



City of Hamilton
GENERAL ISSUES COMMITTEE
AGENDA

Meeting #: 24-011
Date: June 19, 2024
Time: 9:30 a.m.
Location: Council Chambers (GIC)
Hamilton City Hall
71 Main Street West

Angela McRae, Legislative Coordinator (905) 546-2424 ext. 5987

1. CEREMONIAL ACTIVITIES

2. APPROVAL OF AGENDA

(Added Items, if applicable, will be noted with *)

3. DECLARATIONS OF INTEREST

4. APPROVAL OF MINUTES OF PREVIOUS MEETING

4.1 June 5, 2024

5. COMMUNICATIONS

5.1 Correspondence respecting Encampments, from the following individuals:

Recommendation: Be received.

- a. Amanda Weegar
- b. Darcy Field
- c. Phil Pidgeon
- d. Guylaine Spencer

6. DELEGATION REQUESTS

- 6.1 Jelena Vermilion, Sex Workers' Action Program (SWAP), respecting the City of Hamilton Integrity Commissioner's Report Regarding Private Complaint re: Councillor Danko Tweet (Re) - DGB-HamiltonICI-2024-01 (June 12, 2024 Council Agenda Item 6.2)

(In-Person) (For a future meeting)

- 6.2 Delegation Requests respecting Encampments, for today's meeting, from the following individuals:

- a. Kelly Oucharek (In-Person)
- b. Jacqueline Stagen (Virtually)

7. DELEGATIONS

- 7.1 Hafeez Hussain, respecting Putting Taxpayers First - Navigating City Hall (Virtually) (Approved June 5, 2024)

- 7.2 NaWalka Geeshy Meegwun (Lyndon George) and Audrey Davis, Circle of Beads - City of Hamilton Urban Indigenous Community Consultation Circle, respecting Elected Indigenous Council Seat Request - conversation (In-Person) (Approved June 5, 2024)

- 7.3 Rachel Moore, Love to Live, respecting a Request for Audience to Address Systemic Injustice and Lack of Support for Individuals with Disabilities in Hamilton (In-Person) (Approved June 5, 2024)

- 7.4 Delegations respecting Encampments, from the following individuals:

- a. Barbara Weigelt (In-Person) (Approved June 5, 2024)
- b. Mike Rinaldi, Short Straw Productions (In-Person) (Approved June 5, 2024)
- c. Stephen Felker (In-Person) (Approved June 5, 2024)
- d. Denise Hancock (In-Person) (Approved June 5, 2024)

8. STAFF PRESENTATIONS

- 8.1 Asset Management Plans (PW23073(b)) (City Wide)

- 8.2 Cybersecurity Incident Impact Update (CM24004) (City Wide)

9. CONSENT ITEMS

Members of the public can contact the Clerk's Office to acquire the documents considered at this meeting, in an alternate format.

- 9.1 Hamilton-Wentworth District School Board (HWDSB) Liaison Committee Report 24-001 - May 27, 2024
- 9.2 Response to the Office of the Chief Coroner Ontario Forensic Pathology Service (HSC24026) (City Wide)
- 9.3 Shelter Inspection Feasibility (HSC24013) (City Wide)

10. DISCUSSION ITEMS

- 10.1 West Harbour Development Sub-Committee Report 24-001 - May 29, 2024
- 10.2 Community Benefits Protocol Sub-Committee Report 24-001 - May 28, 2024
- 10.3 Contractual Obligations and Substandard Tenant Conditions (HSC24009) (City Wide)
- 10.4 Authority to Enter into Rent Supplement Agreements Under Various Programs (HSC24005) (City Wide)
(Deferred from the February 21, 2024 General Issues Committee Meeting).
- 10.5 Major Hosted Tourism Event Opportunities (PED23129(b)) (City Wide)
- 10.6 Pier 8 Development: Waterfront Shores Development Agreement, Greenway Strata Title, and Delegated Authority (PED23039(a)) (Ward 2)
- 10.7 Reducing Homelessness and Managing Encampments (HSC24027) (City Wide)
- 10.8 Affordable Housing Development Project Stream Q1 2024 Results (HSC23028(e) / FCS23055(c) / PED23099(e)) (City Wide)

11. MOTIONS

- 11.1 Dishwasher for the Community Room at 120 Strathcona Avenue North (Ward 1)

12. NOTICES OF MOTION

13. GENERAL INFORMATION / OTHER BUSINESS

- 13.1 Amendments to the Outstanding Business List:

a. Items Considered Complete and Needing to be Removed:

Hamilton Police Services and Hamilton Public Library Surpluses and Deficits

Added: October 5, 2023 at AF&A (Item 11.1)

Completed: June 5, 2024 at GIC (Item 10.5)

14. PRIVATE AND CONFIDENTIAL

14.1 Closed Session Minutes - June 5, 2024

Pursuant to Section 9.3, Sub-sections (b) and (f) of the City's Procedural By-law 21-021, as amended, and Section 239(2), Sub-sections (b) and (f) of the *Ontario Municipal Act, 2001*, as amended, as the subject matter pertains to personal matters about an identifiable individual, including City or local board members; and advice that is subject to solicitor-client privilege, including communications necessary for that purpose.

14.2 Repurchase of Land in the City of Hamilton (PED23132(a)) (Ward 10)

Pursuant to Section 9.3, Sub-section (c) of the City's Procedural By-law 21-021, as amended, and Section 239(2) sub-section (c) of the *Ontario Municipal Act, 2001*, as amended, as the subject matters pertain to a proposed or pending acquisition or disposition of land for City or a local board purposes.

14.3 Lease Agreement – 35-39 Market Street South, Dundas, ON (PED24095) (Ward 13)

Pursuant to Section 9.3, Sub-section (c) of the City's Procedural By-law 21-021, as amended, and Section 239(2) sub-section (c) of the *Ontario Municipal Act, 2001*, as amended, as the subject matters pertain to a proposed or pending acquisition or disposition of land for City or a local board purposes.

14.4 Multi Use Path Agreement, City of Hamilton (PED24104) (Ward 8)

Pursuant to Section 9.3, Sub-section (c) of the City's Procedural By-law 21-021, as amended, and Section 239(2) sub-section (c) of the *Ontario Municipal Act, 2001*, as amended, as the subject matters pertain to a proposed or pending acquisition or disposition of land for City or a local board purposes.

15. ADJOURNMENT



GENERAL ISSUES COMMITTEE MINUTES 24-010

9:30 a.m.

June 5, 2024

Council Chambers, City Hall, 2nd Floor
71 Main Street West, Hamilton, Ontario

Present: Mayor A. Horwath
Deputy Mayor T. Hwang (Chair)
Councillors J. Beattie, C. Cassar, B. Clark, J.P. Danko, T. Jackson,
C. Kroetsch, T. McMeekin, N. Nann, E. Pauls, M. Spadafora, M. Tadeson,
A. Wilson, and M. Wilson

Absent: Councillor M. Francis – Personal

THE FOLLOWING ITEMS WERE REFERRED TO COUNCIL FOR CONSIDERATION:

**1. Stormwater Fee Financial Incentives Program (FCS22043(c)) (City Wide)
(Outstanding Business List Item) (Item 8.1)**

(i) (A. Wilson/Cassar)

- (a) That the effective date of the Stormwater Rate Structure outlined in Appendix “A” to Report FCS22043(b) be revised from September 1, 2025 to April 1, 2026;

Result: MOTION, CARRIED by a vote of 11 to 2, as follows:

Yes	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
No	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
No	-	Ward 9 Councillor Brad Clark
Conflict	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson

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Absent - Ward 14 Councillor Mike Spadafora
Yes - Ward 15 Councillor Ted McMeekin

(i) (A. Wilson/Cassar)

- (b) That the Residential Stormwater Subsidy Program, as outlined in Appendix "A" to Report FCS22043(c) be approved effective January 1, 2025, with a funding source referred to the 2025 Water, Wastewater and Stormwater Rate Supported Budget;
- (c) That the Stormwater Credit Program as outlined in Appendix "B" to Report FCS22043(c) be approved effective April 1, 2026, with a funding source referred to the 2026 Water, Wastewater and Stormwater Rate Supported Budget;
- (d) That staff develop the 2026-2035 Water, Wastewater and Stormwater Rate Supported Budget incorporating the Stormwater Rate Structure and the Stormwater Fee Financial Incentives Program;
- (e) That the Hamilton Water Divisional staff complement be increased by one (1) Full Time Equivalent (FTE) for a Project Manager position at an annualized cost of \$124K up to an upset limit of \$250K, be funded by the Storm Sewer Reserve (108010) up to December 31, 2025, and thereafter, that funding be incorporated into the 2026 Water, Wastewater and Stormwater Rate Supported Budget;
- (f) That the City Solicitor be authorized and directed to prepare all necessary by-laws, for Council approval, in order to implement Recommendations (a) through (c) of Report FCS22043(c);
- (g) That the single source procurement of Green Venture as the program administrator for the Residential Stormwater Subsidy Program, pursuant to Procurement Policy #11 – Non-competitive Procurements be approved;
- (h) That the General Manager, Public Works, be authorized to negotiate, enter into and execute a contract and any ancillary documents required to procure Green Venture as the administrator of the Residential Stormwater Subsidy Program in a form satisfactory to the City Solicitor;
- (i) That the development and implementation of a Communications strategy with an upset limit of \$100K be funded from the Storm Sewer Reserve (108010);
- (j) That temporary Corporate Services staffing with an upset limit of \$25K be funded from the Storm Sewer Reserve (108010)

- (k) That the single source procurement of AECOM Canada Ltd as external consultants for the Stormwater Funding implementation be extended through to December 31, 2026, with an upset limit of \$50K be funded from the Storm Sewer Reserve (108010);
- (l) That the subject matter regarding the implementation of a Stormwater Incentive Program be identified as complete and removed from the General Issues Committee Outstanding Business List.

Result: MOTION, CARRIED by a vote of 9 to 4, as follows:

Yes	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
No	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
No	-	Ward 9 Councillor Brad Clark
Conflict	-	Ward 10 Councillor Jeff Beattie
No	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
No	-	Ward 15 Councillor Ted McMeekin

2. Affordable Housing Development Project Stream Evaluation Process (HSC23028(d) / FCS23055(b) / PED23099(d)) (City Wide) (Added Item 8.2)

(Cassar/A. Wilson)

- (a) That the General Issues Committee approves the Affordable Housing Development Project Stream Program (Project Stream) as Appendix "A" to Report HSC23028(d)/FCS23055(b)/PED23099(d) which outlines the process for receiving, evaluating, and prioritizing applications to create additional units of affordable and supportive housing projects for any available City funding allocation
- (b) That the Director of the Housing Secretariat Division, be authorized to execute, and administer the Affordable Housing Development Project Stream (Project Stream) Program, including entering into any and all agreements and ancillary documents as required to deliver the Project Stream in a form satisfactory to the City Solicitor and content satisfactory to the Housing Sustainability and Investment Roadmap (HSIR) Executive Committee (comprised of the City Manager, the General Managers of

Healthy and Safe Communities, Planning and Economic Development, and Corporate Services Departments);

- (c) That the Director of the Housing Secretariat Division under the oversight of the General Manager of the Finance and Corporate Services Department through the HSIR Executive Committee, receive delegated authority to enter into financial commitments of up to \$2.5 million per project, provided the municipal contributions are being funded solely from funds managed by the City allocated to the Affordable Housing Funding Program Reserve account number 112257, the Affordable Housing Property Reserve account number 112256, the Supportive Housing Funding Account, and any other funds managed by the City that is deemed necessary or to be used for affordable housing;
- (d) That the Director of the Housing Secretariat Division, under the oversight of the General Manager of the Finance and Corporate Services Department through the HSIR Executive Committee, be authorized to revise the Project Stream program, policy, and application process attached as Appendix "A" to Report HSC23028(d)/FCS23055(b)/PED23099(d) as necessary to ensure efficient delivery of the Project Stream;
- (e) That the General Manager of the Healthy & Safe Communities Department revise the Affordable Housing Fund Program Guidelines attached as Appendix "B" to Report HSC23028(d)/FCS23055(b)/PED23099(d) as approved at the Emergency and Community Services Committee to report HSC23003 and subsequently approved by Council on January 25, 2023.

Result: MOTION, CARRIED by a vote of 11 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

**3. Business Improvement Area Sub-Committee Report 24-004 - May 14, 2024
(Item 9.1)**

(M. Wilson/Cassar)

That the Business Improvement Area Sub-Committee Report 24-004 - May 14, 2024, be received.

Result: MOTION, CARRIED by a vote of 9 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Absent	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Absent	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

**4. Mayor's Task Force on Transparency, Access and Accountability Report 24-004
– May 15, 2024 (Item 9.2)**

(Kroetsch/Danko)

That the Mayor's Task Force on Transparency, Access and Accountability Report 24-004 – May 15, 2024, be received.

Result: MOTION, CARRIED by a vote of 9 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Absent	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Absent	-	Ward 10 Councillor Jeff Beattie

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Yes	-	Ward 11	Councillor Mark Tadeson
Yes	-	Ward 12	Councillor Craig Cassar
Yes	-	Ward 13	Councillor Alex Wilson
Absent	-	Ward 14	Councillor Mike Spadafora
Yes	-	Ward 15	Councillor Ted McMeekin

5. 2023 Assessment Growth (FCS24014) (City Wide) (Item 9.3)

(A. Wilson/Cassar)

That Report FCS24012, respecting 2023 Assessment Growth, be received.

Result: MOTION, CARRIED by a vote of 11 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

6. Accessibility Committee for Persons with Disabilities (ACPD) Report 24-004 - May 14, 2024 (Item 10.1)

(McMeekin/A. Wilson)

(1) Accessibility Committee for Persons with Disabilities' Accessibility Award Logo Package (Item 12.3)

WHEREAS, the Accessibility Committee for Persons with Disabilities' Accessibility Award requires an appropriate logo to represent it on various media;

WHEREAS, the Accessibility Committee for Persons with Disabilities' Outreach Working Group has developed several versions of the logo attached hereto as Appendix "A";

WHEREAS, the secondary version is simplified and may be required sometime in the future for as yet unforeseen reasons; and

WHEREAS, having a variety of logo shapes and colour/grey tones would be beneficial as the Award develops.

THEREFORE, BE IT RESOLVED:

- (a) That the logos included in the Accessibility Committee for Persons with Disabilities' Accessibility Award logo package attached as Appendix "A" to Accessibility for Persons with Disabilities Report 24-004, be approved, as follows:
- (i) The Complex Image logo set be approved as the primary logo; and
 - (ii) The Simplified Image logo set be approved as the secondary logo.

Result: MOTION, CARRIED by a vote of 10 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Absent	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

7. 2023 Annual Report for Economic Development Division Financial Incentive and Assistance Programs (PED24082) (City Wide) (Item 10.2)

(Beattie/Pauls)

That Report PED24082, respecting 2023 Annual Report for Economic Development Division Financial Incentive and Assistance Programs, be received.

Result: MOTION, CARRIED by a vote of 10 to 0, as follows:

Absent	-	Mayor Andrea Horwath
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Yes	-	Ward 1	Councillor Maureen Wilson
Yes	-	Ward 2	Councillor Cameron Kroetsch
Absent	-	Ward 3	Councillor Nrinder Nann
Yes	-	Ward 4	Councillor Tammy Hwang
Absent	-	Ward 5	Councillor Matt Francis
Yes	-	Ward 6	Councillor Tom Jackson
Yes	-	Ward 7	Councillor Esther Pauls
Yes	-	Ward 8	Councillor J. P. Danko
Absent	-	Ward 9	Councillor Brad Clark
Yes	-	Ward 10	Councillor Jeff Beattie
Yes	-	Ward 11	Councillor Mark Tadeson
Absent	-	Ward 12	Councillor Craig Cassar
Yes	-	Ward 13	Councillor Alex Wilson
Absent	-	Ward 14	Councillor Mike Spadafora
Yes	-	Ward 15	Councillor Ted McMeekin

8. Light Rail Transit Sub-Committee Report 24-002 - May 23, 2024 (Item 10.3)

(M. Wilson/A. Wilson)

(1) Applying a Climate Justice Lens to Light Rail Transit (PED24087) (City Wide) (Item 8.1)

- (i) (a) That the City continue to apply a climate justice lens to the Hamilton Light Rail Transit Project and associated works to ensure that any relevant mitigation and adaptation actions as set out in Hamilton's Climate Action Strategy are implemented in a manner that considers climate justice; and
- (b) That the Light Rail Transit Sub-Committee recruit additional non-voting community advisors to the Light Rail Transit Sub-Committee table to ensure that the Sub-Committee's composition reflects the community from a climate justice point of view.
- (ii) That staff report back the process to enable recruitment of additional non-voting community advisors to the Light Rail Transit Sub-Committee table to ensure that the Sub-Committee's composition reflects the community from a climate justice point of view.

(2) Hamilton Light Rail Transit Partial Property Acquisition Update (PED24083) (City Wide) (Item 9.1)

That Report PED24083, respecting Hamilton Light Rail Transit Partial Property Acquisition Update, be received.

**(3) Hamilton Light Rail Transit Early Works Update (PED24084) (City Wide)
(Item 9.2)**

That Report PED24084, respecting Hamilton Light Rail Transit Early Works Update, be received.

**(4) Small Business Supports During Light Rail Transit Major Construction
(Item 12.1)**

WHEREAS, enabling works have begun for the multi-year major construction for the Light Rail Transit (LRT) project and the City of Hamilton is planning ahead for the major construction works funded by both the Provincial and the Federal Governments;

WHEREAS, small businesses in Hamilton make up the majority of employment and contribute to the economic development and vitality of the city;

WHEREAS, of the 16,348 businesses with employees in Hamilton, approximately 56% employ fewer than four people and 75% employ nine or fewer people, meaning that small and micro businesses make up the majority of the city's businesses which contribute to the economic development and vitality of the city (source: InvestInHamilton, 2024, and Canadian Business Counts, June 2021);

WHEREAS, small businesses that are situated along and adjacent to the LRT corridor will be impacted by construction of the project;

WHEREAS, the City of Hamilton seeks to reduce disruption to small businesses along the 14-kilometre LRT corridor;

WHEREAS, other municipalities in Canada that undertook major transit corridor construction like Toronto, Montreal, and Kitchener-Waterloo implemented small business supports including grants and incentives for the impacted businesses; and

WHEREAS, the City of Toronto in partnership with the Federal Economic Development Agency for Southern Ontario (FEDDEV Ontario) implemented the Transit Expansion Construction Mitigation Grant Program to support businesses and business associations impacted by major transit construction works.

THEREFORE, BE IT RESOLVED:

- (a) That staff be directed to research and explore potential small business grant and support programs available to the City of Hamilton, small

businesses, or Business Improvement Areas during the Light Rail Transit (LRT) major construction to support impacted businesses along and adjacent to the LRT;

- (b) That staff be directed to complete a jurisdictional scan of grants and best practices to support small businesses once every year until the substantial completion of the Hamilton LRT project and that the results of this scan be presented to Light Rail Transit Sub-Committee; and
- (c) That staff be directed to collaborate with Metrolinx, FEDDEV Ontario, and other funding agencies to enable the implementation and marketing of these small business supports ahead of LRT major construction.

Result: MOTION, CARRIED by a vote of 11 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

9. Hamilton Police Services and Hamilton Public Library Surpluses and Deficits (FCS24023) (City Wide) (Outstanding Business List Item) (Item 10.5)

(Kroetsch/Danko)

- (a) That City of Hamilton staff work with the Hamilton Police Service and Hamilton Public Library on a process to enhance the information provided on budgetary performance and disposition of year-end surplus amounts in the year-end budget variance report;
- (b) That the Hamilton Public Library be requested to develop a policy with respect to the treatment of surplus and deficit in consultation with City staff; and,

- (c) That Confidential Appendix "B" to Report FCS24023, Hamilton Police Services and Hamilton Public Library Surpluses and Deficits, be received and remain confidential.

Result: MOTION, CARRIED by a vote of 11 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

10. Funding for Outfitting of the Farmer's Market York Boulevard Four Season Space (Ward 2) (Item 11.1)

(Kroetsch/Hwang)

WHEREAS, the Four Season Space in the Hamilton Farmer's Market at 35 York Boulevard, in Ward 2, is presently untenanted; and the Hamilton Farmer's Market Board desires to maximize the interim use of the space until a new long-term tenant is secured;

WHEREAS, the Hamilton Farmer's Market Board aspires to create a more flexible and usable all-season space, enabling revenue opportunities and responding to the Market's evolving needs;

WHEREAS, the Hamilton Farmer's Market Board has engaged the Placemaking, Public Art and Projects team to review feasibility in consideration of these goals; and the Placemaking, Public Art and Projects team has presented a proposal to outfit the space with a combination of salvaged and new furniture and other elements in service of flexible, multi-use space that supports the local community;

WHEREAS, the new furniture to be installed in the Four Season Space will be the property of the Economic Development Division of the City of Hamilton, on

indefinite loan to the Hamilton Farmer's Market Board until such a time that it is no longer needed.

WHEREAS, upon obsolescence, the City of Hamilton will reclaim the furniture and deploy it to other locations in need of public seating.

THEREFORE, BE IT RESOLVED:

- (a) That salvaged furniture from Placemaking, Public Art and Projects' Pier 8 Pop-Ups at the Waterfront including counter and dining height tables and benches; be refinished and repainted, including anti-graffiti coating, and relocated to the Hamilton Farmer's Market York Blvd Four Season Space at 35 York Blvd, Hamilton, to be funded from the Economic Development Initiatives Capital Project (#3621708900) with an upset limit of \$5,000 (exclusive of taxes), be approved;
- (b) That new furniture including picnic table-style accessible benches, counter height stools and moveable planters be purchased for the Hamilton Farmer's Market York Blvd Four Season Space at 35 York Blvd, Hamilton, to be funded from the Economic Development Initiatives Capital Project (#3621708900) with an upset limit, of \$40,000 (exclusive of taxes), be approved;
- (c) That staff be directed to set aside \$10,000 for potential upgrades and enhancements at the Hamilton Farmer's Market York Blvd Four Season Space, located at 35 York Blvd, Hamilton. This fund will cover projects such as outfitting existing artboards with castors to create movable dividers, upgrading the existing message board, and installing vinyl wraps on walls and pillars to enhance the market's identity. The funding will come from the Economic Development Initiatives Capital Project (#3621708900), with an upper limit of \$10,000 (excluding taxes); and,
- (d) That the Mayor and City Clerk be authorized and directed to approve and execute all required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

Result: MOTION, CARRIED by a vote of 11 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls

Yes	-	Ward 8	Councillor J. P. Danko
Absent	-	Ward 9	Councillor Brad Clark
Yes	-	Ward 10	Councillor Jeff Beattie
Yes	-	Ward 11	Councillor Mark Tadeson
Yes	-	Ward 12	Councillor Craig Cassar
Yes	-	Ward 13	Councillor Alex Wilson
Absent	-	Ward 14	Councillor Mike Spadafora
Yes	-	Ward 15	Councillor Ted McMeekin

11. City of Hamilton's Commitment to the Climate Change Emergency Respecting New Industrial Facilities (Item 11.2)

(Nann/Cassar)

WHEREAS the City of Hamilton declared a climate change emergency on March 27, 2019, and subsequently committed to develop community-wide climate mitigation and climate adaptation plans that are now known as Hamilton's Climate Action Strategy;

WHEREAS annual greenhouse gas emission inventories continue to confirm that existing industries are the largest contributor, by far, to greenhouse gas emissions in Hamilton;

WHEREAS Hamilton's Climate Action Strategy recognizes the essential need for action to ensure existing local industries reduce their greenhouse gas emissions in order for Hamilton to reach net zero emissions by or before 2050;

WHEREAS Priority 1 of City Council's 2023-2026 priorities is Sustainable Economic & Ecological Development which includes a commitment to protect our unique natural landscape and waterways and accelerate efforts to mitigate the impacts of climate change;

WHEREAS Hamilton's Climate Action Strategy also recognizes the essential need for industrial operations to be low/no carbon in order to increase global competitiveness as climate pricing frameworks continue to impose greater costs over time;

WHEREAS the City of Hamilton's Economic Development Action Plan includes a commitment to explore and implement decarbonization initiatives with local industry in order to position Hamilton for a sustainable economic future that achieves the City's climate goals and contributes to climate resiliency;

WHEREAS Hamilton's Climate Action Strategy requires the development of a Carbon Accounting Framework, an effort that is currently underway and includes the establishment of a municipal carbon budget and associated green procurement strategy that, combined, will enable the municipality to operate within a carbon

budget that represents the City's fair share of global carbon emissions designed to limit global average temperature increases to 1.5 degrees Celsius;

WHEREAS, despite all of the above, new industrial operations continue to be proposed/established within the City of Hamilton that are choosing to run their operations using fossil fuels even where low/no carbon fuel alternatives are a readily available and viable choice;

WHEREAS one such industry, GFL Environmental Inc., is currently seeking the necessary provincial approvals to establish a new operation at 227 Brant Street, and choosing to power this operation solely with natural/fossil gas when the proponent has confirmed that electricity is also a viable source of power to run the operation;

WHEREAS GFL Environmental Inc., by opting to power its facility with natural gas, has determined that its operation will emit 11.3KtCO_{2e} annually, an amount that is greater than agriculture and waste-related greenhouse gas emissions in Hamilton combined;

THEREFORE, BE IT RESOLVED:

- (a) That the City of Hamilton urge GFL Environmental Inc. to recognize the City's declaration of the climate change emergency and to seek their support in working towards the utilization of low/no carbon fuels to operate its proposed new facility;
- (b) That the City of Hamilton continue to urge any other new industrial facilities choosing to locate within the municipality to be climate leaders by committing to utilize low/no carbon fuels for their new operations; and
- (c) That the City of Hamilton call on the Province of Ontario to mandate accelerated requirements for the decarbonization of all industrial operations in the City of Hamilton and across the Province of Ontario.

Result: MOTION, CARRIED by a vote of 13 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Absent	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Yes	-	Ward 9 Councillor Brad Clark

Yes	-	Ward 10	Councillor Jeff Beattie
Yes	-	Ward 11	Councillor Mark Tadeson
Yes	-	Ward 12	Councillor Craig Cassar
Yes	-	Ward 13	Councillor Alex Wilson
Yes	-	Ward 14	Councillor Mike Spadafora
Yes	-	Ward 15	Councillor Ted McMeekin

12. Verbal Update on a Personnel Matter (Added Item 14.3)

(Spadafora/Pauls)

That the Verbal Update on a Personnel Matter, be received and remain confidential.

Result: MOTION, CARRIED by a vote of 11 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Absent	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Absent	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Yes	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

FOR INFORMATION:

(a) APPROVAL OF AGENDA (Item 2)

The Committee Clerk advised of the following changes to the agenda:

5. COMMUNICATIONS

- 5.1 Correspondence from the Hamilton Police Services Board, respecting Protocol for Information Sharing Between the Hamilton Police Services Board and the City of Hamilton

Recommendation: Be received and referred to ***staff for appropriate action.***

- 5.3 Correspondence from the Hamilton Police Services respecting Correspondence from the City of Hamilton respecting Hamilton Police Services and Hamilton Public Library Surpluses and Deficits (Added Item 5.3)

Recommendation: Be received and referred to consideration of Item 10.5.

6. DELEGATION REQUESTS

- 6.1 Delegation Requests respecting Encampments, for a future meeting, from the following individuals:

(d) Denise Hancock (In-Person)

- 6.3 NaWalka Geeshy Meegwun (Lyndon George) and Audrey Davis, Circle of Beads - City of Hamilton Urban Indigenous Community Consultation Circle, respecting Elected Indigenous Council Seat Request - conversation (In-Person) (For a future meeting)

- 6.4 Delegation Requests respecting Item 8.1 - Stormwater Fee Financial Incentives Program (FCS22043(c)) (City Wide), for today's meeting, from the following individuals:

(a) Drew Spoelstra, Ontario Federation of Agriculture (In-Person)

(b) Gavin Smuk, Hamilton-Wentworth Federation of Agriculture (In-Person)

(c) Daniel Vander Hout, Beverly Greenhouses Ltd. (In-Person)

(d) Larry Freeman (In-Person)

- 6.5 Rachel Moore, Love to Live, respecting a Request for Audience to Address Systemic Injustice and Lack of Support for Individuals with Disabilities in Hamilton (In-Person) (For a future meeting)

- 6.6 Graham Cubitt and Sarah Borde, Hamilton is Home, respecting Item 8.2 - Affordable Housing Development Project Stream Evaluation Process (HSC23028(d) / FCS23055(b) / PED23099(d)) (In-Person) (For today's meeting)

8. PRESENTATIONS

- 8.2 Affordable Housing Development Project Stream Evaluation Process (HSC23028(d) / FCS23055(b) / PED23099(d)) (City Wide)

This item was originally listed on the agenda as Item 10.4 but has been moved to Item 8.2, as a presentation was added.

10. DISCUSSION ITEMS

- 10.2 2023 Annual Report for Economic Development Division Financial Incentive and Assistance Programs (PED24082) (City Wide) – REVISED

14. PRIVATE AND CONFIDENTIAL

- 14.3 Verbal Update on a Personnel Matter

CHANGE TO THE ORDER OF ITEMS

Item 11.2 respecting the City of Hamilton's Commitment to the Climate Change Emergency Respecting New Industrial Facilities will be moved up the agenda to be considered immediately following Delegations, as the mover has to leave for other City business.

Item 14.3 respecting a Verbal Update on a Personnel Matter will be moved up the agenda to be considered immediately following Approval of the Previous Minutes.

(Horwath/Beattie)

That the agenda for the June 5, 2024 General Issues Committee meeting, be approved, as amended.

Result: MOTION, CARRIED by a vote of 13 to 0, as follows:

Yes	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Absent	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Yes	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

(b) DECLARATIONS OF INTEREST (Item 3)

Councillor J. Beattie declared a disqualifying interest to Items 6.4(a) to (d) - Delegation Requests respecting Item 8.1 - Stormwater Fee Financial Incentives Program (FCS22043(c)) (City Wide), Items 7.1(a) to (d) - Delegations respecting Item 8.1 - Stormwater Fee Financial Incentives Program (FCS22043(c)) (City Wide), and Item 8.1 - Stormwater Fee Financial Incentives Program (FCS22043(c)) (City Wide), as he is the owner of an agricultural business.

Councillor M. Wilson declared a non-disqualifying interest to Item 6.6 - Graham Cubitt and Sarah Borde, Hamilton is Home, respecting Item 8.2 - Affordable Housing Development Project Stream Evaluation Process (HSC23028(d) / FCS23055(b) / PED23099(d)) (In-Person) (For today's meeting), Item 7.2 -Graham Cubitt and Sarah Borde, Hamilton is Home, respecting Item 8.2 - Affordable Housing Development Project Stream Evaluation Process (HSC23028(d) / FCS23055(b) / PED23099(d)) (In-Person), and Item 8.2 - Affordable Housing Development Project Stream Evaluation Process (HSC23028(d) / FCS23055(b) / PED23099(d)), as her husband is the President and CEO of the Hamilton Community Foundation, which is mentioned in the report.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETINGS (Item 4)

(i) May 15, 2024 (Item 4.1)

(Spadafora/Cassar)

That the minutes of the May 15, 2024 General Issues Committee, be approved, as presented.

Result: MOTION, CARRIED by a vote of 13 to 0, as follows:

Yes	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Absent	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Yes	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

(d) PRIVATE AND CONFIDENTIAL (Item 14)

(i) (Horwath/Pauls)

That Committee move into Closes Session for Item 14.3 pursuant to Section 9.3, Sub-section (b) of the City's Procedural By-law 21-021, as amended, and Section 239(2) sub-section (b) of the *Ontario Municipal Act, 2001*, as amended, as the subject matter pertains to personal matters about an identifiable individual, including City or local board employees.

Result: MOTION, CARRIED by a vote of 13 to 0, as follows:

Yes	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Absent	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Yes	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

(ii) Verbal Update on a Personnel Matter (Added Item 14.3)

For disposition of this matter, refer to Item 12.

(e) COMMUNICATIONS (Item 5)

(Pauls/Beattie)

That Communication Items 5.1 to 5.3, be approved, as presented, as follows:

(i) Correspondence from the Hamilton Police Services Board, respecting Protocol for Information Sharing Between the Hamilton Police Services Board and the City of Hamilton (Item 5.1)

Recommendation: Be received and referred to staff for appropriate action.

(ii) Correspondence from the Hamilton Public Library respecting the Hamilton Public Library Surpluses and Deficits (Item 5.2)

Recommendation: Be received and referred to consideration of Item 10.5.

- (iii) **Correspondence from the Hamilton Police Services respecting Correspondence from the City of Hamilton respecting Hamilton Police Services and Hamilton Public Library Surpluses and Deficits (Added Item 5.3)**

Recommendation: Be received and referred to consideration of Item 10.5.

Result: MOTION, CARRIED by a vote of 13 to 0, as follows:

Yes	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Absent	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Yes	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

(f) DELEGATION REQUESTS (Item 6)

- (i) **Delegation Requests respecting Encampments (Item 6.1):**

(Spadafora/Pauls)

That the following delegation requests respecting Encampments, be approved, for a future meeting:

- (1) Barbara Weigelt (In-Person) (Item 6.1(a))
- (2) Mike Rinaldi, Short Straw Productions (In-Person) (Item 6.1(b))
- (3) Stephen Felker (In-Person) (Item 6.1(c))
- (4) Denise Hancock (In-Person) (Added Item 6.1(d))

Result: MOTION, CARRIED by a vote of 14 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis

Yes	-	Ward 6	Councillor Tom Jackson
Yes	-	Ward 7	Councillor Esther Pauls
Yes	-	Ward 8	Councillor J. P. Danko
Yes	-	Ward 9	Councillor Brad Clark
Yes	-	Ward 10	Councillor Jeff Beattie
Yes	-	Ward 11	Councillor Mark Tadeson
Yes	-	Ward 12	Councillor Craig Cassar
Yes	-	Ward 13	Councillor Alex Wilson
Yes	-	Ward 14	Councillor Mike Spadafora
Yes	-	Ward 15	Councillor Ted McMeekin

(ii) Hafeez Hussain, respecting Putting Taxpayers First - Navigating City Hall (Virtually) (For a future meeting) (Item 6.2)

(Spadafora/Pauls)

That the delegation request from Hafeez Hussain, respecting Putting Taxpayers First - Navigating City Hall, be approved for a future meeting.

Result: MOTION, CARRIED by a vote of 14 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Yes	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Yes	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

(iii) NaWalka Geeshy Meegwun (Lyndon George) and Audrey Davis, Circle of Beads - City of Hamilton Urban Indigenous Community Consultation Circle, respecting Elected Indigenous Council Seat Request - conversation (In-Person) (For a future meeting) (Added Item 6.3)

(Kroetsch/A. Wilson)

That the delegation request from NaWalka Geeshy Meegwun (Lyndon George) and Audrey Davis, Circle of Beads - City of Hamilton Urban

Indigenous Community Consultation Circle, respecting Elected Indigenous Council Seat Request - conversation, be approved for a future meeting.

Result: MOTION, CARRIED by a vote of 14 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Yes	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Yes	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

(iv) Delegation requests respecting Item 8.1 – Stormwater Fee Financial Incentives Program (FCS22043(c)) (Added Item 6.4):

(A. Wilson/McMeekin)

That the following delegation requests respecting Item 8.1 – Stormwater Fee Financial Incentives Program (FCS22043(c)), be approved, for today's meeting:

- (1) Drew Spoelstra, Ontario Federation of Agriculture (In-Person) (Added Item 6.4(a))
- (2) Gavin Smuk, Hamilton-Wentworth Federation of Agriculture (In-Person) (Added Item 6.4(b))
- (3) Daniel Vander Hout, Beverly Greenhouses Ltd. (In-Person) (Added Item 6.4(c))
- (4) Larry Freeman (In-Person) (Added Item 6.4(d))

Result: MOTION, CARRIED by a vote of 13 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis

Yes	-	Ward 6	Councillor Tom Jackson
Yes	-	Ward 7	Councillor Esther Pauls
Yes	-	Ward 8	Councillor J. P. Danko
Yes	-	Ward 9	Councillor Brad Clark
Conflict	-	Ward 10	Councillor Jeff Beattie
Yes	-	Ward 11	Councillor Mark Tadeson
Yes	-	Ward 12	Councillor Craig Cassar
Yes	-	Ward 13	Councillor Alex Wilson
Yes	-	Ward 14	Councillor Mike Spadafora
Yes	-	Ward 15	Councillor Ted McMeekin

- (v) **Rachel Moore, Love to Live, respecting a Request for Audience to Address Systemic Injustice and Lack of Support for Individuals with Disabilities in Hamilton (In-Person) (For a future meeting) (Added Item 6.5)**

(Pauls/Spadafora)

That the delegation request from Rachel Moore, Love to Live, respecting a Request for Audience to Address Systemic Injustice and Lack of Support for Individuals with Disabilities in Hamilton, be approved for a future meeting.

Result: MOTION, CARRIED by a vote of 14 to 0, as follows:

Absent	-	Mayor Andrea Horwath	
Yes	-	Ward 1	Councillor Maureen Wilson
Yes	-	Ward 2	Councillor Cameron Kroetsch
Yes	-	Ward 3	Councillor Nrinder Nann
Yes	-	Ward 4	Councillor Tammy Hwang
Absent	-	Ward 5	Councillor Matt Francis
Yes	-	Ward 6	Councillor Tom Jackson
Yes	-	Ward 7	Councillor Esther Pauls
Yes	-	Ward 8	Councillor J. P. Danko
Yes	-	Ward 9	Councillor Brad Clark
Yes	-	Ward 10	Councillor Jeff Beattie
Yes	-	Ward 11	Councillor Mark Tadeson
Yes	-	Ward 12	Councillor Craig Cassar
Yes	-	Ward 13	Councillor Alex Wilson
Yes	-	Ward 14	Councillor Mike Spadafora
Yes	-	Ward 15	Councillor Ted McMeekin

- (vi) **Graham Cubitt and Sarah Borde, Hamilton is Home, respecting Item 8.2 - Affordable Housing Development Project Stream Evaluation Process (HSC23028(d) / FCS23055(b) / PED23099(d)) (In-Person) (For today's meeting) (Added Item 6.6)**

(McMeekin/Beattie)

That the delegation request from Graham Cubitt and Sarah Borde, Hamilton is Home, respecting Item 8.2 - Affordable Housing Development Project

Stream Evaluation Process (HSC23028(d) / FCS23055(b) / PED23099(d)),
be approved for today's meeting.

Result: MOTION, CARRIED by a vote of 14 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Yes	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Yes	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

(g) DELEGATIONS (Item 7)

(i) Delegation respecting Item 8.1 – Stormwater Fee Financial Incentives Program (FCS22043(c)) (Added Item 7.1)

(1) The following delegates addressed the Committee respecting Item 8.1 - Stormwater Fee Financial Incentives Program (FCS22043(c)):

- (a) Drew Spoelstra, Ontario Federation of Agriculture (In-Person) (Added Item 7.1(a))
- (b) Gavin Smuk, Hamilton-Wentworth Federation of Agriculture (In-Person) (Added Item 7.1(b))
- (c) Daniel Vander Hout, Beverly Greenhouses Ltd. (In-Person) (Added Item 7.1(c))
- (d) Larry Freeman (In-Person) (Added Item 7.1(d))

(2) (Cassar/Spadafora)

That the following delegations, respecting Item 8.1 - Stormwater Fee Financial Incentives Program (FCS22043(c)), be received:

- (a) Drew Spoelstra, Ontario Federation of Agriculture (In-Person) (Added Item 7.1(a))
- (b) Gavin Smuk, Hamilton-Wentworth Federation of Agriculture (In-Person) (Added Item 7.1(b))

- (c) Daniel Vander Hout, Beverly Greenhouses Ltd. (In-Person)
(Added Item 7.1(c))
- (d) Larry Freeman (In-Person) (Added Item 7.1(d))

Result: MOTION, CARRIED by a vote of 14 to 0, as follows:

Yes	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Yes	-	Ward 9 Councillor Brad Clark
Absent	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Yes	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

- (ii) **Graham Cubitt and Sarah Borde, Hamilton is Home, respecting Item 8.2 - Affordable Housing Development Project Stream Evaluation Process (HSC23028(d) / FCS23055(b) / PED23099(d)) (In-Person) (Added Item 7.2)**

Graham Cubitt and Sarah Borde, Hamilton is Home, addressed the Committee respecting Item 8.2 - Affordable Housing Development Project Stream Evaluation Process (HSC23028(d) / FCS23055(b) / PED23099(d)).

(McMeekin/Spadafora)

That the delegation from Graham Cubitt and Sarah Borde, Hamilton is Home, addressed the Committee respecting Item 8.2 - Affordable Housing Development Project Stream Evaluation Process (HSC23028(d) / FCS23055(b) / PED23099(d)), be received.

Result: MOTION, CARRIED by a vote of 13 to 0, as follows:

Yes	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis

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Yes	-	Ward 6	Councillor Tom Jackson
Absent	-	Ward 7	Councillor Esther Pauls
Yes	-	Ward 8	Councillor J. P. Danko
Yes	-	Ward 9	Councillor Brad Clark
Yes	-	Ward 10	Councillor Jeff Beattie
Absent	-	Ward 11	Councillor Mark Tadeson
Yes	-	Ward 12	Councillor Craig Cassar
Yes	-	Ward 13	Councillor Alex Wilson
Yes	-	Ward 14	Councillor Mike Spadafora
Yes	-	Ward 15	Councillor Ted McMeekin

(h) MOTIONS (Item 11)

(i) Recess

(Cassar/Beattie)

That the General Issues Committee recess for 30 minutes until 12:45 p.m.

Result: MOTION, CARRIED by a vote of 12 to 1, as follows:

Yes	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Absent	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
No	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

(i) PRESENTATIONS (Item 8)

**(i) Stormwater Fee Financial Incentives Program (FCS22043(c)) (City Wide)
(Outstanding Business List Item) (Item 8.1)**

(1) Brian McMullen, Director, Financial Planning Administration and Policy provided an overview and introduced external presenters Liz Enriquez, Green Venture and Giuliana Casimirri, Green Venture; and Nancy Hill, AECOM.

- (a) Liz Enriquez, Green Venture and Giuliana Casimirri, Green Venture addressed the Committee with a presentation respecting Report FCS22043(c), Stormwater Fee Financial Incentives Program.

(A. Wilson/Cassar)

That the presentation from Green Venture respecting Report FCS22043(c), Stormwater Fee Financial Incentives Program, be received.

Result: MOTION, CARRIED by a vote of 11 to 0, as follows:

Yes	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Absent	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Yes	-	Ward 9 Councillor Brad Clark
Conflict	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

- (b) Nancy Hill, AECOM addressed the Committee with a presentation respecting Report FCS22043(c), Stormwater Fee Financial Incentives Program.

(Cassar/McMeekin)

That the presentation from AECOM respecting Report FCS22043(c), Stormwater Fee Financial Incentives Program, be received.

Result: MOTION, CARRIED by a vote of 13 to 0, as follows:

Yes	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang

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Absent	-	Ward 5	Councillor Matt Francis
Yes	-	Ward 6	Councillor Tom Jackson
Yes	-	Ward 7	Councillor Esther Pauls
Yes	-	Ward 8	Councillor J. P. Danko
Yes	-	Ward 9	Councillor Brad Clark
Absent	-	Ward 10	Councillor Jeff Beattie
Yes	-	Ward 11	Councillor Mark Tadeson
Yes	-	Ward 12	Councillor Craig Cassar
Yes	-	Ward 13	Councillor Alex Wilson
Absent	-	Ward 14	Councillor Mike Spadafora
Yes	-	Ward 15	Councillor Ted McMeekin

(2) (A. Wilson/Cassar)

- (a) That the effective date of the Stormwater Rate Structure outlined in Appendix "A" to Report FCS22043(b) be revised from September 1, 2025 to April 1, 2026;
- (b) That the Residential Stormwater Subsidy Program, as outlined in Appendix "A" to Report FCS22043(c) be approved effective January 1, 2025, with a funding source referred to the 2025 Water, Wastewater and Stormwater Rate Supported Budget;
- (c) That the Stormwater Credit Program as outlined in Appendix "B" to Report FCS22043(c) be approved effective April 1, 2026, with a funding source referred to the 2026 Water, Wastewater and Stormwater Rate Supported Budget;
- (d) That staff develop the 2026-2035 Water, Wastewater and Stormwater Rate Supported Budget incorporating the Stormwater Rate Structure and the Stormwater Fee Financial Incentives Program;
- (e) That the Hamilton Water Divisional staff complement be increased by one (1) Full Time Equivalent (FTE) for a Project Manager position at an annualized cost of \$124K up to an upset limit of \$250K, be funded by the Storm Sewer Reserve (108010) up to December 31, 2025, and thereafter, that funding be incorporated into the 2026 Water, Wastewater and Stormwater Rate Supported Budget;
- (f) That the City Solicitor be authorized and directed to prepare all necessary by-laws, for Council approval, in order to implement Recommendations (a) through (c) of Report FCS22043(c);
- (g) That the single source procurement of Green Venture as the program administrator for the Residential Stormwater Subsidy

Program, pursuant to Procurement Policy #11 – Non-competitive Procurements be approved;

- (h) That the General Manager, Public Works, be authorized to negotiate, enter into and execute a contract and any ancillary documents required to procure Green Venture as the administrator of the Residential Stormwater Subsidy Program in a form satisfactory to the City Solicitor;
- (i) That the development and implementation of a Communications strategy with an upset limit of \$100K be funded from the Storm Sewer Reserve (108010);
- (j) That temporary Corporate Services staffing with an upset limit of \$25K be funded from the Storm Sewer Reserve (108010)
- (k) That the single source procurement of AECOM Canada Ltd as external consultants for the Stormwater Funding implementation be extended through to December 31, 2026, with an upset limit of \$50K be funded from the Storm Sewer Reserve (108010);
- (l) That the subject matter regarding the implementation of a Stormwater Incentive Program be identified as complete and removed from the General Issues Committee Outstanding Business List.

Upon Committee's request Sub-Section (a) was voted on separately.

For disposition of Sub-Section (a), refer to Item 1(i).

(3) (McMeekin/Tadeson)

- (a) That the balance of Report FCS22043(c), Stormwater Fee Financial Incentives Program, be DEFERRED to the July 8, 2024 General Issues Committee meeting; and,
- (b) That no further delegation requests will be accepted at the July 8, 2024 General Issues Committee meeting, respecting Report FCS22043(c), Stormwater Fee Financial Incentives Program.

Result: MOTION, DEFEATED by a vote of 5 to 8, as follows:

No	-	Mayor Andrea Horwath
No	-	Ward 1 Councillor Maureen Wilson
No	-	Ward 2 Councillor Cameron Kroetsch
No	-	Ward 3 Councillor Nrinder Nann

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No	-	Ward 4	Councillor Tammy Hwang
Absent	-	Ward 5	Councillor Matt Francis
Yes	-	Ward 6	Councillor Tom Jackson
Yes	-	Ward 7	Councillor Esther Pauls
No	-	Ward 8	Councillor J. P. Danko
Yes	-	Ward 9	Councillor Brad Clark
Conflict	-	Ward 10	Councillor Jeff Beattie
Yes	-	Ward 11	Councillor Mark Tadeson
No	-	Ward 12	Councillor Craig Cassar
No	-	Ward 13	Councillor Alex Wilson
Absent	-	Ward 14	Councillor Mike Spadafora
Yes	-	Ward 15	Councillor Ted McMeekin

For disposition of the balance of Report FCS22043(c), refer to Item 1(ii).

(ii) Affordable Housing Development Project Stream Evaluation Process (HSC23028(d) / FCS23055(b) / PED23099(d)) (City Wide) (Added Item 8.2)

(1) (M. Wilson/Hwang)

That the staff presentation respecting Report HSC23028(d) / FCS23055(b) / PED23099(d), Affordable Housing Development Project Stream Evaluation Process, be waived.

Result: MOTION, CARRIED by a vote of 10 to 2, as follows:

Yes	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
No	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
No	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
Absent	-	Ward 15 Councillor Ted McMeekin

(2) (Kroetsch/Pauls)

That the presentation prepared by staff respecting Report HSC23028(d) / FCS23055(b) / PED23099(d), Affordable Housing Development Project Stream Evaluation Process, be received.

Result: MOTION, CARRIED by a vote of 12 to 0, as follows:

Yes	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Yes	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
Absent	-	Ward 15 Councillor Ted McMeekin

For disposition of this matter, refer to Item 2.

(j) DISCUSSION ITEMS (Item 10)

(i) Hamilton Police Services and Hamilton Public Library Surpluses and Deficits (FCS24023) (City Wide) (Outstanding Business List Item) (Item 10.5) (Item 10.3)

(1) (Cassar/Danko)

That consideration of Report FCS24023, respecting Hamilton Police Services and Hamilton Public Library Surpluses and Deficits, be DEFERRED until after Closed Session.

Result: MOTION, CARRIED by a vote of 11 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson

Yes	-	Ward 7	Councillor Esther Pauls
Yes	-	Ward 8	Councillor J. P. Danko
Absent	-	Ward 9	Councillor Brad Clark
Yes	-	Ward 10	Councillor Jeff Beattie
Yes	-	Ward 11	Councillor Mark Tadeson
Yes	-	Ward 12	Councillor Craig Cassar
Yes	-	Ward 13	Councillor Alex Wilson
Absent	-	Ward 14	Councillor Mike Spadafora
Yes	-	Ward 15	Councillor Ted McMeekin

For disposition of this matter, refer to Item 9.

(k) GENERAL INFORMATION / OTHER BUSINESS (Item 13)

(i) Amendments to the Outstanding Business List (Item 13.1):

(Cassar/McMeekin)

That the amendment to the Outstanding Business List, be approved, as follows:

(a) Items Considered Complete and Needing to be Removed (Item 13.1(a)):

41 South Street West, Dundas, Disposition Strategy
(PED23151) (Ward 13)
Added: July 10, 2023 at GIC (Item 10.1)
Completed: May 15, 2024 at GIC (Item 14.2)

Result: MOTION, CARRIED by a vote of 11 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

**(ii) Impact of Development Charges Freeze on City of Hamilton Finances
(Added Item 13.2)**

Councillor Danko asked questions of finance and planning staff respecting the impact of a Development Charges freeze on the City of Hamilton's finances.

(I) PRIVATE & CONFIDENTIAL (Item 14) (Continued)

Committee determined that discussion of Item 14.1 was not required in Closed Session; therefore, the matter was addressed in Open Session, as follows:

(i) Closed Session Minutes – May 15, 2024 (Item 14.1)

(McMeekin/Pauls)

That the Closed Session minutes of the May 15, 2024 General Issues Committee meeting, be approved and remain confidential.

Result: MOTION, CARRIED by a vote of 11 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

(ii) (Danko/Pauls)

That Committee move into Closes Session for Item 14.2 pursuant to Section 9.3, Sub-section (f) of the City's Procedural By-law 21-021, as amended, and Section 239(2) sub-section (f) of the *Ontario Municipal Act, 2001*, as amended, as the subject matter pertains to advice that is subject to solicitor-client privilege, including communications necessary for that purpose.

Result: MOTION, CARRIED by a vote of 11 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar
Yes	-	Ward 13 Councillor Alex Wilson
Absent	-	Ward 14 Councillor Mike Spadafora
Yes	-	Ward 15 Councillor Ted McMeekin

(iii) Confidential Appendix "B" to Item 10.5 - Hamilton Police Services and Hamilton Public Library Surpluses and Deficits (FCS24023) (City Wide) (Outstanding Business List Item) (Item 14.2)

For disposition of this matter, refer to Item 9.

(m) ADJOURNMENT (Item 15)

(Pauls/Beattie)

That there being no further business, the General Issues Committee be adjourned at 4:49 p.m.

Result: MOTION, CARRIED by a vote of 11 to 0, as follows:

Absent	-	Mayor Andrea Horwath
Yes	-	Ward 1 Councillor Maureen Wilson
Yes	-	Ward 2 Councillor Cameron Kroetsch
Absent	-	Ward 3 Councillor Nrinder Nann
Yes	-	Ward 4 Councillor Tammy Hwang
Absent	-	Ward 5 Councillor Matt Francis
Yes	-	Ward 6 Councillor Tom Jackson
Yes	-	Ward 7 Councillor Esther Pauls
Yes	-	Ward 8 Councillor J. P. Danko
Absent	-	Ward 9 Councillor Brad Clark
Yes	-	Ward 10 Councillor Jeff Beattie
Yes	-	Ward 11 Councillor Mark Tadeson
Yes	-	Ward 12 Councillor Craig Cassar

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Yes	-	Ward 13	Councillor Alex Wilson
Absent	-	Ward 14	Councillor Mike Spadafora
Yes	-	Ward 15	Councillor Ted McMeekin

Respectfully submitted,

Deputy Mayor Tammy Hwang
Chair, General Issues Committee

Angela McRae
Legislative Coordinator
Office of the City Clerk

From: Darcy Field

Sent: Monday, May 27, 2024 1:52 PM

To: McRae, Angela <Angela.McRae@hamilton.ca>

Subject: Re: This one kinda cleaned their mess / Moving Day at Bayfront park

Yes I will make a comment regarding the multiple photos I sent.

These are several photos I took on a beautiful Sunday May 26th at Bayfront Park where kids played around the scattered waste of needles, propane cylinders and other hazardous materials. Each photo is of an encampment that packed up and moved to another area of the park leaving their garbage behind. I counted 5 that moved locations that weekend. As u will see in the one photo an encampment resident is dumping her garbage bins on the ground before moving to a clean site. It seems our unhoused neighbours don't have to follow any rules and city council has put in a protocol with no resources to enforce laws, bylaws, or keep are parks safe or clean.

Many moved to clean sites over the weekend but left some stuff behind.





From: clerk@hamilton.ca
To: [McRae, Angela; Carson, Katie](mailto:McRae_Angela@Carson_Katie)
Subject: FW: New bayfront garbage pics.
Date: Wednesday, May 29, 2024 3:01:00 PM
Attachments: [image2.png](#)
[image3.png](#)

Magda Green
Administrative Assistant II to the City Clerk
Office of the City Clerk, Corporate Services
City of Hamilton
magda.green@hamilton.ca

City Hall is located on the ancestral territory of the Haudenosaunee Confederacy, the Anishinaabe and many other Indigenous peoples. It is also covered by the Dish with One Spoon Wampum agreement, which asks that all sharing this territory do so respectfully and sustainably in community.

From: Darcy Field [REDACTED]
Sent: May 29, 2024 2:58 PM
To: clerk@hamilton.ca
Subject: New bayfront garbage pics.

External Email: Use caution with links and attachments

Was cleaned on Monday but it now Wednesday









Sent from my iPhone

From: clerk@hamilton.ca
To: [McRae, Angela](#); [Carson, Kate](#)
Subject: FW: Garbage piling up at Barton and Tiffany
Date: Monday, June 10, 2024 9:15:16 AM

Magda Green
Administrative Assistant II to the City Clerk
Office of the City Clerk, Corporate Services
City of Hamilton
magda.green@hamilton.ca

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From: Darcy Field [REDACTED]
Sent: June 10, 2024 6:29 AM
To: clerk@hamilton.ca
Subject: Fwd: Garbage piling up at Barton and Tiffany

External Email: Use caution with links and attachments

Sent from my iPhone

Begin forwarded message:

From: Darcy Field [REDACTED]
Date: June 10, 2024 at 6:28:02 AM EDT
To: Ward 12 Office <ward12@hamilton.ca>, ward14@hamilton.ca, Ward 1 Office <ward1@hamilton.ca>, Ward 2 <ward2@hamilton.ca>, ward3@hamilton.ca, ward4@hamilton.ca, ward5@hamilton.ca, ward6@hamilton.ca, ward7@hamilton.ca, ward8@hamilton.ca, ward9@hamilton.ca, ward10@hamilton.ca, ward11@hamilton.ca, ward13@hamilton.ca, ward15@hamilton.ca
Subject: Garbage piling up at Barton and Tiffany

One year of protocol and this site still going.





Sent from my iPhone

From: clerk@hamilton.ca
To: [McRae, Angela](#); [Carson, Katie](#)
Subject: FW: Who lives in these encampments?
Date: Tuesday, May 28, 2024 1:25:26 PM
Attachments: [IMG_3429.png](#)

Magda Green

Administrative Assistant II to the City Clerk

Office of the City Clerk, Corporate Services
City of Hamilton
magda.green@hamilton.ca

City Hall is located on the ancestral territory of the Haudenosaunee Confederacy, the Anishinaabe and many other Indigenous peoples. It is also covered by the Dish with One Spoon Wampum agreement, which asks that all sharing this territory do so respectfully and sustainably in community.

-----Original Message-----

From: phil pidgeon [REDACTED]
Sent: May 28, 2024 1:24 PM
To: clerk@hamilton.ca
Subject: Who lives in these encampments?

External Email: Use caution with links and attachments

They are a bunch of criminals and drug addicts who terrorize neighborhoods and disguise themselves as society's most vulnerable. When is council going to understand that all the encampment protocol is doing is giving our parks to criminal organizations to run their operations rent free and risk free. Wake up council and start looking out for the hard working taxpayer or we will be kicking you all to the curb during the next election.

Phil Pidgeon

From: phil pidgeon [REDACTED]
Sent: June 8, 2024 12:08 PM
To: clerk@hamilton.ca
Cc: Ward15@hamimton.ca
Subject: Homeless in our parks

Virgin Wi-Fi

12:04 PM



facebook.com

← Hamilton Neighbourhoo... ... ↗ 🔍

Everybody that supports this [REDACTED] homelessness in our public parks needs to wake the [REDACTED] up. Our kids cant even play safely or feel comfortable playing in public park now because all the homeless camp out causing a mess [REDACTED] them, and everybody that support camping in public parks! [REDACTED] and for the ones that are going to ask, where should they go? I don't give a [REDACTED] let them live at your house or go in a big empty field. That is not a public park.



From: [REDACTED]
To: [McRae, Angela](#)
Subject: email submission for June 19 General Issues Committee
Date: Monday, June 3, 2024 11:48:01 PM

External Email: Use caution with links and attachments

The so-called protocol for encampments is a failure, which many of us knew it would be when it was announced last year. It's lacking in compassion for both the unhoused and the housed. It's been almost a year and conditions have worsened in the city. The city needs to immediately take steps to stem the damage their protocol has caused.

1. For people withOUT mental or drug issues. Rent space for dorm-style housing. No need to build a building, there seems to be empty property in the city already. It should not take that long to put something like this together. Get each person a small dorm room and install a cafeteria. Shared showers and washrooms. Here they can live until they can find something better. Charge them a portion of their welfare cheque for food and board. Until this is ready (may take a few months), rent a building where you can put partition walls --- this can be put together in a week if needed. Perhaps a few church basements. Remember how quickly the COVID hospital rooms went up?
2. For those with drug issues, offer treatment for recovery (which would come with a place to stay). If they refuse, do not provide housing and do not allow them to live in parks. The law requires you make the offer, not that you force compliance.
3. For those with mental illness, get St Joe's Hospital to help. If needed, put up extra trailers on their grounds until more permanent spaces can be built. We're going to need more beds for a while to come, I suspect.
4. Make camping in city parks illegal again. Enforce it. Clean the parks so they are safe for children again. Remove people camping on sidewalks and in store doorways. Make it known through all media channels that things have changed in Hamilton and we are no longer Drug City.

Guyline Spencer

Submitted on Tue, 06/11/2024 - 12:24

Submitted by: Anonymous

Submitted values are:

Committee Requested

Committee

General Issues Committee

Will you be delegating in-person or virtually?

In-person

Will you be delegating via a pre-recorded video?

No

Requestor Information

Jelena Vermilion [she/her]

Sex Workers' Action Program (SWAP) Hamilton

SWAPHamilton@gmail.com

Preferred Pronoun

she/her

Reason(s) for delegation request

I wish to speak to the June 12th item 6.2, City of Hamilton Integrity Commissioner's Report Regarding Private Complaint re: Councillor Danko Tweet (Re) - DGB-HamiltonICI-2024-01, May 27, 2024. via oral submission.

Will you be requesting funds from the City?

No

Will you be submitting a formal presentation?

No

Submitted on Tue, 06/11/2024 - 18:01

Submitted by: Anonymous

Submitted values are:

Committee Requested

Committee
General Issues Committee

Will you be delegating in-person or virtually?
In-person

Will you be delegating via a pre-recorded video?
No

Requestor Information

Requestor Information
Kelly Oucharek

Reason(s) for delegation request
To speak regarding the encampment protocol on June 19th
Can I submit photos as well with my reading? please advise

Will you be requesting funds from the City?
No

Will you be submitting a formal presentation?
No

Submitted on Wed, 06/12/2024 - 08:58

Submitted by: Anonymous

Submitted values are:

Committee Requested

Committee
General Issues Committee

Will you be delegating in-person or virtually?
Virtually

Will you be delegating via a pre-recorded video?
No

Requestor Information

Requestor Information
Jacqueline Stagen

Preferred Pronoun
she/her

Reason(s) for delegation request
Comments regarding encampment protocol

Will you be requesting funds from the City?
No

Will you be submitting a formal presentation?
No

Submitted on Mon, 05/27/2024 - 22:39

Submitted by: Anonymous

Submitted values are:

Committee Requested

Committee
General Issues Committee

Will you be delegating in-person or virtually?
Virtually

Will you be delegating via a pre-recorded video?
No

Requestor Information

Requestor Information
Hafeez Hussain

Preferred Pronoun
he/him

Reason(s) for delegation request
Putting Taxpayers First - Navigating City Hall

Navigating City Hall is quite complex, and I have identified issues in which city departments do not collabrate effectively to better service residents needs. I would like to delegate a request on ways Hamilton can use agility in having taxpayers navigate city hall more effectively.

Will you be requesting funds from the City?
No

Will you be submitting a formal presentation?
Yes

Submitted on Sun, 06/02/2024 - 14:21

Submitted by: Anonymous

Submitted values are:

Committee Requested

Committee
General Issues Committee

Will you be delegating in-person or virtually?
In-person

Will you be delegating via a pre-recorded video?
No

Requestor Information

Requestor Information
NaWalka Geeshy Meegwun (lyndongearge) & Audrey Davis
Circle of Beads - City of Hamilton Urban Indigenous Community Consultation Circle
100 Main Street E., Suite 203
Hamilton, Ontario . L8N 3W4
lyndon.george@hclc.clcj.ca
289 680 4544

Reason(s) for delegation request
Elected Indigenous Council Seat Request - conversation

Will you be requesting funds from the City?
No

Will you be submitting a formal presentation?
No

Submitted on Mon, 06/03/2024 - 21:08

Submitted by: Anonymous

Submitted values are:

Committee Requested

Committee
General Issues Committee

Will you be delegating in-person or virtually?
In-person

Will you be delegating via a pre-recorded video?
No

Requestor Information

Requestor Information
Miss Moore
Love to Live

Preferred Pronoun
she/her

Reason(s) for delegation request
Subject: Request for Audience to Address Systemic Injustice and Lack of Support for Individuals with Disabilities in Hamilton

Dear City Hall Members/Delegation,

I am writing to request an audience with you to discuss an urgent matter affecting our community: systemic injustice and the lack of support for individuals living with disabilities in Hamilton.

My personal experience post a motor vehicle accident which has rendered me a person living with a disability reveals that there are significant disparities in access to resources, opportunities, and support systems for this vulnerable population. As residents of Hamilton, it is our collective responsibility to ensure that all members of our community are treated with dignity, respect, and provided with the necessary support to thrive.

Unfortunately, systemic barriers continue to hinder the full participation and inclusion of individuals with disabilities in various aspects of society.

During our meeting, I would like to bring attention to specific instances of injustice and explore potential solutions to address these issues. By working collaboratively with city hall members and stakeholders, we can develop policies and initiatives that promote inclusivity, accessibility, and equity for all residents.

I believe that by coming together to address these challenges, we can create a more just and inclusive community where everyone has the opportunity to reach their full potential. Your time and attention to this matter are greatly appreciated, and I look forward to the opportunity to discuss these important issues with you.

Thank you for your consideration.

Sincerely,
Rachel Moore

Will you be requesting funds from the City?

Yes

Will you be submitting a formal presentation?

Yes

Submitted on Thu, 05/23/2024 - 17:17

Submitted by: Anonymous

Submitted values are:

Committee Requested

Committee
General Issues Committee

Will you be delegating in-person or virtually?
In-person

Will you be delegating via a pre-recorded video?
No

Requestor Information

Requestor Information
Barbara Weigelt

Preferred Pronoun
she/her

Reason(s) for delegation request

Address the unhoused/encampment issues in Hamilton and questions regarding council's action plan. Concerns for the safety and well being of the unhoused as well as the public. Concerns about specific encampment sites and why they are allowed, in very busy public spaces. I have witnessed abuse at one site in Gage Park. Questions regarding future "sanctioned " sites and council's plans for such. Concerns of public garbage, drug paraphernalia, rats, foul language. Questions of plans for city/provincial/federal governments to address mental health and addiction issues in order to permanently correct or reduce the above issues

Will you be requesting funds from the City?
No

Will you be submitting a formal presentation?
No

Submitted on Sat, 05/25/2024 - 17:55

Submitted by: Anonymous

Submitted values are:

Committee Requested

Committee
General Issues Committee

Will you be delegating in-person or virtually?
In-person

Will you be delegating via a pre-recorded video?
No

Requestor Information

Requestor Information
Mike Rinaldi
Short Straw Producitons

Preferred Pronoun
he/him

Reason(s) for delegation request
To be heard on how the Gage Park Encampments are affecting my neighbourhood and family.

Will you be requesting funds from the City?
No

Will you be submitting a formal presentation?
No

Submitted on Sat, 05/25/2024 - 18:09

Submitted by: Anonymous

Submitted values are:

Committee Requested

Committee
Encampments

Will you be delegating in-person or virtually?
In-person

Will you be delegating via a pre-recorded video?
No

Requestor Information

Requestor Information
Stephen Felker

Preferred Pronoun
he/him

Reason(s) for delegation request
Discuss Gage Park Encampments

Will you be requesting funds from the City?
No

Will you be submitting a formal presentation?
No

Submitted on Thu, 05/30/2024 - 16:07

Submitted by: Anonymous

Submitted values are:

Committee Requested

Committee
General Issues Committee

Will you be delegating in-person or virtually?
In-person

Will you be delegating via a pre-recorded video?
No

Requestor Information

Requestor Information
Denise Hancock

Preferred Pronoun
she/her

Reason(s) for delegation request
Represent Simcoe St West residents by Bayfront Park to address health and safety concerns of nearby encampments. Several of my neighbours are elderly and not able to attend and are not able to use email. We have all been impacted by this and will provide a 5 minute succinct talk on how it affects us along with a proposed solution.

I was not sure what committee box to check so I used the emergency box since the mayor has declared this issue as an emergency. If this is not correct, please contact me. Also, if I am not approved to speak, please contact me so I can provide a written submission.

Will you be requesting funds from the City?
No

Will you be submitting a formal presentation?
No



CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Corporate Asset Management

TO:	Mayor and Members General Issues Committee
COMMITTEE DATE:	June 19, 2024
SUBJECT/REPORT NO:	Asset Management Plans (PW23073(b)) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Jasmine MacDonald (905) 546-2424 Ext. 2461
SUBMITTED BY:	Andrea Vargas Acting Director, Corporate Asset Management Public Works Department
SIGNATURE:	

RECOMMENDATION

- (a) That the Corporate Asset Management Plans, attached as appendices “A”, “B”, “C”, “D”, “E”, “F”, “G”, “H”, “I”, “J”, “K”, “L”, “M” and “N” to Report PW23073(b), be approved as required by Ontario Regulation 588/17: Asset Management for Municipal Infrastructure;
- (b) That the Asset Management Plans, attached as appendices “A”, “B”, “C”, “D”, “E”, “F”, “G”, “H”, “I”, “J”, “K”, “L”, “M” and “N” to Report PW23073(b), subject to the approval of recommendation (a), be posted in a designated area on the City’s website, as required under Ontario Regulation 588/17.

EXECUTIVE SUMMARY

This is the first iteration of Asset Management Plans for the following 14 asset categories including:

- Appendix “A” to Report PW23073(b) Animal Services, Licensing and Municipal Law Enforcement
- Appendix “B” to Report PW23073(b) Hamilton Municipal Cemeteries;
- Appendix “C” to Report PW23073(b) Children’s and Community Services;
- Appendix “D” to Report PW23073(b) CityHousing Hamilton;
- Appendix “E” to Report PW23073(b) Corporate Asset Management (Fleet, EAM);

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- Appendix “F” to Report PW23073(b) Corporate Facilities and Energy Management;
- Appendix “G” to Report PW23073(b) Forestry and Horticulture;
- Appendix “H” to Report PW23073(b) Information Technology;
- Appendix “I” to Report PW23073(b) Long-Term Care;
- Appendix “J” to Report PW23073(b) Natural Assets;
- Appendix “K” to Report PW23073(b) Parks and Recreational Trails;
- Appendix “L” to Report PW23073(b) Public Health;
- Appendix “M” to Report PW23073(b) Recreation; and,
- Appendix “N” to Report PW23073(b) Tourism, Museums and Culture.

These were completed by the Corporate Asset Management Division, in partnership with asset owners and key stakeholders across the City. The intent of these first plans is to meet *Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure* requirements, which include establishing current levels of service and setting a benchmark for the asset groups to identify continuous improvement items for the next iteration of the Plans.

A key output of an Asset Management Plan is the infrastructure funding gap. Over the 10-year planning horizon, Hamilton’s funding gap for these 14 combined asset categories is estimated to be \$120.4 million annually or \$1.2 billion over 10 years with low-medium data confidence.

The overall Citywide funding gap identified from these first plans as presented in Reports PW22048, PW23073, PW23073(a) and PW23073(b) for both Core and Non-core assets is \$383 million annually or \$3.8 billion over 10 years with a low-medium data confidence rating.

Moving forward, the City will continue to improve its asset lifecycle data, which will allow for better-informed choices as to how best to mitigate impacts and address the funding gap itself. This gap in funding will be refined over the next year to improve the confidence and accuracy of the forecasts in alignment with Ontario Regulation 588/17 requirements and present proposed Levels of Service with a funding strategy by 2025.

There are no specific financial commitments required at this time from these Asset Management Plans, however, findings from Report PW23073(b) will be used to inform the 2025 tax-supported budget process.

Alternatives for Consideration – See Page 10**FINANCIAL – STAFFING – LEGAL IMPLICATIONS**

Financial: The approval of these Asset Management Plans, attached as Appendices “A”, “B”, “C”, “D”, “E”, “F”, “G”, “H”, “I”, “J”, “K”, “L”, “M” and “N” to Report

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SUBJECT: Asset Management Plans (PW23073(b)) (City Wide) – Page 3 of 12

PW23073(b), is required for the City of Hamilton to qualify for future infrastructure funding grants.

There are no specific financial commitments required at this time from these Asset Management Plans; However, the findings from Report PW23073(b) will be used to inform the 2025 tax-supported budget process.

Staffing: N/A

Legal: N/A

HISTORICAL BACKGROUND

Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure, filed under the *Infrastructure for Jobs and Prosperity Act, 2015*, was enacted on January 1, 2018. Expanding upon the Province's 10-year infrastructure plan, "*Building Together: Guide for Municipal Asset Management Plans (2012)*", Ontario Regulation 588/17 outlines the requirements and deadlines for municipal asset management plans and policies.

Key requirements of Ontario Regulation 588/17 include the preparation of a strategic asset management policy and phased implementation of asset management plans:

(1) Strategic Asset Management Policy

The deadline for Strategic Asset Management Policy implementation was July 1, 2019. The policy requires municipal Council endorsement, to be reviewed and updated every five years. City Council approved the Corporate Asset Management Policy (PW19053) in June 2019, fulfilling this requirement. Council approved an updated Policy in June 2023 through report PW23044, now recognizing all assets owned by the City.

(2) Corporate Asset Management Plan

The Corporate Asset Management Plan has three implementation deadlines, as set out by Ontario Regulation 588/17:

- (i) July 1, 2022 – Preparation of an Asset Management Plan, including current Levels of Service, with respect to a municipality's core municipal infrastructure, defined as water, wastewater, stormwater, roads, bridges, and culverts. City Council approved these plans in June 2022 (Appendices "B" and "C" to report PW22048), fulfilling this requirement.
- (ii) July 1, 2024 – Preparation of an Asset Management Plan with respect to its other municipal infrastructure assets. City Council approved some of these

SUBJECT: Asset Management Plans (PW23073(b)) (City Wide) – Page 4 of 12

plans in December 2023 (Appendices “A”, “B” and “C” to report PW23073) and in April 2024 (Appendices “A”, “B”, “C”, “D” and “E” to report PW23073(a)) with the remaining asset management plans to be presented in June 2024 via report PW23073(b).

- (iii) July 1, 2025 –Preparation of an Asset Management Plan, to include proposed Levels of Service and associated financial strategy, with respect to its municipal infrastructure assets.

Ontario Regulation 588/17 also outlines that a municipality shall review and update asset management plans at least every five years.

The Asset Management Plans attached as Appendices “A”, “B”, “C”, “D”, “E”, “F”, “G”, “H”, “I”, “J”, “K”, “L”, “M” and “N” to Report PW23073(b), are the outcome of efforts from staff across the City who are involved with managing municipal infrastructure assets, which include finance, technical service areas and operations staff.

The process of developing comprehensive Asset Management Plans was a structured approach which included multiple meetings and workshops with each of these service areas included in the scope of the Asset Management Plans.

The plans contain an analysis of the services provided, history, voice of the customer, lifecycle activities, changing demand, climate impacts, risk, levels of service (both current and proposed where possible), financial impacts and opportunities for continuous improvement.

Previous reports pertinent to this recommendation:

- Asset Management Plans Recommendation Report PW23073(a) – April 3, 2024
 - Hamilton Street Railway (HSR)
 - Hamilton Fire Department
 - Hamilton Paramedic Service
 - Corporate Real Estate Office
 - Hamilton Public Library
- Asset Management Plans Recommendation Report PW23073 – December 6, 2023.
 - Waste Management
 - Hamilton Police Service
 - Hamilton Municipal Parking System
- Strategic Asset Management Policy and Corporate Asset Management Program Update Recommendation Report PW23044 – June 14, 2023;
- Core Asset Management Plan Recommendation Report PW22048 – June 15, 2022;

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- Water
 - Wastewater
 - Storm Water
 - Roads
 - Engineered Structures
- Corporate Asset Management Information Report PW22037 – May 18, 2022;
 - Strategic Asset Management Policy PW19053 – June 17, 2019; and
 - Public Works Asset Management Plan – Provincial Requirement PW14035 – April 7, 2014.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

Ontario Regulation. 588/17 came into effect on January 1, 2018. It requires the City to develop a comprehensive Corporate Asset Management Plan based on a phased approach with three deadlines of July 1, 2022, July 1, 2024, and July 1, 2025. July 1, 2022, and July 1, 2024, deadlines are where 'Core' assets (water, wastewater, stormwater, road, bridges, and culverts) and all other City infrastructure assets, respectively, are required to have an asset management plan, documenting current levels of service. The final deadline requires the documentation of proposed levels of service and financial strategies to fund these expenditures.

RELEVANT CONSULTATION

As part of the Asset Management Plan preparation and development, various workshops and meetings were held with relevant asset owner groups and stakeholders to ensure that all pertinent information had been captured accurately.

The following departments and divisions were consulted:

Table 1: Departments and Divisions Consulted

DIVISION	ASSOCIATED ASSET MANAGEMENT PLAN(S)
Licensing and Bylaw Enforcement	Animal Services, Licensing and Municipal Law Enforcement
Children's and Community Services	Children's and Community Services
CityHousing Hamilton	CityHousing Hamilton
Corporate Asset Management	Corporate Asset Management (Fleet and EAM)
Corporate Facilities and Energy Management	Corporate Facilities and Energy Management
Corporate Services Financial Planning and Policy	Information Technology
Division	Associated Asset Management Plan(s)

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Environmental Services	Parks and Recreational Trails Forestry and Horticulture Hamilton Municipal Cemeteries
Long-Term Care	Long-Term Care
Public Health Services	Public Health
Recreation	Recreation
Tourism, Museums and Culture	Tourism, Museums and Culture
Multiple Divisions	Natural Assets

ANALYSIS AND RATIONALE FOR RECOMMENDATION

Ontario Regulation 588/17 – Asset Management Planning for Municipal Infrastructure, under the Infrastructure for Jobs and Prosperity Act, 2015, requires each municipality to have asset management plans written and approved by Council for all City assets. As such, the Corporate Asset Management Division has worked with asset groups across the organization to develop Asset Management Plans as attached to Report PW23073(b).

PW23073(b), if approved by Council, fulfils the City's requirement under Ontario Regulation 588/17 to complete Asset Management Plans to current levels of service for all assets by July 1, 2024.

Like many municipalities, the City of Hamilton is modifying its approach to asset management and is progressively adopting a service-focused view of City infrastructure and investments. By integrating customer-centric levels of service framework, metrics, and targets, and weighing investments based on service impact and risk, the City will establish a clear relationship between infrastructure investment and service outcomes.

A key output of an Asset Management Plan is the infrastructure funding gap. Hamilton's current infrastructure position represents a social investment that has been built up progressively over the last 150 years predominantly due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

Hamilton's challenge is to determine how it will manage the funding gap over the long term to ensure that the City can continue to deliver its services sustainably today and across future generations.

Over the next 10-year period Hamilton's funding gap for these 14 asset management plans is estimated to be \$120.4M annually (see Table 2) with a low-medium data confidence. Moving forward, the City will continue to improve its asset lifecycle data, and this will allow for more informed choices as to how best to mitigate any impacts and address the funding gap itself. This gap in funding will be refined over the next year to improve the confidence and accuracy of the forecasts in alignment with Ontario

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Regulation 588/17 requirements and to present proposed levels of service and a funding strategy by 2025.

It should be noted that this funding gap relates to Animal Services, Licensing and Municipal Law Enforcement, Cemeteries, Children’s and Community Services, CityHousing Hamilton, Corporate Asset Management (Fleet, EAM), Corporate Facilities and Energy Management, Forestry and Horticulture, Information Technology, Long-Term Care, Natural Assets, Parks and Recreational Trails, Public Health, Recreation and Tourism, Museums and Culture asset groups only and as the City applies asset management practices more robustly, it is expected that this gap may increase.

Table 2: Summary of Findings

ASSET CATEGORY	REPLACEMENT VALUE	AVERAGE AGE (YEARS)	AVERAGE CONDITION	RENEWAL FUNDING RATIO	10-YEAR O&M AND RENEWAL FUNDING RATIO	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS
Animal Services, Licensing and Municipal Law Enforcement	\$9.4M	26 Years (43%)	4-POOR	80%	94%	\$1.2M	\$12.0M
Data Confidence	Medium	High	High	Low	Low	Low	Low
Cemeteries	\$29.5M	33 years (31%)	3-FAIR	29%	86%	\$1.0M	\$10.0M
Data Confidence	Low	Low	Low	Low	Low	Low	Low
Children’s and Community Services	\$10.6M	99 years (68%)	3-GOOD	76%	100%	\$0.1M	\$1.3M
Data Confidence	Medium	High	Medium	Medium	Medium	Medium	Medium
CityHousing Hamilton	\$2.95B	40 years (46%)	3-FAIR	7%	56%	\$63.0M	\$630.0M
Data Confidence	Medium	Medium	Medium	Medium	Low	Low	Low
* Corporate Asset Management (Fleet, EAM)	\$87.4M	26 years (39%)	4-POOR	55%	87%	\$2.5M	\$25.4M
Data Confidence	Medium	Medium	Medium	Low	Low	Low	Low
* Corporate Facilities and Energy Management	\$912.7M	39 years (18%)	2-GOOD	42%	84%	\$4.6M	\$46.0M

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ASSET CATEGORY	REPLACEMENT VALUE	AVERAGE AGE (YEARS)	AVERAGE CONDITION	RENEWAL FUNDING RATIO	10-YEAR O&M AND RENEWAL FUNDING RATIO	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS
Data Confidence	Medium	High	Medium	Medium	Medium	Medium	Medium
Forestry and Horticulture	\$390.0M	26 years (48%)	2-GOOD	95%	91%	\$0.17M	\$1.7M
Data Confidence	Low	High	Low	Low	Medium	Low	Low
* Information Technology	\$25.2M	7 Years (16%)	3-FAIR	59%	92%	\$2.0M	\$19.6M
Data Confidence	Medium	Medium	Low	Low	Medium	Medium	Medium
Long-Term Care	\$319.0M	24 years (51%)	2-GOOD	98%	97%	\$2.5M	\$24.7M
Data Confidence	Medium	High	High	Medium	Medium	Medium	Medium
Parks and Recreational Trails	\$643.2M	28 years (45%)	3-FAIR	35%	71%	\$15.5M	\$155.0M
Data Confidence	Medium	Low	Low	Low	Low	Low	Low
Public Health	\$3.4M	5 years (36%)	3-FAIR	67%	100%	\$0.1M	\$1.3M
Data Confidence	Low	High	Medium	Low	Medium	Medium	Medium
Recreation	\$1.57B	39 years (49%)	3-FAIR	94%	74%	\$22.9M	\$229.0M
Data Confidence	Medium	Medium	Medium	Low	Low	Low	Low
Tourism, Museums and Culture	\$446.3M	147 years	2-GOOD	92%	76%	\$4.8M	\$48.0M
Data Confidence	Low	High	Medium	High	Medium	Medium	Medium
TOTAL	\$7.4B	Funding Gap \$120.4 annually (data confidence low-med)				\$120.4M	\$1.2B

* These service areas are both Asset Owners and internal service providers across the City. The Asset Management Plans for these areas include only the assets needed to deliver their respective services.

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It is important to note that there is a Natural Assets Asset Management Plan that was completed but is not summarized in the table above because natural assets do not always follow traditional asset or financial management practices. Currently, the known natural asset registry information the City can report is the estimated quantity. Replacement value and condition are not yet able to be quantified, and the average age would not be applicable for natural assets. In addition, the City has not yet quantified the lifecycle activities and budget required to manage these assets, so the funding gap and financial ratios were not yet able to be quantified. These values will be incorporated into future iterations of the plan as the City makes progress on the Natural Asset Management Roadmap described in the Natural Assets Asset Management Plan.

Table 3 provides a summary of Asset Management Plans brought forward to Council between 2022 and 2024, their respective Recommendation Report Numbers and the overall City-wide funding gap identified of \$383 million annually with a low-medium data confidence rating.

Table 3: City-Wide Replacement Value and Funding Gap

REPORT NUMBER	ASSET MANAGEMENT PLANS	REPLACEMENT VALUE (B)	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS
Core Assets June 2022 - PW22048	Water Wastewater Stormwater Roads Engineered Structures	\$21.3	\$195.9	\$1.96B
Non-Core Assets December 2023 - PW23073	Waste Management Hamilton Police Services Municipal Parking System	\$1.0	\$24.8	\$248M
Non-Core Assets April 2024 - PW23073(a)	Hamilton Street Railway Hamilton Fire Department Hamilton Paramedics Corporate Real Estate Office Hamilton Public Library	\$1.3	\$41.8	\$418M

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REPORT NUMBER	ASSET MANAGEMENT PLANS	REPLACEMENT VALUE (B)	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS (M)
Non-Core Assets June 2024 - PW23073(b)	Animal Services, Licensing and Municipal Law Enforcement Cemeteries Children's and Community Services CityHousing Hamilton Corporate Asset Management (Fleet, EAM) Corporate Facilities and Energy Management Forestry and Horticulture Information Technology Long-Term Care Natural Assets Public Health Services Recreation Tourism, Museums and Culture	\$7.4	\$120.4	\$1.20B
Unallocated Assets	To Be Determined	\$0.2	To Be Determined	To Be Determined
DATA CONFIDENCE		Low-Medium	Low-Medium	Low-Medium
TOTAL		\$31.2	\$383	\$3.83B

As noted in Table 3 above, there are approximately \$200.5M of City-owned assets that are currently unallocated in Asset Management Plans. Examples of unallocated assets include civic properties, buildings owned by the City and leased to others and utility buildings. This has been identified as a Continuous Improvement item for future iterations of the plan.

Although the City considers condition as the preferred measurement for planning, many assets in the City do not yet have a process to determine condition. For assets where there was no known condition information, or inspections were not completed in a way the conditions could be converted to a standardized scale, the condition was assumed based on estimated remaining service life.

Navigating the climate crisis has been a key area of focus for the City of Hamilton, which is represented by historical efforts to understand the challenges that climate change poses to City assets. As part of this work, an inventory of projects/initiatives has been created and can be found in the Climate Change sections of the Asset Management Plans.

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Hamilton has begun to undergo a shift in how it evaluates risk in accordance with its infrastructure planning. High-level risks and trade-offs have been identified in the Asset Management Plans. This information will be further enhanced in the 2025 Asset Management Plans regarding proposed levels of service.

The Corporate Asset Management Division recognizes the importance of continuous improvement as an essential part of the asset management journey. As the City begins to embrace asset management practices, it is important to recognize that the City is early in this journey and will acknowledge findings through the Improvement Plan and future iterations of the Asset Management Plans.

Improvement findings include categories such as data inconsistencies (e.g., lack of asset registries, gaps, duplication, low confidence, multiple sources, outdated), asset condition (lack of condition assessments, lack of process) and lifecycle management (not all assets are properly programmed). Condition was largely based on estimated service life for the majority of assets and as such, a low confidence level was assigned as age is not always an indicator of condition. In addition, replacement costs were based on in-house costs which were not always based on current market rates and can be affected by inflation.

In summary, the Corporate Asset Management Division has made progress in both the finalization of Asset Management Plans and the development of the Corporate Asset Management Program. Asset management is an ongoing process that requires strategic planning and effective execution. Positive progress has been made in successfully fulfilling the necessary requirements under Ontario Regulation 588/17 but also in developing a corporate-wide Asset Management Program that will support the City in making better-informed decisions about our assets and the services that we provide.

The Corporate Asset Management Division will continue to lead asset management through governance, expertise, monitoring, research support, reporting and assurance of consistent practices. Enhanced asset management practices will become ingrained in the City's culture at all levels of the corporation.

ALTERNATIVES FOR CONSIDERATION

Due to the requirements under Ontario Regulation 588/17, there are no alternatives for consideration.

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" to Report PW23073(b) – Animal Services, Licensing and Municipal Law Enforcement Asset Management Plan

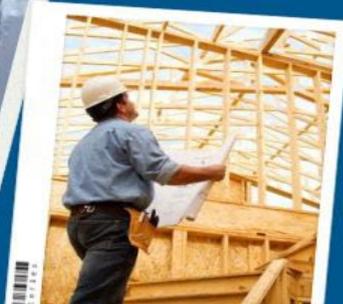
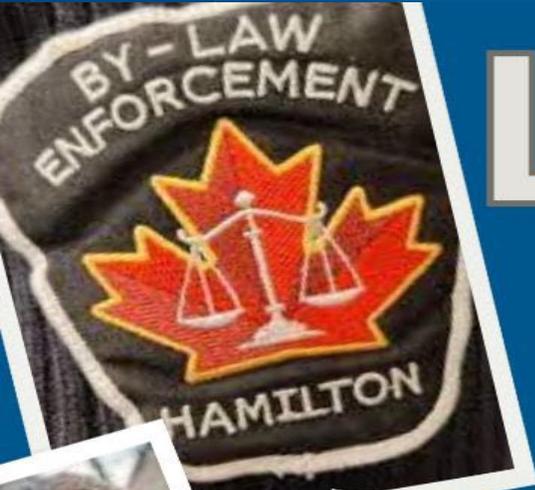
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- Appendix “B” to Report PW23073(b) – Hamilton Municipal Cemeteries Asset Management Plan
- Appendix “C” to Report PW23073(b) – Children’s and Community Services Asset Management Plan
- Appendix “D” to Report PW23073(b) – CityHousing Hamilton Asset Management Plan
- Appendix “E” to Report PW23073(b) – Corporate Asset Management (Fleet, EAM) Plan
- Appendix “F” to Report PW23073(b) – Corporate Facilities and Energy Management Asset Management Plan
- Appendix “G” to Report PW23073(b) – Forestry and Horticulture Asset Management Plan
- Appendix “H” to Report PW23073(b) – Information Technology Asset Management Plan
- Appendix “I” to Report PW23073(b) – Long Term Care Asset Management Plan
- Appendix “J” to Report PW23073(b) – Natural Asset Management Plan
- Appendix “K” to Report PW23073(b) – Parks and Recreational Trails Asset Management Plan
- Appendix “L” to Report PW23073(b) – Public Health Asset Management Plan
- Appendix “M” to Report PW23073(b) – Recreation Asset Management Plan
- Appendix “N” to Report PW23073(b) – Tourism, Museums and Culture Asset Management Plan

LICENSING AND BY-LAW SERVICES

Animal Services,
Licensing and
Municipal Law
Enforcement

2024 ASSET MANAGEMENT PLAN



Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

2024 Asset Management Plan

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SUMMARY AND QUICK FACTS

SERVICE PROFILE



Licensing and By-law (LBS) division responds to, enforces, and investigates complaints to ensure compliance with by-laws enacted by City Council. The division is responsible for Animal Services, Business Licensing and Municipal Law Enforcement.

ASSET SUMMARY



Replacement Value

\$9.4 M

Medium

Average Age of **26** years or **43%** of the average remaining service life



LEVEL OF SERVICE SUMMARY

- 70 Survey Responses were received. This correlates to a 12% Margin of Error which may cause uncertainty in the final results.
- Survey Respondents felt that the performance of LBS was average in the last 24 months.
- Survey Respondents felt Neutral if LBS responds within a reasonable timeframe.
- Survey Respondents felt Neutral on if LBS services meet their service needs overall.

ASSET HIGHLIGHTS

ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION	STEWARDSHIP MEASURES
Facilities	2 Owned	\$6.2M	Poor	Work with CFEM to complete BCA's and maintenance backlog
Fleet	63	\$2.3M	Poor	Twice Annual maintenance checks by Fleet. Replace End of Life Vehicles as soon as practical.
Equipment	347	\$537K	No Data	Develop Asset Register and Condition Assessment

DATA CONFIDENCE



VERY HIGH

MEDIUM

VERY LOW



Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

2024 Asset Management Plan



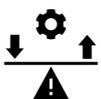
Population change – Hamilton’s Population will continue to grow and LBS will continue to see growth in requests for service relating to Licensing of services, By-law enforcement and greater need for Animal Services.



Financial Change – Deteriorating economic conditions increase requests for LBS services. Residents might have difficulty maintaining properties. Animal Services sees an increase in shelter intakes.



Increase in Scope/New By-laws – Expanding scope of By-laws or new categories of By-laws increases enforcement demands on existing resources.



RISK

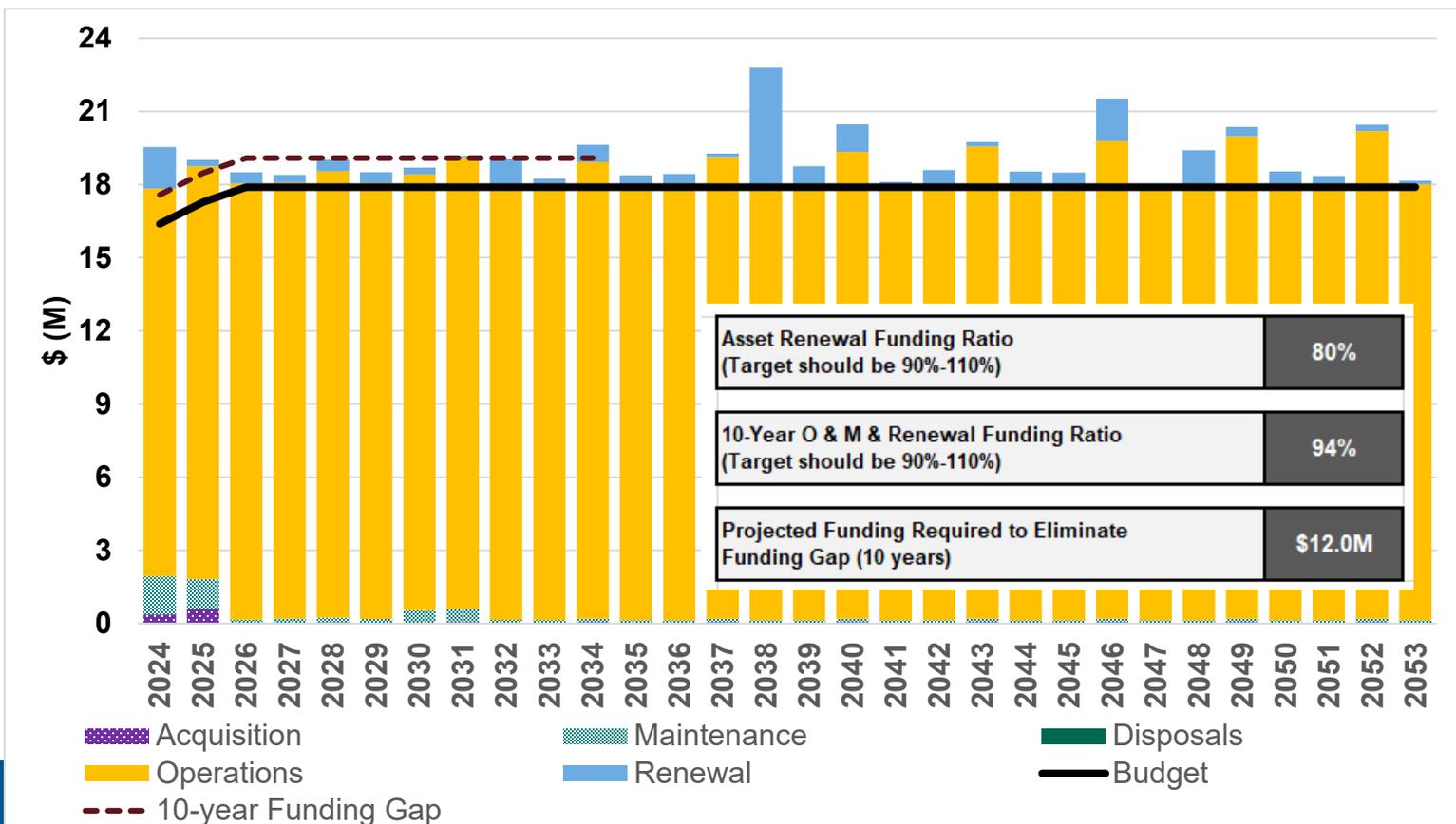
- Critical Assets are identified as the Animal Services Facility and the vehicles used by By-law and Animal services staff.

CLIMATE CHANGE MITIGATION



- The fleet will transition to electric vehicles as outlined in the Hamilton Community Energy + Emissions Plan.
- LBS will work with CFEM to transition buildings as outlined in the Hamilton Community Energy + Emissions Plan.

LIFECYCLE SUMMARY



Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

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1. INTRODUCTION

Licensing and By-law (LBS) division responds to, enforces, and investigates complaints to ensure compliance with by-laws enacted by the City Council. The division is responsible for Animal Services, Business Licensing and Municipal Law Enforcement.

The purpose of this Asset Management Plan (AM Plan) is to ensure that LBS has the required assets to provide these services to the City.

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements (i.e. O.Reg 588/17¹) and required funding to provide the appropriate levels of service over the 2024-2053 planning period.

The Licensing and By-law division assets include Facilities, Fleet, Equipment and Technology groupings.

Since Sunday, February 25, 2024, the City of Hamilton experienced a cyber incident that disabled some of the IT systems. As a result, this AM Plan was created based on the data that was accessible at the time of publication.

¹ Government of Ontario, 2017

Licensing and By-Law Services (Animal Services, Licensing and Municipal Law Enforcement) 2024 Asset Management Plan

2. BACKGROUND

The information in this section is intended to give a snapshot in time of the current state of LBS service areas by providing background on the service, outlining legislative requirements, defining the asset hierarchy used throughout the report, and providing a detailed summary and analysis of the existing inventory information as age profile, condition methodology, condition profile, and asset usage and performance for each of the asset classes. This section will provide the necessary background for the remainder of the AM Plan.

2.1 SERVICE PROFILE

Listed below are related documents reviewed in preparation of the Asset Management Plan:

- **Asset Management Plan Overview Document**

Additional financial-related documents are identified in **Section 10** Plan Improvement and Monitoring.

2.1.1 SERVICE HISTORY

Licensing and By-law (LBS) division at the City of Hamilton is comprised of five sections:

- Licensing;
- Municipal Law Enforcement;
- Animal Services;
- Service Delivery; and,
- Policy & Programs.

The division is responsible for providing services within the full boundary of the City of Hamilton. LBS division operates out of shared spaces at 330 Wentworth Street North and maintains a service counter at City Hall. Animal Services operates out of shared spaces with the Hamilton-Burlington Society for the Prevention of Cruelty to Animals (HBSPCA) located at 247 Dartnall Road and a Public Works yard building on Jones Road which serves as a logistics hub and emergency shelter location as part of the Business Continuity Plan.

Prior to amalgamation Animal Services was contracted to the HBSPCA, City staff in Stoney Creek and additional contractors for Glanbrook and Flamborough. The HBSPCA chose to not renew the contract and the City assumed the responsibilities on January 1, 2003.

Different aspects of Municipal Law Enforcement (MLE) were handled by different teams prior to the amalgamation. The Hamilton Building Department handled MLE's Property Standards, Zoning and Fence By-laws, while an independent contractor enforced the Noise By-law and Growth Management enforced Site Alterations By-law. The portfolio has been growing over the years, with proactive work, Vacant Buildings, Infill and Firearms By-laws coming under MLE after amalgamation.

Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

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Prior to amalgamation, the outlying municipalities had their own licensing sections or contracted with another nearby municipality, such as the former City of Hamilton or the Region of Hamilton/Wentworth to manage these services. Since amalgamation, this service is wholly within the City's jurisdiction to manage and as such, the team has expanded to its current size.

Currently, this very diverse team is comprised of; one director, five managers, eight supervisors, 51 full-time officers, students, administrative staff, animal care attendants, animal intake and care assistant, shelter assistant, veterinarian technicians, cleaners, by-law clerks, licensing administrators quality management coordinator, licensing and by-law administrator (Councillor Complaint Municipal Law Enforcement (CCMLE)), project and policy assistant, program development advisor, program assistants and project manager.

2.1.2 SERVICE FUNCTION

By-laws are local regulatory laws that keep our city safe and moving. The City licenses businesses, and activities, and investigates complaints on private and public property to ensure compliance with by-laws. The City Council establishes by-laws according to the city's needs to regulate, prohibit, or impose requirements. The City of Hamilton by-laws are maintained by the City Clerk's office.

The purpose of the services provided by the Licensing and By-law division is to ensure public safety and consumer protection by establishing compliance with municipal by-laws. LBS division ensures that residents adhere to the City's by-laws related to concerns like public and private property offences, snow removal, noise complaints, yard maintenance, business licensing and supply of vital services amongst many other City by-laws.

The Municipal Law Enforcement (MLE) team is comprised of 25 full-time officers who primarily spend time on the road to ensure all by-law-related concerns are addressed in a timely manner. Full-time officers are assisted year-round by co-op students and additional summer students.

The Service Delivery team is comprised of by-law clerks and a licensing and by-law services administrator (CCMLE). By-law clerks function as the first point of contact over the phone or email for citizens' by-law-related concerns. They are also responsible for inputting and maintaining all the pertinent data into the internal database for dispatching, tracking and data analytics purposes. The licensing and by-law services administrator acts as a liaison between City Councillors and the By-law team to address any by-law-related inquiries.

The Policy and Programs team is comprised of project managers, project and policy assistants and a quality management coordinator. The Policy and Programs team is responsible for providing; legal administrative support to the division, all continuous improvement initiatives, and leading policy-driven work on behalf of the division (i.e., drafting and presenting reports to Council and development, implementation and monitoring of programs).

Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

2024 Asset Management Plan

The Licensing team is responsible for the compliance and regulation of the Licensing By-law and all 32 Schedules. This includes administration and compliance operations. The team is responsible for a portion of the Sign By-law including ensuring compliance and permit issuance as well as the Lottery Licensing By-law. Licensing Administration is a facilitation process that is responsible for taking in licensing applications. This includes document intake and review and notifying other departments which require inspection of the premises (i.e., Fire Prevention, Public Health, Building and Parking). The administrative team also ensures compliance with lottery licensing mandates as well as liquor licensing comments to the Alcohol and Gaming Commission of Ontario (AGCO) through requested comments from other city services.

The Licensing Compliance team ensures those with a licence are operating within the regulations of the Licensing By-law or other provincial legislation. Additionally, licensing compliance officers will investigate businesses which fall within the provisions of the Licensing By-law that may be operating without a licence and take appropriate steps to gain compliance and establish public safety and consumer protection. The team is also responsible for inspections of taxis, personal transportation providers and food service vehicles. The team conducts property standards inspections at several types of locations (care facilities, restaurants, etc.).

The Animal Services team operates out of shared spaces with the HBSPCA located at 247 Dartnall Road, along with a building in the Public Works yard at 345 Jones Road. Animal Services is responsible for ensuring adherence to all Responsible Owner and Animal/Wildlife By-laws. They are responsible for providing shelter to lost and found pets, providing all the associated services to ensure their safety, licensing pets, resourcing rescues, foster homes, and permanent homes via the adoption programs while providing veterinarian services where required. The team at Animal Services ensures that the City of Hamilton is a sustainable community where residents can safely co-exist with wildlife. The Animal Services team has 13 full-time and two part-time officers along with two co-op students for city-wide coverage. Animal Welfare services are provided by the Province's Animal Welfare Services.

2.1.3 USERS OF THE SERVICE

The users of these services are all citizens, visitors and businesses operating within the City of Hamilton. Below are some statistics for the year ending 2022 that illustrate the diverse users of this group's services:

- Officers issued 149 COVID-19 related charges through the Emergency Management and Civil Protection Act (EMCPA), Reopening Ontario Act (ROA) and municipal by-laws;
- In addition to COVID-19, LBS received a total of 43,441 complaints for investigations;
- Councillor inquiries totalled 5,295 for all other municipal by-laws;

Licensing and By-Law Services

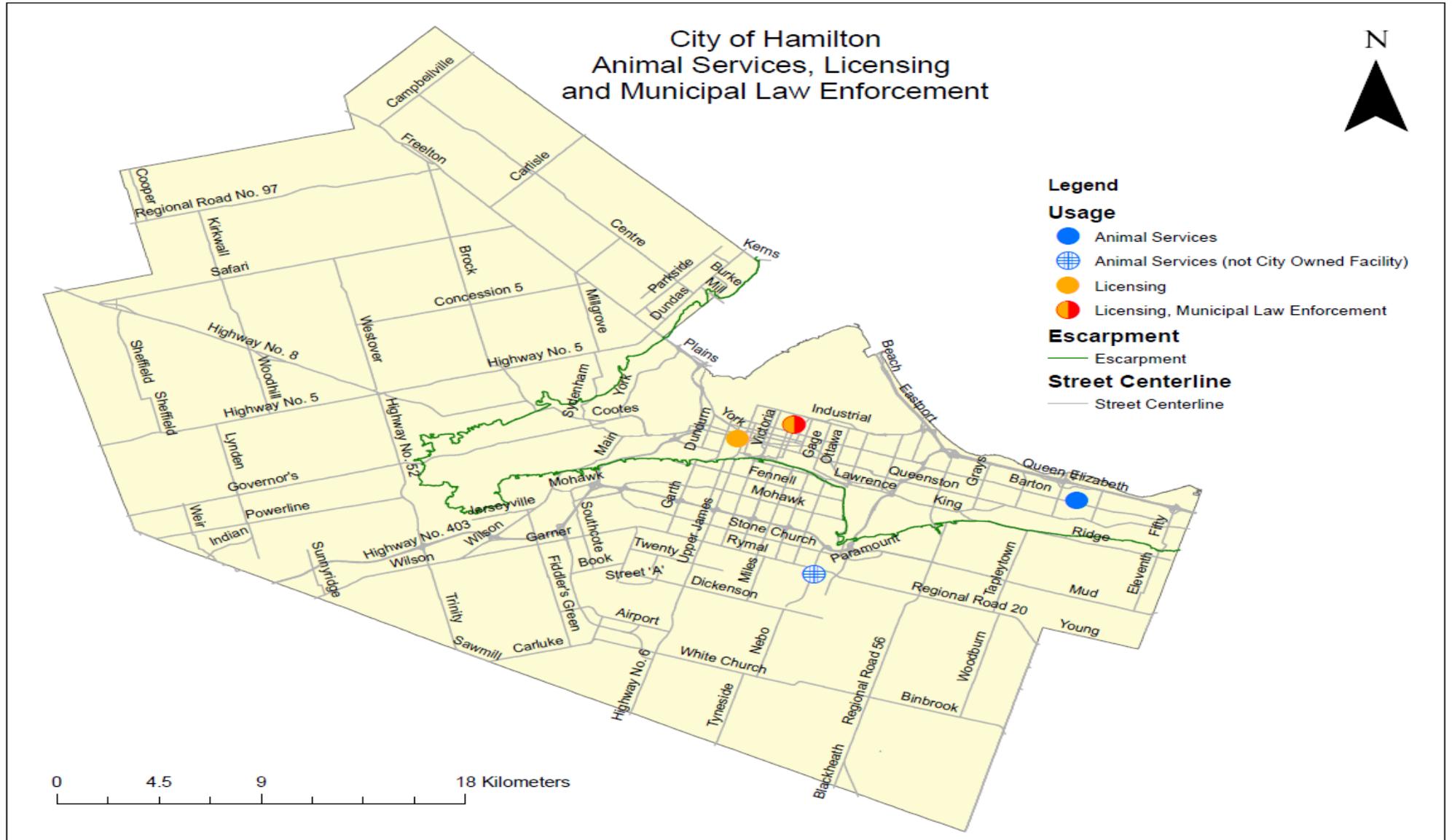
(Animal Services, Licensing and Municipal Law Enforcement)

2024 Asset Management Plan

- These calls resulted in a total of 3,302 Administrative Penalty Charges resulting in \$452,645 in fines;
- Animal Services clerks fielded 29,084 calls from the public that ranged from service requests for dog licenses/renewals, stray animals, injured and deceased animals (wildlife and pets) special enforcement, adoptions, feces, dog bite investigations and barking dog complaints;
- Licensing issued 661 new business licences. The Licensing Section currently licenses 10,030 businesses over 45 distinct categories in the city; and,
- Licensing provides direct service to business owners requiring a licence, indirect to customers, residents, and visitors to the City of Hamilton that may use a service or licensed business in the city. Licensing responds to complaints related to licensed or non-licensed locations and trade service providers. Licensing also engages with several other City services such as Fire Prevention, Building, Public Health, Parking, Tourism and the Councillors' offices and Licensing works closely with the Hamilton Police Service, the Alcohol and Gaming Commission of Ontario, and other provincial agencies.

Licensing and By-Law Services (Animal Services, Licensing and Municipal Law Enforcement) 2024 Asset Management Plan

Figure 1: Map of Facility Locations



Licensing and By-Law Services (Animal Services, Licensing and Municipal Law Enforcement) 2024 Asset Management Plan

2.1.4 UNIQUE SERVICE CHALLENGES

LBS division faces unique service challenges due to the wide geographical area it serves, the diversity of its population and the uniqueness of each by-law that it enforces and administers. The wide and varied nature of by-laws administered requires expertise and continued upgrades to education, training and technology to keep up with the evolving landscape of municipal by-law enforcement. Some of the legislated items are detailed in **Section 2.2, Table 1**.

The division faces challenges from the high concentration of student population in parts of the city clustered around the college and university. These areas create increases in service requests relating to noise, tenant concerns, property standards and waste removal.

Additionally, a number of the by-laws require around-the-clock coverage. However, this becomes a challenge as Municipal Law Enforcement Officers (MLEO) are not permitted to work beyond 1 a.m. due to concerns relating to officer safety. This stems from a consultant’s report to the council in 2008 which stated staff cannot work past 1 a.m. which was the basis of approval for hiring of officers.

Animal Services staff work 24 hours per day, seven days per week for animal care and responding to dangerous animals or wildlife and by-law concerns.

The work of LBS is often required to shift due to high-priority files and programs which can be driven by Council priority, seasonality, or changes in socio-economic issues as examples. Staffing resource levels continue to pose challenges to the implementation and operation of such programs and where a shift in priorities is required. Often this results in existing staff being redirected to respond to these elevated needs and priorities which may impact service levels and enforcement of other programs.

2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of LBS services are outlined in **Table 1**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

Table 1: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENT
Municipal Act, 2001, S.O. 2001, c. 25	Most by-laws are created under the authority of the Municipal Act, 2001, S.O. 2001, c. 25. Required to provide the services within the By-law and regulate council mandates.
Provincial Offences Act, R.S.O. 1990, c. P.33	Authority in which charges can be laid.

Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

2024 Asset Management Plan

LEGISLATION OR REGULATION	REQUIREMENT
Planning Act, R.S.O, c. P.13	Enforcement of property use aspects.
Building Code Act, 1992, S.O. 1992, c. 23	Authority to create and regulate a Property Standards By-law for the minimum maintenance standards of properties.
Dog Owners' Liability Act, RSO 1990, c D.16	Authority in which provincial charges can be laid relating to dog control/pit bull legislation.
Livestock, Poultry and Honey Bee Protection Act, R.S.O. 1990, c. L.24	Municipal responsibilities to respond to wildlife predation calls, review and submit program applications for compensation program.
Protection of Livestock and Poultry from Dogs Act, RSO 1990, c L.24	Municipal responsibilities to respond to dog killing/injuring livestock/poultry, review and submit program applications for compensation program.
Pounds Act, RSO 1990, c P.17	Authority in which provincial charges can be laid for specific livestock at large/impoundment rules.
Animal For Research Act and Regulations	Provincial requirements for municipalities operating a pound for dogs and cats impounded pursuant to a by-law. Enforced by Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA).
Provincial Animal Welfare Services Act, 2019, SO 2019, c 13	Adherence to provincial welfare and standards of care for animals is provided. Enforced by the Ministry of the Attorney General.
Fish and Wildlife Conservation Act, 1997, S.O. 1997, c. 41	Provincial requirements for allowances/prohibitions related to Hamilton Animal Services' work with wildlife. Enforced by the Ministry of Natural Resources and Forestry (MNRF).
Species at Risk Act (S.C. 2002, c. 29)	Federal obligations to our work with specific species related to Wildlife Regulations and Compliance. Promotion of Environment and Climate Change Canada.
Migratory Birds Regulations, 2022 (SOR/2022-105)	Federal regulations outlining obligations within work with migratory birds.
Reportable Diseases Regulations (SOR/91-2)	Federal regulations respecting diseases/substances that may affect animals/transmit to persons.
Health Protection and Promotion Act, R.S.O. 1990, C. H.7	Rabies immunization.
Disposal of deadstock Regulation under Food Safety and Quality Act, 2001 O. Reg. 105/09	Obligations for disposal of cadavers. Enforced by Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA).

Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

2024 Asset Management Plan

LEGISLATION OR REGULATION	REQUIREMENT
OAVT Act, 1993; Veterinarians Act and Regulations VA Article 19 and Reg. 1093	Mandates regulations for Registered Veterinary Technicians (RVT) designated staff under the Ontario Association of Veterinary Technicians (OAVT) (staff designation).

2.3 ALIGNMENT WITH COUNCIL PRIORITIES

As referenced in the ***AM Plan Overview in Section 5.4***, Strategic Alignment, The City’s strategic goals and objectives are shaped by internal drivers such as Council-approved strategies and plans, as well as external forces such as citizen expectations, and legislative and regulatory requirements. The specific legislative and regulatory requirements for service areas are provided in each AM Plan.

City objectives provide asset owners with direction regarding levels of service and asset investment priorities. This AM Plan will demonstrate how the City’s objectives for non-core assets can influence levels of service and direct asset expenditures.

2.4 ASSET HIERARCHY

In order to deliver these services, LBS requires assets. The LBS service area has been broken down into four asset classes for the purpose of this AM Plan:

- **Facilities:** refers to any City-owned facilities necessary to deliver LBS services.
- **Fleet:** vehicles which are used for LBS service delivery and Powered Equipment.
- **Equipment:** refers to all equipment used for LBS service delivery including Admin Equipment, Animal Care Equipment such as vet tools, and cages, and Enforcement Tools such as noise meters, light meters, and Officer Uniforms.
- **Technology:** describes the different types of technology required to deliver the service including, IT Equipment, Mobile Phones and Mobile Printers.

The communication radio system and body armour used by LBS are owned by the Hamilton Police Service (HPS). Body Armour is loaned to LBS officers from HPS when required as such these assets are not considered as part of this AM Plan. LBS's use of the HPS radio system ensures that communication is facilitated during joint enforcement operations.

Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

2024 Asset Management Plan

Table 2: Asset Class Hierarchy

SERVICE AREA	LBS – LICENSING, BY-LAW, AND ANIMAL SERVICES			
ASSET CLASS	FACILITIES	FLEET	EQUIPMENT	TECHNOLOGY
	<ul style="list-style-type: none"> By-law Facilities (330 Wentworth Street North) * Animal Services Facilities** (Jones Road/Dartnall Road) 	<ul style="list-style-type: none"> By-law Fleet Animal Services Fleet Powered Equipment 	<ul style="list-style-type: none"> Admin Equipment Officer Uniforms Officer Enforcement Tools Animal Care Equipment 	<ul style="list-style-type: none"> IT Equipment Mobile Printers Mobile Phones

*Licensing maintains a service counter at City Hall. This is not included in the current iteration of the AM Plan as City Hall is being considered in its entirety in the Corporate Facilities & Energy Management (CFEM) AM Plan.

** The Dartnall Road Animal Services Facility is not owned by the City of Hamilton. The City is a tenant and has shared responsibility for operations and maintenance costs related to the facility in accordance with the terms of the agreement between the City and HBSPCA.

Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

2024 Asset Management Plan

3. SUMMARY OF ASSETS

Table 3 displays the detailed summary of assets for the LBS service area. The sources for this data are a combination of data included in the City's database information. It is important to note that inventory information does change often and that this is a snapshot of information available as of November 3, 2023.

The City owns approximately **\$9.4M** in LBS assets which are on average in **POOR** condition. Assets are a weighted average of **26 years** of age, which is **43%** of the average remaining service life (RSL). Most of the weighting for these averages comes from the Facilities and Fleet asset classes. For most assets, this means that the City should be completing preventative, preservation and minor maintenance activities per the Building Condition Assessment inspection reports as well as operating activities (e.g., inspection, cleaning) to prevent any premature failures. Data confidence associated with this information is also presented in **Table 3**.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. It is also important to note that AM Plans only include asset information related to assets that the City owns. Facilities leased from other bodies are incorporated into operational costs but are not incorporated into the total replacement cost for the service. Finally, the assets included below are assets that are assumed and in service at the time of writing.

The replacement costs below are typically a **MEDIUM** data confidence level overall. For Facilities, replacement costs are calculated using an internal Corporate Facilities & Energy Management (CFEM) tool which encompasses current market rates, building type and size and were escalated to include additional soft costs. Equipment and Technology replacement costs were gathered from the most recent purchase price for similar assets and are typically High confidence. Vehicle costs are typically **MEDIUM** confidence due to challenges in maintaining current replacement value costs.

The overall average age data confidence is rated as High as most of the highest replacement value asset classes data is based on fleet and facilities where data confidence is much higher as service dates are generally known for these asset types. The percent remaining service life (%RSL) data is largely estimated based on Subject Matter Expertise (SME) or is unknown.

The overall average condition data confidence is rated as High. The highest value item for this service area is Facilities where the condition is based on Facility Condition Index (%FCI). For the majority of the assets the condition is based on age and not based on actual physical inspection and data condition analysis.

A continuous improvement item identified in **Table 29** is ensuring inventory data is accurate and includes key database fields as well as metadata and follows the newly developed City Data Standard through the creation of an Asset Registry for LBS.

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Please refer to the [AM Plan Overview](#) for a detailed description of data confidence.

Table 3: Detailed Summary of Assets for LBS Service Area

FACILITIES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (%RSL)	AVERAGE EQUIVALENT CONDITION
By-law Facilities	1	\$4.5M	35 Years (30%)	4-POOR
Data Confidence	Very High	Medium	Very High	High
Animal Services Facilities	1 Owned 1 Leased	\$1.7M*	26 Years (49%)	4-POOR
Data Confidence	Very High	Medium	Very High	High
SUBTOTAL		\$6.2M	33 Years (34%)	4-POOR
DATA CONFIDENCE		Medium	Very High	High

FLEET				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (%RSL)	AVERAGE EQUIVALENT CONDITION
By-law Fleet	51	\$1.8M	8 Years (24%)	4-POOR
Data Confidence	High	Medium	High	Low
Animal Fleet	10	\$0.5M	7 Years (34%)	4-POOR
Data Confidence	High	Medium	High	Low
Powered Equipment	2	\$5K	No Data	No Data
Data Confidence	Low	Low		
SUBTOTAL		\$2.3M	8 Years (26%)	4-POOR
DATA CONFIDENCE		Medium	High	Low

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EQUIPMENT				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (%RSL)	AVERAGE EQUIVALENT CONDITION
Admin	13	\$46K	No Data	No Data
Data Confidence	Low	Low		
Animal Care	256	\$295K	No Data	No Data
Data Confidence	Low	Low		
Officer Equipment	27	\$63K	No Data	No Data
Data Confidence	Low	Low		
Officer Uniforms	51	\$133K	No Data	3-FAIR
Data Confidence	Low	Low		Low
SUBTOTAL	\$537K		No Data	No Data
DATA CONFIDENCE	Low			

TECHNOLOGY				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (%RSL)	AVERAGE EQUIVALENT CONDITION
IT Hardware	200	\$270K	4 Years (26%)	4-POOR
Data Confidence	High	High	High	Low
Mobile Printers	80	\$72K	No Data	No Data
Data Confidence	Low	Medium		
Mobile Phones	80	\$31K	2 Years (47%)	3-FAIR
Data Confidence	High	High	High	Medium
SUBTOTAL	\$374K		4 Years (28%)	4-POOR
DATA CONFIDENCE	High		High	Low
TOTAL	\$9.4M		26 Years (43%)	4-POOR
DATA CONFIDENCE	Medium		High	High

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* The Animal Services Facility at 247 Dartnall Road is a shared facility with a third party, the Hamilton-Burlington Society for the Prevention of Cruelty to Animals (HBSPCA). The replacement value in **Table 3** does not include the replacement value of this facility as it is not a city-owned asset. It is Asset Management's understanding that 50% of costs relating to facility operations, maintenance and repairs are split with HBSPCA but any replacement facility could potentially require negotiation and discussion of a new agreement.

3.1 ASSET CONDITION GRADING

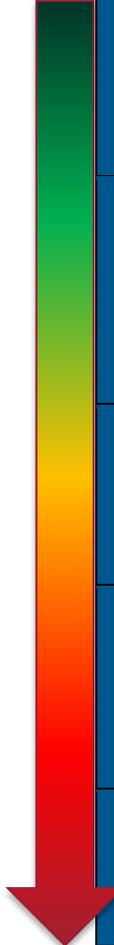
Condition refers to the physical state of the LBS assets and is a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, **Table 4** below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in **Table 29**, is to review and/or develop existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

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Table 4: Equivalent Condition Conversion Table



EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	FACILITIES CONDITION INDEX (FCI)
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance is required only.	>79.5%	N/A
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on the asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	< 5%
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset's usage. Minor to significant maintenance is required.	39.5% - 69.4%	>= 5% to < 10%
4 Poor	The asset has significant defects and deterioration. Deterioration has an impact on asset's usage. Rehabilitation or major maintenance is required in the next year.	19.5% -39.4%	>= 10% to <30%
5 Very Poor	The asset has serious defects and deterioration. The asset is not fit for use. Urgent rehabilitation or closure is required.	<19.4%	>= 30%

The following conversion assumptions were made:

- For assets where a condition assessment was not completed, but age information was known, the condition was based on the percentage of remaining service life (%RSL).
- Facilities Condition Index conversion was based on ranges provided by a consultant who has previously completed Building Condition Assessments (BCA) for the City.
- Where no condition assessment is available or age is unknown, the condition is based on Subject Matter Expert (SME) opinion or listed as No Data and a condition of 0-UNKNOWN is assigned.

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3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile, and Performance Issues for each of the asset classes.

- The age of an asset is an important consideration in the asset management process as it can be used for planning purposes typically assets have an estimated service life (ESL) where they can be planned for replacement. Some lower-cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if an asset's condition is based on age, it is typically considered to be of a low confidence level. Although typically, age is used when projecting replacements beyond the 10-year forecast to predict degradation.
- Condition refers to the physical state of assets and is a measure of the physical integrity of assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected/assessed at different frequencies and using different methodologies to determine their condition which are noted in this section.
- Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

3.2.1 FACILITIES PROFILE

Licensing and By-law Services has four main operating locations: 330 Wentworth Street North, City Hall, 247 Dartnall Road and 345 Jones Road. Licensing administrative services are offered to the public at two different counter service locations in the city (City Hall and 330 Wentworth Street North).

Animal Facilities are considered as the shared HBSPCA space at 247 Dartnall Road and the building occupied at 345 Jones Road, which is in a Public Works yard. Although not owned by the city, the location at Dartnall Road is shared use and the City shares in operating and maintenance costs. The condition of the facility will have an impact on the quality of the service offered and has financial impacts on the City. This facility does not appear on the Facilities Age Profile, **Figure 2**, as the graph is done by replacement value which is not currently part of this AM Plan.

By-law Facilities are operated out of shared space at 330 Wentworth Street North. The replacement values for the shared facilities have been allocated based on the portion of the building that By-law is currently occupying. Since this square footage allocation changes regularly, a continuous improvement item identified in **Table 29** is to implement a process to keep up to date on facilities and square footage for LBS.

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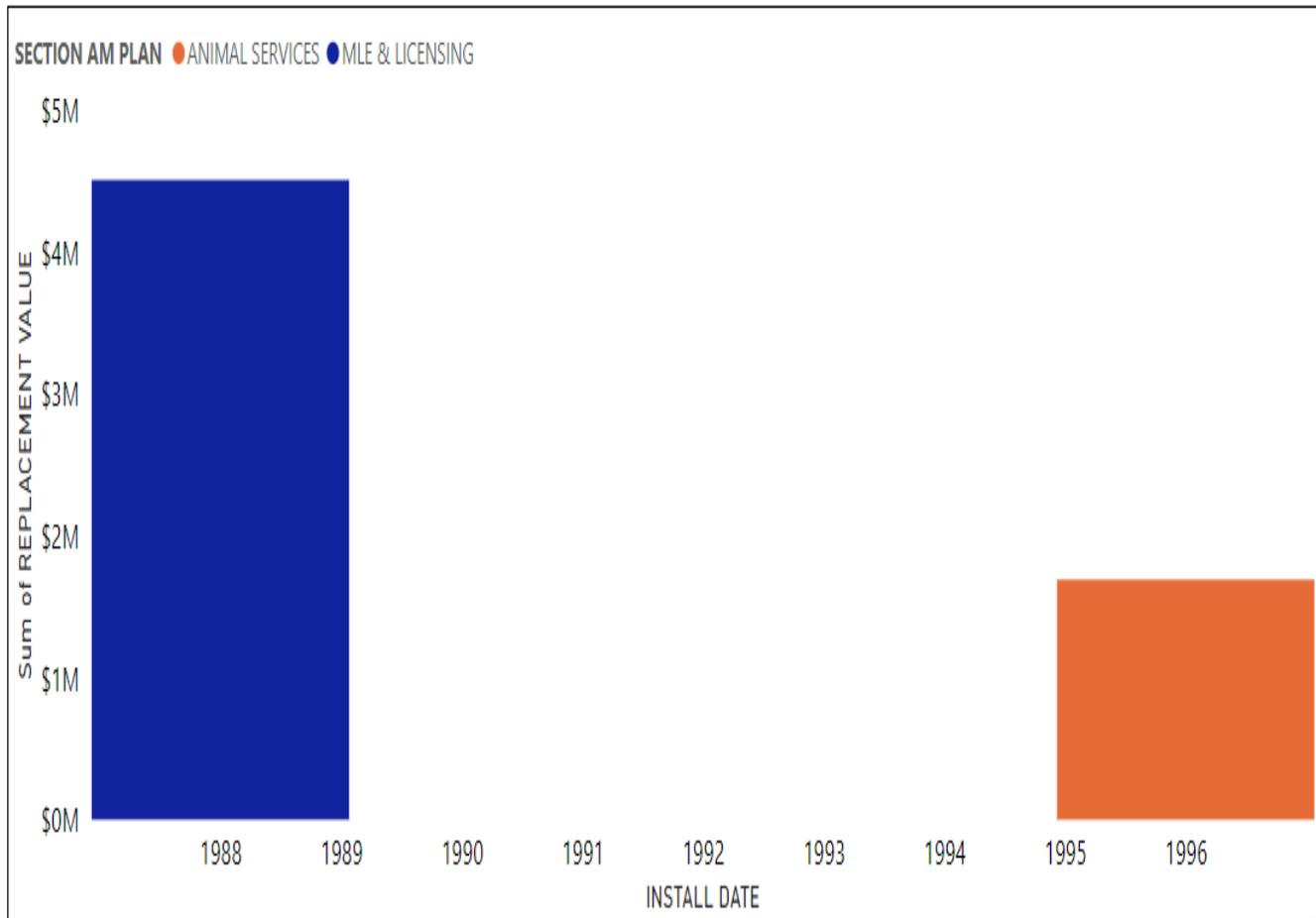
The service counter space at City Hall is not included in this AM Plan as City Hall has many shared user groups. The City Hall shared asset is not being allocated for this iteration of AM Plans and this asset will be addressed in the Corporate Facilities & Energy Management AM Plan.

3.2.1.1 AGE PROFILE

The age profile of the LBS Facilities assets is shown in **Figure 2**. For Facility assets, the data confidence for age is typically Very High because this information was recorded during the construction of the facilities.

At this time no LBS facilities are beyond their estimated service life.

Figure 2: Facilities Age Profile



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3.2.1.2 CONDITION METHODOLOGY & PROFILE

Condition for City of Hamilton facilities is determined based on the results of a Building Condition Assessment (BCA). BCAs are generally completed on facilities every five years and output a score called a Facility Condition Index (FCI) which is considered to be a high confidence level source. The FCI is calculated based on a ratio of the cost of work required on the facility to the total replacement cost of the facility. The condition conversion from FCI to the standardized 5-point scale used in this AM Plan is shown in **Table 4**.

Table 5: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
330 Wentworth Street North	BCA – Every five years	2019 Mantecon	% FCI
345 Jones Road	BCA – Every five years	2019 Mantecon	% FCI
247 Dartnall Road	BCA - Last overall condition Done in 2006	2006 Norr, 2009 Bldg. Innovation Energy Studies, 2007 Aegis Roofing	% FCI

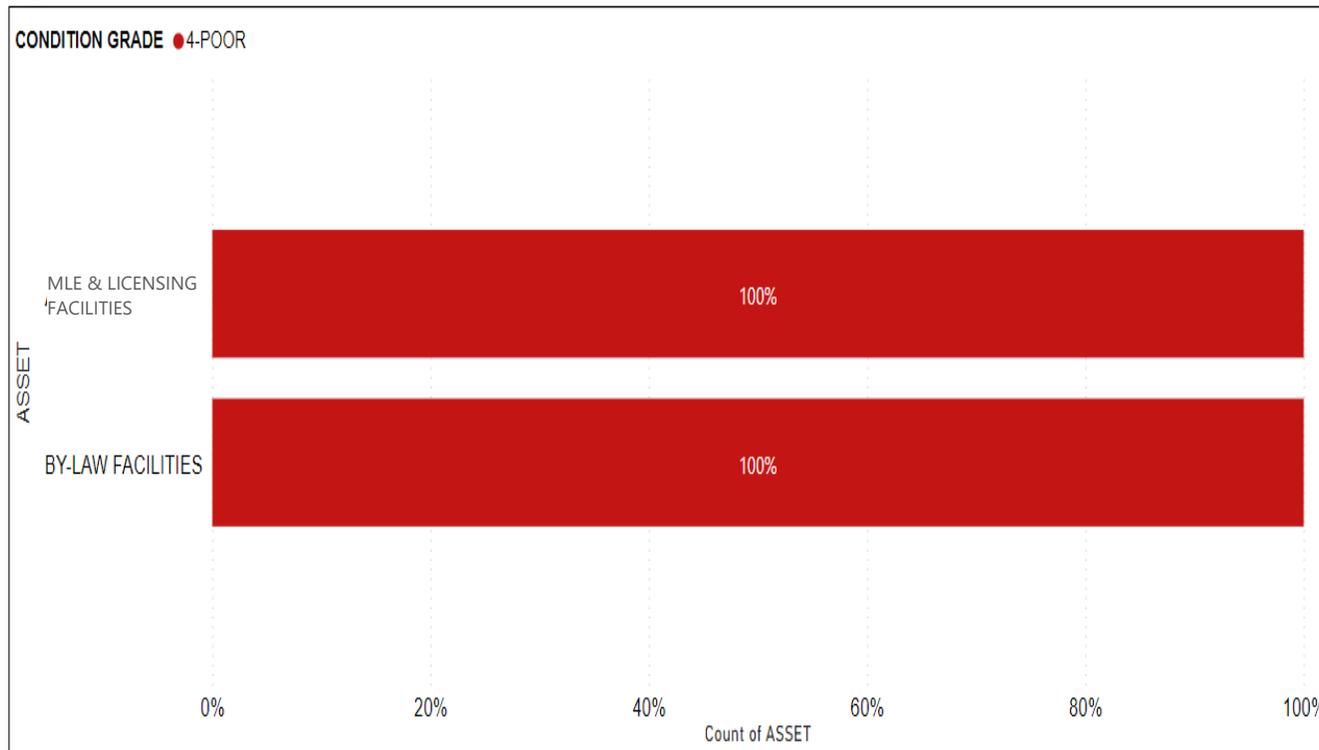
The last available Building Condition Assessment for 247 Dartnall Road, Animal Services Facility was done in 2006. Typically for other City facilities the BCA is done on a five-year basis. This BCA data being used in this report is in excess of 16 years old and items may have deteriorated further or been improved since it was completed so the actual condition based on FCI is low data confidence. A continuous improvement Item in **Table 29** is that a new BCA should be completed for this facility and a new condition be available for the next AM Plan update.

Animal Services works from two facilities at this time. The Jones Road location is part of the ongoing Public Works/CFEM Yards Study and decisions made in the yards study will have an impact on Animal Services work procedures and operations. This may require additional capital funding or changes to future operating and maintenance expenses related to relocation or reconfiguration of facilities to replace this facility in the future if that is the conclusion of the yards study. Once the yard study is completed and Animal Services can develop a strategic facilities plan these lifecycle costs can be incorporated in detail in future AM Plans.

The condition profile for LBS facilities is shown below in **Figure 3**. It is evident that the facilities are in Poor condition based on the results of the available BCAs despite the facilities being within their estimated useful lives. Many of the identified needs are due to building components being at the end of their service life with some of the larger items detailed in **Table 6**, Known Service Performance Deficiencies.

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Figure 3: Facilities Condition Distribution



3.2.1.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with LBS facilities involve components at the end of their service life. The significant service performance deficiencies for Facilities in **Table 6** were identified using information from the BCA considering cost and consequences of failure. At this time, many of these deficiencies have not yet been incorporated into the capital budget and are an outstanding need.

Table 6: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Facilities	330 Wentworth Street North (Multi-Tenant Facility – By-law)	Built-Up Roof	Built up roof requires replacement.
		Asphalt Paving	Observed to be in poor condition with visible cracking and areas of ponding.

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ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
		Footings and Foundations	Visible deterioration on poured concrete walls.
		Electrical Service Equipment	Replacement recommended.
	345 Jones Road - Animal Services	Asphalt Paving	The parking lot is in poor condition with many areas of cracking, ponding and patchwork.
		Roof Mounted Make up Air Units	Gas-fired units near end-of-life expectancy (2018) and should be replaced.
		Yard Review Plan	This facility is part of the Yards Review strategy and changes to the AM Plan analysis may be required once the study is completed.

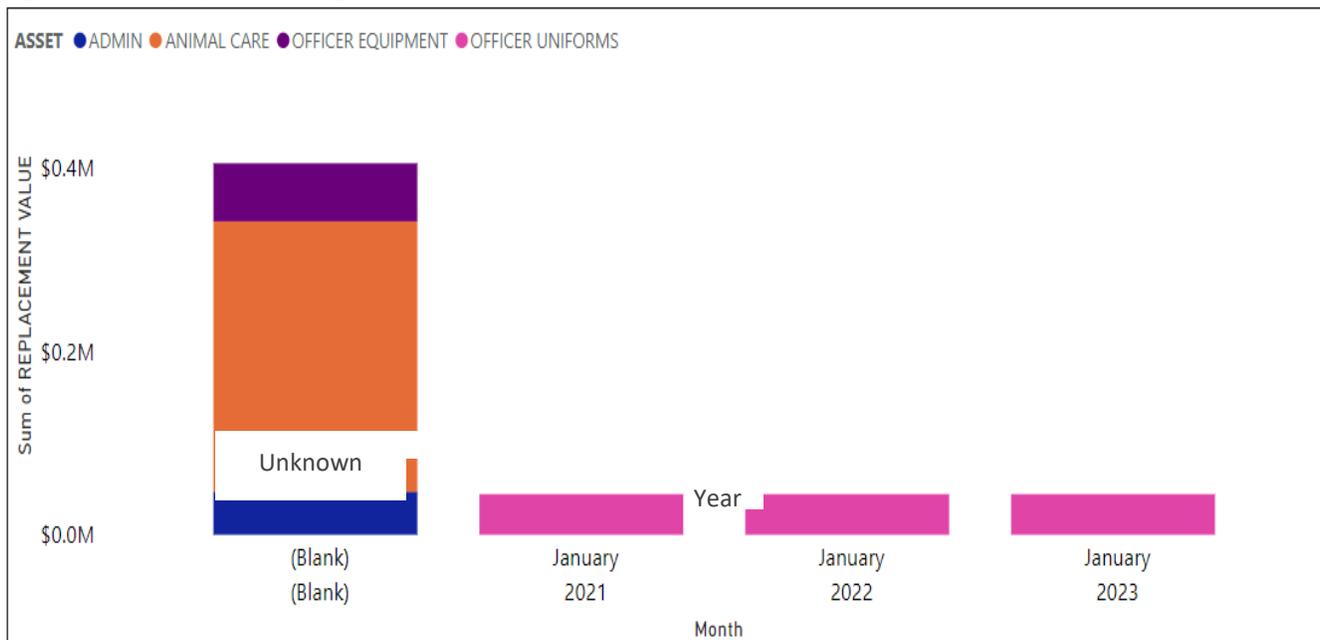
3.2.2 EQUIPMENT PROFILE

3.2.2.1 AGE PROFILE

The age profile of the LBS Equipment assets is shown in **Figure 6**. No age data is available for much of this equipment. A continuous improvement item in **Table 29** is to prepare an Asset Register to begin to track the quantity, age and condition of many of these assets in a more formal, documented manner. The uniform age profile is equally distributed based on the SME's estimated service life.

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Figure 4: Equipment Age Profile



3.2.2.2 CONDITION METHODOLOGY & PROFILE

The majority of equipment does not have a formal condition process. Officer enforcement tools typically require inspection, certification, and calibration such that the measurements can be submitted as evidence for enforcement purposes.

Table 6: Inspection and Condition Information

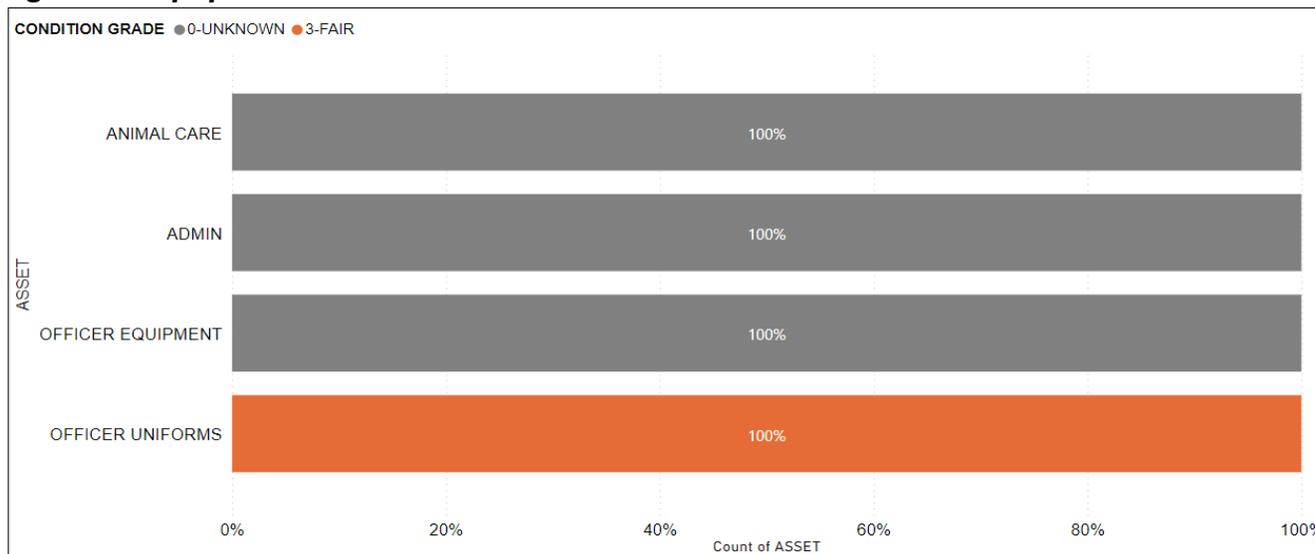
ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Officer Equipment – temperature probes, noise meters, not guns	Annual Calibration	2023	Certificate of Calibration
Officer Uniforms	As Needed	Ad Hoc	Uniforms replaced as per Collective Agreement – assumed to be in fair condition overall

The condition profile for LBS Equipment assets is shown below in **Figure 7**. The condition of such equipment is unknown, age is also unknown so the condition cannot be determined from %RSL. A continuous improvement item in **Table 29** is to prepare an Asset Register to begin to track inspections and conditions for many of these assets in a more formal, documented manner.

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The Officer Uniform condition is based on subject matter expertise. The Collective Agreement requires the replacement of uniform items based on specific criteria which ensures that uniforms overall could always be considered to be at a minimum, in fair condition.

Figure 5: Equipment Condition Distribution



3.2.2.3 ASSET USAGE AND PERFORMANCE

The largest known service performance deficiencies are with equipment nearing or exceeding the estimated service life.

Table 7: Known Service Performance Deficiencies

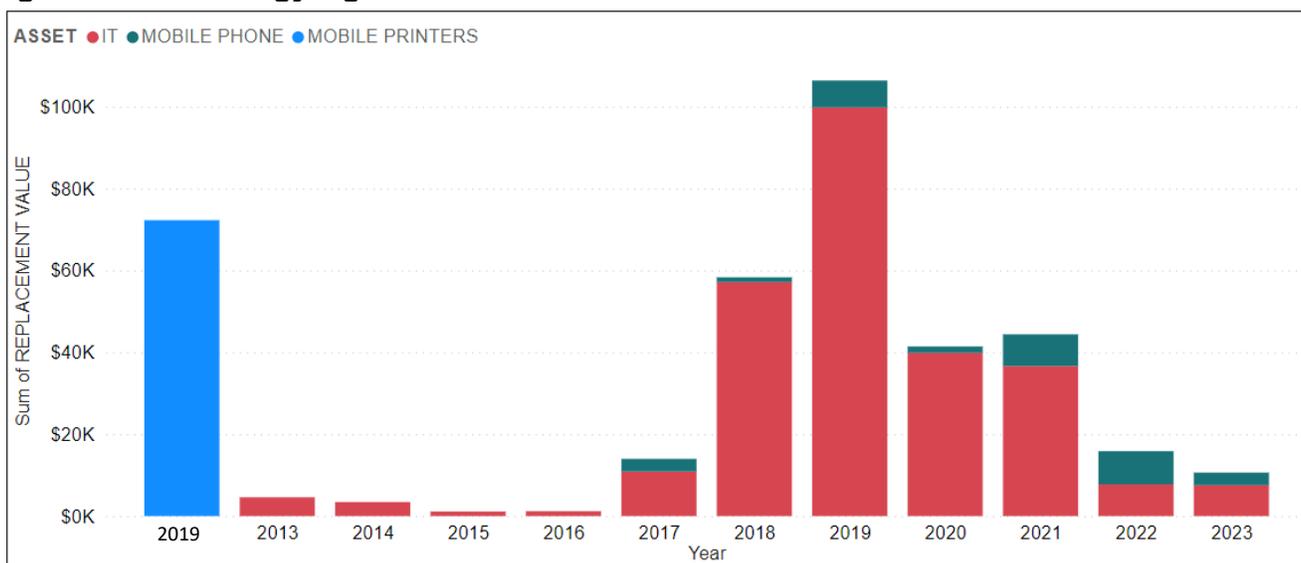
ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
ANIMAL CARE	Animal Care and Enforcement Equipment	Animal Care Equipment – cages rusting, Kuranda beds nearing the end of life, catch pole nets nearing the end of life	The equipment is nearing the end of its life and needs replacement. Rusting cages are difficult to clean.
OFFICER TOOLS	Thermometers	Repeated failures in calibration	Not enough enforcement tools or tools not working when needed. This creates delays and challenges in enforcement.

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3.2.2.4 AGE PROFILE

The age profile of the LBS Technology assets is shown in **Figure 8**. An analysis of the age profile is provided below. Much of the Information Technology (IT) equipment has an estimated service life of four to five years. Any equipment older than 2019 should be reviewed and where necessary renewal should be considered. Mobile printers were purchased in 2019 as part of a transition to a mobile officer program and are shown on the graph below to the left of the remaining assets.

Figure 6: Technology Age Profile



3.2.2.5 CONDITION METHODOLOGY & PROFILE

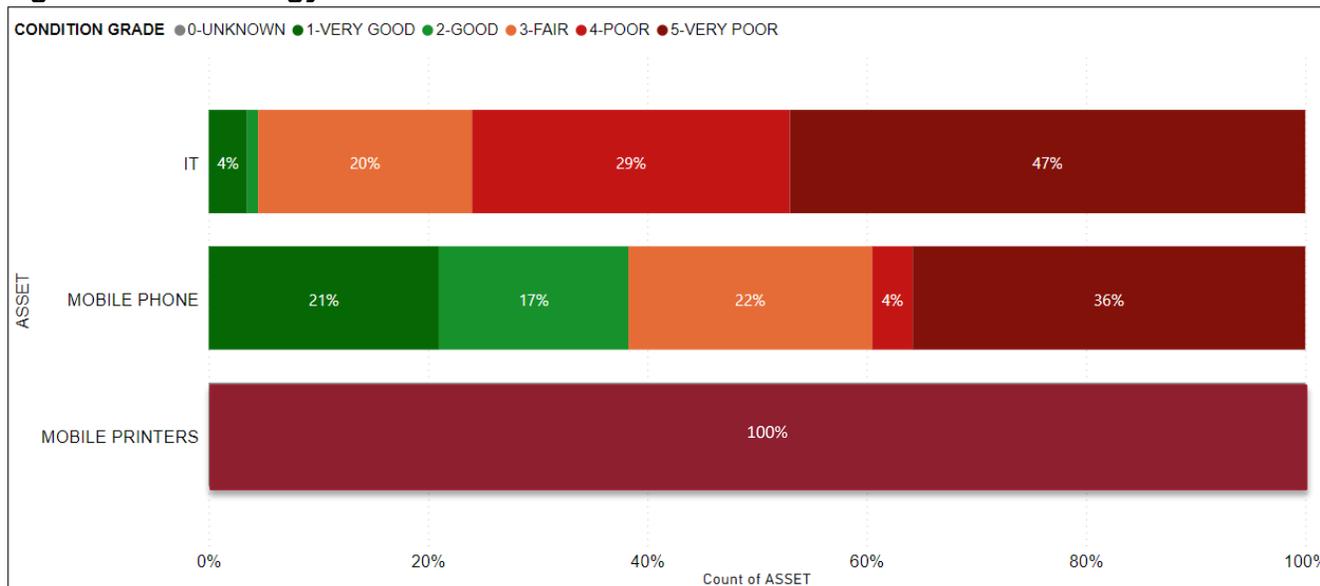
The majority of Technology assets do not have a formal inspection program and are inspected ad hoc.

Table 8: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
All Technology Assets	Ad Hoc	Ad Hoc	N/A

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Figure 7: Technology Condition Distribution



There is no formal asset inspection or physical inspection that leads to a condition rating for Technology assets. The condition of Technology assets is based only on age and estimated service life. The condition scores were developed from the %RSL as detailed in **Table 4**. The Mobile Printers refer to the Zebra Printers used by officers to issue tickets in the field.

3.2.2.6 ASSET USAGE AND PERFORMANCE

There are no known service performance deficiencies with technology.

Table 9: Known Service Performance Deficiencies

ASSET	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
None	None	None

4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what the City provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that the City provides those services.

O.Reg 588/17 does not define levels of service for LBS assets and therefore the City has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in Section 7.5 of the **AM Plan Overview**.

4.1 SURVEY METHODOLOGY

To develop customer values and customer levels of service, a Customer Engagement Survey entitled *Let's Connect, Hamilton – City Services & Assets Review: Animal Services, Licensing and Municipal Law Enforcement (By-law)* was released November 27, 2023, on the Engage Hamilton platform and closed on January 2, 2024. The survey results can be found in Appendix "A".

The survey received submissions from 70 respondents and contained 41 questions related to the *Animal Services, Licensing and Municipal Law Enforcement (By-law)* service delivery. Based on the number of responses, a sample size of 70 correlates to a 95% confidence level with a 12% margin of error based on an approximate population size of 570,000². This error is a significant amount and will cause uncertainty in the final results. The survey will be used to develop the initial customer values and customer performance measures for this AM Plan however there will be uncertainty and further detailed investigation should be made before any specific changes to levels of service are proposed. These survey results might point to trends or areas to consider further. It is important to note that respondents could opt out of questions, and so different questions may have different confidence levels depending on the opt-out rate for that question. Most survey respondents also indicated that they experienced the services *Very Infrequently* or *Infrequently* over the last two years which means that responses are based on their perception of the services and not necessarily on direct experience.

When reviewing demographic data for the survey it is noted that the 18–34-year age group is underrepresented in the respondents compared to the proportion of the population they represent and that the 35-64 age group is overrepresented. The geographic makeup has rural respondents largely underrepresented and upper city respondents somewhat underrepresented based on the known geographic distribution of residents. The majority of respondents indicate they are homeowners but there is also representation from tenants and other living situations identified as well.

² Census Profile, 2021 Census of Population, 2021

While these surveys were used to establish customer values and customer performance measures, it is important to note that there were also limitations to the survey methodology which may reduce the confidence level in the survey data. The survey was only released using an online platform and did not include telephone surveys. Consequently, there is no way to confirm the identity information provided in the survey. In addition, the survey did not control for IP addresses, and therefore it is possible that respondents could complete the survey more than once and skew the survey results. Although there are limitations to the survey methodology it does appear that these results can be used to provide some context about the feelings of customers on the services LBS provides, but decisions should not be made based on this survey alone.

Table 10: Data Confidence Levels

GRADE	DATA CONSISTENCY (STANDARD DEVIATION)	CONFIDENCE LEVEL (MARGIN OF ERROR AT 95% CONFIDENCE IN SAMPLE SIZE)
Very High	0 to 0.5 – results are tightly grouped with little to no variance in response	0% to 5% - minimal to no error in results, can generally be interpreted as is
High	0.5 to 1.0 – results are tightly grouped but with slightly more variance in response	5% to 10% - error has become noticeable, but results are still trustworthy
Medium	1.0 to 1.5 – results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - error is a significant amount and will cause uncertainty in the final results
Low	1.5 to 2.0 – results show a high variance with a fair amount of disparity in responses	20% to 30% - error has reached a detrimental level and results are difficult to trust
Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - significant error in results, hard to interpret data in a meaningful way

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4.2 CUSTOMER VALUES

Customer values are what the customer can expect from their tax dollar in “customer speak” which outlines what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

Customer Values indicate:

- What aspects of the service are important to the customer;
- Whether they see value in what is currently provided; and,
- The likely trend over time-based on the current budget provision.

As previously mentioned, the customer values below were determined using the results from the *Let’s Connect, Hamilton – City Services & Assets Review: Animal Services, Licensing and Municipal Law Enforcement (By-law)*. This will be summarized as the 2024 LBS City Services & Assets Review Survey.

Table 11: Customer Values

SERVICE OBJECTIVE				
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK “Based on Average Survey Response...”	Data Consistency (Table 13)	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
All service areas surveyed provided by LBS are rated as important services to provide	2024 LBS City Services & Assets Review Survey	...it is <i>important</i> for LBS to be responsible for providing these services: Business Licensing, Property Use Enforcement, and Trade Licensing.	High Data Consistency	Maintain
		Animal Control Enforcement, Animal Adoption, Dog Licensing, Temporary Business Licensing.	Medium Data Consistency	
Services provided by LBS should meet my needs		... are <i>neutral</i> that services meet their needs.	Medium Data Consistency	Maintain

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SERVICE OBJECTIVE				
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK "Based on Average Survey Response..."	Data Consistency (Table 13)	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Overall customers would possibly recommend LBS services to others		...would <i>possibly</i> recommend LBS to others. Services that stood out as <i>probably recommended</i> include Animal Adoption and Dog Licensing services.	Medium Data Consistency	Maintain
Rates (taxation) should be maintained		...LBS should maintain rates.	Medium Data Consistency	Maintain

4.3 CUSTOMER LEVELS OF SERVICE

Ultimately customer performance measures are the measures that the City will use to assess whether it is delivering the level of service the customers desire. Customer level of service measurements relate to how the customer feels about the City’s LBS service in terms of their quality, reliability, accessibility, responsiveness, sustainability and, of course, their cost. The City will continue to measure these customer levels of service to ensure a clear understanding of how the customers feel about the services and the value of their tax dollars.

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or underused? Do we need more or less of these assets?

In **Table 14** under each of the service measure types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current allocation.

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Table 12: Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
Quality/ Condition	Provide effective and adequate Animal Services, Licensing and Municipal Law Enforcement Services.	2024 LBS City Services & Assets Review Survey	Average survey respondents on how LBS has performed overall in the last 24 months in all service areas.	Average	Maintain
			Confidence Level	Medium	
			Data Consistency	Medium	
	Ensure that LBS assets are maintained in good condition.	2024 LBS City Services & Assets Review Survey	Average survey respondent opinion on whether LBS facilities are physically accessible, welcoming, and inclusive over the last two years.	Neutral	Maintain
			Confidence Level	Medium	
			Data Consistency	Medium	
	Be fiscally responsible when delivering services.	2024 LBS City Services & Assets Review Survey	Average survey respondent opinion on whether LBS is providing good value for money overall.	Neutral	Maintain
			Confidence Level	Medium	
			Data Consistency	Medium	
Function	Provide appropriate LBS services that meet needs.	2024 LBS City Services & Assets Review Survey	Average survey respondent opinion on whether LBS services meet their service needs overall.	Neutral	Maintain
			Confidence Level	Medium	
			Data Consistency	Medium	
	Ensure Response timelines are reasonable.	2024 LBS City Services & Assets Review Survey	Average survey respondent if LBS responds within a reasonable timeframe.	Neutral	Decrease
			Confidence Level	Medium	
			Data Consistency	Medium	
Capacity / Use	Services are easy to access.	2024 LBS City Services & Assets Review Survey	Average survey respondents if LBS services are easy to access in person, online or by phone over the last two years.	Neutral	Maintain
			Confidence Level	Medium	
			Data Consistency	Medium	

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4.3.1 CUSTOMER INDICES

The two indices calculated to assess how customer expectations for a service are aligning with the perceived performance for a service are listed below in **Table 15**. These indices are explained and analyzed in detail in the sections below.

Table 13: Customer Indices

CUSTOMER INDICES	AVERAGE RESULT
Service Importance Versus Performance Net Differential ³	-26
Net Promoter Score (%) ⁴	-44

The information below is intended to provide context around the survey results to assist LBS with areas to further investigate before proposing any new levels of service.

SERVICE IMPORTANCE VERSUS PERFORMANCE INDICE

The Service Importance versus Performance indices is used to determine if a service’s importance correlates with the perceived performance. Service areas where the average importance rating exceeds the average performance rating by 20 points are indicative of a mismatch between expectations and service levels, equal to one point on the Likert⁵ scale.

Per **Figure 10**, below, the net differential exceeds 20 points for the majority of services offered by LBS. This indicates that there are mismatches between how respondents feel about the importance of the service versus how the service is performing. LBS could investigate Property Use Enforcement and Animal Control Enforcement if they were to consider proposing different levels of service. To reduce the net differential LBS would have to increase their performance to Good for property use and Very Good for Animal Control Enforcement which they could accomplish by altering their Technical Levels of Service as explained in **Section 4.3**. Differential results around licensing (trade, business and temporary) could be considered as well as areas of potential change however nearly 50% of respondents opted out of responding to these questions so results exceed a 20% margin of error indicating that these results are difficult to trust.

³ For these indices, a value close to 0 is considered a match, and a value exceeding 20 points indicates a mismatch between customer expectations, and perception of service levels.

⁴ A positive net promoter score indicates customers would recommend the service to others, a negative score indicates they would not, and a value close to 0 indicates a neutral feeling about the service.

⁵ A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g., Very Good to Very Poor, Very Satisfied to Very Unsatisfied).

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It is noted that there is a good match between performance and importance relating to Animal Adoption and Dog Licensing services.

Since the majority of respondents have infrequently used the service, these results are based on customers' perceptions of the performance and on limited experience with the service.

Figure 8: Importance versus Performance Index Score

Service Area	Performance (index score)	Importance (index score)	Net Differential	Opt Out %
Total	59	85	-26	29%
Property use enforcement (Bylaws, such as: Fireworks, fences, noise control)	44	89	-45	13%
Trade licencing (Example: Plumbing, Heating, Ventilation and Air Conditioning (HVAC), building repair)	54	87	-34	46%
Animal control enforcement (The Responsible Animal Ownership Bylaw: Ensures the health and safety of residents, protects property and prevents public issues)	56	88	-32	13%
Business licencing (Example: Taxicabs, hotels, restaurants)	59	90	-31	44%
Temporary business licencing (Valid for 30 days, used to test markets and promote business development with minimal risk)	56	77	-21	51%
Dog licencing (Enforced/required under The Responsible Animal Ownership Bylaw)	69	79	-10	14%
Animal adoption from City of Hamilton shelter (247 Dartnall Rd)	74	83	-9	24%

NET PROMOTER SCORE INDICE

The Net Promoter Score indices outline how likely an individual is to recommend a service to another person and measure customer loyalty. For municipal services, this score is difficult to interpret because often individuals do not have many alternatives for utilizing different services and also there may be internal biases for certain service areas, however, this score does provide valuable information for if customers would recommend using the service or whether they may seek alternatives or avoid using the service altogether.

Likert choices (*A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours and consists of a statement or question followed by a series of five or seven answer statements*) less than a score of four are considered 'Detractors' meaning that they would not recommend the service, while scores of five are considered 'Promoters' who would recommend the service and scores of four are considered 'Passive' which means they do not have strong feelings about the service. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Promoters) and (% Detractors). The Standard Deviation (σ) is calculated in percent, the same units as the Net Promoter Score.

Based on the results below in **Figure 11**, LBS has a negative net promotor score indicating that on average customers would not recommend LBS services to others.

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Figure 9: Net Promoter Score

Service Area	σ	NPS	Detractors	Passives	Promoter
All Service Areas	1.34	-43.77	223	96	58
Animal Services, Licensing and Municipal Law Enforcement (By-law) services meet my needs	1.39	-50.00	43	7	12
I would be willing to increase taxation to provide better Licensing, Bylaw & Animal Services Division's services	1.42	-46.97	39	19	8
Licensing, Bylaw & Animal Services Division's respond within a reasonable timeframe	1.38	-46.15	32	12	8
Licensing, Bylaw & Animal Services Division's service provides good value for money	1.42	-45.00	36	15	9
Services are easy to access in person, online or by phone	1.27	-42.19	36	19	9
Spaces are physically accessible	1.05	-35.14	19	12	6
Spaces are welcoming and inclusive for all	1.09	-33.33	18	12	6

SERVICE RATES VERSUS VALUE FOR MONEY INDICE

The Service Rates versus Value for Money indices are used to determine if the rate an individual is paying for a service correlates with the perceived value for money. Service areas where rate level ratings exceed value for money ratings by 20 points are indicative of a mismatch between expectations and service levels, equal to one point on the Likert⁶ scale. Positive Net Differential values indicate that 'Value for Money' was greater than willingness for 'Rates'. Low index scores in 'Rates' indicate that respondents are not willing to pay increased rates for the service area. All values were calculated and then rounded to the nearest whole number.

Although these indices were not measured directly for this iteration of the Animal Services, Licensing and Municipal Law Enforcement (By-law) AM Plan when comparing past experiences and asking customers if "...services meet my needs" to "I would be willing to increase taxation to provide better... services" both are rated as 'Neutral' indicating a general match of perceived Value for money.

4.3.2 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how the City delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. The City will measure specific

⁶ A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g., Very Good to Very Poor, Very Satisfied to Very Unsatisfied).

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lifecycle activities to demonstrate how the City is performing in delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.^{2F⁷}

Table 16 shows the activities expected to be provided under the current 10-year Planned Budget allocation and the forecast activity requirements being recommended in this AM Plan.

⁷ IPWEA, 2015, IIMM, p 2|28.

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Table 14: Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE (2023)	CURRENT TARGET PERFORMANCE (2024)	PROPOSED 10-YEAR PERFORMANCE
Acquisition	Ensure LBS has the capacity to reliably respond to service requests in a timely manner and new By-laws.	A number of new vehicles were purchased due to growth/demand (2024 Approved budget items, Business Cases and General Growth).	No approved Acquisitions in 2023.	PED23237 ⁸ = 1 PED23236 ⁹ = 1 PED23072(b) ¹⁰ = 3 5 Total	BC 1.1 = 1 PED23072(b) ¹⁰ = 13 PED23237 ⁸ = 1 PED23236 ⁹ = 1 Pop ratio = 4 20 Total
		Budget		\$273K	\$1.1M
Operation	Customers desire quick turn-around to their By-law/Licensing and Animal Services related concerns.	Number of working days it takes to respond to concerns coming through CCMLE.	-	24 Hours of Receiving Request	24 Hours of Receiving Request
		Percent of times By-law clerks respond to incoming phone calls.	-	100%	Future continuous improvement initiatives to set targets and recommended performance
	Budget				TBD
	Customers desire a high level of customer satisfaction (virtual or in-person services).	Number of annual service requests received via phone call.	3519 (YTD Sep 2023)	TBD	Future continuous improvement initiatives to set targets and recommended performance

⁸ Reid, 2023

⁹ Barkovitch, 2023

¹⁰ Gillian Barkovitch / James O'Brien, 2024

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LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE (2023)	CURRENT TARGET PERFORMANCE (2024)	PROPOSED 10-YEAR PERFORMANCE
		Number of annual service requests received via email or online forms.	4617 (YTD Sep 2023)	TBD	Future continuous improvement initiatives to set targets and recommended performance
		Budget			TBD
	Customers want to be able to rely on the services when needed (virtual or in-person).	1. Average number of open service desks. 2. Number of days the website is operational.	Not Currently Measured. Future continuous improvement items to track going forward	No Target	Future continuous improvement initiatives to set targets and recommended performance
		Budget			TBD
Maintenance	Ensure that By-law/MLE/Animal Services facilities assets are maintained in good condition.	Average Facility Condition Index for Facilities	Wentworth – 19.82% Jones Road – 11.75% Dartnall Road– 16.08%	<5%	<5%
		Budget			\$4.5M
Renewal	Ensure that Animal Services, Licensing and Municipal Law Enforcement assets are renewed when appropriate.	Percent of Fleet that exceeds Estimated Service Life in years.	Animal Services = 1 of 10 (10%) MLE, Licensing = 8 of 51 (15%)	5%	5%
		Budget			\$226K

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It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

It is important to note that these metrics were created specifically for this 2023 AM Plan with available data and some of these metrics are not yet being measured. Many of these metrics should be improved to include a target to be in line with SMART objectives identified on Page 43 of the **AM Plan Overview**.

4.3.3 PROPOSED LEVELS OF SERVICE DISCUSSION

LBS is developing and benchmarking potential additional Technical Levels of Service as a continuous improvement item in **Table 29**. When developing these Technical LOS consideration could be given to developing Technical LOS that match to Customer LOS. Since the confidence level associated with the survey is a maximum of medium, and most survey respondents were not actual users of the service, it is difficult to make any conclusive decisions based on this initial survey. LBS will need to collect more customer data before proposing any new levels of service beyond what has been approved as part of the 2024 budget process. It has been assumed in the interim that the current levels of service will be the proposed levels of service moving forward past 2025 in accordance with O. Reg 588/17. The information below is intended to provide context to direct LBS to areas for further investigation before proposing any new levels of service.

In addition, many of LBS asset customers are internal customers (e.g., staff) as they are the main users of LBS assets. For this first iteration of the AM Plan, the focus was on external customers (i.e., the public), and as a result, there are some gaps in the information below with respect to internal customers. This has been identified as a continuous improvement item in **Table 29**.

CONDITION / QUALITY

Based on the Customer Levels of Service **Table 14** and Technical Levels of Service **Table 16**, it seems likely that typically customer expectations match service levels, given the neutral rating given to many survey questions. Again, results must be interpreted recognizing the margin of error in the survey results.

Survey respondents thought that LBS had average performance overall and they felt neutral about using LBS services showing a match in customer expectations and technical targets.

In terms of providing good value for money, customers felt neutral about whether the services provided good value for money, showing a match in customer expectations and technical targets.

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As previously mentioned, LBS does not yet have an internal survey to survey internal staff on the condition of assets, and LBS does not yet have measures or targets for maintaining assets in acceptable condition. This has been identified as a continuous improvement item in **Table 29**.

FUNCTION

Survey respondents thought that LBS was neutral in meeting service needs overall. However, when asked about response times customers were also neutral if responses were received in a reasonable timeframe. This seems that there is agreement between service needs and response times and that current performance on Technical Key Performance Indicators (KPIs) could be considered when setting targets.

CAPACITY

Customers rated their satisfaction with their ability to access services as predominately neutral.

Customers were neutral on increasing taxation to provide better Licensing, By-law, and Animal Services. It will be difficult to greatly improve Levels of Service experiences as these improvements would typically require increasing the capacity of the service, and also costs, to respond more quickly or to resolve the ever-growing requests for service and expanding by-laws that require enforcement. Some LOS improvements that seem to be desired by customers, such as Noise By-law enforcement at all hours, are related to specific previous council reports and approvals and would require different approvals from council to implement changes.

When customers were asked about what could be done to improve services or spaces in the future from an open text box in the survey the word cloud summary reveals: dog enforcement (dogs, animals), fireworks, and proactive, as key themes to consider.

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5. FUTURE DEMAND

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of services required.

5.1 DEMAND DRIVERS

For the LBS service area, the key drivers are population growth and legislative change.

5.2 DEMAND FORECASTS

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 17**. Growth projections have been shown on **Page 45** of the **AM Plan Overview** document.

Where costs are known, these additional demands as well as anticipated operations and maintenance costs have been encompassed in the Lifecycle Models in **Section 8**.

5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets is shown in **Table 17**. Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to date for demand management are shown in **Table 17**. Climate change adaptation is included in **Table 23**.

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Table 15: Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Population Increase: Officer to Population Ratio 2023 levels	51 Officers population 570K = 9 officers per 100,000	Future Population (236 K increase) 21 additional officers could be considered by 2051 Add 2 officers every 3 years to maintain the current ratio	<ul style="list-style-type: none"> Additional Officers are needed to maintain the current LOS/Ratio. If not added: <ul style="list-style-type: none"> Decrease in customer satisfaction; Decrease in the number of proactive inspections; and, Longer response times. 	<ul style="list-style-type: none"> Request Additional officers and support staff to ensure capacity. Consider part-time staff. Acquire additional assets (vehicles, office space, furniture, computers/laptops, cell phones) to support new FTEs. Investigate jurisdictional scans to compare to other municipalities and their service levels for benchmarking.
Reputation (Number of complaints for investigation)	2023 Service Request Volume: 43,441 (7,621 per 100K residents)	Forecast Service Request volume: 62,500	<ul style="list-style-type: none"> Increased staff time to respond. Reputational impacts. 	See the Demand Management Plan above. <ul style="list-style-type: none"> Additional FTEs needed to receive complaints (by-law clerks) and address complaints (officers), admin staff, and legal staff. Additional projects will require the addition of project managers to the staff.
Population Growth – Additional Animal Services needed	One facility, Animal care capacity concerns exist today	Service needs will grow. New purpose-built facility with expanded capacity.	<ul style="list-style-type: none"> Unable to accept voluntary surrenders in a timely manner. 	<ul style="list-style-type: none"> Population growth will drive the need for additional shelter spaces and possibly new facilities.
Financial (Unemployment rate & inflation)	Hamilton's unemployment rate is 6.0% (three-month average January 2024)	Unknown	<ul style="list-style-type: none"> Increase in the number of shelter intakes at Animal Services as residents can't care for pets due to financial limitations. Decrease in pet adoptions due to lack of affordability. 	Expansion of facility will need: <ul style="list-style-type: none"> Additional vet staff; Additional shelter; Assets for animal care; Additional staff to accommodate; and, Increase in shelter intakes. Proposed but not funded at this time - Business Case 1.1 requests additional FTEs and Equipment related to Animal Services related to current Animal Care Officers.
Environmental Commitments (Reduction in carbon emissions)	54 Vehicles (10 Hybrid, 1 EV)	80+ Vehicles	<ul style="list-style-type: none"> Increase in operating cost. Increased fuel cost. 	Procure more EVs, active implementation of anti-idling, mandatory eco driver training, disposal of aged vehicles additional charging stations, storage of vehicles/parking.
Technology (Digital notes - provincial initiative) (Body cameras) (QR codes)	Digital notes are currently entered into the AMANDA system Currently no body cameras Currently no use of QR codes	Procure advanced technology for digital notes whether it be a digital notebook, or apps on cell phones Procure body cameras for evidence Information integration using QR codes	<ul style="list-style-type: none"> Reduce staff and officer's admin time; Improved accuracy/consistency in text, less confusion, easily readable; Consistency in courts that may increase credibility; Impact Freedom of Information (FOI) requests – ease of access; Possible use of body cameras can capture all incidents creating additional evidence; and, Use of QR codes specific to licensing, to minimize the use of paper documents, and mailing, improve accessibility, reduce errors, and can be used for contractors (ensure consistent information). 	<ul style="list-style-type: none"> Active procurement of digital note solutions, body cameras and QR code technology for information integration. Additional training in the use of new technology. Additional staff for roll out of new technology initiatives. Possible alignment with Hamilton Police Services for digital notes.
An increase in the scope of By-laws draws demand for additional officers/impacts existing response times	51 officers currently		<ul style="list-style-type: none"> A mismatch between new by-laws and additional resources to enforce by-laws causes service delays and complaints. 	<ul style="list-style-type: none"> Request for Additional FTEs /vehicles for Council Referred Items to support new by-law enforcement. PED23237¹¹ – Waterfront Ambassador Program PED23072(b)¹² – Renovation License By-law and Safe Apartment Buildings By-law PED 23236¹³ - Industrial/Commercial Proactive By-law pilot project

¹¹ Reid, 2023

¹² Gillian Barkovitch / James O'Brien, 2024

¹³ Barkovitch, 2023

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5.4 ASSET PROGRAMS TO MEET DEMAND

The new assets required to meet demand may be acquired, donated or constructed. For *Animal Services, Licensing and Municipal Law Enforcement (By-law)*, assets are typically purchased or constructed.

At this time there are additional vehicles and FTE officers planned to be acquired over the next 5 years related to PED23237 – Waterfront Ambassador Program¹⁴; PED23072(b) – Renovation License By-law and Safe Apartment Buildings¹⁵; and, By-law PED 23236 Industrial/Commercial Proactive By-law pilot project¹⁶. Acquiring new assets will commit Animal Services, Licensing and Municipal Law Enforcement (By-law) to ongoing operations, maintenance and renewal costs for the amount of time that the service is required. These future costs have been estimated at a high level in the Lifecycle Models in **Section 8** but should be quantified further for future iterations of the report for consideration in developing higher confidence forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan.

¹⁴ Reid, 2023

¹⁵ Gillian Barkovitch / James O'Brien, 2024

¹⁶ Barkovitch, 2023

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6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk’¹⁷.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. The City of Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

6.1 CRITICAL ASSETS

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in **Table 18**. Failure modes may include physical failure, collapse or essential service interruption.

Table 16: Critical Assets

CRITICAL ASSET	FAILURE MODE	IMPACT
Animal Services Facility	Facility unusable (heat, fire, flood structural)	Unable to meet legislative requirements to meet care standards for animals.
By-Law and Animal Services Vehicles	Essential service interruption	Challenges to respond in a timely manner due to not enough serviceable vehicles.

¹⁷ ISO 31000:2009, p 2

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By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

Critical risks are those assessed with ‘Very High’ (requiring immediate corrective action), and ‘High’ (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan are shown in **Table 19**. It is essential that these critical risks and costs are reported to management. Additional risks will be developed in future iterations of the plan and are identified in **Table 29** in the Continuous Improvement Section of the plan.

Table 17: Risks and Treatment Plans

SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
Animal Services Facility	Animal Services facility uninhabitable (longer than 12 hours)	HIGH	Update and Practice Business Continuity Plans for various scenarios	MEDIUM	TBD
Animal Services Facility	Joint use of 247 Dartnall Road with HBSPCE ends	HIGH	Develop Risk Mitigation Plans	MEDIUM	All facility costs of the new facility would need to be paid 100% by the City of Hamilton and the City would need to construct a new facility

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SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
By-law Enforcement	Delays in enforcing By-laws due to available resources might lead to litigation/claims against the City	HIGH	Prioritize service requests. Public safety calls are given the highest priority. Advocate for additional resources to address increasing call volumes.	MEDIUM	See 2023 in year and 2024 budget Referred Item requests. Consider future year requests for growth-related FTEs.

6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to ‘withstand a given level of stress or demand’, and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery, and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment and crisis leadership.

6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective of achieving the optimum benefits from the available resources.

The following table outlines what activities LBS cannot afford to do over the next 10 years with their existing budget and provides the associated service and risk tradeoffs.

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Table 18: Service and Risk Trade-offs

WHAT WE CANNOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
Acquisition of additional vehicles and enforcement tools for additional officers related to growth.	Longer timelines to respond to non-life-threatening calls for service.	Reputational risk due to not meeting customer expectations.
Increase animal intake services without expansion of facilities, vehicles, equipment and staff.	Demand for services may exceed capacity as the city grows. Unable to accept surrendered animals and accommodate stray animals.	Health and safety concerns for animals. Public satisfaction with service will decline.
Develop, implement and enforce new Council-approved by-laws and schedules in reasonable timelines and implement new by-law programs with limited resources.	Increasing amounts and complexity of by-laws and enforcement requests will delay response times, investigation and resolution.	Financial risk of liability and claims against the City. Reputational risk due to not meeting customer expectations. Continued non-compliance with by-laws. Increased risk to the health and safety of residents.
Implement technology improvements/service process improvements due to the increasing volume of regular operational work.	Not able to provide services the way the public wants, missed efficiency opportunities.	Public satisfaction with service will decline. Lack of transparency with the public unable to access desired information. Staff frustrations with older processes.

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7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we have already begun to experience (adaptation). At a minimum, the City must consider how to manage our existing assets given the potential climate change impacts for our region.

Changes to Hamilton's climate will impact City assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models as well as levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan. This has been identified as a continuous improvement item in **Table 29**.

7.1 CLIMATE CHANGE MITIGATION

Climate Mitigation refers to human intervention to reduce GHG emissions or enhance GHG removals (e.g. building transportation infrastructure that can support cycling and public transit and reduce the need for car travel). The City of Hamilton's Community Energy + Emissions Plan¹⁸ (CEEP includes five low-carbon transformations necessary to achieve the City's target of net-zero GHG emissions by 2050:

- Innovating our industry;
- Transforming our buildings;
- Changing how we move;
- Revolutionizing renewables; and
- Growing Green.

¹⁸ Newbold, Skidmore, Chessman , Imhoff, & McDowell, 2022

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MITIGATION DEMAND ANALYSIS

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City's modelled targets for the low carbon transformations that applied to the service/asset;
- Discussing the impact, the targets would have on the service/asset; and
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050 as shown in **Table 21** below.

As previously mentioned, due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below have not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AM Plan. This has been identified as a continuous improvement item in **Table 29**.

Moving forward, the Climate Lens tool discussed in the [AM Plan Overview](#) will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

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MITIGATION DEMAND ANALYSIS

Table 19: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Changing How We Move	100% of new municipal small and light-duty vehicles will be electric by 2040. 100% of new municipal heavy-duty vehicles switch to clean hydrogen by 2040.	Electric vehicle chargers will need to be installed at all City yards. Initial upfront capital costs for electric vehicles. In the case of 24-hour operations, charging could be an issue.	Green Fleet Strategy deployment for MLE vehicles. Evaluate alternative vehicles under excessive idling conditions and ensure equipment (Automatic Vehicle Locating/Laptops) still operates when vehicles are off.
Revolutionizing Renewables	By 2050, 50% of municipal buildings will add rooftop solar PV, covering 30% of the building's electrical load.	Work with the CFEM division to incorporate any solar PV into buildings where appropriate considering capital cost for solar, and possible roof upgrades to support solar.	Work with the CFEM division to incorporate any solar PV into buildings where appropriate.
Transforming Our Buildings	By 2050, all municipal buildings will be retrofitted to achieve 50% energy efficiency relative to 2016.	The conversion may require the facility to be out of service for a period of time.	Facilities will need to be assessed to figure out the feasibility of any retrofits. Staff will need to be trained on the new system.
Transforming Our Buildings	By 2050, all new municipal buildings achieve net-zero emissions.	The net-zero building could have higher costs to construct but lower operational expenses.	Any new buildings constructed will look to achieve net-zero emissions in keeping with any City Policy.

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MITIGATION RISK ANALYSIS

Additionally, since the risk of not completing climate change mitigation projects is that the City continues to contribute to climate change in varying degrees which were modelled in the Climate Science Report for the City of Hamilton completed by ICLEI Canada, a risk analysis has not been completed in this AM Plan for not completing climate mitigation projects (ICLEI Canada, 2021).

CURRENT MITIGATION PROJECTS

Mitigation projects LBS is currently pursuing are outlined below in **Table 22**. These projects may already be included in the budget and may be quantified in the lifecycle models.

Table 20: Asset Climate Mitigation Projects

PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
None	Transforming our Buildings	LED Lighting was recently installed at some facilities.	Reduction in GHG

7.2 CLIMATE CHANGE ADAPTATION

Climate Adaptation refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads).

The impacts of climate change may have a significant impact on the assets we manage and the services we provide. Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.^{3F19}

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report²⁰ guided by ICLEI’s Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP) (ICLEI, 2021). The BARC Framework identified thirteen high-impact areas.

¹⁹ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

²⁰ City of Hamilton & Local Governments for Sustainability Canada, 2021

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ADAPTATION DEMAND ANALYSIS

Table 21: Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	BASELINE (1976-2005) ²¹	AVERAGE PROJECTED CHANGE 2021-2050 ²¹ (ASSUMING RCP4.5 ²² SCENARIO)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
<p>More frequent and intense heatwaves will increase instances of heat-related health and safety issues, particularly for households without access to reliable air-conditioning and the homeless.</p>	<p>2.1 average annual heat waves</p>	<p>4.7 average annual heat waves</p>	<p>Potential Increase in calls for service relating to proposed by-law for Adequate Temperature investigation and enforcement.</p>	<p>Additional Resources are requested through PED23072(b)²³.</p>
<p>Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns.</p>	<p>187 mm average total winter precipitation</p>	<p>204 mm average total winter precipitation</p>	<p>Animal Services impacted by outages (heat/air conditioning, H&S of staff and animals). Unable to charge electric vehicles.</p>	<p>Document alternate locations for EV charging. Develop a Business Continuity Plan for the Animal Services Facility. Investigate alternative work locations for staff.</p>

²¹ ICLEI Canada, 2022

²² RCP4.5 Scenario: Moderate projected Green House Gas concentrations, resulting from substantial climate change mitigation measures. It represents an increase of 4.5W/m2 in radiative forcing to the climate system. RCP 4.5 is associated with 580-720ppm of CO2 and would more than likely lead to 3°C of warming by the end of the 21st century.

²³ Gillian Barkovitch / James O'Brien, 2024

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ADAPTATION IMPACT STATEMENT	BASELINE (1976-2005) ²¹	AVERAGE PROJECTED CHANGE 2021-2050 ²¹ (ASSUMING RCP4.5 ²² SCENARIO)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
<p>Rising summer temperatures and extreme heat will increase energy demand for air conditioning, causing a financial burden for low-income households.</p>	<p>25.9 degrees Celsius average summer seasonal temperature</p>	<p>27 degrees Celsius average summer seasonal temperature</p>	<p>Rising summer temperatures and extreme heat will increase energy demand for air conditioning, causing a higher load on equipment and more run time. This will increase costs and reduce the lifecycle of equipment.</p>	<p>Work with the CFEM division to ensure that critical HVAC systems are inspected and maintained at appropriate intervals and replace systems at the end of life when the risk of failure is highest to guard against reactive replacement.</p>
<p>Reduced capacity of flood protection measures and water storage caused by an increase in rainfall intensity leading to flooding.</p>	<p>6.7 total heavy precipitation days (20 mm)</p>	<p>7.7 total heavy precipitation days (20 mm)</p>	<p>EV Charging stations might be unusable. Flooding may leave the Animal Shelter unusable.</p>	<p>Damage to EV charging stations in the event of flooding. Infrastructure plan to accommodate the possibility of future flooding when installing charging stations.</p> <p>The business Continuity Plan should consider a relocation/evacuation plan for the Animal Services shelter.</p> <p>Any new infrastructure should consider a risk assessment for flooding based on current climate models (updated for climate change).</p>

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ADAPTATION RISK ANALYSIS

Additionally, the City should consider the risks for the asset or service as a result of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Similarly, to the exercise above and using the risk process in **Section 6**, asset owners:

- Reviewed the likelihood scores in the Vulnerability and Risk Assessment Report for the adaptation impact occurring;
- Identified the consequence to the asset/service if the event did happen to develop a risk rating; and,
- If the risk was identified as high, the asset owner produced a preliminary risk adaptation plan shown below in **Table 24**.

It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of mitigating the risks below has not been included in the lifecycle and financial models at this time. The adaptation plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should consider these risks during the planning and design processes. Future changes will be incorporated into future iterations of the AM Plan. Moving forward, the Climate Lens tool will assess projects based on these targets and will assist with the prioritization of climate adaptation projects. This has been identified as a continuous improvement item in **Table 29**.

Table 22: Adapting to Climate Change

ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
Various	Animal Shelter	Flooding of the facility. Power outage impacting utilities resulting in lack of ability to heat or cool.	High	Update and practice the Business Continuity Plan as outlined in the Risk Section of the AM Plan.

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CURRENT ADAPTATION PROJECTS

At this time this service area does not have any adaptation projects identified.

CLIMATE ADAPTATION DISCUSSION

Climate effects are more difficult to assess on LBS services and assets and need to be investigated further which has been identified as a continuous improvement item in **Table 29**.

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8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budgets. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated together and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options. However, at this time the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

At the time of writing, LBS does not have a Capital budget or forecast. A continuous improvement item noted in **Table 29** is to create a 10-year Capital budget and forecast. The budgets identified in the lifecycle management plan are based on the approved 2023 budget and in-year approvals for PED23237²⁴ and 2024 budget requests relating to PED 23072(b)²⁵, and PED23236²⁶. No additional increases have been assumed, i.e., the budget was flatlined across future years. Operating budgets are created annually. The budgets used are also the **gross budgets** as the impact of revenues collected by LBS will be considered as part of the Long-Term Financial plan impact, as such any funding gap identified is not necessarily attributed directly to the levy and may be recovered in part by increased enforcement activities.

8.1 ACQUISITION PLAN

The acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs.

CURRENT PROJECT DRIVERS – 10-YEAR PLANNING HORIZON

The City prioritizes capital projects based on various drivers to help determine ranking for project priorities and investment decisions. As part of future AM Plans, the City will continue to develop its understanding of how projects are prioritized and ensure that multiple factors are being considered to drive investment decisions in the next iteration of the AM Plan. These drivers will include legal compliance, risk mitigation, O&M impacts, growth impacts, health and safety, reputation and others. These drivers should be reviewed during each iteration of the AM Plan to ensure they are appropriate and effective in informing decision-making.

²⁴ Reid, 2023

²⁵ Gillian Barkovitch / James O'Brien, 2024

²⁶ Barkovitch, 2023

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CONSTRUCTED OR PURCHASED ACQUISITIONS

Over the next 30-year planning period, based on current proposed council-referred items, business cases, and maintaining existing officer-to-population ratio, the City may acquire approximately **\$1.5M** of purchased or constructed assets which can either be new assets which did not exist before or expansion of assets when they are to be replaced. Major possible acquisition expenditures over the next thirty years include:

- Approved acquisitions (15 additional vehicles):
 - Thirteen additional approved By-law Enforcement vehicles (\$709K) PED23072(b)²⁷;
 - One additional vehicle (\$55K) approved Waterfront Ambassador Vehicle PED 23237²⁸; and,
 - One additional vehicle (\$55K) approved Industrial/Commercial Proactive By-law pilot project PED 23236²⁹.
- Proposed acquisitions (11 additional vehicles):
 - One additional proposed Animal Services vehicle (\$90K) – BC 1.1; and,
 - Forecast/proposed additional 10 vehicles and equipment costs for 20 FTEs to maintain the current ratio of officers to population based on the existing 2023 By-law scope of work (\$606K).

It is important to note that proposed acquisitions are not necessarily approved at this time but have been included in the financial projections to show the lifecycle impacts if they are approved by Council and if not implemented level of service may decrease as population growth occurs.

One additional acquisition that is not currently modelled is either the acquisition of new space for Animal Services or the participation in the renewal of the existing shared-use facility. Timing and costs for this are unknown and any renewal cost sharing arrangements are not publicly available. A facilities strategic plan should be completed for Animal Services. This has been identified as a continuous improvement item in **Table 29**.

One additional acquisition that is not currently modelled is the acquisition of new space to accommodate the additional vehicle parking and working space for new FTEs identified and approved as part of the 2024 budget process. It is not determined at this time if this expansion can be accommodated within the existing space allocation at 330 Wentworth Street North or if additional space or facilities will be needed.

The City has insufficient budget for its proposed purchased or constructed acquisitions at this time. This does not address future asset needs that may need to be purchased or constructed to ensure service levels are maintained over the long term. With competing needs for resources

²⁷ Gillian Barkovitch / James O'Brien, 2024

²⁸ Reid, 2023

²⁹ Barkovitch, 2023

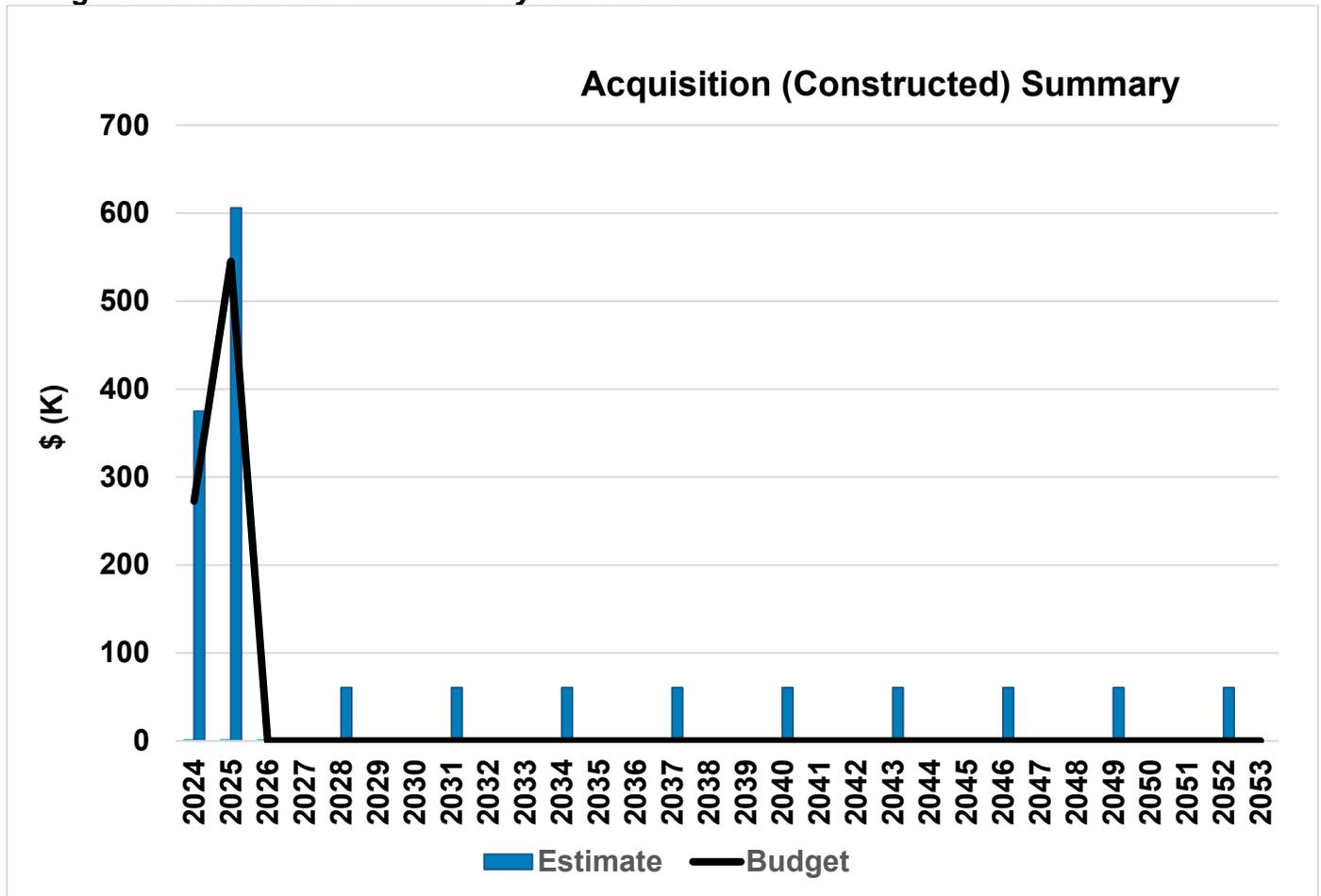
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across the entire city, there will be a need to investigate trade-offs and design options to further optimize asset decisions and ensure intergenerational equity can be achieved. The City of Hamilton will continue to monitor its purchased and constructed assets annually and update the AM Plan when new information becomes available.

Figure 10: Acquisition (Constructed) Summary
 All figure values are shown in 2023-year dollars.

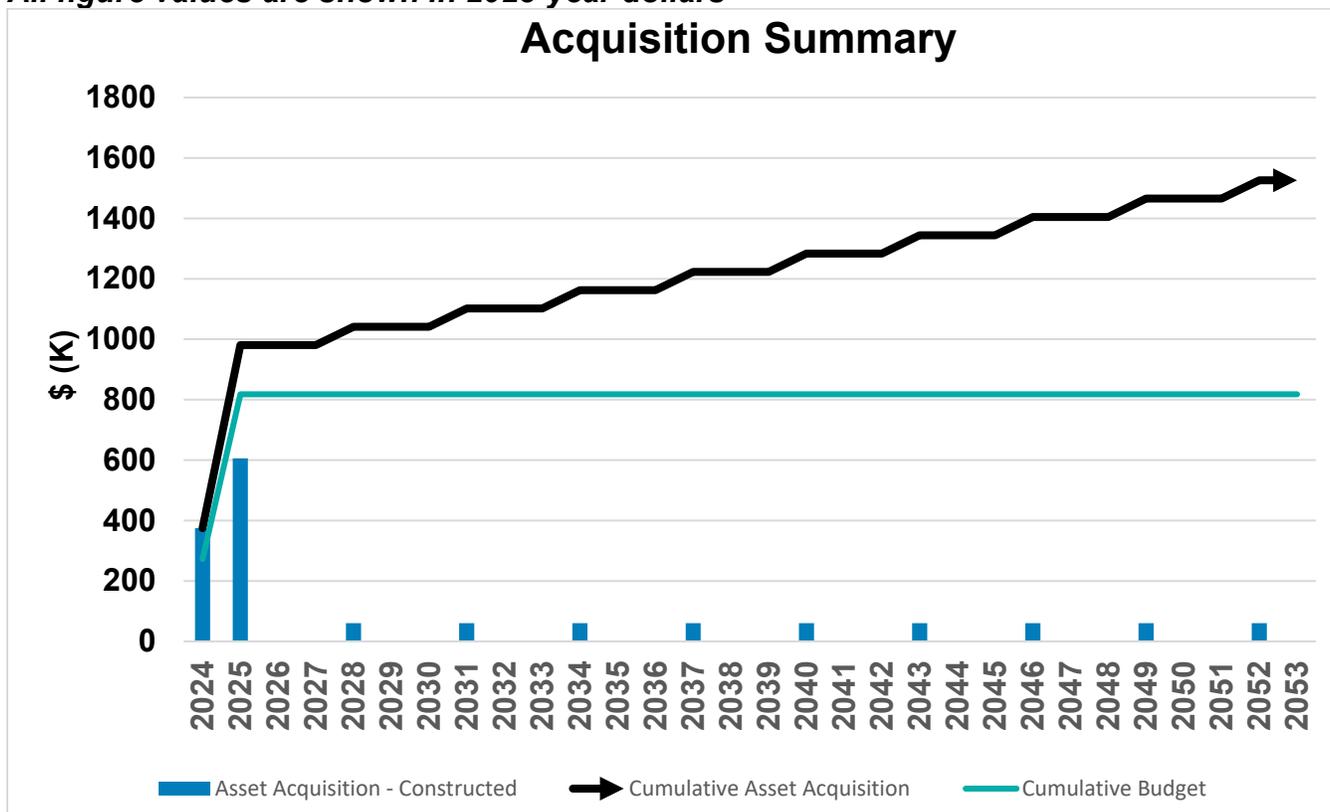


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ACQUISITIONS SUMMARY

Forecast acquisition costs are summarized in **Figure 13** and show the possible cumulative effect of asset acquisitions over the next 30-year planning period.

Figure 11: Acquisition Summary
All figure values are shown in 2023-year dollars



When the City of Hamilton commits to constructing new assets, the municipality must be prepared to fund future operations, maintenance, and renewal costs. The City of Hamilton must also account for future depreciation when reviewing long-term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken. The cumulative value of all acquisition work, including assets that are constructed and contributed is shown in **Figure 13** above. The lack of future acquisitions is largely due to a lack of acquisition forecast rather than a lack of actual potential need to acquire additional assets in the future.

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8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons. Examples of typical operational activities include operating assets, utility costs, inspections and the necessary staffing resources to perform these activities. LBS is largely a people and operations-driven service and the majority of the costs required to deliver the service are employee-related costs. Some of the major operational investments over the next 10 years include:

- **\$8.1 million** allocated for employee-related costs in 2023 (i.e., salaries, wages, benefits, contractual agreements, etc.); and,
- Increases in operating costs and FTE complement related to:
 - Waterfront Ambassador Program PED23237³⁰ (**\$79.6K Annualized**);
 - Industrial/Commercial Proactive By-law pilot project PED23236³¹ (**\$263K Annualized**); and,
 - Renovation License By-law and Safe Apartment Buildings By-law components of PED23072(b)³² (Increasing from **\$1.4M in 2024 to \$3.4M Annualized in 2026**).

For the Animal Services facility at 247 Dartnall Road, the costs of facility operation, maintenance and repairs are shared with HBSPCA. The costs in this AM Plan are the City's portion of the shared costs to operate the facility. If the City were ever to operate their own facility the O&M costs would increase.

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are proactively applied to assets and to ensure it reaches its intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition. Examples of typical maintenance activities include equipment repairs and component replacements along with appropriate staffing and material resources required to perform these activities.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure the LBS assets are reliable and can achieve the desired level of service.

There are no major maintenance activities identified for LBS in the available budgets and the gap is largely driven by facilities 10-year needs.

The forecast needs include costs related to Business Case 1.1 relating to additional proposed FTEs for Animal Services. It also includes estimated increases in operating costs related to

³⁰ Reid, 2023

³¹ Barkovitch, 2023

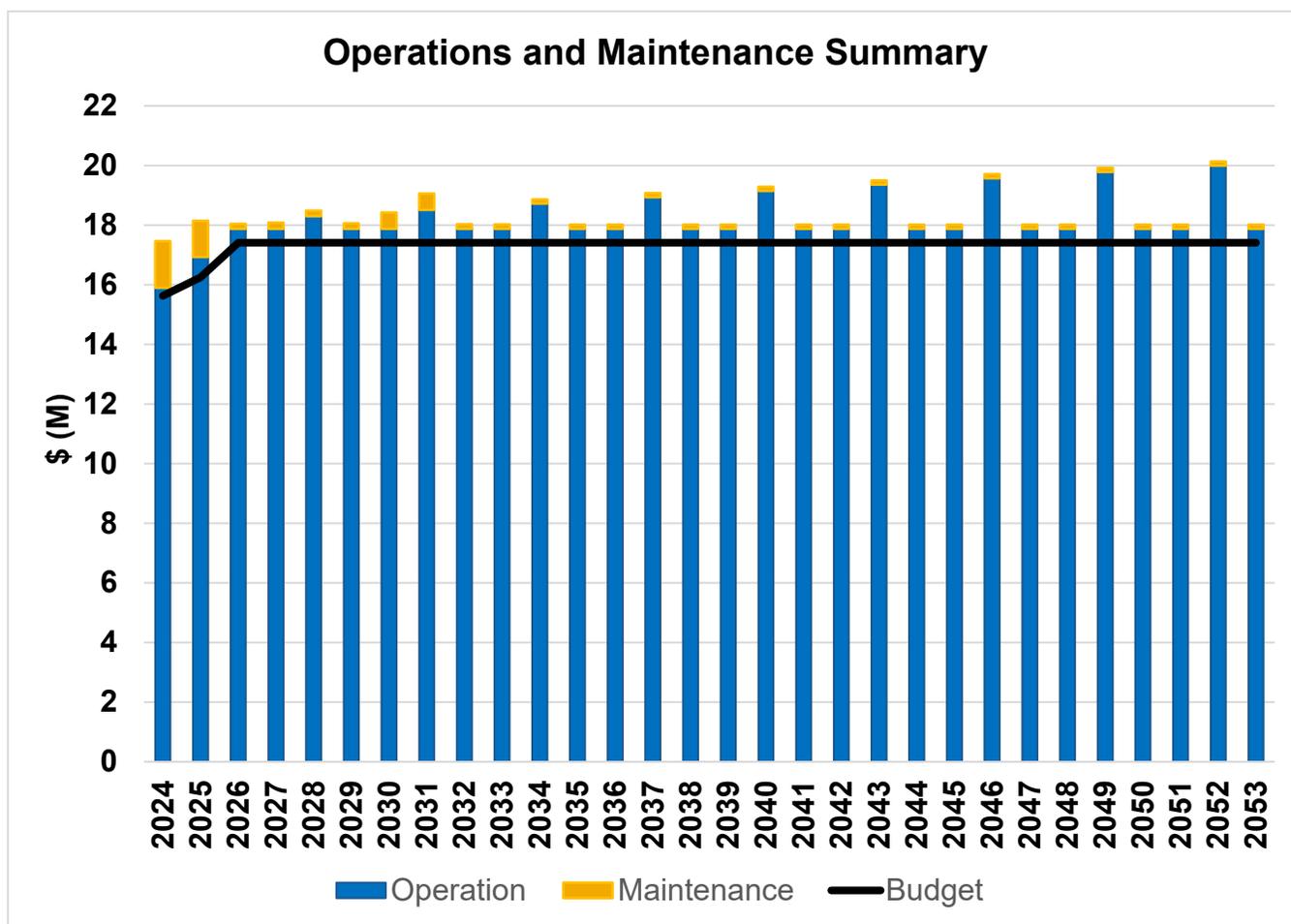
³² Gillian Barkovitch / James O'Brien, 2024

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maintaining an officer-to-population ratio similar to the current 2023 ratio, which suggests an increase of approximately 20 officers over the next 30 years. It is important to note that these Business Cases and the proposed concept to maintain the ratio of officers to the current population are not approved at this time but have been included in the financial projections to show the lifecycle impacts if they are approved by Council in future considerations.

The forecast does not include any additional O&M costs related to any additional (if any) space requirements related to new FTEs approved as part of the 2024 budget process. It is possible these costs were included in the budget requests which have been modelled and may not need to be included separately.

Figure 12: Operations and Maintenance Costs
 All figure values are shown in 2023-year dollars.



The forecasted operations and maintenance needs will increase steadily over time with the proposed implementation of the Animal Services Business Case. They will also increase based on the proposed addition of officers, vehicles and equipment to maintain the current LOS provided by the current ratio of officers to population. All of these costs have been incorporated into this model with information available at the time of writing.

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LBS does not have a sufficient budget to implement needed backlog repairs to facilities. It is important to note that priority repairs are being completed on these facilities and that major decisions should also be put on hold pending an operational review of their current spaces and needs to be driven in part by the Public Works/CFEM Yards Study and the current capacity limitations at 330 Wentworth Street North and the Animal Services Facilities.

There is not sufficient budget to implement Business Case item 1.1. It is also likely that with the current budgets, the ratio of officers to population will decrease resulting in fewer officers to handle calls related to a growing population.

8.3 RENEWAL PLAN

Renewal is major work which does not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Asset renewals are typically undertaken to either ensure the assets' reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 25** and are based on the estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2023 however they should be reviewed annually until their accuracy reflects the City's current practices.

Table 23: Useful Lives of Assets

ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Facilities	50
Animal Services Fleet – Vans & Powered Equipment	10
All Other Fleet – Vehicles	8
IT Hardware	4
Mobile Phones	2
Mobile Printers	5
Animal Care Equipment – Average	10
Admin – Average	17

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ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Officer Equipment	5
Officer Uniforms	3

The estimates for renewals in the AM Plan were based on the register method which utilizes the data from the City’s asset registry to analyze available lifecycle information and then determine the optimal timing for renewals based on the ESL. The alternate method was also used to quantify renewals for future anticipated acquisitions.

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).³³

Future methodologies may be developed to optimize and prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure;
- Have high use and the subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have the potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.³⁴

³³ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

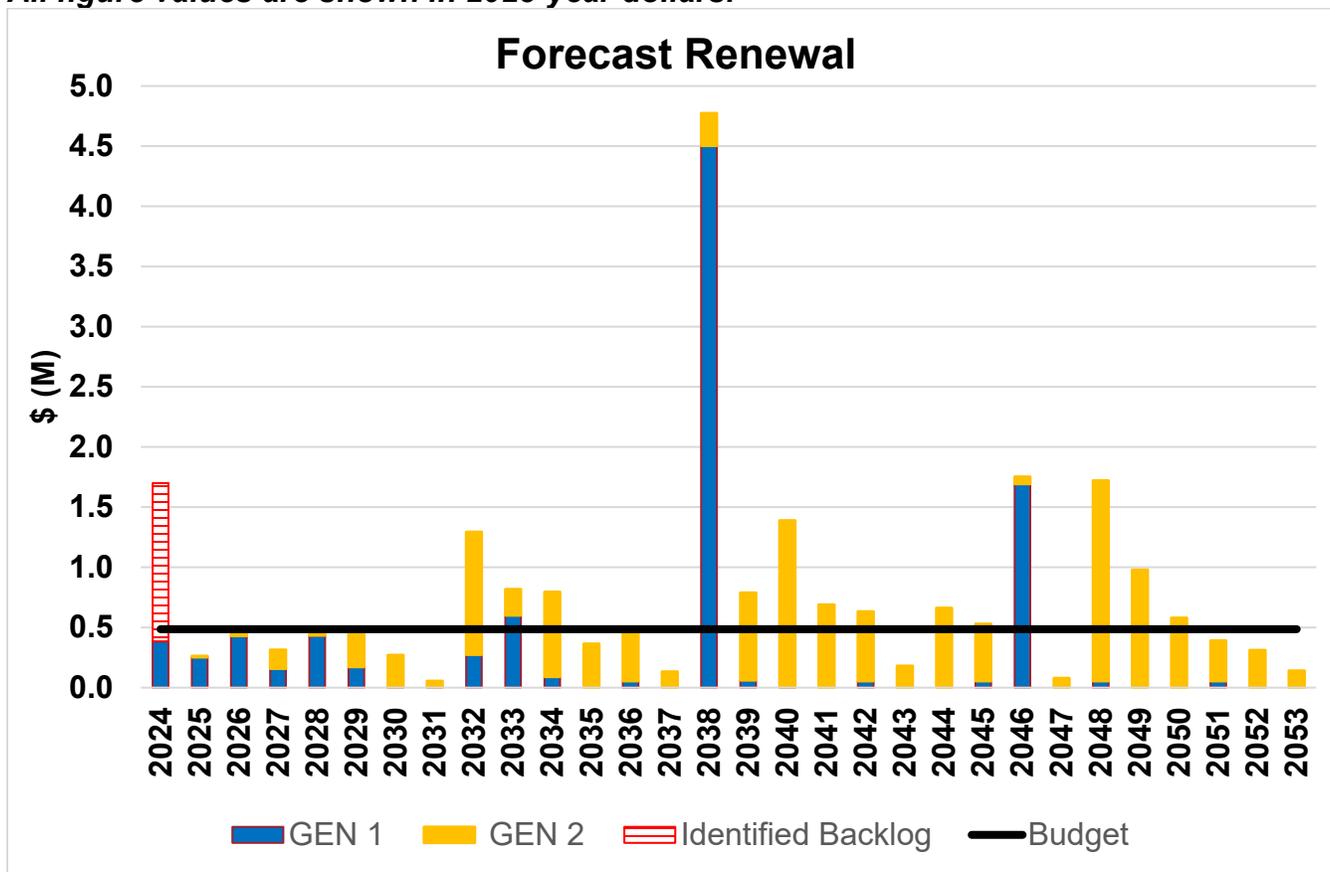
³⁴ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

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SUMMARY OF FUTURE RENEWAL COST

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in **Figure 15**.

Figure 13: Forecast Renewal Costs
 All figure values are shown in 2023-year dollars.



The significant expense in 2038 is for the facility renewal for the By-law portion of 330 Wentworth Street North and the spike in 2046 is for the facility renewal for the Animal Services facility at Jones Road. Not shown are any funding requests for the renewal of the shared-use facility at Dartnall Road. This would occur in 2049 if an ESL of 50 years is used.

In addition, the other significant amount in the model above highlighted in red in 2024 represents the cumulative backlog of deferred work needed to be completed that has been identified through its current estimated service life per **Table 25**. This backlog represents nearly **\$1.32M** of deferred works that have accumulated and have created a backlog of necessary works.

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Major backlog items include:

- **\$822K** in Fleet Renewal
- **\$101K** in Technology Renewal
- **\$265K** in Animal Care Equipment Renewal

There is insufficient budget to support the planned renewals over the 10-year horizon. This may change once a more detailed asset inventory and formalized condition assessment process is undertaken and it may be necessary to adjust the renewal backlog if some assets are found to be in worse condition than originally anticipated.

The additional expected renewal works over the 10-year planning horizon include:

- Replacement of vehicles as they reach the end of useful life;
- Replacement of IT equipment items as they reach the end of useful life;
- Replacement of officer equipment items as they reach the end of useful life; and,
- Replacement of animal care equipment items as they reach the end of useful life.

Since properly funded and timely renewals ensure the assets perform as expected, LBS is unable to perform satisfactorily by replacing assets at the suggested interval with an appropriate budget. Deferring renewals creates risks of higher financial costs, decreased availability and decreased satisfaction with asset performance. It is recommended to continue to analyze asset renewals based on criticality and availability of funds for future AM Plans. This may change if a more detailed asset inventory and a formalized condition assessment process are undertaken. It may be necessary to adjust the renewal intervals if some assets are found to be in worse condition than originally anticipated.

8.4 DISPOSAL PLAN

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen.

Assets identified for possible decommissioning and disposal are shown in **Table 26**. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in **Table 26**. Any costs or revenue gained from asset disposals is included in future iterations of the plan and the long-term financial plan.

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Table 24: Assets Identified for Disposal

ASSET	REASON FOR DISPOSAL	TIMING	DISPOSAL COSTS	OPERATIONS & MAINTENANCE ANNUAL SAVINGS
Fleet	End of Life	Unknown	Unknown	Unknown

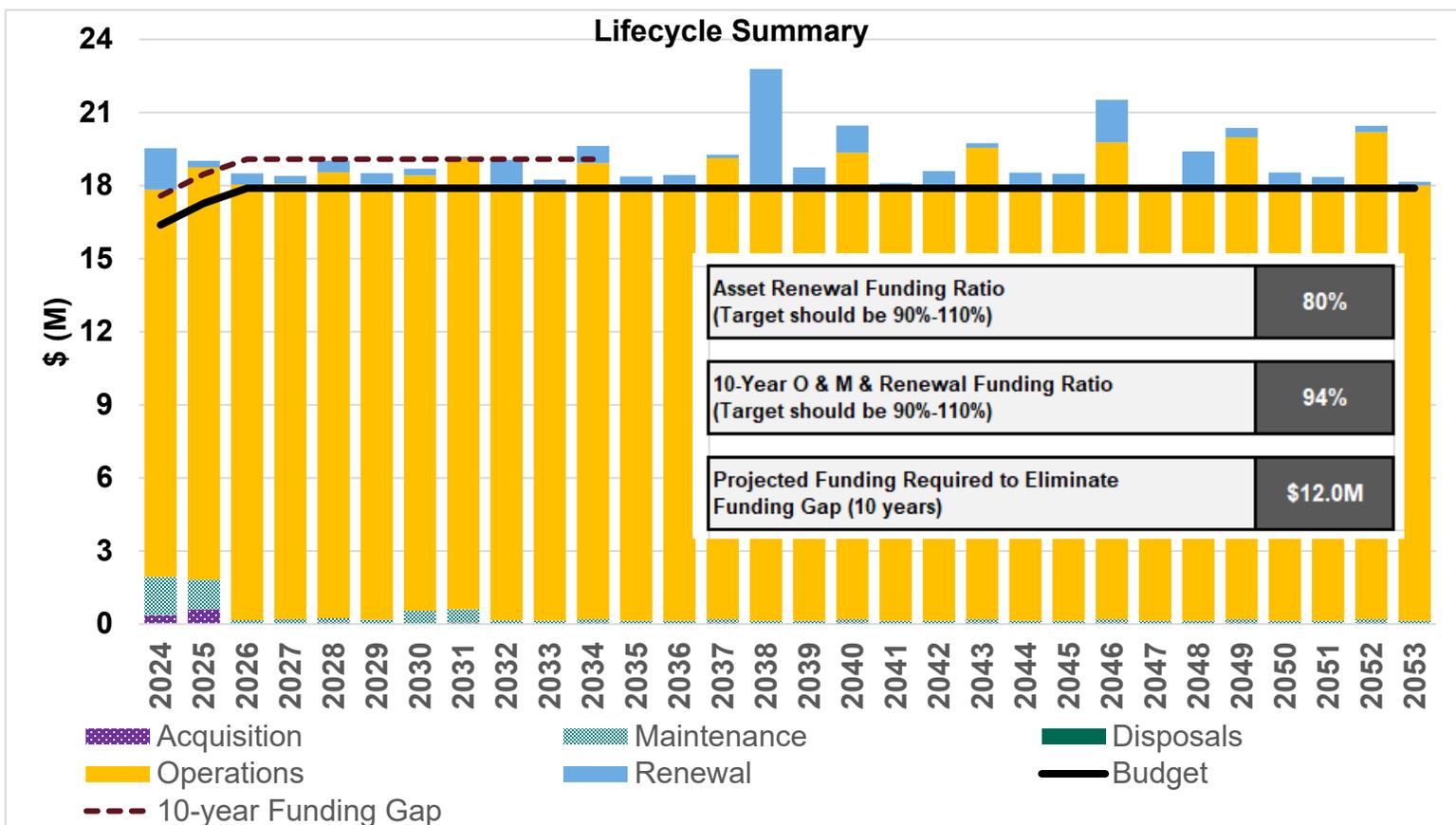
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8.5 LIFECYCLE COST SUMMARY

The financial projects from this asset plan are shown in **Figure 16** below. These projects include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimize the lifecycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving a balance between costs, levels of service and risk to achieve the best value outcome.

Figure 14: Lifecycle Summary
 All figure values are shown in 2023-year dollars.



If the implementation of proposed Council Referred Items, Business Cases and maintaining the current LOS/Ratio of officers to the population are desired then LBS will need to continue to increase their budgets annually. They will also need to consider allocating funding to facility renewal or if the program/facility review determines they may need funding to construct new or different facilities in future years. If the funding is not increased then they will be unable to

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maintain their current levels of service. The 10-year Operations, Maintenance and Renewal funding gap is explained in **Section 9.1**.

Due to the lack of data confidence in the current levels of service information, LBS will need to collect more data before proposing any new levels of service. It has been assumed in the interim that the current levels of service will be the proposed levels of service continuing forward past 2025 in accordance with O. Reg 588/17.

The City will continue to improve its lifecycle data, and this will allow for informed choices as to how best to mitigate impacts and how to address the funding gap itself. This gap in funding future plans will be refined over the next three years to improve the confidence and accuracy of the forecasts.

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9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure LBS provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-term financial planning (LTFP) is critical for the City to ensure that network lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for the LBS service, the City will have difficult choices to make in the future which will include options such as higher costs reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all of the network's needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

9.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years/forecast renewal costs for next 10 years); and,
- Medium-term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio³⁵ **80%**

The Asset Renewal Funding Ratio is used to determine if the City is accommodating asset renewals in an **optimal** and **cost-effective** manner from a timing perspective and relative to financial constraints, the risk the City is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable, however, the expenditures are below this level in some service areas predominantly due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

³⁵ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

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If assets are not renewed at the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to the City's reputation and risk of fines or legal costs

The lack of renewal resources will be addressed in future AM Plans while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

MEDIUM-TERM – 10 YEAR FINANCIAL PLANNING PERIOD

10-Year Operations, Maintenance & Renewal Financial Ratio **94%**

Although this AM Plan includes forecast projections to 30 years, the higher confidence numbers are typically within the first 10 years of the lifecycle forecast. The 10-year Operations, Maintenance & Renewal Financial Ratio compares the Planned Budget with the Lifecycle Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the ARFR, the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization's risk and service level commitments.

The forecast operations, maintenance and renewal costs over the 10-year planning period is **\$18.8M** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The proposed (budget) operations, maintenance and renewal funding is **\$17.6M** on average per year giving a 10-year funding shortfall of **\$1.2M** per year or **\$12M** over the 10-year planning period. This indicates that **94%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget.

Funding an annual funding shortfall or funding 'gap' should not be addressed immediately. The overall gap in funding city-wide will require vetting, planning and resources to begin to incorporate gap management into the future budgets for all City services. This gap will need to be managed over time to reduce it sustainably and limit financial shock to customers. Options for managing the gap include:

- Financing strategies – increased funding, block funding for specific lifecycle activities, long-term debt utilization;
- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets;
- Influence level of service expectations or demand drivers; and,
- Review revenue generated by LBS.

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These options and others will allow the City of Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of **90-110%** for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

9.2 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Table 27 shows the forecast costs (outlays) required for consideration in the 30-year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

The City will manage the ‘gap’ by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low-use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

Table 25: Forecast Costs (Outlays) for the Long-Term Financial Plan

****Forecast Costs Are Shown in 2023-year Dollar Values**

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2024	\$374,781	\$15,896,785	\$1,562,102	\$1,699,842	\$0
2025	\$605,853	\$16,926,972	\$1,216,767	\$262,691	\$0
2026	\$0	\$17,875,894	\$165,699	\$458,901	\$0
2027	\$0	\$17,875,894	\$205,130	\$313,967	\$0
2028	\$60,603	\$18,299,894	\$185,690	\$471,880	\$0
2029	\$0	\$17,875,894	\$187,158	\$444,617	\$0

Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

2024 Asset Management Plan

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2030	\$0	\$17,875,894	\$545,827	\$270,084	\$0
2031	\$60,603	\$18,511,894	\$547,528	\$55,303	\$0
2032	\$0	\$17,875,894	\$154,369	\$1,293,998	\$0
2033	\$0	\$17,875,894	\$147,417	\$817,754	\$0
2034	\$60,603	\$18,723,894	\$137,795	\$795,832	\$0
2035	\$0	\$17,875,894	\$137,795	\$364,427	\$0
2036	\$0	\$17,875,894	\$137,795	\$475,180	\$0
2037	\$60,603	\$18,935,894	\$137,795	\$132,779	\$0
2038	\$0	\$17,875,894	\$137,795	\$4,774,096	\$0
2039	\$0	\$17,875,894	\$137,795	\$789,024	\$0
2040	\$60,603	\$19,147,894	\$137,795	\$1,389,475	\$0
2041	\$0	\$17,875,894	\$137,795	\$689,916	\$0
2042	\$0	\$17,875,894	\$137,795	\$632,816	\$0
2043	\$60,603	\$19,359,894	\$137,795	\$180,662	\$0
2044	\$0	\$17,875,894	\$137,795	\$662,658	\$0
2045	\$0	\$17,875,894	\$137,795	\$529,997	\$0
2046	\$60,603	\$19,571,894	\$137,795	\$1,753,494	\$0
2047	\$0	\$17,875,894	\$137,795	\$78,738	\$0
2048	\$0	\$17,875,894	\$137,795	\$1,721,017	\$0
2049	\$60,603	\$19,783,894	\$137,795	\$979,391	\$0
2050	\$0	\$17,875,894	\$137,795	\$580,440	\$0
2051	\$0	\$17,875,894	\$137,795	\$390,855	\$0
2052	\$60,603	\$19,995,894	\$137,795	\$312,091	\$0

Licensing and By-Law Services (Animal Services, Licensing and Municipal Law Enforcement) 2024 Asset Management Plan

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2053	\$0	\$17,875,894	\$137,795	\$0	\$0

9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in the City’s operational budget and 10-year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM plan will provide service delivery options and alternatives to optimize limited financial resources.

9.4 VALUATION FORECASTS

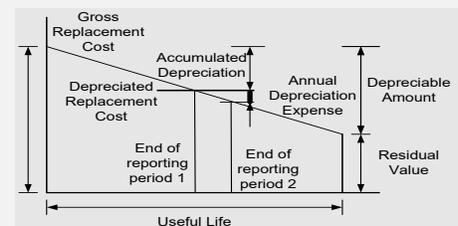
Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and remove the high costs of renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs, however, this will be improved for the next iteration of the plan.

9.5 ASSET VALUATION

The best available estimate of the value of assets included in this AM Plan is shown below. The assets are valued at the estimated replacement costs.

Replacement Cost (Current/Gross)	\$9,357,701
Depreciable Amount	\$9,357,701
Depreciated Replacement Cost³⁶	\$2,524,663
Depreciation	\$ 571,920



³⁶ Also reported as Written Down Value, Carrying or Net Book Value.

Licensing and By-Law Services

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The current replacement cost is the most common valuation approach for specialized infrastructure assets. The methodology includes establishing a comprehensive asset registry, assessing replacement costs (based on market pricing for the modern equivalent assets) and useful lives, determining the appropriate depreciation method, testing for impairments, and determining remaining useful life.

As the City matures its asset data, it is highly likely that these valuations will fluctuate significantly over the next three years, and they should increase over time based on improved market equivalent costs as well as anticipated cost changes due to climate change mitigation and adaptation strategies.

9.6 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 30-year horizon and do not address other operational needs not yet identified;
- Maintenance forecasts are based on current budget allocations and do not identify asset needs at this time. It is solely based on planned activities;
- Replacement costs were based on historical costing. They were also made without determining what the asset would be replaced with in the future;
- Known Business Cases and Council Referred Items have been included in needs and may not be funded;
- Additional officer FTEs and vehicles have been added to the lifecycle needs to account for population growth. Additional FTEs may be needed in addition to account for non-background growth (i.e., expansion of services). Support FTEs have not been included but would also need to be increased; and,
- Modelling is done at the Gross budget level and does not include offsetting revenue or grants that may be available.

9.7 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the **AM Plan Overview**.

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a **Low confidence** level.

Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

2024 Asset Management Plan

Table 26: Data Confidence Assessment for Data Used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	Low	Based on SME opinion of potential demand based on historical knowledge.
Growth Projections	Medium	Based on Greater Golden Horseshoe Growth Forecasts as outlined in the <u>Asset Management Overview Plan</u> .
Acquisition Forecast	Low	The acquisition forecast is based on proposed business cases and growth forecasts. A 10-year capital budget is not available.
Operation Forecast	Low	Currently, the budget is based on one year of budget and the remaining years are forecast with zero growth. Category allocation based on SME opinion.
Maintenance Forecast	Low	Currently, the budget is based on one year of budget and the remaining years are forecast with zero growth. Category allocation based on SME opinion.
Renewal Forecast - Asset Values	Low	Renewal forecast asset values are based on SME opinion.
Asset Useful Life	Low	With the exception of vehicles and facilities - based on SME opinion and a review of a report on university lab equipment suggested ESL. Continuous improvement is required to ensure data is vetted and aligns with the City of Hamilton's actual practices.
Condition Modelling	Low	No formalized condition assessment for many asset types and categories. Requires standardization along with predictable timelines for assessments.
Disposal forecast	Very Low	Current disposal information is largely rolled into renewal. Continuous improvements are required to ensure accurate data is available.

Licensing and By-Law Services (Animal Services, Licensing and Municipal Law Enforcement) 2024 Asset Management Plan

10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PRACTICES

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2023 Approved Operating Budget;
- PED23072(b)³⁷ Opportunities for Tax Levy Savings in the Hamilton Apartment Rental Program and Tenant Support Program Feb 15, 2024 General Issues Committee Meeting;
- PED23237³⁸ Waterfront Ambassador Nov 14, 2023 Planning Committee Meeting;
- PED23236³⁹ Industrial/Commercial Proactive By-law Pilot Program, Nov 14, 2023 Planning Committee Meeting;
- Business Case 1.1 Animal Services FTE/Vehicles;
- Building Condition Assessment Reports;
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc.);
- Financial Exports from internal financial systems;
- Historical cost and estimates of budget allocation based on SME experience; and,
- Proposed Council Referred Items and Business Cases.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter expert opinion and anecdotal information; and,
- Reports from the mandatory inspections, operational & maintenance activities internal reports.

³⁷ Gillian Barkovitch / James O'Brien, 2024

³⁸ Reid, 2023

³⁹ Barkovitch, 2023

Licensing and By-Law Services (Animal Services, Licensing and Municipal Law Enforcement) 2024 Asset Management Plan

10.2 IMPROVEMENT PLAN

It is important that the City recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision-making. The tasks listed below are essential to improving the AM Plan and the City’s ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning and to plans to physically improve the assets.

The Improvement Plan **Table 29** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this AM Plan will provide updates on these improvement plans.

Table 27: Improvement Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1	Develop an Asset Register for Equipment and Technology Asset categories. The register should include inventory, relevant asset attributes and defined inspection and condition assessment criteria and intervals.	LBS/CAM	\$1500 Internal Staff Resources	1 Year 2024-2025
2	Update the AM Plan at regular intervals.	CAM/LBS	As needed	When an Update is scheduled
3	Recommend an update to BCA at 247 Dartnall Road as part of the overall Animal Services facility and operation review as the City shares in maintenance costs.	Facilities/LBS	\$3,000 Third-Party Consultant	1 Year 2024-2025
4	Based on continuous improvement item 3 above and this item: Coordinate with CFEM on Public Works Yard Study relating to Jones Road and future needs of Animal Services and develop a strategic facilities study with recommendations and cost projections to include in capital plans and future AM Plans.	Facilities/LBS	\$ Internal Resources	1 Year 2024-2025
5	Annual Review of Demand Drivers and Risk Assessment.	LBS	\$TBD Internal Resources	Annually

Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

2024 Asset Management Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
6	Develop a 10-year multi-year Capital budget using asset renewal principles to identify a budget for renewal and acquisitions.	Finance/LBS	\$TBD Internal Resources	1 Year (2025- 2026)
7	The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AM Plan.	LBS/Climate Office	\$TBD Internal Resources	TBD
8	Further, Develop and refine proposed Technical Levels of Service and identify targets.	LBS	\$TBD Internal Resources	1 Year (2024- 2025)
9	Incorporate Climate Mitigation and Climate Adaptation into future versions of the AM Plan once costs are better defined.	LBS	\$TBD Internal Resources	TBD
10	Update and practice Business Continuity Plan for Animal Shelter as part of Risk Management Plans.	LBS	\$TBD Internal Resources	TBD
11	Determine long-term facilities strategy relating to Municipal Law Enforcement and update AM Plan as needed.	LBS	\$TBD Internal Resources	TBD
12	Explore DC Funding opportunities for Capital funding for the next DC By-law update.	Finance/LBS	\$TBD Internal Resources	1 Year (2024- 2025)
13	Implement processes to keep up to date on facilities and square footage cost allocations and provide input into maintenance activities as they relate to %FCI.	LBS	\$TBD Internal Resources	TBD

Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

2024 Asset Management Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
14	Develop and implement internal staff survey and incorporate results into LOS for assets where staff are also the customer.	CAM/LBS	\$TBD Internal Resources	TBD

10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated regularly to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one-to-ten-year detailed works programs, budgets, business plans and corporate structures consider the ‘global’ works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 110%).

Licensing and By-Law Services

(Animal Services, Licensing and Municipal Law Enforcement)

2024 Asset Management Plan

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Licensing and By-Law Services (Animal Services, Licensing and Municipal Law Enforcement) 2024 Asset Management Plan

12. APPENDIX A – SURVEY ANALYSIS



Animals Services, Licensing, and Municipal Law Enforcement (By-law)

Survey Period: November 27th - January 2, 2024

January 2024

70 Respondents	36 Survey Questions	5 Demographic Questions	2423 Survey Responses	351 Demographic Responses
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Age	% Pop. by Age	% of Respondents	Respondents
65+	19.5%	17.1%	12
35 to 64	41.7%	67.1%	47
18 to 34	22.1%	8.6%	6

Home Status	% of Respondents	Respondents
Home owner	74.3%	52
Tenant	14.3%	10
Other	11.4%	8

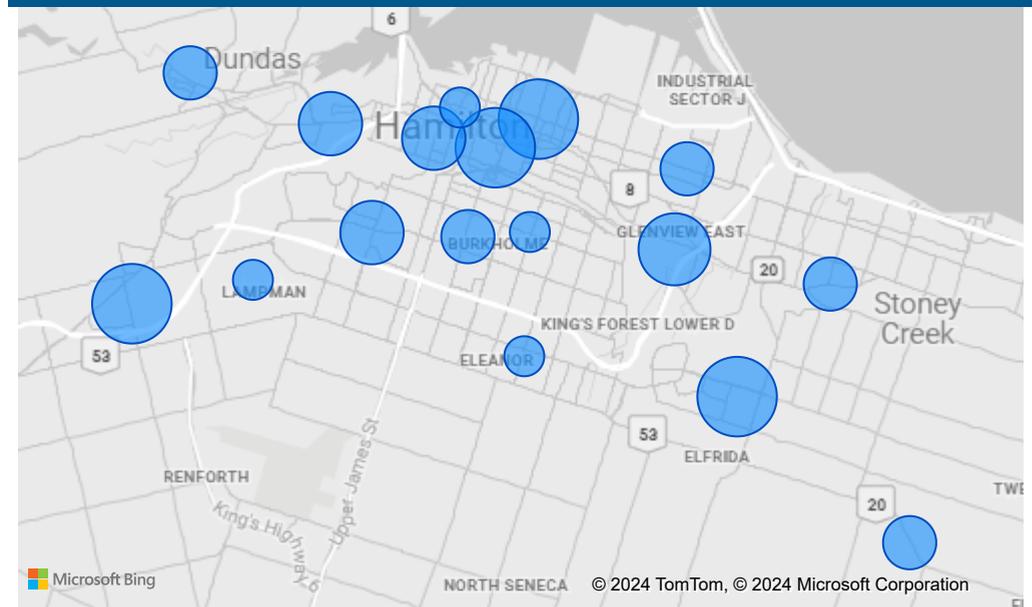
Residency	% of Respondents	Respondents
Yes	98.6%	69

Identity	% of Respondents	Respondents
Do not self identify	75.7%	53
Marginalized	14.3%	10
Prefer not to answer	8.6%	6

Region	% Pop. by Region	Population	% of Respondents	Respondents
Lower	45.6%	432,375	38.6%	27
Upper	37.3%	353,485	25.7%	18
Rural	17.1%	161,840	2.9%	2

These stats may not sum to 100% because the survey allowed respondents to choose multiple options or opt out of the question

Respondent Density Map



Respondents By Day

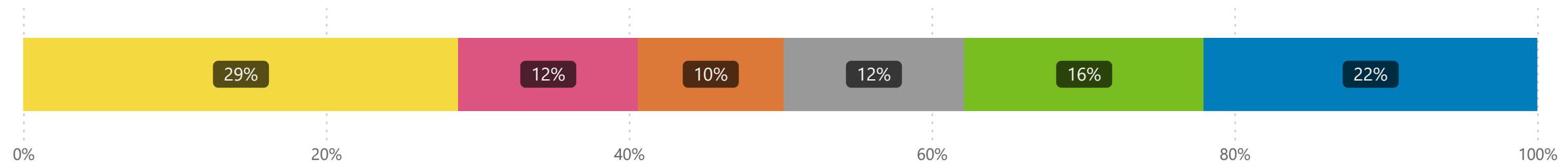


Responses Respondents

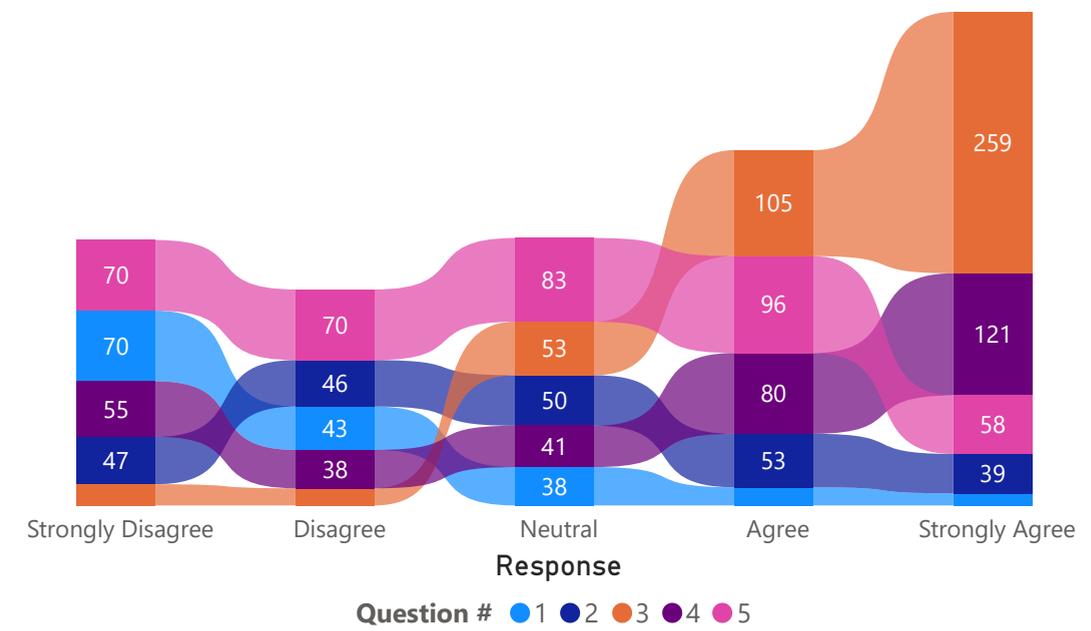
1784 70

Summary of Survey Results

● Can't Say ● Strongly Disagree ● Disagree ● Neutral ● Agree ● Strongly Agree



Questions	σ	Avg.	Opt Out	Opt Out %
All Questions	1.46	3.37	840	34.67%
Q3 Importance of services	1.09	4.24	32	6.57%
Q4 Recommend to Others	1.48	3.52	148	30.64%
Q5 Past experiences	1.34	3.01	110	22.59%
Q2 Overall performance	1.37	2.96	251	51.65%
Q1 Experience with services	1.24	2.22	299	62.29%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Responses Respondents
1784 **70**

Survey Question Summary

Question #	Survey Question	n (Sample Size)	σ (Consistency)	Margin of Error (Confidence Level \pm)
1	How many times have you experienced the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services in the last 2 years?	55	1.24	13%
2	How do you feel the Animal Services, Licencing and Municipal Law Enforcement (By-law) has performed overall?	34	1.37	17%
3	How would you rate the importance of the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services?	65	1.09	12%
4	How likely are you to recommend to others the following services offered by the Animal Services, Licencing and Municipal Law Enforcement (By-law)?	48	1.48	14%
5	Based on your experience with Animal Services, Licencing and Municipal Law Enforcement (By-law) over the past 2 years, do you agree with the following statements?	54	1.34	13%

Question

1

Experience with services

How many times have you experienced the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services in the last 2 years?

Responses

382

Respondents

68

Service Area	Very infrequently (More than 2 years ago)	Infrequently (Once)	Occasionally (1-2 times)	Somewhat frequently (3-4 times)	Frequently (More than 5 times)	I have not
Total	70	43	38	18	12	201
Animal adoption from City of Hamilton shelter (247 Dartnall Rd)	11	6	3	1	2	35
Animal control enforcement (The Responsible Animal Ownership Bylaw: Ensures the health and safety of residents, protects property and prevents public issues)	7	14	11	4	4	21
Business licencing (Example: Taxicabs, hotels, restaurants)	12	1	1	1		34
Dog licencing (Enforced/required under The Responsible Animal Ownership Bylaw)	5	15	14	5	2	19
Property use enforcement (Bylaws, such as: Fireworks, fences, noise control)	14	7	8	5	4	22
Temporary business licencing (Valid for 30 days, used to test markets and promote business development with minimal risk)	11			1		35
Trade licencing (Example: Plumbing, Heating, Ventilation and Air Conditioning (HVAC), building repair)	10		1	1		35

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.24	2.22	299	62.3%
Dog licencing (Enforced/required under The Responsible Animal Ownership Bylaw)	1.01	2.61	28	40.6%
Animal control enforcement (The Responsible Animal Ownership Bylaw: Ensures the health and safety of residents, protects property and prevents public issues)	1.18	2.60	29	42.0%
Property use enforcement (Bylaws, such as: Fireworks, fences, noise control)	1.37	2.42	30	44.1%
Animal adoption from City of Hamilton shelter (247 Dartnall Rd)	1.25	2.00	47	67.1%
Trade licencing (Example: Plumbing, Heating, Ventilation and Air Conditioning (HVAC), building repair)	0.95	1.42	56	82.4%
Business licencing (Example: Taxicabs, hotels, restaurants)	0.88	1.40	53	77.9%
Temporary business licencing (Valid for 30 days, used to test markets and promote business development with minimal risk)	0.83	1.25	56	82.4%



- Can't say
- I have not
- Very infrequently
- Infrequently
- Occasionally
- Somewhat frequently
- Frequently

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

2

Overall performance

How do you feel the Animal Services, Licencing and Municipal Law Enforcement (By-law) has performed overall?

Responses

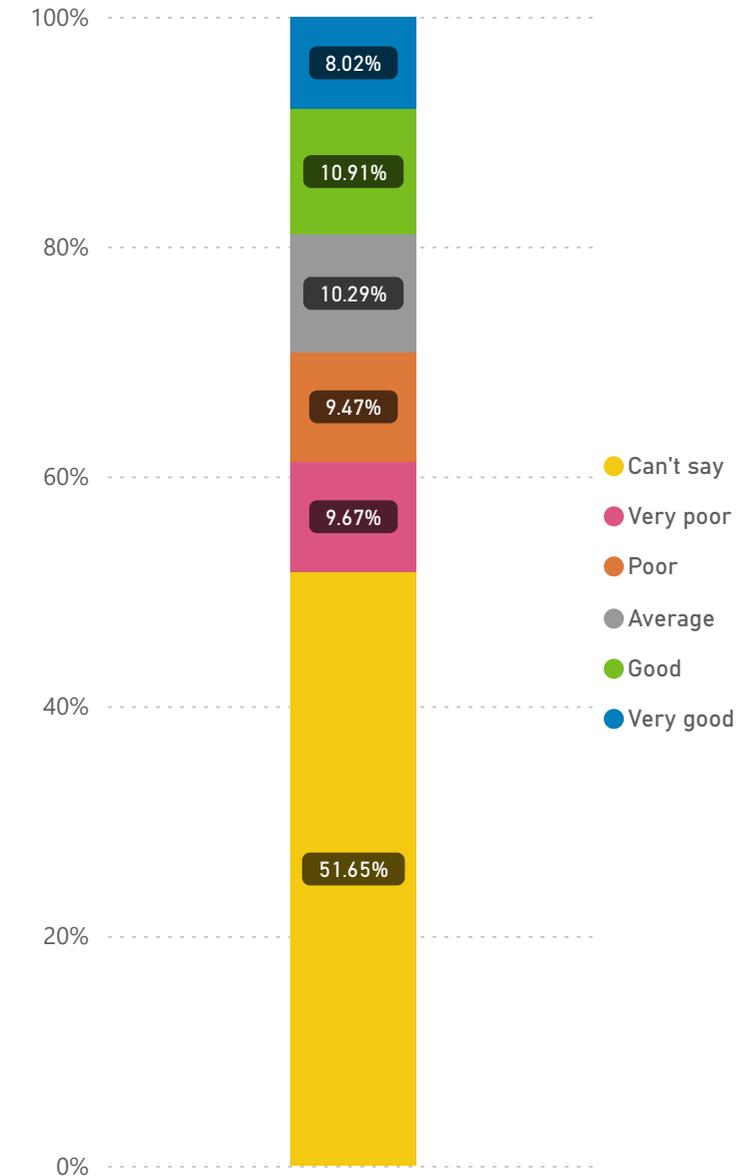
235

Respondents

68

Service Area	Very poor	Poor	Average	Good	Very good
Total	47	46	50	53	39
Trade licencing (Example: Plumbing, Heating, Ventilation and Air Conditioning (HVAC), building repair)	4	4	2	5	1
Temporary business licencing (Valid for 30 days, used to test markets and promote business development with minimal risk)	3	1	2	3	1
Property use enforcement (Bylaws, such as: Fireworks, fences, noise control)	18	14	13	5	2
Dog licencing (Enforced/required under The Responsible Animal Ownership Bylaw)	5	9	7	16	13
Business licencing (Example: Taxicabs, hotels, restaurants)	5	1	2	8	1
Animal control enforcement (The Responsible Animal Ownership Bylaw: Ensures the health and safety of residents, protects property and prevents public issues)	10	13	14	7	8
Animal adoption from City of Hamilton shelter (247 Dartnall Rd)	2	4	10	9	13

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.37	2.96	251	51.6%
Animal adoption from City of Hamilton shelter (247 Dartnall Rd)	1.19	3.71	32	45.7%
Dog licencing (Enforced/required under The Responsible Animal Ownership Bylaw)	1.31	3.46	20	28.6%
Business licencing (Example: Taxicabs, hotels, restaurants)	1.39	2.94	51	75.0%
Animal control enforcement (The Responsible Animal Ownership Bylaw: Ensures the health and safety of residents, protects property and prevents public issues)	1.32	2.81	18	25.7%
Temporary business licencing (Valid for 30 days, used to test markets and promote business development with minimal risk)	1.40	2.80	59	85.5%
Trade licencing (Example: Plumbing, Heating, Ventilation and Air Conditioning (HVAC), building repair)	1.31	2.69	53	76.8%
Property use enforcement (Bylaws, such as: Fireworks, fences, noise control)	1.13	2.21	18	25.7%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Question

3

Importance of services

How would you rate the importance of the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services?

Responses

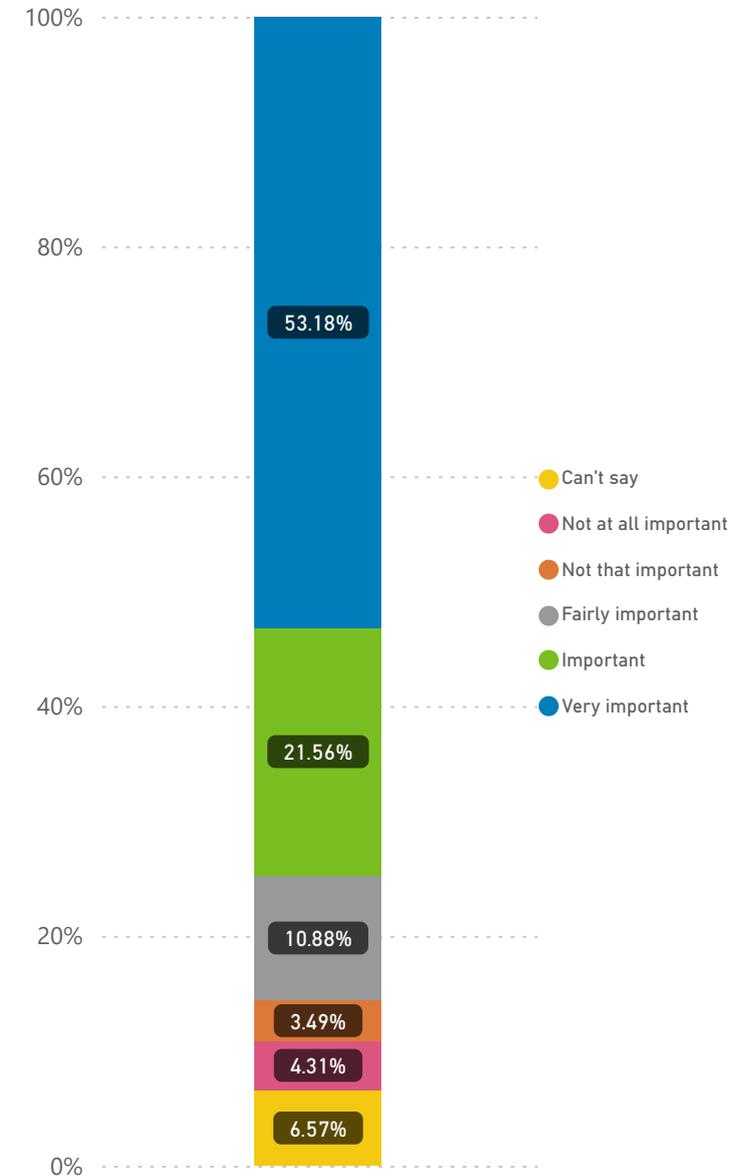
455

Respondents

70

Service Area	Not at all important	Not that important	Fairly important	Important	Very important
Total	21	17	53	105	259
Trade licencing (Example: Plumbing, Heating, Ventilation and Air Conditioning (HVAC), building repair)	3		4	17	35
Temporary business licencing (Valid for 30 days, used to test markets and promote business development with minimal risk)	4	2	11	22	18
Property use enforcement (Bylaws, such as: Fireworks, fences, noise control)	1	2	8	12	47
Dog licencing (Enforced/required under The Responsible Animal Ownership Bylaw)	7	6	7	14	36
Business licencing (Example: Taxicabs, hotels, restaurants)	2		4	15	39
Animal control enforcement (The Responsible Animal Ownership Bylaw: Ensures the health and safety of residents, protects property and prevents public issues)	2	3	6	12	47
Animal adoption from City of Hamilton shelter (247 Dartnall Rd)	2	4	13	13	37

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.09	4.24	32	6.6%
Business licencing (Example: Taxicabs, hotels, restaurants)	0.88	4.48	9	13.0%
Property use enforcement (Bylaws, such as: Fireworks, fences, noise control)	0.91	4.46		
Animal control enforcement (The Responsible Animal Ownership Bylaw: Ensures the health and safety of residents, protects property and prevents public issues)	1.01	4.41		
Trade licencing (Example: Plumbing, Heating, Ventilation and Air Conditioning (HVAC), building repair)	0.99	4.37	10	14.5%
Animal adoption from City of Hamilton shelter (247 Dartnall Rd)	1.09	4.14	1	1.4%
Dog licencing (Enforced/required under The Responsible Animal Ownership Bylaw)	1.36	3.94		
Temporary business licencing (Valid for 30 days, used to test markets and promote business development with minimal risk)	1.12	3.84	12	17.4%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Differential of Importance and Performance

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

690

Respondents

40

Service Area	Performance (index score)	Importance (index score)	Net Differential	Opt Out %
Total	59	85	-26	29%
Property use enforcement (Bylaws, such as: Fireworks, fences, noise control)	44	89	-45	13%
Trade licencing (Example: Plumbing, Heating, Ventilation and Air Conditioning (HVAC), building repair)	54	87	-34	46%
Animal control enforcement (The Responsible Animal Ownership Bylaw: Ensures the health and safety of residents, protects property and prevents public issues)	56	88	-32	13%
Business licencing (Example: Taxicabs, hotels, restaurants)	59	90	-31	44%
Temporary business licencing (Valid for 30 days, used to test markets and promote business development with minimal risk)	56	77	-21	51%
Dog licencing (Enforced/required under The Responsible Animal Ownership Bylaw)	69	79	-10	14%
Animal adoption from City of Hamilton shelter (247 Dartnall Rd)	74	83	-9	24%

Performance

Q2 How do you feel the Animal Services, Licencing and Municipal Law Enforcement (By-law) has performed overall?

Importance

Q3 How would you rate the importance of the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services?



The Net Differential is calculated here by taking the average Likert score for each service area, multiplied by 20, then the difference between performance and importance is calculated as our final product. Negative differential indicates a higher perceived level of importance vs performance and positive is the opposite.

Question

4

Recommend to Others

How likely are you to recommend to others the following services offered by the Animal Services, Licencing and Municipal Law Enforcement (By-law)?

Responses

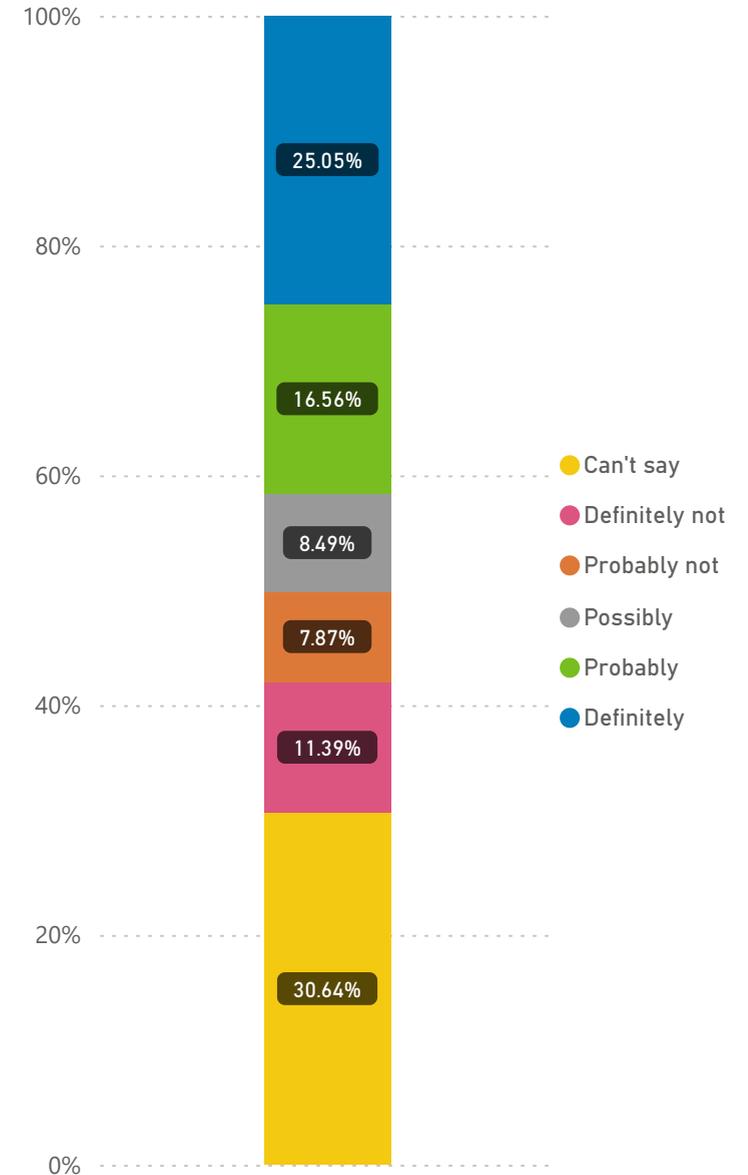
335

Respondents

68

Service Area	Definitely not	Probably not	Possibly	Probably	Definitely
Total	55	38	41	80	121
Trade licencing (Example: Plumbing, Heating, Ventilation and Air Conditioning (HVAC), building repair)	7	4	4	9	10
Temporary business licencing (Valid for 30 days, used to test markets and promote business development with minimal risk)	8	4	3	10	7
Property use enforcement (Bylaws, such as: Fireworks, fences, noise control)	12	6	9	11	19
Dog licencing (Enforced/required under The Responsible Animal Ownership Bylaw)	8	6	5	18	26
Business licencing (Example: Taxicabs, hotels, restaurants)	7	4	3	6	11
Animal control enforcement (The Responsible Animal Ownership Bylaw: Ensures the health and safety of residents, protects property and prevents public issues)	8	8	10	15	19
Animal adoption from City of Hamilton shelter (247 Dartnall Rd)	5	6	7	11	29

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.48	3.52	148	30.6%
Animal adoption from City of Hamilton shelter (247 Dartnall Rd)	1.34	3.91	12	17.1%
Dog licencing (Enforced/required under The Responsible Animal Ownership Bylaw)	1.40	3.76	7	10.0%
Animal control enforcement (The Responsible Animal Ownership Bylaw: Ensures the health and safety of residents, protects property and prevents public issues)	1.40	3.48	10	14.3%
Property use enforcement (Bylaws, such as: Fireworks, fences, noise control)	1.54	3.33	12	17.4%
Trade licencing (Example: Plumbing, Heating, Ventilation and Air Conditioning (HVAC), building repair)	1.51	3.32	34	50.0%
Business licencing (Example: Taxicabs, hotels, restaurants)	1.59	3.32	37	54.4%
Temporary business licencing (Valid for 30 days, used to test markets and promote business development with minimal risk)	1.52	3.13	36	52.9%



Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

5

Past experiences

Based on your experience with Animal Services, Licencing and Municipal Law Enforcement (By-law) over the past 2 years, do you agree with the following statements?

Responses

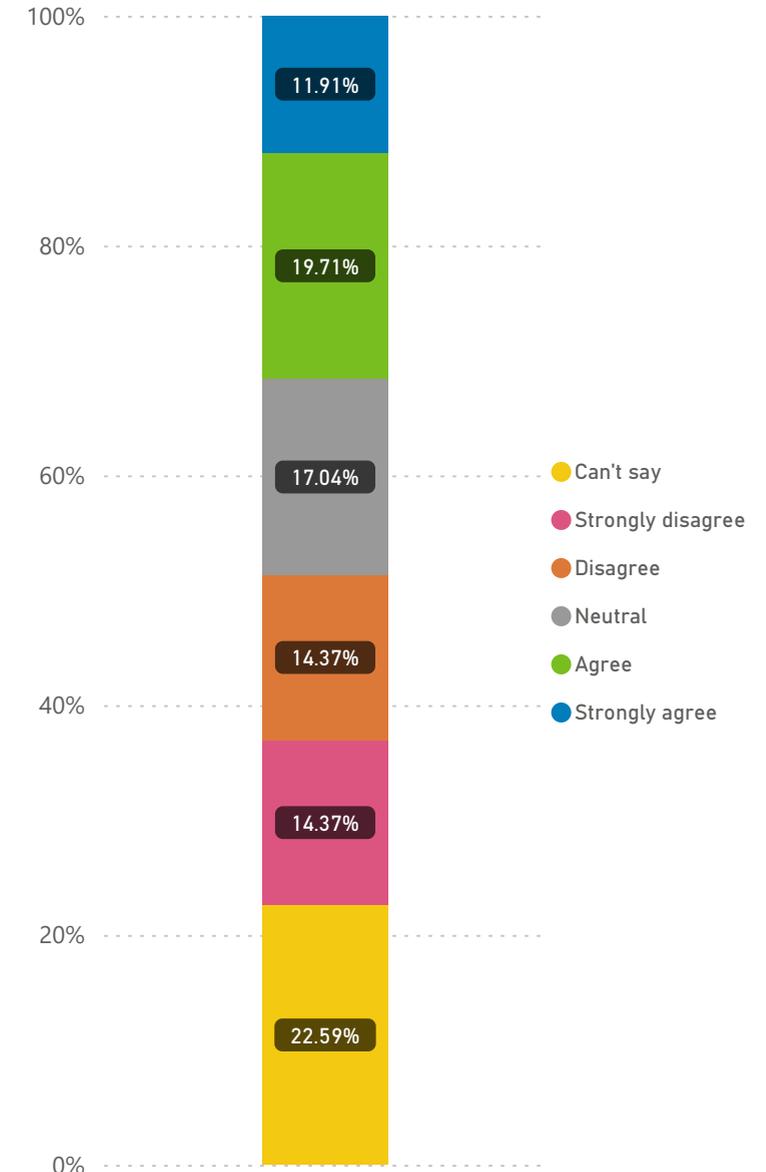
377

Respondents

70

Service Area	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	70	70	83	96	58
Spaces are welcoming and inclusive for all	2	5	11	12	6
Spaces are physically accessible	2	4	13	12	6
Services are easy to access in person, online or by phone	8	16	12	19	9
Licencing, Bylaw & Animal Services Division's service provides good value for money	15	11	10	15	9
Licencing, Bylaw & Animal Services Division's respond within a reasonable timeframe	12	7	13	12	8
I would be willing to increase taxation to provide better Licencing, Bylaw & Animal Services Division's services	18	12	9	19	8
Animal Services, Licencing and Municipal Law Enforcement (By-law) services meet my needs	13	15	15	7	12

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.34	3.01	110	22.6%
Spaces are physically accessible	1.05	3.43	32	46.4%
Spaces are welcoming and inclusive for all	1.09	3.42	33	47.8%
Services are easy to access in person, online or by phone	1.27	3.08	6	8.6%
Licencing, Bylaw & Animal Services Division's respond within a reasonable timeframe	1.38	2.94	17	24.6%
Licencing, Bylaw & Animal Services Division's service provides good value for money	1.42	2.87	10	14.3%
Animal Services, Licencing and Municipal Law Enforcement (By-law) services meet my needs	1.39	2.84	8	11.4%
I would be willing to increase taxation to provide better Licencing, Bylaw & Animal Services Division's services	1.42	2.80	4	5.7%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

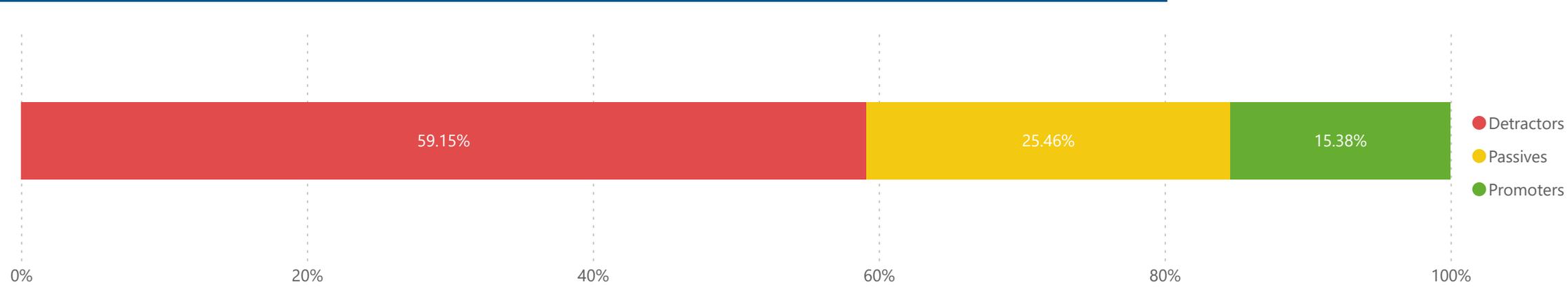
Net Promoter Score

Based on your experience with Animal Services, Licencing and Municipal Law Enforcement (By-law) over the past 2 years, do you agree with the following statements?

Question
5

Responses
377

Respondents
70



Service Area	σ	NPS	Detractors	Passives	Promoter
All Service Areas	1.34	-44	223	96	58
Animal Services, Licencing and Municipal Law Enforcement (By-law) services meet my needs	1.39	-50	43	7	12
I would be willing to increase taxation to provide better Licencing, Bylaw & Animal Services Division's services	1.42	-47	39	19	8
Licencing, Bylaw & Animal Services Division's respond within a reasonable timeframe	1.38	-46	32	12	8
Licencing, Bylaw & Animal Services Division's service provides good value for money	1.42	-45	36	15	9
Services are easy to access in person, online or by phone	1.27	-42	36	19	9
Spaces are physically accessible	1.05	-35	19	12	6
Spaces are welcoming and inclusive for all	1.09	-33	18	12	6

Typically the Net Promoter Score is used to measure customer loyalty.

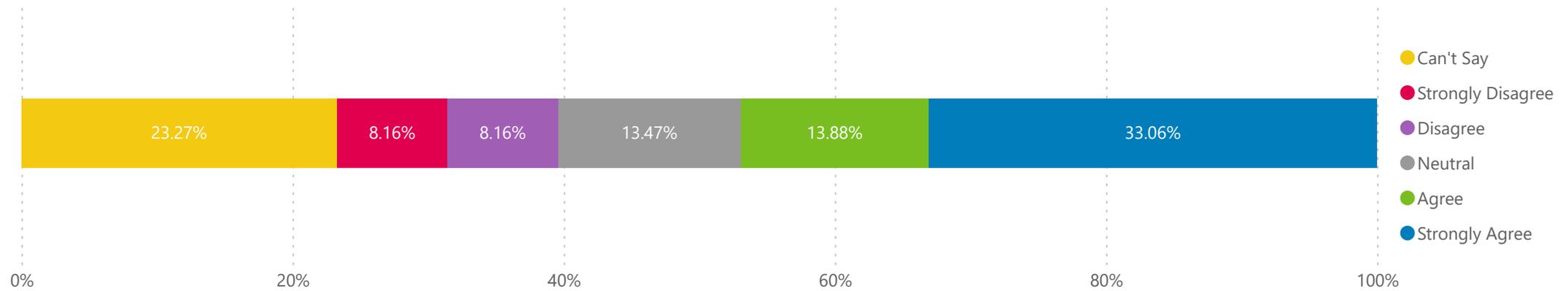


Likert choices less than or equal to 3 are considered 'Detractors', 4s are 'Passive' and 5s are considered 'Promoters'. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Detractors) from (% Promoters).

Summary of Specific Service Areas over Several Questions

Animal adoption from City of Hamilton shelter (247 Darnall Rd)

Responses
203
 Respondents
70



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.38	3.72	74.47	92	32.86%
Q3 How would you rate the importance of the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services?	1.09	4.14	82.90	1	1.43%
Q4 How likely are you to recommend to others the following services offered by the Animal Services, Licencing and Municipal Law Enforcement (By-law)?	1.34	3.91	78.28	12	17.14%
Q2 How do you feel the Animal Services, Licencing and Municipal Law Enforcement (By-law) has performed overall?	1.19	3.71	74.21	32	45.71%
Q1 How many times have you experienced the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services in the last 2 years?	1.25	2.00	40.00	47	67.14%

Respondents who did not answer or selected 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

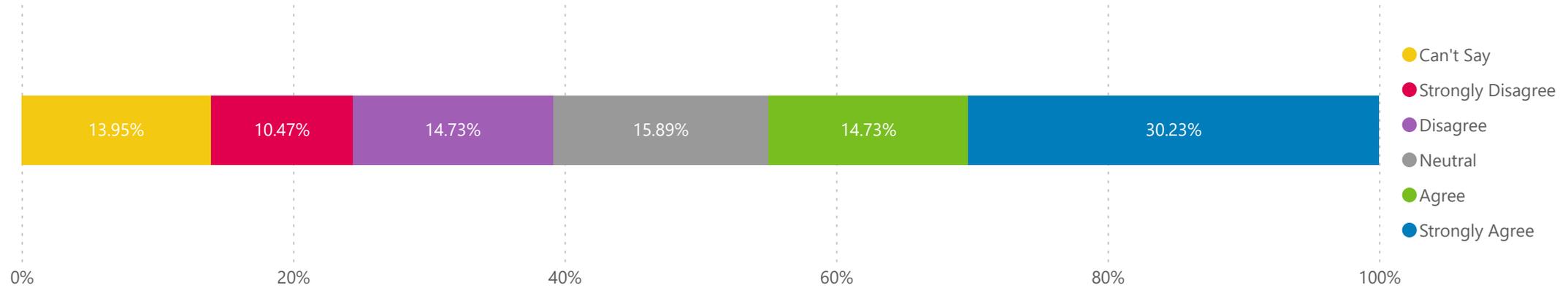
Animal control enforcement (The Responsible Animal Ownership Bylaw: Ensures the health and safety of residents, protects property and prevents public issues)

Responses

216

Respondents

70



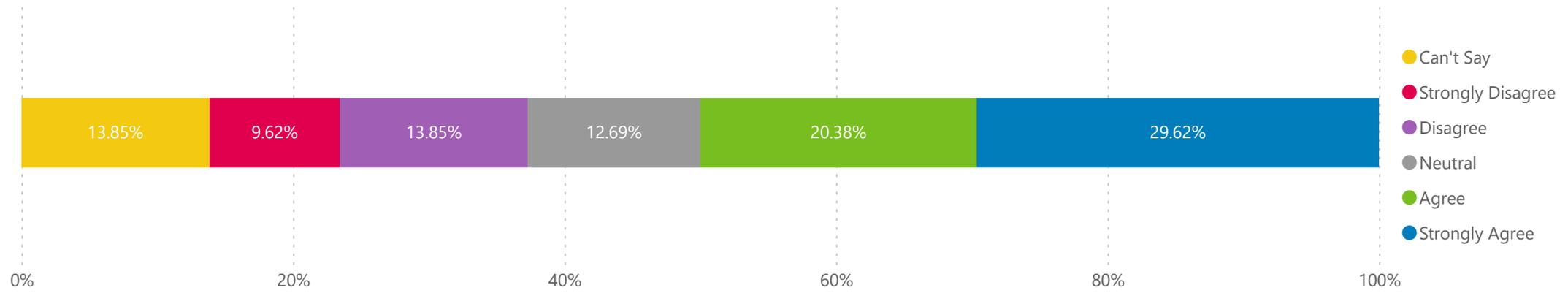
Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.42	3.46	69.19	57	20.43%
Q3 How would you rate the importance of the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services?	1.01	4.41	88.29		
Q4 How likely are you to recommend to others the following services offered by the Animal Services, Licencing and Municipal Law Enforcement (By-law)?	1.40	3.48	69.67	10	14.29%
Q2 How do you feel the Animal Services, Licencing and Municipal Law Enforcement (By-law) has performed overall?	1.32	2.81	56.15	18	25.71%
Q1 How many times have you experienced the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services in the last 2 years?	1.18	2.60	52.00	29	42.03%



Summary of Specific Service Areas over Several Questions

Dog licencing (Enforced/required under The Responsible Animal Ownership Bylaw)

Responses
218
 Respondents
70



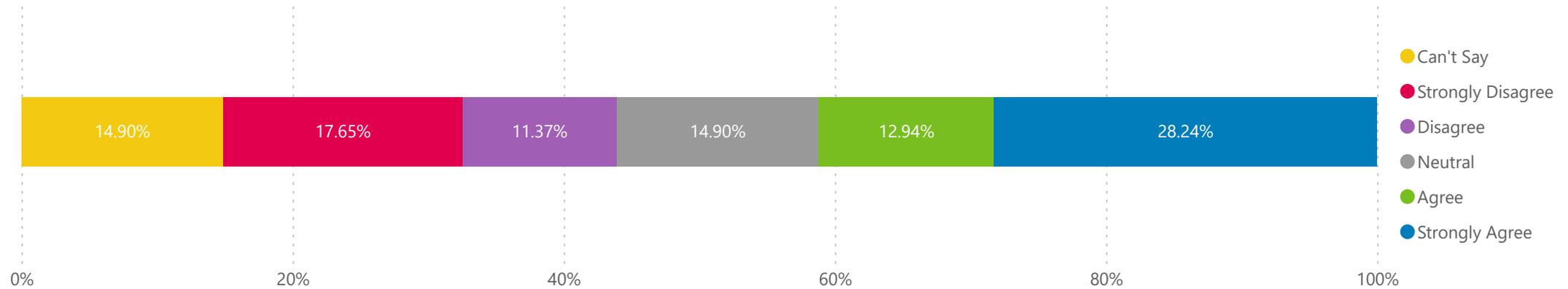
Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.39	3.54	70.80	55	19.71%
Q3 How would you rate the importance of the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services?	1.36	3.94	78.86		
Q4 How likely are you to recommend to others the following services offered by the Animal Services, Licencing and Municipal Law Enforcement (By-law)?	1.40	3.76	75.24	7	10.00%
Q2 How do you feel the Animal Services, Licencing and Municipal Law Enforcement (By-law) has performed overall?	1.31	3.46	69.20	20	28.57%
Q1 How many times have you experienced the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services in the last 2 years?	1.01	2.61	52.20	28	40.58%

Respondents who did not answer or selected 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

Property use enforcement (Bylaws, such as: Fireworks, fences, noise control)

Responses
194
 Respondents
70



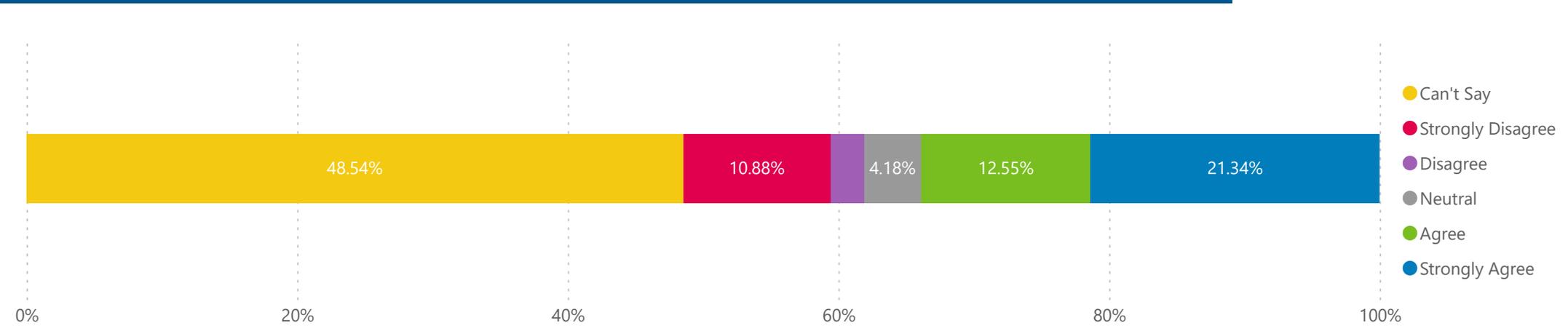
Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.54	3.27	65.35	60	21.66%
Q3 How would you rate the importance of the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services?	0.91	4.46	89.14		
Q4 How likely are you to recommend to others the following services offered by the Animal Services, Licencing and Municipal Law Enforcement (By-law)?	1.54	3.33	66.67	12	17.39%
Q1 How many times have you experienced the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services in the last 2 years?	1.37	2.42	48.42	30	44.12%
Q2 How do you feel the Animal Services, Licencing and Municipal Law Enforcement (By-law) has performed overall?	1.13	2.21	44.23	18	25.71%



Summary of Specific Service Areas over Several Questions

Business licencing (Example: Taxicabs, hotels, restaurants)

Responses
131
 Respondents
66



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.56	3.60	72.03	150	54.95%
Q3 How would you rate the importance of the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services?	0.88	4.48	89.67	9	13.04%
Q4 How likely are you to recommend to others the following services offered by the Animal Services, Licencing and Municipal Law Enforcement (By-law)?	1.59	3.32	66.45	37	54.41%
Q2 How do you feel the Animal Services, Licencing and Municipal Law Enforcement (By-law) has performed overall?	1.39	2.94	58.82	51	75.00%
Q1 How many times have you experienced the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services in the last 2 years?	0.88	1.40	28.00	53	77.94%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

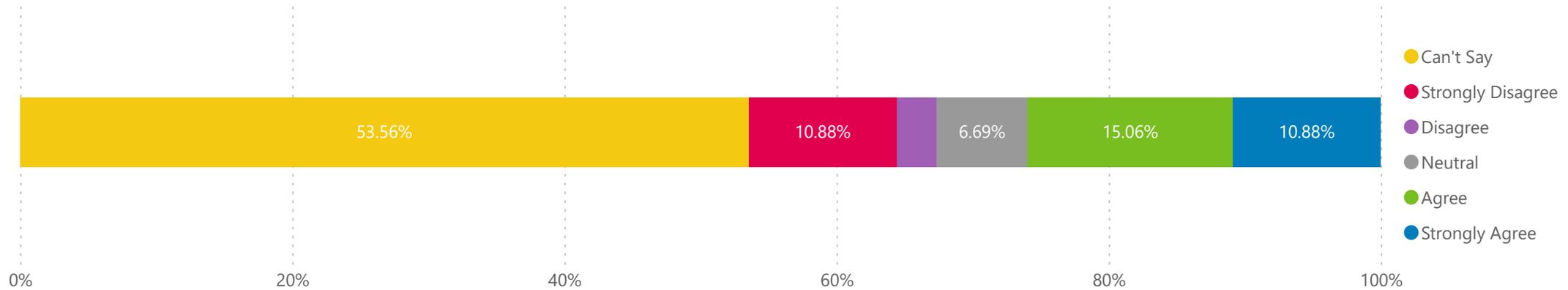
Temporary business licencing (Valid for 30 days, used to test markets and promote business development with minimal risk)

Responses

120

Respondents

66



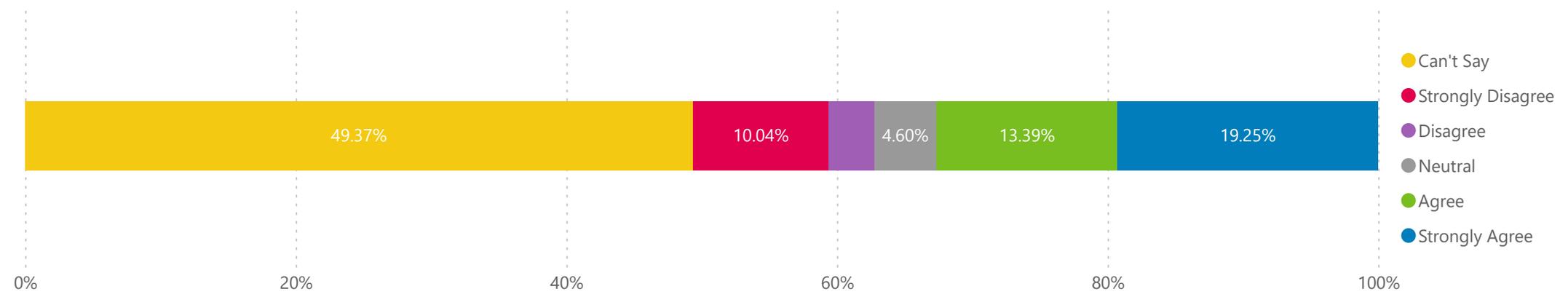
Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.48	3.26	65.23	163	59.49%
Q3 How would you rate the importance of the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services?	1.12	3.84	76.84	12	17.39%
Q4 How likely are you to recommend to others the following services offered by the Animal Services, Licencing and Municipal Law Enforcement (By-law)?	1.52	3.13	62.50	36	52.94%
Q2 How do you feel the Animal Services, Licencing and Municipal Law Enforcement (By-law) has performed overall?	1.40	2.80	56.00	59	85.51%
Q1 How many times have you experienced the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services in the last 2 years?	0.83	1.25	25.00	56	82.35%



Summary of Specific Service Areas over Several Questions

Trade licencing (Example: Plumbing, Heating, Ventilation and Air Conditioning (HVAC), building repair)

Responses
132
 Respondents
66



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.53	3.56	71.24	153	55.84%
Q3 How would you rate the importance of the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services?	0.99	4.37	87.46	10	14.49%
Q4 How likely are you to recommend to others the following services offered by the Animal Services, Licencing and Municipal Law Enforcement (By-law)?	1.51	3.32	66.47	34	50.00%
Q2 How do you feel the Animal Services, Licencing and Municipal Law Enforcement (By-law) has performed overall?	1.31	2.69	53.75	53	76.81%
Q1 How many times have you experienced the following Animal Services, Licencing and Municipal Law Enforcement (By-law) services in the last 2 years?	0.95	1.42	28.33	56	82.35%

Respondents who did not answer or selected 'Can't Say' are included in opt out.

Data Grading Scales

Definition and Ranking of Consistency and Confidence

Grade	Data Consistency Standard Deviation (σ, Consistency of Responses)	Confidence Level Margin of Error (at 95% Confidence in Sample Size)
A Very High	0 to 0.5 - results are tightly grouped with little to no variance in response	0% to 5% - Minimal to no error in results, can generally be interpreted as is
B High	0.5 to 1.0 - results are fairly tightly grouped but with slightly more variance in response	5% to 10% - Error has become noticeable, but results are still trustworthy
C Medium	1.0 to 1.5 - results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - Error is a significant amount and will cause uncertainty in final results
D Low	1.5 to 2.0 - results show a high variance with a fair amount of disparity in responses	20% to 30% - Error has reached a detrimental level and results are difficult to trust
E Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - Significant error in results, hard to interpret data in much of a meaningful way

$$\text{Margin of Error} = \frac{0.98}{\sqrt{n}}$$

Here we attribute a lower value of consistency of response (Standard Deviation) to a higher confidence grade, but it does not necessarily mean that the data is "better". In reality we receive insight about the data regardless. With a high consistency we can tell that respondents more often come to the same conclusion on a response for a question, whereas with low consistency we would see a split in people's opinion, some with a very high rating and others with a very low rating. Knowing this and then understanding why is the most important thing.

The margin of error is calculated using a standard factor of 0.98 and the sample size (n). The margin of error mainly tells us whether the sample size of the survey is appropriate. This is because in the calculation above, sample size would be the main variable and thus has the largest impact. The margin of error is represented as a percentage and indicates the range above and below the calculated average the true value is likely to fall. A smaller margin of error indicates a more precise estimate and vice versa.

Hamilton Municipal Cemeteries Asset Management Plan 2024



HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

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HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

SUMMARY AND QUICK FACTS

SERVICE PROFILE



The purpose of Hamilton Municipal Cemeteries is to provide service for those looking for a final resting place for themselves or for their loved ones. This includes providing compassionate care, respectful spaces and services, and proficient delivery of services achieved through efficient administration, maintenance, and management of the municipal cemeteries.

ASSET SUMMARY

Replacement Value

\$29.5M

FAIR CONDITION

Average Age of **33** years
or **31%** of the average
remaining service life



LEVEL OF SERVICE SUMMARY

- Customers felt that Hamilton Municipal Cemeteries performance was **GOOD** in providing services in the last 24 months.
- Customers felt neutral about Hamilton Municipal Cemeteries providing **AVERAGE** value for money when providing infrastructure and services.



ASSET HIGHLIGHTS				
ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION	STEWARDSHIP MEASURES
Cemeteries Infrastructure	40	\$26.8M	Fair	Staff Inspections and Building Condition Assessments
Fleet and Equipment	245	\$2.71M	Poor	Biannual Inspections completed by Fleet Services

DATA CONFIDENCE



HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

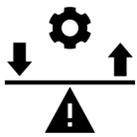
DRIVERS

Population change – Hamilton’s population will continue to grow and Hamilton Municipal Cemeteries will continue to see growth in cemetery services and land needs.

Aging population – increased growth in the elderly demographics will increase the death rate of Hamilton’s overall population. Hamilton Municipal Cemeteries can expect increased demand for cemetery services and land needs.

Changing customer preferences – increased demand for cremation services and products including columbaria, niches, and scattering gardens.

RISK



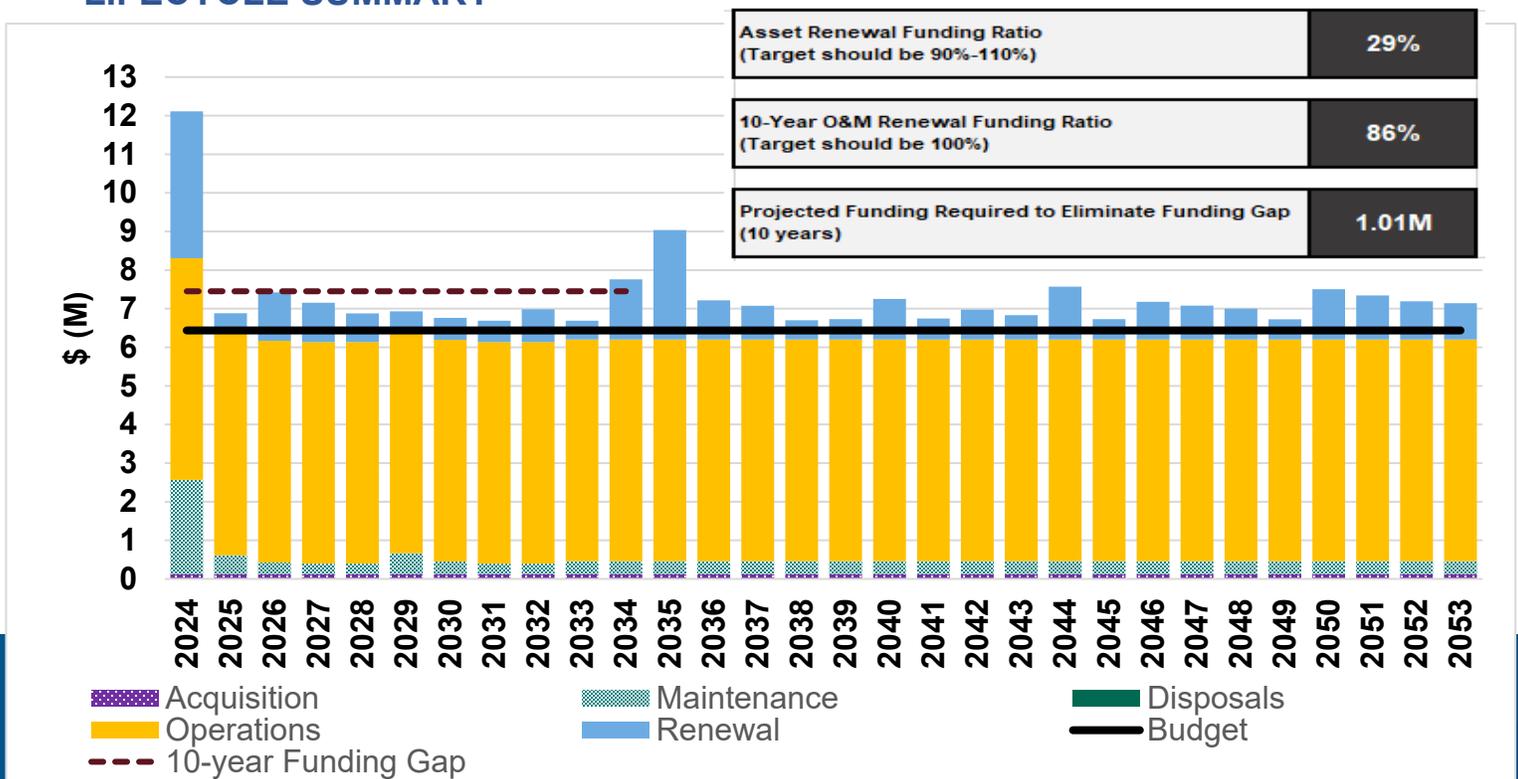
- No critical assets have been identified for the cemeteries service area. Some risks facing Hamilton Municipal Cemeteries are maintaining relinquished cemeteries in perpetuity without additional funding, and excessive deterioration of assets with insufficient funding for maintenance and renewal.

CLIMATE CHANGE MITIGATION



- Natural Burial Area opened at Mount Hamilton Cemetery where remains to return to the earth organically as part of a natural ecosystem
- Targeted mowing reductions and no-mow areas
- Piloting electric small equipment

LIFECYCLE SUMMARY



HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

1. INTRODUCTION

Hamilton Municipal Cemeteries provides administration, maintenance, and management of municipal cemeteries as well as end-of-life services for residents and their families within the City of Hamilton. The purpose of this Asset Management Plan (AM Plan) is to ensure that Hamilton Municipal Cemeteries has the required assets to deliver effective, sustainable and respectful Cemeteries services to the City.

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements (i.e. O. Reg 588/17¹) and required funding to provide the appropriate levels of service over the 2024-2053 planning period.

The Hamilton Municipal Cemeteries section assets include cemetery infrastructure including laneways, fencing and buildings, and commemorative assets, such as mausolea and columbaria. Vehicles, machinery, and equipment are used by Cemetery Staff to provide cemetery services, maintenance, and management of cemetery properties.

Since Sunday, February 25, 2024, the City of Hamilton experienced a cyber incident that disabled some of the IT systems. As a result, this AM Plan was created based on the data that was accessible at the time of publication.

¹ (Government of Ontario, 2017)

HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

2. BACKGROUND

The information in this section is intended to provide background on Hamilton Municipal Cemeteries service areas by providing a service profile, outlining legislative requirements and defining the asset hierarchy used throughout the report. This section will provide the necessary background for the remainder of the AM Plan.

2.1 SERVICE PROFILE

Listed below are related documents reviewed in preparation of the Asset Management Plan:

- Asset Management Plan Overview Document; and,
- City of Hamilton Cemeteries Business Plan Strategy and Land Needs Assessment (2014)².

Additional financial-related documents are identified in **Section 10** Plan Improvement and Monitoring.

2.1.1 SERVICE HISTORY

For over 150 years Hamilton Municipal Cemeteries has been serving residents, providing lasting remembrance tributes, comfort to families and preservation of family and local history for future generations. Hamilton Cemetery, located on Burlington Heights between Cootes Paradise to the West and Burlington Bay to the East, is Canada's first and oldest municipally-owned cemetery with the first burial at the site in 1850. Many of Hamilton's municipal cemeteries are like museums, with their headstones serving as a record of local culture and social history.

Cemeteries are among the most valuable of historical resources, revealing information about settlement patterns, historical events, religions, lifestyles, and genealogy. Cemeteries were also some of the first parks, providing the public with beautiful outdoor gathering spaces at a time when parks were still on the horizon of city planning. This tradition continues today with local cemeteries showcasing a variety of creative horticulture and landscaping.

The City operates 70 cemeteries across the municipality making it the largest municipal cemetery portfolio in Canada. The service area stretches the entire municipality with a wide variety of sites, from historical family burial grounds to modern-day grounds with a suite of service offerings.

The Environmental Services Division (Parks and Cemeteries Section) of the Public Works Department is responsible for the administration, operation, and maintenance of municipally-owned cemeteries. The City provides a range of traditional cemetery services and products, including single/multiple grave lots, full burial (adult, child and veteran), cremation burial (urn gardens), columbaria niches, mausolea crypts, memorial benches, memorial trees, plaques, vases, emblems, flower beds, family history research and upright and flat markers. More

² (Lees+Associates Cemetery Planners, 2014)

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recently, natural burials are now available to residents seeking an alternative to traditional burial practices.

Hamilton Municipal Cemeteries is a Licensed Cemetery Operator, issued by the Bereavement Authority of Ontario (BAO).

2.1.2 SERVICE FUNCTION

Hamilton Municipal Cemeteries provides service for those looking for a final resting place for themselves or for their loved ones. Staff are committed to providing compassionate care, respectful spaces and services, and proficient delivery of services.

Services include:

- Maintenance and management of 70 active and inactive cemeteries;
- Sales of interment rights, and products/services such as benches, urns, vaults, and providing grave side tents and chairs to support funerals;
- Burial and disinterment; and,
- Historical family searches and historical walking tours.

Hamilton benefits from these services in several ways, including:

- Established infrastructure, systems, staffing and outreach programs;
- Strong support from funeral homes, councillors, and the community;
- A significant supply of undeveloped lands and a variety of burial options with the opportunity to be buried in your community; and
- Infilling opportunities at some inactive cemeteries.

In order to deliver cemetery services, Hamilton Municipal Cemeteries requires assets. Some ways assets support the delivery of the service include:

- The provision of final resting place options including columbaria, and the equipment required to perform interment;
- Site works including laneways, stormwater management, lighting, and pathways, that allow cemetery properties to function at the desired level of service;
- Equipment and resources to maintain cemeteries and services at the desired level of service; and
- Administrative equipment to support the delivery of services.

2.1.3 USERS OF THE SERVICE

Hamilton Municipal Cemeteries receive hundreds of requests for services per year, such as interment sales, products (e.g., benches, urns, funeral support items), burial and disinterment,

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graveside services and historical family searches. Staff assist with many interments each year, completing 1371 burials in 2022.

Programs include:

- Historical walking tours;
- Remembering services and outreach events (e.g., Remembrance Day, trees of remembrance, field of flags);
- End-of-life planning services; and,
- Memorial bench program.

Customers are often those dealing with the loss of a loved one or considering making arrangements for themselves or for a loved one but also include visitors who are grieving a loved one, making family connections, studying genealogy, and enjoying the greenspace and scenery.

Hamilton Municipal Cemeteries provide a diverse range of services located at sites in all communities of the City allowing residents to choose a resting place close to their homes and families. **Table 1** identifies the number of Hamilton Municipal Cemeteries in each community.

Table 1: Cemetery Details

COMMUNITY	NUMBER OF CEMETERIES
Ancaster	11
Dundas	6
Flamborough	13
Glanbrook	12
Hamilton	16
Stoney Creek	12

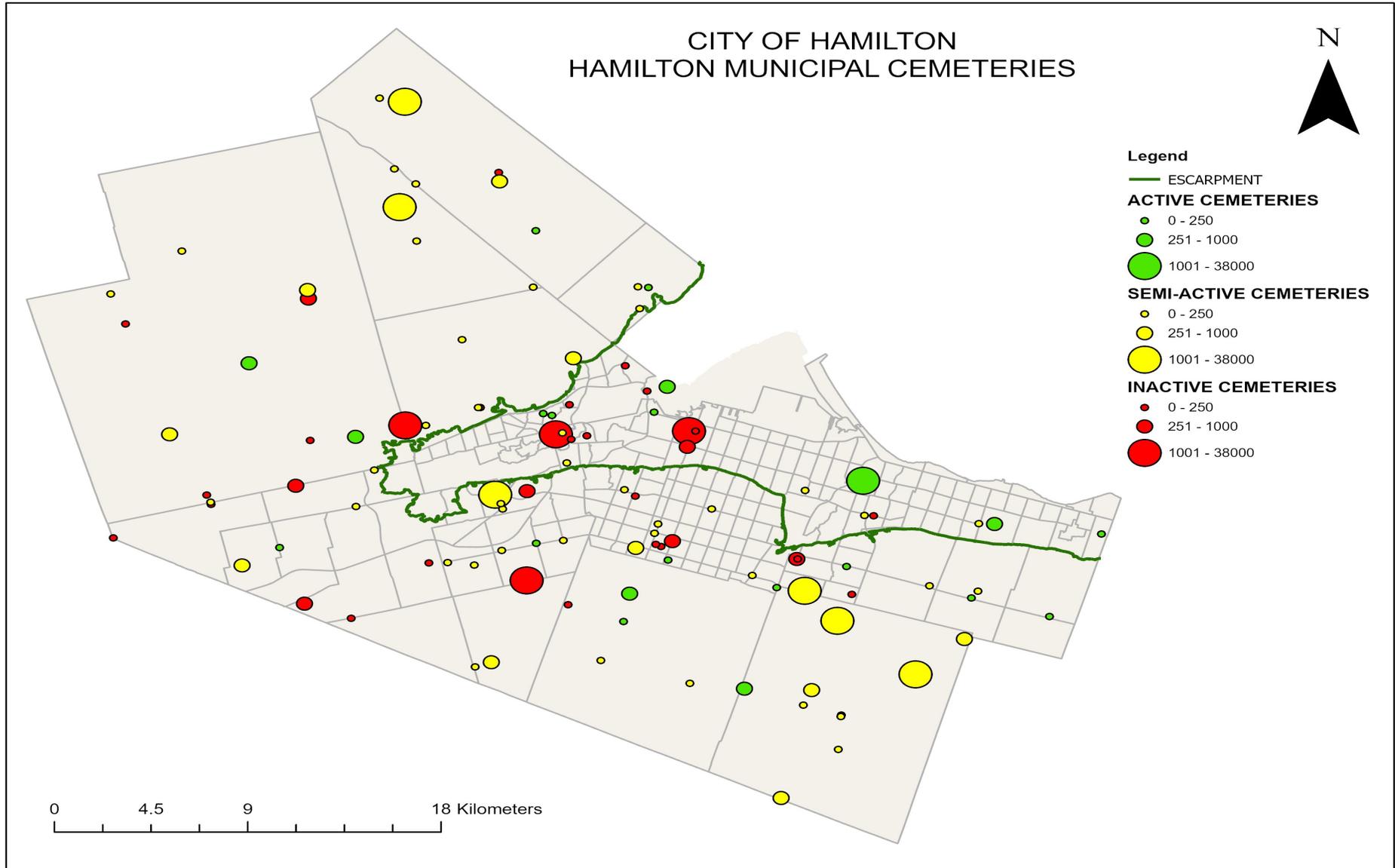
Based on the 2021 (2016) Census results, Hamilton’s population is 569,353 (536,917), and the average household size is 2.5 (2.5) people.³ During the period of 2008 to 2012, 37 percent of Hamilton residents that chose in-ground casket burial chose to do so at a municipal cemetery and 21 percent of Hamilton residents that chose cremation interred their remains at a municipal cemetery.⁴

³ (Census Profile, 2021 Census of Population, 2021)

⁴ (Lees+Associates Cemetery Planners, 2014)

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Figure 1: Map of Hamilton Municipal Cemetery Locations



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2.1.4 UNIQUE SERVICE CHALLENGES

Hamilton Municipal Cemeteries has several unique service challenges including:

- In Ontario, the Funeral, Burial and Cremation Services Act, 2002 stipulates that cemetery owners must set aside a portion of the interment rights fee and/or portions of fees from the other products and services provided to be kept in a trust fund known as the Care and Maintenance Fund. This trust is intended to fund the care and maintenance required of the cemetery in perpetuity;

The Act mandates that municipalities assume responsibility for any burial site that is not being maintained or is abandoned. The BAO will direct the City of Hamilton to assume this responsibility. As a result, the City currently owns and maintains numerous cemeteries that are historical, inactive, and have no dedicated Care and Maintenance Fund to provide for their perpetual care. This can place a strain on existing funding without any additional cost allocations provided. These assumed assets may require significant initial maintenance activities at turnover to stabilize and bring the assets up to a serviceable condition;

- Consumers are increasingly price-conscious, while also accustomed to choosing from a wide array of products and services. Trends in preference from burial toward cremation are expected to continue to increase. There is also a trend toward consumer desire for more natural and environmentally friendly end-of-life options. The City has also developed a new natural burial section at Mount Hamilton Cemetery to meet this demand in the community;
- A Business Plan Strategy and Land Needs Assessment was completed in 2014 to provide strategic direction to Hamilton Municipal Cemeteries. Given the time that has passed and changes that have occurred in the City, an updated plan will be undertaken in 2024 to identify needs and guide plans for future growth;
- Land needs for cemeteries are assessed for each area of the City to ensure residents can be buried in their local areas. Lands that are appropriate for cemetery use are scarce in some areas and can be costly to acquire. Strategic planning is required such that when opportunities arise the City is in a position to move quickly to acquire the properties; and,
- Existing assets are aging while existing funding for maintenance and renewal is limited and not sufficient to complete all desired planned maintenance activities or replace assets at the optimal time. Asset data and records are limited and stored in a variety of formats and locations. Assets are diverse and maintenance procedures are not standardized and documented for all assets.

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2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of Hamilton Municipal Cemeteries services are outlined in **Table 2**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

Table 2: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENT
<p>Funeral, Burial and Cremation Services Act, 2002</p>	<p>The Funeral, Burial and Cremation Services Act (FBCSA) is the main law respecting funerals, burials, cremations, alkaline hydrolysis and related bereavement supplies and services within the province of Ontario.</p> <p>By law, funeral establishments, cemeteries, crematoriums, alternative dispositions and transfer service operators as well as funeral directors and sales representatives must be licensed. The act also outlines consumer rights related to bereavement supplies and services.</p> <p>The Bereavement Authority of Ontario (BAO) is responsible for most of the FBCSA.</p> <p>This legislation stipulates that cemetery owners must provide “care and maintenance” of their properties and that they must do so in perpetuity.</p>
<p>City of Hamilton By-law No. 12-151 By-law respecting the City of Hamilton’s cemeteries</p>	<p>By-law for the operation of cemeteries owned by the City of Hamilton.</p>

2.3 ASSET HIERARCHY

In order to deliver services, Hamilton Municipal Cemeteries requires assets. The Cemeteries Service Area has been broken down into three asset classes for the purpose of this AM Plan:

- **Cemeteries Infrastructure:** refers to physical assets located at cemetery locations including buildings, pathways, furnishings including benches, laneways, fencing and signs. This also includes utilities such as stormwater facilities, lighting, electrical, and irrigation;
- **Commemorative Assets:** refers to columbaria and mausoleums assets; and,

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- **Fleet and Equipment:** refers to all fleet and equipment that support the delivery of cemetery services.

Table 3 : Asset Class Hierarchy

SERVICE AREA	HAMILTON MUNICIPAL CEMETERIES		
ASSET CLASS	CEMETERIES INFRASTRUCTURE	COMMEMORATIVE ASSETS	FLEET AND EQUIPMENT
	<ul style="list-style-type: none"> • Signs and Wayfinding Features (including entryways and section markers) • Garden Beds • Water and Irrigation Systems • Pathways and Furnishings • Laneways • Fencing • Retaining Walls • Utilities (stormwater, electrical, lighting) • Facilities (including soil storage) 	<ul style="list-style-type: none"> • Columbaria and Niches • Mausoleum 	<ul style="list-style-type: none"> • IT Equipment • Large Equipment and Attachments • Trucks and Vehicles • Small Equipment • Interment Equipment • Sales Equipment

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3. SUMMARY OF ASSETS

This section provides a detailed summary and analysis of the existing inventory information as of October 2023 including age profile, condition methodology, condition profile, asset usage, and performance for each of the asset classes. *Table 4* displays the detailed summary of assets for the **Hamilton Municipal Cemeteries** service area. The sources for this data are a combination of data included in the City's database information. It is important to note that inventory information does change often, and that this is a snapshot in time of information.

The City owns approximately **\$29.5 million** in **Hamilton Municipal Cemeteries** assets. To calculate the average age and condition, a weighted average calculation has been completed based on replacement cost and excludes assets where information is currently unavailable.

Assets are a weighted average of **33 years** in age which is **31%** of the average remaining service life (RSL); however, age data is only available for fleet, equipment, and facilities assets. Based on the limited age data available, the overall data confidence for age and remaining service life is **Low**.

The assets are on average in **Fair** condition however there are a number of categories for many assets where there is no condition data available. Based on the limitations of the data, the overall data confidence for the condition is **Low**. For most assets, this means that the City should be completing preventative, preservation and maintenance activities as well as operating activities (e.g., inspection, cleaning) to prevent any premature failures.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. In addition, the assets included below are assets that are assumed and in service at the time of writing.

Data confidence associated with asset information is also presented in *Table 4*. Data confidence descriptions are outlined on **page 31**, in the [AM Plan Overview](#). The replacement costs below are typically a Low-Medium data confidence level for categories with data available. Due to the overall number of assets with incomplete data, the overall replacement value confidence level is **Low**. For most Facility assets, these replacement costs are calculated using an internal tool which encompasses current market rates, building type and size. Fleet and Equipment assets replacement costs were gathered from the most recent purchase price for similar assets. Replacement values for other items are generally based on inflated values of original purchase, recent purchase price for similar assets, or replacement cost estimates based on staff expert opinion.

A continuous improvement item identified in *Table 29* is to implement an asset registry for all Hamilton Municipal Cemeteries assets which includes key database fields and follows the newly developed City Data Standard. The Cemeteries section is currently implementing the City's Enterprise Asset Management (EAM) System which will improve the asset inventory in future iterations of the AM Plan.

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Table 4 : Detailed Summary of Assets

CEMETERIES INFRASTRUCTURE				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Signs and Wayfinding Features	No Data	No Data	No Data	No Data
Data Confidence				
Garden Beds	52	No Data	No Data	No Data
Data Confidence	Low			
Water Taps and Irrigation Systems	464 - Water Taps No Data – Irrigation Systems	\$0.46M	No Data	No Data
Data Confidence	Low	Low		
Pathways and Furnishings	No Data	No Data	No Data	No Data
Data Confidence				
Laneways	28 km	\$18.7M	No Data	3-Fair
Data Confidence	Medium	Medium		Medium
Fencing	2.6 km	\$0.87M	No Data	3-Fair
Data Confidence	Medium	Medium		Medium
Retaining Walls and Barriers	3	No Data	No Data	No Data
Data Confidence	Low			
Utilities (stormwater, lighting, electrical)	No Data	No Data	No Data	No Data
Data Confidence				
Facilities	9	\$6.8M	35 (31%)	4-Poor
Data Confidence	High	Medium	High	Low
SUBTOTAL		\$26.8M	35 (31%)	3-Fair*
DATA CONFIDENCE		Medium*	High	Medium*

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COMMEMORATIVE ASSETS				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Columbaria and Niches	118	No Data	No Data	2-Good
Data Confidence	Low			Medium
Mausoleum	1	No Data	No Data	No Data
Data Confidence	High			No Data
SUBTOTAL	No Data		No Data	2-Good
DATA CONFIDENCE				Medium

FLEET AND EQUIPMENT				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
IT Equipment	18	\$0.03M	3 (44%)	3-Fair
Data Confidence	High	Medium	High	Low
Large Equipment and Attachments	32	\$1.22M	8 (25%)	4-Poor
Data Confidence	High	Medium	High	Low
Trucks and Passenger Vehicles	16	\$1.06M	8 (22%)	4-Poor
Data Confidence	High	Medium	High	Low
Small Equipment	178	\$0.4M	8 (39%)	4-Poor
Data Confidence	Medium	Medium	Medium	Low
Interment Equipment	No Data	No Data	No Data	No Data
Data Confidence				No Data
Sales Equipment	No Data	No Data	No Data	No Data
Data Confidence				No Data
SUBTOTAL	\$2.7M		8 (26%)*	4-Poor*
DATA CONFIDENCE	MEDIUM*		HIGH*	LOW*

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TOTAL	\$29.5M	33 (31%)*	3-FAIR*
DATA CONFIDENCE	LOW**	LOW**	LOW**

*Weighted average by replacement value

**Overall data confidence for Average Age (%RSL) and Average Equivalent Condition is based on subject matter expert opinion rather than weighted average by replacement value due to the overall lack of data and number of categories with no data available

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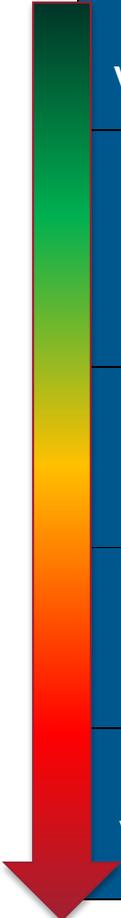
3.1 ASSET CONDITION GRADING

Condition refers to the physical state of the cemeteries assets and is a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life.

Since condition scores are reported using different scales and ranges depending on the asset, **Table 5** below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in **Table 29**, is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

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Table 5: Equivalent Condition Conversion Table



EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	FACILITIES CONDITION INDEX (FCI)	COLUMBARIA CONDITION	LANEWAY ASPHALT QUALITY ASSESSMENT – SEVERITY LEVEL	FENCE CONDITION
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance required only.	>79.5%	N/A	N/A	1	N/A
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on asset’s usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	< 5%	EXCELLENT	2	Good – No Issues
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset’s usage. Minor to significant maintenance is required.	39.5% - 69.4%	>= 5% to < 10%	GOOD	3	Fair - No Poor condition components, 4/7 or fewer fair condition components
4 Poor	Asset has significant defects and deterioration. Deterioration has an impact on asset’s usage. Rehabilitation or major maintenance required in the next year.	19.5% - 39.4%	>= 10% to <30%	FAIR	4	Poor – 1 or more poor condition components or >4 fair condition components
5 Very Poor	Asset has serious defects and deterioration. Asset is not fit for use. Urgent rehabilitation or closure required.	<19.4%	>= 30%	N/A	5	N/A

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The following conversion assumptions were made:

- For assets where a condition assessment was not completed, but age information was known (Fleet, IT Equipment, Small Equipment), the condition was based on the percent of remaining service life;
- Facilities Condition Index was based on ranges provided by a consultant who has completed the Building Condition Assessment (BCA) for the City which corresponds to a 4-point scale; therefore, facilities will not be able to attain a score of 1–Very Good; and,
- For Columbaria, Laneways, and Fences, condition was based on overall condition rating produced by staff visual inspection.

3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile, and Performance Issues for each of the asset classes.

- The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life (ESL) where they can be planned for replacement. Some lower cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if an asset's condition is based on age, it is typically considered to be of a low confidence level. Although typically, age is used when projecting replacements beyond the 10-year forecast to predict degradation;
- Condition refers to the physical state of assets and is a measure of the physical integrity of assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected/assessed at different frequencies and using different methodologies to determine their condition which are noted in this section; and,
- Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

3.2.1 CEMETERIES INFRASTRUCTURE PROFILE

The asset profile information for Cemeteries Infrastructure asset classes is included in each section below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

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3.2.1.1 AGE PROFILE

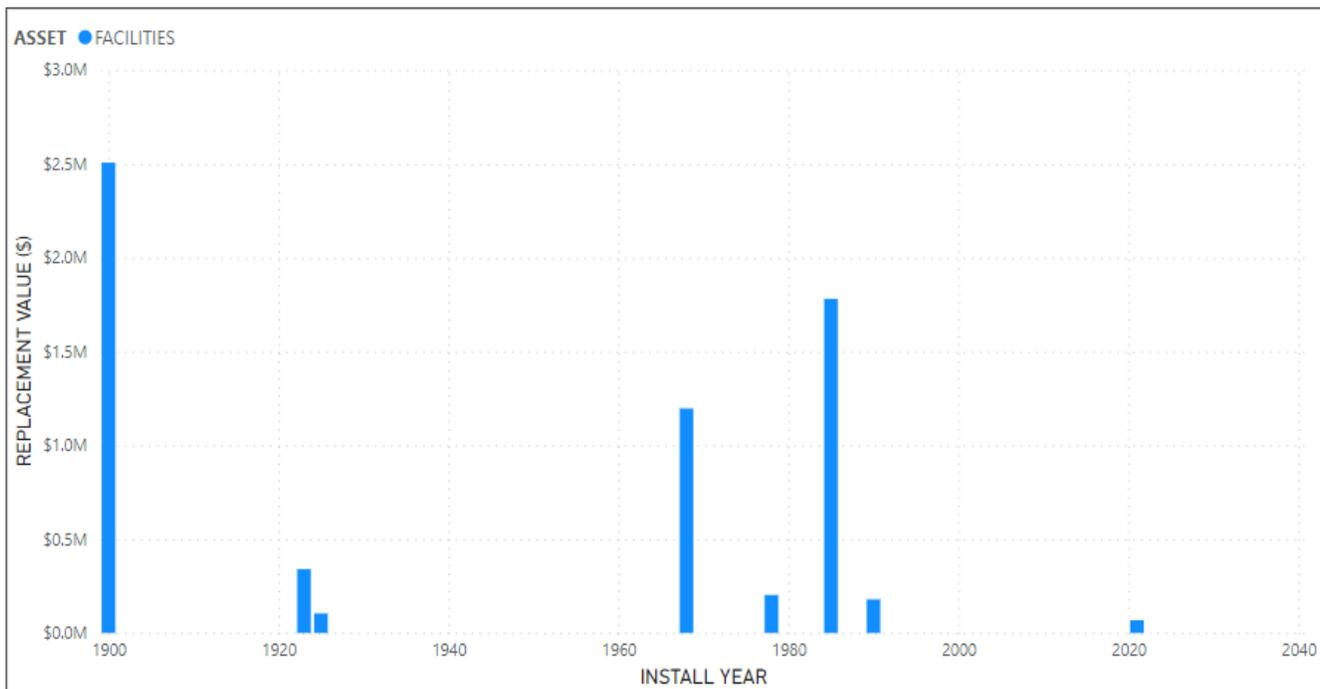
The only asset category in the Cemeteries Infrastructure asset class with known age data at this time are Facilities.

Hamilton Municipal Cemeteries has nine Facilities, including one soil storage building at Woodland Cemetery. The data confidence for the age of facilities is typically High because this information was recorded at the time of construction. At this time, age data is not known for any other Cemeteries Infrastructure assets.

The age profile of the Facilities assets is shown in **Figure 2**. An analysis of the age profile is provided below. For Facilities assets, the data confidence for age is typically high because the date of construction was formally recorded.

Several of the Facilities are historical in age; one at Hamilton Cemetery, and two at Woodland Cemetery. The Estimated Service Life for these assets is essentially undetermined as they would not likely be replaced given their setting and context in the history of the cemetery. These buildings, however, will require significant ongoing operations and maintenance costs to maintain. For the purposes of the average facilities ages and Estimated Service Life these four buildings were considered to be historical and were removed from the calculation so as not to weight the calculation. The remaining service life and age in the Detailed Asset Summary, **Table 4**, is more reflective of the age and condition of the buildings and their eventual asset renewal needs. Other facilities were primarily built from the late 1970s to the mid-1980s. Based on a service life of 50 years, these buildings are approaching the end of their estimated service life.

Figure 2 : Facilities Age Profile



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3.2.1.2 CONDITION METHODOLOGY AND PROFILE

Condition data is not available for many Cemeteries Infrastructure assets. A comprehensive asset inspection program for all assets should be developed identifying the frequency of inspection and developing 5-point scales for use during inspection so a condition can be determined. Condition assessment frequency should also be determined for asset categories, so condition is being reviewed and updated on a regular basis to better identify asset service lives. This has been added as a Continuous Improvement item in **Table 29**.

Condition for Cemeteries Facilities is determined based on the results of a Building Condition Assessment (BCA) completed by the Corporate Facilities and Energy Management (CFEM) division. The BCA identifies necessary major and minor maintenance activities in a 10-year forecast with projected costs, and outputs a detailed report outlining methodology, overall findings and condition.

BCAs are completed on Cemeteries Facilities every five years and output a score called a Facility Condition Index (FCI) which is considered to be a high confidence level source for condition. The FCI is calculated based on a ratio of the estimated cost of maintenance/repair work required on the facility to the total replacement cost of the facility. The 10-year forecast from the BCA's were incorporated into the maintenance plan shown in **Section 8.2**.

The condition conversion from FCI to the standardized 5-point scale used in this AM Plan is shown in **Table 5**. As per **Table 5** there is no FCI value that can give a Very Good condition rating.

BCA information was not available for the two historical buildings and soil storage facility at Woodland Cemetery. The soil storage was built in 2021 and was assumed to be in Good condition based on age. Due to the historical nature of the other two buildings, condition could not be determined. These are both small accessory buildings at Woodland Cemetery (Back Shop and Equipment Storage)

A condition assessment of Laneways and Fencing was completed in 2018-2019 by seasonal staff. Visual inspections were performed to produce condition scores further described in **Table 5**.

Table 6: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Laneways	Ad Hoc	2018-19	5-point Scale
Fencing	Ad Hoc	2018-19	3-point Scale
Facilities	5-Year Regular Facilities Inspection	2019 Mantecon	% Facilities Condition Index (FCI)
All Other Identified Assets	Ad Hoc	Ad Hoc	N/A

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Condition Profile

The condition profile of the City’s assets is shown in **Figure 3**. As mentioned in **Section 3.1**, the original condition grades were converted to a standardized condition category for report consistency.

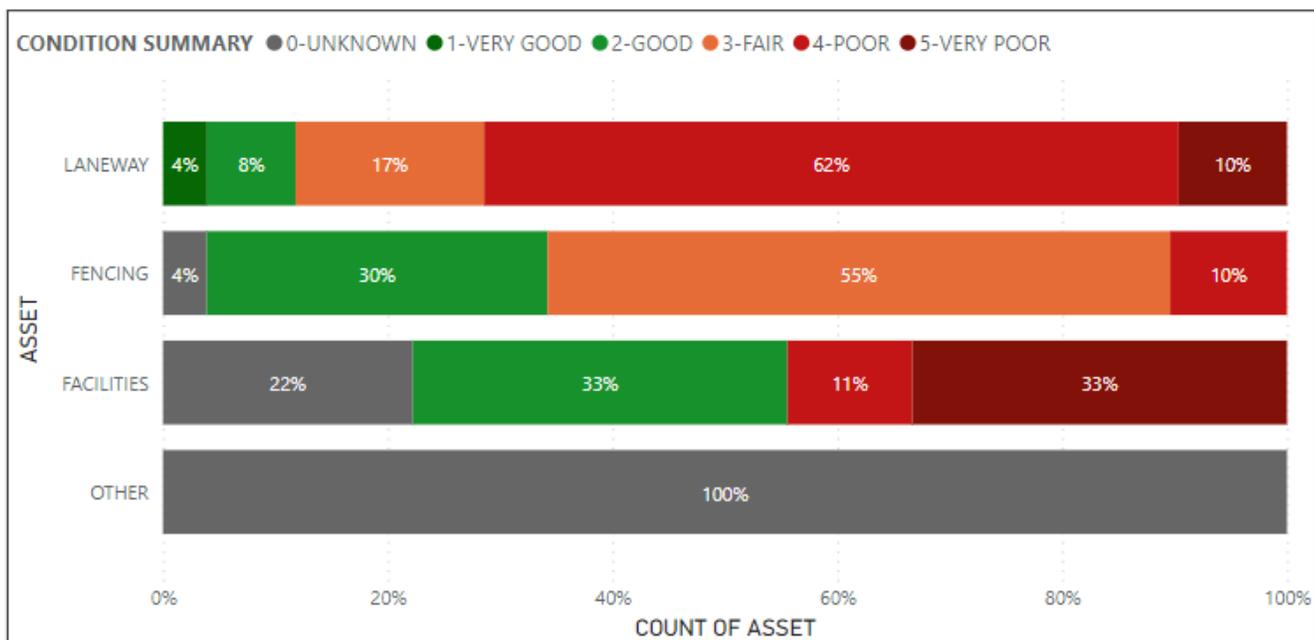
Nearly 75 percent of the Laneways in cemeteries are in poor or worse condition. Laneways are the main way of travelling respectfully throughout the cemetery and should be maintained to provide an ideal pathway for vehicles and pedestrians in the cemetery that is free from ponding water, mud and surface irregularities.

Fencing is in generally Fair condition, however, most of the perimeter fencing is permitted to fail and then subsequently removed at the end of life as it does not provide a health and safety purpose and public access to cemeteries is permitted. Decorative or historic fencing is maintained. When completing the Lifecycle Model further described in **Section 8**, renewal of perimeter fencing was not included and ultimately this asset class will be eliminated as fencing reaches the end of life.

Nearly half of the Facilities by count are in Poor condition or worse however it should be noted that by replacement value 84% of Facilities are in poor condition. Facilities account for a substantial portion of the financial value of Hamilton Municipal Cemeteries assets and replacement will be costly. Some buildings serve as sales and customer service locations where the comfort of families is important, and the impression made by the buildings will leave an impression on those considering accessing Hamilton Municipal Cemeteries services.

Other assets in this category do not have any available condition information.

Figure 3: Cemeteries Infrastructure Condition Distribution



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3.2.1.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. The largest performance issues with Cemeteries Infrastructure involve poor condition of assets or its components. The known service performance deficiencies in **Table 7** are identified using information from the 2019 Building Condition Assessment (BCA) inspection data and discussions with Hamilton Municipal Cemeteries staff.

Table 7: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
CEMETERIES INFRASTRUCTURE	Laneways	Poor asphalt condition	72% of laneways were rated as Poor or Very Poor condition. Asphalt is significantly deteriorated due to a lack of maintenance and renewal.
	Facilities	Eastlawn Cemetery and Mount Hamilton Cemetery Buildings	Buildings are past or close to the end of estimated service life and both in Poor or Very Poor condition based on FCI.
		Hamilton Cemetery Main Building	Historical building built in 1900. Footings and foundation in Fair condition. It is recommended to repair the footings and foundations as required, following an appropriate study.
		Multiple Buildings	Improvements required at multiple buildings where there are improper infrastructure connections and servicing, inadequate design of amenities for use and more.

3.2.2 COMMEMORATIVE ASSETS PROFILE

The asset profile information for commemorative asset classes is included in each section below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

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3.2.2.1 AGE PROFILE

The age profile of the Commemorative Assets is not known at this time.

3.2.2.2 CONDITION METHODOLOGY AND PROFILE

Condition of Columbaria was produced by visual inspection completed in 2022 by Cemeteries staff.

Condition of the Mausoleum is not known at this time.

A comprehensive asset inspection program for all assets should be developed identifying the frequency of inspection and developing 5-point scales for use during inspection so a condition can be determined. Condition assessment frequency should also be determined for asset categories, so condition is being reviewed and updated on a regular basis to better identify asset service lives. This was added as a Continuous Improvement item in **Table 29**.

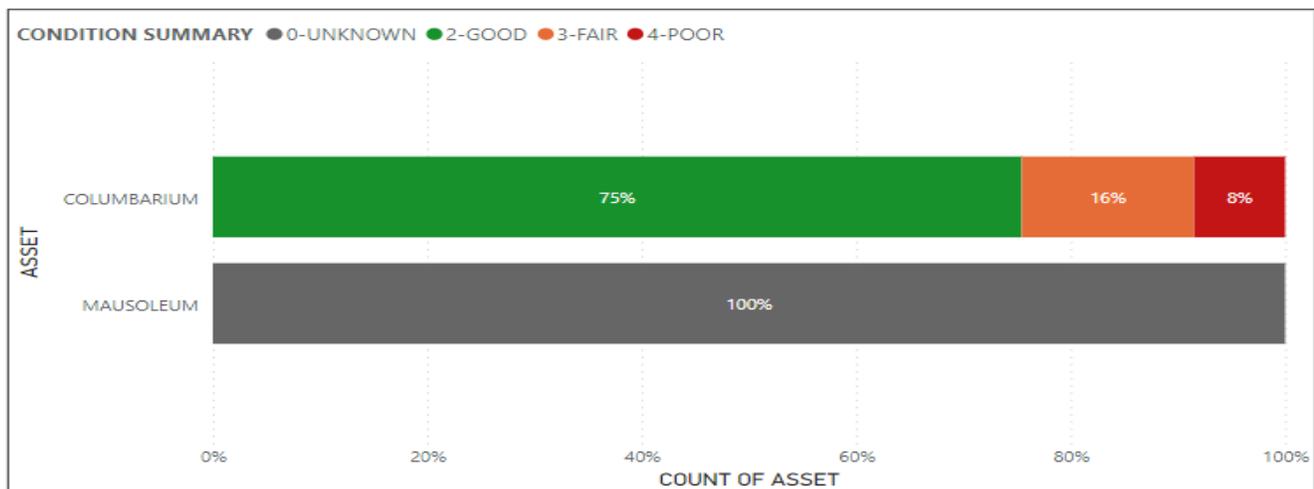
Table 8: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Columbaria	2-year Cycle	2022	3-point Scale
Mausoleum	Ad Hoc	Ad Hoc	NA

Condition Profile

The Columbaria are generally in Good condition. Mausoleum condition is unknown at this time.

Figure 4: Commemorative Assets Condition Profile



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3.2.2.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. Due to the commemorative nature of these assets, they will generally be maintained in perpetuity rather than replaced.

Table 9: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Commemorative Assets	Various	Deterioration or failure	Age-related deterioration of private monuments and commemorative assets at times require work to maintain safety. For example, in 2024 vault repairs at Hamilton Cemetery. A CI Item has been added to Table 29 to document responsibilities.

3.2.3 FLEET AND EQUIPMENT PROFILE

The asset profile information for Fleet and Equipment asset classes is included in each section below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

3.2.3.1 AGE PROFILE

The age profile of the Fleet and Equipment assets is shown in **Figure 5**. For Fleet and Equipment assets, the data confidence for age is typically high because age is generally known with the exception of interment and sales equipment, which are replaced as needed.

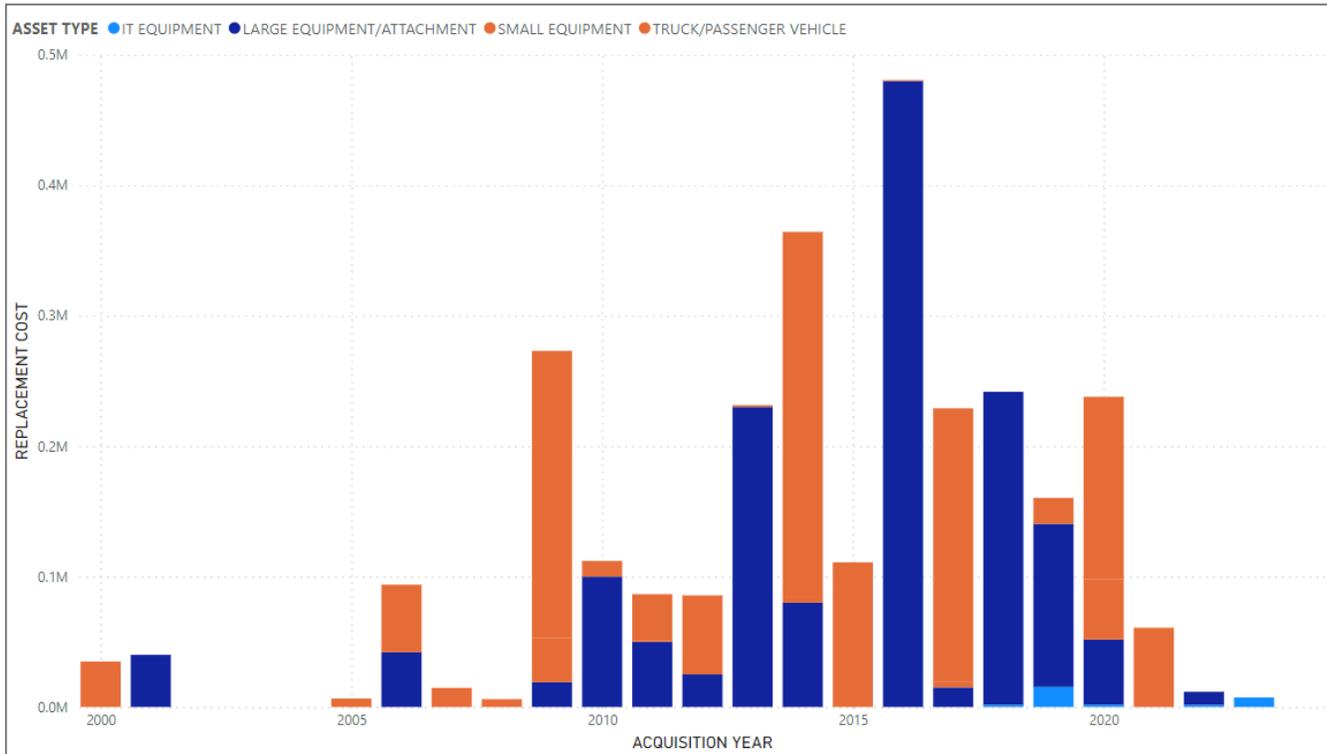
Large Equipment, Trucks and Passenger Vehicles are procured, and maintenance is managed with assistance from the City of Hamilton Fleet Services. Small Equipment is items such as push lawnmowers, leaf blowers, snowblowers and weed eaters are managed by Parks and Cemeteries section directly.

Most fleet assets including trucks, passenger vehicles, large equipment, and attachments have an estimated service life of 8-10 years. Small equipment assets have an estimated service life of 10 years. As shown in the figure, there are numerous equipment assets still in service with ages beyond 10 years. This profile includes extended-use vehicles. These are typically vehicles that have already had replacements put into service, but the area is maintaining the replaced vehicle for a period of time beyond the arrival of the replacement vehicle. A significant number

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of vehicles are past the end of service life and not extended use and require replacement in the near term to adequately deliver Hamilton Municipal Cemeteries services. A continuous improvement item is to review the extended use of vehicles/equipment and develop a long-term strategy for the fleet and their usage, see the continuous improvement **Table 29** for more information.

Figure 5: Fleet and Equipment Age Profile



3.2.3.2 CONDITION METHODOLOGY AND PROFILE

As shown in **Table 10** below, the condition for Fleet and Equipment assets is based on age as there are no regular condition assessments completed on these assets which reflects condition data confidence of Low.

Table 10: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Large Equipment and Attachments	Scheduled 2 times per year	Various	N/A - based on age
Trucks and Passenger Vehicles	Scheduled 2 times per year	Various	N/A - based on age
Small Equipment	None	N/A	N/A - based on age

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ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
IT Equipment	None	N/A	N/A - based on age
Interment Equipment	None	N/A	N/A
Sales Equipment	None	N/A	N/A

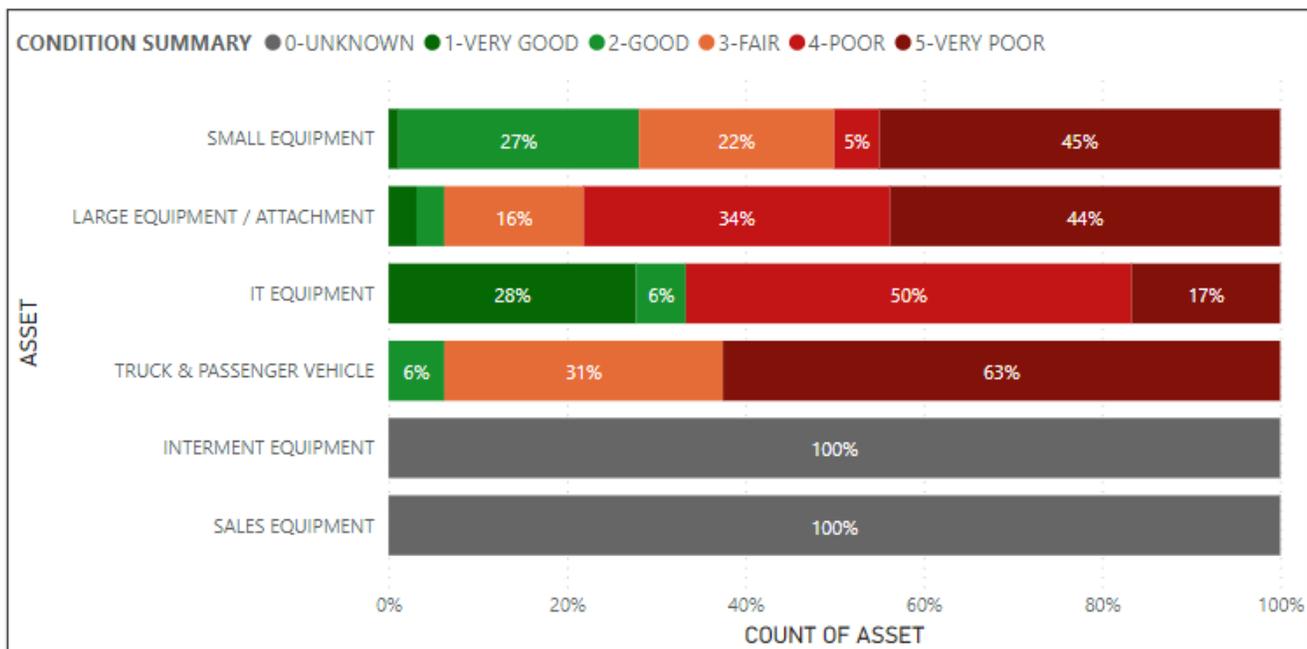
Condition Profile

The condition profile of the Fleet and Equipment assets is shown in **Figure 6**. As mentioned in **Section 3.1**, the condition grades were based on age and estimated service life.

Condition of small equipment has been assumed based on age and an estimated service life of 10 years. Though this is considered low confidence data, it can be seen that 50% of small equipment assets are in poor or very poor condition.

The extended use vehicles have been included in the Condition details in the Figure and contribute to the increased percentage of Very Poor vehicles. Extended use vehicles are not included in the replacement value calculations as they are still in use but upon disposal are not intended to be replaced. A continuous improvement item is to review the extended use vehicles and develop a long-term strategy for the fleet and their usage, see the continuous improvement **Table 29** for more information.

Figure 6: Fleet and Equipment Condition Distribution



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3.2.3.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with Fleet and Equipment assets involve assets exceeding their ESL as shown in **Table 11**.

Table 11: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Fleet and Equipment	Large Equipment and Attachments	Many equipment pieces are at the end of service life.	78% of Large Equipment and Attachments are rated as Poor or Very Poor condition based on their age and estimated service life.
	Trucks and Passenger Vehicles	Many vehicles are at the end of service life.	63% of Trucks and Passenger Vehicles are rated as Very Poor condition based on their age and estimated service life contributing to higher maintenance costs and more downtime.
	Small Equipment	Many small equipment pieces at the end of service life.	50% of Small Equipment are rated Poor or Very Poor condition based on their age and estimated service life

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4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what the City provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that the City provides those services.

O.Reg 588/17 does not define levels of service for Hamilton Municipal Cemeteries assets and therefore the City has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in Section 7.5 of the AM Plan Overview.

4.1 SURVEY METHODOLOGY

To develop customer values and customer levels of service, a Customer Engagement Survey entitled *Let’s Connect, Hamilton – City Services and Assets Review: Parks and Cemeteries* was released on November 8, 2023, on the Engage Hamilton platform and closed on December 13, 2023. The survey results can be found in Appendix “A”.

The survey received submissions from 70 respondents and contained five questions related to the *Hamilton Municipal Cemeteries* service delivery. For the purposes of this report, data has been evaluated from a confidence level perspective (margin of error at 95% confidence in sample size) and a data consistency (standard deviation) perspective per **Table 12**. Based on the number of responses, a sample size of 70 correlates to a 95 percent confidence level with a 12 percent margin of error based on an approximate population size of 570,000. This error is significant and leads to uncertainty in the results. It is important to note that respondents could opt out of questions, and so different questions have different confidence levels depending on the opt-out rate for that question. In this survey, the opt-out rate was approximately 70 percent for some questions resulting in significant uncertainty and Low confidence making it difficult to make conclusions about the results of these questions.

Table 12: Data Confidence Levels

GRADE	DATA CONSISTENCY (STANDARD DEVIATION)	CONFIDENCE LEVEL (MARGIN OF ERROR AT 95% CONFIDENCE IN SAMPLE SIZE)
Very High	0 to 0.5 – results are tightly grouped with little to no variance in response	0% to 5% - minimal to no error in results, can generally be interpreted as is
High	0.5 to 1.0 – results are tightly grouped but with slightly more variance in response	5% to 10% - error has become noticeable, but results are still trustworthy
Medium	1.0 to 1.5 – results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - error is a significant amount and will cause uncertainty in the final results

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GRADE	DATA CONSISTENCY (STANDARD DEVIATION)	CONFIDENCE LEVEL (MARGIN OF ERROR AT 95% CONFIDENCE IN SAMPLE SIZE)
Low	1.5 to 2.0 – results show a high variance with a fair amount of disparity in responses	20% to 30% - error has reached a detrimental level and results are difficult to trust
Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - significant error in results, hard to interpret data in a meaningful way

For this survey, data consistency was also considered. A high data consistency means that respondents came to the same conclusion more often for a question, whereas a low data consistency means that there is a split in respondent’s opinions. Therefore, while Corporate Asset Management may be able to improve survey confidence levels over time by increasing the survey sample size, it may not be possible to improve data consistency over time as this depends on the opinions of the respondents and may require additional insight on why respondent’s opinions are split. A low consistency of data does not mean the data is wrong, but it does mean that it is difficult to make decisions using that information. Overall, Hamilton Municipal Cemeteries survey data consistency was typically Medium across all questions indicating most respondents are generally in agreement with results moderately grouped together.

While these surveys were used to establish customer values and customer performance measures, it is important to note that there were also limitations to the survey methodology which may further reduce the confidence level in the survey data. The survey was only released using an online platform and did not include telephone surveys and consequently there is no way to confirm the identity information provided in the survey. In addition, the survey did not control for IP addresses, and therefore it is possible that respondents could complete the survey more than once and skew the survey results.

Although there are limitations to the survey methodology and the number of responses was not at a high confidence level for the most recent survey, these results can be used to provide some context about the feelings customers have about the services that the Hamilton Municipal Cemeteries and Cemeteries section provides. However, decisions should not be made based on this survey alone and further investigation is required prior to proposing new levels of service. These survey results might point to trends or areas to consider further.

4.2 CUSTOMER VALUES

Customer values are what the customer can expect from their tax dollar in “customer speak” which outlines what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

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00Customer Values indicate:

- What aspects of the service are important to the customer;
- Whether they see value in what is currently provided; and,
- The likely trend over time-based on the current budget provision.

As previously mentioned, the customer values below were determined using the results from the *Let's Connect, Hamilton – City Services and Assets Review: Parks and Cemeteries*

Table 13: Customer Values

CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	DATA CONSISTENCY	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Cemeteries Services are important.	2023 Parks and Cemeteries City Service and Assets Review	Based on average survey responses cemeteries services are important.	Medium	Maintain
Maintenance and management of cemeteries, graveside services, burials and interment, and end-of-life planning services are the most important services.		Based on average survey responses these services are important for the Cemeteries section to provide.	Medium	Maintain
Sales of interment rights, cemetery services, supporting products and historical family searches and tours are fairly important services.		Based on average survey responses these services are fairly important for the Cemeteries section to provide.	Medium	Maintain
Customers prefer to maintain rates and service levels.		The average survey respondent would prefer to minimize tax rate increases and maintain services in all surveyed service areas.	Medium	Maintain

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4.3 CUSTOMER LEVELS OF SERVICE

Ultimately customer performance measures are the measures that the City will use to assess whether it is delivering the level of service the customers desire. Customer level of service measurements relates to how the customer feels about the Hamilton Municipal Cemeteries service in terms of their quality, reliability, accessibility, responsiveness, sustainability and, over the course, their cost. The City will continue to measure these customer levels of service to ensure a clear understanding of how the customers feel about the services and the value for their tax dollars.

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or underused? Do we need more or less of these assets?

In **Table 14** under each of the service measure types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current allocation.

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Table 14: Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET	
Quality/ Condition	Provide adequate Cemeteries services.	2023 Parks and Cemeteries City Service and Assets Review	Average survey respondent opinion on how Cemeteries have performed overall in the last 24 months in the service areas of historical family searches and walking tours, graveside services, burials and interment, and maintenance and management of cemeteries.	Good	Maintain	
		Confidence Level			Low-Medium	
		Data Consistency			Medium	
		2023 Parks and Cemeteries City Service and Assets Review	Average survey respondent opinion on how Cemeteries has performed overall in the last 24 months in the service areas of end-of-life planning services and sales of interment rights, cemetery services and supporting products.	Average	Maintain	
		Confidence Level			Low	
	Data Consistency			Medium		
	Be fiscally responsible when delivering services.	2023 Parks and Cemeteries City Service and Assets Review	Average survey respondent opinion on whether Cemeteries is providing good value for money when providing infrastructure and services.	Average	Maintain	
		Confidence levels			Low	
		Data Consistency			Medium	

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4.3.1 CUSTOMER INDICES

The three indices calculated to assess how customer expectations for a service are aligning with the perceived performance for a service are listed below in **Table 15**. These indices are explained and analyzed in detail in the sections below.

Table 15: Customer Indices

CUSTOMER INDICES	AVERAGE RESULT
Service Importance Versus Performance Net Differential ⁵	1
Net Promoter Score (%) ⁶	-20
Service Rates Versus Value for Money Net Differential	-8

The information below is intended to provide context around the survey results to assist Hamilton Municipal Cemeteries with areas to further investigate before proposing any new levels of service.

SERVICE IMPORTANCE VERSUS PERFORMANCE INDICE

The Service Importance versus Performance indices is used to determine if a service’s importance correlates with the perceived performance. Service areas where the average importance rating exceeds the average performance rating by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert⁷ scale.

The average net differential of one, and of less than 20 for all service areas in **Figure 7**, indicates that there is a close match between customer performance and the importance of Hamilton Municipal Cemeteries services. Customers feel that services are important and that Hamilton Municipal Cemeteries' performance is Good. It should be noted that while the average opt-out rate for the survey question about service importance was 35 percent, the average opt-out rate for the performance question was 70 percent resulting in lower confidence in perceived performance data. It is possible that while customers feel these are important services, they have not experienced the services to comment on performance.

⁵ For these indices, a value close to 0 is considered a match, and a value exceeding 20 points indicates a mismatch between customer expectations, and perception or service levels.

⁶ A positive net promoter score indicates customers would recommend the service to others, a negative score indicates they would not, and a value close to 0 indicates a neutral feeling about the service.

⁷ A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g., Very Good to Very Poor, Very Satisfied to Very Unsatisfied).

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It is notable that the largest differential was found for the service area of historical family searches and walking tours. Though the differential is less than 20 indicating a close match, customers feel that while there is good performance, it is a less important service area.

Figure 7: Importance versus Performance Index Score

Service Area	Performance (index score)	Importance (index score)	Net Differential	Opt Out %
Maintenance and management of active and inactive cemeteries	76	82	-5	38%
Sales of interment rights, cemetery services and supporting products	66	69	-3	59%
End of life planning services	69	71	-2	58%
Graveside services, burials and interment	77	76	1	58%
Historical family searches and walking tours	80	67	13	50%

NET PROMOTER SCORE INDICES

The Net Promoter Score indices outline how likely an individual is to recommend a service to another person and measure customer loyalty. For municipal services, this score is difficult to interpret because oftentimes individuals do not have many alternatives for utilizing different services and also there may be internal biases for certain service areas, however, this score does provide valuable information for if customers would recommend using the service or whether they may seek alternatives or avoid using the service altogether.

Likert choices less than a score of four are considered 'Detractors' meaning that they would not recommend the service, while scores of five are considered 'Promoters' who would recommend the service, and scores of four are considered 'Passive' which means they do not have strong feelings about the service. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (percentage of Promoters) and (percentage of Detractors). The Standard Deviation (σ) is calculated in percent, the same units as the Net Promoter Score.

Based on the results in **Figure 8**, Hamilton Municipal Cemeteries has a negative net promoter score indicating that on average customers would not recommend Hamilton Municipal Cemeteries services to others. Data consistency for this question was overall Medium but approaching Low for some service areas indicating that opinions were more split. The opt-out rate for this question was 70.5 percent on average making the data confidence Medium-Low. Overall, it is difficult to make conclusions based on the limited responses.

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Figure 8: Net Promoter Score

Service Area	σ	NPS	Detractors	Passives	Promoter
All Service Areas	1.34	-20.21	48	17	29
Sales of interment rights, cemetery services and supporting products	1.26	-44.44	12	2	4
End of life planning services	1.30	-37.50	10	2	4
Graveside services, burials and interment	1.20	-20.00	7	4	4
Historical family searches and walking tours	1.33	-9.52	9	5	7
Maintenance and management of active and inactive cemeteries	1.47	0.00	10	4	10

SERVICE RATES VERSUS VALUE FOR MONEY INDICE

The Service Rates versus Value for Money indices is used to determine if the rate an individual is paying for a service correlates with the perceived value for money. Service areas where rate level ratings exceed value-for-money ratings by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale. Positive Net Differential values indicate that 'Value for Money' was greater than willingness for 'Rates'. Low index scores in 'Rates' indicate that respondents are not willing to pay increased rates for the service area. All values were calculated and then rounded to the nearest whole number.

As per **Figure 9** below, survey respondents generally perceived they were getting Average value for money across all services and thought that Hamilton Municipal Cemeteries should minimize service cuts and maintain rates across all services as well.

Figure 9: Rates versus Value for Money Index Score

Service Area	Value for Money (index score)	Rates (index score)	Net Differential	Opt Out %
Maintenance and management of active and inactive cemeteries	68	62	5	47%
Graveside services, burials and interment	66	60	6	57%
Sales of interment rights, cemetery services and supporting products	65	57	7	60%
End of life planning services	69	58	11	59%
Historical family searches and walking tours	71	59	12	55%

4.3.2 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how the City delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. The City will measure specific

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lifecycle activities to demonstrate how the City is performing on delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.⁸

Table 16 shows the activities expected to be provided under the current 10 year Planned Budget allocation and the forecast activity requirements being recommended in this AM Plan.

⁸ IPWEA, 2015, IIMM, p 2|28

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Table 16 : Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE (2023)	CURRENT TARGET PERFORMANCE (2023)	PROPOSED 10-YEAR PERFORMANCE
Acquisition	Ensure appropriate capacity to meet service needs.	Land capacity of municipally owned cemeteries to meet forecast demand based on current interment rates – measured in number of years.	TBD Updated Land Needs Assessment to be completed 2024	50 years of land capacity in each community	50 years of land capacity in each community
		Inventory of available Columbaria Niches - % available.	TBD Updated Land Needs Assessment to be completed 2024	Minimum 20% available	Minimum 20% available
		Budget	Not yet quantified		
Operation	Ensure assets are kept in acceptable state and issues are resolved in a timely manner.	Number of customer complaints received.	679	554/year	554/year
		% of complaints responded to within 24 hours.	TBD	100%	100%
	Compliant with Legislation.	Number of office closures longer than 2 days.	0	0	0
	Ensure Cemeteries are kept in safe and acceptable condition.	Contracted grass cutting - number of cuts completed at cemeteries annually.	1060	1156	1156
		In-house grass cutting - number of cuts at Premier Cemeteries annually.	72	104	104
	Ensure Cemeteries assets are kept in safe and acceptable repair.	Number of cemetery inspections performed.	105	60	60
		Number of monument inspections performed.	30	18	18
		% of non-facility assets inspected and condition determined based on plan annually. (excluding Facilities and Fleet)	To be Determined (Continuous Improvement item to develop the program)	100%	100%
	Budget	\$5.7M (2023)	Not yet quantified		
Maintenance	Ensure Cemeteries assets are kept in safe and acceptable repair.	Number of markers raised and levelled per reporting locations annually.	534	800	800
		Number of unsafe monument foundations repaired or replaced annually.	39	5	5
		% of Pathways and Roadways in Fair or better condition	TBD	TBD	TBD
		Budget	Not yet quantified		
Renewal	Ensure timely Fleet vehicles replacement.	% of Fleet Vehicles beyond ESL.	42%	TBD – Continuous Improvement Item to develop Fleet Strategy	
		Budget	\$482k	Not yet quantified	
	Ensure timely replacement of Small Equipment	% of Small Equipment less than Fair Condition.	50%	TBD	
	Budget	Not yet quantified			

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4.3.3 PROPOSED LEVELS OF SERVICE DISCUSSION

Per the Technical Levels of Service **Table 16**, it can be concluded that Hamilton Municipal Cemeteries is often meeting technical standards with some exceptions. However, customer preferences and expectations do not always align with internal technical targets. The purpose of this section is to link the customer and technical levels of service to determine areas where different levels of service could be proposed. As previously mentioned, since the 2023 survey results have only a medium level of data confidence with lower confidence for some areas, it is difficult to make any conclusive decisions based on this initial survey. The discussion below is intended to provide context to direct Hamilton Municipal Cemeteries to areas for further investigation based on these initial results before proposing any new levels of service.

CONDITION / QUALITY

Survey respondents rated the overall service performance as Good while providing good value for money. Customers have also identified that they would prefer current rates and service levels be maintained.

Cemeteries should consider that the survey indicates customers are not identifying a need for changes related to the condition or quality of their services and any proposed changes would be done at their own discretion in terms of operational needs or based on data from other sources.

FUNCTION

Survey respondents rated the overall service performance as Good while providing good value for money. Customers have also identified that they would prefer current rates and service levels be maintained.

Hamilton Municipal Cemeteries should consider the survey indicates that customers are not identifying a need for changes related to condition or quality of their services and any proposed changes would be done at their own discretion in terms of operational needs or based on data from other sources. Staff have noted that they frequently receive requests from customers that there is a desire for new and expanded service offerings. Hamilton Municipal Cemeteries has recently opened a Natural Burial area including a scattering garden in response to some of these customer requests. Given the small number of responses to the survey and low data confidence, additional data is required to make conclusions. Additional consultation should be performed to understand the desire for an increased level of service. At this time with the data available, it appears that function should be maintained requiring routine maintenance of assets and renewals in the appropriate timeframes to prevent degradation of assets. Acquisitions should be driven by growth to maintain current levels of service.

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CAPACITY

Survey respondents rated the overall service performance as Good while providing good value for money. Customers have also identified that they would prefer current rates and service levels be maintained.

Hamilton Municipal Cemeteries should consider that customers are satisfied with the capacity of cemeteries' services and should maintain focus on maintaining a level of service by increasing services and assets to manage population growth in line with Cemeteries Business Plan Strategy and Land Needs Assessment, and future updates to the assessment. As the Hamilton Municipal Cemeteries portfolio grows, staffing and resources should be increased proportionally to maintain service capacity.

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5. FUTURE DEMAND

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of service required.

5.1 DEMAND DRIVERS

For the Hamilton Municipal Cemeteries service area, the key drivers are population growth, aging population and changing customer preferences and expectations.

5.2 DEMAND FORECASTS

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 17**. Growth projections have been shown on Page 45 in the AM Plan Overview document.

Where costs are known, these additional demands as well as anticipated operations and maintenance costs have been encompassed in the Lifecycle Models in **Section 8**.

5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets are shown in **Table 17**. Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Opportunities identified to date for demand management are shown in **Table 17**. Climate change adaptation demands are included in **Table 22**.

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Table 17: Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Population Growth and Development	570,000 (2021)	820,000 (2051)	Population growth will increase demand for cemeteries services and land needs.	An update to the Cemeteries Land Needs Study 2014 is being undertaken in 2024 and will direct additional needs for land and columbaria.
Aging Population	8.75 Deaths per 100,000 population (2011 Hamilton) ⁹	9.09 Deaths per 100,000 population (2037 Hamilton) ¹⁰	Over the next 25 years, the death rate is expected to increase to 9.09 per 100,000 people. Dundas, Glanbrook and Hamilton have the highest proportion of seniors.	An update to the Cemeteries Land Needs Study 2014 is being undertaken in 2024 and will direct additional needs for land and columbaria.
Changing Consumer Preferences	From 2006 to 2012, cremation outpaced in-ground (casket) burial in Hamilton, increasing from 53% to 63% of all deaths. ¹¹	Projected to continue to increase.	Increased demand for cremation services and products including columbaria, niches, and scattering gardens.	An update to the Cemeteries Land Needs Study 2014 is being undertaken in 2024 and will direct additional needs for land and columbaria.
Regulatory Demand – Assumption of Additional Cemeteries	70 Municipal Cemeteries	Projected to increase	Increased operations and maintenance need to care for cemeteries required to be assumed by the municipality based on legislation.	Review assumption procedures and develop necessary SOPs surrounding inventory of assumed assets and development of lifecycle costs.

⁹ (Lees+Associates Cemetery Planners, 2014)

¹⁰ (Lees+Associates Cemetery Planners, 2014)

¹¹ (Lees+Associates Cemetery Planners, 2014)

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<p>Increased Market Capture</p>	<p>From 2008-2012 the City's market capture was 27%.¹²</p>	<p>Hamilton Municipal Cemeteries has rebranded and has a marketing plan in place which is being actioned over the next 5 years. Market capture is projected to increase.</p>	<p>Increased demand for sales and burials. Requests for more variety of options for burials and overall increase in revenue.</p>	<p>Plan for land management and start to build out product offerings. Focus funds on marketing opportunities and ensure staff are well trained and represent the brand.</p>
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5.4 ASSET PROGRAMS TO MEET DEMAND

The new assets required to meet demand may be acquired, donated or constructed. For Hamilton Municipal Cemeteries typically assets are acquired or constructed.

Hamilton Municipal Cemeteries acquires an average of 2 new columbaria per year at a cost of approximately \$125 thousand or \$625 thousand in the next five years. An updated Land Needs Study will be undertaken in 2024. This study may identify additional land required for Hamilton Municipal Cemeteries to meet the needs of customers, as well as additional assets required including columbaria. These costs should be quantified in future iterations of the plan with consideration for the full lifecycle of the assets.

Given that Hamilton Municipal Cemeteries assumes the management of cemeteries as mandated, there likely will be acquisitions that are difficult to plan for. Acquiring these new assets will commit Hamilton Municipal Cemeteries to ongoing operations, maintenance and renewal costs for the amount of time that the service is required, potentially in perpetuity. These future costs have not been incorporated in the Lifecycle Models in **Section 8**, but should be quantified wherever possible in future iterations of the AM Plan for consideration in developing higher confidence forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan.

¹² (Lees+Associates Cemetery Planners, 2014)

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6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk’¹³.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

6.1 CRITICAL ASSETS

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. No critical assets have been identified for the cemeteries service area.

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

¹³ ISO 31000:2009, p 2

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An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in **Table 18**. It is essential that these critical risks and costs are reported to management. Additional risks will be developed in future iterations of the plan and is identified in **Table 29** in the Continuous Improvement Section of the plan.

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Table 18: Risks and Treatment Plans

SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
Non-Municipal Cemeteries	Owners/operators of cemeteries within the municipal boundary can relinquish ownership to the City. The City will be required to maintain the cemeteries in perpetuity which will require additional funding for operations, maintenance and renewal activities.	High	The City does not have access to any data to monitor. The Bereavement Authority of Ontario (BAO) audits cemeteries and provides some information prior to likely transfers. Cemeteries would require additional funding.	High	Unable to treat risk due to unknowns and lack of control over the process.
Cemetery Monument Foundations	Excessive deterioration of foundations can cause failure of the monument which can lead to property damage and injury.	High	Document and complete regular visual inspections performed at a regular frequency. Target to replace 5 unsafe foundations per year. Allocate additional funding for the renewal and maintenance of foundations.	Medium	TBD
Large Equipment	Higher level of breakdowns due to delayed replacements. Possible injuries to staff. Increased reactive maintenance costs and lower levels of service if equipment is being repaired frequently.	High	Replace End of Life Vehicles / Equipment to minimize breakdowns.	Medium	\$482,000 in 2024 to renew 13 vehicles beyond ESL.

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6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to ‘withstand a given level of stress or demand’, and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment and crisis leadership.

6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective to achieve the optimum benefits from the available resources.

The following **Table 19** outlines what activities Hamilton Municipal Cemeteries cannot afford to do over the next 10 years with their existing budget and provides the associated service and risk tradeoffs.

Table 19: Service and Risk Tradeoffs

WHAT WE CAN NOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
Renew existing Cemetery Infrastructure assets as quickly as needed	Assets continue to deteriorate.	The reputational risk from the condition of cemeteries. Financial risk if asset deterioration leads to injury.
Develop new cemeteries	Capacity in existing cemeteries will be consumed and not replaced.	Reputational risk and loss of market share

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7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we've already begun to experience (adaptation). At a minimum the City must consider how to manage our existing assets given potential climate change impacts for our region.

Changes to Hamilton's climate will impact City assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models as well as levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan. This has been identified as a Continuous Improvement item in **Table 29**.

7.1 CLIMATE CHANGE MITIGATION

Climate Mitigation refers to human intervention to reduce GHG emissions or enhance GHG removals (e.g. building transportation infrastructure that can support cycling and public transit and reduces need for car travel). The City of Hamilton's Community Energy + Emissions Plan¹⁴ (CEEP) includes five Low-carbon Transformations necessary to achieve the City's target of net-zero GHG emissions by 2050:

- Innovating our industry;
- Transforming our buildings;
- Changing how we move;
- Revolutionizing renewables; and
- Growing Green.

¹⁴ Newbold, Skidmore, Chessman, Imhoff, & McDowell, 2022

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Mitigation Demand Analysis

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City’s modelled targets for the low carbon transformations that applied to the service/asset;
- Discussing the impact the targets would have on the service/asset; and
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050 as shown in **Table 20** below.

As previously mentioned, due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below have not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AM Plan. This has been identified as a continuous improvement item in **Table 29**.

Moving forward, the Climate Lens tool discussed in the AM Plan Overview will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

Table 20: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Changing How We Move	100% of new municipal small and light-duty vehicles are electric by 2040. 100% of new municipal heavy-duty vehicles switch to clean hydrogen by 2040.	Electric vehicle (EV) chargers will need to be installed. Initial upfront capital costs for electric vehicles. Removal of fuel infrastructure.	Coordination with Fleet Services on Green Fleet Strategy. Coordination with CFEM division.
Transforming Our Buildings	By 2050, all new municipal buildings achieve net-zero emissions.	Net-zero buildings may have higher upfront costs to construct but lower operational expenses.	Coordination with CFEM division to achieve net-zero emission for new buildings.

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CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Transforming Our Buildings	By 2050, all municipal buildings will be retrofitted to achieve 50% energy efficiency relative to 2016.	The initial upfront cost of retrofit potentially lowers operational expenses.	Coordinate with the CFEM division to identify feasibility.
Transforming Our Buildings	Post-retrofits, switch buildings to heat pumps for space and water heating by 2050.	The initial upfront cost of switching potentially lowers operational expenses.	Coordinate with the CFEM division to identify feasibility.
Revolutionizing Renewables	By 2050, 50% of municipal buildings will add rooftop solar PV, covering 30% of the building's electrical load.	Initial upfront cost, potential energy cost savings.	Coordinate with the CFEM division to identify feasibility.
Growing Green	Planting 50,000 trees a year through to 2050	Considerations made for tree planting projects and locations in cemeteries.	Continue identifying tree planting opportunities.

MITIGATION RISK ANALYSIS

Additionally, since the risk of not completing climate change mitigation projects is that the City continues to contribute to climate change in varying degrees which were modelled in the Climate Science Report for the City of Hamilton completed by ICLEI Canada, a risk analysis has not been completed in this AM Plan for not completing climate mitigation projects (ICLEI Canada, 2021).

CURRENT MITIGATION PROJECTS

Mitigation projects Hamilton Municipal Cemeteries is currently pursuing are outlined below in **Table 21**. These projects may already be included in the budget and may be quantified in the lifecycle models.

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Table 21: Asset Climate Mitigation Projects

PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
Electric Equipment Pilot	Revolutionizing Renewables	Currently piloting electric equipment for cemetery maintenance activities.	Reduced emissions associated with maintenance equipment.
Mowing Reductions	Growing Green	Reduced mowing and targeted no-mow areas to increase naturalization.	Reduced emissions from equipment. Increased capture of CO ² .
Natural Burial Areas	Growing Green	Opened a natural burial area at Mount Hamilton Cemetery. The area is planted with gardens and allows remains to return to the earth organically as part of a natural ecosystem.	Reduced emissions, increased capture of CO ² .
Canopy Coverage	Growing Green	Tree planting in Cemeteries	Increased capture of CO ² .
Re-Naturalization	Growing Green	Identifying areas for re-naturalization	Increased capture of CO ²

CLIMATE MITIGATION DISCUSSION

At this time, the Cemeteries have already made progress toward some of the modelled target transformations in the areas of Revolutionizing Renewables and Growing Green.

Revolutionizing Renewables

The Cemeteries Section has also begun piloting electric small equipment (trimmers, chain saws etc.) to investigate the products available and their ability to meet the Cemetery's operational needs. While reducing emissions, there may be challenges with meeting operational needs with electric equipment due to the high volume of use per day for this equipment and available batteries. The equipment may require multiple batteries to be changed throughout the day or require a method of recharging (solar and batteries on board vehicles, etc.) and staff downtime to wait for recharging midday.

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Growing Green

Cemeteries contain significant green space including trees, gardens, and naturalized areas. Opportunities to enhance these areas for additional environmental benefit are considered when opportunities arise including tree planting projects, additional gardens, and re-naturalization of areas. Mowed areas have been reviewed and targeted areas were identified to either reduce or eliminate mowing to allow more vegetation growth and CO² capture as well as reducing emissions from mowing equipment.

In 2023, the Cemeteries Section opened its first natural burial area at Mount Hamilton Cemetery. The section provides the options of burial interment, cremation interment and a designated scattering garden. The area is planted with gardens of native species and wildflowers increasing the capture of CO² while supporting local biodiversity. Traditional burial uses concrete or steel vaults, and a headstone for each burial, the production of which produce significant carbon emissions. The only materials involved in natural burial is a biodegradable casket and a single commemorative rock to memorialize all interments in the section. The land requirements are smaller than traditional burial areas and the area is not mowed significantly reducing the carbon emissions produced by maintenance equipment.

7.2 CLIMATE CHANGE ADAPTATION

Climate Adaptation refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads).

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.¹⁵

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report¹⁶ guided by ICLEI's Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP) (ICLEI, 2021). The BARC Framework identified thirteen high-impact areas.

¹⁵ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

¹⁶ City of Hamilton & Local Governments for Sustainability Canada, 2021

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Adaptation Demand Analysis

Table 22: Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	BASELINE (1976-2005) ¹⁷	AVERAGE PROJECTED CHANGE 2021-2050 ¹¹ (ASSUMING RCP4.5 SCENARIO) ¹⁸	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.	6.7 total heavy precipitation days (20 mm)	7.7 total heavy precipitation days (20 mm)	<ul style="list-style-type: none"> ▪ Flooding in cemeteries impacting assets and facilities. ▪ Following events, debris cleanup requirements, drainage issues, and high soil saturation impacting the ability to perform burials. Additional shoring devices and pumping are required. The process is more time-consuming and the risk to staff is increased. 	<ul style="list-style-type: none"> ▪ Identify flood-prone areas, and locations of drainage/stormwater issues and follow City's stormwater design standards. ▪ Increased Low Impact Development (LID) features incorporated for management of stormwater.
Increased intensity of rainfall leading to increasing runoff into rivers and lakes, and washing of sediment, nutrients, pollutants, and other materials.	25.8 heavy precipitation days (10 mm)	27.6 heavy precipitation days (10 mm)	<ul style="list-style-type: none"> ▪ Erosion and destabilization of slopes, exacerbated by increased invasive species destroying understory vegetation. 	<ul style="list-style-type: none"> ▪ Improvements to slope stabilization including invasive species management and planting of native stabilizing species.
Changes in precipitation resulting in erosion of natural systems (i.e., water banks, escarpment erosion) leading to washouts of bridges and roadways.	844 mm average annual total precipitation	886 mm average annual total precipitation	<ul style="list-style-type: none"> ▪ Following flood events, shorter periods of acceptable weather for remediation projects, including difficulty scheduling, and waiting longer to repair for ground conditions to dry. ▪ High soil saturation causing instability of monument foundations and columbaria. 	<ul style="list-style-type: none"> ▪ Education of council and the public about practices and impacts to burials. ▪ Adding foam stabilization below monument foundations to address instability.
Increased instances of heat-related issues due to extreme heat.	16.1 average days where the temperature is 30 degrees Celsius or more	34.4 average days where the temperature is 30 degrees Celsius or more	<ul style="list-style-type: none"> ▪ Staff will require longer cooling breaks on hot days potentially delaying schedules. ▪ Negative impacts to natural vegetation. ▪ Impacts to mowing cycles due to cycles of drought and high rainfall. ▪ Faster growing vegetation requiring more maintenance. 	<ul style="list-style-type: none"> ▪ Increase tree cover in cemeteries. ▪ Make consideration in the design of gardens and plantings for types of vegetation resistant to drought. ▪ Consider possible changes to mowing cycles. ▪ Continue to make irrigation schedule decisions based on conditions rather than a set schedule including education of staff.
Increased temperatures and changes in precipitation increasing incidences of infectious diseases and vector-borne diseases as a result of longer transmission periods or changes in geographic distribution of disease vectors.	52.2 number of ice days (temperature below 0 degrees Celsius)	35.7 number of ice days (temperature below 0 degrees Celsius) extending the breeding season of mosquitos/ticks.	<ul style="list-style-type: none"> ▪ Increased risk of staff exposure to vector-borne diseases. 	<ul style="list-style-type: none"> ▪ Continue with invasive management programs (poison ivy, phragmites) and education programs. ▪ Continue tick and mosquito education protocols for staff.
Increased intensity and frequency of ice storms leading to increased hazardous roads, pathways and sidewalk conditions.	187 mm average total winter precipitation	204 mm average total winter precipitation	<ul style="list-style-type: none"> ▪ Increased winter maintenance for pathways, parking lots and access roads. ▪ Accelerated deterioration of infrastructure including freeze-thaw impacts on pathways, roads, and monument foundations. 	<ul style="list-style-type: none"> ▪ Stay up to date on the best materials for freeze-thaw resistance and best maintenance practices. ▪ Maintain accurate signage to identify pathways that are maintained in winter and pathways that may be hazardous. ▪ Continue to meet winter path and road maintenance standards and evaluate standards at regular intervals.

¹⁷ ICLEI Canada, 2022

¹⁸ RCP4.5 Scenario: Moderate projected Green House Gas concentrations, resulting from substantial climate change mitigation measures. It represents an increase of 4.5 W/m² in radiative forcing to the climate system. RCP 4.5 is associated with 580-720ppm of CO₂ and would more than likely lead to 3°C of warming by the end of the 21st century.

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ADAPTATION RISK ANALYSIS

Additionally, the City should consider the risks for the asset or service as a result of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Similarly, to the exercise above and using the risk process in **Section 6**, asset owners:

- Reviewed the likelihood scores in the Vulnerability and Risk Assessment Report for the adaptation impact occurring;
- Identified the consequence to the asset/service if the event did happen to develop a risk rating; and,
- If the risk was identified as high, the asset owner produced a preliminary risk adaptation plan shown below in **Table 23**.

It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of mitigating the risks below has not been included in the lifecycle and financial models at this time. The adaptation plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should consider these risks during the planning and design processes. Future changes will be incorporated into future iterations of the AM Plan. Moving forward, the Climate Lens tool will assess projects based on these targets and will assist with the prioritization of climate adaptation projects. This has been identified as a continuous improvement item in **Table 29**.

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Table 23: Adapting to Climate Change

ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.	All Assets	Deterioration of assets due to an increase in extreme weather events and changing climate including freeze-thaw cycles, extreme heat, and flooding. Increased inspection and maintenance requirements and reduced service lives accelerating program needs.	High	Develop Overall Asset Management Strategy (Asset Inventory, standardized inspection criteria, standardized condition rating and prioritization) Maintenance Strategy. Monitor changes to maintenance and renewal needs. Investigate resilient materials in renewal designs.

CURRENT ADAPTATION PROJECTS

Adaptation projects Hamilton Municipal Cemeteries is currently pursuing are outlined below in **Table 24**. These projects may already be included in the budget and may be quantified in the lifecycle models.

Table 24: Asset Climate Mitigation Projects

PROJECT	PROJECT DESCRIPTION
Changes to Irrigation Practices	Changed from scheduled use of irrigation systems to informed decision-making. Irrigation is based on real conditions.
Changes to Monument Foundation Stabilization Practices	Identifying monuments with unstable foundations and using foam stabilizers to address instability.

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CLIMATE ADAPTATION DISCUSSION

The outdoor nature of cemeteries as well as their locations within and close to bodies of water, slopes and other hazard lands will make them vulnerable to many of the impacts of climate change. A robust asset management strategy including a thorough asset inventory, standardized inspection and condition ratings, and standardized maintenance procedures will be instrumental in monitoring impacts on assets and subsequently planning for and prioritizing maintenance and renewal needs. Climate change will impact Hamilton Municipal Cemeteries assets as well as operations as staff manage operations through storms, increased rainfall, increased summer heat and drought.

Progress is being made toward climate adaptation including addressing monument foundation stability issues that have been worsened by increasingly wet weather and saturated ground conditions. Monuments are being inspected for stability issues and unstable foundations are being repaired by using stabilizing foam beneath the foundations. Changes to irrigation practices have also been implemented where the real moisture condition of irrigated areas is considered when timing the use of irrigation systems.

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8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budgets. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated together and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of Whole-Life-Costs and funding options. However, at this time the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

8.1 ACQUISITION PLAN

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs. Assets are frequently either donated through development agreements to the City or through the construction of new assets which are mostly related to population growth. For the cemetery service area, asset donations are driven by legislated obligations as described below. Purchased and constructed assets are driven by demand from an aging and growing population. Land needs for cemetery services are significant and continually grow due to the nature of the service. Even with a stagnant population land, columbaria and supporting assets would still need to be regularly acquired as once an interment is performed the land or columbarium is allocated for that single use and maintained in perpetuity. This land never returns to the system. Additional land will always be required for future interments.

CURRENT PROJECT DRIVERS – 10-YEAR PLANNING HORIZON

The City prioritizes capital projects based on various drivers to help determine ranking for project priorities and investment decisions. As part of future AM Plans, the City will be continuing to develop its understanding of how projects are prioritized and ensure that multiple factors are being considered to drive investment decisions in the next iteration of the AM Plan. These drivers will include legal compliance, risk mitigation, O&M impacts, growth impacts, health, and safety, reputation, and others. These drivers should be reviewed during each iteration of the AM Plan to ensure they are appropriate and effective in informing decision-making.

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DONATED ACQUISITIONS

The City has a legislated responsibility to assume responsibility for any burial site that is not being maintained or is abandoned. When these properties are identified, the BAO will direct the City of Hamilton to assume this responsibility for the land including all assets. These properties are often historical and may or may not have a Care and Maintenance Fund to provide for their perpetual care and the assets may be in various states of age and condition.

The acquisition of these properties is difficult to predict as the information is managed by BAO and the City is not often given significant notice before a property is directed to be assumed. Once assumed the City is responsible for managing these areas in perpetuity requiring lifelong operations, maintenance and renewal activities. As there is currently no certainty on future acquisitions through this mechanism, no donated acquisitions have been included in this iteration of the AM Plan. A Continuous Improvement item has been added to **Table 29** to develop a guide for the assumption of cemeteries including procedures following City standards.

The City is reviewing its donated asset assumption process to ensure that it proactively understands what assets are being donated annually to ensure they are appropriately planned for. This will allow multiple departments across the City to plan for the assets properly such as:

- AM to forecast the long-term needs and obligations of the assets;
- Operations and maintenance can include the assets in their planned activities (inspections, legislative compliance activities); and,
- Finance can ensure that assets are properly captured and recognized appropriately (Audited Financial Statements, TCA process, Provincial reporting such as the FIR).

The City will need to ensure the required data is updated frequently and to a single source to ensure that all the departments have access to the data they require in a timely manner.

Once the assets are assumed, Cemeteries then becomes the steward of these assets and is responsible for all ongoing costs for the asset's operation, continued maintenance, inevitable disposal and their likely renewal.

CONSTRUCTED OR PURCHASED ACQUISITIONS

Over the next 10-year planning period from 2024 to 2033, the City will acquire approximately \$1.25M of constructed assets composed of \$125 thousand per year of new columbaria as shown in **Figure 10**.

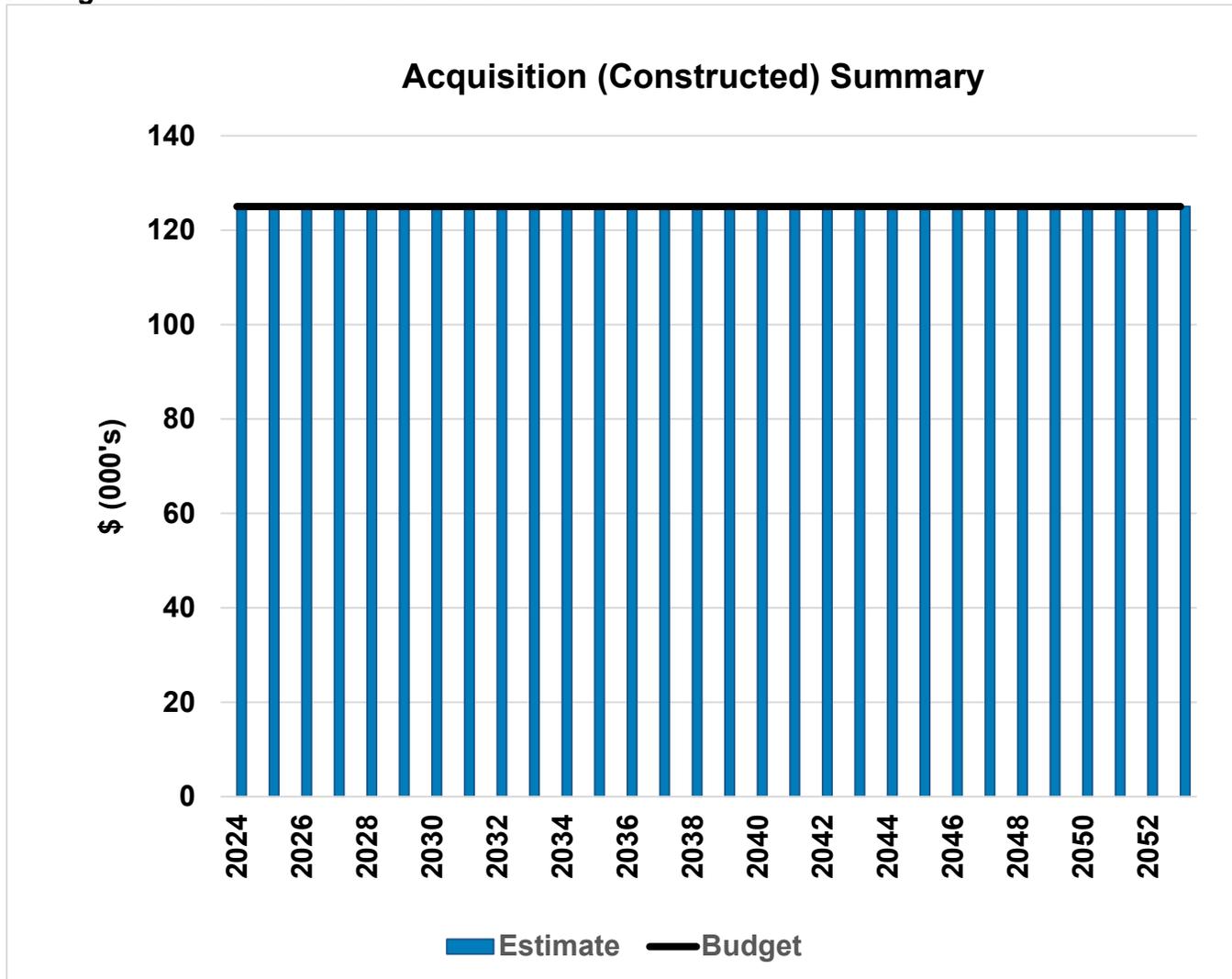
The City has **sufficient** budget for its planned constructed acquisitions at this time however this does not address future assets that may need to be purchased or constructed to ensure service levels are maintained over the long term. With the completion of the updated Land Needs Assessment, additional plans to acquire land for new cemeteries, columbaria, and supporting assets may be identified and will be incorporated into the next iteration of the AM Plan.

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A number of fleet assets currently being relied upon are extended use vehicles. A Continuous Improvement Item has been added to **Table 29** to review the use of extended use vehicles and develop a fleet strategy. It is possible it will be identified that new vehicle acquisitions are required to meet service delivery needs.

With competing needs for resources across the entire city there will be a need to investigate trade-offs and design options to further optimize asset decisions and ensure intergenerational equity can be achieved. Hamilton will continue to monitor its constructed assets annually and update the AM Plan when new information becomes available.

Figure 10: Acquisition (Constructed) Summary
 All Figure Values Are Shown in 2023 Dollars

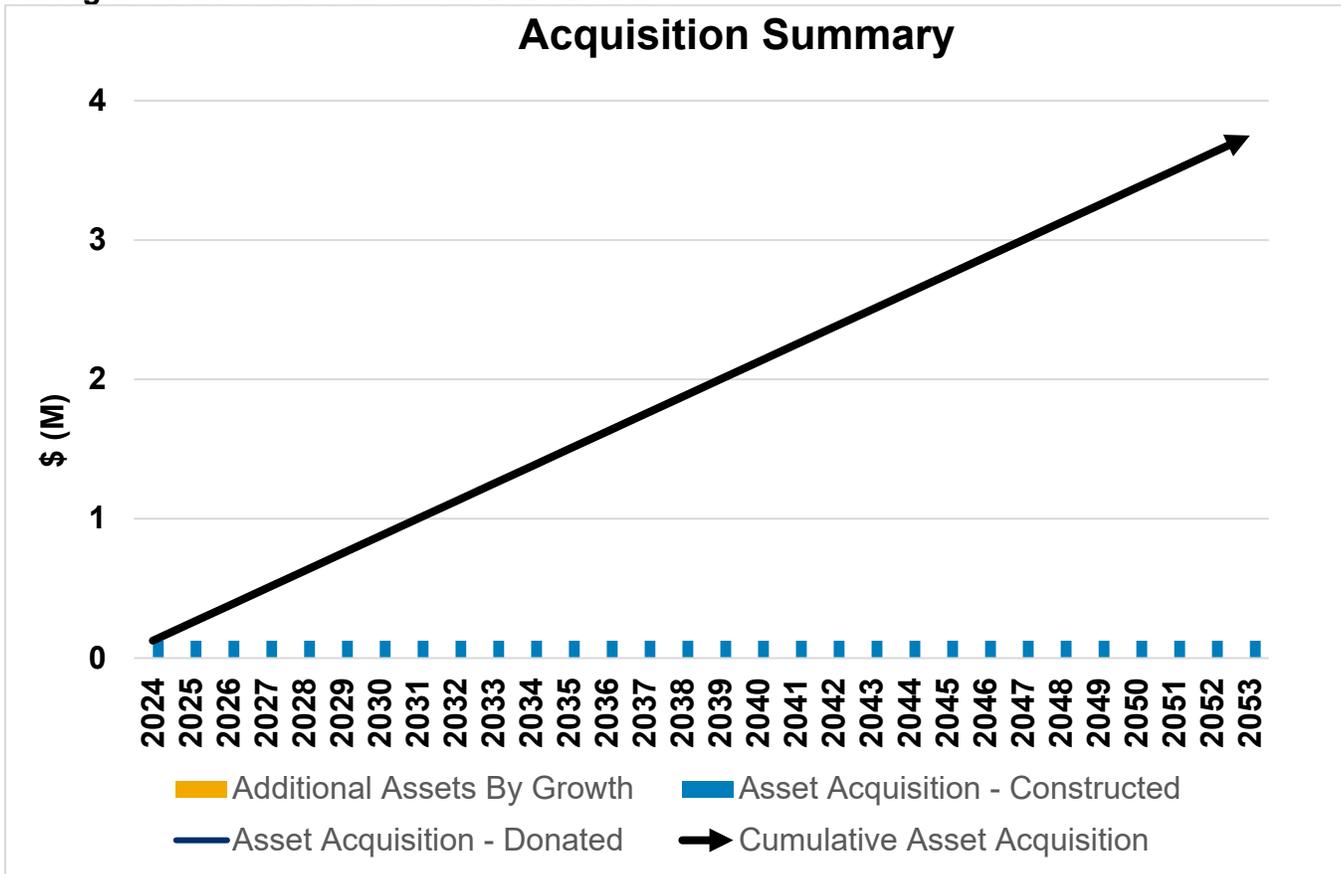


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ACQUISITIONS SUMMARY

Forecast acquisition asset costs are summarized in **Figure 11** and show the cumulative effect of asset assumptions over the next 10-year planning period.

Figure 11: Acquisition Summary
 All Figure Values Are Shown in 2023 Dollars



When Hamilton commits to constructing or purchasing new assets, the municipality must be prepared to fund future operations, maintenance, and renewal costs. Hamilton must also account for future depreciation when reviewing long-term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by Hamilton. The cumulative value of all acquisition work, including assets that are constructed and contributed is shown in **Figure 11** above. Hamilton will need to address how to best fund these ongoing costs as well as the costs to construct the assets while seeking the highest level of service possible.

HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons. Examples of typical operational activities include operating assets, utility costs, inspections, and the necessary staffing resources to perform these activities.

Some of the major operational investments over the next 10 years include:

- **\$4.3 Million** allocated for employee-related costs in 2024 (i.e., salaries, wages, benefits etc.);

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure it reach its intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition. Examples of typical maintenance activities include equipment repairs and component replacements along with appropriate staffing and material resources required to perform these activities.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure Hamilton Municipal Cemeteries assets are reliable and can achieve the desired level of service.

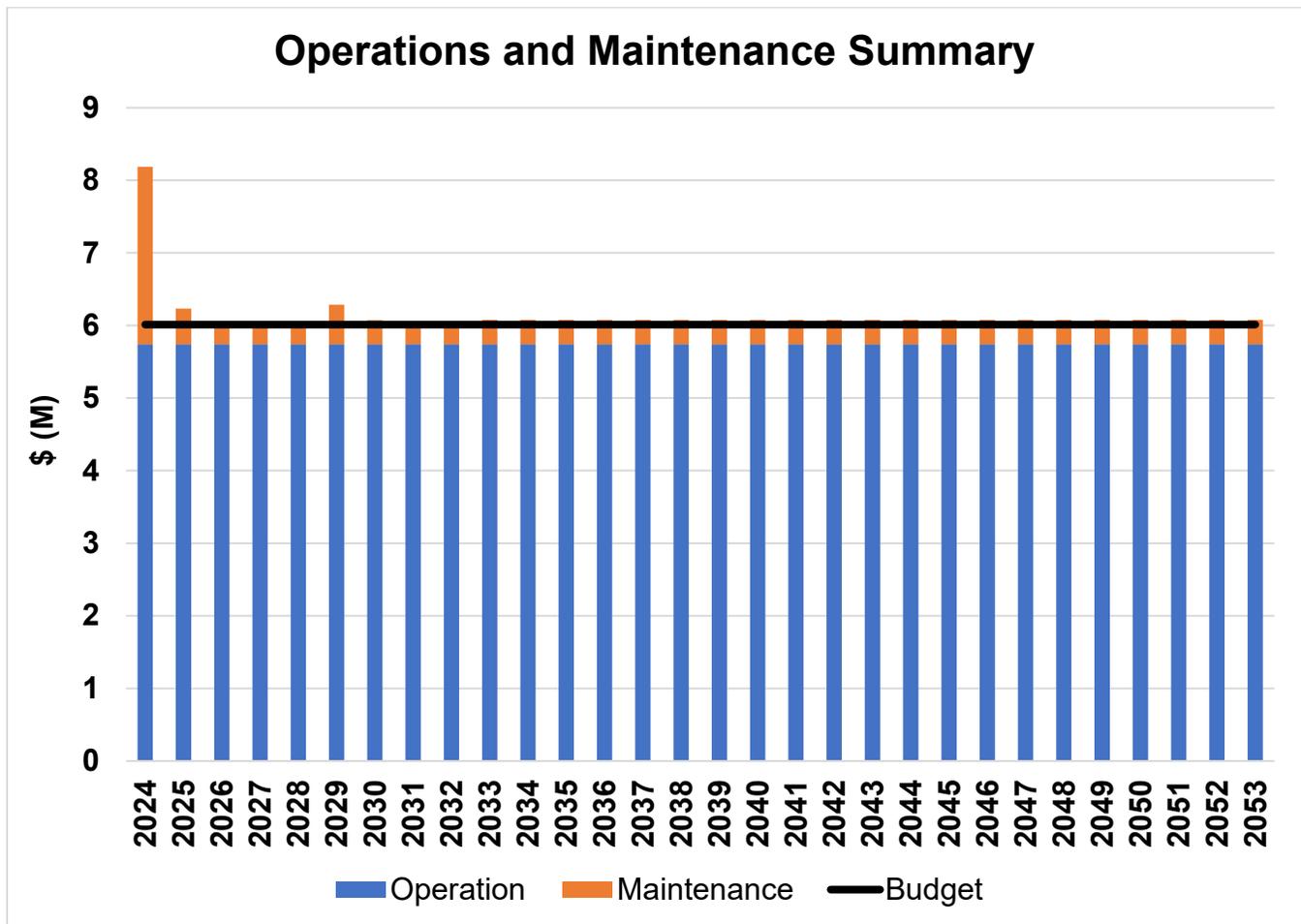
Major maintenance projects the City plans to complete over the next 10 years include:

- **\$170 thousand** annually for building repairs.

Forecast operations and maintenance costs vary in relation to the total value of the asset registry. When additional assets are acquired, future operations and maintenance costs are forecast to increase. When assets are disposed of the forecast operation and maintenance costs are reduced.

HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

Figure 12: Operations and Maintenance Summary
 All Figure Values Are Shown in 2023 Dollars



The funding for operations is generally sufficient; however, as additional cemeteries are acquired through assumption or construction, operations needs will increase. It will be important for the City to continue increasing operational funding as the cemeteries portfolio grows to maintain the current level of service.

The funding for maintenance is currently insufficient leading to a substantial backlog in facilities maintenance. The maintenance spike in 2024 is considered a maintenance backlog because it includes deferred maintenance due to budget constraints over time. This backlog should be investigated following the completion of this Asset Management Plan to ensure critical components have been prioritized in the Corporate Facilities and Energy Management and the Cemeteries budget forecasts. There are currently over \$2M of maintenance needs in the backlog accounting for nearly 80% of all identified facilities maintenance needs. On top of the identified maintenance needs, staff have identified deficiencies with building amenities not meeting needs and servicing challenges that would require buildings enhancements.

HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

The maintenance forecast for facilities assets is based on the 10-year facility needs. The building at Eastlawn Cemetery is due for renewal and the building at Mount Hamilton Cemetery is due for renewal in 2028 based on ESL of 50 years and FCI indicates that both buildings are in poor condition. Facilities needs for these buildings have not been included as it was assumed they would be renewed rather than continued maintenance. An average of the 10-year needs, excluding backlog, has been used to estimate facilities maintenance needs beyond the 10-year horizon. Facilities maintenance amounts beyond the existing budget are assumed to be unfunded

At this time the asset inventory is incomplete and optimal maintenance activities for many assets are not well defined. Maintenance needs for many assets in this plan are not well quantified. Continuous Improvement items have been added to **Table 29** to develop standardized condition assessments as well as document operations and maintenance standards for all Cemeteries assets. As the required activities and needs become better quantified it is anticipated that the funding gap for maintenance will increase.

8.3 RENEWAL PLAN

Renewal is major works which does not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential are considered to be an acquisition resulting in additional future operations and maintenance costs

Asset renewals are typically undertaken to either ensure the assets' reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 25** and are based on the estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2022 however, they will be reviewed annually until their accuracy reflects the City's current practices.

Table 25: Useful Lives of Assets

ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Water Taps and Irrigation	25
Laneways	40
Iron Fencing	50
Retaining Walls	30
Facilities	50*

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ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Columbaria	Indefinite, perpetual maintenance
Mausoleum	Indefinite, perpetual maintenance
IT Equipment	4-5
Trucks and Passenger Vehicles	8-10
Utility and Turf Maintenance Vehicles	8-15
Small Equipment	10
Sales Equipment	5
Interment Equipment	10

*Several facilities are historical in nature and it was assumed that maintenance would continue in perpetuity rather than renewal.

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).¹⁹

Future methodologies may be developed to optimize and prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure;
- Have high use and subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.²⁰

¹⁹ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

²⁰ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

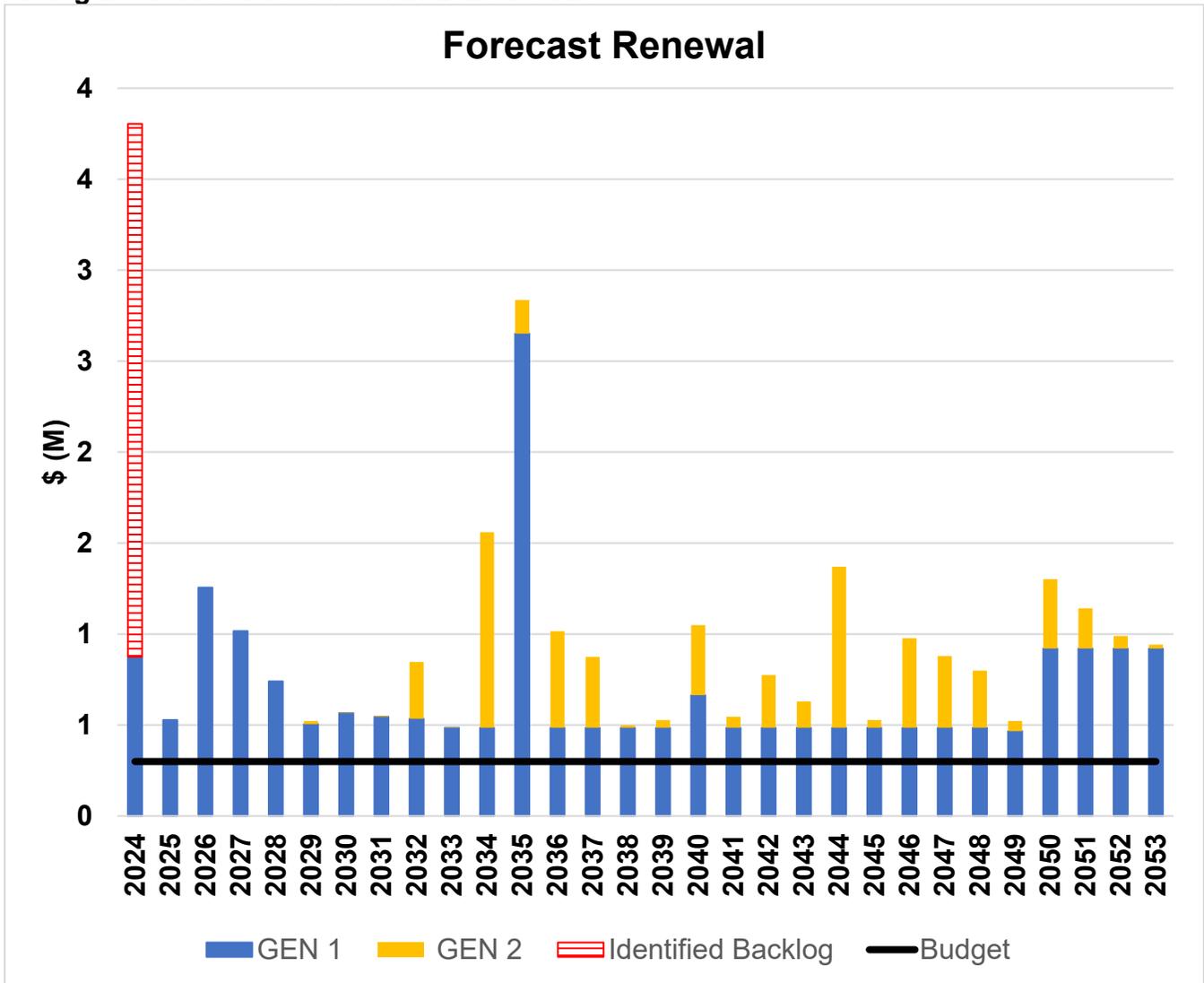
HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

SUMMARY OF FUTURE RENEWAL COST

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in **Figure 13**.

In the **Figure 13** below, Generation 1 (Gen 1) costs refer to renewals that occur for the first time in the model based on the estimated service life and Generation 2+ (Gen 2+) costs refer to renewals that have occurred twice or more based on the estimated service life.

Figure 13: Forecast Renewal Cost
 All Figure Values Are Shown in 2023 Dollars



The significant amount highlighted as unfunded in 2024 represents the cumulative backlog of deferred work needed to be completed that has been either identified through its current condition or age.

HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

Major backlog items include:

- \$1.2 Million for Eastlawn Cemetery Building
- \$0.95 Million for poor condition Laneways
- \$0.48 Million for Fleet Equipment
- \$0.22 Million for Small Equipment

The model assumes that assets in the backlog will be renewed in 2024 and predicts their 2+ generations of renewal needs based on ESL. This drives renewal spikes for fleet and small equipment renewals approximately every 10 years. Other significant spikes in renewal are generally driven by high-value facilities renewals. The spike in 2035 is for renewal of buildings at Woodland Cemetery (\$1.8M) and Mountview Gardens Cemetery (\$0.38M), both built in 1985, assuming a 50-year service life.

There is no age or condition data for a number of assets. These assets have generally not been included in the backlog and an even distribution of renewals has been assumed across the asset's ESL. There are also a number of assets in the Cemeteries Infrastructure category for which no inventory or replacement value was available indicating that renewal needs are likely much higher than what is currently modelled. These assets should be inventoried for inclusion for the next iteration of the AM Plan.

Currently, there is insufficient funding to accomplish all the renewals that are forecast over the next ten years. Based on the number of funded replacements each year described above, this percentage is expected to continue to grow as assets deteriorate faster than they can be renewed and exceed their estimated service life.

Properly funded and timely renewals ensure the assets perform as expected. Deferring renewals creates risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. It is recommended to continue to analyze asset renewals based on criticality and availability of funds in future AM Plans.

8.4 DISPOSAL PLAN

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen.

Assets identified for possible decommissioning and disposal are shown in **Table 26**. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposal of the assets are also outlined in **Table 26**. Any costs or revenue gained from asset disposals is included in future iterations of the plan and the long-term financial plan.

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Table 26: Assets Identified for Disposal

ASSET	REASON FOR DISPOSAL	TIMING	DISPOSAL COSTS	OPERATIONS & MAINTENANCE ANNUAL SAVINGS
Non-decorative perimeter fencing	Disposed of at end of life as determined to not be required	Various	TBD	Not quantified at this time.

Standard perimeter fencing is typically not renewed at the end of life. Public access to cemeteries properties is permitted and the fencing has been determined to not be required for health and safety. As such the fencing is currently being left in place until end-of-life deterioration is observed. Operations and maintenance costs related to fencing inspection and repairs are largely eliminated with this approach. The fencing is then removed and will not be renewed, saving future renewal costs. Decorative iron and stone fencing continue to be renewed and maintained.

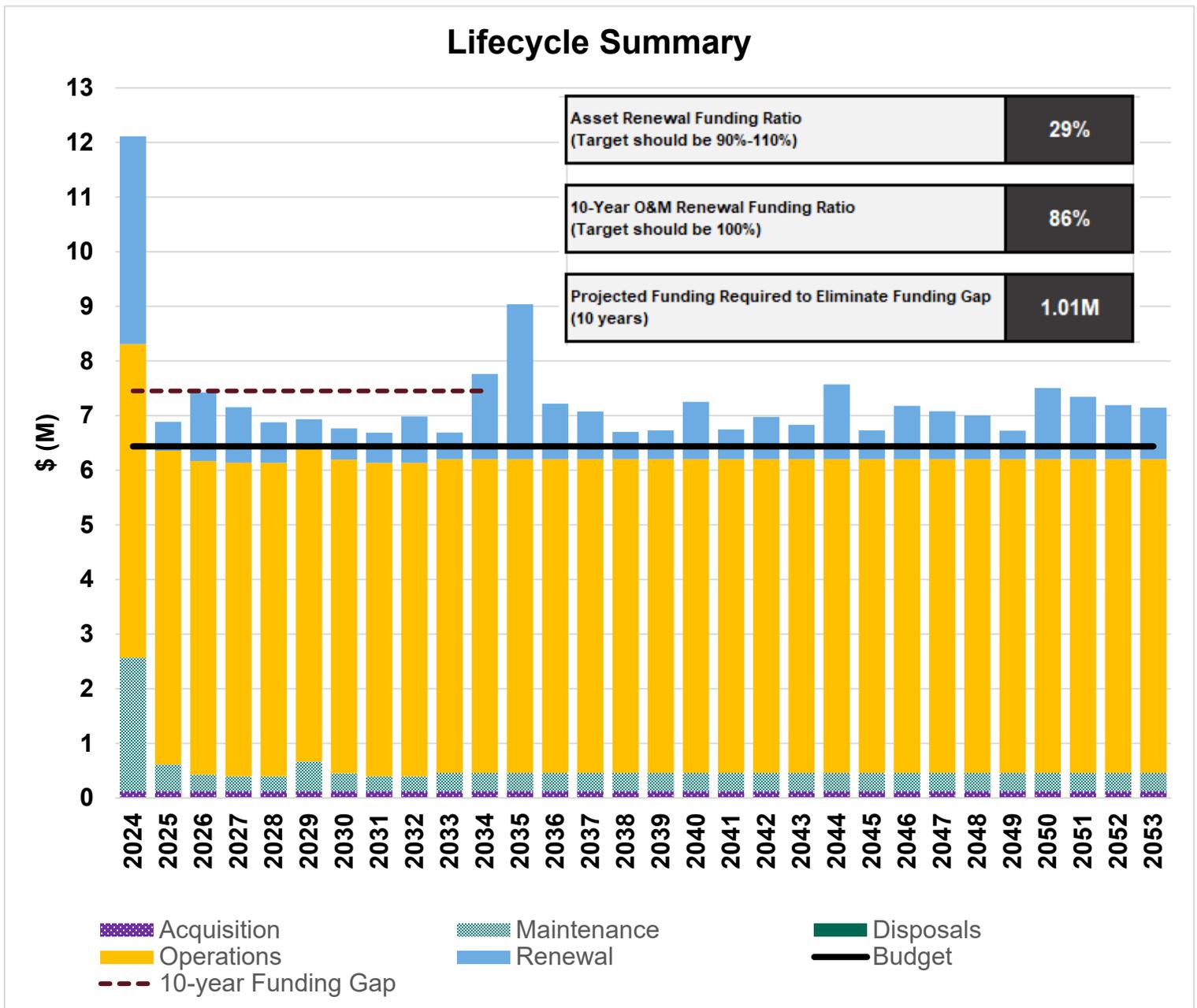
8.5 LIFECYCLE COST SUMMARY

The financial projections from this asset plan are shown in **Figure 14**. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving a balance between costs, levels of service and risk to achieve the best value outcome.

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Figure 14: Lifecycle Summary
 All Figure Values Are Shown in 2023 Dollars



There is currently insufficient funding over the 10-year period to address lifecycle needs which will result in an eventual reduction in level of service if not addressed. The underfunded activities are primarily maintenance and renewal.

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Operations budgets are currently sufficient; however, the acquisition of additional cemeteries and of new and expanded assets will commit the City to additional operations costs throughout the lifecycle of the assets. The City will need to continue increasing operating budgets to support these assets.

Maintenance funding for facilities is currently insufficient leading to a significant backlog of deferred maintenance. The asset inventory and maintenance needs are currently incomplete. As the City continues to develop condition profiles, identify necessary works, and implement an idealized maintenance strategy, identified maintenance needs will likely increase and if unfunded may impact the delivery of service.

The largest contributor to the funding gap is unfunded renewals and the renewal backlog in particular. The backlog is expected to continue to grow as assets deteriorate faster than they can be renewed and exceed their estimated service life. As additional assets are acquired, future renewal needs will continue to increase. Deferring renewals (assets identified for renewal and not funded) creates risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance potentially leading to increased usage and decreased service life of newer assets.

Due to the lack of data confidence in the current levels of service information, Hamilton Municipal Cemeteries will need to collect more data before proposing any new levels of service. It has been assumed in the interim that the current levels of service will be the proposed levels of service continuing forward past 2025 in accordance with O. Reg 588/17.

The City will continue to improve its lifecycle data, and this will allow for informed choices as to how best to mitigate impacts and how to address the funding gap itself. This gap in funding future plans will be refined over the next three years to improve the confidence and accuracy of the forecasts.

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9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure Hamilton Municipal Cemeteries provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-term financial planning (LTFP) is critical for the City to ensure that network lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly, the City will have difficult choices to make in the future which will include options such as higher costs reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all of the network's needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- Medium-term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio²¹ **29%**

The Asset Renewal Funding Ratio (ARFR) is used to determine if the City is accommodating asset renewals in an **optimal** and **cost-effective** manner from a timing perspective and relative to financial constraints, the risk the City is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable, however, the expenditures are below this level in some service areas predominantly due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

²¹ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

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If assets are not renewed at the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to the City's reputation and risk of fines or legal costs

The lack of renewal resources will be addressed in future AM Plans while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

MEDIUM-TERM – 10 YEAR FINANCIAL PLANNING PERIOD

10-Year Operations, Maintenance and Renewal Financial Ratio 86%

Although this AM Plan includes forecast projections to 30-years, the higher confidence numbers are typically within the first 10 years of the lifecycle forecast. The 10-year Operations, Maintenance and Renewal Financial Ratio compares the Planned Budget with the Lifecycle Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the ARF, the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization's risk and service level commitments.

The forecast operations, maintenance and renewal costs over the 10 year planning period is **\$7.3M** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The proposed (budget) operations, maintenance and renewal funding is **\$6.3M** on average per year giving a 10 year funding shortfall of **\$1.0M** per year or **\$10M** over the 10 year planning period. This indicates that **86%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget, which is close to the 90-110% range. Therefore, it can be concluded that Hamilton Municipal Cemeteries is close to funding their assets at an acceptable rate. Note, these calculations exclude acquired assets.

Funding an annual funding shortfall or funding 'gap' should not be addressed immediately. The overall gap in funding city-wide will require vetting, planning and resources to begin to incorporate gap management into the future budgets for all City services. This gap will need to be managed over time to reduce it in a sustainable manner and limit financial shock to customers. Options for managing the gap include;

- Financing strategies – increased funding, block funding for specific lifecycle activities, long term debt utilization;
- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets; and,

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- Influence level of service expectations or demand drivers.
- Increase revenues – strategically increase rates/fees/fines to achieve cost recovery and other business objectives;

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of **90-110%** for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

9.1 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Table 27 shows the forecast costs (outlays) required for consideration in the 30 year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

The City will manage the ‘gap’ by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

**Table 27: Forecast Costs (Outlays) For the Long-Term Financial Plan Forecast
 Costs Are Shown In 2023 Dollar Values**

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2024	\$125,000	\$5,742,244	\$2,442,166	\$3,803,986	\$0
2025	\$125,000	\$5,742,244	\$489,294	\$527,499	\$0
2026	\$125,000	\$5,742,244	\$301,011	\$1,255,232	\$0
2027	\$125,000	\$5,742,244	\$270,692	\$1,015,773	\$0

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YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2028	\$125,000	\$5,742,244	\$270,306	\$740,185	\$0
2029	\$125,000	\$5,742,244	\$543,734	\$521,885	\$0
2030	\$125,000	\$5,742,244	\$328,105	\$569,365	\$0
2031	\$125,000	\$5,742,244	\$270,306	\$550,544	\$0
2032	\$125,000	\$5,742,244	\$270,306	\$846,853	\$0
2033	\$125,000	\$5,742,244	\$334,896	\$487,207	\$0
2034	\$125,000	\$5,742,244	\$334,896	\$1,559,373	\$0
2035	\$125,000	\$5,742,244	\$334,896	\$2,835,377	\$0
2036	\$125,000	\$5,742,244	\$334,896	\$1,015,592	\$0
2037	\$125,000	\$5,742,244	\$334,896	\$873,853	\$0
2038	\$125,000	\$5,742,244	\$334,896	\$498,847	\$0
2039	\$125,000	\$5,742,244	\$334,896	\$526,805	\$0
2040	\$125,000	\$5,742,244	\$334,896	\$1,048,961	\$0
2041	\$125,000	\$5,742,244	\$334,896	\$545,624	\$0
2042	\$125,000	\$5,742,244	\$334,896	\$774,493	\$0
2043	\$125,000	\$5,742,244	\$334,896	\$629,127	\$0
2044	\$125,000	\$5,742,244	\$334,896	\$1,369,733	\$0
2045	\$125,000	\$5,742,244	\$334,896	\$527,499	\$0
2046	\$125,000	\$5,742,244	\$334,896	\$977,232	\$0
2047	\$125,000	\$5,742,244	\$334,896	\$878,773	\$0
2048	\$125,000	\$5,742,244	\$334,896	\$799,207	\$0
2049	\$125,000	\$5,742,244	\$334,896	\$521,885	\$0
2050	\$125,000	\$5,742,244	\$334,896	\$1,301,672	\$0
2051	\$125,000	\$5,742,244	\$334,896	\$1,141,851	\$0

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YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2052	\$125,000	\$5,742,244	\$334,896	\$989,160	\$0
2053	\$125,000	\$5,742,244	\$334,896	\$941,514	\$0

9.2 FUNDING STRATEGY

The proposed funding for assets is outlined in the City’s operational budget and 10-year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM plan will provide service delivery options and alternatives to optimize limited financial resources.

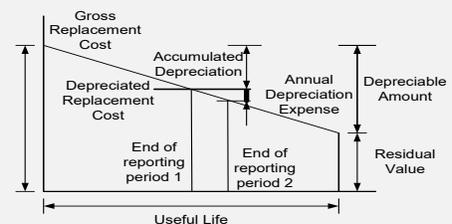
9.3 VALUATION FORECASTS

Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and remove the high costs of renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs, however, this will be improved for the next iteration of the plan.

9.4 ASSET VALUATION

Replacement Cost (Current/Gross)	\$29,472,472
Depreciable Amount	\$29,472,472
Depreciated Replacement Cost²²	\$11,284,984
Depreciation	\$ 880,116



²² Also reported as Written Down Value, Carrying or Net Book Value.

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The current replacement cost is the most common valuation approach for specialized infrastructure assets. The methodology includes establishing a comprehensive asset registry, assessing replacement costs (based on market pricing for the modern equivalent assets) and useful lives, determining the appropriate depreciation method, testing for impairments, and determining remaining useful life. As previously mentioned, Public Trees were not included in the depreciation as enhanced natural assets do not depreciate.

As the City matures its asset data, it is highly likely that these valuations will fluctuate significantly over the next three years, and they should increase over time based on improved market equivalent costs as well as anticipated cost changes due to climate change mitigation and adaptation strategies.

9.5 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 30-year horizon and do not address other operational needs not yet identified;
- Maintenance forecasts are based on current budget allocations and do not identify asset needs at this time. It is solely based on planned activities; and,
- Replacement costs were based on historical costing. They were also made without determining what the asset would be replaced with in the future.

It should be noted that the Office of the City Auditor presented a Hamilton Municipal Cemeteries Trust Funds Audit in January 2023 to ensure the effective administration of Hamilton Cemeteries Trust and compliance with regulatory requirements. The Auditor made 17 recommendations that have all been agreed to by management with plans and timelines to address all recommendations. One of these recommendations includes correcting revenue recognition and financial reporting issues.

9.6 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the [AM Plan Overview](#).

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a Low confidence level.

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Table 28: Data Confidence Assessment for Data Used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	Low	Demand drivers were developed using subject matter opinion and the Land Needs Assessment and Business Plan that was developed in 2014. This document will be updated in 2024 providing a higher level of confidence.
Growth Projections	Medium	Based on Greater Golden Horseshoe Growth Forecasts as outlined in the Asset Management Overview Plan.
Acquisition Forecast	Low	Land Needs Assessment and Business Plan document will be updated in 2024 providing a higher level of confidence. Additional acquisitions due to legislated responsibilities have not been identified but are likely to occur within the planning period.
Operation Forecast	Low	Currently budget-based and requires future improvement to ensure allocation is accurate and all operational needs accounted for. Additional operational costs for future acquired assets are not accounted for and the operational needs for acquired assets are under-reported in this AM Plan.
Maintenance Forecast	Low	Currently budget-based for most assets and requires future improvement to ensure allocation is accurate and all maintenance needs accounted for. BCA forecast is available until 2032, and maintenance needs are projected beyond 2032. BCA numbers have low confidence. Additionally, maintenance needs for acquired assets are not included in the budget needs, leading to underreporting of the additional maintenance needs.

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DATA	CONFIDENCE ASSESSMENT	COMMENT
Renewal Forecast - Asset Value	Low	<p>Market pricing was used for renewal replacement costs for facilities, vehicles, small equipment, and IT equipment which have generally a medium confidence.</p> <p>No data is available for a number of assets in the Cemeteries Infrastructure category reducing the overall confidence.</p>
Renewal Forecast - Asset Useful Life	Low	<p>There is a high confidence in age data for facilities, fleet, and IT assets.</p> <p>Age data was not available for most other assets. Useful lives were based on subject matter expertise.</p>
Renewal Forecast - Condition Modelling	Low	<p>Condition data was available for laneways, fencing, and columbaria based on staff visual inspection with a generally medium confidence.</p> <p>The condition of vehicles, small equipment, and IT assets was based on age and estimated service life with a generally low confidence level.</p> <p>There are a number of assets with no condition data available reducing the overall confidence.</p>
Disposal forecast	Low	<p>Current disposal information is rolled into renewal. Continuous improvements are required to ensure accurate data is available.</p>

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10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PRACTICES²³

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2023 Approved Operating Budget;
- 2024-2025 Multi-Year Operating Forecast;
- 2023 Approved Capital Budget;
- 2023 Hamilton Municipal Cemeteries Trust Funds Audit
- 2024-2032 Multi-Year Capital Forecast;
- Building Condition Assessment Reports;
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc.);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter Expert Opinion and Anecdotal Information; and,
- Reports from the mandatory inspections, operational and maintenance activities internal reports.

10.2 IMPROVEMENT PLAN

It is important that the City recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision-making. The tasks listed below are essential to improving the AM Plan and the City's ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning and to plans to physically improve the assets.

²³ ISO 55000 Refers to this as the Asset Management System

HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

The Improvement Plan **Table 29** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this AM Plan will provide updates on these improvement plans.

Table 29: Improvement Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1	<p>Develop a complete asset registry for all cemeteries assets including inventory and condition assessment program.</p> <p>Inventory all assets, include key database fields and follow the newly developed City Data Standard.</p> <p>Develop condition inspection protocol based on a five-point scale, create inspection templates and implement a routine inspection program.</p> <p>Develop associated Standard Operating Procedures. Investigate digital solutions including integration with EAM to streamline the program and analyse data collected.</p>	Cemeteries with CAM assistance for framework and methodology	Possible PM/Coordinator	<p>Investigate needs: Q4-2024</p> <p>EAM implementation 2024</p>
2	<p>Develop documentation of operations and maintenance standards for Cemeteries assets. Align with corporate and departmental SOPs, develop additional SOPs where necessary.</p>	Cemeteries with CAM assistance for framework	PM/Coordinator	Investigate needs: Q4-2024
3	<p>Develop fleet strategy – identify purpose of extended use vehicles, replacement needs, additional fleet needs to fill gaps or meet future demand</p>	Cemeteries	Internal Resources	Q2-2025
4	<p>Document responsibilities for private commemorative assets. Update and document agreements – historical monuments etc.</p>	Cemeteries	Internal Resources	Ongoing

HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
5	Develop guide for assumption of cemeteries and development of new cemeteries. Including assumption procedures and develop necessary SOPs surrounding inventory of assumed and constructed assets and development of lifecycle costs.	Cemeteries	Internal Resources	Investigate needs: Q4-2024
6	Review facilities data including building condition assessments and 10-yr needs. Review estimated service lives and renewal needs.	Cemeteries with Facilities input	Staff time	Q2-2025

10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated on a regular basis to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one-to-ten-year detailed works programs, budgets, business plans and corporate structures consider the ‘global’ works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 110%).

HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

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HAMILTON MUNICIPAL CEMETERIES 2024 ASSET MANAGEMENT PLAN

APPENDIX "A" – SURVEY ANALYSIS



Hamilton

Corporate Asset Management

Parks and Cemeteries

Survey Period: November 8th - December 13, 2023

May 2024

70

Respondents

115

Survey Questions

10

Demographic Questions

7376

Survey Responses

658

Demographic Responses

Age	% Pop. by Age	% of Respondents	Respondents
65+	19.5%	20.0%	14
35 to 64	41.7%	52.9%	37
18 to 34	22.1%	22.9%	16

Region	% Pop. by Region	Population	% of Respondents	Respondents
Lower	45.6%	432,375	52.9%	37
Upper	37.3%	353,485	22.9%	16
Rural	17.1%	161,840	7.1%	5

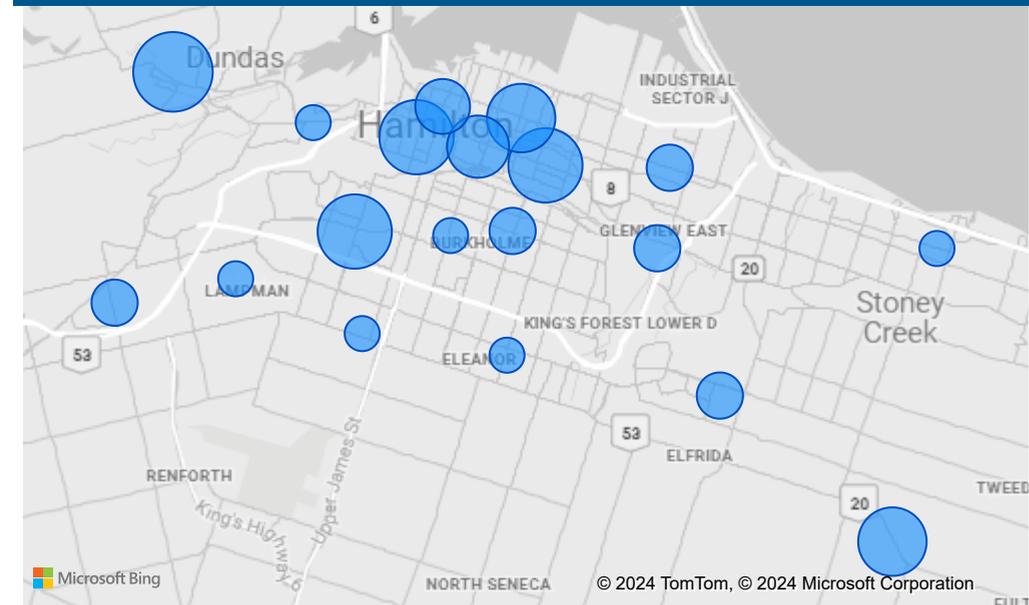
Outdoor Space	% of Respondents	Responses
Private Yard/Greenspace	75.7%	53
Private Balcony/Deck	21.4%	15
Shared Yard/Greenspace	14.3%	10
Other	5.7%	4

Living Situation	% of Respondents	Responses
Live in Hamilton	94.3%	66
Work in Hamilton	57.1%	40
Retired in Hamilton	15.7%	11
Other	10.0%	9

Identity	% of Respondents	Responses
Do not identify with any of the groups	55.7%	39
Marginalized	22.9%	23
Prefer not to answer	20.0%	14

These tables may not sum to 100% because the survey allowed respondents to choose multiple options or opt out of the question

Respondent Density Map



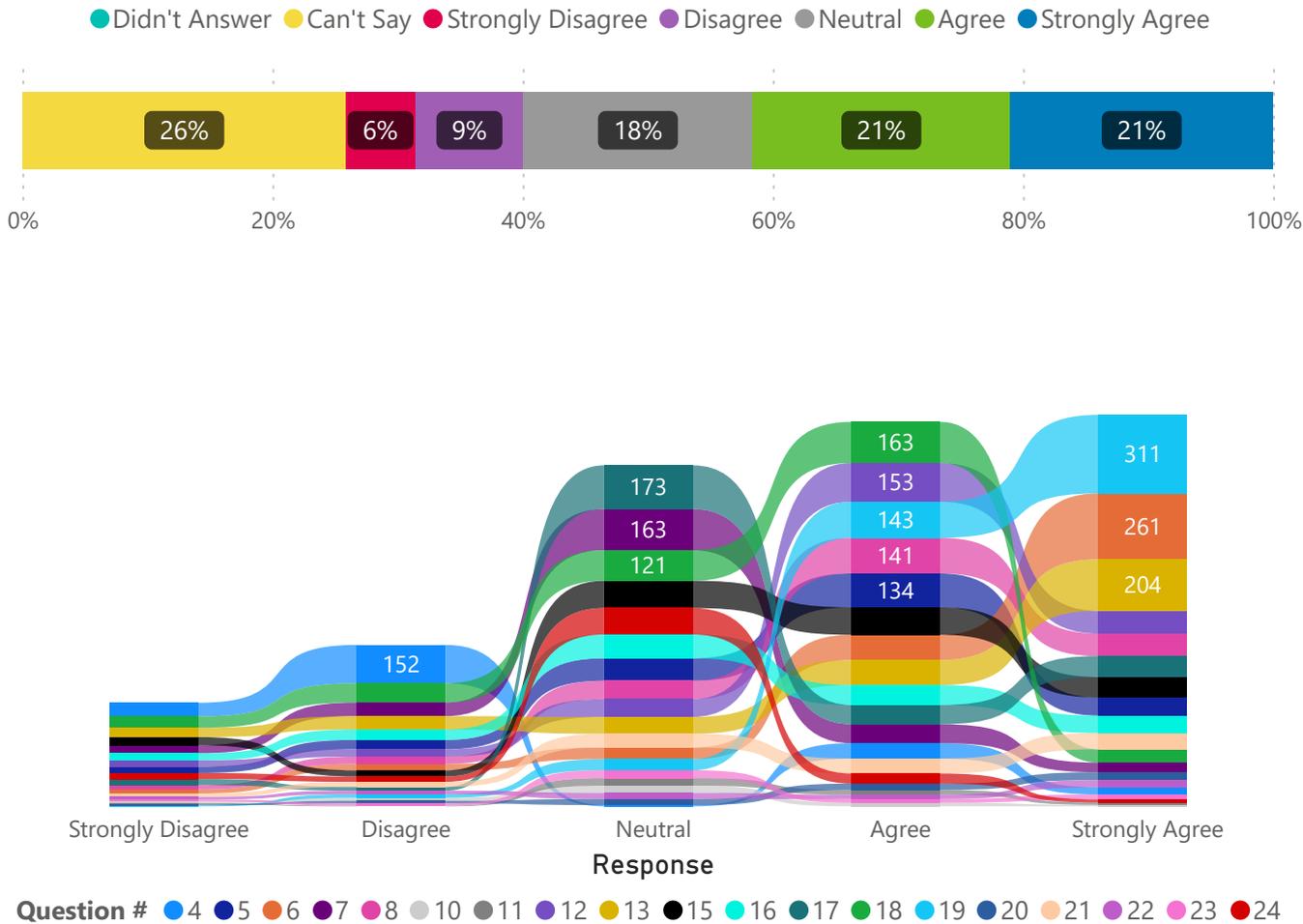
Respondents By Day



Total Responses
5471

Respondents
70

Summary of Survey Results



Questions	σ	Avg.	Opt Out	Opt Out %
All Questions	1.22	3.58	1908	25.9%
Q19 Hamilton Parks ideal condition	0.82	4.44	12	2.3%
Q6 Importance of Parks services	1.08	4.26	26	5.5%
Q13 Importance of potential Parks services	1.32	3.83	12	2.5%
Q20 Performance of Cemetery services	1.15	3.73	225	70.5%
Q8 Comfort accessing Parks sites and services	1.08	3.73	113	24.5%
Q12 Ability to access services	1.13	3.69	101	21.6%
Q21 Importance of Cemetery services	1.19	3.66	114	35.1%
Q5 Overall performance of Parks services	1.13	3.54	105	22.7%
Q15 Recommend Parks services	1.18	3.52	119	25.2%
Q17 Tax rate increases	1.08	3.48	75	16.8%
Q22 Recommend Cemetery services	1.34	3.44	225	70.5%
Q23 Cemeteries value for money	1.21	3.39	237	74.3%
Q16 Hamilton Parks value for money	1.22	3.39	133	30.0%
Q11 500-metre proximity	1.02	3.36	3	4.3%
Q18 Hamilton parks current condition	1.15	3.22	78	14.6%
Q7 Parks sites and services meeting needs	1.06	3.09	101	21.8%
Q10 800-metre proximity	1.07	3.00	1	1.4%
Q24 Service level cuts	1.01	2.98	123	37.8%
Q4 Sites and services in the last 24 months	1.26	2.52	105	25.9%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Total Responses **5471** Respondents **70**

Survey Question Summary

Question #	Survey Question	n (Sample Size)	σ (Consistency)	Margin of Error (Confidence Level ±)
4	In the last 24 months, which of these sites or services have you visited, and who did you go with?	43	1.26	15%
5	How do you feel Hamilton Parks have performed overall with the following services?	51	1.13	14%
6	How important to you are the Hamilton Parks sites and services listed below?	64	1.08	12%
7	Do the following Hamilton Park sites and services meet your needs?	52	1.06	14%
8	Do you feel comfortable accessing these Hamilton Parks sites and services?	50	1.08	14%
10	Does the target of having a park within 800-metre walking distance meet your needs?	68	1.07	12%
11	Would the target of having a park within a 500-metre walking distance meet your needs?	66	1.02	12%
12	How satisfied were you with your ability to access these Hamilton Parks sites and services?	52	1.13	14%
13	Please rate the following potential Hamilton Parks Services, based on their importance to you.	66	1.32	12%
15	How likely would you be to recommend the following Hamilton Parks services to others?	51	1.18	14%
16	How would you rate Hamilton Parks for providing good value for money for the following sites and services?	44	1.22	18%
17	If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	53	1.08	16%
18	Do you agree with the following statements? Hamilton Parks' outdoor spaces and buildings are	65	1.15	12%
19	Do you agree with the following statements? Hamilton Parks' outdoor spaces and buildings should be	65	0.82	11%
20	How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?	12	1.15	10%
21	How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?	42	1.19	18%
22	How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?	19	1.34	10%
23	How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?	16	1.21	11%
24	Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?	40	1.01	18%



Question

Sites and services in the last 24 months

4
 In the last 24 months, which of these sites or services have you visited, and who did you go with?

Responses

300

Respondents

68

● Can't Say ● Friends ● Family ● Co-Workers ● Visited On My Own ● Others



Service Area	Friends	Family	Co-Workers	Visited On My Own	Others
Total	54	152	5	61	28
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	13	35	2	14	4
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	6	16	2	8	4
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	7	16	1	13	8
Playground Equipment	2	24		4	3
Recreational Trails and Escarpment Stairs	13	29		11	4
Sport Fields, Diamonds and Courts	10	16		5	3
Spray Pads	3	16		6	2

Service Area	Opt Out	Opt Out %
Total	105	25.9%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1	1.4%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	20	35.7%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	14	23.7%
Playground Equipment	22	40.0%
Recreational Trails and Escarpment Stairs	4	6.6%
Sport Fields, Diamonds and Courts	18	34.6%
Spray Pads	26	49.1%

Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

5

Overall performance of Parks services

How do you feel Hamilton Parks have performed overall with the following services?

Responses

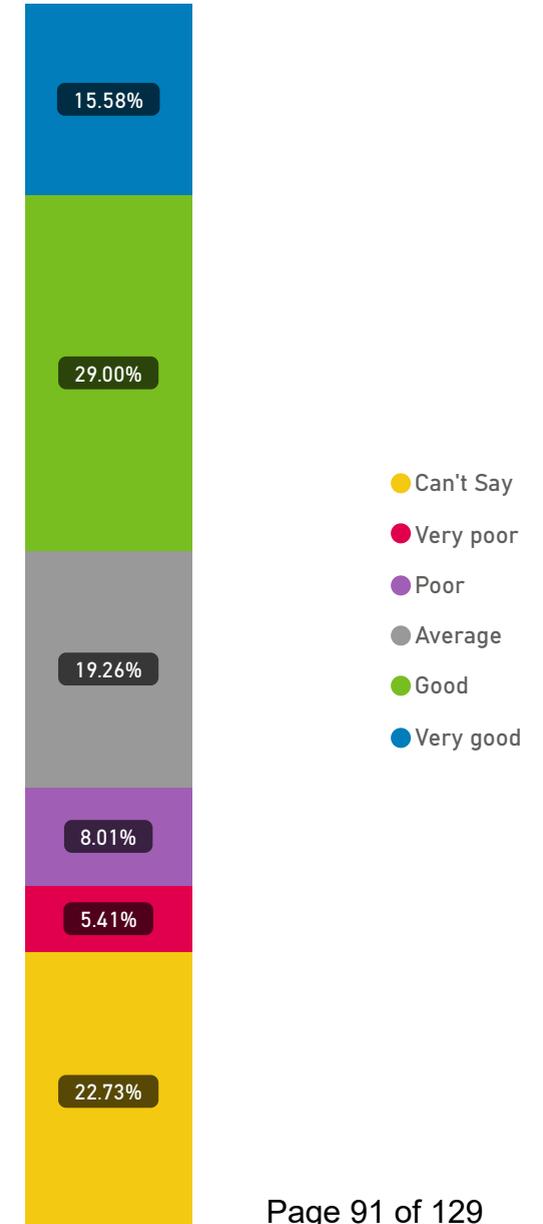
357

Respondents

70

Service Area	Very poor	Poor	Average	Good	Very good
Total	25	37	89	134	72
Spray Pads	2	3	11	12	9
Sport Fields, Diamonds and Courts	1	6	7	17	7
Recreational Trails and Escarpment Stairs	3	6	5	34	15
Playground Equipment	3	3	14	13	10
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	9	6	15	28	9
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	4	7	16	6	7
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	3	6	21	24	15

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.13	3.54	105	22.7%
Recreational Trails and Escarpment Stairs	1.05	3.83	5	7.4%
Spray Pads	1.10	3.62	26	41.3%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.05	3.61	1	1.4%
Sport Fields, Diamonds and Courts	1.04	3.61	27	41.5%
Playground Equipment	1.13	3.56	20	31.7%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.21	3.33	2	2.9%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.19	3.13	24	37.5%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Question

6

Importance of Parks services

How important to you are the Hamilton Parks sites and services listed below?

Responses

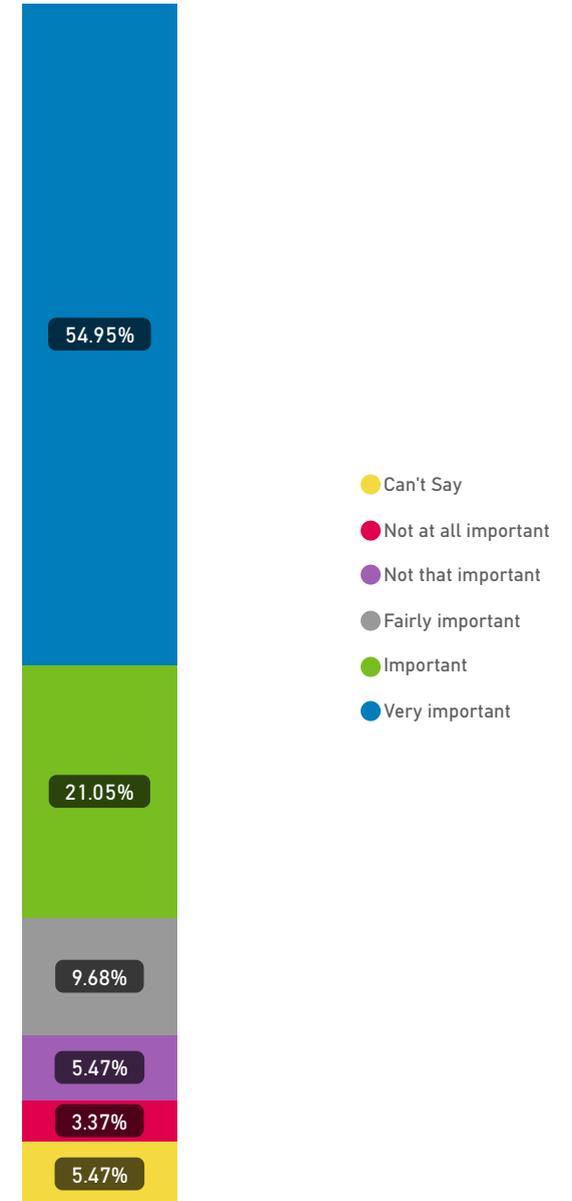
449

Respondents

69

Service Area	Not at all important	Not that important	Fairly important	Important	Very important
Total	16	26	46	100	261
Spray Pads	6	9	8	13	24
Sport Fields, Diamonds and Courts	3	6	16	15	21
Recreational Trails and Escarpment Stairs		1	3	14	51
Playground Equipment	4	8	4	15	29
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms			2	15	52
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	2	2	10	16	31
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1		3	12	53

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.08	4.26	26	5.5%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	0.51	4.72	1	1.4%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	0.69	4.68	1	1.4%
Recreational Trails and Escarpment Stairs	0.63	4.67	1	1.4%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.03	4.18	6	9.0%
Playground Equipment	1.30	3.95	6	9.1%
Sport Fields, Diamonds and Courts	1.17	3.74	6	9.0%
Spray Pads	1.39	3.67	5	7.7%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Differential of Importance and Performance

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

806

Respondents

57

Service Area	Performance (index score)	Importance (index score)	Net Differential	Opt Out %
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	67	94	-28	2%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	72	94	-21	1%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	63	84	-21	23%
Recreational Trails and Escarpment Stairs	77	93	-17	4%
Playground Equipment	71	79	-8	20%
Sport Fields, Diamonds and Courts	72	75	-3	25%
Spray Pads	72	73	-1	24%

Performance

Q5 How do you feel Hamilton Parks have performed overall with the following services?

Importance

Q6 How important to you are the Hamilton Parks sites and services listed below?

The Net Differential is calculated here by taking the average Likert score for each service area and multiplied by 20, the difference between performance and importance is then calculated as our final product. Negative differential indicates a higher perceived level of importance vs performance and positive is the opposite.



Question

7

Parks sites and services meeting needs

Do the following Hamilton Park sites and services meet your needs?

Responses

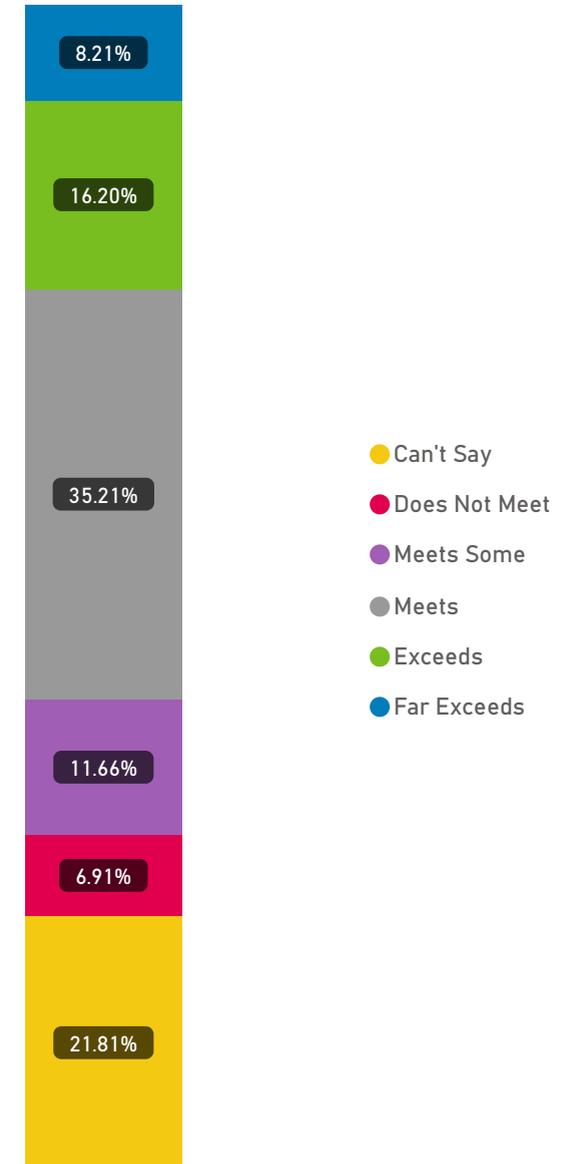
362

Respondents

68

Service Area	Does Not Meet	Meets Some	Meets	Exceeds	Far Exceeds
Total	32	54	163	75	38
Spray Pads	3	3	18	8	4
Sport Fields, Diamonds and Courts	3	4	20	9	4
Recreational Trails and Escarpment Stairs	3	7	29	17	7
Playground Equipment	4	5	13	11	5
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	9	15	27	9	7
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	3	9	25	8	5
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	7	11	31	13	6

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.06	3.09	101	21.8%
Recreational Trails and Escarpment Stairs	0.97	3.29	5	7.4%
Playground Equipment	1.15	3.21	26	40.6%
Spray Pads	1.02	3.19	28	43.8%
Sport Fields, Diamonds and Courts	1.00	3.18	24	37.5%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	0.99	3.06	15	23.1%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.06	3.00	1	1.4%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.14	2.85	2	2.9%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

8

Comfort accessing Parks sites and services

Do you feel comfortable accessing these Hamilton Parks sites and services?

Responses

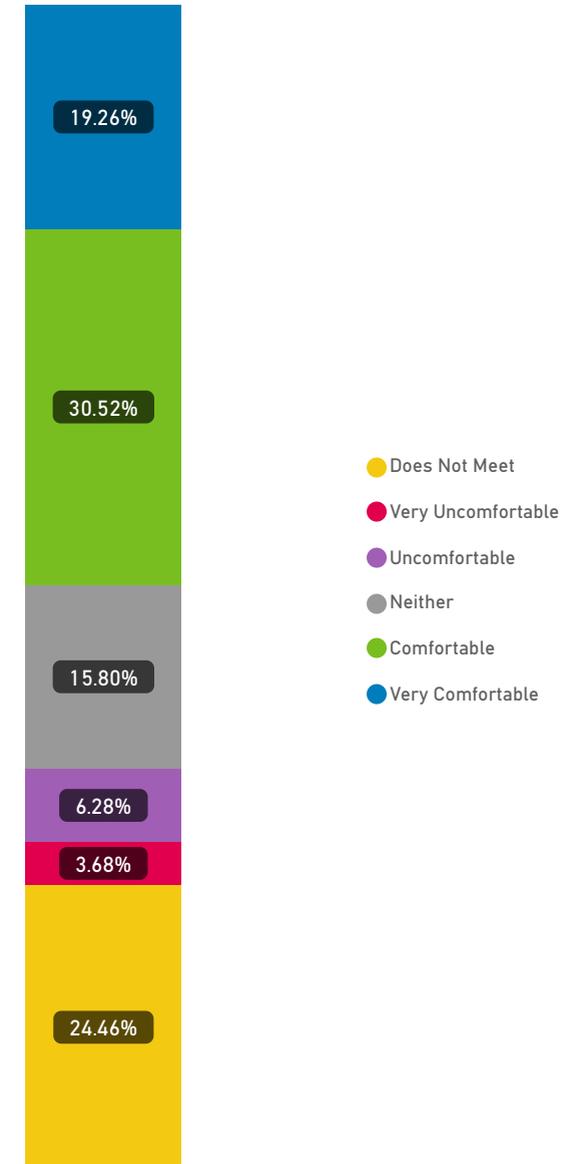
349

Respondents

68

Service Area	Does Not Meet	Very Uncomfortable	Uncomfortable	Neither	Comfortable	Very Comfortable
Total	113	17	29	73	141	89
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	2	6	4	12	24	20
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	18	2	6	9	18	12
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	7	4	10	16	20	12
Playground Equipment	25		2	6	19	11
Recreational Trails and Escarpment Stairs	5	5	5	14	26	13
Sport Fields, Diamonds and Courts	25		1	9	19	11
Spray Pads	31		1	7	15	10

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.08	3.73	113	24.5%
Spray Pads	0.80	4.03	31	48.4%
Playground Equipment	0.81	4.03	25	39.7%
Sport Fields, Diamonds and Courts	0.77	4.00	25	38.5%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.21	3.73	2	2.9%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.11	3.68	18	27.7%
Recreational Trails and Escarpment Stairs	1.14	3.59	5	7.4%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.16	3.42	7	10.1%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

800-metre proximity

10

Does the target of having a park within 800-metre walking distance meet your needs?

Responses

68

Respondents

68

● Can't Say ● Does Not Meet ● Meets Some ● Meets ● Exceeds ● Far Exceeds



ServiceArea	Does Not Meet	Meets Some	Meets	Exceeds	Far Exceeds
Currently, the City of Hamilton commits to providing a park within an 800-metre walking distance to all residents. 800-metres is roughly a 5 to 10-minute walk, 2-minute cycle or 1-minute drive. Does the target of having a park within 800-metre wal	7	12	29	14	6

ServiceArea	σ	Avg.	Opt Out	Opt Out %
Currently, the City of Hamilton commits to providing a park within an 800-metre walking distance to all residents. 800-metres is roughly a 5 to 10-minute walk, 2-minute cycle or 1-minute drive. Does the target of having a park within 800-metre wal	1.07	3.00	1	1.4%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

500-metre proximity

11

Would the target of having a park within a 500-metre walking distance meet your needs?

Responses

66

Respondents

66

● Did not answer ● Does Not Meet ● Meets Some ● Meets ● Exceeds ● Far Exceeds



ServiceArea	Does Not Meet	Meets Some	Meets	Exceeds	Far Exceeds
Some municipalities are shifting to a smaller radius for park provision. Would the target of having a park within a 500-metre walking distance meet your needs? 500-metres is roughly a 6-minute walk, 1-minute cycle or 1-minute drive.	5	3	30	19	9

ServiceArea	σ	Avg.	Opt Out	Opt Out %
Some municipalities are shifting to a smaller radius for park provision. Would the target of having a park within a 500-metre walking distance meet your needs? 500-metres is roughly a 6-minute walk, 1-minute cycle or 1-minute drive.	1.02	3.36	3	4.3%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

Ability to access services

12

How satisfied were you with your ability to access these Hamilton Parks sites and services?

Responses

367

Respondents

68

Service Area	Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
Total	25	29	70	153	90
Spray Pads	2	2	10	13	11
Sport Fields, Diamonds and Courts	2	6	9	18	10
Recreational Trails and Escarpment Stairs	3	6	11	29	15
Playground Equipment	3	1	9	16	11
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	6	6	16	24	11
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	4	7	9	21	9
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	5	1	6	32	23

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.13	3.69	101	21.6%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.08	4.00	1	1.5%
Playground Equipment	1.11	3.78	26	39.4%
Spray Pads	1.09	3.76	28	42.4%
Recreational Trails and Escarpment Stairs	1.06	3.73	4	5.9%
Sport Fields, Diamonds and Courts	1.10	3.62	21	31.8%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.17	3.48	16	24.2%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.17	3.44	5	7.4%



- Can't Say
- Very Dissatisfied
- Dissatisfied
- Neither
- Satisfied
- Very Satisfied

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

Importance of potential Parks services

Please rate the following potential Hamilton Parks Services, based on their importance to you.

Responses

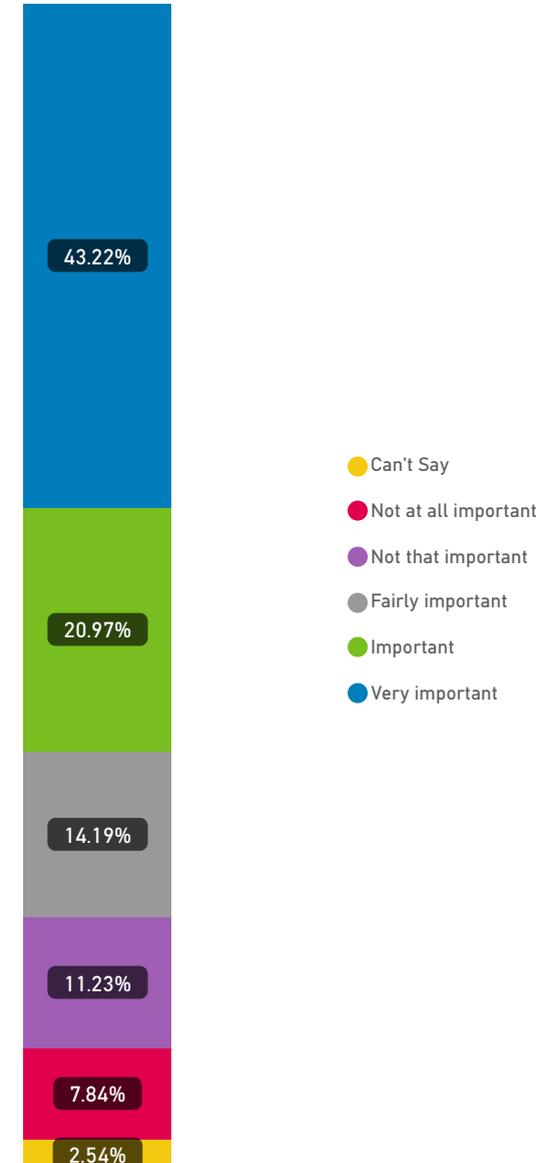
460

Respondents

68

Service Area	Not at all important	Not that important	Fairly important	Important	Very important
Total	37	53	67	99	204
Additional Parking	15	18	13	11	7
Additional Sport Lighting and Extended Playing Hours.1	5	14	14	10	17
All-Season Use: Winter Maintenance, Washrooms Open During the Winter	3	6	7	14	37
Barrier-Free Amenities: Ramps, Accessible Trails and Beach Routes	6	5	14	20	21
Improved Park Connectivity: Extended Pathways and Cycling Networks	4	4	2	14	43
Increased Pathway Lighting for Better Visibility at Night	2	2	11	14	39
Reducing Impact on Climate Change: Planting Native Plant Species or Pollinator Gardens, Solar-Powered Lighting, Water-Smart Facilities	2	4	6	16	40

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.32	3.83	12	2.5%
Improved Park Connectivity: Extended Pathways and Cycling Networks	1.16	4.31		
Reducing Impact on Climate Change: Planting Native Plant Species or Pollinator Gardens, Solar-Powered Lighting, Water-Smart Facilities	1.04	4.29		
Increased Pathway Lighting for Better Visibility at Night	1.02	4.26		
All-Season Use: Winter Maintenance, Washrooms Open During the Winter	1.18	4.13		
Barrier-Free Amenities: Ramps, Accessible Trails and Beach Routes	1.25	3.68	1	1.5%
Additional Sport Lighting and Extended Playing Hours.1	1.32	3.33	7	10.4%
Additional Parking	1.30	2.64	4	5.9%



Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

Recommend Parks services

15

How likely would you be to recommend the following Hamilton Parks services to others?

Responses

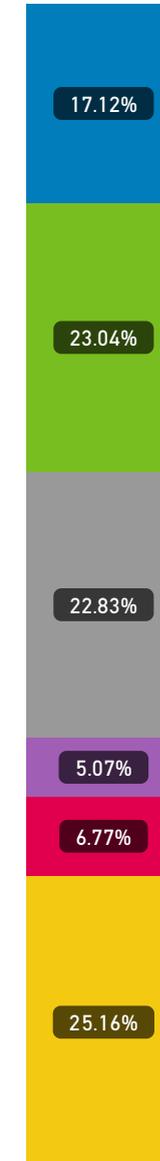
354

Respondents

66

Service Area	Definitely not	Probably not	Possibly	Probably	Definitely
Total	32	24	108	109	81
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	6	2	20	20	18
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	6	6	16	12	7
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	10	3	20	15	9
Playground Equipment	3	6	10	15	9
Recreational Trails and Escarpment Stairs	2	1	14	23	21
Sport Fields, Diamonds and Courts	3	2	15	12	8
Spray Pads	2	4	13	12	9

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.18	3.52	119	25.2%
Recreational Trails and Escarpment Stairs	0.97	3.98	7	10.3%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.18	3.64	2	2.9%
Spray Pads	1.09	3.55	27	40.3%
Sport Fields, Diamonds and Courts	1.10	3.50	27	40.3%
Playground Equipment	1.17	3.49	24	35.8%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.27	3.18	11	16.2%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.21	3.17	21	30.9%



- Can't Say
- Definitely not
- Probably not
- Possibly
- Probably
- Definitely

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

Parks Net Promoter Score

How likely would you be to recommend the following Hamilton Parks services to others?

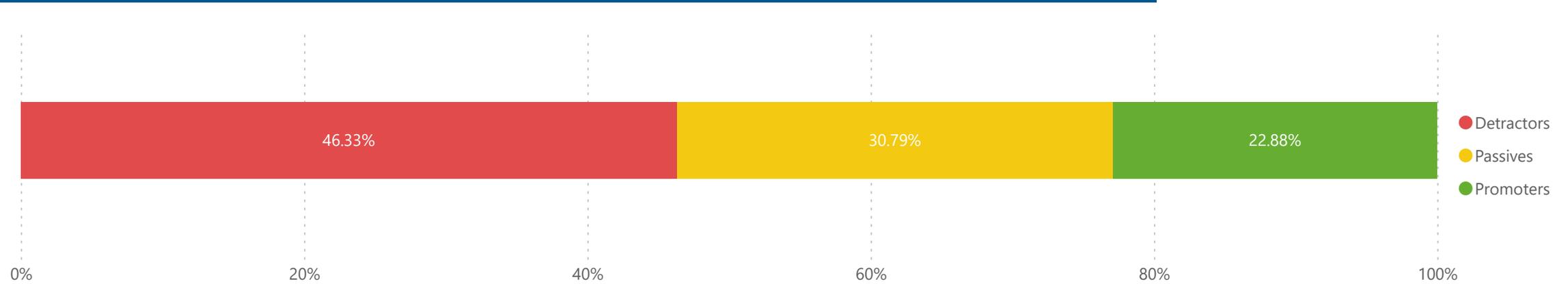
15

Responses

354

Respondents

66



Service Area	σ	NPS	Detractors	Passives	Promoter
All Service Areas	1.18	-23.45	164	109	81
Recreational Trails and Escarpment Stairs	0.97	6.56	17	23	21
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.18	-15.15	28	20	18
Playground Equipment	1.17	-23.26	19	15	9
Spray Pads	1.09	-25.00	19	12	9
Sport Fields, Diamonds and Courts	1.10	-30.00	20	12	8
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.27	-42.11	33	15	9
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.21	-44.68	28	12	7

Typically the Net Promoter Score is used to measure customer loyalty.

Likert choices less than or equal to 3 are considered 'Detractors', 4s are 'Passive' and 5s are considered 'Promoters'. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Detractors) from (% Promoters).



Question

Hamilton Parks value for money

16

How would you rate Hamilton Parks for providing good value for money for the following sites and services?

Responses

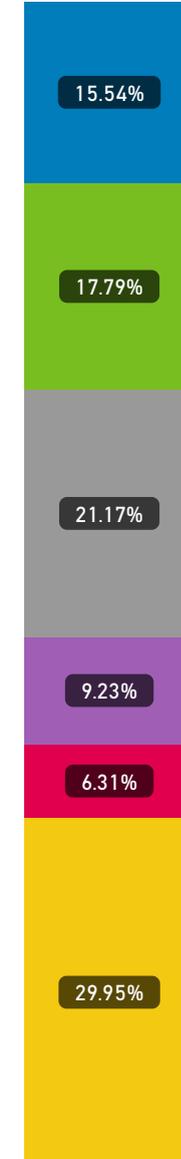
311

Respondents

57

Service Area	Very poor	Poor	Average	Good	Very good
Total	28	41	94	79	69
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	4	6	16	17	14
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	5	4	16	12	6
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	6	8	16	10	9
Playground Equipment	5	5	9	9	10
Recreational Trails and Escarpment Stairs	3	6	12	16	15
Sport Fields, Diamonds and Courts	3	6	13	8	7
Spray Pads	2	6	12	7	8

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.22	3.39	133	30.0%
Recreational Trails and Escarpment Stairs	1.17	3.65	12	18.8%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.17	3.54	7	10.9%
Spray Pads	1.17	3.37	28	44.4%
Playground Equipment	1.35	3.37	25	39.7%
Sport Fields, Diamonds and Courts	1.18	3.27	26	41.3%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.16	3.23	20	31.7%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.25	3.16	15	23.4%



- Can't Say
- Very poor
- Poor
- Average
- Good
- Very good

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

Tax rate increases

17

If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?

Responses

371

Respondents

60



Service Area	Definitely Prefer Cuts to Service	Probably Prefer Cuts to Service	Minimize Rate Increase; Maintain Service	Probably Prefer Rate Increase; Improve Services	Definitely Prefer Rate Increase; Increase Services
Total	24	15	173	76	83
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	2	2	22	14	20
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	4	2	33	5	11
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	2	1	28	15	11
Playground Equipment	4	2	19	10	10
Recreational Trails and Escarpment Stairs	2		24	17	17
Sport Fields, Diamonds and Courts	4	4	28	6	7
Spray Pads	6	4	19	9	7

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.08	3.48	75	16.8%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.05	3.80	5	7.7%
Recreational Trails and Escarpment Stairs	0.97	3.78	5	7.7%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	0.94	3.56	7	10.9%
Playground Equipment	1.15	3.44	18	28.6%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.06	3.31	9	14.1%
Sport Fields, Diamonds and Courts	1.04	3.16	13	21.0%
Spray Pads	1.19	3.16	18	28.6%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Parks Differential of Rates vs. Value for Money

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

682

Respondents

55

Service Area	Value for Money (index score)	Rates (index score)	Net Differential	Opt Out %
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	63	71	-8	17%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	71	76	-5	9%
Recreational Trails and Escarpment Stairs	73	76	-3	13%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	65	66	-2	23%
Playground Equipment	67	69	-2	34%
Sport Fields, Diamonds and Courts	65	63	2	31%
Spray Pads	67	63	4	37%

Value for Money

Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?

Rates

Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?

The Net Differential is calculated by getting the average score for Rates and Value for Money. Then, the average score for Rates and Value for Money is multiplied by 20. Finally, the Rates score is subtracted from the Value for Money score. A negative differential indicates higher perceived Rates than Value for Money. A positive differential indicates a higher perceived Value for Money than Rates.

Question

Hamilton parks current condition

18

Do you agree with the following statements? Hamilton Parks' outdoor spaces and buildings are

Responses

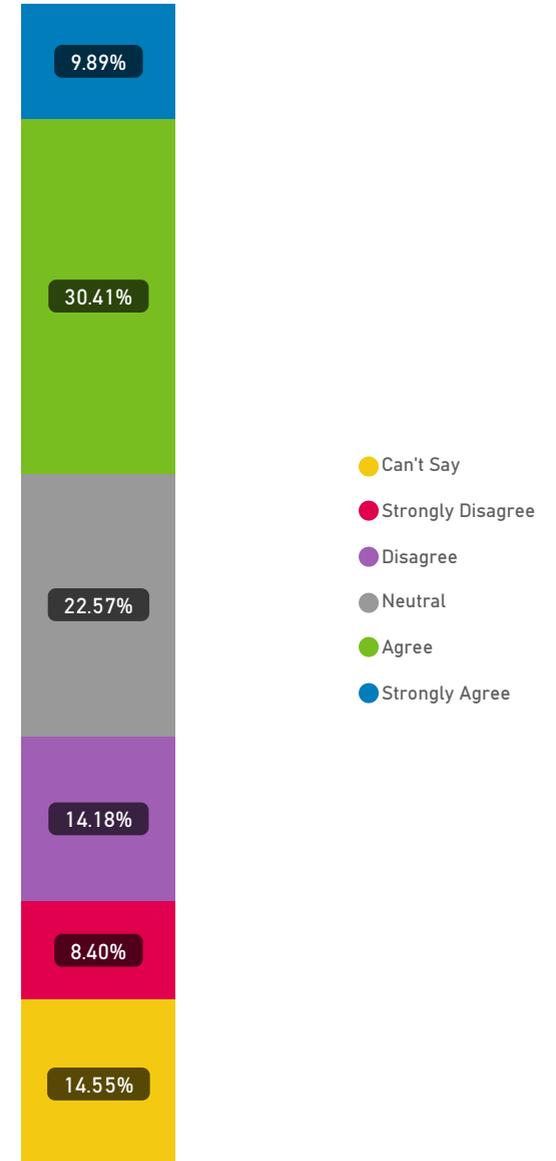
458

Respondents

67

Service Area	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Total	45	76	121	163	53
Accessible by public transportation	7	13	9	22	5
Accessible, meeting provincial minimum standards per AODA, 2005	5	8	10	11	5
Clean and in good repair	8	12	16	26	4
Comfortable with appropriate levels of lighting and noise	7	13	16	22	7
Easy to locate, with clearly marked public entrances	3	5	15	31	12
Energy efficient, helping the city meet energy targets and reduce utility usage	4	5	16	10	3
Inviting, appealing and attractive	4	7	23	22	10
Safe, equitable and inclusive spaces for all	7	13	16	19	7

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.15	3.22	78	14.6%
Easy to locate, with clearly marked public entrances	1.01	3.67	1	1.5%
Inviting, appealing and attractive	1.06	3.41	1	1.5%
Comfortable with appropriate levels of lighting and noise	1.18	3.14	2	3.0%
Safe, equitable and inclusive spaces for all	1.19	3.10	5	7.5%
Clean and in good repair	1.14	3.09	1	1.5%
Accessible by public transportation	1.21	3.09	11	16.4%
Energy efficient, helping the city meet energy targets and reduce utility usage	1.06	3.08	29	43.3%
Accessible, meeting provincial minimum standards per AODA, 2005	1.23	3.08	28	41.8%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

Hamilton Parks ideal condition

19

Do you agree with the following statements? Hamilton Parks' outdoor spaces and buildings should be

Responses

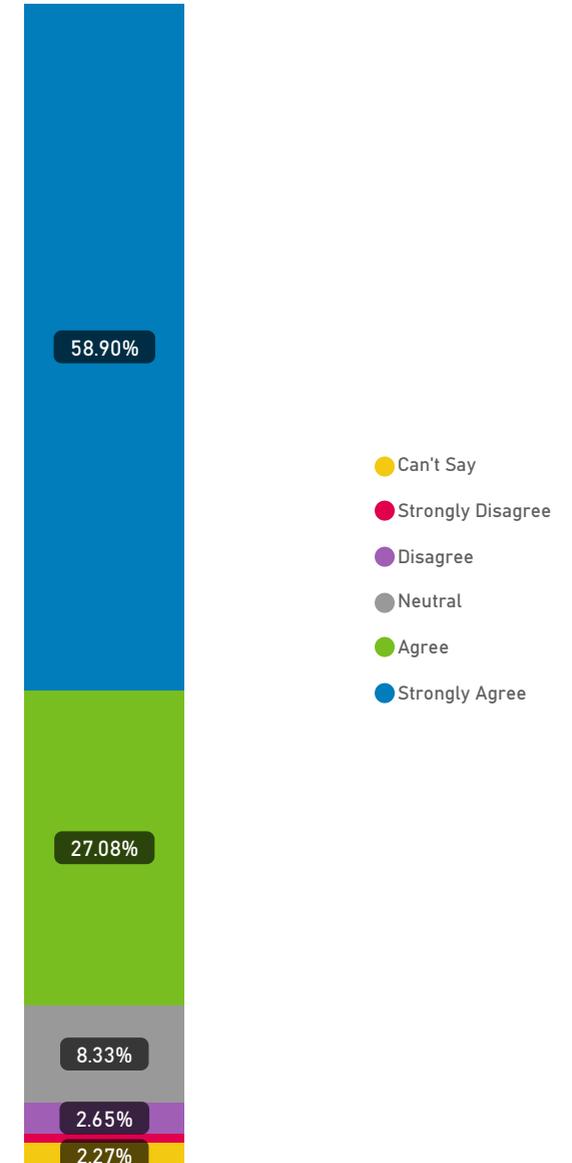
516

Respondents

66

Service Area	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Total	4	14	44	143	311
Accessible by public transportation	2	2	7	17	37
Accessible, meeting provincial minimum standards per AODA, 2005			7	14	38
Clean and in good repair		1	2	13	50
Comfortable with appropriate levels of lighting and noise		3	4	22	37
Easy to locate, with clearly marked public entrances		2	9	20	35
Energy efficient, helping the city meet energy targets and reduce utility usage	1	4	8	16	35
Inviting, appealing and attractive			2	27	36
Safe, equitable and inclusive spaces for all	1	2	5	14	43

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	0.82	4.44	12	2.3%
Clean and in good repair	0.60	4.70		
Accessible, meeting provincial minimum standards per AODA, 2005	0.70	4.53	7	10.6%
Inviting, appealing and attractive	0.56	4.52	1	1.5%
Safe, equitable and inclusive spaces for all	0.88	4.48	1	1.5%
Comfortable with appropriate levels of lighting and noise	0.80	4.41		
Easy to locate, with clearly marked public entrances	0.82	4.33		
Accessible by public transportation	0.99	4.31	1	1.5%
Energy efficient, helping the city meet energy targets and reduce utility usage	1.00	4.25	2	3.0%



Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

Performance of Cemetery services

How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?

Responses

20

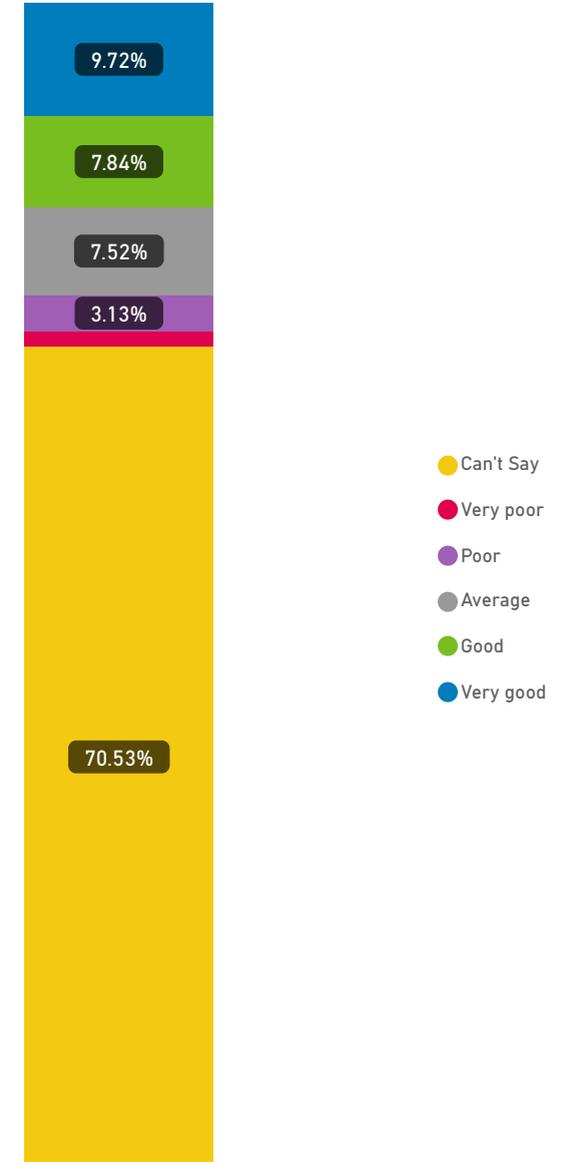
94

Respondents

35

Service Area	Very poor	Poor	Average	Good	Very good
Total	4	10	24	25	31
End of life planning services	1	2	5	2	4
Graveside services, burials and interment		1	5	3	5
Historical family searches and walking tours	1	2	3	4	10
Maintenance and management of active and inactive cemeteries	1	2	8	13	9
Sales of interment rights, cemetery services and supporting products	1	3	3	3	3

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.15	3.73	225	70.5%
Historical family searches and walking tours	1.22	4.00	43	68.3%
Graveside services, burials and interment	0.99	3.86	50	78.1%
Maintenance and management of active and inactive cemeteries	1.00	3.82	31	48.4%
End of life planning services	1.24	3.43	50	78.1%
Sales of interment rights, cemetery services and supporting products	1.26	3.31	51	79.7%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

Importance of Cemetery services

How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?

Responses

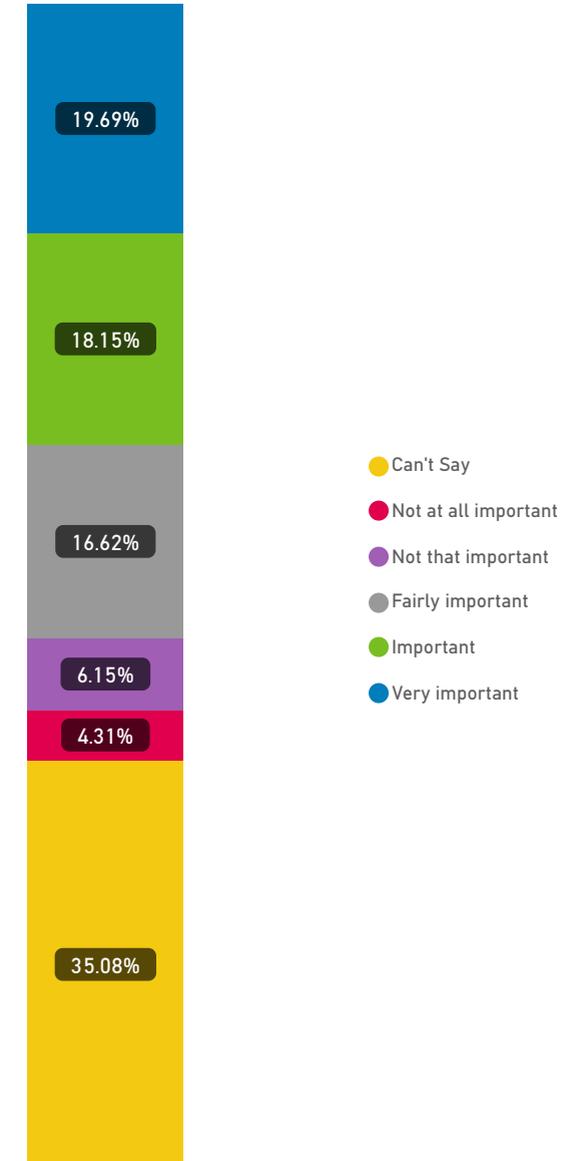
211

Respondents

48

Service Area	Not at all important	Not that important	Fairly important	Important	Very important
Total	14	20	54	59	64
End of life planning services	3	4	11	12	10
Graveside services, burials and interment	2	4	7	14	13
Historical family searches and walking tours	3	8	13	10	10
Maintenance and management of active and inactive cemeteries	2		10	15	20
Sales of interment rights, cemetery services and supporting products	4	4	13	8	11

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.19	3.66	114	35.1%
Maintenance and management of active and inactive cemeteries	1.01	4.09	18	27.7%
Graveside services, burials and interment	1.14	3.80	25	38.5%
End of life planning services	1.18	3.55	25	38.5%
Sales of interment rights, cemetery services and supporting products	1.26	3.45	25	38.5%
Historical family searches and walking tours	1.21	3.36	21	32.3%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Differential of Importance and Performance

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

305

Respondents

52

Service Area	Performance (index score)	Importance (index score)	Net Differential	Opt Out %
Maintenance and management of active and inactive cemeteries	76	82	-5	38%
Sales of interment rights, cemetery services and supporting products	66	69	-3	59%
End of life planning services	69	71	-2	58%
Graveside services, burials and interment	77	76	1	58%
Historical family searches and walking tours	80	67	13	50%

Performance

Q20 How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?

Importance

Q21 How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?

The Net Differential is calculated by getting the average score for Performance and Importance. Then, the average score for Performance and Importance is multiplied by 20. Finally, the Importance score is subtracted from the Performance score. A negative differential indicates a higher perceived importance than performance. A positive differential indicates a higher perceived performance than importance.



Question

Recommend Cemetery services

How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?

Responses

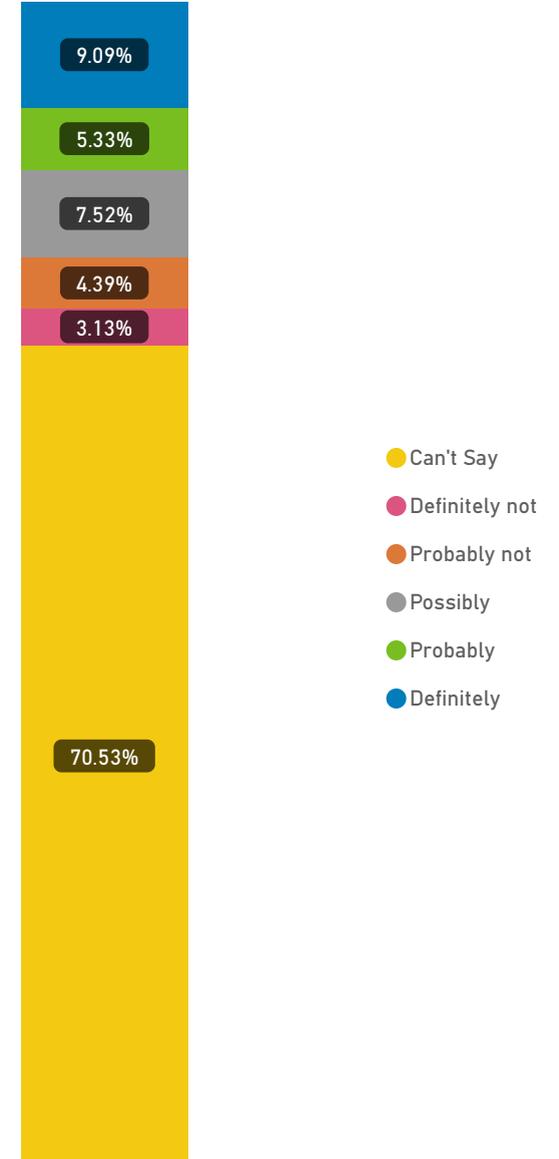
94

Respondents

26

Service Area	Definitely not	Probably not	Possibly	Probably	Definitely
Total	10	14	24	17	29
Sales of interment rights, cemetery services and supporting products	2	3	7	2	4
Maintenance and management of active and inactive cemeteries	3	4	3	4	10
Historical family searches and walking tours	2	3	4	5	7
Graveside services, burials and interment	1	2	4	4	4
End of life planning services	2	2	6	2	4

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.34	3.44	225	70.5%
Maintenance and management of active and inactive cemeteries	1.47	3.58	40	62.5%
Historical family searches and walking tours	1.33	3.57	43	67.2%
Graveside services, burials and interment	1.20	3.53	48	76.2%
End of life planning services	1.30	3.25	48	75.0%
Sales of interment rights, cemetery services and supporting products	1.26	3.17	46	71.9%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Cemeteries Net Promoter Score

Question

22

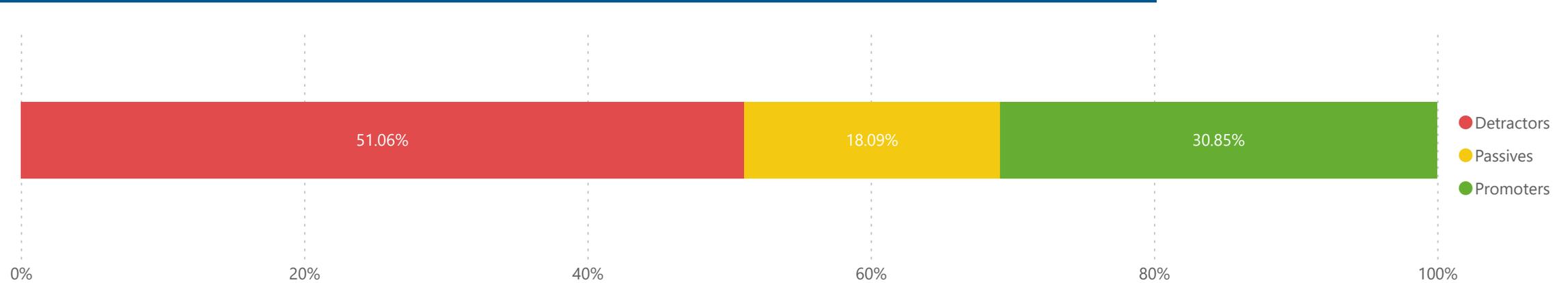
How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?

Responses

94

Respondents

26



Service Area	σ	NPS	Detractors	Passives	Promoter
All Service Areas	1.34	-20.21	48	17	29
Sales of interment rights, cemetery services and supporting products	1.26	-44.44	12	2	4
End of life planning services	1.30	-37.50	10	2	4
Graveside services, burials and interment	1.20	-20.00	7	4	4
Historical family searches and walking tours	1.33	-9.52	9	5	7
Maintenance and management of active and inactive cemeteries	1.47	0.00	10	4	10

Typically the Net Promoter Score is used to measure customer loyalty.

Likert choices less than or equal to 3 are considered 'Detractors', 4s are 'Passive' and 5s are considered 'Promoters'. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Detractors) from (% Promoters).



Question

Cemeteries value for money

23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?

Responses

82

Respondents

24

Service Area	Very poor	Poor	Average	Good	Very good
Total	7	9	31	15	20
Sales of interment rights, cemetery services and supporting products	1	2	5	3	2
Maintenance and management of active and inactive cemeteries	3	2	8	5	6
Historical family searches and walking tours	1	1	6	4	4
Graveside services, burials and interment	1	2	8	1	4
End of life planning services	1	2	4	2	4

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.21	3.39	237	74.3%
Historical family searches and walking tours	1.12	3.56	48	75.0%
End of life planning services	1.28	3.46	50	79.4%
Maintenance and management of active and inactive cemeteries	1.28	3.38	40	62.5%
Graveside services, burials and interment	1.16	3.31	48	75.0%
Sales of interment rights, cemetery services and supporting products	1.12	3.23	51	79.7%



- Can't Say
- Very poor
- Poor
- Average
- Good
- Very good



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Question

Service level cuts

24

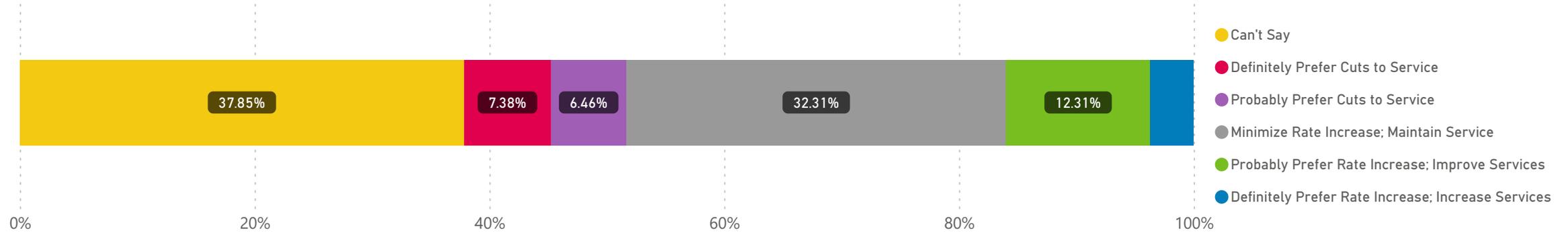
Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?

Responses

202

Respondents

46



Service Area	Definitely Prefer Cuts to Service	Probably Prefer Cuts to Service	Minimize Rate Increase; Maintain Service	Probably Prefer Rate Increase; Improve Services	Definitely Prefer Rate Increase; Increase Services
Total	24	21	105	40	12
Sales of interment rights, cemetery services and supporting products	4	5	21	8	
Maintenance and management of active and inactive cemeteries	5	2	23	11	3
Historical family searches and walking tours	5	6	21	6	4
Graveside services, burials and interment	4	4	22	6	3
End of life planning services	6	4	18	9	2

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.01	2.98	123	37.8%
Maintenance and management of active and inactive cemeteries	1.00	3.11	21	32.3%
Graveside services, burials and interment	0.99	3.00	26	40.0%
Historical family searches and walking tours	1.07	2.95	23	35.4%
End of life planning services	1.07	2.92	26	40.0%
Sales of interment rights, cemetery services and supporting products	0.86	2.87	27	41.5%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Cemeteries Differential of Rates vs. Value for Money

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

284

Respondents

52

Service Area	Value for Money (index score)	Rates (index score)	Net Differential	Opt Out %
Maintenance and management of active and inactive cemeteries	68	62	5	47%
Graveside services, burials and interment	66	60	6	57%
Sales of interment rights, cemetery services and supporting products	65	57	7	60%
End of life planning services	69	58	11	59%
Historical family searches and walking tours	71	59	12	55%

Value for Money *Q23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?*

Rates *Q24 Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?*

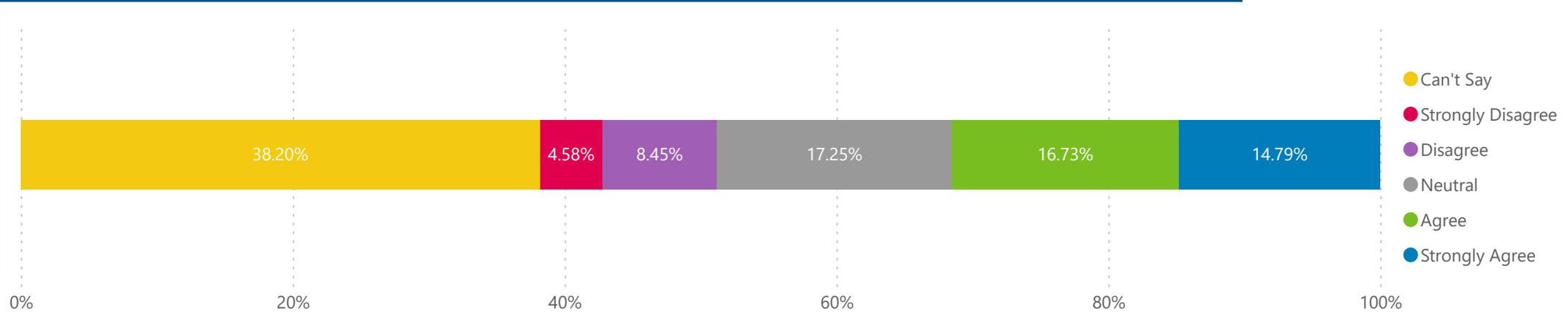
The Net Differential is calculated by getting the average score for Rates and Value for Money. Then, the average score for Rates and Value for Money is multiplied by 20. Finally, the Rates score is subtracted from the Value for Money score. A negative differential indicates higher perceived Rates than Value for Money. A positive differential indicates a higher perceived Value for Money than Rates.



Summary of Specific Service Areas over Several Questions

Spray Pads

Responses
325
 Respondents
64



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.20	3.46	69.29	217	38.2%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	0.80	4.03	80.61	31	48.4%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.09	3.76	75.26	28	42.4%
Q6 How important to you are the Hamilton Parks sites and services listed below?	1.39	3.67	73.33	5	7.7%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.10	3.62	72.43	26	41.3%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	1.09	3.55	71.00	27	40.3%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.17	3.37	67.43	28	44.4%
Q7 Do the following Hamilton Park sites and services meet your needs?	1.02	3.19	63.89	28	43.8%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	1.19	3.16	63.11	18	28.6%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.17	2.56	51.11	26	49.1%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

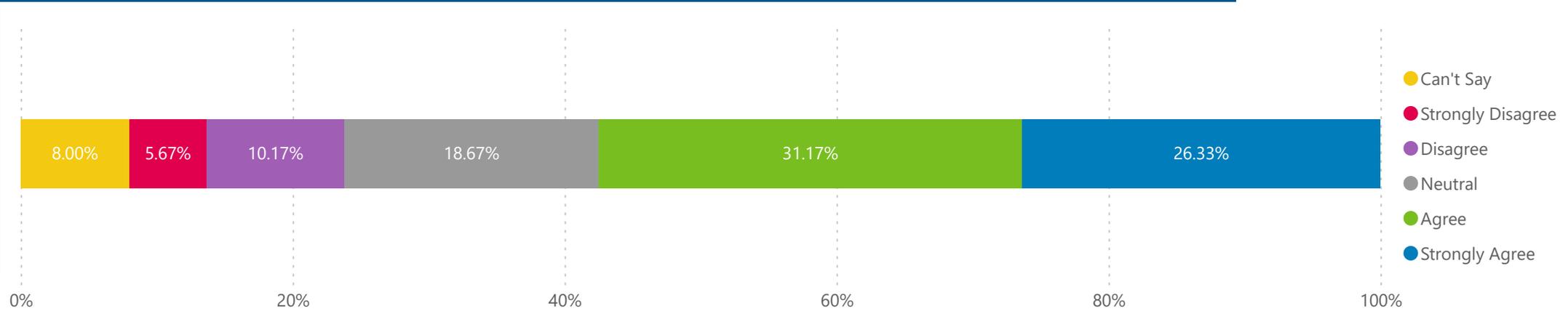
Recreational Trails and Escarpment Stairs

Responses

518

Respondents

70



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.18	3.68	73.55	48	8.0%
Q6 How important to you are the Hamilton Parks sites and services listed below?	0.63	4.67	93.33	1	1.4%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	0.97	3.98	79.67	7	10.3%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.05	3.83	76.51	5	7.4%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	0.97	3.78	75.67	5	7.7%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.06	3.73	74.69	4	5.9%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.17	3.65	73.08	12	18.8%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	1.14	3.59	71.75	5	7.4%
Q7 Do the following Hamilton Park sites and services meet your needs?	0.97	3.29	65.71	5	7.4%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.22	2.37	47.37	4	6.6%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

Recreational Trails and Escarpment Stairs

Responses
518
 Respondents
70



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.18	3.68	73.55	48	8.0%
Q6 How important to you are the Hamilton Parks sites and services listed below?	0.63	4.67	93.33	1	1.4%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	0.97	3.98	79.67	7	10.3%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.05	3.83	76.51	5	7.4%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	0.97	3.78	75.67	5	7.7%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.06	3.73	74.69	4	5.9%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.17	3.65	73.08	12	18.8%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	1.14	3.59	71.75	5	7.4%
Q7 Do the following Hamilton Park sites and services meet your needs?	0.97	3.29	65.71	5	7.4%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.22	2.37	47.37	4	6.6%

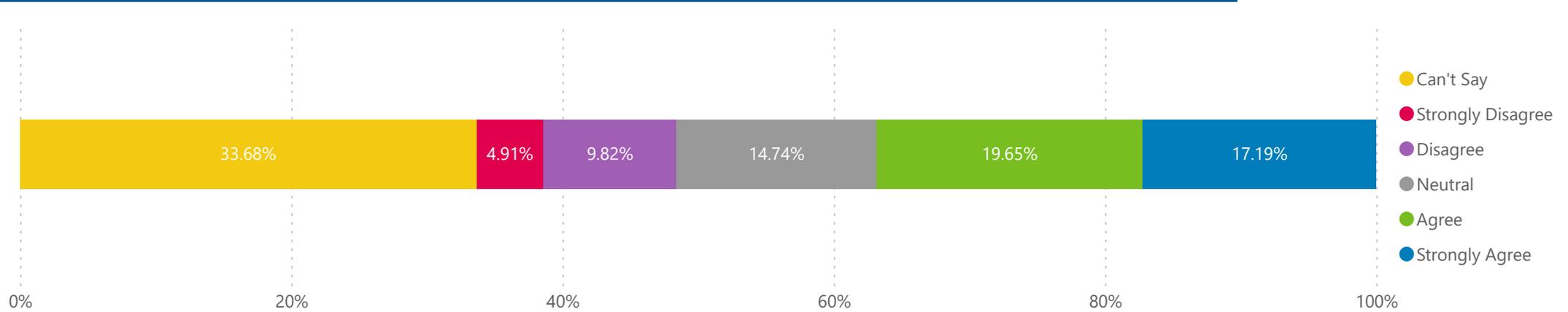
Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

Playground Equipment

Responses
350
 Respondents
65



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.23	3.52	70.37	192	33.7%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	0.81	4.03	80.53	25	39.7%
Q6 How important to you are the Hamilton Parks sites and services listed below?	1.30	3.95	79.00	6	9.1%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.11	3.78	75.50	26	39.4%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.13	3.56	71.16	20	31.7%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	1.17	3.49	69.77	24	35.8%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	1.15	3.44	68.89	18	28.6%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.35	3.37	67.37	25	39.7%
Q7 Do the following Hamilton Park sites and services meet your needs?	1.15	3.21	64.21	26	40.6%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.08	2.45	49.09	22	40.0%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

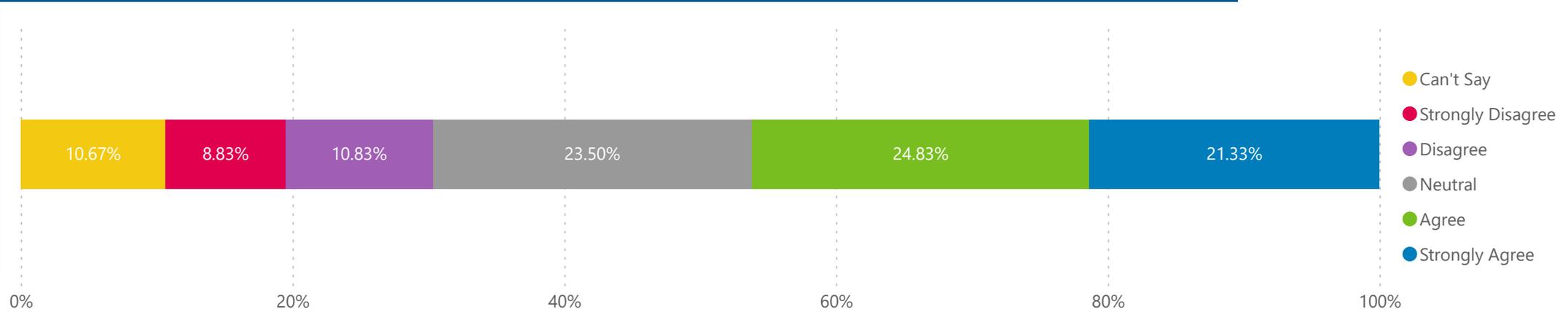
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms

Responses

483

Respondents

70



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.25	3.44	68.73	64	10.7%
Q6 How important to you are the Hamilton Parks sites and services listed below?	0.51	4.72	94.49	1	1.4%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	0.94	3.56	71.23	7	10.9%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.17	3.44	68.89	5	7.4%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	1.16	3.42	68.39	7	10.1%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.21	3.33	66.57	2	2.9%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	1.27	3.18	63.51	11	16.2%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.25	3.16	63.27	15	23.4%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.41	2.98	59.56	14	23.7%
Q7 Do the following Hamilton Park sites and services meet your needs?	1.14	2.85	57.01	2	2.9%

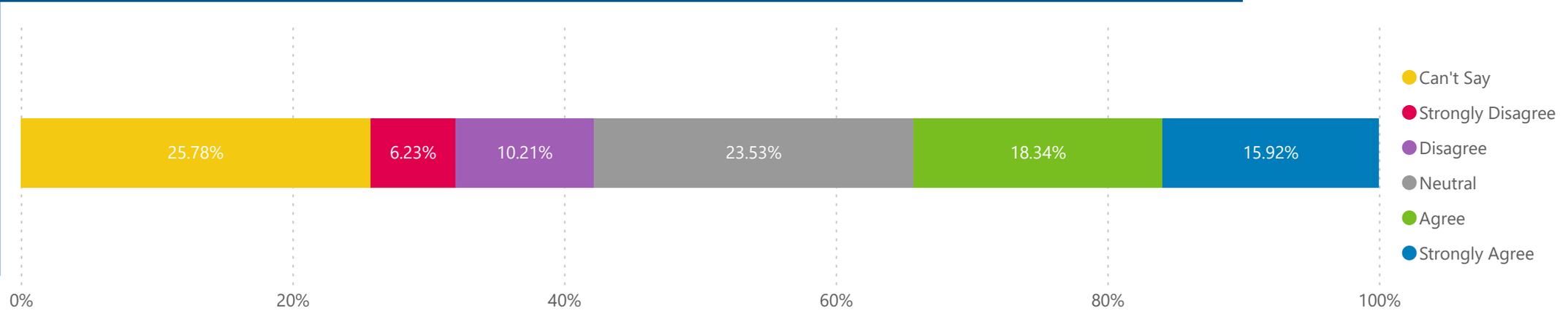
Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures

Responses
393
 Respondents
66



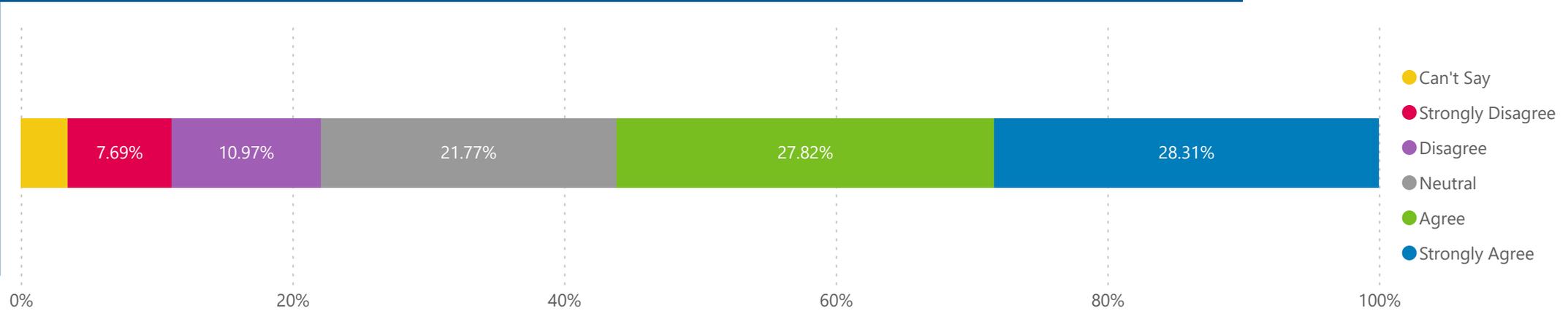
Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.20		3.37	67.41	149 25.8%
Q6 How important to you are the Hamilton Parks sites and services listed below?	1.03		4.18	83.61	6 9.0%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	1.11		3.68	73.62	18 27.7%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.17		3.48	69.60	16 24.2%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	1.06		3.31	66.18	9 14.1%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.16		3.23	64.65	20 31.7%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	1.21		3.17	63.40	21 30.9%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.19		3.13	62.50	24 37.5%
Q7 Do the following Hamilton Park sites and services meet your needs?	0.99		3.06	61.20	15 23.1%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.29		2.67	53.33	20 35.7%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces

Responses
543
 Respondents
70



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.24	3.60	72.03	21	3.4%
Q6 How important to you are the Hamilton Parks sites and services listed below?	0.69	4.68	93.62	1	1.4%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.08	4.00	80.00	1	1.5%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	1.05	3.80	76.00	5	7.7%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	1.21	3.73	74.55	2	2.9%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	1.18	3.64	72.73	2	2.9%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.05	3.61	72.17	1	1.4%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.17	3.54	70.88	7	10.9%
Q7 Do the following Hamilton Park sites and services meet your needs?	1.06	3.00	60.00	1	1.4%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.18	2.43	48.53	1	1.4%

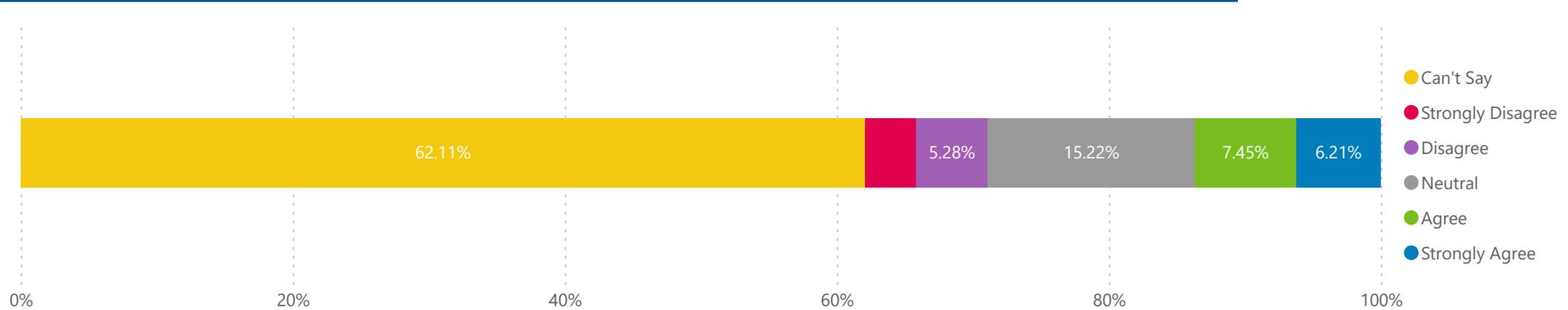
Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

Sales of interment rights, cemetery services and supporting products

Responses
110
 Respondents
45



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.16	3.19	63.77	200	62.1%
Q21 How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?	1.26	3.45	69.00	25	38.5%
Q20 How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?	1.26	3.31	66.15	51	79.7%
Q23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?	1.12	3.23	64.62	51	79.7%
Q22 How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?	1.26	3.17	63.33	46	71.9%
Q24 Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?	0.86	2.87	57.37	27	41.5%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

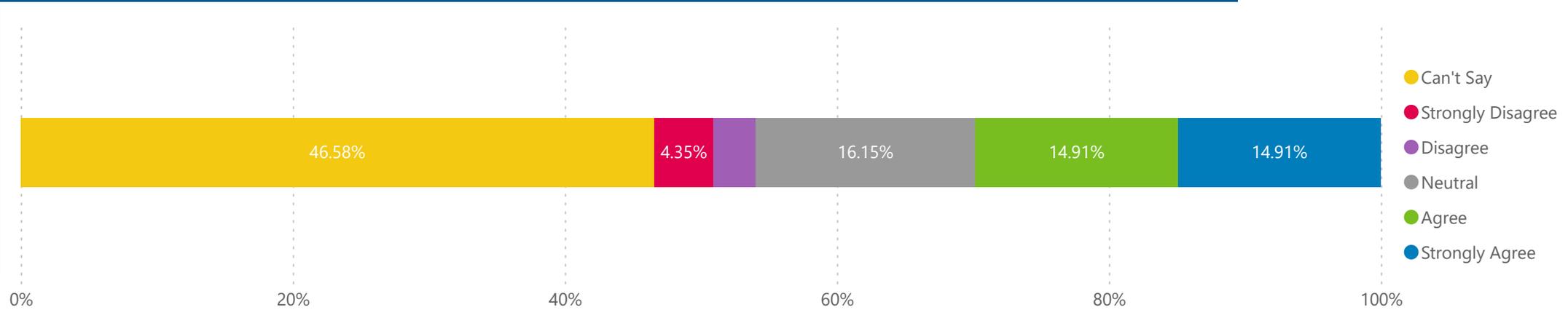
Maintenance and management of active and inactive cemeteries

Responses

158

Respondents

52



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.18	3.62	72.33	150	46.6%
Q21 How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?	1.01	4.09	81.70	18	27.7%
Q20 How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?	1.00	3.82	76.36	31	48.4%
Q22 How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?	1.47	3.58	71.67	40	62.5%
Q23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?	1.28	3.38	67.50	40	62.5%
Q24 Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?	1.00	3.11	62.27	21	32.3%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

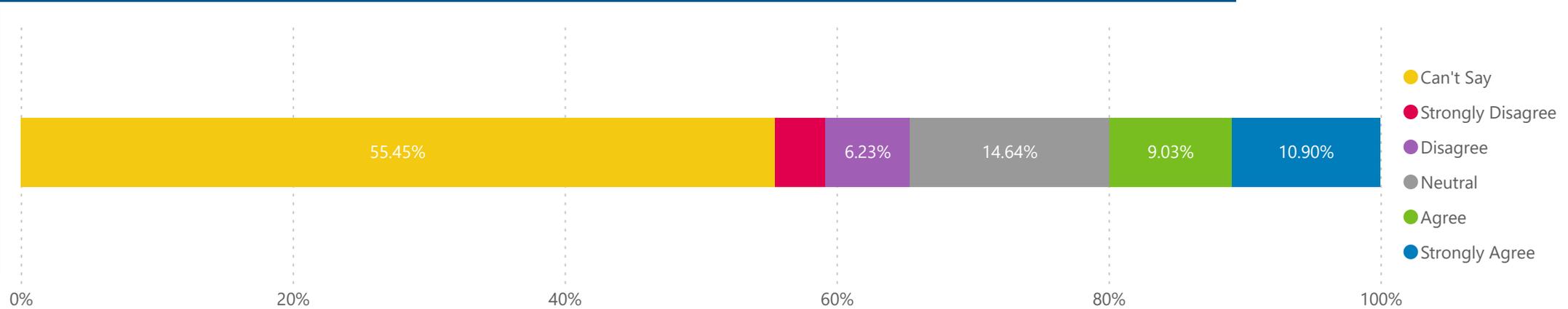
Historical family searches and walking tours

Responses

131

Respondents

50



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.23	3.38	67.69	178	55.5%
Q20 How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?	1.22	4.00	80.00	43	68.3%
Q22 How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?	1.33	3.57	71.43	43	67.2%
Q23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?	1.12	3.56	71.25	48	75.0%
Q21 How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?	1.21	3.36	67.27	21	32.3%
Q24 Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?	1.07	2.95	59.05	23	35.4%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

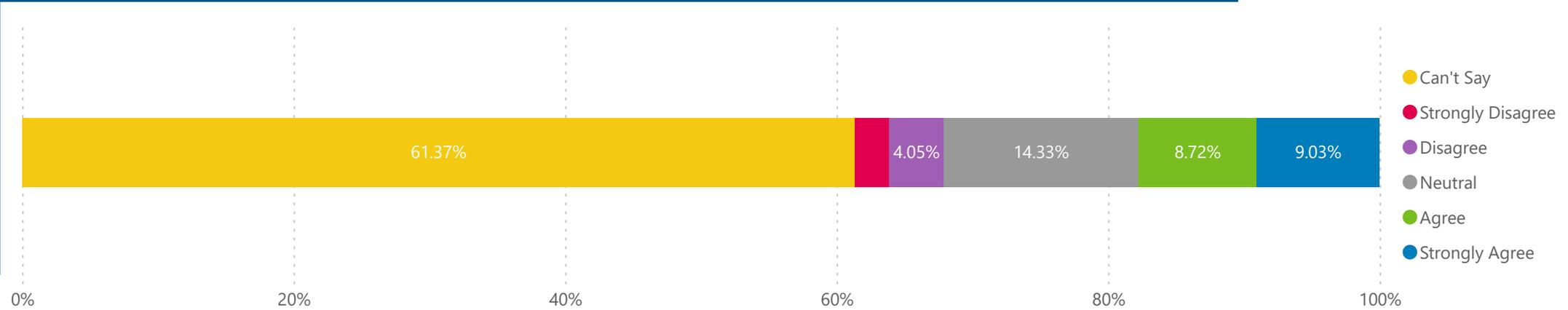
Graveside services, burials and interment

Responses

116

Respondents

45



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.15	3.46	69.19	197	61.4%
Q20 How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?	0.99	3.86	77.14	50	78.1%
Q21 How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?	1.14	3.80	76.00	25	38.5%
Q22 How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?	1.20	3.53	70.67	48	76.2%
Q23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?	1.16	3.31	66.25	48	75.0%
Q24 Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?	0.99	3.00	60.00	26	40.0%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

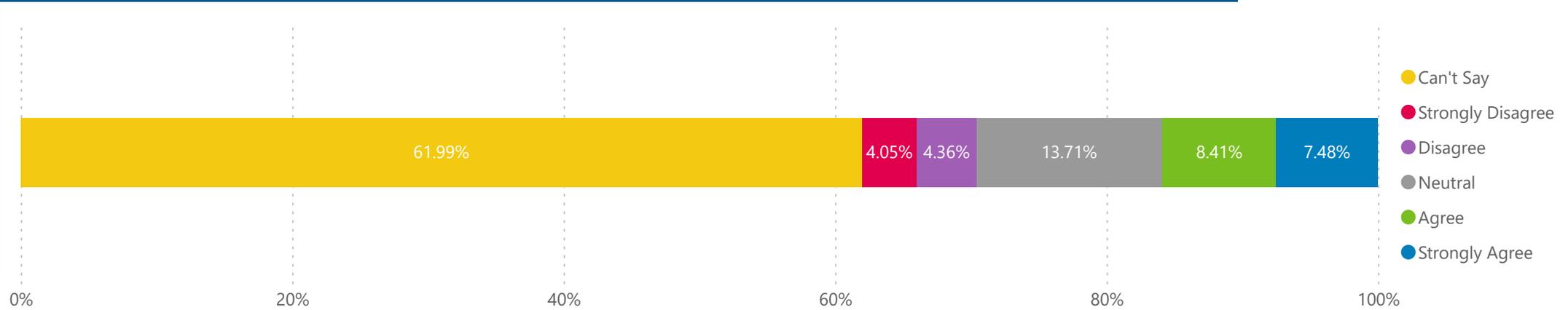
End of life planning services

Responses

109

Respondents

45



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.21	3.29	65.74	199	62.0%
Q21 How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?	1.18	3.55	71.00	25	38.5%
Q23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?	1.28	3.46	69.23	50	79.4%
Q20 How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?	1.24	3.43	68.57	50	78.1%
Q22 How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?	1.30	3.25	65.00	48	75.0%
Q24 Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?	1.07	2.92	58.46	26	40.0%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Data Grading Scales

Definition and Ranking of Consistency and Confidence

Grade		Data Consistency Standard Deviation (σ , Consistency of Responses)	Confidence Level Margin of Error (at 95% Confidence in Sample Size)
A	Very High	0 to 0.5 - results are tightly grouped with little to no variance in response	0% to 5% - Minimal to no error in results, can generally be interpreted as is
B	High	0.5 to 1.0 - results are fairly tightly grouped but with slightly more variance in response	5% to 10% - Error has become noticeable, but results are still trustworthy
C	Medium	1.0 to 1.5 - results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - Error is a significant amount and will cause uncertainty in final results
D	Low	1.5 to 2.0 - results show a high variance with a fair amount of disparity in responses	20% to 30% - Error has reached a detrimental level and results are difficult to trust
E	Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - Significant error in results, hard to interpret data in much of a meaningful way

$$\text{Margin of Error} = \frac{0.98}{\sqrt{n}}$$

Assigning a lower consistency value (Standard Deviation) to a higher grade doesn't imply that the data is "better" or "worse". Instead, it helps in understanding how divided or similar people are in their responses. When high consistency is observed, it indicates that most respondents agree on a question. But when the consistency is low, opinions are split, with some rating higher and others lower. The key is to understand why the split occurs which provides valuable insights into the data.

The margin of error is calculated using a standard factor of 0.98 and the sample size (n). The margin of error helps assess if the sample size of the survey is suitable. The margin of error, expressed as a percentage, indicates the range around the calculated sample average where the true population average is likely to be. A smaller margin of error suggests a more accurate estimate, while a larger one implies less precision.

Children's & Community Services Asset Management Plan 2024



CHILDREN'S & COMMUNITY SERVICES ASSET MANAGEMENT PLAN

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CHILDREN'S & COMMUNITY SERVICES ASSET MANAGEMENT PLAN

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CHILDREN'S & COMMUNITY SERVICES ASSET MANAGEMENT PLAN

SUMMARY AND QUICK FACTS



SERVICE PROFILE

The Children's & Community Services Division's goal is to develop a responsive, high quality, accessible and increasingly integrated system of programs and services for all citizens, youth, children, and families. To achieve this goal, the division oversees various portfolios, including: The Early Years system, direct services (programming), business supports (childcare system), performance, planning and evaluation (policy development), community strategies (human services) and Indigenous relations (Urban Indigenous Strategy).



ASSET SUMMARY

Replacement Value
\$10M

GOOD CONDITION

Average age of **99** years or **68%** of the average remaining service life



LEVEL OF SERVICE SUMMARY

- 91% of survey respondents agree that Red Hill Family Centre is clean and comfortable.
- 94% of survey respondents feel CCS provides quality services to its users.
- 90% of survey respondents feel CCS service locations are convenient and service hours meet their needs.

ASSET HIGHLIGHTS

ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION	STEWARDSHIP MEASURES
Facilities	1	\$10.1M	Good	Building Condition Assessments
Technology	197	\$171K	Poor	A formal inspection program is a continuous improvement item

DATA CONFIDENCE



CHILDREN'S & COMMUNITY SERVICES ASSET MANAGEMENT PLAN

DEMAND DRIVERS



- **Population change** – Hamilton’s population is projected to increase to approximately 680,000 by 2031. Population growth trend projection anticipates that there will be a demand for additional childcare facilities.

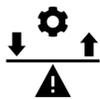


- **Financial factors** - Financial and economic considerations play a crucial role in the CCS division, which heavily relies on provincial grant funding. The availability of variable budgets influences the division's capacity to deliver programs and services to the public. As well, fluctuating economic conditions affecting users contribute to variations in the demand for services based on affordability.



- **Policy/regulatory factors** - Adjustments in government initiatives influence the costs of services, thereby impacting demand. An example of this is the Canada-wide Early Learning Childcare (CWELCC) initiative, which aims to reduce the cost of care to an average of \$12 per day. This cost reduction may lead to an increase in demand for childcare services.

RISK



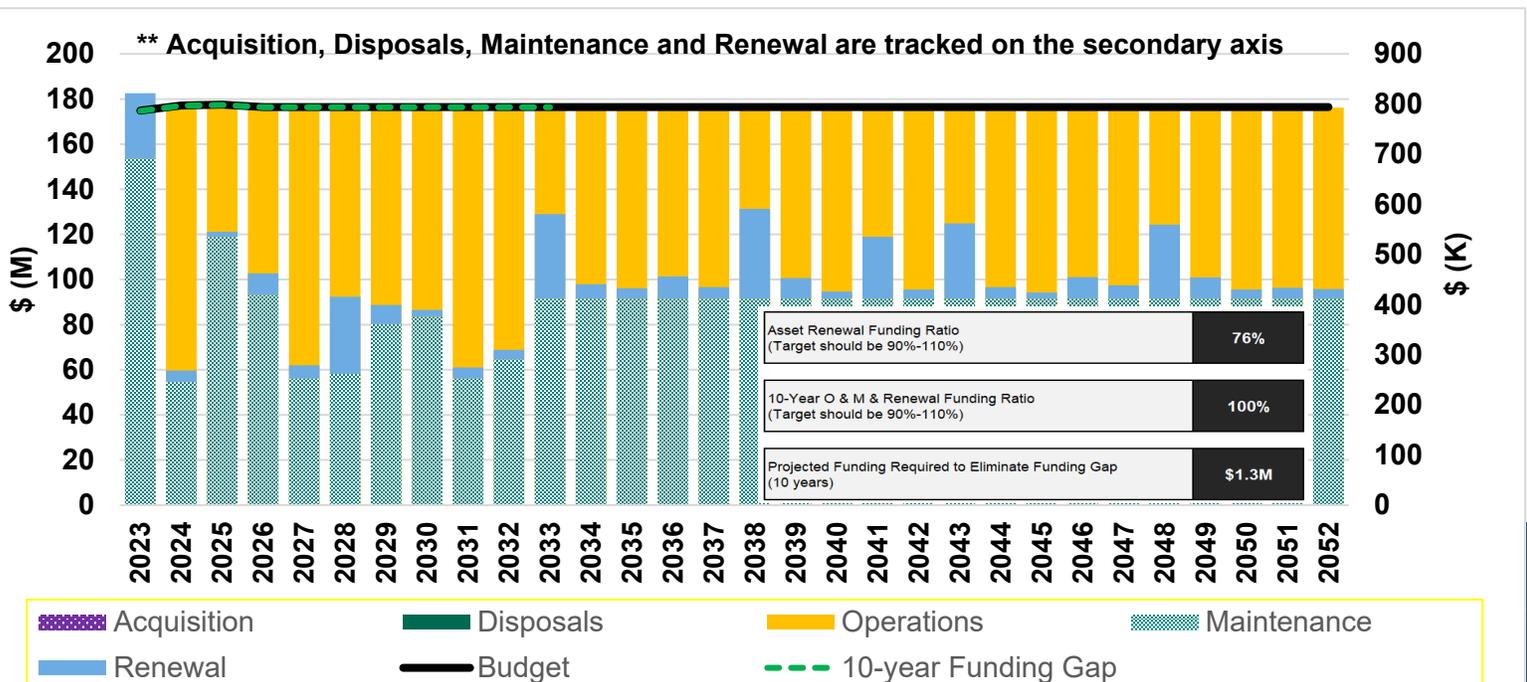
- No critical assets were identified as CCS’ operations are decentralized, with the majority of services provisioned through subcontracted locations not owned or staffed by the City.

CLIMATE CHANGE MITIGATION



- Retrofit Red Hill Family Centre to achieve 50% energy efficiency relative to 2016, by 2050.
- Post retrofit, change heat pumps in buildings for space and water heating, by 2050.

LIFECYCLE SUMMARY



CHILDREN'S & COMMUNITY SERVICES ASSET MANAGEMENT PLAN

1. INTRODUCTION

Children's & Community Services (CCS) works with community partners and teams to develop collaborative strategies and approaches that foster a sense of belonging and enhance the lives of children, youth, families, and residents of the City of Hamilton. The purpose of this Asset Management Plan (AM Plan) is to ensure that Children's & Community Services has the required assets to deliver their services to the City.

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements as stated in O.Reg 588/17¹, and required funding to provide the appropriate levels of service over the 2023-2052 planning period.

Since Sunday, February 25, 2024, the City of Hamilton experienced a cyber incident that disabled some of the IT systems. As a result, this AM Plan was created based on the data that was accessible at the time of publication.

¹ (Government of Ontario, Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure, 2017)

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2. BACKGROUND

The information in this section is intended to provide background on the CCS service areas by providing a service profile, outlining legislative requirements, and defining the asset hierarchy used throughout the report. This section will provide the necessary background for the remainder of the AM Plan.

Listed below are related documents reviewed in preparation of the Asset Management Plan:

- Asset Management Plan Overview Document;
- 2022-2027 Youth Strategy Report;
- Community Safety and Well-Being (CSWB) Plan;
- Urban Indigenous Strategy (UIS) & Indigenous Relations Updates;
- Early Years Community Plan 2023 Update;
- 2024 Ontario Child Care and EarlyON Child and Family Centres Service Management and Funding guidelines;
- Building Safer Communities Multi-Year Plan; and,
- Canada-Wide Early Learning & Childcare Guidelines.

Additional financial-related documents are identified in **Section 10.2**, Plan Improvement and Monitoring.

2.1 SERVICE PROFILE

The service profile consists of four main aspects of the service:

- Service History;
- Service Function;
- Users of the Service; and,
- Unique Service Challenges.

2.1.1 SERVICE HISTORY

The Children's & Community Services Division adopted its current name in 2022 but has a long history of providing services and support for children and families despite name changes and reorganizations. It was formerly recognized as the Children's Services and Neighbourhood Development Division, following the amalgamation of the Neighbourhood and Community Initiatives Division and the Children's and Home Management Services Division in 2018.

Since 2001, the City of Hamilton has functioned as the Service System Manager for the child care system. In 2018, the City of Hamilton also assumed the role of Service System Manager for the Early Years System, as required by the Child Care and Early Years Act, 2014 (CCEYA)². As the Service System Manager (SSM) for the Child Care and Early Years System in the City of Hamilton, Children's and Community Services Division (CCSD) is responsible for

² (Government of Ontario, Child Care and Early Years Act, 2014, S.O. 2014, c. 11, Sched. 1, 2021)

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implementing the Canada-Wide Early Learning and Child Care ³(CWELCC) agreement at a local level.

2.1.2 SERVICE FUNCTION

The Children's & Community Services Division's goal is to develop a responsive, high-quality, accessible and increasingly integrated system of programs and services for all citizens, youth, children, and families.

To achieve this goal, the Division oversees various portfolios, including:

Early Years System – This section is responsible for planning, funding, and monitoring the early years system. These responsibilities are outlined in the Child Care and Early Years Act and the Ministry of Education's annual service management and funding guidelines. All services align with Hamilton's Early Years Community Plan. This includes:

- a) **Canada-Wide Early Learning and Child Care** - All licensed child care programs participating in the Canada-Wide Early Learning and Child Care system receive funding to support family fee reductions, workforce compensation and cost escalation. All new child care spaces are approved through a directed growth application process and must align with the City of Hamilton Access and Inclusion Framework. Licensed Child Care programs apply for a funding agreement with the City of Hamilton which outlines the accountabilities for funding and monitoring.
- b) **Hamilton Early Years Quality Program** - The Hamilton Early Years Quality Program is a framework and process to guide continuous quality assurance for organizations providing early years programs through Funding Agreements with the City of Hamilton. The purpose of the program is to collectively make Hamilton the best place to raise a child and the best place to be a child, by cultivating high-quality early years programs and services where children, families and educators are viewed as capable and competent.
- c) **Special Needs Resourcing** – Delivers inclusive services to ensure that licensed child care locations across the city can deliver the appropriate level of service for children with special needs, including staff, equipment, and supplies.
- d) **EarlyON Child and Family Centre** - EarlyON Child and Family Centres offer free, high-quality programs for families and children from prenatal to 6 years old.

Direct Services - This section is responsible for serving the public, specifically, children, families, youth, and vulnerable adults. Program areas include:

- a) **Red Hill Family Centre** - The Red Hill Family Centre is the City's only directly operated licensed Child Care Program. Red Hill Family Centre is an inclusive family-based child care centre for children 18 months to four years. The staff team includes Registered Early

³ (Ministry of Education, Canada-wide Early Learning and Child Care System Guidelines, 2022)

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Childhood Educators and Resource Teachers who support the inclusion and well-being of all children.

- b) **Home Management** - The Home Management Program is responsible for teaching individuals, families and groups through practical instruction and coaching, the life skills necessary for day-to-day living. Activities include, but are not limited to, basic budgeting, advocacy and community support, goal setting, time management, basic nutrition and meal planning, and household management.
- c) **Child Care Fee Subsidy** – This team is responsible for determining financial assistance for eligible families enrolling in licensed child care settings. This team is also the primary referral source for children identified with special needs.
- d) **Learning, Earning, and Parenting (LEAP)** - The LEAP teams work with families in receipt of Ontario Works. The goal is to develop individual support plans including financial support so participants can obtain their high school diploma.
- e) **Xperience Annex** – This team works with youth aged 14 to 29 years to assist them in getting connected to community services and support.

Business Supports – This section is responsible for planning and funding for the licensed child care system and ensures operational compliance with all applicable legislation, policies, contracts, agreements, regulations, and guidelines. Activities include the development and integration of division-wide strategies, system analysis and decision support, business procedures and processes and database management to support long-range planning, consultation, and service delivery.

Performance, Planning and Evaluation – This section is responsible for providing a broad range of services that support Divisional, Departmental and Corporate program planning, policy development, evidence-based decision-making, evaluation, and community capacity building and development. They ensure coordinated and integrated policy development and evaluations of programs and service delivery (including customer satisfaction evaluations), in order to improve program effectiveness and/or efficiencies. This section also leads the Division's Equity, Diversity, Inclusion and Belonging work across the early years system.

Community Strategies – This section is responsible for strengthening community safety and well-being through effective planning, strategies and governance across the human services. More specifically, this includes:

- a) **Community Safety and Well-Being Plan** which is mandated as part of the Community Safety and Policing Act, 2019⁴, and supports safe and healthy communities through a community-based approach to addressing root causes of complex social issues across four key areas: social development, prevention, risk intervention, and incident response.

⁴ (Government of Ontario, Community Safety and Policing Act, 2019, S.O. 2019, c. 1, Sched. 1, 2024)

- b) **Building Safer Communities Multi-Year Plan⁵** identifies community-based prevention and intervention strategies and initiatives to tackle gun and gang activities amongst youth in Hamilton.
- c) **Hate Prevention and Mitigation Plan** reinforces shared positive values, creating effective policies and building our community resilience.
- d) **Youth Strategy** maps out a plan for how the City will engage youth aged 14-29 years and address the issues they face in Hamilton.
- e) **Hamilton's Early Years Community Plan⁶** is designed to move our local Early Years System towards integration, transformation and seamless transitions for children and their families from birth to young adulthood.

Indigenous Relations – This section is responsible for the implementation of the Urban Indigenous Strategy⁷ which is working to carry out the Calls to Action for the Truth and Reconciliation Commission of Canada and the Missing and Murdered Indigenous Women and Girls (MMIWG) Calls to Justice at the local level. This team supports corporate strategy by helping to promote a better understanding among all residents about Indigenous histories, cultures, experiences, and contributions and is responsible for strengthening the City's relationship with the Indigenous community.

2.1.3 USERS OF THE SERVICE

Users of the services provided by Children's & Community Services primarily consist of families and their children, youth, and vulnerable persons. Additional users include individual adults engaging with services such as the Home Management Program. It is important to note that there are eligibility requirements for the services provided.

Table 1: Direct Service Eligibility Requirements

DIRECT SERVICES	ELIGIBILITY REQUIREMENTS
Red Hill Family Centre	Children aged 18 months to 4 years
Home Management	Income testing based on Low Income Cut-Off (LICO)
Child Care Fee Subsidy	Reason for service plus income testing based on Notice of Assessment (NOA)

⁵ (City of Hamilton, Building Safer Communities Grant, 2023-2026)

⁶ (City of Hamilton, Early Years Community Plan, 2023)

⁷ (City of Hamilton, Urban Indigenous Strategy, 2019)

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DIRECT SERVICES	ELIGIBILITY REQUIREMENTS
Learning, Earning, and Parenting	Ontario Works recipients; 26 years of age and under with child(ren) that needs a high school diploma
Xperience Annex	Ages 18-29

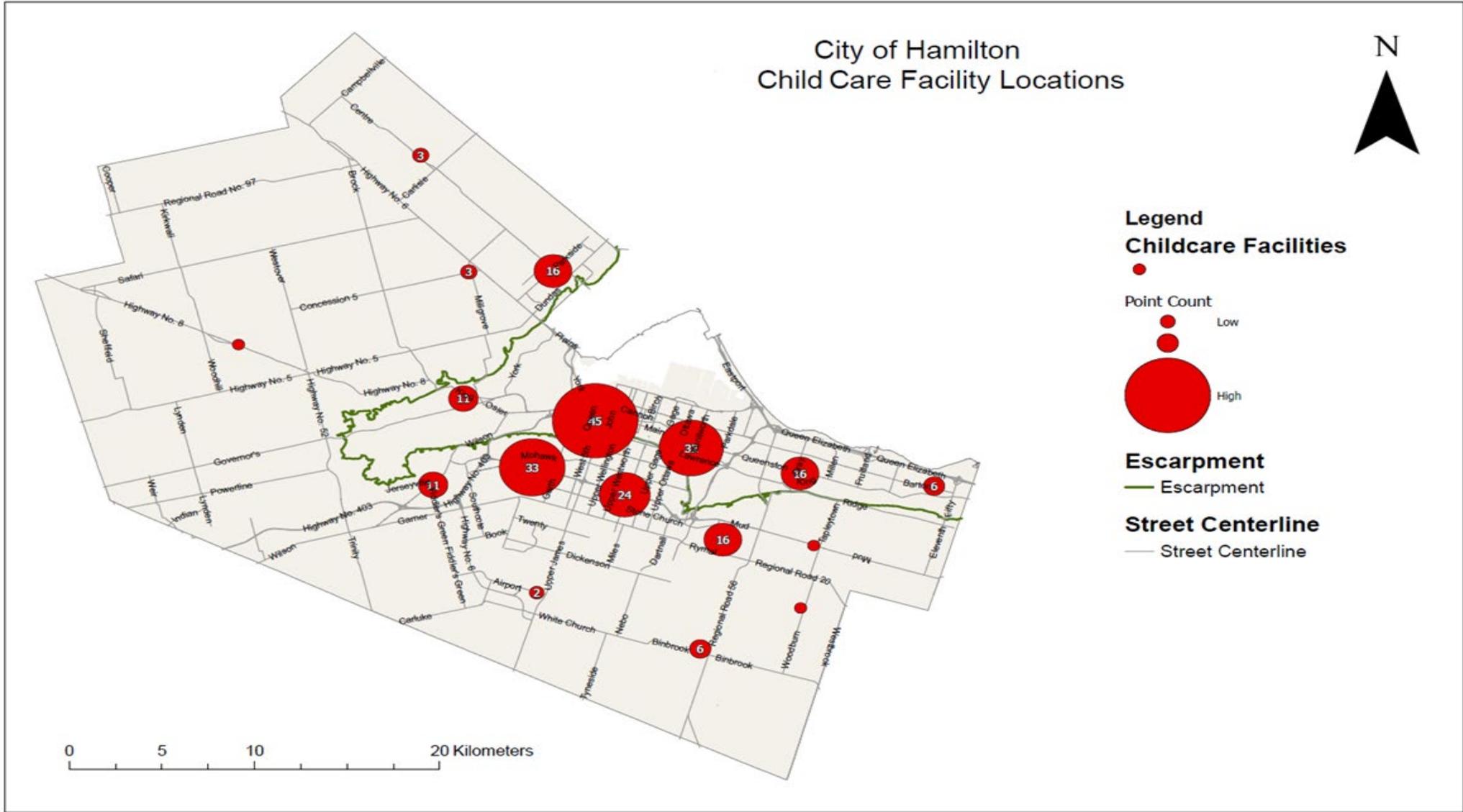
Community partners and organizations, as well as internal partners, also benefit from the services offered by Children’s & Community Services, participating in service initiatives and collaborating with the aim of building community capacity. This collaborative approach extends the impact of the services beyond individual users to enhance the broader community support network. Though the extent of these partnerships has not been fully quantified, the breadth of the organizations engaged is well into the hundreds.

A map of licensed Home and Centre based Child Care locations is displayed in **Figure 1**. Child Care Centres care for infants, toddlers, pre-school and school-aged children. They include nursery schools, full-day care, extended hours care, and before and after school programs. Child care centres operate out of a variety of locations including workplaces, community centres, schools, and places of worship. Home-based childcare locations provide care for children 0-12 in smaller group sizes in homes that are licensed and located throughout the city.

A map of EarlyON Child and Family Centre locations is displayed below in **Figure 2**. EarlyON Child and Family Centres offer free, high-quality programs for families and children from prenatal to 6 years old. They offer various activities and resources such as playgroups, parenting workshops, early learning programs, and connections to community services. These centres focus on supporting families in their parenting journey, promoting early learning and development, and fostering social connections among families with young children.

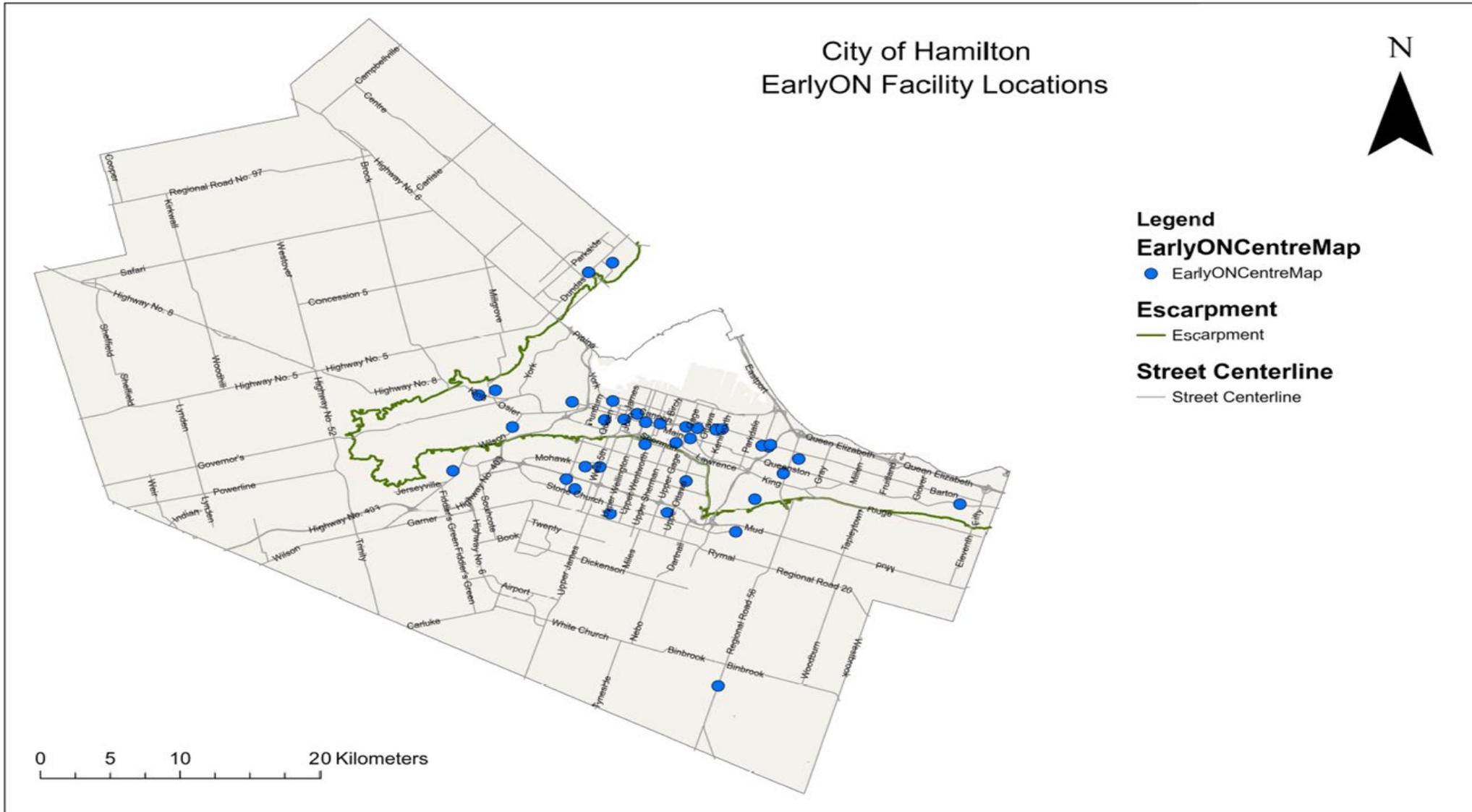
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Figure 1: City of Hamilton Child Care Locations



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Figure 2: City of Hamilton EarlyON Facility Locations



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2.1.4 UNIQUE SERVICE CHALLENGES

The main service challenge for the CCS group is the financial variability due to heavy reliance upon funding from sources outside of the City budget (e.g., provincial, and federal funding). With annual changes to funding structures outside their control, financial stability presents the most unique service challenge.

Additionally, the CCS group relies heavily on internal and external partnerships to overcome system challenges and ensure optimal service delivery often without sustainable resources. This interdependence underscores the complexity of the CCS work and the importance of cohesive partnerships.

Furthermore, while the CCS group is funded to be the service system manager for the early years system in Hamilton; the CCS division also plays a critical leadership role in planning for broader human services systems. Specific funding for broader human services planning has been identified as a limitation, as it does not encompass the breadth of support desired. This iteration of the AM plan is limited to current levels of service and does not address optimizing resources to deliver the desired level of service. This will be discussed in future iterations of the plan and has been noted as a continuous improvement item in **Section 10.2**.

Lastly, the lack of early childhood educators (ECEs) poses a unique service challenge for both the licensed child care system and the EarlyON Child and Family Centre system. This challenge requires strategic solutions to address workforce constraints in providing quality child care services and operating at full licensed capacity to meet the growing demand for available space.

2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of Children’s & Community Services are outlined in **Table 2**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

Table 2: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENT
Child Care and Early Years Act (CCEYA) ⁸	Requirements related to the operation of childcare centres and home childcare (e.g., staff ratios, group sizes, etc.).
Ontario Works (OW) Act⁹	Criteria to determine financial assistance eligibility for families attending licensed childcare programs and the Learning, Earning and Parenting Program (LEAP).

⁸ (Government of Ontario, Child Care and Early Years Act, 2014, S.O. 2014, c. 11, Sched. 1, 2021)

⁹ (Government of Ontario, Ontario Works Act, 1997, S.O. 1997, c. 25, Sched. A, 2023)

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LEGISLATION OR REGULATION	REQUIREMENT
Ontario Child Care and EarlyON Child and Family Centres Service Management and Funding Guidelines¹⁰	Guidelines on the administration and funding of child care and EarlyON Child and Family Centres services in Ontario.
Homemakers and Nurses Services Act¹¹	Teaching/coaching families and groups life skills for day-to-day living.
Community Safety and Policing Act (2019)¹²	Collaboratively develop and implement a comprehensive strategy addressing local priorities for crime prevention, social development, and community well-being.
Canada-Wide Early Learning and Child Care Guidelines¹³	Guidelines on the administration and funding of Child Care and Early Years services.

2.3 ASSET HIERARCHY

In order to deliver their services, Children’s & Community Services requires assets. The Children’s & Community Services Service Area has been broken down into three asset classes for the purpose of this AM Plan:

- **Facilities:** refers to any City-owned facilities necessary to deliver Children’s & Community Services.
- **Equipment:** refers to all equipment used for Children’s & Community Services.
- **Technology:** describes the different types of technology required to deliver the services including communications, IT, desktop, and mobile equipment.

¹⁰ (Ministry of Education, Ontario Child Care and EarlyON Child and Family Centres Service Management and Funding Guidelines , 2023)

¹¹ (Government of Ontario, Homemakers and Nurses Services Act, R.S.O. 1990, c. H.10, 2020)

¹² (Government of Ontario, Community Safety and Policing Act, 2019, S.O. 2019, c. 1, Sched. 1, 2024)

¹³ (Ministry of Education, 2024 Canada-wide Early Learning and Child Care Guidelines, 2024)

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Table 3: Asset Class Hierarchy

SERVICE AREA			
ASSET CLASS	FACILITIES	EQUIPMENT	INFORMATION TECHNOLOGY
Asset	Red Hill Family Centre Lister Block (Leased Space)	Indoor Equipment Outdoor Equipment	Computers Laptops Mobile Devices

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3. SUMMARY OF ASSETS

This section provides a detailed summary and analysis of the existing inventory information as of February 2024 including age profile, condition methodology, condition profile, asset usage, and performance for each of the asset classes.

Table 4 displays the detailed summary of assets for Children's & Community Services (CCS). The sources for this data are a combination of data included in the City's databases. It is important to note that inventory information does change often and that this is a snapshot of information available as of February 2024.

The City owns approximately \$10.6M worth of CCS assets, which are generally in good condition. These assets have an average age of 99 years, comprising 68% of their average remaining service life (RSL). The Red Hill Family Centre asset holds significant weight in these averages, accounting for 95% of the total asset value, making it the primary asset in terms of dollar value. For most assets, this means that the City should be completing preventative maintenance activities and any necessary operating activities (e.g., inspection, cleaning) to prevent premature failures.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. It is also important to note that AM Plans only include asset information related to assets that the City owns. Operational costs related to the management of programs run by external providers are incorporated into operational costs but are not incorporated into the total replacement cost for the service. In addition, the assets included below are assets that are assumed and in service at the time of writing.

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Table 4: Detailed Summary of Assets
***Weighted Average based on Replacement Cost**

FACILITIES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AGE	EQUIVALENT CONDITION
Red Hill Family Centre	1	\$10.1M	104	2 – GOOD
Data Confidence	Very High	High	Very High	High
TECHNOLOGY				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE	AVERAGE EQUIVALENT CONDITION
Mobile Devices	106	\$0.047M	2	4 - POOR
Data Confidence	High	Medium	High	Low
Desktops, Laptops, Tablets	91	\$0.12M	4	4 - POOR
Data Confidence	High	Medium	High	Low
SUBTOTAL	197	\$0.17M	3*	4 – POOR*
DATA CONFIDENCE	High	Medium	High	Low
EQUIPMENT				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE	AVERAGE EQUIVALENT CONDITION
Appliances & Furniture	204	\$0.14M	8	3 - FAIR
Data Confidence	Medium	Low	Low	Low
Classroom Toys/Equip. & Outdoor Play Structures	1315	\$0.2M	6	3 - FAIR
Data Confidence	Medium	Low	Low	Low
SUBTOTAL	1519	\$0.34M	7	3 – FAIR*
DATA CONFIDENCE	Medium	Low	Low	Low
TOTAL		\$10.6M	99 (68%)*	3 – GOOD*
DATA CONFIDENCE		Medium	High	Medium

The overall replacement value data confidence for the registry is Medium. For facilities, these replacement costs are calculated using an internal tool which encompasses current market rates, building type and size. Equipment and Technology Assets replacement costs were gathered from the most recent purchase price for similar assets. Please refer to **page 31** of the AM Plan Overview¹⁴ for a detailed description of data confidence.

¹⁴ (City of Hamilton, 2022)

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3.1 ASSET CONDITION GRADING

Condition refers to the physical state of the CCS assets and is a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, **Table 5** below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in **Table 22**, is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

Table 5: Equivalent Condition Conversion Table



EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	FACILITIES CONDITION INDEX (FCI)
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance is required only.	>79.5%	N/A
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on the asset’s usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	< 5%
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset usage. Minor to significant maintenance is required.	39.5% - 69.4%	>= 5% to < 10%
4 Poor	The asset has significant defects and deterioration. Deterioration has an impact on asset usage. Rehabilitation or major maintenance is required in the next year.	19.5% -39.4%	>= 10% to <30%
5 Very Poor	The asset has serious defects and deterioration. The asset is not fit for use. Urgent rehabilitation or closure is required.	<19.4%	>= 30%

The following conversion assumptions were made:

- Facilities Condition Index was based on ranges provided by the consultant who completed the Building Condition Assessment (BCA).
- For Equipment assets, a letter grade (A/B/C) was provided as an estimate by Red Hill Family Centre Staff, which was converted into the 5-point scale.
- For Information Technology assets, the condition was based on the % of remaining service life.

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3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile, and Performance Issues for each of the asset classes.

- The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life (ESL) where they can be planned for replacement. Some lower-cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if an asset's condition is based on age, it is typically considered to be of a low confidence level. Although typically, age is used when projecting replacements beyond the 10-year forecast to predict degradation.
- Condition refers to the physical state of assets and is a measure of the physical integrity of assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected/assessed at different frequencies and using different methodologies to determine their condition which are noted in this section.
- Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

3.2.1 FACILITIES PROFILE

The CCS division currently operates one building, which is owned by the City, the Red Hill Family Centre (RHFC). The CCS division is the sole occupant of the building, which is situated at 25 Mount Albion Road, constructed in 1919. This building serves as both an office space for staff and a child care facility where high-quality care is provided. Additionally, the CCS division leases space for its staff on portions of the 5th and 6th floors of Lister Block at 28 James Street North. Although CCS does not hold ownership of the Lister Block building, operational costs related to the floor area's utilization are included where applicable, with the facility being excluded from asset scope.

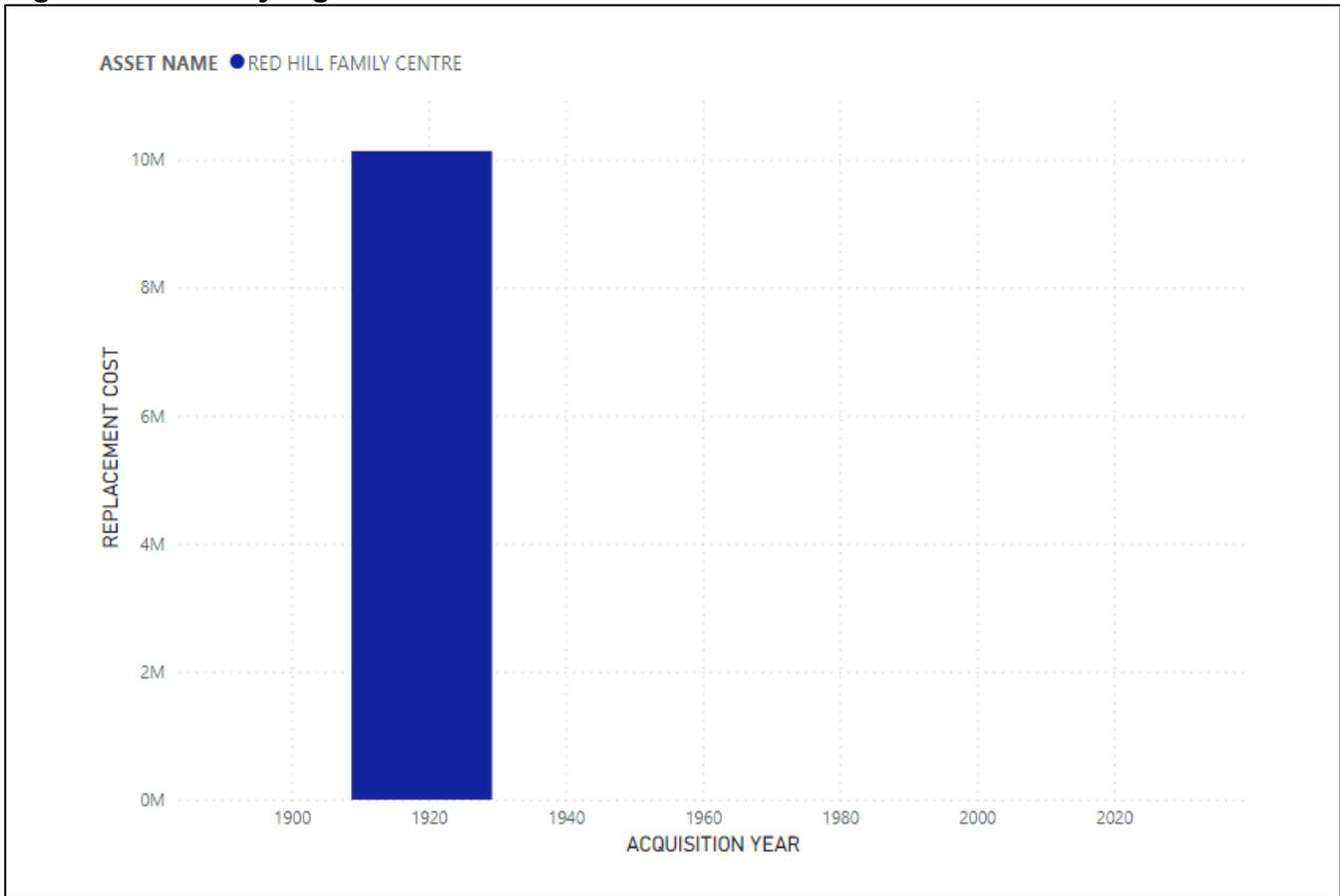
3.2.1.1 AGE PROFILE

The age profile for the CCS facility is shown in **Figure 3** below. For facility assets, the data confidence for age is typically considered Very High, as this information was recorded during the construction of the facilities. Estimates for building replacement costs are sourced internally, utilizing data provided by the facilities division.

Typically, the Estimated Service Life (ESLs) of City facilities is between 50 and 75 years. The RHFC was constructed in 1919, therefore the facility would be considered beyond its ESL. Based on a review of the BCA results, and consultation with facility management and CCS staff, the ESL of the RHFC has been extended to 150 years, with the possibility of reviewing and adjusting this value in future iterations of the AM plan.

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Figure 3: Facility Age Profile



3.2.1.2 CONDITION METHODOLOGY & PROFILE

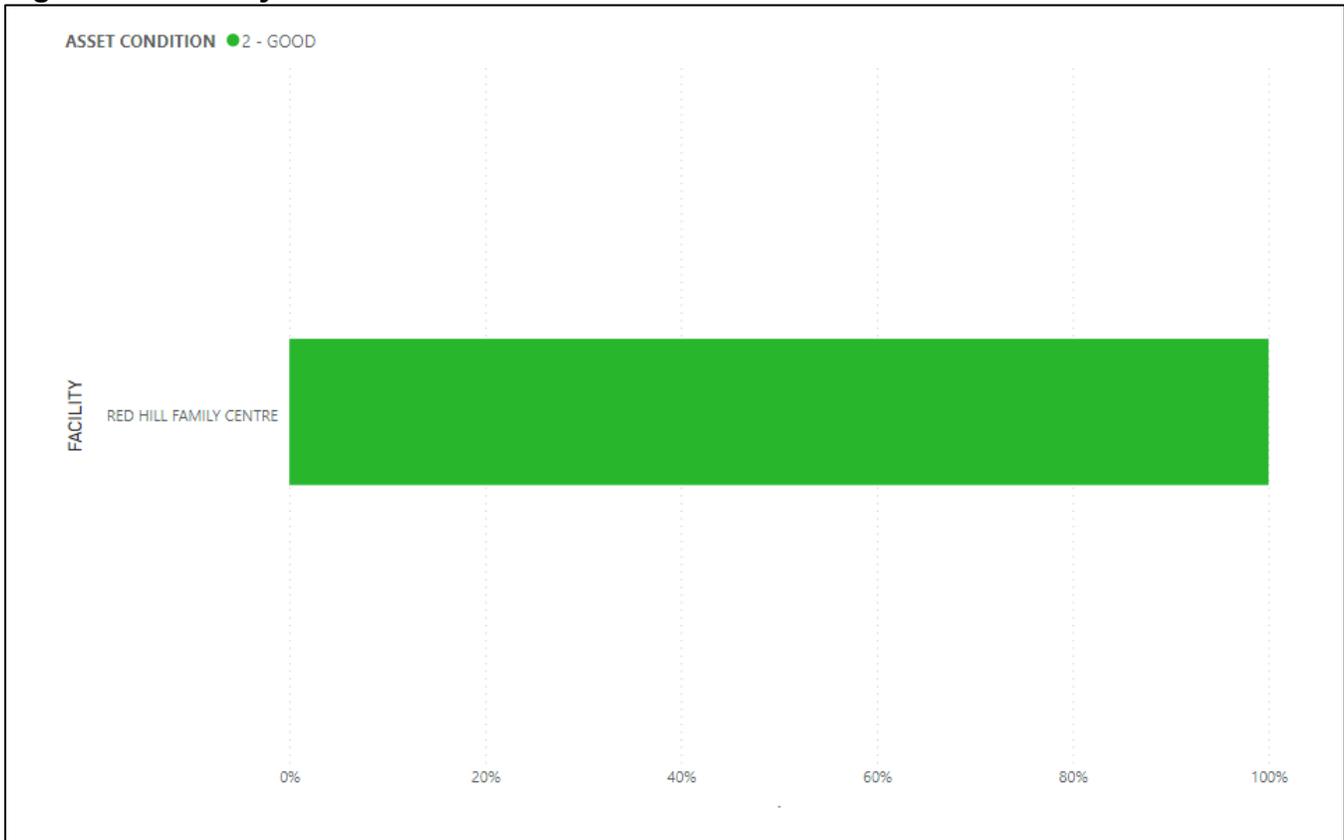
The facility condition is determined based on the results of a BCA report completed by external consultants. BCAs are typically completed on facilities every five years and output a score called a Facility Condition Index (FCI) which is considered to be a high confidence level source. The FCI is calculated based on a ratio of the cost of work currently required on the facility to the total replacement cost of the facility. The most recent building condition assessment was completed on the Red Hill Family Centre by WalterFedy in 2020, which provided in an FCI rating of 5 percent (i.e., 2-GOOD).

Table 6: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Red Hill Family Centre	Every Five Years	2020	Facility Condition Index (0% - 100%)

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Figure 4: Facility Condition Distribution



3.2.1.3 ASSET USAGE AND PERFORMANCE

A sample of the known deficiencies is shown in **Table 7** and has been identified using information from the 2020 BCA report. These deficiencies were recommended as repairs/replacements to occur in the year 2023. Deficiencies remediated since the 2020 BCA report findings have been excluded.

Table 7: Known Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Facility	Red Hill Family Centre	Built-up Roof Bubbling	Replacement of the built-up portion of the roof is recommended at the end of its expected service life.
		Exterior Masonry Cracking/Efflorescence	Repointing/replacement of the masonry walls is recommended as needed.

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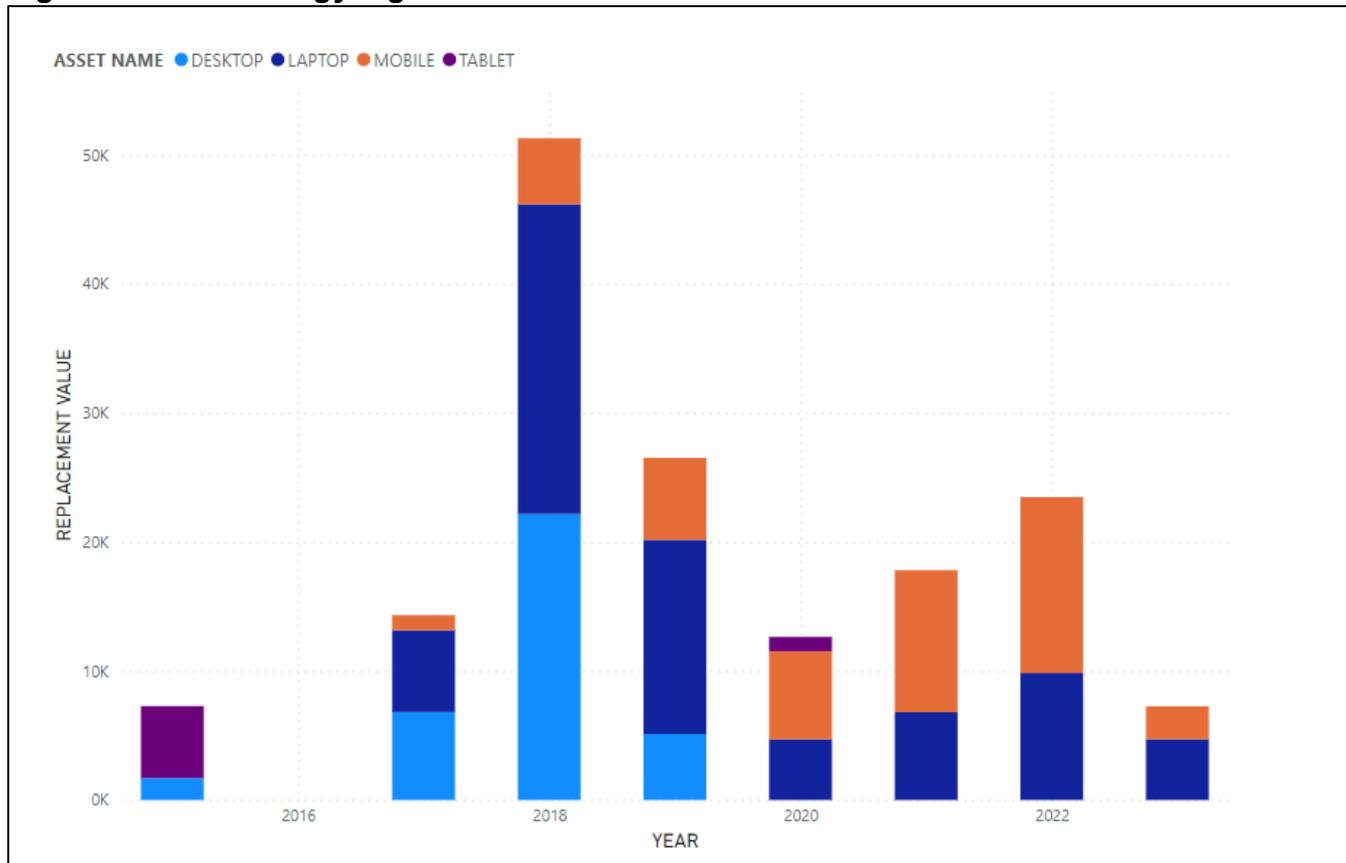
ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
		Delamination of the parking to the exterior of the foundation	Reapply parking in affected areas.
		Interior lighting inefficiency	Replace the interior lighting system with LED equivalent as an energy conservation measure.

3.2.2 TECHNOLOGY PROFILE

3.2.2.1 AGE PROFILE

The age profile of the Technology assets is shown in **Figure 5**. Replacement costs are estimated based on market pricing for the modern equivalent assets. Age data is provided internally through the City’s IT division.

Figure 5: Technology Age Profile

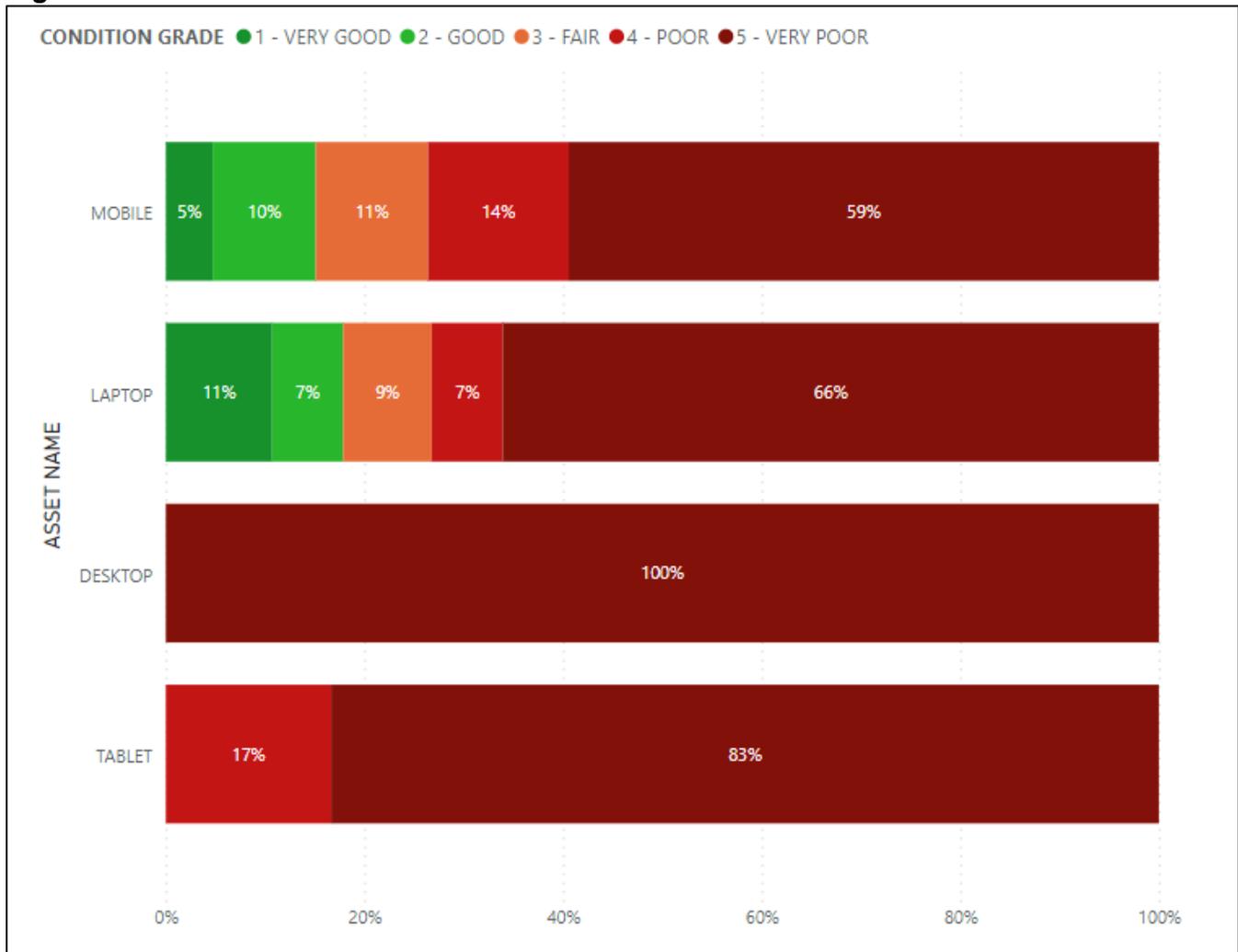


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3.2.2.2 CONDITION METHODOLOGY & PROFILE

The condition profile of the City’s assets is shown in **Figure 6**. The majority of technology assets do not have a formal inspection program which has been identified as a continuous improvement item in **Table 22**. Currently, conditions of the IT assets are determined using an estimate based on age. Due to the condition rating methodology, a significant amount of assets are classified as “poor” or “very poor” due to nearing or surpassing their ESL. However, it should be noted that this classification does not necessarily imply that these assets are not in acceptable working condition.

Figure 6: IT Asset Condition Profile



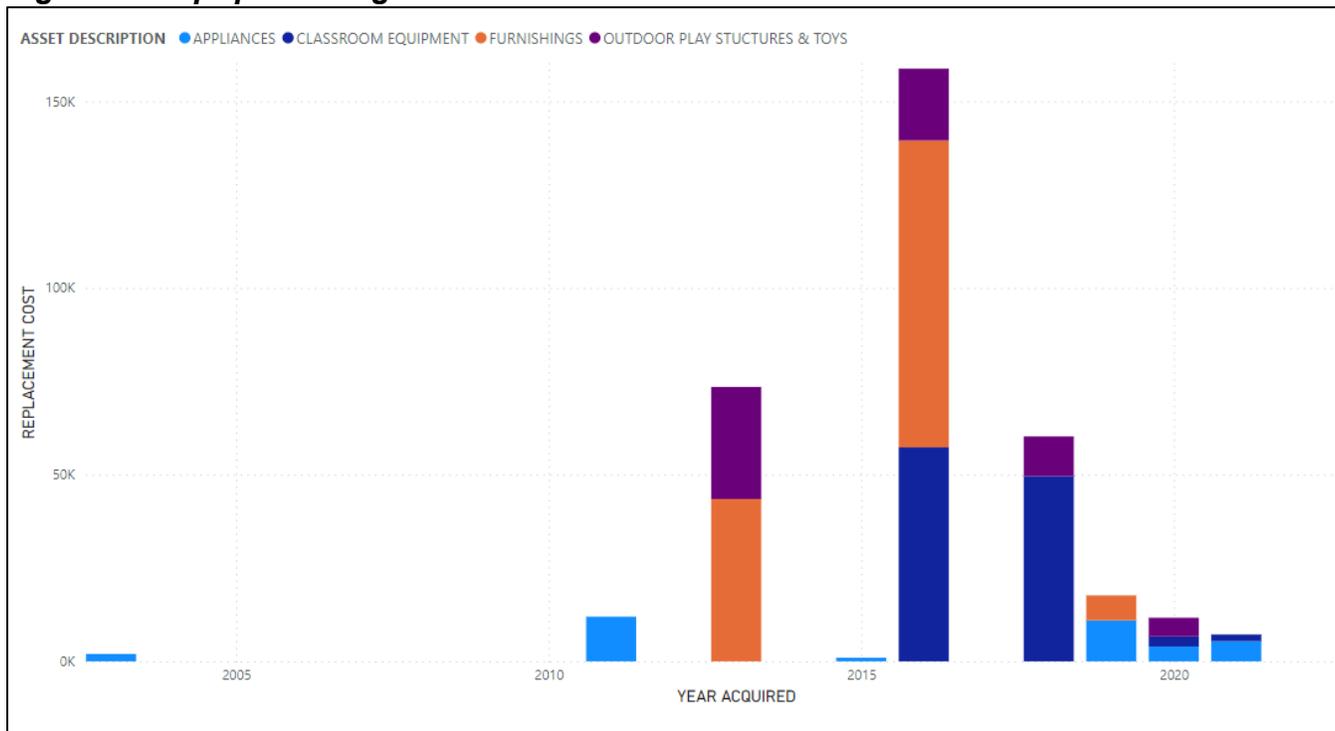
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3.2.3 EQUIPMENT PROFILE

3.2.3.1 AGE PROFILE

The age profile of the equipment assets is shown in **Figure 7**. This inventory is exclusive to equipment housed at the RHFC. Staff provided an estimate of the age, quantity, and replacement value of the equipment included. Where estimated replacement values and ESLs were not provided, the best approximation was used based on researched market data. A more robust equipment inventory and tracking system has been identified as a continuous improvement item.

Figure 7: Equipment Age Profile



3.2.3.2 CONDITION METHODOLOGY & PROFILE

No formal inspection program exists for the equipment assets. Equipment conditions are monitored with use and replaced on an as-needed basis. Estimated condition scores for the equipment were provided by the asset owners for purposes of this report in August of 2023. Conditions were provided using a grading score of A/B/C, which was then converted to match the asset management 5-point scale with the following conversion:

- A = 2 – GOOD
- B = 3 – FAIR
- C = 4 – POOR

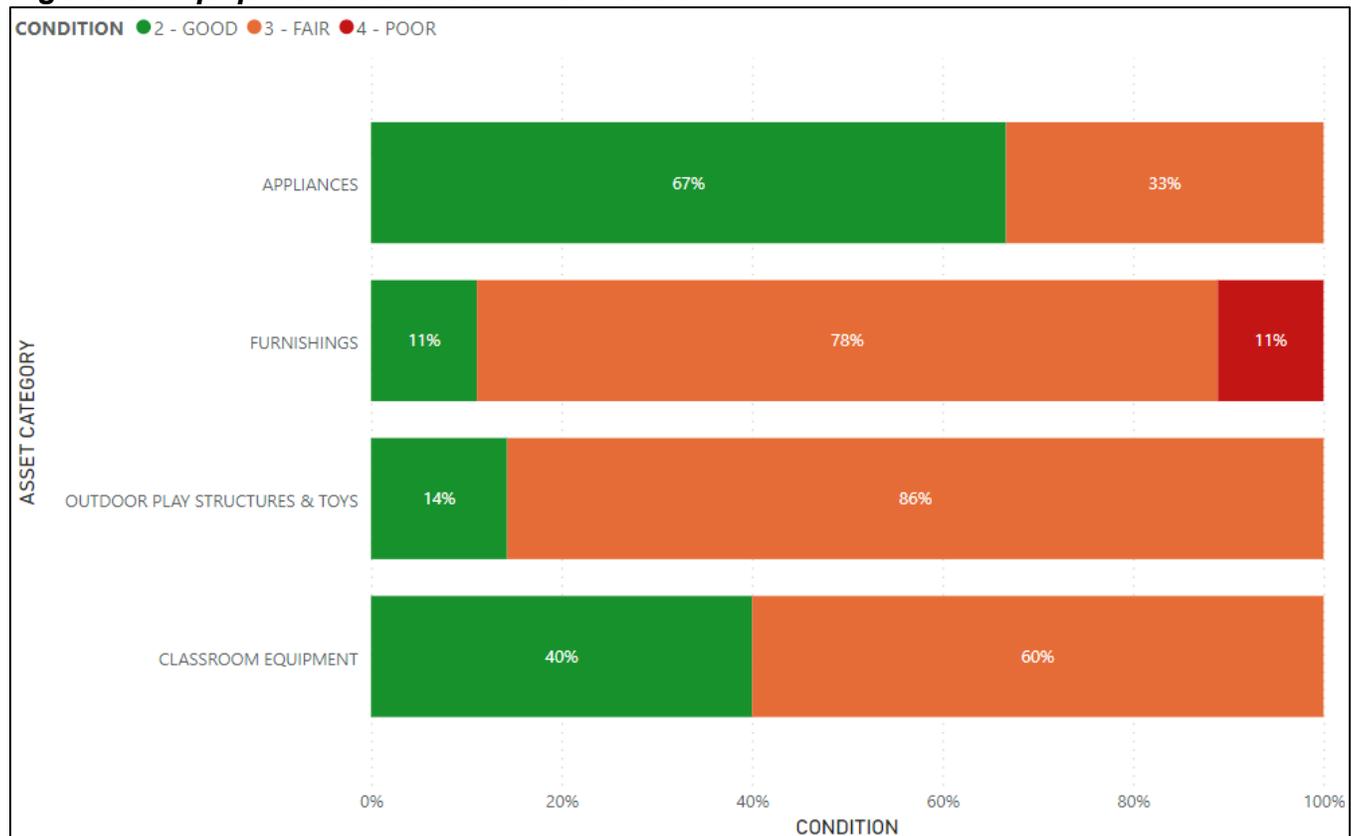
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Table 8: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Equipment	Not Established	Aug 2023	Grade Score (A/B/C)

The condition profile of the equipment assets is shown in **Figure 8**. The assets included predominantly rank in the “Fair” condition. Data confidence for these values is considered low, as the information is primarily drawn from informal visual estimates.

Figure 8: Equipment Condition Distribution



3.2.3.3 ASSET USAGE AND PERFORMANCE

No major performance issues with the equipment assets were identified by the staff. Equipment is typically reviewed for performance as used and replaced on an as-needed basis.

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4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what the City provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that the City provides those services.

O.Reg 588/17 does not define levels of service therefore the City has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in **Section 7.5** of the **AM Plan Overview**.

4.1 SURVEY METHODOLOGY

A Customer Engagement Survey entitled CCS Division Client Survey 2023 was conducted between November 22, 2023, and December 22, 2023. The survey was available online and in a paper format for clients interacting with staff from:

- Child Care Fee Subsidy Program;
- Home Management Program - Case Management;
- Learning, Earning and Parenting (LEAP) Program;
- Red Hill Family Centre; and,
- Xperience Annex.

The survey was created internally by the CCS division as part of their annual data collection to determine client satisfaction results, which was then used to develop customer values and customer levels of service for the purposes of this asset management plan. Surveys were sent directly to users of the service to record their experiences when using the various programs offered by CCS. The survey results can be found in **Appendix "A"**.

It is important to note that due to the nature of how the surveys were collected, the data cannot be considered statistically significant, and margins of error were unable to be calculated. This has been noted as a continuous improvement moving forward.

Furthermore, the standard set of questions outlined in the CCS client survey does not include specific inquiries relating to the development of customer values. In lieu of this, inferences were drawn to approximate customer values using the available questions. Additionally, customer indices were not included in this iteration of the asset management plan, which has been noted as a continuous improvement item.

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Table 9: Data Confidence Levels

GRADE	DATA CONSISTENCY (STANDARD DEVIATION)	CONFIDENCE LEVEL (MARGIN OF ERROR AT 95% CONFIDENCE IN SAMPLE SIZE)
Very High	0 to 0.5 – results are tightly grouped with little to no variance in response	0% to 5% - minimal to no error in results, can generally be interpreted as is
High	0.5 to 1.0 – results are tightly grouped but with slightly more variance in response	5% to 10% - error has become noticeable, but results are still trustworthy
Medium	1.0 to 1.5 – results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - error is a significant amount and will cause uncertainty in the final results
Low	1.5 to 2.0 – results show a high variance with a fair amount of disparity in responses	20% to 30% - error has reached a detrimental level and results are difficult to trust
Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - significant error in results, hard to interpret data in a meaningful way

4.2 CUSTOMER VALUES

Customer values are what the customer can expect from their tax dollar in “customer speak” which outlines what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

Customer Values indicate:

- What aspects of the service are important to the customer;
- Whether they see value in what is currently provided; and,
- The likely trend over time-based on the current budget provision.

As previously mentioned, the customer values below were interpolated using the results from the *CCS Division Client Survey 2023*.

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Table 10: Customer Values

SERVICE OBJECTIVE			
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
It is important that program staff are respectful, friendly, professional, and caring of clients’ needs/concerns.	CCS Division Client Survey 2023	Program staff were recognized as being respectful, friendly, professional, and caring about clients’ needs/concerns by over 95% of respondents.	Maintain

4.3 CUSTOMER LEVELS OF SERVICE

Ultimately customer performance measures are the measures that the City will use to assess whether it is delivering the level of service the customers desire. Customer level of service measurements relate to how the customer feels about the City’s Children’s & Community services in terms of their quality, reliability, accessibility, responsiveness, sustainability and, over the course, their cost. The City will continue to measure these customer levels of service to ensure a clear understanding of how the customers feel about the services and the value of their tax dollars.

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or underused? Do we need more or less of these assets?

In **Table 11** under each of the service measure types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current allocation.

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Table 11: Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
Quality/ Condition	Ensure that CCS assets are maintained in good condition.	CCS Division Client Survey 2023	The majority (91%) of respondents opinion on if RHFC is clean and comfortable.	Strongly agree	Maintain
Function	Provide quality services to CCS users.	CCS Division Client Survey 2023	The majority (94%) of respondents opinion on the overall rating of CCS services.	Very Good to Excellent	Maintain
Capacity	Ensure CCS services are accessible to the public when required.	CCS Division Client Survey 2023	The majority (over 90%) of respondents' opinions on whether service locations were convenient, service hours met needs, and the service sought was obtained.	Agreed to Strongly Agreed	Maintain

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4.3.1 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how the City delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. The City will measure specific lifecycle activities to demonstrate how the City is performing in delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.¹⁵

Table 12 shows the activities expected to be provided under the current 10-year Planned Budget allocation and the Forecast activity requirements being recommended in this AM Plan. Currently, these values are estimated based on the budget, but were not perfectly delineated in the capital and operating budgets and forecasts and may change in future iterations of the plan.

Table 12: Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE (2023)	CURRENT TARGET PERFORMANCE (2023)	PROPOSED 10-YEAR PERFORMANCE
Operation	Provide affordable child care services	Avg cost of child care service (\$/day)	\$28.50 (2022)	\$12/day by 2026 (CWELCC)	TBD
		Budget	TBD	TBD	TBD
	Be fiscally responsible when delivering services.	Actual Operating Expenditures vs Planned Budget	100%	90 – 100%	90 – 100%
		Budget	\$175M	\$175M	\$1.75B
Maintenance	Ensure that CCS assets are maintained in good condition.	Facility Condition Index	5% (“Good”)	5% (“Good”)	5% (“Good”)
		Budget	\$34K	\$34K	\$500K

¹⁵ IPWEA, 2015, IIMM, p 2|28.

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4.3.2 PROPOSED LEVELS OF SERVICE DISCUSSION

It is evident per **Table 12** that CCS is often meeting technical standards with some exceptions. However, customer preferences and expectations do not always match internal technical targets. It has been assumed in the interim that the current levels of service will be the proposed levels of service moving forward past 2025 in accordance with O.Reg 588/17. Therefore, the information below is intended to provide context to direct CCS to areas for further investigation before proposing any new levels of service.

CONDITION / QUALITY

Per Customer Levels of Service **Table 10**, the majority of survey respondents strongly agreed that the RHFC is clean and comfortable. In reference to **Table 12**, Technical Levels of Service, the RHFC's facility condition index earned a "Good" rating in 2023. Although these metrics do not align precisely, there is a broad consistency in their results. Further inquiry is necessary to assess the RHFC's technical service levels in operational terms, particularly regarding customer satisfaction with cleanliness and comfort.

FUNCTION

Survey respondents rated their satisfaction with the function of the service with respect to the provided service hours of locations they visited. Additional investigation is required to determine proposed levels of service, particularly as they relate to customer values. This is expected to be explored through the forthcoming creation of a survey by the corporate asset management division.

CAPACITY

Clients rated their satisfaction with regard to their ability to access services, in response to questions related to suitability of location, and convenience of location. Positive results were received aforementioned accessibility metrics; however, the 2023 CCS Division Client Survey collects data exclusively from existing clients enrolled in offered programs, limiting its scope. This omission of feedback from the general public, including those on waitlists, may limit the comprehensiveness of the survey. Data from a broader range of respondents may wish to be explored in the future to obtain a more comprehensive understanding of the proposed levels of service to be established for the CCS division.

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5. FUTURE DEMAND

Specific to the CCS division, demand is defined as the desire customers have for assets or services and that they are either willing to pay for or would be eligible for based on program criteria (e.g., financial eligibility). These desires are for either new assets/services or current assets.

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of services required.

5.1 DEMAND DRIVERS

For the CCS service area, the key drivers are population change, financial factors, and policy/regulatory factors.

- Population Change - Hamilton's population is projected to increase to approximately 680,000 by 2031. Projecting future trends in population growth, it is anticipated that there will continue to be a demand for additional child care facilities.
- Financial Factors - Financial and economic considerations play a crucial role in the CCS division, which heavily relies on provincial and federal grant funding. The availability of variable budgets influences the division's capacity to deliver programs and services to the public. Moreover, the fluctuating economic conditions affecting users contribute to variations in the demand for services based on affordability.
- Policy/regulatory factors - Adjustments in government initiatives influence the costs of services, thereby impacting demand. An example of this is the Federal Canada-Wide Early Learning Childcare (CWELCC) initiative, which aims to reduce the cost of care to an average of \$12 per day. This cost reduction may lead to an increase in demand for childcare services.

5.2 DEMAND FORECASTS

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 13**.

5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets is shown in **Table 13**. Demand for new services will be managed through a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

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The current iteration of this AM plan outlines demand management strategies, yet these solutions have not been quantified in terms of the necessary dollar value for implementation. This has been identified as a continuous improvement item as noted in **Section 10.2**. Demands as they relate to climate change adaptation are included in **Section 7**.

Table 13: Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Population	560,000	680,000	Increase in demand for child care services. Will require additional child care spaces and fee subsidies.	Increase budget (funding pots) to maintain a level of service for new families. Expand EarlyON and child care centres
Economic Conditions	Mixed economic conditions	Economic conditions may improve or worsen	Variable Demand	Flexibility in resource allocation, and economic support programs.
Policy and Legislation	Steady	Potential policy changes	Regulatory Compliance, Service Expansion	Monitor and adapt to legislative changes.
Demographic Shifts	Diverse demographics	Demographic changes (aging population, cultural diversity)	Altered Service Needs	Tailor services to different demographic groups.
Funding Availability	Sufficient funding	Uncertain funding landscape	Financial Sustainability	Diversify funding sources, and continue to maximize provincial and federal funding sources

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5.4 ASSET PROGRAMS TO MEET DEMAND

CCS currently has no plans to make expansions to meet demand in the form of increasing their owned assets. Beyond the Red Hill Family Centre facility, programs operate out of facilities either owned by other divisions of the city or by other entities. In this unique service delivery model CCS acts as a "service system manager", approving the operation of services out of locations that are not owned by the City. As such, expansion in the number of operating facilities to meet increased demand would represent elevated budget requirements in the operational lifecycle stage, not acquisitions of owned facility assets. However, acquisition costs are anticipated for purchasing of additional IT equipment (computers, mobile phones, etc.) to meet the needs of additional full-time employees.

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6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk¹⁶.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

6.1 CRITICAL ASSETS

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Failure modes may include physical failure, collapse or essential service interruption.

The CCS division functions with a non-traditional service delivery approach, primarily operating through decentralized means. They provide the majority of their services from subcontracted locations that are not owned or staffed by the City. Consequently, widespread service disruptions across programs are not expected, as each program operates independently from the others. As a result, no critical assets were identified that would cause a significant loss or reduction of service in the event of failure.

¹⁶ ISO 31000:2009, p 2

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6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, the evaluation of the risk and the development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

Critical risks are those assessed with ‘Very High’ (requiring immediate corrective action) and ‘High’ (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan are shown in **Table 14**. It is essential that these critical risks and costs are reported to management. Additional risks and their costs will be developed in future iterations of the plan and are identified in **Section 10.2** in the Continuous Improvement Section of the plan.

As a service-oriented provider, the division's operations primarily depend on staff possessing the required credentials mandated by legislation to deliver services to communities. The most significant risk of service interruptions occurs when there is a shortage of sufficiently qualified staff. Efforts to mitigate this risk have involved creating permanent "floater" positions and city-wide on-call lists in collaboration with private providers. The existing efforts to manage these risks have been identified as continuous improvement items in **Section 10.2**. The main factor affecting the existing labour force of qualified individuals has been identified as insufficient compensation. Compensation rates for child care workers outside of RHFC are determined by individual owners of child care facilities, beyond the jurisdiction of the CCS division.

Table 14: Risks and Treatment Plans

SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
Child Care Programs	Shortage of staff with proper credentials. Insufficient staff-to-client ratio.	High	Advocate to the provincial government for competitive compensation for recruitment and retention.	Medium	Internal Resources

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6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment and crisis leadership.

We do not currently measure our resilience in service delivery, and this will be included in the next iteration of the AM Plan.

6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective to achieve the optimum benefits from the available resources. Due to the consistent and transparent nature of the available grants and provincial funding, the CCS division can accurately adjust service delivery targets to align with projected budgets. Currently, there are no instances of underfunding or expected shortages of funding in the foreseeable future. Furthermore, an assessment of the maintenance needs of RHFC over the next 10 years suggests that the facility is adequately funded to uphold its condition.

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7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we have already begun to experience (adaptation). At a minimum, the City must consider how to manage our existing assets given the potential climate change impacts for our region.

Changes to Hamilton's climate will impact City assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and,
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models as well as levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan. This has been identified as a Continuous Improvement item in **Section 10.2**.

7.1 CLIMATE CHANGE MITIGATION

Climate Mitigation refers to human intervention to reduce GHG emissions or enhance GHG removals (e.g. building transportation infrastructure that can support cycling and public transit and reduces the need for car travel). The City of Hamilton's Community Energy + Emissions Plan¹⁷ (CEEP includes five Low-carbon Transformations necessary to achieve the City's target of net-zero GHG emissions by 2050:

- Innovating our industry;
- Transforming our buildings;
- Changing how we move;
- Revolutionizing renewables; and
- Growing Green.

¹⁷ Newbold, Skidmore, Chessman, Imhoff & McDowell, 2022

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Mitigation Demand Analysis

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City’s modelled targets for the low carbon transformations that applied to the service/asset;
- Discussing the impact the targets would have on the service/asset; and
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050 as shown in **Table 15** below.

As previously mentioned, due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below have not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AMP, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AMP. This has been identified as a continuous improvement item in **Section 10.2**.

Moving forward, the Climate Lens tool discussed in the AMP Overview will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

Since CCS possesses a Facility the transformations that relate to transforming our buildings, are the key modelled targets that CCS will have to accommodate as shown in **Table 15** below.

Table 15: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Transforming Our Buildings	By 2050, all new municipal buildings achieve net-zero emissions.	High initial capital cost for net-zero retrofits to RHFC. Conversion to a heat pump may not be feasible.	Funding will need to be acquired to retrofit buildings. Staff will need to be trained on new systems
	By 2050, all municipal buildings will be retrofitted to achieve 50% energy efficiency relative to 2016.		
	Post-retrofits, switch buildings to heat pumps for space and water heating by 2050.		

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CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Growing Green	Planting 50,000 trees a year through 2020	Adding trees may add more operating costs	Review the Red Hill Family Centre site layout to determine the planting scenario
Revolutionizing Renewables	By 2050, 50% of municipal buildings will add rooftop solar PV, covering 30% of the building’s electrical load.	Additional capital and operating/maintenance costs requirements.	Implement a study to determine feasibility based on Red Hill Centre’s roof structure.

MITIGATION RISK ANALYSIS

Additionally, since the risk of not completing climate change mitigation projects is that the City continues to contribute to climate change in varying degrees which were modelled in the Climate Science Report for the City of Hamilton completed by ICLEI Canada, a risk analysis has not been completed in this AMP for not completing climate mitigation projects (ICLEI Canada, 2021).

CURRENT MITIGATION PROJECTS

At present, CCS has not set any timelines for the implementation of projects aimed at mitigating climate change. However, the work that CCS is expected to undertake as part of City-wide initiatives is outlined in **Table 16** below.

Table 16: Asset Climate Mitigation Projects

PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
RHFC Retrofits	Transforming Our Buildings	None are currently in process.	Reduce emissions associated with facility operation.

CLIMATE MITIGATION DISCUSSION

The outlined climate change mitigation projects are not scheduled; however, the CCS division is ready to adapt and collaborate with the Corporate Facilities and Energy Management division as needed. Although these projects are not part of the current budget, they are intended to be incorporated into lifecycle models for future planning purposes. Additional research is necessary to ascertain the feasibility and strategy for integrating these updates into the RHFC.

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7.2 CLIMATE CHANGE ADAPTATION

Climate Adaptation refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads).

The impacts of climate change may have a significant impact on the assets we manage and the services we provide. Climate change impacts on assets will vary depending on the location and the type of services provided, as well as how those impacts are responded to and managed¹⁸.

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report¹⁹ guided by ICLEI's Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP) (ICLEI, 2021). The BARC Framework identified thirteen high-impact areas.

ADAPTATION DEMAND ANALYSIS

The impact areas were incorporated into the climate change adaptation analysis for this service area by:

- Identifying the asset-specific adaptation impact statements that affected the service areas;
- Discussing the potential impacts on the asset/service using the projected change in climate using the RCP4.5 Scenario; and,
- Proposing preliminary demand management plans to adapt to these impacts.

It is important to note that due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below has not been included in the lifecycle and financial models at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should consider these adaptation impacts during the planning and design processes. Once the demand management plans are finalized, the information will be incorporated into future iterations of the AM Plan. This has been identified as a continuous improvement item in **Section 10.2**.

Moving forward, a Climate Lens tool is currently being developed which will assess projects based on these targets and will assist with the prioritization of climate adaptation projects.

The adaptation impact statements identified by CCS staff which will have a potential impact on assets and services include temperature increases, and ice storms as shown in **Table 17 on** the following page.

¹⁸ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

¹⁹ City of Hamilton & Local Governments for Sustainability Canada, 2021

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Table 17: Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	BASELINE (1976-2005) ²⁰	AVERAGE PROJECTED CHANGE 2021-2050 ²¹ (ASSUMING RCP4.5 ²² SCENARIO)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Increased Instances of Heat-Related Issues due to Extreme Heat.	16.1 average days where the temperature is 30 degrees Celsius or more	34.4 average days where the temperature is 30 degrees Celsius or more	Increased heat-related issues can lead to discomfort and health concerns for both children and staff. It can disrupt outdoor activities, increase the risk of heat-related illnesses, and require additional resources for cooling measures, affecting the overall well-being and operation of the program.	Provide shaded outdoor areas, ensure proper hydration for children, schedule indoor activities during peak heat hours, and maintain a well-ventilated and climate-controlled indoor environment. Additionally, educating staff and parents about heat safety and implementing a heat response plan could enhance the program's resilience to heat-related challenges.
Prolonged Power Outages During Winter Months due to an Increase in Ice Storms Resulting in Public Safety Concerns.	187 mm average total winter precipitation	204 mm average total winter precipitation	The absence of power may compromise children's safety and comfort, necessitate temporary closures, and create logistical challenges for staff and parents.	Have backup generators, maintain emergency heating sources, stock essential supplies like blankets and non-perishable food, and have a well-communicated emergency response plan. These preparations can help ensure the safety and well-being of children and staff during such events.

²⁰ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

²¹ ICLEI Canada, 2022

²² RCP4.5 Scenario: Moderate projected Green House Gas concentrations, resulting from substantial climate change mitigation measures. It represents an increase of 4.5 W/m² in radiative forcing to the climate system. RCP 4.5 is associated with 580-720ppm of CO₂ and would more than likely lead to 3°C of warming by the end of the 21st century.

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ADAPTATION RISK ANALYSIS

Additionally, the City should consider the risks for the asset or service as a result of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Similarly, to the exercise above and using the risk process in **Section 6**, asset owners:

- Reviewed the likelihood scores in the Vulnerability and Risk Assessment Report for the adaptation impact occurring;
- Identified the consequence to the asset/service if the event did happen to develop a risk rating; and,
- If the risk was identified as high, the asset owner produced a preliminary risk adaptation plan shown below in **Table 18**.

It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of the mitigating the risks below has not been included in the lifecycle and financial models at this time. The adaptation plans discussed in this section should be explored by asset owners in more detail following the AMP, and new projects should consider these risks during the planning and design processes. Moving forward, the Climate Lens tool will assess projects based on these targets and will assist with the prioritization of climate adaptation projects. This has been identified as a continuous improvement item in **Section 10.2**.

Table 18: Adapting to Climate Change

ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns.	Child care programs, staff, and clients.	Prolonged power outages	Medium	Install back-up generator
Increased instances of heat-related issues due to extreme heat.	Child care programs, staff, and clients.	Increased instances of heat-related issues due to extreme heat.	Medium	Educate staff and parents about heat safety. Implement a heat response plan.

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CURRENT ADAPTATION PROJECTS

The RHFC has identified the installation of a backup generator as an adaptation project, but implementation has not commenced. Furthermore, the cost of this project has not been determined, nor has it been integrated into the lifecycle model. The development and implementation of a heat response plan has been identified as an actionable climate adaptation strategy, utilizing internal resources. Both these adaptation strategies have been established as continuous improvement items.

The impact of climate change on assets and how the City will adapt is a new and complex discussion and further opportunities will be developed in future revisions of this AM Plan.

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8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budgets. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated together and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options. However, at this time the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

8.1 ACQUISITION PLAN

The acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs. Assets can either be donated through development agreements to the City or through the construction of new assets which are mostly related to population growth.

At the time of writing, the CCS Division indicated there were no plans to expand through the acquisition of owned facilities. While an expansion of service delivery via ancillary child care locations is expected, these facilities are not owned assets with directly attributable operations and maintenance costs. However, this form of expansion may incur additional staffing needs and necessary IT equipment for office operations. This data has not been integrated into the current iteration of the lifecycle model but is noted as a continuous improvement item going forward.

8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons. As a service provider, the financial structure of the CCS division is primarily shaped by operational expenses, with a significant portion allocated to wages. The majority of operational budgets are funded through grants and subsidies, predominantly sourced from the provincial government. Annually, the division secures approximately \$161M (2023), constituting more than 90% of its operational budget. Looking ahead, staff acknowledges the improbability of provincial funding becoming unavailable, and underscores the presence of established controls to facilitate adaptability to changes in the uses of funding.

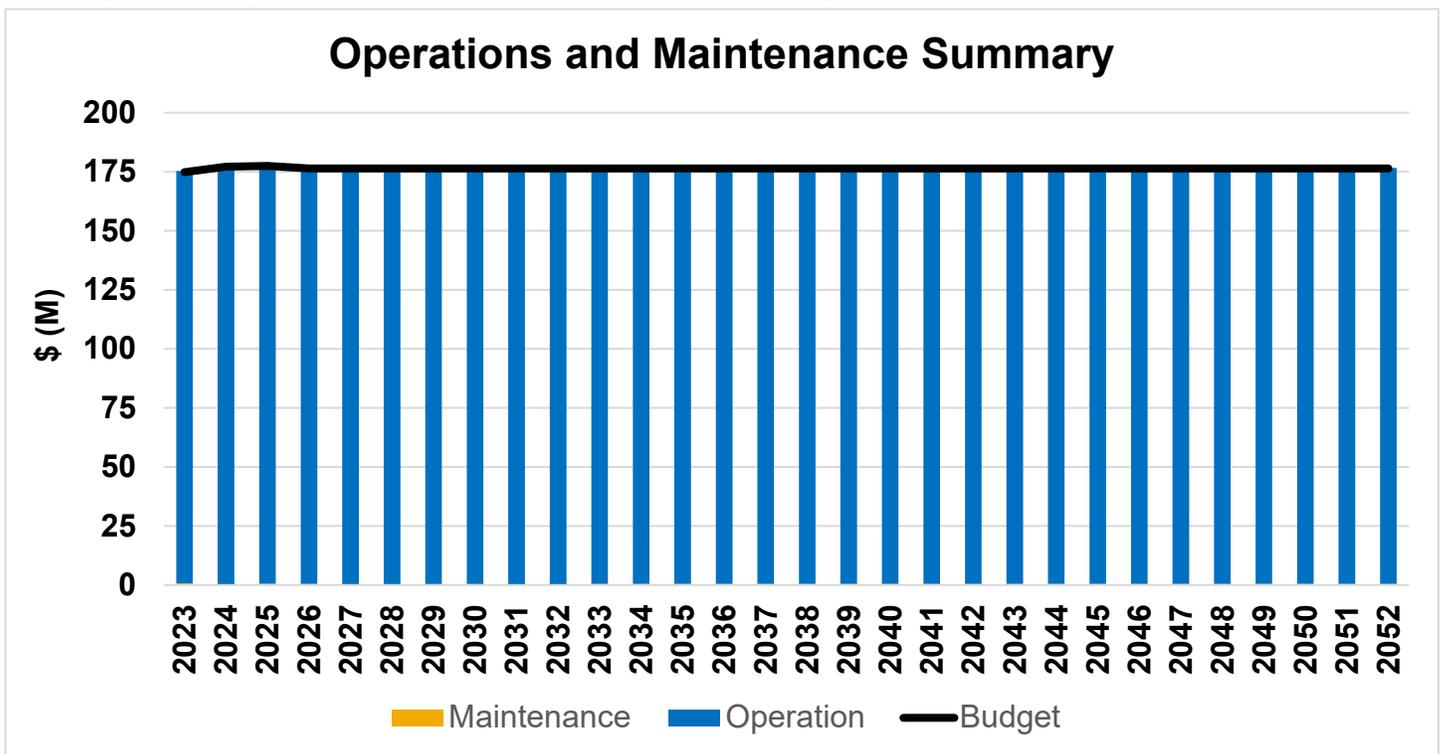
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Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure they reach their intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition.

Examples of typical maintenance activities include equipment repairs and component replacements along with appropriate staffing and material resources required to perform these activities. Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure the facility is reliable and can achieve the desired level of service.

The division’s maintenance budget is predominantly driven by needs related to the RHFC facility. Reviewing the BCA 10-year needs for the facility in conjunction with the budgets allocated for maintenance projects, there are currently adequate dollars established to maintain the “Good” condition of the building going forward. However, it is essential to periodically reassess these budgets considering any new information regarding anticipated maintenance costs, as revealed during future BCA inspections of the facility.

Figure 9: Operation and Maintenance Summary



As displayed in **Figure 9** above, the overall operations and maintenance costs are dominated by operational expenditures, which are significantly larger in reference to maintenance costs. This is due to the fact that the CCS division is primarily a service provider, with only one facility contributing to maintenance costs.

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8.3 RENEWAL PLAN

Renewal is a major works, which does not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs

Asset renewals are typically undertaken to either ensure the assets’ reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 19** and are based on the estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2022 however they will be reviewed annually until their accuracy reflects the City’s current practices.

Table 19: Useful Lives of Assets

ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Facilities (RHFC)	150
IT Equipment	5
Refrigerators	10
Upright Freezers	10
Chest Freezers	10
Gas Range	10
Dishwasher	10
Washer & Dryer	10
Mini Refrigerators	10
Tables	25
Chairs	25
Shelves	25
Children's Furniture	15
Cabinets	25
Vacuums	8

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ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Floor Polisher	10
Couches, Loveseat, Chairs	15
Children's Beds	10
Rugs	10
Water/Sand Tables	10
Dramatic Play Furniture Sets	10
Cozy Cubes	10
Light Tables	10
Toys/Play Materials	5
Lockers	25
Climbing Structures	20
Huts	20
Sandboxes	15
Gazebo	15
Sunshades	10
Mud Kitchens	5
Riding Toys	5
Laptop	5
Desktop	5
Tablet	4
Mobile Phone	2

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RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).²³

Future methodologies may be developed to optimize and prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure;
- Have high use and the subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have the potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.²⁴

SUMMARY OF FUTURE RENEWAL COST

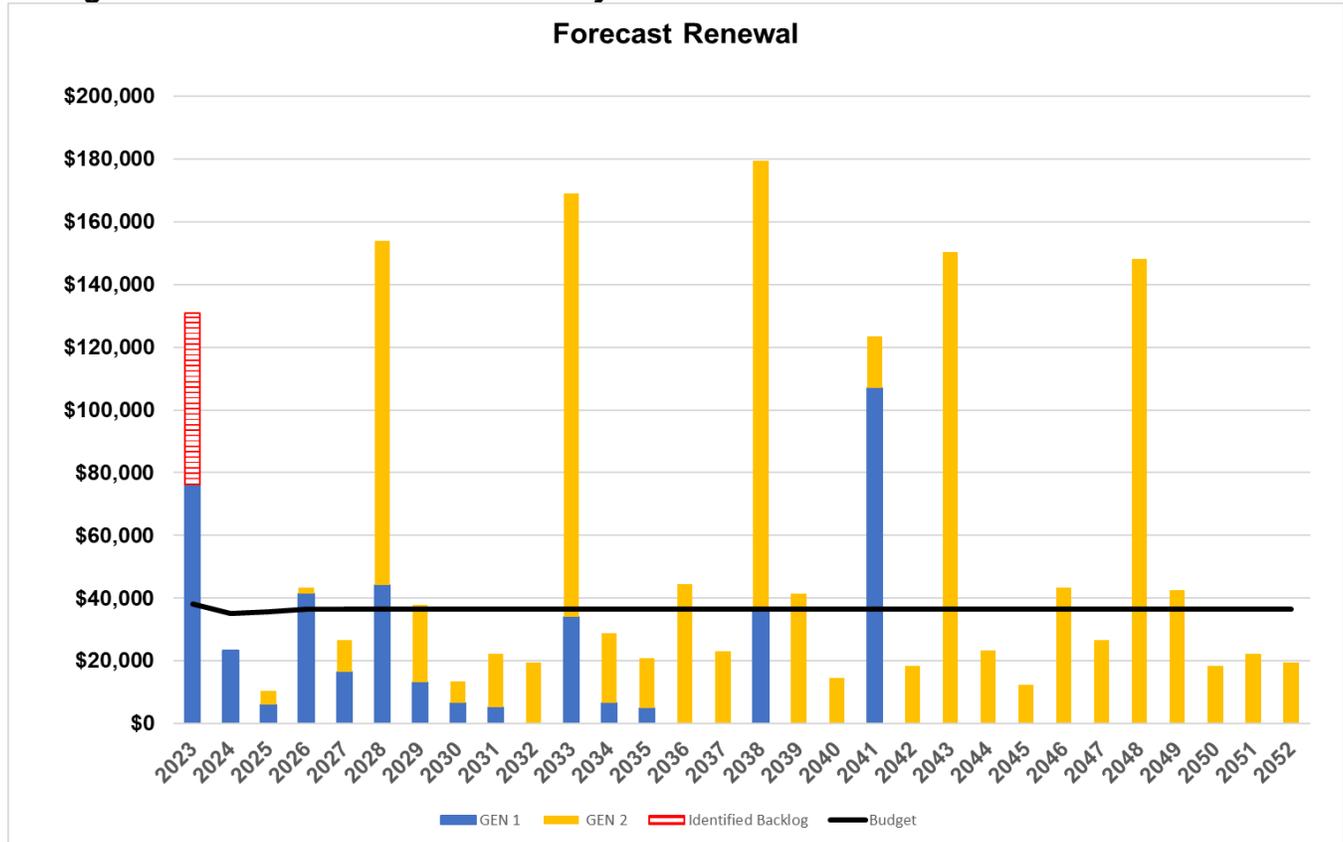
Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in **Figure 10**. The assets included consist exclusively of IT equipment and indoor/outdoor equipment located at the RHFC. Equipment located at auxiliary facilities is owned by the respective entities and is out of scope. In the figure below, Generation 1 (Gen 1) costs refer to renewals that occur for the first time in the model based on the estimated service life and Generation 2+ (Gen 2+) costs refer to renewals that have occurred twice or more based on the estimated service life.

²³ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

²⁴ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

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Figure 10: Forecast Renewal Costs
 All figure values are shown in 2023-year dollars.



The planned renewals of assets include technology and equipment as they reach the end of useful life. The existing backlog of renewals has been identified in red in **Figure 10** above. Deferring renewals creates risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. It is recommended to continue to analyze asset renewals based on criticality and availability of funds for future AM Plans. As well, developing a more accurate inventory of RHFC equipment replacement costs and expected useful lifetimes has been noted as a continuous improvement item as noted in **Section 10.2**.

8.4 DISPOSAL PLAN

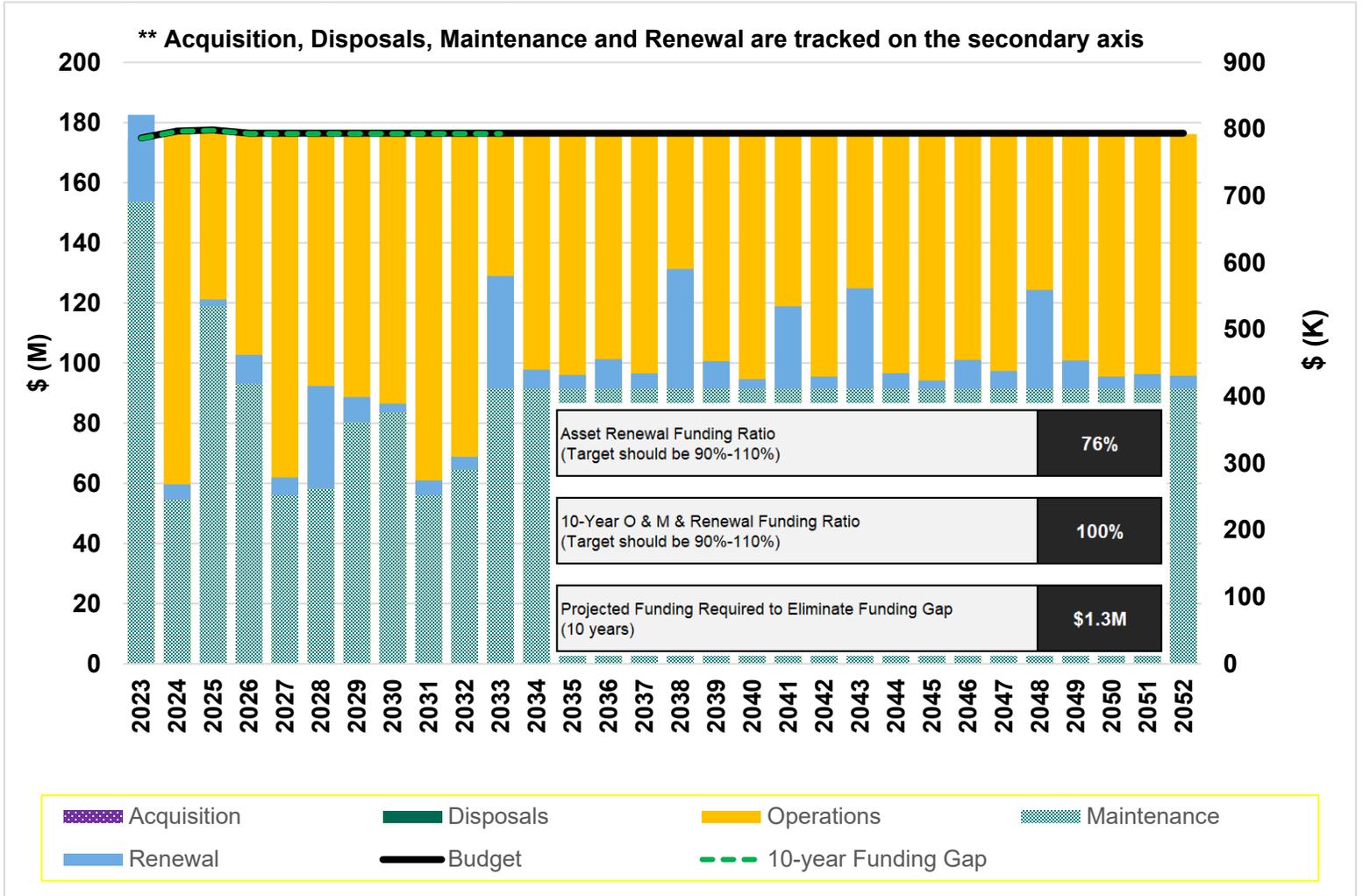
Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen.

At present, the CCS division has neither outlined plans nor allocated a budget for disposals within the foreseeable planning period. The disposal of the RHFC, being the division's main physical asset, is identified as the most probable source of potential disposal-related expenses. Although there are presently no intentions to dispose of the building, future condition assessments could influence this decision.

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8.5 LIFECYCLE COST SUMMARY

Figure 11: Lifecycle Summary



As **Figure 11** shows, CCS's budget is almost completely composed of operations expenditures. Based on the current financial data, there is mostly sufficient budget to meet currently identified needs other than some minor unfunded asset renewals mentioned in Section 8.3. However, with the increase in funding not keeping pace with inflation and population growth, and the discontinuation of certain provincial funding, as well as the unquantified demands, risks, and climate change impacts identified in the report, CCS may still require additional funds to maintain current levels of service in future years.

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9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure its CCS division provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-term financial planning (LTFP) is critical for the City to ensure that network lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for CCS programs, the City will have difficult choices to make in the future which will include options such as higher costs reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all of the network's needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

9.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- Medium-term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio²⁵ **76%**

The Asset Renewal Funding Ratio is used to determine if the City is accommodating asset renewals in an **optimal** and **cost-effective** manner from a timing perspective and relative to financial constraints, the risk the City is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable, however, the expenditures are below this level in some service areas predominantly

²⁵ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

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due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

Renewals scheduled in the lifecycle model contributing to the calculated asset renewal funding ratio consist of the IT hardware and the equipment (e.g., furniture, toys, etc.) located at the RHFC. A more thorough review of the replacement costs and lifespans of the RHFC equipment is needed to improve the accuracy of the renewal funding ratio.

If assets are not renewed at the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to the City's reputation and risk of fines or legal costs

The lack of renewal resources will be addressed in future AM Plans while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

MEDIUM-TERM – 10 YEAR FINANCIAL PLANNING PERIOD

10-Year O&M and Renewal Ratio 100%

Although this AM Plan includes forecast projections to 30 years, the higher confidence numbers are typically within the first ten (10) years of the lifecycle forecast. The 10-year Lifecycle Financial Ratio compares the Planned Budget with the Lifecycle Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the AARF, the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization's risk and service level commitments.

The forecast operations, maintenance and renewal costs over the 10-year planning period is **\$176.6 Million** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The proposed (budget) operations, maintenance and renewal funding is **\$176.5 Million** on average per year giving a 10-year funding shortfall of **\$0.1 Million** per year or **\$1.3 Million** over the 10-year planning period. This indicates that 100% (99.9% rounded) of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget, which is within the 90-110% range. Therefore, it can be concluded that CCS is funding its assets at an acceptable rate. Note, that these calculations exclude acquired assets.

Funding an annual funding shortfall or funding 'gap' should not be addressed immediately. The overall gap in funding city-wide will require vetting, planning and resources to begin to incorporate gap management into the future budgets for all City services. This gap will need to

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be managed over time to reduce it in a sustainable manner and limit financial shock to customers. Options for managing the gap include;

- Financing strategies – increased funding, block funding for specific lifecycle activities, long-term debt utilization;
- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets; and,
- Influence level of service expectations or demand drivers.

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of **90-110%** for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

9.2 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Table 19 shows the forecast costs (outlays) required for consideration in the 30-year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

The City will manage the 'gap' by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low-use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

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Table 20: Forecast Costs (Outlays)

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2023	\$0	\$174,635,616	\$690,904	\$130,750	\$0
2024	\$0	\$176,893,568	\$245,317	\$23,296	\$0
2025	\$0	\$177,227,456	\$534,835	\$10,370	\$0
2026	\$0	\$176,184,800	\$419,038	\$43,377	\$0
2027	\$0	\$176,184,800	\$252,325	\$26,637	\$0
2028	\$0	\$176,184,800	\$261,797	\$153,997	\$0
2029	\$0	\$176,184,800	\$361,256	\$37,915	\$0
2030	\$0	\$176,184,800	\$375,844	\$13,424	\$0
2031	\$0	\$176,184,800	\$252,325	\$22,163	\$0
2032	\$0	\$176,184,800	\$290,214	\$19,531	\$0
2033	\$0	\$176,184,800	\$411,469	\$168,966	\$0
2034	\$0	\$176,184,800	\$411,469	\$28,866	\$0
2035	\$0	\$176,184,800	\$411,469	\$20,945	\$0
2036	\$0	\$176,184,800	\$411,469	\$44,492	\$0
2037	\$0	\$176,184,800	\$411,469	\$23,150	\$0
2038	\$0	\$176,184,800	\$411,469	\$179,382	\$0
2039	\$0	\$176,184,800	\$411,469	\$41,402	\$0
2040	\$0	\$176,184,800	\$411,469	\$14,539	\$0
2041	\$0	\$176,184,800	\$411,469	\$123,549	\$0
2042	\$0	\$176,184,800	\$411,469	\$18,416	\$0
2043	\$0	\$176,184,800	\$411,470	\$150,481	\$0
2044	\$0	\$176,184,800	\$411,471	\$23,296	\$0

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YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2045	\$0	\$176,184,800	\$411,472	\$12,458	\$0
2046	\$0	\$176,184,800	\$411,473	\$43,377	\$0
2047	\$0	\$176,184,800	\$411,474	\$26,637	\$0
2048	\$0	\$176,184,800	\$411,475	\$148,057	\$0
2049	\$0	\$176,184,800	\$411,476	\$42,512	\$0
2050	\$0	\$176,184,800	\$411,477	\$18,424	\$0
2051	\$0	\$176,184,800	\$411,478	\$22,163	\$0
2052	\$0	\$176,184,800	\$411,479	\$19,531	\$0

9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in the City’s operational budget and 10-year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM plan will provide service delivery options and alternatives to optimize limited financial resources.

9.4 VALUATION FORECASTS

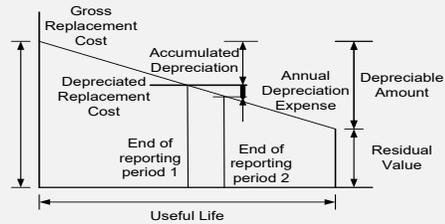
Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposal of assets would decrease the operations and maintenance needs in the longer term and remove the high costs of renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs, however, this will be improved for the next iteration of the plan.

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9.5 ASSET VALUATION

Replacement Cost (Current/Gross)	10,651,994
Depreciable Amount	10,612,016
Depreciated Replacement Cost²⁶	3,319,710
Depreciation	144,384



9.6 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 30-year horizon and do not address other operational needs not yet identified;
- Maintenance forecasts are based on current budget allocations and do not identify asset needs at this time. It is solely based on planned activities; and,
- Replacement costs were based on historical costing. They were also made without determining what the asset would be replaced with in the future.

9.7 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the AMP Overview.

Table 21: Data Confidence Assessment for Data Used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	N/A	Demand drivers were not able to be quantified at this time.
Acquisition Forecast	N/A	Acquisitions for the future were not able to be quantified at this time.

²⁶ Also reported as Written Down Value, Carrying or Net Book Value.

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DATA	CONFIDENCE ASSESSMENT	COMMENT
Operation Forecast	Low	Future operations costs were not forecasted due to a lack of projected data. Values included were based on current operational data.
Maintenance Forecast	Medium	Maintenance forecast in this AM Plan is typically based on the results of the Building Condition Assessment which has been updated by the Corporate Facilities and Energy Management division and is assumed to be a medium confidence.
Renewal Forecast Asset Value	Medium	Market pricing was used for renewal replacement costs for IT equipment which have high confidence, but facilities replacement costs were of medium confidence and are a high-value asset which affected the overall confidence. Estimates from staff and market research were used to determine replacement costs for equipment at the Red Hill Family Centre.
Asset Useful Life	Medium	Estimated service lives are provided by IT for technology hardware. Estimated service life for the owned facility was extended based on current conditions. Minimal age data for equipment was available which affected the overall confidence.
Condition Modelling	Medium	Condition information was only known for Facilities. IT and equipment asset conditions were established through age-based calculations, with low confidence.
Disposal Forecast	N/A	No disposals were identified or integrated into the forecast.

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10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PRACTICES

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2023 Approved Operating Budget;
- Building Condition Assessment Reports;
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc.);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter Expert Opinion and Anecdotal Information; and,
- Reports from the mandatory inspections, operational & maintenance activities internal reports.

10.2 IMPROVEMENT PLAN

It is important that the City recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision-making. The tasks listed below are essential to improving the AM Plan and the City's ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning and plans to physically improve the assets.

The Improvement Plan **Table 22** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this AM Plan will provide updates on these improvement plans. The costs and resources to complete each of these tasks have not been included in the lifecycle models to data, and resource requirements would need to be reviewed for internal resource-driven projects.

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Table 22: Improvement Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1	Maintain the inventory of asset-related information. Streamline data updates from CCS to CAM/Facilities.	CAM	Internal Resources	Ongoing
2	Explore and implement additional sustainability initiatives, such as eco-friendly practices, to align asset management with environmental considerations.	CCS / Climate Office	Internal Resources	2024-2026
3	Modify condition ratings for assets to align on a 5-point scale	CAM	Internal Resources	2026
4	Continue to strengthen partnerships with local educational institutions to create pipelines for recruiting ECEs and facilitate internship programs for students pursuing early childhood education.	CCS	Internal Resources	Ongoing
5	Continue to implement creative recruitment strategies, such as hosting job fairs, leveraging social media, and collaborating with local community organizations to reach potential ECE candidates.	CCS	Internal Resources	Ongoing
6	Review and update the Red Hill Family Centre's parent handbook to include a clear provision informing parents about the potential risk of emergency closures and the policies and procedures in such situations.	CCS	Internal Resources	2024-2025
7	Develop clear criteria for prioritizing families in the event of a classroom closure, considering factors such as parental flexibility, the age of the child, and any special needs.	CCS	Internal Resources	2024-2026
8	Develop an internal CAM survey for CCS to gather more robust data including customer values and customer indices.	CAM	Internal Resources	2024

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#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
9	Develop proposed levels of service in accordance with O.Reg 588/17, including optimization of resources.	CAM	Internal Resources	2025
10	Quantify and implement demand drivers, acquisitions, climate change, and risk data into future lifecycle models when plans are more defined.	CAM	Internal Resources	Ongoing
11	Develop a formal condition rating system for IT hardware assets.	CAM/IT	Internal Resources	2024
12	Climate Lens tool to be used to assess projects and prioritize climate adaptation projects.	CFEM	Internal Resources	2027

10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated regularly to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one-to-10-year detailed works programs, budgets, business plans and corporate structures consider the ‘global’ works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
 The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 110%).

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CHILDREN'S & COMMUNITY SERVICES ASSET MANAGEMENT PLAN

12. APPENDIX A – CHILDREN'S AND COMMUNITY SERVICES DIVISION CLIENT SURVEY 2023

Children's and Community Services Division

Client Survey 2023

~ Results Summary

Children’s and Community Services Division Client Survey 2023

~ Results Summary

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Children's and Community Services Division Client Survey 2023 ~ Results Summary

SURVEY PURPOSE AND OVERVIEW

The Children's and Community Services Division provides a range of unique programs and services to Hamilton residents which include the following:

- Child Care Fee Subsidy Program
- Home Management Program - Case Management
- Home Management Program - Training and Workshops
- Learning, Earning and Parenting (LEAP) Program
- Red Hill Family Centre
- Xperience Annex

To understand how the Division is doing overall in providing services, the Children's and Community Services Division Client Survey was developed. The survey collects client feedback to assess and monitor client satisfaction in a consistent way across the different program areas for key service delivery elements important for client satisfaction common to all programs. The survey tool is modified slightly for each program area to ensure the questions are relevant and appropriate for each program while still contributing to consistent measures that can inform the Division's overall performance.

A table with a summary of the key service delivery elements and variations of survey questions used for each program area is provided in Appendix A. The 2023 survey tools for each program area are provided in Appendix B to Appendix F.

2023 SURVEY DEPLOYMENT AND RESPONSE

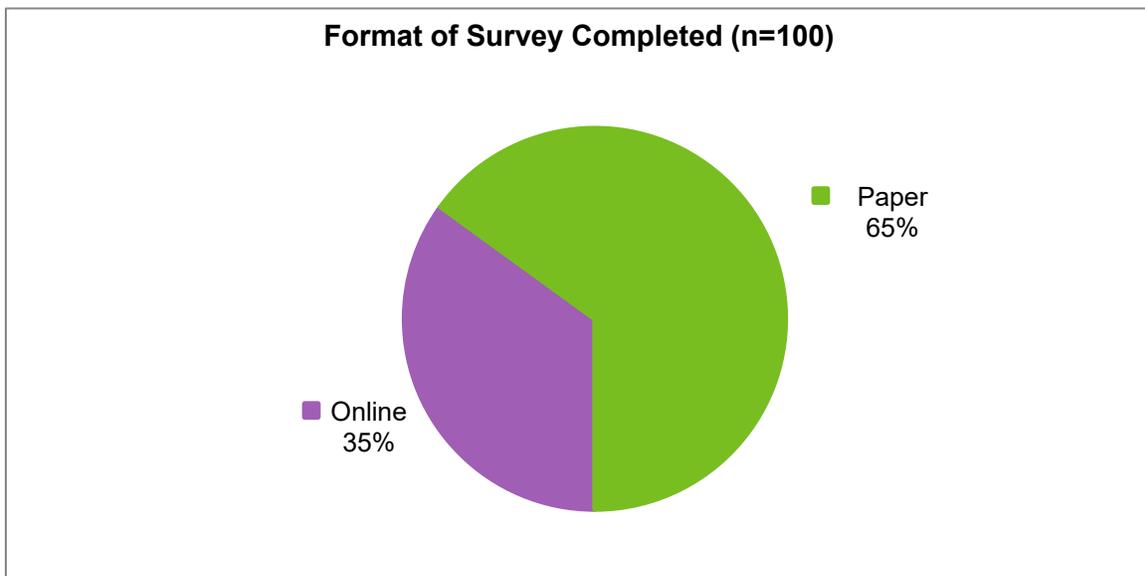
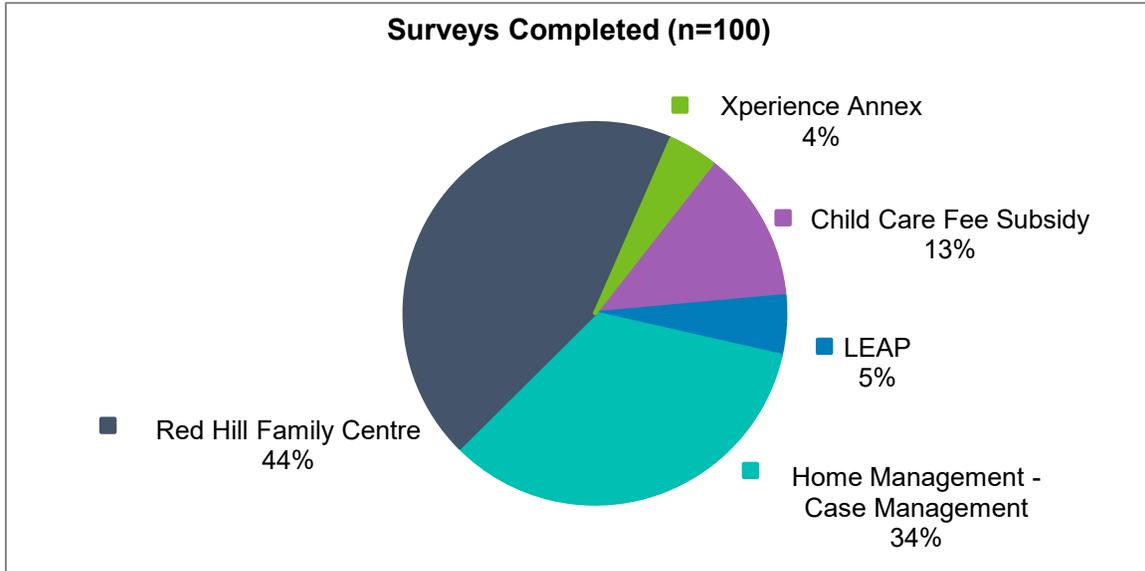
The 2023 survey was conducted between November 22, 2023, and December 22, 2023. The survey was available online and in a paper format for clients interacting with staff from:

- Child Care Fee Subsidy Program
- Home Management Program - Case Management
- Learning, Earning and Parenting (LEAP) Program
- Red Hill Family Centre
- Xperience Annex

The Home Management Program - Training and Workshops survey was not conducted in 2023 as the program was not being provided.

During the survey period, 100 fully or partially completed surveys were collected online or in paper format. The following is a breakdown of the survey completions by program area and format.

Children's and Community Services Division Client Survey 2023 ~ Results Summary



Children's and Community Services Division Client Survey 2023 ~ Results Summary

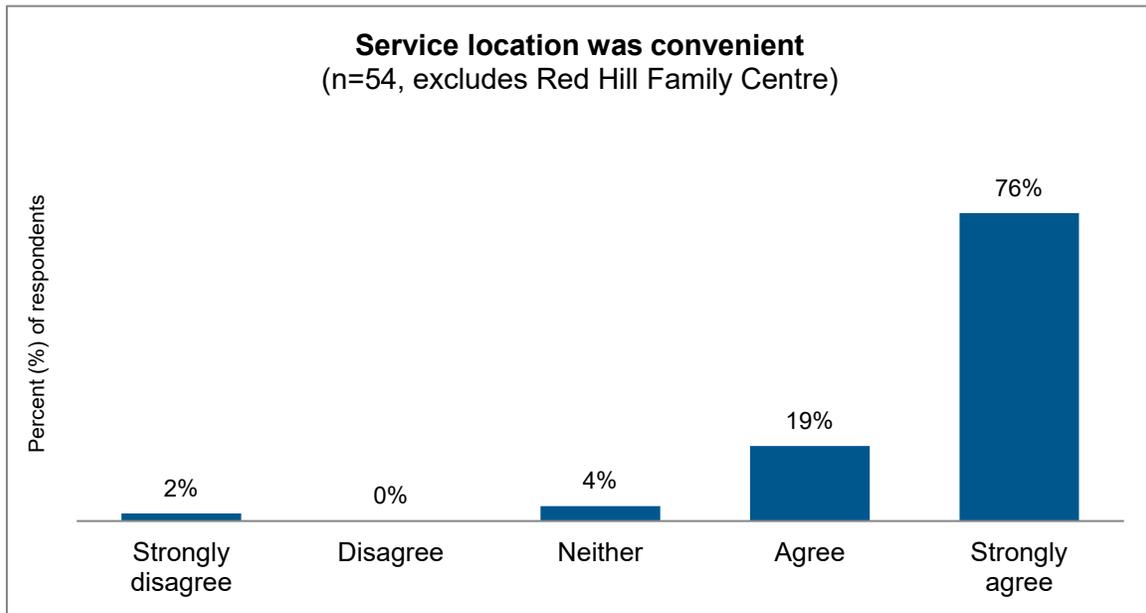
KEY SUMMARY OF 2023 SURVEY RESULTS

- Approximately 94% of clients gave an overall rating of excellent or very good to the services they received from Children's and Community Services.
- The majority (over 90%) of clients agreed or strongly agreed that service locations were convenient, service hours meet needs, and the service sought was obtained.
- Program staff were recognized as being respectful, friendly, professional and caring about clients' needs/concerns by over 95% of respondents.
- Overall, the most preferred means of communication is in-person.
- Across all program areas, the majority of responses to the open text question about how service experience can be made better were notes commending the services and remarks about a positive experience.
- The majority (57%) of respondents did not identify as being Indigenous, racialized or Francophone. Approximately 10% of respondents identified being Indigenous and 18% being racialized.

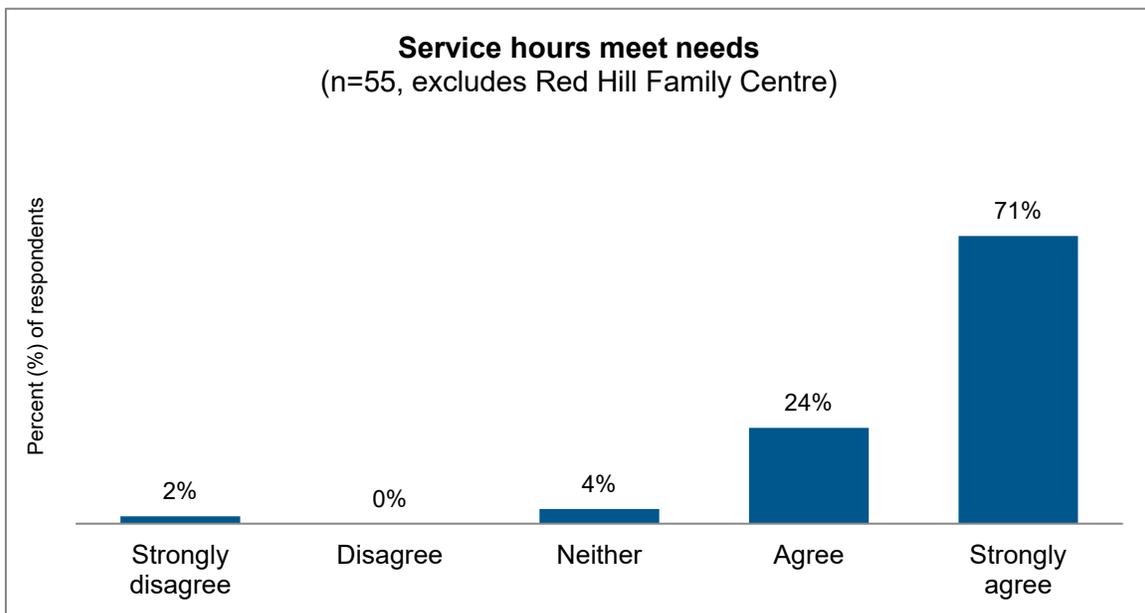
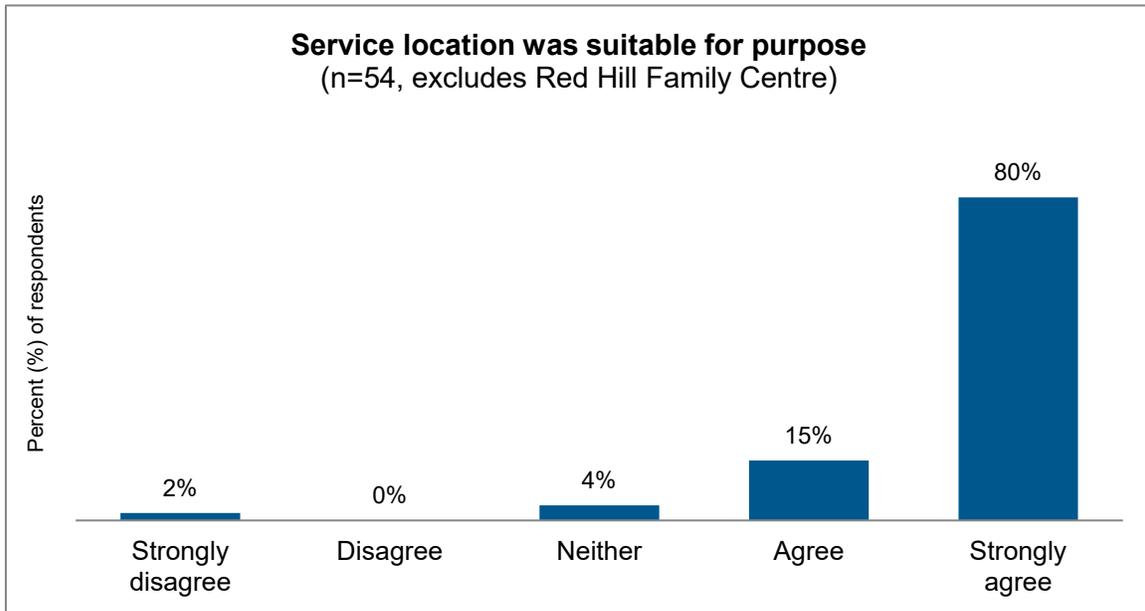
Children’s and Community Services Division Client Survey 2023 ~ Results Summary

DETAILED 2023 SURVEY RESULTS

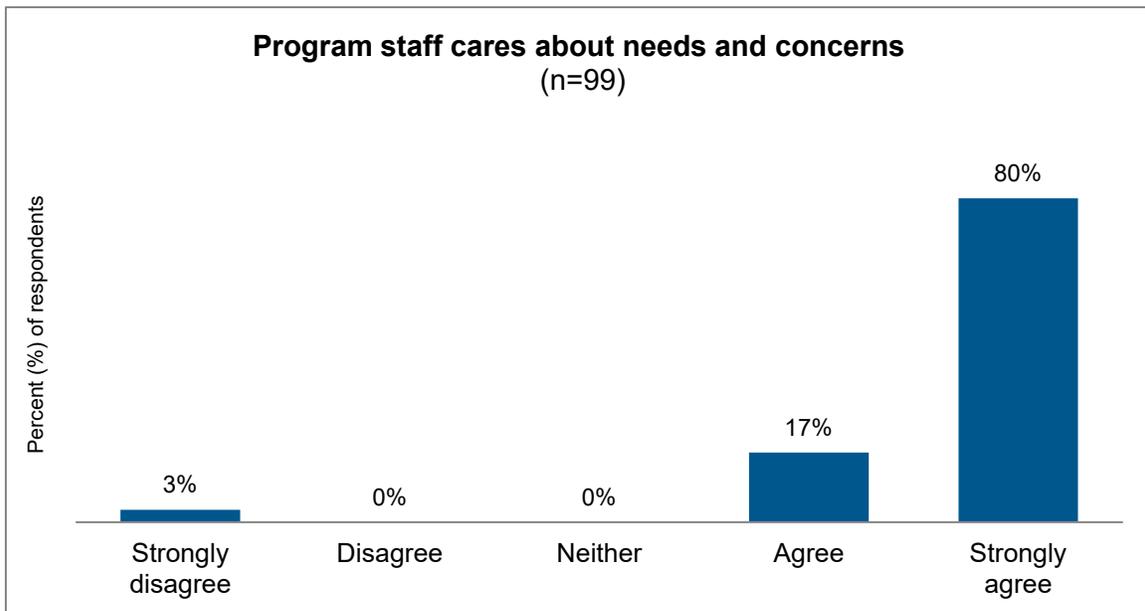
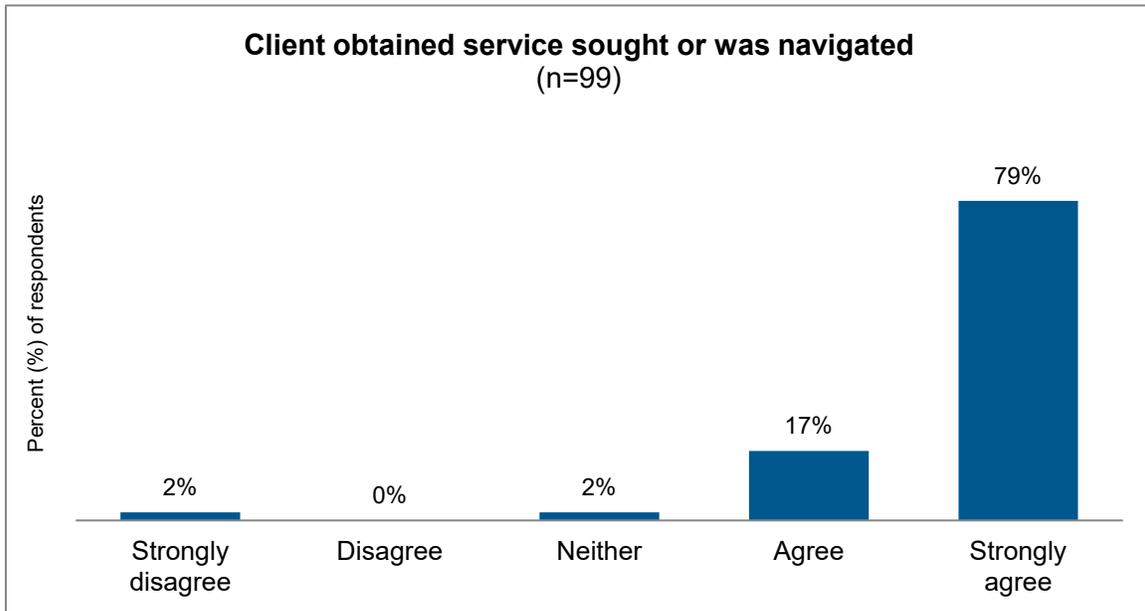
This section provides the detailed results of each key service delivery element. Unless otherwise specified, survey data from the five (5) different program areas surveys have been combined to represent a summary of the service delivery element. The universe of respondents (n) is provided in brackets for each question.



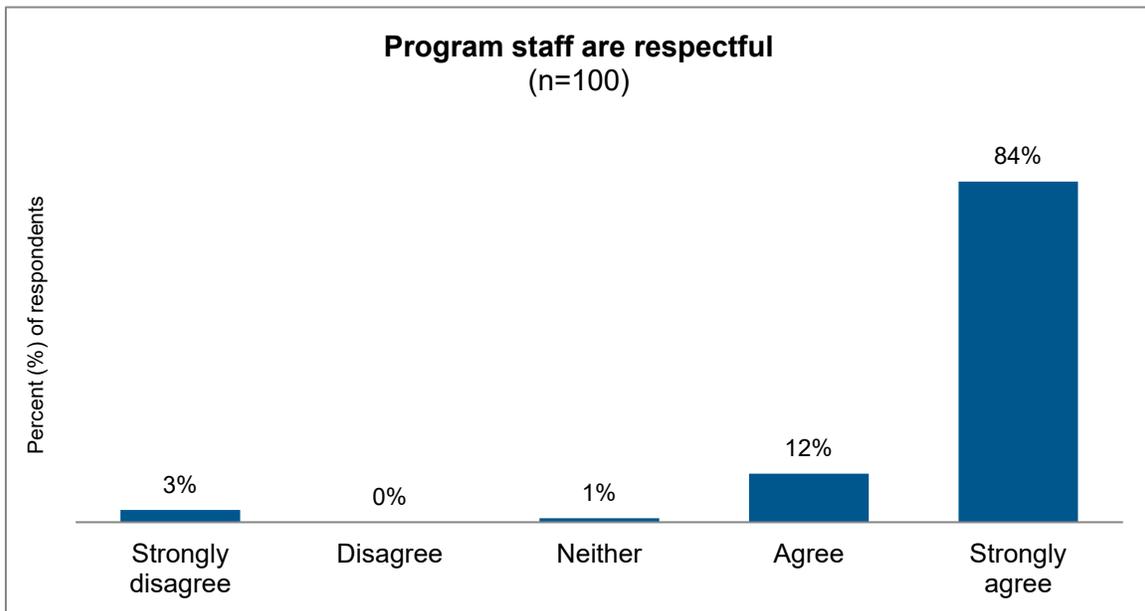
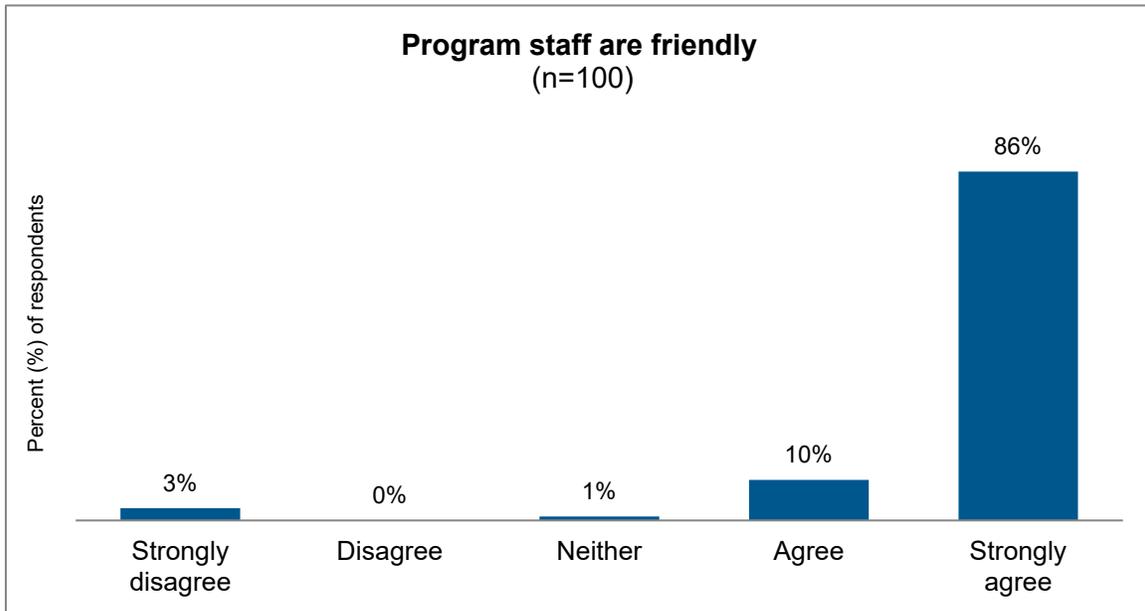
Children's and Community Services Division Client Survey 2023 ~ Results Summary



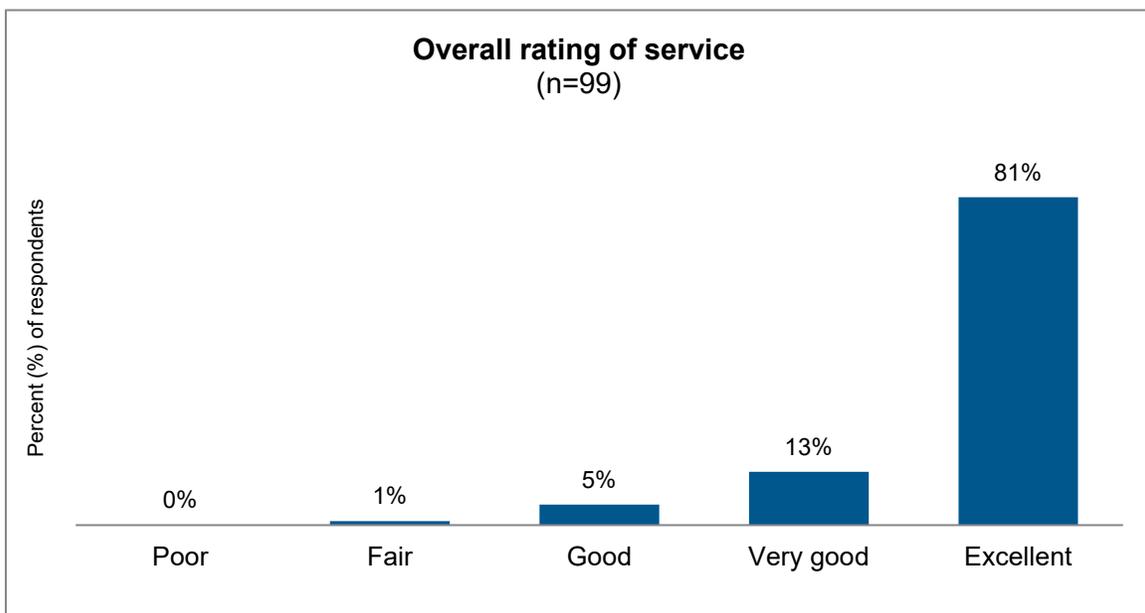
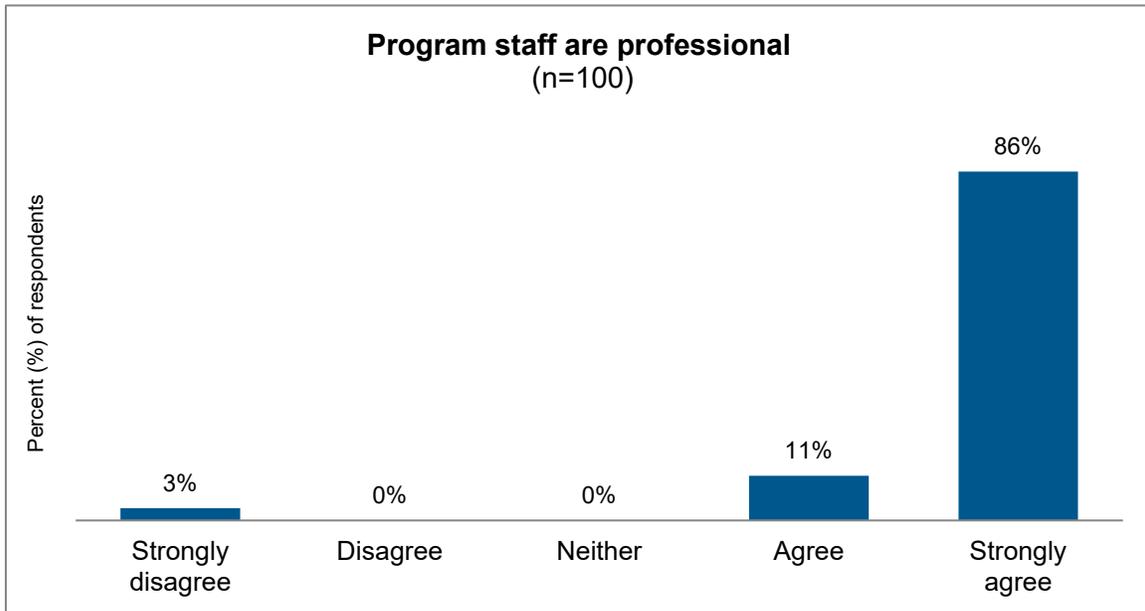
Children's and Community Services Division Client Survey 2023 ~ Results Summary



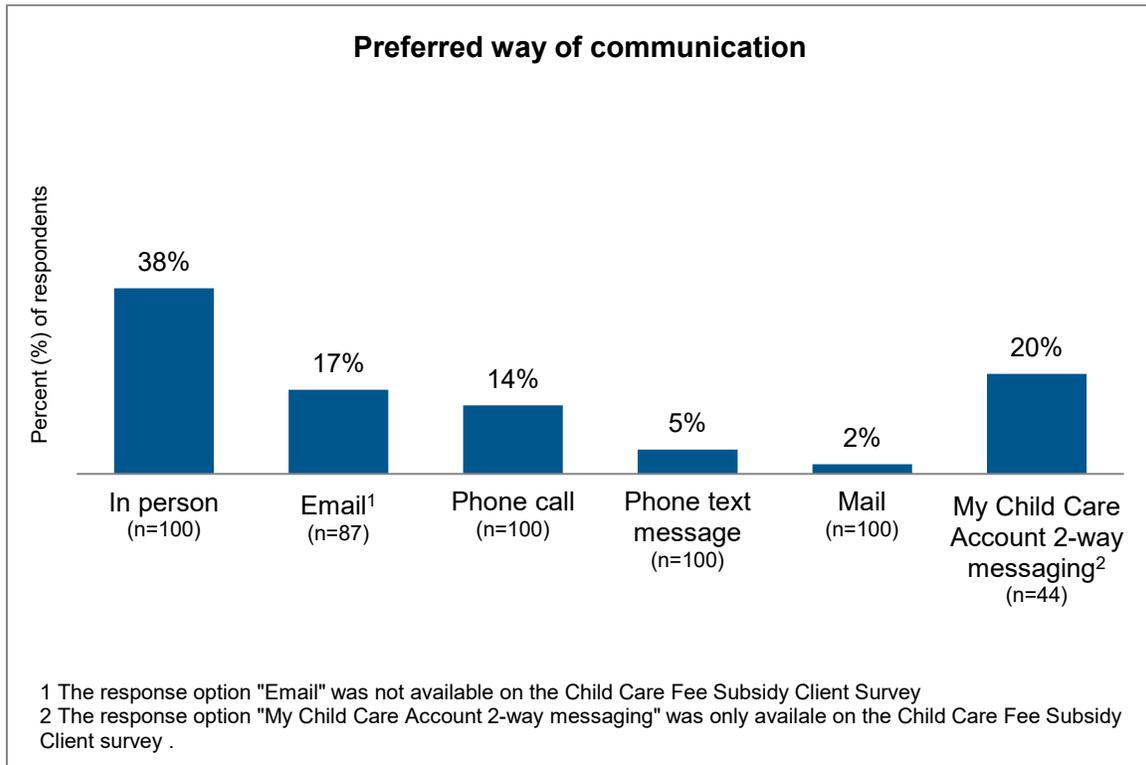
Children's and Community Services Division Client Survey 2023 ~ Results Summary



Children's and Community Services Division Client Survey 2023 ~ Results Summary



Children's and Community Services Division Client Survey 2023 ~ Results Summary

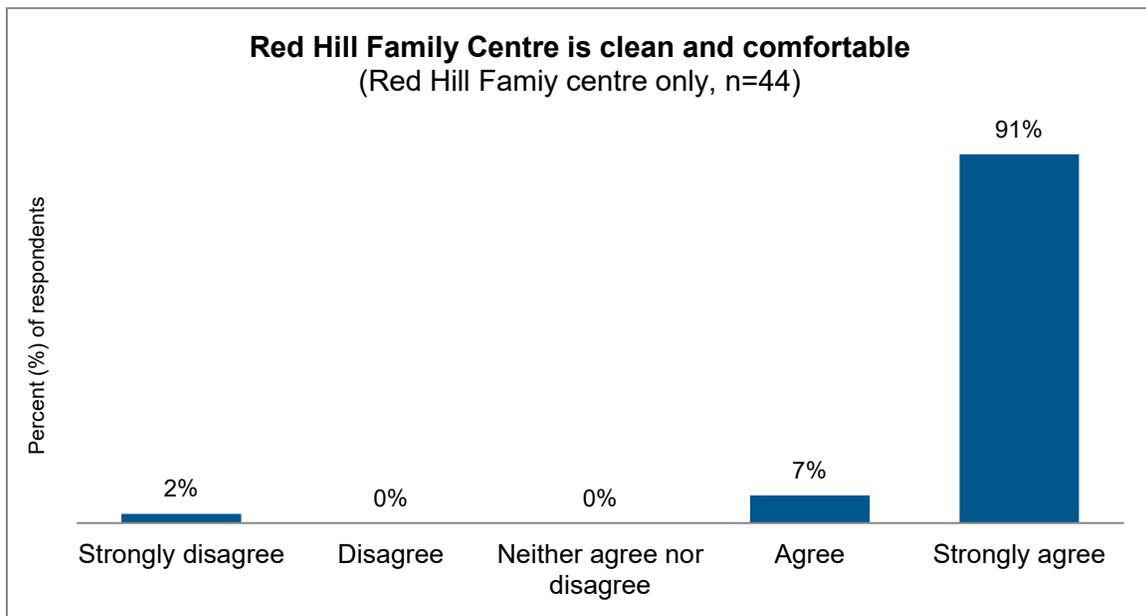


Children’s and Community Services Division Client Survey 2023 ~ Results Summary

The following sections provide summaries of survey responses for questions that were unique to specific program areas.

Red Hill Family Centre-Specific Survey Questions

The following is a summary of survey questions that were unique to the Red Hill Family Centre Client survey.



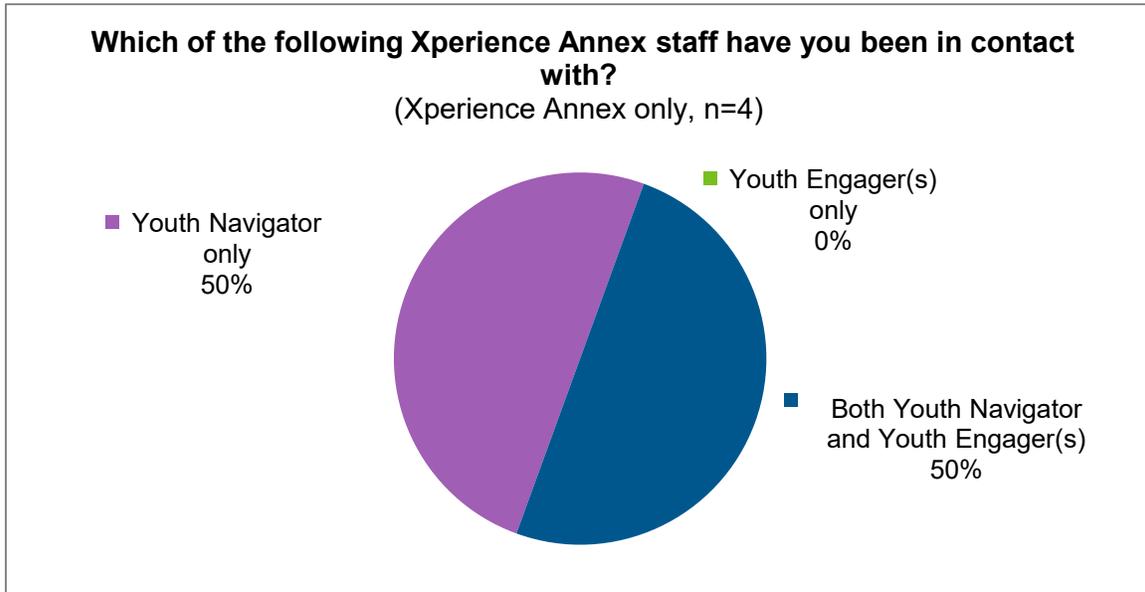
The Red Hill Family Centre survey asks respondents whether there are service hours other than the current service hours of 7:30 am to 5:30 pm that would better meet respondents’ needs. Most Red Hill Family Centre survey respondents did not have any feedback about the centre’s current service hours or indicated being content with the current service hours. There were just a few (7) respondents indicating a preference for either an earlier start (i.e., 7:00am) or later end (i.e., 6:00pm).

The complete set of verbatim collected for this question is provided in Appendix G.

Children's and Community Services Division Client Survey 2023 ~ Results Summary

Xperience Annex-Specific Survey Question

The following is a summary of the survey question specific to the Xperience Annex client survey that asks about respondent's contact with Xperience Annex staff.



Comments and Suggestions

Surveys for all program areas included an open-ended question about what would have made the service experience better for respondents. Across all program areas, the majority of responses to the open text question about how service experience can be made better were notes commending the services and remarks about a positive experience.

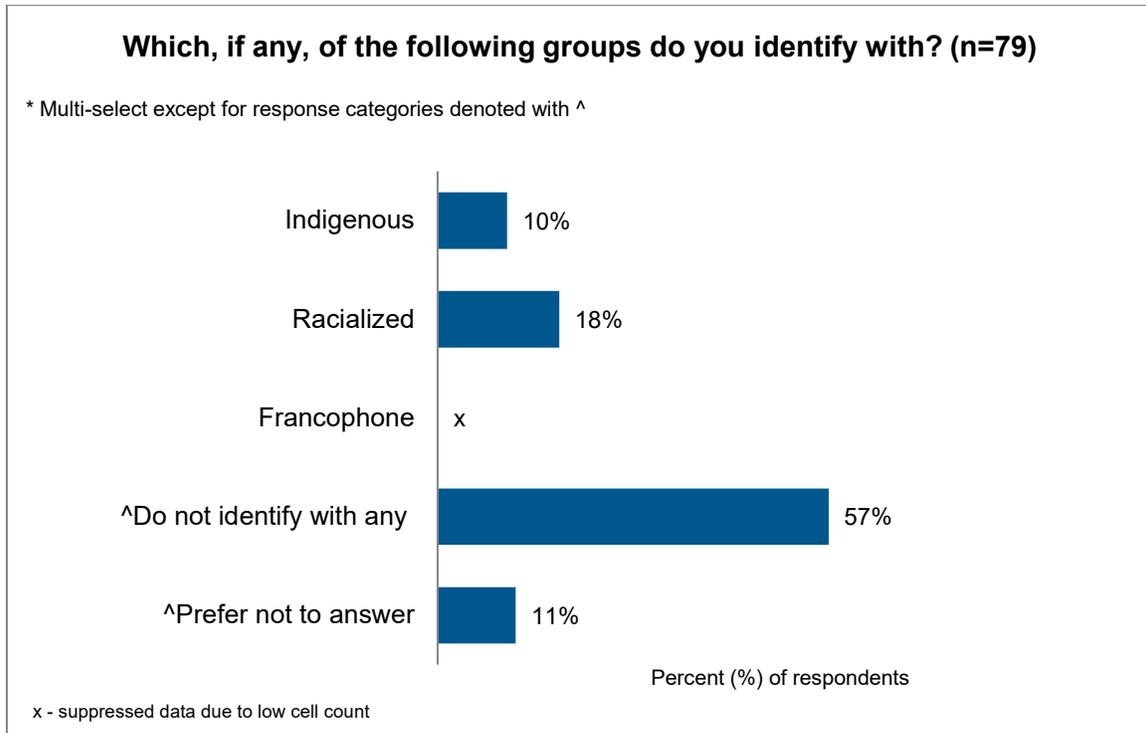
There were a few specific suggestions or comments for:

- Home Management regarding concerns about supports ending, having more available appointments and space to meet.
- Red Hill Family Centre to provide more communication, i.e., updates or pictures through the day, debrief at end of day, etc.

The complete set of verbatim collected for this question is provided in Appendix G.

Children's and Community Services Division Client Survey 2023 ~ Results Summary

Indigenous, Racialized and Francophone Respondents



Children’s and Community Services Division Client Survey 2023 ~ Results Summary

SERVICE DELIVERY ELEMENT RATINGS 2019-2023

The following table provides a summary of the ratings of the service delivery elements from the 2019, 2022 and 2023 surveys.

Note: Due to the nature of how the surveys were collected, the data cannot be considered statistically significant, and margins of errors cannot be calculated. While the collected survey data provides a general directional indication of client satisfaction with service delivery elements, limited conclusions can be drawn about data differences between years.

Service Delivery Element	2019 (n=125)	2022 (n=53)	2023 (n=100)
Service location was convenient	93%	94%	95%
Service location was suitable for purpose	97%	100%	95%
Service hours meet needs	96%	98%	95%
Client obtained service sought or was navigated	97%	96%	96%
Program staff cares about needs and concerns	97%	94%	97%
Program staff are friendly	99%	100%	96%
Program staff are respectful	98%	98%	96%
Program staff are professional	98%	98%	97%
Overall rating of service - excellent	81%	67%	81%

Children’s and Community Services Division Client Survey 2023 ~ Results Summary

APPENDIX A: SERVICE DELIVERY ELEMENTS AND SURVEY QUESTIONS

Service Delivery Element	Program Area	Survey Question
Service location was convenient	Child Care Fee Subsidy	The location was convenient.
	Home Management - Case Management	The location was convenient.
	LEAP	The location was convenient.
	Red Hill Family Centre	--Not applicable--
	Xperience Annex	The location was convenient.
Service location was suitable for purpose	Child Care Fee Subsidy	The location was suitable for the meeting purpose.
	Home Management - Case Management	The location was suitable for the meeting purpose.
	LEAP	The location was suitable for the meeting purpose.
	Red Hill Family Centre	--Not applicable--
	Xperience Annex	The location was suitable for the meeting purpose.
Service hours meet needs	Child Care Fee Subsidy	I am satisfied with the availability of appointments.
	Home Management - Case Management	I am satisfied with the availability of appointments.
	LEAP	I am satisfied with the availability of appointments.
	Red Hill Family Centre	The current service hours at Red Hill Family Centre are 7:30am to 5:30pm. Are there other service hours that would better meet your needs?
	Xperience Annex	I am satisfied with the availability of appointments.

Children’s and Community Services Division Client Survey 2023 ~ Results Summary

Service Delivery Element	Program Area	Survey Question
Client obtained service sought or was navigated	Child Care Fee Subsidy	I received the information or assistance I required.
	Home Management - Case Management	My needs were met, or I was provided a referral to another service.
	LEAP	My needs were met, or I was provided a referral to another service.
	Red Hill Family Centre	My child is well cared for at Red Hill Family Centre.
	Xperience Annex	My needs were met, or I was provided a referral to another service.
Program staff cares about needs and concerns	Child Care Fee Subsidy	The Child Care Fee Subsidy staff cares about my needs and concerns.
	Home Management - Case Management	The home management program staff cares about my needs and concerns.
	LEAP	The LEAP program staff cares about my needs and concerns.
	Red Hill Family Centre	Red Hill Family Centre staff cares about my needs and concerns.
	Xperience Annex	The Xperience Annex Youth Navigator and/or Youth Engagers cares about my needs and concerns.
Program staff are friendly	Child Care Fee Subsidy	The Child Care Fee Subsidy staff are friendly.
	Home Management - Case Management	The Home Management program staff are friendly.
	LEAP	The LEAP program staff are friendly.
	Red Hill Family Centre	Red Hill Family Centre staff are friendly.
	Xperience Annex	The Xperience Annex Youth Navigator and/or Youth Engagers are friendly.

Children’s and Community Services Division Client Survey 2023 ~ Results Summary

Service Delivery Element	Program Area	Survey Question
Program staff are respectful	Child Care Fee Subsidy	The Child Care Fee Subsidy staff treats me with respect.
	Home Management - Case Management	The Home Management program staff treats me with respect.
	Home Management – Training/Workshop	The Home Management program staff treats me with respect.
	LEAP	The LEAP program staff treats me with respect.
	Red Hill Family Centre	Red Hill Family Centre staff treats me with respect.
	Xperience Annex	The Xperience Annex Youth Navigator and/or Youth Engagers treats me with respect.
Program staff are professional	Child Care Fee Subsidy	The Child Care Fee Subsidy staff are professional.
	Home Management - Case Management	The Home Management program staff are professional.
	LEAP	The LEAP program staff are professional.
	Red Hill Family Centre	Red Hill Family Centre staff are professional.
	Xperience Annex	The Xperience Annex Youth Navigator and/or Youth Engagers are professional.
Overall rating of service	Child Care Fee Subsidy	Overall, how would you rate the service you received from Child Care Fee Subsidy?
	Home Management - Case Management	Overall, how would you rate the service you received from the Home Management program?
	LEAP	Overall, how would you rate the service you received from the LEAP program?
	Red Hill Family Centre	Overall, how would you rate the service your family received from Red Hill Family Centre?
	Xperience Annex	Overall, how would you rate the service you received from the Xperience Annex program?

Children’s and Community Services Division Client Survey 2023 ~ Results Summary

Service Delivery Element	Program Area	Survey Question
Preferred way of communicating with service area	Child Care Fee Subsidy	What is your preferred way of communicating with Child Care Fee Subsidy staff?
	Home Management - Case Management	What is your preferred way of communicating with Home Management program staff?
	LEAP	What is your preferred way of communicating with LEAP program staff?
	Red Hill Family Centre	What is your preferred way of communicating with Red Hill Family Centre staff?
	Xperience Annex	What is your preferred way of communicating with the Xperience Annex Youth Navigator and/or Youth Engagers?
Suggestions for how service experience can be made better	Child Care Fee Subsidy	What would have made your experience with Child Care Fee Subsidy better?
	Home Management - Case Management	What would have made your experience with the Home Management program better?
	LEAP	What would have made your experience with the LEAP program better?
	Red Hill Family Centre	What would have made the experience Red Hill Family Centre better?
	Xperience Annex	What would have made your experience with the Xperience Annex program better?

Children’s and Community Services Division Client Survey 2023 ~ Results Summary

APPENDIX B: CHILD CARE FEE SUBSIDY CLIENT SURVEY 2023



Child Care Fee Subsidy – Client Survey - 2023

As part of efforts for continuous improvement, we want to hear about your experience with Child Care Fee Subsidy. Please take a few minutes to fill out this survey and provide us with your feedback.

Important things about this survey

- Participation is voluntary, you may answer or skip any of the questions in the survey.
- Your responses will be kept confidential and will only be reported at a group level and will not identify you.

Where was your recent appointment with Child Care Fee Subsidy staff?

In person at Child Care Fee Subsidy Office (Lister Block)

In person at other location, specify location: _____

Phone appointment

Please indicate your level of agreement with the following statements about your appointment today.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The meeting location/format was convenient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The meeting location/format was suitable for the meeting purpose.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with the availability of appointments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I received the information or assistance I required.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Continued on Back 

Children’s and Community Services Division Client Survey 2023 ~ Results Summary



Child Care Fee Subsidy – Client Survey - 2023

Please indicate your level of agreement with the following statements.

The Child Care Fee Subsidy staff ...

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
cares about my needs and concerns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
are friendly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
treats me with respect	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
are professional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is your preferred way of communicating with Child Care Fee subsidy staff?
Select one (1) response only. Note not all options are currently used.

- My Child Care Account 2-way messaging
- In person
- Phone call
- Phone text message
- Mail

Overall, how would you rate the service you received from Child Care Fee Subsidy?

- Poor
- Fair
- Good
- Very good
- Excellent

Children's and Community Services Division Client Survey 2023 ~ Results Summary



Child Care Fee Subsidy – Client Survey - 2023

What would have made your experience with Child Care Fee Subsidy better?

Which, if any, of the following groups do you identify with?
Select all that apply.

- Indigenous
- Racialized (i.e. Black, people of colour)
- Francophone
- I do not identify with any of the above groups.
- Prefer not to answer

Thank you for participating!

Children’s and Community Services Division Client Survey 2023 ~ Results Summary

APPENDIX C: HOME MANAGEMENT PROGRAM CLIENT SURVEY 2023



Home Management Program - Client Survey - 2023

As part of efforts for continuous improvement, we want to hear about your experience with the Home Management program. Please take a few minutes to fill out this survey and provide us with your feedback.

Important things about this survey

- Participation is voluntary, you may answer or skip any of the questions in the survey.
- Your responses will be kept confidential and will only be reported at a group level and will not identify you.

Where was your appointment today with Home Management program staff?

Please indicate your level of agreement with the following statements about your appointment today.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The location was convenient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The location was suitable for the meeting purpose.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with the availability of appointments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My needs were met or I was provided a referral to another service.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Continued on Back 

Children’s and Community Services Division Client Survey 2023 ~ Results Summary



Home Management Program - Client Survey - 2023

Please indicate your level of agreement with the following statements.

The Home Management program staff ...

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
cares about my needs and concerns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
are friendly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
treats me with respect	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
are professional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is your preferred way of communicating with Home Management program staff?
 Select one (1) response only.

- In person
- Email
- Phone call
- Phone text message
- Mail

Overall, how would you rate the service you received from the Home Management program?

- Poor
- Fair
- Good
- Very good
- Excellent

Children's and Community Services Division Client Survey 2023 ~ Results Summary



Home Management Program - Client Survey - 2023

What would have made your experience with the Home Management program better?

Which, if any, of the following groups do you identify with?
Select all that apply.

- Indigenous
- Racialized (i.e. Black, people of colour)
- Francophone
- I do not identify with any of the above groups.
- Prefer not to answer

Thank you for participating!

Children’s and Community Services Division Client Survey 2023 ~ Results Summary

APPENDIX D: LEAP PROGRAM CLIENT SURVEY 2023



LEAP Program – Client Survey - 2023

Hamilton

As part of efforts for continuous improvement, we want to hear about your experience with the Learning, Earning and Parenting (LEAP) Program. Please take a few minutes to fill out this survey and provide us with your feedback.

Important things about this survey

- Participation is voluntary, you may answer or skip any of the questions in the survey.
- Your responses will be kept confidential and will only be reported at a group level and will not identify you.

Where was your appointment today with LEAP program staff?

Please indicate your level of agreement with the following statements about your appointment today.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The location was convenient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The location was suitable for the meeting purpose.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with the availability of appointments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My needs were met or I was provided a referral to another service.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Continued on Back 

Children’s and Community Services Division Client Survey 2023 ~ Results Summary



LEAP Program – Client Survey - 2023

Hamilton

Please indicate your level of agreement with the following statements.

The LEAP program staff ...

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
cares about my needs and concerns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
are friendly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
treats me with respect	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
are professional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is your preferred way of communicating with LEAP program staff?
Select one (1) response only.

- In person
- Email
- Phone call
- Phone text message
- Mail

Overall, how would you rate the service you received from the LEAP program?

- Poor
- Fair
- Good
- Very good
- Excellent

Children's and Community Services Division Client Survey 2023 ~ Results Summary



LEAP Program – Client Survey - 2023

What would have made your experience with the LEAP program better?

Which, if any, of the following groups do you identify with?
Select all that apply.

- Indigenous
- Racialized (i.e. Black, people of colour)
- Francophone
- I do not identify with any of the above groups.
- Prefer not to answer

Thank you for participating!

Children’s and Community Services Division Client Survey 2023 ~ Results Summary

APPENDIX E: RED HILL FAMILY CENTRE CLIENT SURVEY 2023



Red Hill Family Centre - Client Survey - 2023

As part of efforts for continuous improvement, we want to hear about your experience with Red Hill Family Centre. Please take a few minutes to fill out this survey and provide us with your feedback.

Important things about this survey

- Participation is voluntary, you may answer or skip any of the questions in the survey.
- Your responses will be kept confidential and will only be reported at a group level and will not identify you.

Please indicate your level of agreement with the following statements.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
My child is well cared for at Red Hill Family Centre.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Red Hill Family Centre is clean and comfortable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The current service hours at Red Hill Family Centre are 7:30am to 5:30pm. Are there other service hours that would better meet your needs?

Please indicate your level of agreement with the following statements.

Red Hill Family Centre staff ...

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
cares about my needs and concerns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
are friendly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
treats me with respect	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
are professional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Continued on Back 

Children's and Community Services Division Client Survey 2023 ~ Results Summary



Red Hill Family Centre – Client Survey – 2023

What is your preferred way of communicating with Red Hill Family Centre staff?
Select one response only.

- In person
- Email
- Phone call
- Phone text message
- Mail

Overall, how would you rate the service your family received from Red Hill Family Centre?

- Poor
- Fair
- Good
- Very good
- Excellent

What would have made the experience with Red Hill Family Centre better?

Which, if any, of the following groups do you identify with?
Select all that apply.

- Indigenous
- Racialized (i.e. Black, people of colour)
- Francophone
- I do not identify with any of the above groups.
- Prefer not to answer

Thank you for participating!

Children’s and Community Services Division Client Survey 2023 ~ Results Summary

APPENDIX F: XPERIENCE ANNEX CLIENT SURVEY 2023



Xperience Annex - Client Survey - 2023

Hamilton

As part of efforts for continuous improvement, we want to hear about your experience with the Xperience Annex. Please take a few minutes to fill out this survey and provide us with your feedback.

Important things about this survey

- Participation is voluntary, you may answer or skip any of the questions in the survey.
- Your responses will be kept confidential and will only be reported at a group level and will not identify you.

Please indicate your level of agreement with the following statements about your visit/appointment today.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The location was convenient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The location was suitable for the meeting purpose.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with the availability of appointments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My needs were met or I was provided a referral to another service.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Which of the following Xperience Annex staff have you been in contact with?

- Youth Navigator
- Youth Engager
- Both

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Children’s and Community Services Division Client Survey 2023 ~ Results Summary



Xperience Annex - Client Survey – 2023

Please indicate your level of agreement with the following statements.

The Xperience Annex Youth Navigator and/or Youth Engagers ...

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
cares about my needs and concerns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
are friendly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
treats me with respect	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
are professional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is your preferred way of communicating with the Xperience Annex Youth Navigator and/or Youth Engagers?

Select one (1) response only.

- In person
- Email
- Phone call
- Phone text message
- Mail

Overall, how would you rate the service you received from the Xperience Annex program?

- Poor
- Fair
- Good
- Very good
- Excellent

Children's and Community Services Division Client Survey 2023 ~ Results Summary



Xperience Annex - Client Survey – 2023

What would have made your experience with the Xperience Annex program better?

Which, if any, of the following groups do you identify with?
Select all that apply.

- Indigenous
- Racialized (i.e. Black, people of colour)
- Francophone
- I do not identify with any of the above groups.
- Prefer not to answer

Thank you for participating!

CityHousing Hamilton 2024 Asset Management Plan



CITYHOUSING HAMILTON

2024 ASSET MANAGEMENT PLAN

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SUMMARY AND QUICK FACTS

SERVICE PROFILE



CityHousing Hamilton (CHH) provides affordable housing that is safe, well maintained, cost effective and supports the diverse needs of our many communities. CHH is the largest social housing provider in Hamilton.

ASSET SUMMARY



Replacement Value
\$2.95B

Average Age of 40 Years
 or 46% of life remaining.

LEVEL OF SERVICE SUMMARY

Customer

- On average, survey respondents feel neutral on how satisfied they are with the overall condition of their home.
- On average, survey respondents feel CHH has performed Average in providing services tenants expect from a landlord.
- On average, survey respondents feel neutral on how satisfied they are with Pest Control services and Maintenance services.

Technical

- 5.8% overall vacancy rate – target is 2%.
- Buildings are on average in Fair condition.
- 100% of legislated maintenance inspections were completed in 2023.



MAJOR ASSET HIGHLIGHTS

MAJOR ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION	STEWARDSHIP MEASURES
Facilities (including components)	448	\$2.94 B	Fair	Building Condition Assessments are completed every 5 years
Administrative Assets	303	\$752.5K	Poor	Vehicles are checked at least twice a year
Appliances*	10,806	\$7.5M	N/A*	Checked during the annual unit inspection

*Appliances condition is not available for this iteration of the AM Plan.

DATA CONFIDENCE



CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

Key Demand Drivers



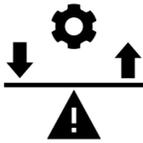
POPULATION CHANGE: Hamilton's population is projected to grow until 2051, leading to a potential increase in demand for affordable housing.



LEGISLATION: Potential new by-laws, such as adequate temperature by-laws, could change the level of service provided to tenants and can increase the operation and maintenance costs of CHH services.

RISK

- Critical Assets identified for CHH are facilities components including mechanical and electrical systems, elevators, building envelope and foundation.



CLIMATE CHANGE

Mitigation

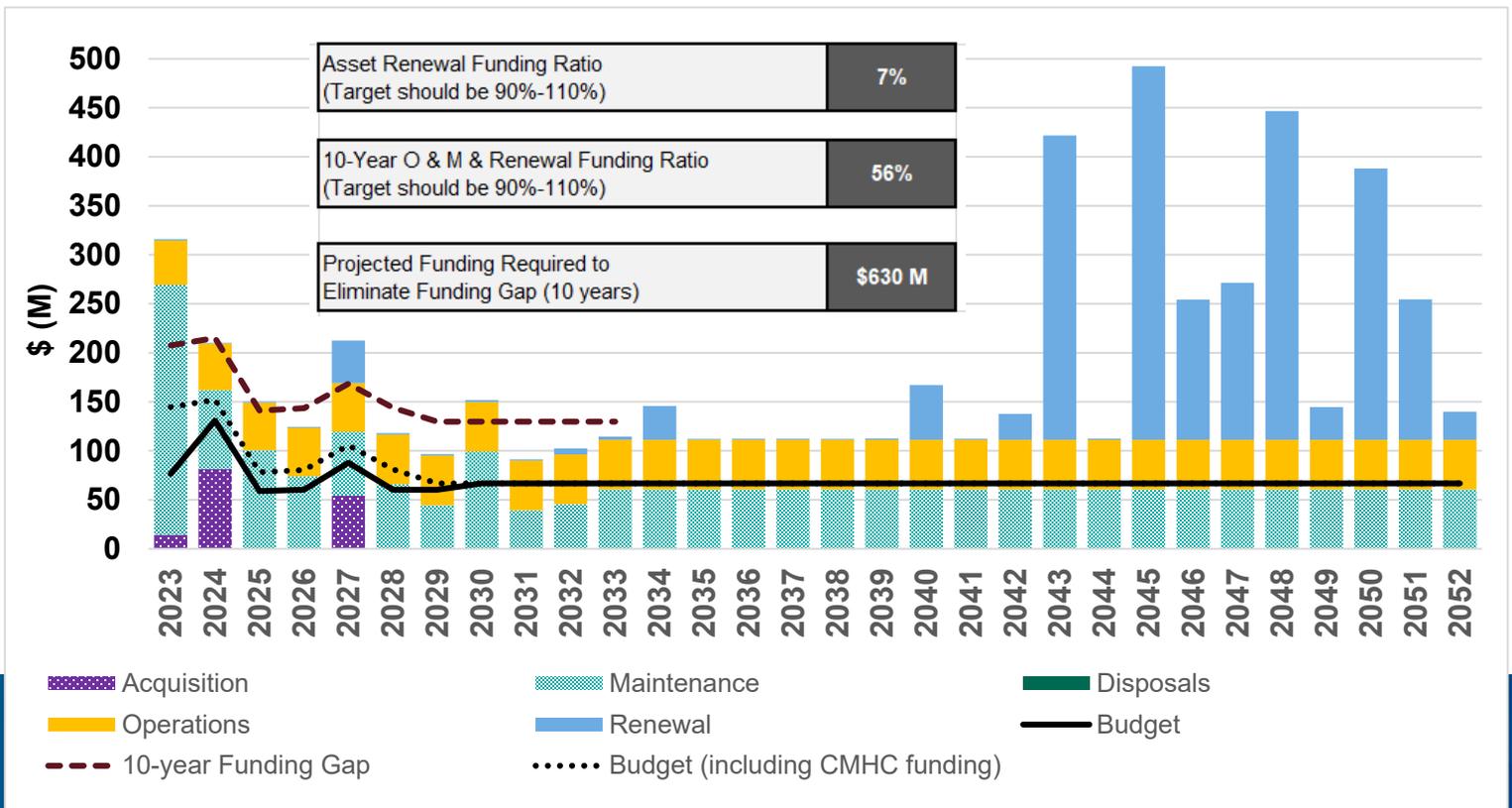
- Canada Mortgage Housing Corporation (CMHC) projects with energy efficiency, and accessibility targets to be met by 2028.
- All new developments after 2022 adhere to passive house standards. These new facilities are built to use 90% less energy than a conventional facility and are nearly net zero.



Adaptation

- No Adaptation Projects identified at this time.

LIFECYCLE SUMMARY



CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

1. INTRODUCTION

CityHousing Hamilton (CHH) is the largest social housing provider in the City of Hamilton and provides homes that are safe, well-maintained, and affordable for people who live and work in our diverse community. The purpose of this Asset Management Plan (AM Plan) is to ensure that CHH has the required assets to deliver on this goal.

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements (i.e., O. Reg 588/17¹), and required funding which will provide the appropriate levels of service over the 2023-2052 planning period.

¹ Government of Ontario, 2017

CITYHOUSING HAMILTON

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2. BACKGROUND

The information in this section is intended to provide background on the CHH service area by providing a service profile, outlining legislative requirements, defining the asset hierarchy used throughout the report, and a detailed summary and analysis of existing inventory information as of November 2023 including age profile, condition methodology, condition profile, and asset usage and performance for each of the asset classes. This section will provide the necessary background for the remainder of the plan.

2.1 SERVICE PROFILE

Listed below are related documents reviewed in preparation of the Asset Management Plan:

- Asset Management Plan Overview Document;
- 2022 City of Hamilton Housing Needs Assessment;
- 2022 Housing & Homelessness Action Plan in Hamilton;
- CityHousing Hamilton Renewal Plan 2021-2028; and,
- CityHousing Hamilton 2022 Annual Report.

Additional financial-related documents are identified in **Section 10.1** Plan Improvement and Monitoring.

2.1.1 SERVICE HISTORY

In 2000, the Province of Ontario began the process of transferring ownership and responsibility for the operation of former provincially managed local housing authorities to newly created Local Housing Corporations (LHCs) to be owned by certain municipalities. At the same time, it began downloading responsibilities for oversight and funding of the housing system to the same municipalities and created the Consolidated Municipal Service Manager role (Service Manager) through the then Social Housing Reform Act, 2000 (SHRA).

Hamilton Housing Corporation (HHC) was created as Hamilton's LHC. Many municipalities, including Hamilton and pre-amalgamation municipalities, already operated municipal housing corporations including Municipal Non-Profit (Hamilton) Corporation and Dundas Valley Municipal Housing Corporation. HHC went through a process of amalgamating smaller social housing providers and municipal housing providers.

HHC changed its name to CityHousing Hamilton (CHH) Corporation in 2006 but remains the LHC for the City of Hamilton and is governed by: Part IV of the Housing Services Act, 2011; and the Ontario Business Corporations Act.

The Housing Services Act, 2011, which replaced the SHRA, prescribes certain rules for the operation of LHCs and allows for local rules to be established by the Service Manager (The

CITYHOUSING HAMILTON

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system oversight role is currently fulfilled by the Housing Service Division of the Healthy & Safe Communities Department City of Hamilton).

The Act expressly confirms that LHCs are not considered to be local boards of the municipality nor are they commercial enterprises. Unlike most local boards or municipal corporations, the Business Corporations Act is the defining legislation for corporate governance matters, not the Municipal Act.

Today, CHH is responsible for operating homes for households of all ages and compositions located throughout 12 of Hamilton's 15 wards. CHH is the third largest publicly owned housing provider in Ontario, behind Toronto Community Housing Corporation and Ottawa Community Housing Corporation.

CHH works collaboratively with the City of Hamilton, other housing providers, and the broader community to address homelessness and affordability. As a stakeholder, CHH is a leading champion participant in discussions and initiatives with other large housing providers to drive system-wide policy development and funding opportunities across the province. CHH participates in sector advocacy, benchmarking, sharing best practices and piloting concepts for efficiency with industry partners such as Housing Services Corporation, the Ontario Non-Profit Housing Association and the Canada Housing and Renewal Association. It is also a core member of Hamilton is Home, a local collaboration of affordable housing developers.

2.1.2 SERVICE FUNCTION

Housing Services:

The City of Hamilton's Housing Services Division is designated by the Province of Ontario as the Service Manager for Community Housing and Homelessness. In this capacity, the division is tasked with funding, overseeing compliance with relevant legislation, and strategizing for the long-term sustainability of Social and Community Housing within the City of Hamilton. Additionally, the division is responsible for planning and facilitating the development of new community housing initiatives. Their responsibilities as a Service Manager also include administering other forms of financial assistance such as rent supplements, housing allowances and the Canada Ontario Housing Benefit.

Housing Services secures funding for investments from all levels of government. Investment programs for social housing include the Community Entity for funding under Reaching Home, Canada's Homelessness Strategy, Affordable Housing Fund Program (AHFP), Canada-Ontario Community Housing Initiative (COCHI), Ontario Priorities Housing Initiative (OPHI), and Canada Mortgage Housing Corporation (CMHC). With these funds, the City offers various services to assist low-income residents in finding affordable homes. This involves allocating operating funds and capital repair dollars to maintain buildings, ensuring they are safe and healthy. Rent-gear-to-income (RGI) and rent subsidies (Housing Allowances, Rent Supplements, Canada Ontario Housing Benefit) help reduce rents in private market buildings to 30% of a household's income. In efforts to tackle the housing crisis and unaffordability in Hamilton, in August 2020 Hamilton City Council endorsed the review of the Housing and Homelessness Action Plan (HHAP). The

CITYHOUSING HAMILTON

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HHAP is a community-based, person-centred plan that sets a vision, clear targets, and goals to ensure everyone in Hamilton has a home. The plan is to be viewed as a living document that will be updated as required.

Housing Services plays a critical role in addressing housing challenges and ensuring that residents have access to affordable and suitable housing options. Housing Services collaborates with social housing providers, including CityHousing Hamilton, to align efforts with broader municipal and provincial housing goals.

While the City of Hamilton collaborates with different housing providers through Housing Services, including CityHousing Hamilton, the current Asset Management Plan (AM Plan) specifically focuses on reviewing the assets and housing portfolio of CityHousing Hamilton. The housing portfolios managed by third-party providers are not covered within this AM Plan.

CityHousing Hamilton (CHH):

As the third-largest owner and operator of social housing in Ontario, CHH plays a pivotal role in managing the assets and housing portfolio within the City of Hamilton. Originally established in 2001 as the Hamilton Housing Corporation, CHH operates under the governance of the Ontario Business Corporations Act, with the City of Hamilton as its sole shareholder. The corporate mandate of CHH encompasses various aspects, which include, the maintenance, and operation of housing units and the development of new affordable housing by the Housing Services Act, of 2011. The mandate extends to the administration of programs providing Rent-Geared-to-Income (RGI) assistance, the provision of accommodation for individuals with special needs, and engagement in matters agreed upon with the Minister of Municipal Affairs and Housing.

As of February 2023, CHH actively manages a diverse portfolio comprised of 6,931 units, exclusive of 191 units which were sold or decommissioned to support new development. CHH has an obligation to replace these 191 units at a 1:1 ratio at minimum. 82% of these units are designated as RGI units, ensuring affordability for residents, while 18% of these units are designated as market rent. In total, approximately 13,000 individuals live in CHH units. This Asset Management Plan is specifically about CityHousing Hamilton.

CHH Responsibilities:

CHH provides property management and tenant support services such as:

- **Operations:** Responsible for day-to-day coordination of on-site property management services, including meeting with tenants, vendor coordination, maintenance issue resolution, building coordination and emergency response.
- **Tenancy Administration:** Manages rent calculations, tenant selection, annual reviews, and reception services, ensuring smooth operation of the tenant-related processes.

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- **Partnership Development & Support Services:** Committed to enhancing the overall well-being of CHH tenants and communities. Tenant Support Workers (TSWs) address various tenant needs, including conflict resolution, crisis intervention, mental health support and eviction prevention. The Partnership Development side focuses on developing partnerships that offer social, educational and wellness programs for CHH tenants.
- **Maintenance:** Oversees the delivery of maintenance services, integrated pest control and HVAC maintenance and repairs. Maintenance Servicers manage routine maintenance requests, while specialized work may involve external vendors.
- **Asset Renewal:** Manages capital planning and project management for large-scale repairs and replacements. The team is dedicated to sustainability, participating in the City of Hamilton's Climate Change Action Strategy.
- **Development:** Responsible for project management related to redevelopment, revitalization, new builds and conversion or acquisition projects, aligning with the long-term growth and development plan for CHH.
- **Strategy & Quality Improvement:** Assists the entire organization in developing and monitoring CHH's Strategic Plan. This team leads policy and procedure development, service contract development and continuous improvement initiatives.
- **Finance:** Works closely with the City's Finance staff and Housing Services staff in developing annual budgets, overseeing financial controls, and managing departmental operating, reporting, capital, and project-specific budgets.

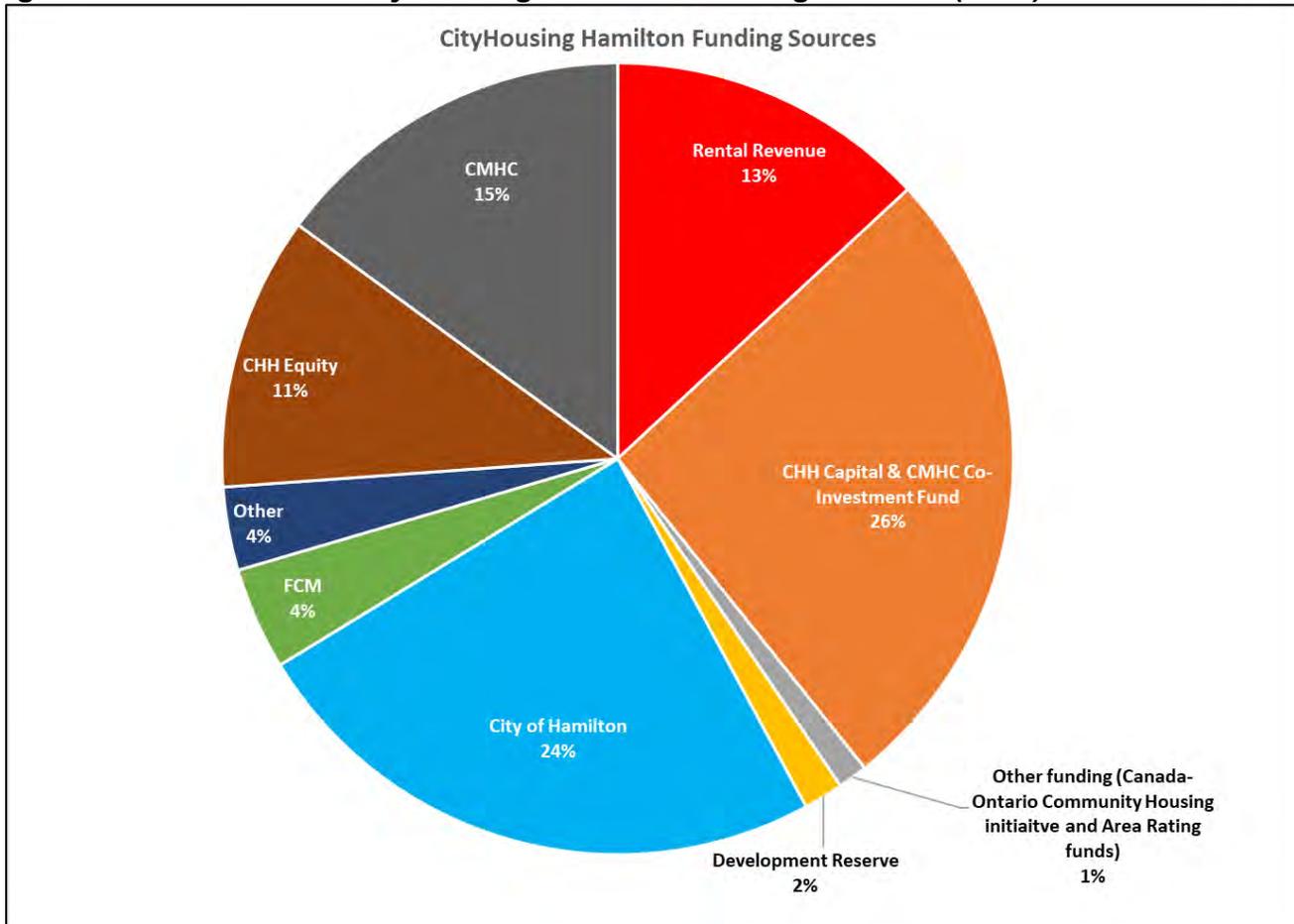
CHH plays a pivotal role in not only providing housing but also in the holistic well-being of its tenants and the sustainable development of housing in the City of Hamilton. The various operational components ensure a comprehensive approach to housing management and community support.

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CityHousing Funding Breakdown:

CityHousing relies on multiple funding sources, a breakdown of these sources is shown in **Figure 1** below.

Figure 1: Breakdown of CityHousing Hamilton Funding Sources (2024)

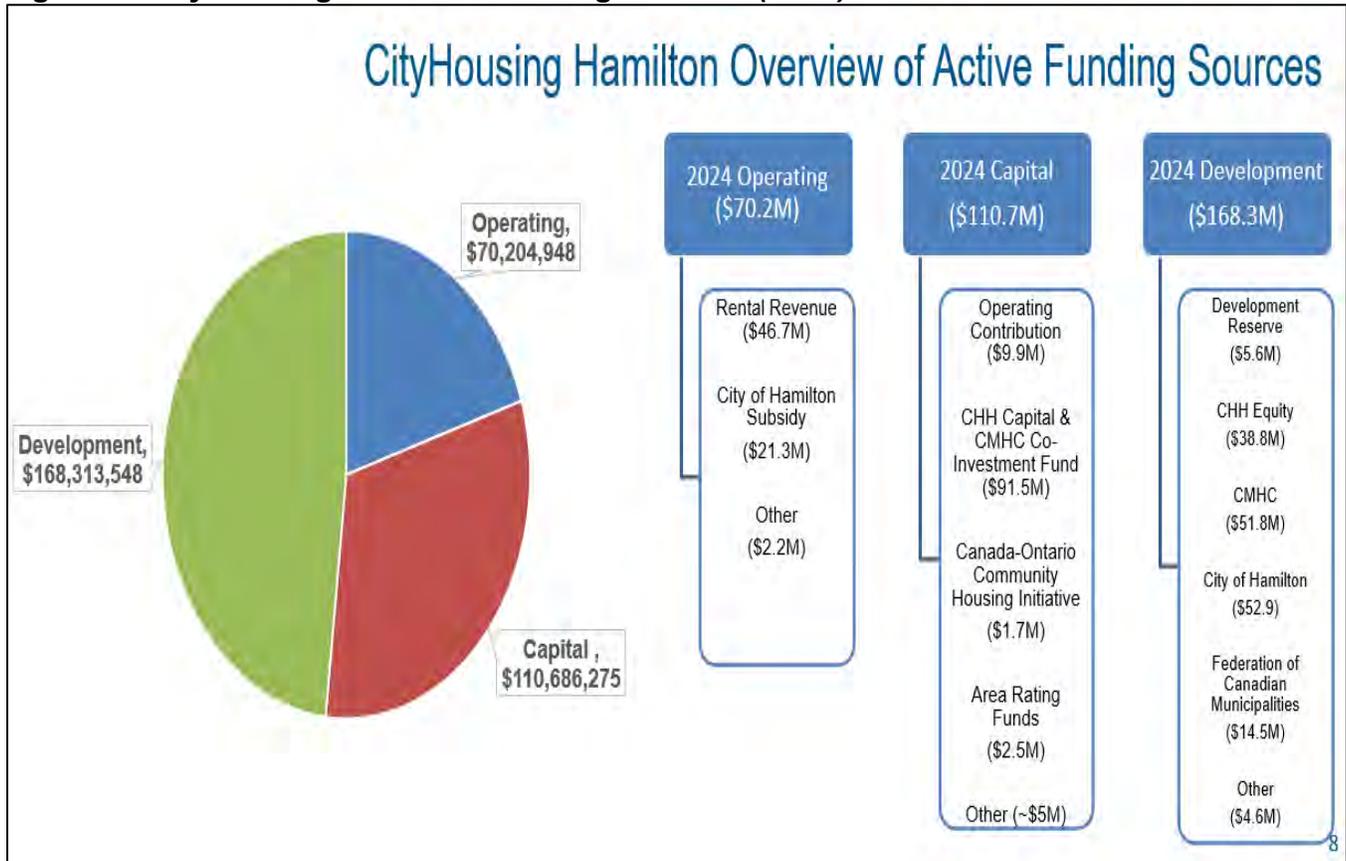


Funding comes from rental revenue collected from tenants, rent subsidy and new development funding from the City of Hamilton, CMHC grant funding for development projects, CityHousing capital funds & Equity and CMHC Co-Investment funding, and other funding sources.

Funding sources can and do vary by year as funding can be highly dependent upon grants from other levels of government. **Figure 2** below is based on newer budget data and includes work-in-progress projects from the previous year that may be in progress but not yet completed.

CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

Figure 2: CityHousing Hamilton Funding Sources (2024)



2.1.3 USERS OF THE SERVICE

CHH houses 13,000 tenants of diverse age, education, language, ability, religion, and ethnicity. CHH tenant records show that 43% of tenants are families, 47% are seniors and 10% are single.

The City of Hamilton supports a diverse population of almost 570,000 residents, with key demographic indicators reflecting its unique character. According to the 2021 Census results², Hamilton's average age stands at 41.5 and median age 40.8 years, with an average size of census families at 2.9 persons per household. While English is the most commonly spoken language, 24% of the population's mother tongue is neither English nor French, and 27% identify as a visible minority. This diversity is reflected in the demographics of tenants served by CHH, with more than 30 different first languages spoken by tenants.

In 2022, Hamilton's household income averaged \$121,031, slightly lower than the Ontario average of \$129,159. This suggests a potential need for more affordable housing options in the City. The median house price in Hamilton was \$830,000 compared to \$500,000 in 2017³ and average rent continues to increase. It appears that incomes have not kept pace with housing

² Census Profile, 2021 Census of Population, 2021

³ Association, The Canadian Real Estate. 2024

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prices. Not only are the costs of ownership increasing, as shown in **Figure 3** below, but rental costs have also increased significantly over the last few years. The combined effect is that fewer and fewer people can afford a home and may require additional support, such as Rent Geared to Income (RGI) programs.

Figure 3: Rental Prices in Hamilton⁴

Rent prices in Hamilton growing at rapid pace

The gap between rent listings and what renters across Hamilton are paying is growing.



Source: City of Hamilton, Canada Mortgage and Housing Corporation and Zumper (Bobby Hristova/CBC)

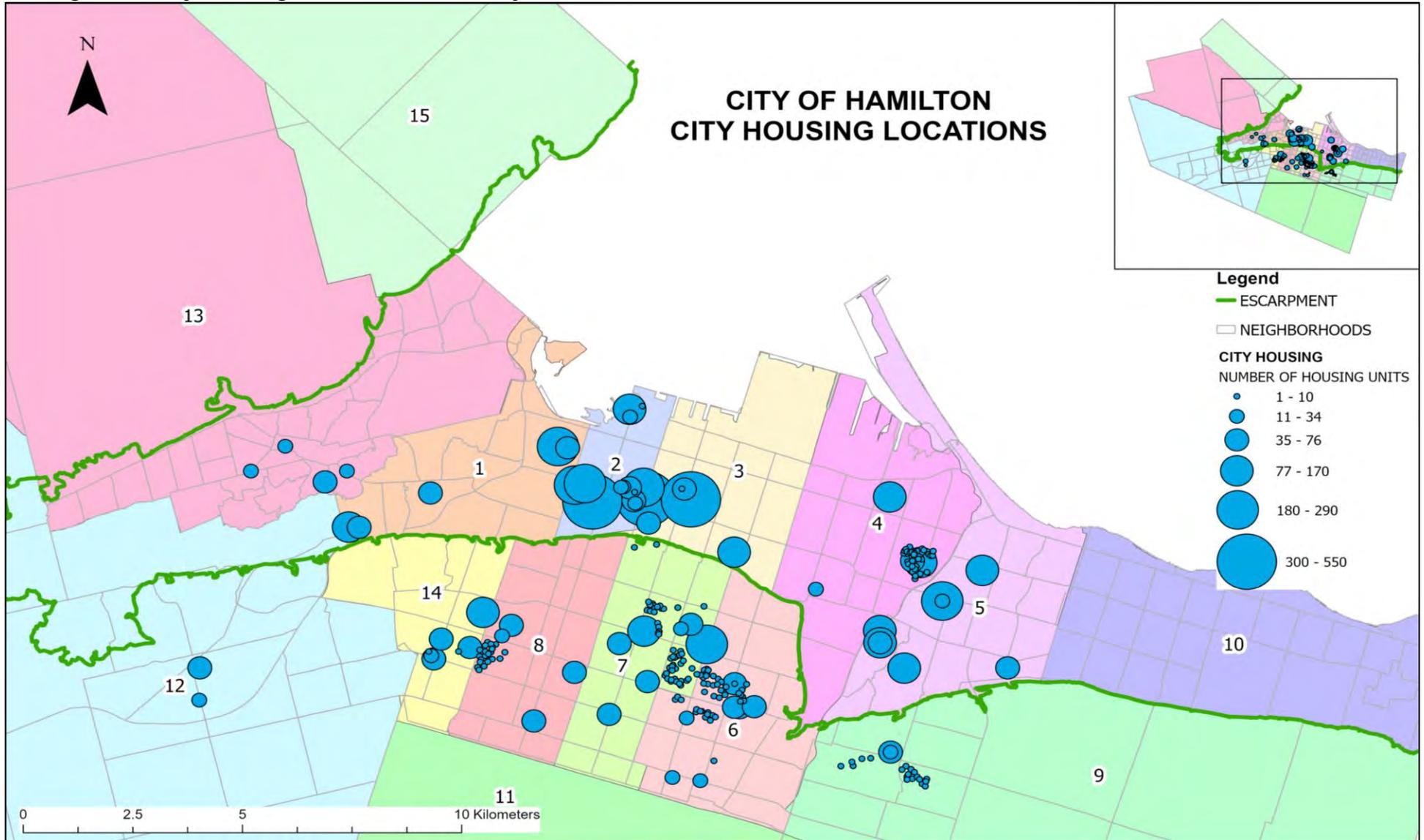
The increasing cost of home ownership and rising rental prices are contributing to growing unaffordability within the city. The situation may prompt individuals to move out of the city to seek housing in communities where they can still afford to rent or own a home. Similarly, individuals from higher-cost areas such as the Greater Toronto Area (GTA) may be migrating to Hamilton for better affordability.

CityHousing Hamilton has housing units in 12 of 15 wards located throughout the City as shown in **Figure 4** below. The highest concentration of CHH housing units is in the downtown8po area.

⁴ Hristova, B. 2024 February 10

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Figure 4: CityHousing Locations in the City of Hamilton



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2.1.4 UNIQUE SERVICE CHALLENGES

CityHousing Hamilton (CHH) faces many challenges that impact its operational efficiency and the condition of housing it provides. These challenges include the following:

- **Inadequate Funding:** CHH prioritizes crucial maintenance projects based on health, safety, and emergency and aligns these projects with limited available funding. However, inadequate funding has caused CHH to defer certain maintenance projects (as defined in **Section 8.2**) which is affecting the overall condition of its properties.
- **Aging Infrastructure and Maintenance Challenges:** Social housing properties often have aging infrastructure, resulting in ongoing maintenance challenges. Addressing repairs and upgrades to ensure the longevity and quality of housing units may be a continual challenge for CityHousing Hamilton.
- **Support Services and Partnerships:** CHH strives to connect tenants with a variety of services which improve housing stability and quality of life. It relies on many partnerships with different agencies and other community resources. The support needs of CHH tenants have increased significantly over the years, at a time when many outside agencies are struggling to meet the demands. This impacts individual tenants and the overall well-being of CHH communities and can manifest in many unintended outcomes - such as increased safety concerns, social isolation of tenants and even increased damage to property.
- **Preventative Maintenance and Funding Constraints:** Limited funding has caused CHH to make decisions to defer or not complete some preventative maintenance work at the recommended frequency at all CHH properties, resulting in a reactive rather than proactive maintenance approach. Rapidly accelerating costs for construction, materials and real estate are further affecting the ability to deliver projects within existing historical budgets.
- **Diverse Tenant Mix and Increased Administrative Costs:** The diverse mix of tenants with unique support needs, translates into increased time and costs related to tenant administration and tenant support services.
- **Geographically Dispersed Property Portfolio:** The portfolio comprises a significant number of single-home dwellings, including semis and detached houses, scattered across the city. Unlike high-rise or multi-unit buildings, where multiple service requests can be efficiently addressed in the same location, the dispersed nature of single-home dwellings necessitates more driving time for staff. This means that after servicing one unit, they may have to cover greater distances before reaching another single unit, potentially leading to delays in maintenance response times. This also means tenants who may be struggling and/or would otherwise need to be connected to CHH staff are not always identified as early.

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- Budgeting Challenges For Renewals:** A significant portion of CHH's property portfolio was constructed around the same time, resulting in a synchronization of renewal needs indicating that a substantial number of assets will require renewal simultaneously. Coordinating the necessary resources and finances to address these clustered renewal demands becomes a crucial aspect of effective property management.
- Regulatory Changes:** Many regulations and initiatives can impact the service delivery and capital costs of CHH. Some of these regulations are mentioned in **Section 2.2** and initiatives that apply to the Service Manager and CHH can be found in **Section 2.1.2**. Any new initiatives that will require significant upgrade work to properties to ensure compliance can increase service delivery costs for CHH.

2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of CityHousing Hamilton services are outlined in **Table 1**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

Table 1: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENT
Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c.11	The Accessibility for Ontarians with Disabilities Act, 2005 is a statute enacted in 2005 by the Legislative Assembly of Ontario in Canada. Its purpose is to improve accessibility standards for Ontarians with physical and mental disabilities to all public establishments by 2025.
Housing Services Act, 2011	The purpose of this Act is to provide for community-based planning and delivery of housing and homelessness services with general provincial oversight and policy direction.
Residential Tenancies Act, 2006	This Act outlines the roles and responsibilities of landlords and tenants. The act allows for the following: to provide protection for residential tenants from unlawful rent increases and unlawful evictions, to establish a framework for the regulation of residential rents, to balance the rights and responsibilities of residential landlords and tenants and to provide for the adjudication of disputes and for other processes to informally resolve disputes.
Business Corporations Act, 1990 and Municipal Freedom of Information and Protection of Privacy Act	The Ontario Business Corporations Act creates obligations for CHH in terms of filing, reporting and corporate governance activities. CHH is not subject to the provisions of the Municipal Act, 2006. However, the provisions of the Municipal Freedom of Information and Protection of Privacy Act do apply to CHH.

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LEGISLATION OR REGULATION	REQUIREMENT
Ontario Building Code Act	The Building Code Act is an Ontario regulation that describes the requirements for built facilities.
Ontario Fire Code	The Ontario Fire Code requires any landlord or commercial property owner to be responsible for carrying out the provisions for fire safety.
O. Reg. 278/05 Designated Substance	This regulates exposure to designated substances in the workplace and outlines different ways to control the hazards posed by those substances.
Planning Act	The Planning Act is a set of rules on how land use planning (such as approval of development sites) must be conducted in Ontario.
Electrical Safety Authority (ESA)	The Electrical Safety Authority (ESA) issues an electrical repair license to CHH and enforces the Ontario Electrical Code requirements in CHH buildings.
Backflow By-law 10-103	Ensures that the City of Hamilton drinking water quality and distribution system is protected from each: industrial, commercial, institutional, or multi-residential property. This by-law requires buildings with four or more stories high must have backflow preventers installed on the domestic and fire water supply lines. These must be inspected and reported to the water department annually.
Technical Safety and Standards Association (TSSA)	Technical Standards and Safety Authority (TSSA) is Ontario's public safety regulator for Elevating & Amusement Devices, Ski Lifts, Fuels, Boilers & Pressure Vessels, and Operating Engineers.

2.3 ALIGNMENT WITH CHH BOARD PRIORITIES

The CHH Board is comprised of nine members, five of which are City Councillors and four members from the community. Although the CHH Board has their own priorities and strategic direction, City Council priorities are considered in the development of these priorities.

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Table 2: CityHousing Board of Directors Priorities

PRIORITY	DESCRIPTION	ALIGNMENT WITH AM PLAN
Flourishing Communities	Empower tenants with the support and services they need to survive.	AM Plan incorporates the voice of the customer using Customer Values and Customer Levels of Service to understand what customers think is important, and how the customer feels about the service and links Customer and Technical Levels of Service to lifecycle costing.
Pride in Homes	Preserve and upgrade CHH's current housing stock.	AM Plan provides a lifecycle approach to all assets and services and assesses asset costs to ensure we are acquiring, operating, maintaining, renewing, and disposing of assets using a lifecycle approach.
Neighbourhood Revitalization	Develop new and inclusive affordable mixed housing while building strong and successful multi-generational communities.	AM Plan discusses demand and forecasts how growth could potentially affect CHH, where known.
A Whole Team Approach	Strengthen our people and our performance.	AM Plan assesses required resources to ensure that CHH continues to deliver agreed-upon levels of service.

2.4 ASSET HIERARCHY

CHH assets provide homes that are safe, well-maintained, and affordable for people who live and work in our diverse community. The CHH Service areas are broken down into three asset classes for the purpose of this AM Plan:

- **Facilities:** refers to any CHH-owned facilities necessary to deliver CHH services.
- **Administrative Assets:** includes assets required for CHH staff to deliver the service such as vehicles, computers, and mobiles.
- **Tools and Appliances:** refer to tools used for facility maintenance, pest control services and appliances such as CHH-owned fridges and stoves.

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Table 3 : Asset Class Hierarchy

SERVICE AREA	CITYHOUSING HAMILTON		
ASSET CLASS	FACILITIES	ADMINISTRATIVE ASSETS	TOOLS AND APPLIANCES
	<ul style="list-style-type: none"> • High-rise • Mid-rise • Low-rise • Semis (Semi-detached) • Singles (Detached) • Townhouse 	<ul style="list-style-type: none"> • Computers • Mobiles • Vehicles 	<ul style="list-style-type: none"> • Fridges • Stoves • Maintenance tools • Pest Control tools

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3. SUMMARY OF ASSETS

This section provides a detailed summary and analysis of existing inventory information as of November 2023 including age profile, condition methodology, condition profile, asset usage, and performance for each of the asset classes. **Table 4** displays the detailed summary of assets for the CHH service area. The sources for this data are a combination of data included in the City's and CHH's database information. Inventory information does change often, and this is a snapshot of the time of information available.

CHH owns approximately **\$2.95 billion** in assets which are on average in **Fair** condition as shown in **Table 4**. Assets are a weighted average by replacement cost of **40 years** in age which is **46%** of the average remaining service life (RSL). The majority of the weighting for these averages comes from the Facilities asset class. For most assets, this means the CHH should perform preventative maintenance activities identified in the inspection reports and by staff with subject matter expertise, along with the operating activities (e.g., inspection, cleaning) to prevent any premature failures.

Data confidence associated with asset information is also presented in **Table 4**. Data confidence descriptions are outlined on **page 31**, in the AM Plan Overview. The replacement costs below are typically a **Medium** data confidence level overall. For Facilities, these replacement costs are calculated by Subject Matter Experts (SME) using current market rates, building type and size, and were assigned a **Medium** confidence level. Administrative assets replacement costs were gathered from the most recent purchase price for similar assets and are typically **Medium** confidence. Tools and Appliances replacement value is based on an estimate provided by SMEs and is a **Low** data confidence. No asset registry data is available for appliances (stoves and fridges). A continuous improvement item in **Table 29** has been identified to collect this information going forward for all assets.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. It is also important to note that AM Plans only include asset information related to assets that the CHH owns. Assets that are leased from other bodies (such as some leased vehicles) are incorporated into operational costs but are not incorporated into the total replacement cost for the service. Finally, the assets included below are assets that are assumed and in service at the time of writing.

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Table 4 : Detailed Summary of Assets
 * Weighted Average based on Replacement Cost

FACILITIES					
ASSET CATEGORY	NUMBER OF ASSETS	NUMBER OF UNITS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
High-rise	27	4,527	\$1,836M	37 years (50%)	3-FAIR
DATA CONFIDENCE	High	High	Medium	High	High
Mid-rise	4	93	\$51.8M	42 years (44%)	3-FAIR
DATA CONFIDENCE	High	High	Medium	High	High
Low-rise	10	352	\$155.3M	43 years (43%)	3-FAIR
DATA CONFIDENCE	High	High	Medium	High	High
Singles	185	185	\$96.3M	56 years (25%)	4-POOR
DATA CONFIDENCE	High	High	Medium	Medium	Low
Semis	192	192	\$99.9M	60 years (20%)	5-VERY POOR
DATA CONFIDENCE	High	High	Medium	Medium	Low
Townhouse	30	1,582	\$703.5M	42 years (44%)	3-FAIR
DATA CONFIDENCE	High	High	Medium	High	High
SUBTOTAL	448	6,931 units	\$2.943B	40 YEARS* (46%)*	3-FAIR*
DATA CONFIDENCE	HIGH	HIGH	MEDIUM	MEDIUM	MEDIUM

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ADMINISTRATIVE ASSETS				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Computers	173	\$305K	4 years (15%)	4-POOR
DATA CONFIDENCE	High	Medium	High	Low
Mobiles	115	\$42K	3 years (22%)	4-POOR
DATA CONFIDENCE	High	Medium	High	Low
Vehicles	15**	\$405K	12 years (5%)	5-VERY POOR
DATA CONFIDENCE	High	Medium	High	Low
SUBTOTAL	\$752K		8 years* (22%)*	4-POOR*
DATA CONFIDENCE	MEDIUM		MEDIUM	LOW

**CHH also operates an additional 6 leased vehicles which are not shown in this table.

TOOLS AND APPLIANCES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Fridges	5,403	\$4.1M		NA
DATA CONFIDENCE	Medium	Low		
Stoves	5,403	\$3.4M		NA
DATA CONFIDENCE	Medium	Low		
Maintenance Tools	1,281	\$102K		NA
DATA CONFIDENCE	High	Medium		
Pest Control Tools	32	\$18K		NA
DATA CONFIDENCE	High	Medium		
SUBTOTAL	\$7.6M			NA
DATA CONFIDENCE	LOW			
TOTAL	\$2.951B		40 years* (46%*)	3-FAIR*
DATA CONFIDENCE	MEDIUM		MEDIUM	MEDIUM

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3.1 ASSET CONDITION GRADING

Condition refers to the physical state of the CityHousing Hamilton assets and is a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, **Table 5** below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in **Table 29** is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

Table 5: Equivalent Condition Conversion Table

EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	FACILITIES CONDITION INDEX (FCI)*
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance is required only.	>79.5%	N/A
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on the asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	< 5% Unplanned component failure is highly unlikely. Operations and maintenance costs are predictable. The building will provide a clean and functional environment.
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset usage. Minor to significant maintenance is required.	39.5% - 69.4%	>= 5% to < 10% Unplanned building component failure is unlikely. There may be some variability in operations and maintenance costs. The building will meet most operational needs with minor complaints.
4 Poor	The asset has significant defects and deterioration. Deterioration has an impact on asset usage. Rehabilitation or major maintenance is required in the next year.	19.5% -39.4%	>= 10% to <30% Unplanned building component failure is likely. Unplanned repairs will likely occur, and operations and maintenance costs will be high. The facility will look worn with serious signs of deterioration.
5 Very Poor	The asset may have serious defects and deterioration.	<19.4%	>= 30% Unplanned component failure will occur. Emergency repairs will likely occur, and operations and maintenance costs will be high. The facility will look worn with serious signs of deterioration. The functionality of the entire building will be compromised.

*All facilities are actively maintained to ensure habitability through legislative and preventative maintenance on all units. FCI is a financial indicator of condition.

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The following conversion assumptions were made:

- For Administrative assets, a condition assessment was not completed, but where age information was known, the condition was based on the percent of remaining service life (%RSL);
- Facilities Condition Index was based on ranges provided by a consultant who has completed Building Condition Assessments (BCA) for the City, which corresponds to a 4-point scale; therefore, facilities will not be able to attain a score of 1-Very Good. FCI is a financial indicator of condition;
- Semis and singles-type facilities, condition assessment data is not available, but age information was approximated from historical engineering data records on site servicing, the condition was based on the %RSL; and,
- Tools and Appliances asset age and condition were unknown, and their condition was not included in the AM Plan.

3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile, and Performance Issues for each of the asset classes.

- The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life (ESL) where they can be planned for replacement. Some lower-cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if an asset's condition is based on age, it is typically considered to be of a low confidence level. Typically, age is used when projecting replacements beyond the 10-year forecast to predict degradation.
- Condition refers to the physical state of assets and is a measure of the physical integrity of assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected/assessed at different frequencies and using different methodologies to determine their condition which are noted in this section.
- Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

3.2.1 FACILITIES PROFILE

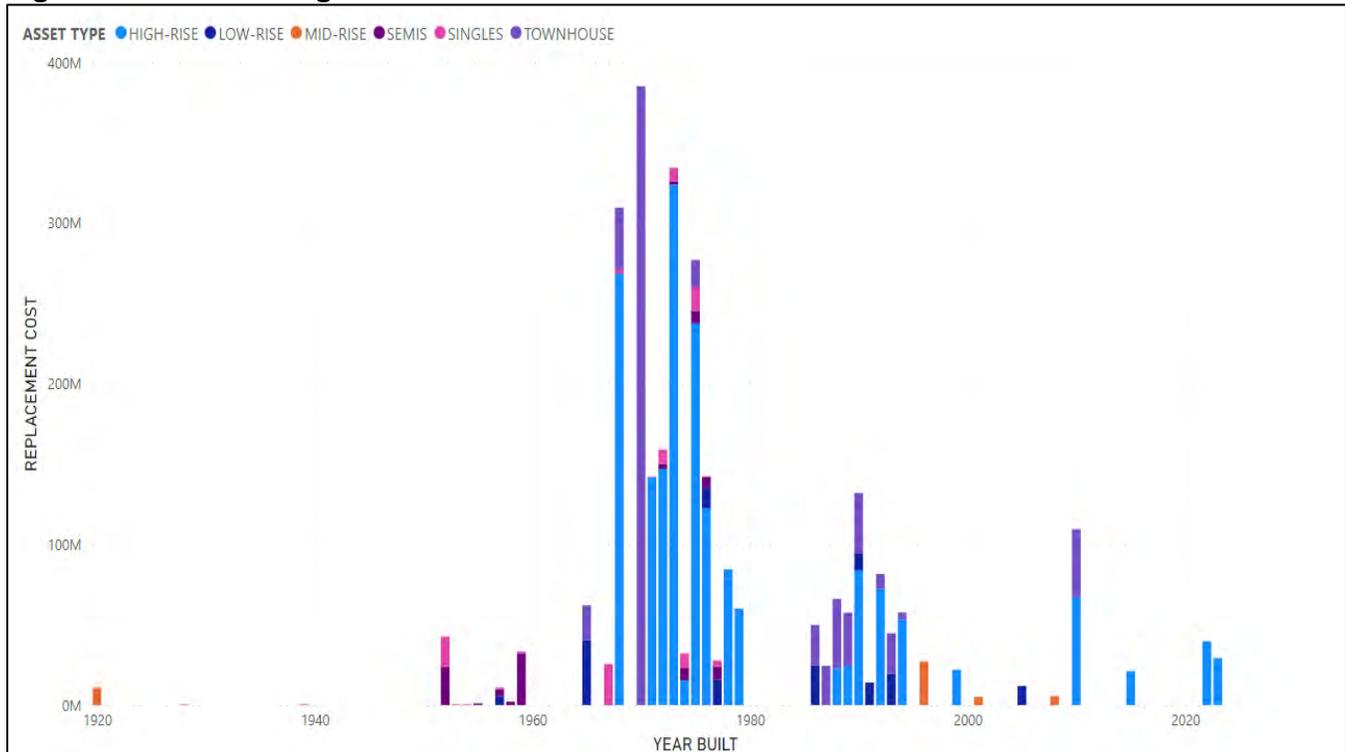
3.2.1.1 AGE PROFILE

The age profile of the CHH Facilities assets is shown in **Figure 5**. The data confidence for age is typically High as this information was recorded during the construction of the facilities. Age data for semis and single facility type was not readily available and was estimated based on sewer construction dates to the lots from an engineering drawing database and was assigned a low confidence level.

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There are a total of 448 buildings in the CHH portfolio, out of which 243 (54%) were built between 1960-1980 as shown by the concentration of properties in **Figure 5** below. This clustering becomes significant in the later stages of the lifecycle model as these properties will be due for renewal around the same time. The pattern observed in the construction years will be reflected in the lifecycle model as these properties approach the end of their estimated service life.

Figure 5: Facilities Age Profile



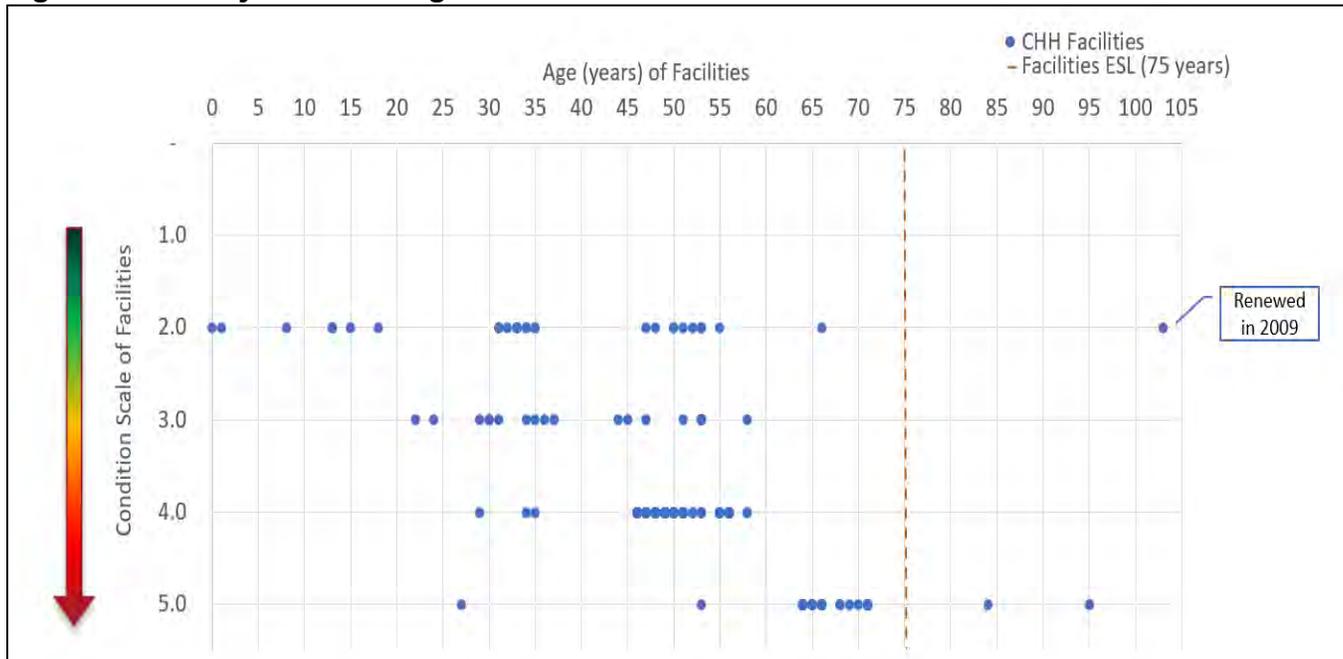
CHH has established an estimated service life (ESL) of 75 years for its facilities. This ESL is intended for the overall shell of the building and does not include the service life of building components, detailed discussion in **Section 8.2**. As stated in the AM Plan Overview document, an estimated service life is defined as the duration during which the City of Hamilton anticipates an asset to be available for use. It represents the expected timeframe between placing the asset into service and the eventual removal of the asset from active service.

Figure 6 below shows the current CHH housing portfolio and compares the age of the facilities with the condition of the facilities. CHH complies with all building codes and by-laws to ensure tenant safety. Facilities shown were operational and occupied by CHH tenants. Based on **Figure 6**, it can be seen that most of the CHH facilities are less than 75 years of age with the exception of three facilities. Among these three older facilities, one mid-rise facility underwent a full renewal in 2009 and the other two are singles (detached homes). The BCA condition score corresponds to a 4-point scale; therefore, facilities will not be able to attain a score of 1- Very Good, with 2 Good being the highest attainable condition rating.

Based on this analysis it appears that a 75-year ESL is an appropriate assumption for CHH's current housing portfolio.

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Figure 6: Facility Portfolio Age versus Condition



With aging facilities, CHH has been making significant efforts to maintain and repair these units and uses different funding sources to fund these repair projects. In 2021, the CMHC's National Housing Co-Investment Fund (NHCF) approved a comprehensive eight-year plan, allocating \$145.6M to support \$194.2M in facility repair and renewal. This ongoing initiative aims to enhance tenant experience and positively impact 6,290 CHH units. A primary goal of NHCF is to fund projects that will achieve improved outcomes related to affordability, energy efficiency and accessibility. CHH remains committed to meeting these targets and has been diligently implementing the necessary measures. The progress on these targets can be seen in **Table 15**. As this funding has a defined scope, money cannot be used to address all types of repair needs. The funding from the NHCF will help to extend the lifespan of some, but not all, of CHH's housing stock.

3.2.1.2 CONDITION METHODOLOGY & PROFILE

Condition assessments for CHH facilities are determined based on the results of a Building Condition Assessment (BCA). BCAs are completed on CityHousing Hamilton's multi-unit facilities, such as high-rise, mid-rise, low-rise and townhouses, every five years and output a score called a Facility Condition Index (FCI) which is considered to be a high confidence level data source. The FCI is a financial indicator of condition and is calculated based on a ratio of the cost of work required on the facility to the total replacement cost of the facility. The condition conversion from FCI to the standardized 5-point scale used in this AM Plan is shown in **Table 5**. The condition of semis and singles is based on the percentage of remaining service life (%RSL) conversion with lower data confidence due to a lack of BCA data.

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Table 6: Inspection and Condition Information

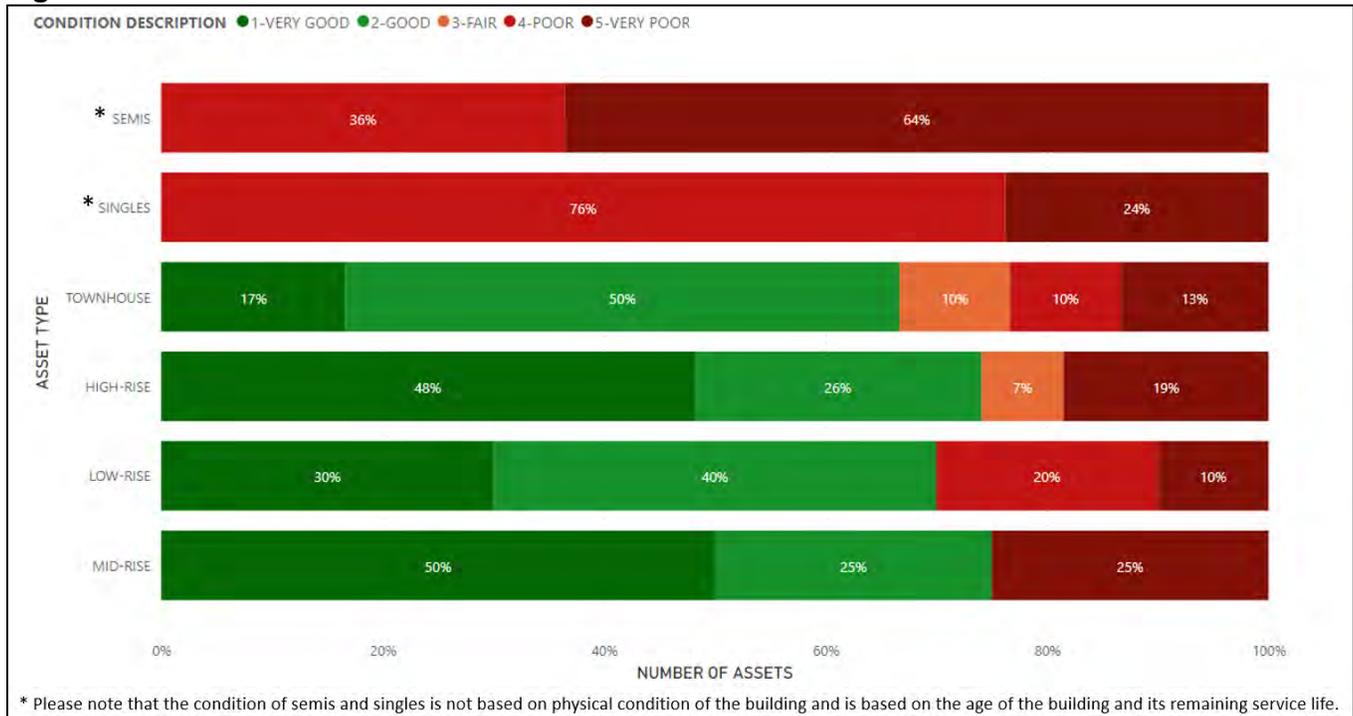
ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
High-rise, Mid-rise, and Low-rise buildings	Every 5 years	2018, WalterFedy	Facility Condition Index (0% - 100%)
All Facilities	Annual unit inspection on all units	2022	Formalized and prioritized based on health and safety concerns

According to the BCAs, the overall condition of multi-unit facilities was rated to be **Fair** condition, though these BCA assessments were a visual, surface-level inspection and lacked detailed analysis such as cutting into walls or removing mechanical panels. Therefore, occasionally additional findings might emerge during detailed analysis which can result in modifications to the facility condition score. In contrast, the semis and singles were shown as **Poor** condition, but the condition is based **only** on %RSL calculations. While BCA’s are not completed for these units, an annual inspection was completed on every unit during which any health and safety concerns were observed and noted by the staff. A continuous improvement item has been identified in **Table 29** to design and develop a condition process for all major asset types which includes semis and single facilities.

CHH is an important service; it is essential that facilities are kept in a state of good repair. CHH has ensured that facilities are kept in a safe, working, and liveable condition but acknowledges that a significant amount of facility maintenance needs will be required in the next 10 years as shown in **Section 8.2**. If certain items are not completed, it could result in a further decline in the facility's condition. Building Condition Assessments were completed in 2018, and while the forecasted works have been updated in the CHH database, a future Building Condition Assessment will be completed in 2024-2025 and therefore these condition ratings may change in the next year.

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Figure 7: Facilities Condition Distribution



Semis and Singles asset condition as shown above was based solely on the age of the facility and their %RSL and converted to condition based on **Table 5**. This has been identified in **Table 29** to design and develop a condition process for all major assets. **It's crucial to note that all facilities discussed in this AM Plan are functional and safe to be occupied by tenants and are actively maintained to ensure habitability through legislative and preventative maintenance on all units. FCI is a financial indicator of condition.**

3.2.1.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. However, there are often insufficient resources to address all known deficiencies.

Most performance issues with CityHousing Hamilton facility assets involve the poor condition of asset components at or near the end of their estimated service life. Some of the known service performance deficiencies are shown in **Table 7** which were identified using information from the 2018 Building Condition Assessment (BCA). As stated in **Section 3.2.1**, the BCAs are only conducted on multi-unit facilities, the semis and singles are not part of this assessment.

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Table 7: Known Service Performance Deficiencies

ASSET	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Facilities (Various)	Mechanical Upgrades Required	<p>Some facilities have equipment where components are beyond their expected service life.</p> <p>To meet the upcoming energy and GHG targets there is a requirement to upgrade the majority of mechanical systems.</p>
	Electrical Servicing Components in Poor Condition	Buildings that are approximately 40 years old with original electrical systems, will require extensive capital dollars to upgrade.
	Buildings' Exterior Shell Condition Varies	The condition of exterior walls, roofs, windows, doors, and overhead doors varies from good to poor across the portfolio.
	Appliances in Fair Condition	Some facilities have fridges and stoves provided in the unit with some appliances observed to be in fair condition.
	Elevators	<p>Some of the high-rise and mid-rise facilities have elevators that are beyond their expected service life.</p> <p>Currently, CHH is conducting an audit to prioritize elevator upgrades across the portfolio.</p>
	Parking Lots Surface and Underground Lots In Poor Condition	Parking lots of some facilities appeared in poor condition. An ongoing program is in place to upgrade the parking lots. Due to funding restraints, there is a backlog on these upgrades.
	Cooling Systems in Poor Condition	<p>Some systems that provide cooling to individual units are beyond their expected service life. Where there is no cooling provided to individual units, there is often cooling provided in community rooms.</p> <p>If a new by-law for maximum summer temperature goes into effect, this would create extensive capital and ongoing operational budget requirements.</p>
	Foundation Walls in Poor Condition	The foundation walls of multiple facilities were found to be in poor condition. It is recommended that the foundation walls be repaired along with the weeping tiles and waterproofing.

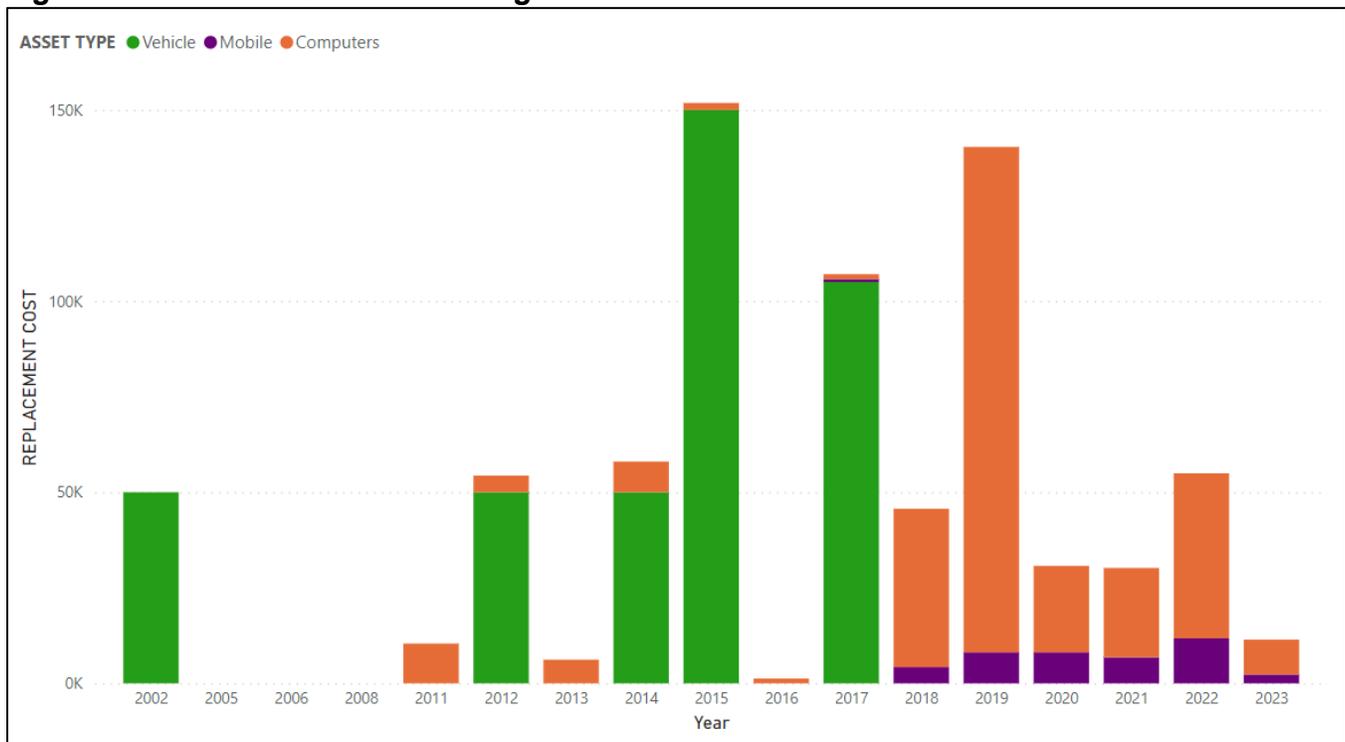
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3.2.2 ADMINISTRATIVE ASSETS PROFILE

3.2.2.1 AGE PROFILE

The age profile of the Administrative Assets is shown in **Figure 8**. For vehicles, computers and mobile assets, the data confidence for age is typically High because asset age is formally tracked, and many assets are replaced based on age. Vehicles that exceed eight years of age, which is the entirety of the CHH-owned fleet, generally exceed the estimated service life. CHH is only able to access vehicles from the City of Hamilton once they have been declared surplus to the City of Hamilton's needs.

Figure 8: Administrative Assets Age Profile



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3.2.2.2 CONDITION METHODOLOGY & PROFILE

Vehicles are inspected and maintenance activities are conducted at specific intervals throughout the asset’s lifecycle as shown in **Table 8**. Computer assets do not have a formal inspection program which has been identified as a continuous improvement item in **Table 29**.

Table 8: Inspection and Condition Information

ASSET	INSPECTION TYPE	DESCRIPTION	FREQUENCY	CONDITION SCORE OUTPUT
Computers	Ad Hoc	None	Ad Hoc	None
Vehicles	Annual	Safety Checks and Regular Maintenance as needed	Twice a year at minimum	None

The condition profile of the administrative assets is shown in **Figure 9**. The condition of administrative assets was estimated based on %RSL as no formal condition rating is assigned to each asset at this time. Due to the condition methodology, a significant amount of assets are showing poor or very poor condition because they are approaching or are beyond their estimated service life.

Currently, the average condition of Computer and Mobile assets is Poor, and Vehicles are Very Poor.

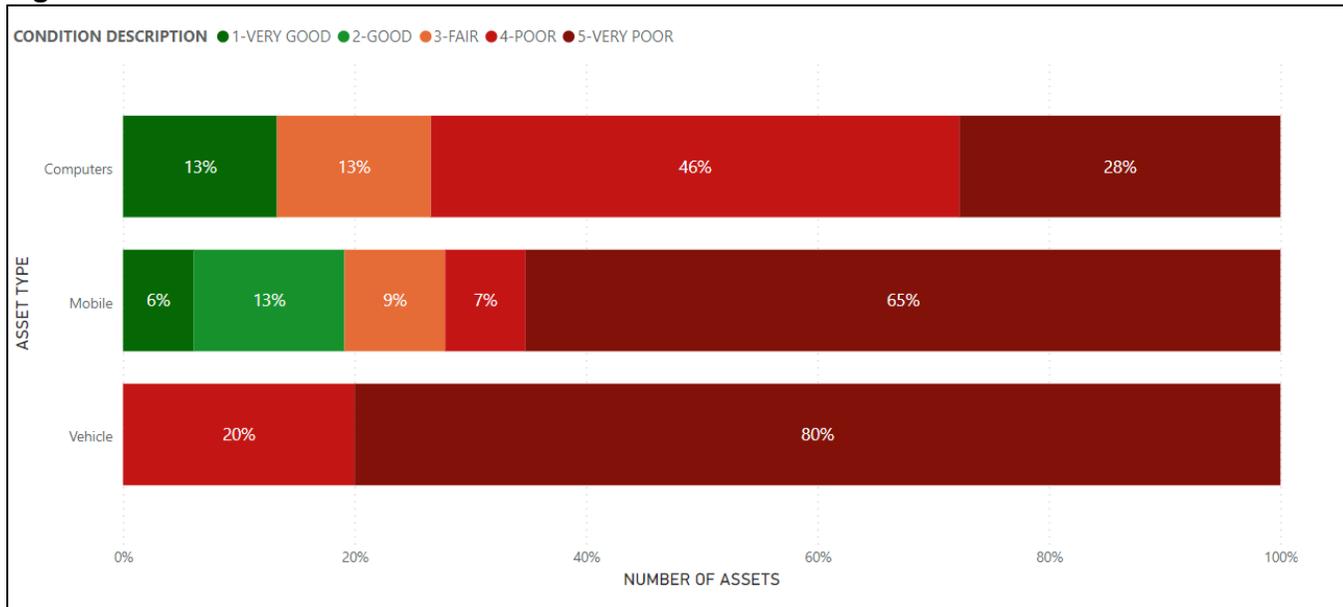
The total effective size of the fleet operated by CHH is 21 Vehicles:

- Eight vehicles are owned directly by CHH;
- Seven vehicles are provided by the City of Hamilton Fleet Services. Six of the seven Fleet Services provided vehicles are extended-use vehicles which have been included in the age and condition details in the figures below. These extended-use vehicles contribute to the increased percentage of Very Poor vehicles.
- Six vehicles are leased by CHH which are not included in the asset list (**Table 4**). The leasing fees are incorporated into the lifecycle model as an operational cost.

The condition of fleet assets is likely impacting the delivery of services. A continuous improvement item in **Table 29** is to develop and implement a fleet strategy.

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Figure 9: Administrative Assets Condition Profile



3.2.2.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with administrative assets involve assets exceeding their ESL. The known service performance deficiencies in **Table 9** were identified using staff input.

Table 9: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Vehicle	Various	CHH vehicles used beyond the expected replacement interval	Inadequate funding and extensive procurement processes have created a backlog in vehicle acquisitions. CHH is experiencing more frequent maintenance needs.

3.2.3 TOOLS AND APPLIANCES PROFILE

3.2.3.1 AGE PROFILE AND CONDITION

The age profile of the Tools and Appliances assets is unknown. The quantity and replacement value of Tools and Appliances is estimated based on subject matter expertise. Developing a detailed asset register with an accurate number of assets, age, replacement costs and condition assessment has been identified as a continuous improvement item in **Table 29**.

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3.2.3.2 ASSET USAGE AND PERFORMANCE

Due to a lack of information on Tools and Appliances assets, this was not identified. The asset usage deficiencies for Tools and Appliances will be identified in future iterations of the AM Plan, this has been identified as a continuous improvement item in **Table 29**.

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4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what CHH provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that CHH provides those services.

O.Reg 588/17 does not define levels of service for CHH assets and therefore the City, along with CHH, has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in **Section 6.5** of the AMP Overview.

4.1 SURVEY METHODOLOGY

To develop customer values and customer levels of service, a Customer Engagement Survey entitled *Let's Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton* was released on **September 5, 2023**, on the Engage Hamilton platform and closed on **October 10, 2023**. The survey results can be found in Appendix "A".

The survey was structured in two parts to align with CHH's service delivery approach.

The first part focused on CHH tenants and consisted of 13 questions specifically tailored to evaluate CHH's service delivery to tenants. This part of the survey received responses from seven participants. Due to the exceptionally low response rate and the resulting very low data confidence grade, as seen in **Table 11**, the results from this section of the survey were not incorporated into developing customer levels of service.

The second part of the survey was open to all respondents, including CHH tenants and the general public (external customers). It was comprised of 11 questions focusing on CHH service delivery based on external customers' perceptions. A total of 54 participants responded to this section.

CHH also conducts its own internal tenant survey periodically. The most recent survey was completed in 2022. This survey had 100 responses and a high data confidence grade. This data was also used to develop Customer Values and levels of service.

For the purposes of this report, data has been evaluated and assigned a grade from a confidence level perspective (margin of error at 95% confidence in sample size) and a data consistency (standard deviation) perspective per **Table 10** below.

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Table 10: Data Confidence Levels

Grade	Data Consistency (Standard Deviation)	Confidence Level (Margin of Error at 95% Confidence in Sample Size)
Very High	0 to 0.5 – results are tightly grouped with little to no variance in response	0% to 5% - minimal to no error in results, can generally be interpreted as is
High	0.5 to 1.0 – results are tightly grouped but with slightly more variance in response	5% to 10% - error has become noticeable, but results are still trustworthy
Medium	1.0 to 1.5 – results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - error is a significant amount and will cause uncertainty in the final results
Low	1.5 to 2.0 – results show a high variance with a fair amount of disparity in responses	20% to 30% - error has reached a detrimental level and results are difficult to trust
Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - significant error in results, hard to interpret data in a meaningful way

The specific data confidence level and data grade for each of the surveys are detailed in **Table 11**, on the next page.

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Table 11: Survey Results – Confidence Level, Margin of Error, and Data Usage.

SURVEY	SURVEY RESPONSE RATE	ESTIMATED POPULATION	CONFIDENCE LEVEL (MARGIN OF ERROR AT 95% CONFIDENCE IN SAMPLE SIZE)	GRADE	DATA USAGE
2023 Let's Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton Survey Part 1 – Tenant Questions	7	13,000	37% - significant error in results, hard to interpret data in a meaningful way.	Very Low	Due to very low confidence levels, results were not used in customer values and customer levels of service discussion.
2023 Let's Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton Survey Part 2 – All respondents' questions	54	570,000	13% - error is a significant amount and will cause uncertainty in the final results.	Medium	Due to the medium confidence level and the lack of direct experience from external customers with CHH services, results were used to inform customer values and customer levels of service but should be interpreted with discretion.
2022 CHH Tenant Survey	100	13,000	10% - error is becoming noticeable, but results are still trustworthy.	High	Due to the high confidence level, results were used to develop customer values and customer LOS.

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High data consistency means that more often respondents came to the same conclusion for a question, whereas a low data consistency means that there is a split in respondent's opinions. Therefore, while CAM may be able to improve survey confidence levels over time by increasing the survey sample size, it may not be possible to improve data consistency over time as this depends on the opinions of the respondents and may require additional insight into why respondents' opinions are split. A low consistency of data does not mean the data is "bad," but it does mean that it is difficult to make decisions using that information.

It is also important to note that these surveys are based on customers' sentiments and opinions about the service CHH is providing. It is crucial to recognize that the surveys reflecting customers' sentiments and opinions toward CHH's services serve as potential indicators. However, it is equally important to acknowledge that managing customer expectations is essential, particularly in light of budgetary constraints. In addition, approximately 87% of survey respondents may not have direct experience with CHH services, so many of the performance-based responses are not based on CHH's actual performance but rather on the customers' sentiment.

Limitations to Survey Methodology:

The *Let's Connect* survey methodology has several limitations which may also reduce the confidence level in the survey data. The survey was released using an online platform and did not include telephone surveys and consequently, there is no way to confirm the identity information provided in the survey. In addition, the survey did not control for IP addresses, and therefore it is possible that respondents could complete the survey more than once and skew the survey results. Paper copies of the survey were also made available in public libraries and to CHH residents in common areas of multi-unit buildings.

However, it is crucial to acknowledge that even though the survey results offer some insight into customer sentiments toward the services provided by CHH, **decisions should not be made based on this survey alone**. The limitations in methodology raise concerns about the reliability and representativeness of the data. Therefore, it is advisable to complement these findings with other sources of information or conduct further research to ensure a comprehensive understanding of customer perceptions and needs.

The future intent is to release this survey on a regular basis to measure the trends in customer satisfaction over time and ensure that CHH is providing the agreed level of service, as well as to improve the marketing strategy by both incorporating telephone surveys and/or IP controls to improve confidence levels in the survey responses. This has been noted in **Table 29** in the continuous improvement section.

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4.2 CUSTOMER VALUES

Customer values are what the customer can expect from their tax dollar in “customer speak” which outlines what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

Customer Values indicate:

- What aspects of the service are important to the customer;
- Whether they see value in what is currently provided; and,
- The likely trend over time based on the current budget provision.

As previously mentioned, the customer values below were determined and informed using the results from the *Let’s Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton and the 2022 CHH Tenant Survey*.

Table 12: Customer Values

SERVICE OBJECTIVE				
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	DATA CONSISTENCY GRADE (as per Table 15)	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Waste Management and Resolving Safety Concerns Are Very Important Services.	2023 CHH City Services & Assets Review Survey ⁵	Based on survey responses, on average, these are considered very important services.	High	Maintain
Exterior Care Of The Building And Landscaping Around The CHH Properties Are Important Services.		Based on survey responses, on average, these are considered very important services for CHH to be responsible for providing.	High	Maintain

⁵ The 2023 CHH City Services & Assets Review Survey gauges public sentiment towards CHH services, but the public may lack direct experience with CHH services. Data Confidence Grade is Medium

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SERVICE OBJECTIVE				
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	DATA CONSISTENCY GRADE (as per Table 15)	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Increasing Access to Equitable, Affordable, and Inclusive Housing Across Hamilton is Important.		Based on survey responses, on average it is important to increase access to equitable, affordable, and inclusive housing in Hamilton.	Medium	Maintain
Redevelopment, Revitalization, And Renewal of The Housing Supply are Important Responsibilities Of CHH.		Based on survey responses, it is important for CHH to be responsible for the redevelopment, revitalization, and renewal of the housing supply.	Medium	Maintain
CHH Buildings Should Be Maintained in Good Condition and Should Be Welcoming, Safe and Accessible.		Based on survey responses CHH buildings should be accessible, safe, equitable, inclusive, clean, in good repair, comfortable, energy efficient, and inviting.	High	Maintain
Rate Level Change May Be Considered to Increase the Level of Service.		Based on survey responses, customers may prefer service level changes.	Medium	Maintain

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SERVICE OBJECTIVE				
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	DATA CONSISTENCY GRADE (as per Table 15)	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Outdoor Green Spaces and Community Spaces in CHH Buildings (Such as Meeting Rooms/Lounges) are Very Important.	2022 CHH Tenant Survey	Based on survey responses, on average, these are considered very important services for CHH tenants.	High	Maintain
Outdoor Playgrounds are Not Important for Customers.		Based on survey responses, on average, these are considered not important services for CHH tenants.	High	Maintain
Access To Community Agencies Located Within the CHH Building is Important.		Based on survey responses, on average, these are considered important services for CHH tenants.	High	Maintain

4.3 CUSTOMER LEVELS OF SERVICE

Ultimately customer performance measures are the measures that the City and CHH will use to assess whether it is delivering the level of service the customers desire. Customer level of service measurements relate to how the customer feels about CityHousing Hamilton’s service in terms of their quality, reliability, accessibility, responsiveness, sustainability and of course, their cost. The City and CHH will continue to measure these customer levels of service to ensure a clear understanding of how the customers feel about the services and the value of their tax dollars.

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The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or underused? Do we need more or less of these assets?

In **Table 13** under each of the service measure types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current allocation.

Table 13: Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
Quality/Condition	Ensure that CHH assets are functional and well-maintained.	2023 CHH City Services & Assets Review Survey ⁶	Average survey respondent opinion on how CHH has performed overall in the last 24 months.	Below average	Increase
		Confidence Level		Medium	
		Data Consistency		Medium	
		2022 CHH Tenant Survey	Average survey respondent opinion on how satisfied they are with the overall condition of their home.	Average Performance (Neither satisfied nor dissatisfied)	Increase
		Confidence Level		High	
		Data Consistency		High	

⁶ The 2023 CHH City Services & Assets Review Survey gauges public sentiment towards CHH services, but the public may lack direct experience with CHH services. Data Confidence Grade is Medium

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TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
	Be fiscally responsible when delivering services.	2023 CHH City Services & Assets Review Survey ⁷	Average survey respondents on whether CHH is providing good value for money when providing infrastructure and services.	Below Performance	Maintain
		Confidence Level		Medium	
		Data Consistency		Medium	
Function	Provide prompt, efficient, and effective property management services.	2022 CHH Tenant Survey	Average survey respondents on if they agree that CHH is providing the services they expect from a landlord.	Average Performance (Customers neither agree nor disagree)	Increase
		Confidence Level		High	
		Data Consistency		High	
		2022 CHH Tenant Survey	Average survey respondents on whether they are satisfied with Pest Control Services.	Average Performance (Customers neither satisfied nor dissatisfied)	Maintain
		Confidence Level		High	
		Data Consistency		High	
		2022 CHH Tenant Survey	Average survey respondents on whether they are satisfied with Maintenance Services.	Average Performance (Customers neither satisfied nor dissatisfied)	Increase
		Confidence Level		High	
		Data Consistency		High	

⁷ The 2023 CHH City Services & Assets Review Survey gauges public sentiment towards CHH services, but the public may lack direct experience with CHH services. Data Confidence Grade is Medium

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TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
		2022 CHH Tenant Survey	Average survey respondents on whether they are satisfied with Tenant Support Services.	Average Performance (Customer neither satisfied nor dissatisfied)	Increase
		Confidence Level		High	
		Data Consistency		High	
	Provide safe core social housing services that support well-being and quality of life.	2023 CHH City Services & Assets Review Survey	Average respondent response on whether CHH fosters equitable, diverse, and inclusive communities.	Average response	Increase
		Confidence Level		Medium	
		Data Consistency		Medium	

4.3.1 CUSTOMER INDICES

The three indices calculated to assess how customer expectations for a service align with the perceived performance from the *Let’s Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton Survey* are listed below in **Table 14**. These indices are explained and analyzed in detail in the sections below and will eventually be included for all assets (when available) in the overall measures in the AM Plan Overview.

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Table 14: Customer Indices

CUSTOMER INDICES	AVERAGE RESULT
Service Importance Versus Performance Net Differential ⁸	-47
Net Promoter Score (%) ⁹	-68.97%
Service Rates Versus Value for Money Net Differential	-24

As the CHH survey results appear to be overall divided into many issues, it is difficult to make any conclusive decisions based on this survey alone. Therefore, the information below is intended to provide context around the survey results to assist CHH with areas to further investigate before proposing any new levels of service. Approximately 87% of survey respondents had not used any aspect of CHH service, meaning that many of the results are based on public perception of the service and not a customer’s direct experience of CHH performance. Therefore, it is difficult to make any conclusive decisions based on this survey alone.

SERVICE IMPORTANCE VERSUS PERFORMANCE INDICE

The Service Importance versus Performance indices is used to determine if a service’s importance correlates with the perceived performance. Service areas where the average importance rating exceeds the average performance rating by 20 points are indicative of a mismatch between expectations and service levels, equal to one point on the Likert¹⁰ scale.

Per **Figure 10** below, the net differential exceeds 20 points for all service areas. This indicates that although customers generally consider these services to be between Very Important to Important on the Likert scale, they also perceive that CHH only performed Average to Below Average for these services over the last 24 months. The data consistency on both questions showed an overall medium consistency.

To reduce the net differential, CHH would have to increase their performance to between Good and Very Good, which they would accomplish by altering their Technical Levels of Service and closely monitoring and developing more relevant metrics to improve customer satisfaction. However, due to low response from tenants, an average of 87% of respondents may not have

⁸ For these indices, a value close to 0 is considered a match, and a value exceeding 20 points indicates a mismatch between customer expectations, and perception or service levels.

⁹ A positive net promotor score indicates that customers would recommend the service to others, a negative score indicates they would not, and a value close to 0 indicates a neutral feeling about the service.

¹⁰ A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g., Very Good to Very Poor, Very Satisfied to Very Unsatisfied)

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used most aspects of CHH services. These results primarily reflect how customers perceive CHH's performance based on their expectations and impressions, rather than firsthand experiences with the services provided.

Q18-Importance question asked if these services were important as a responsibility for CHH, as such, it is unclear if some of these answers are regarding the importance of the service or the importance of CHH being responsible for that service. Future surveys will clarify verbiage to ensure the question is clear and this has been included as a Continuous Improvement Item in **Table 29**.

Figure 10: Importance versus Performance Index Score

Service Area	Importance (index score)	Performance (index score)	Net Differential	Opt Out %
Total	90	46	-44	21%
Resolving Safety Concerns	99	40	-59	23%
Redevelopment, Revitalization And Renewal Of The Housing Supply	88	36	-52	15%
Exterior Care / Condition Of Building	88	47	-41	18%
Waste Management	95	54	-41	22%
Tenant Services At Properties	85	49	-37	28%
Landscaping (E.G. Grass Cutting, Snow Clearing, Etc)	86	54	-32	19%

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NET PROMOTER SCORE INDICE

The Net Promoter Score indices outline how likely an individual is to recommend a service to another person and measure customer loyalty. For municipal services, this score is difficult to interpret because oftentimes individuals do not have many alternatives for utilizing different services and also there may be internal biases for certain service areas, however, this score does provide valuable information for if customers would recommend using the service or whether they may seek alternatives or avoid using the service altogether.

Likert¹¹ choices less than a score of 4 are considered 'Detractors' meaning that they would not recommend the service, while scores of 5 are considered 'Promoters' who would recommend the service, and scores of 4 are considered 'Passive' which means they do not have strong feelings about the service. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Promoters) and (% Detractors). The Standard Deviation (σ) is calculated in percent, the same units as the Net Promoter Score.

Per **Figure 11** below, most external customers/public perception is to not recommend the services provided by CHH to another person. CHH received negative promoter values (>20%) for all services discussed in the figure below, which indicates that CHH may need to investigate the public perception of why customers would not recommend using these services.

Figure 11: Net Promoter Score

Service Area	σ	NPS	Detractors	Passives	Promoter	
All Service Areas	1.41		-61.98	139	33	20
Resolving Safety Concerns	1.42		-66.67	23	4	3
Tenant Services At Properties	1.35		-65.52	21	6	2
Redevelopment, Revitalization And Renewal Of The Housing Supply	1.48		-64.52	24	3	4
Exterior Care / Condition Of Building	1.36		-63.89	26	7	3
Landscaping (E.G. Grass Cutting, Snow Clearing, Etc)	1.35		-57.58	23	6	4
Waste Management	1.39		-54.55	22	7	4

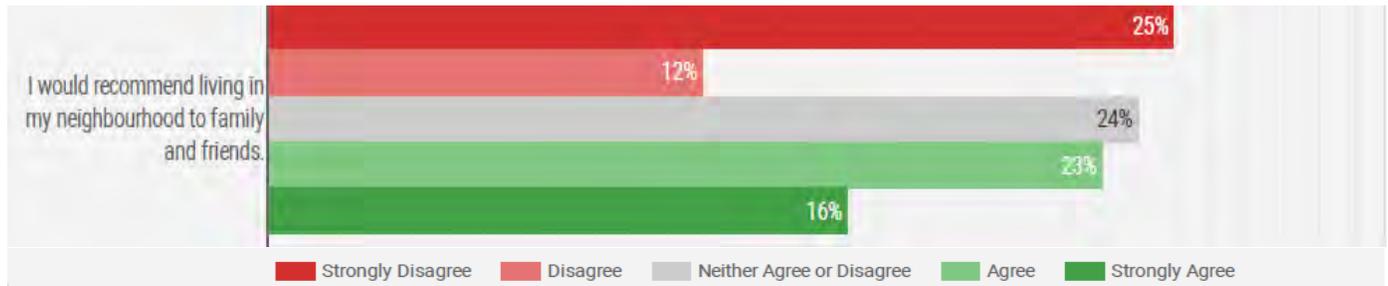
The above Net Promoter Score was from external customers (i.e., the general public). As discussed in **Section 4.1**, due to low survey response on the tenant section of the **Let's Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton Survey**, the Net promoter score from the tenant section cannot be used. To provide a general idea of whether the tenants would recommend living in their neighbourhood to others which is likely a more important metric from individuals actively experiencing the service, provided below are

¹¹ A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g., Very Good to Very Poor, Very Satisfied to Very Unsatisfied)

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results from the 2022 CHH Tenant Survey. According to the results, on average, tenants are "Passive" and divided about the neighbourhoods their homes are located in. The net promoter score, based on these results, is -45 which is a net negative promoter.

Figure 12: Net Promoter Neighbourhood Score, CHH 2022 Survey



SERVICE RATES VERSUS VALUE FOR MONEY INDICE

The Service Rates versus Value for Money indices are used to determine if the rate an individual is paying for a service correlates with the perceived value for money. Service areas where rate level ratings exceed value-for-money ratings by 20 points are indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale. Positive Net Differential values indicate that 'Value for Money' was greater than willingness for 'Rates'. Low index scores in 'Rates' indicate that respondents are not willing to pay increased rates for the service area. All values were calculated and then rounded to the nearest whole number.

These results are derived from the *Let's Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton Survey*. Per **Figure 13** below, the net differential exceeds twenty (20) for most services, survey respondents believe that the value for money did not align with the current rates. However, the data consistency was rated as medium-low for both value for money and rate level as there are differing opinions on this matter. This is based on sentiments of the public who may not have direct experience with CHH services.

Figure 13: Rates Versus Value for Money Index Score

Service Area	Rates (index score)	Value for Money (index score)	Net Differential	Opt Out %
Total	71	50	-21	29%
Redevelopment, Revitalization And Renewal Of The Housing Supply	76	42	-35	24%
Resolving Safety Concerns	76	48	-27	33%
Exterior Care / Condition Of Building	69	50	-19	27%
Tenant Services At Properties	68	50	-18	36%
Waste Management	71	56	-15	29%
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	65	52	-13	28%

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4.3.2 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how CHH plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how CHH delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. CHH will measure specific lifecycle activities to demonstrate how CHH is performing in delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.¹²

Table 15 shows the activities expected to be provided under the current 10-year Planned Budget allocation and the forecast activity requirements being recommended in this AM Plan.

¹² IPWEA, 2015, IIMM, p 2|28.

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Table 15 : Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE	CURRENT TARGET PERFORMANCE	PROPOSED 10-YEAR PERFORMANCE
Acquisition	Ensure sufficient CHH housing supply is offered across Hamilton.	New units will be added to the housing supply by the end of 2024.	-	161 units (2024)	To be determined based on the Long-term Development Strategy
		Budget	-	\$95.6M	Not yet quantified
Operation	Provide safe, well-maintained, affordable, core social housing services.	Overall Vacancy rate as of 2023.	5.8%	2%	2%
		Budget	\$4.7M	Not yet defined	Not yet defined
	Ensure CHH facilities are energy efficient.	Energy savings (%) achieved in 2022*.	13% (2022)	14% (2022)	25% (2028)
	Ensure CHH facilities are environmentally sustainable.	Greenhouse gas reductions (%) achieved in 2022*.	14% (2022)	16% (2022)	25% (2028)
	Provide safe core social housing services that support well-being and quality of life.	% of units with added accessibility *	3%	4%	20% (2028)
		Budget (Including CMHC funding and CHH contributions)	-	-	\$194.2M (2029)
Maintenance	Ensure that CHH assets are functional and well-maintained.	Average Facility Condition Index for Facilities **.	9.2 %	< 10 %	< 10 %
	Provide effective and adequate, property management services.	% of Legislated Maintenance Inspections completed in 2023.	100%	100%	100%
	Budget	\$911K	\$911K	-	
Renewal	Ensure that CHH vehicle assets are functional and well-maintained.	% vehicles replaced before the end of estimated service life.	0%	100%	100%
		Budget	\$0	\$405K	Not yet quantified

*These activity measures are established as part of the CMHC funding requirement. More details for this project can be found in **Section 3.2.1.1**.

**FCI is not available for semis and singles facility types, and they are not included in these calculations.

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It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

These metrics were created specifically for this 2024 AM Plan with available data. Many of these metrics should be improved to include a target to be in line with SMART objectives identified on **Page 43** of the AMP Overview. In addition, performance measure data should be both easy to extract and measured over time, and a data collection process may likely need to be created. CHH tracks and reports on several KPIs deemed necessary to deliver on strategic directions or Board-directed priorities. As a result, the dataset and available KPIs could change or improve for the next iteration of the plan. These have been identified as continuous improvement items in **Table 29**.

4.3.3 PROPOSED LEVELS OF SERVICE DISCUSSION

At this time, technical metrics for the CHH service area were largely based on operational metrics and asset conditions. Operational metrics include metrics monitored by CHH as part of CMHC funding requirements and CHH's reported vacancy rate to Council. However, customer preferences and expectations do not always match internal technical targets. Due to the low response rate, the *Let's Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton Survey* has a medium confidence level, and as all survey respondents were not direct users of the service, it is difficult to make any conclusive decisions based on this initial survey. The 2022 CHH Tenant Survey was used to create some customer levels of service and values based on tenants' sentiments, but it did not assess the proposed service level. Therefore, CHH will need to collect more customer data before proposing any new levels of service.

In the interim, it has been assumed that the current levels of service will be the proposed levels of service moving forward past 2025 in accordance with O. Reg 588/17. Therefore, the information below is intended to provide context to CHH to areas for further investigation before proposing any new Levels of Service for the future.

CONDITION / QUALITY

As shown in the Customer Level of Service **Table 13**, tenant respondents provided ratings that indicate neither satisfaction nor dissatisfaction with the overall condition of their homes. In **Table 4**, CHH's Facility Condition Index (FCI) target indicates an average facility condition of Fair. FCI measures the condition of the entire facility and is not an individual measurement for each unit. Moreover, FCI data is not available for semi and single units. Finally, FCI is a financial-based condition metric but is generally accepted in the industry to evaluate conditions. Despite this limitation, there is alignment between the technical measure and customers' responses regarding the condition of their homes.

There seems to be a difference between how external customers (the public) rated the importance of all services discussed in **Figure 10** and the corresponding performance level.

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Additionally, these services received negative scores on the Net Promoter Score. However, considering the low response rate on the survey and the medium confidence level of the data, it is advisable to approach the indices of Service Rates versus Value for money with caution. As a result, it is difficult to determine the willingness of external customers to pay for improved services.

FUNCTION

2022 CHH Tenant Survey respondents thought that CHH performed average on Pest Control Services, Maintenance Services, Tenant Support Services, and general services the tenants expect from CHH as a landlord. CHH is currently in the process of developing technical metrics for these services that can be shared in the next iteration of the AM Plan. It is worth noting that the 2022 CHH Tenant Survey was not designed by the Corporate Asset Management (CAM) team, leading to some inconsistencies in the structure and types of questions asked. Particularly, questions regarding 'good value for money and rates' were not included for these services.

CAPACITY

The 2022 CHH Tenant Survey did not include questions related to capacity. Additionally, the tenant-focused questions in the *Let's Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton Survey* are not being considered in the discussion due to very low data confidence. However, based on external customers' opinions on question 23, which indicated that adding more subsidized housing across Hamilton and more affordable mixed housing was rated as important city-wide services, it suggests that there is a perceived need for more social housing across Hamilton.

CHH is preparing a Long-term Development Strategy that will serve as a blueprint for the organization's long-term development initiatives. This strategy will encompass various aspects, including potential dispositions and acquisitions, to guide CHH's growth and evolution in the future.

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5. FUTURE DEMAND

Demand is defined as the desire customers have for assets or services that they are willing to pay for. These desires are for either new assets/services or current assets.

The ability of the CHH to be able to predict future demand for services enables CHH to plan and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of services required.

5.1 DEMAND DRIVERS

For the CHH service area, the key drivers are population change and regulatory obligations/changes.

- Population change – Per **Page 45** in the AMP Overview, it is evident that Hamilton's population will continue to grow until 2051. With a growing population, the demand for affordable housing will increase.
- Regulatory obligations/changes – changes to provincial legislation, and municipal regulation (including local service manager rules and potential new by-laws, such as the Adequate Temperature By-law) could require an increase or change to the level of service provided to tenants and could increase acquisition, operation, maintenance, and future renewal costs of CHH services.

5.2 DEMAND FORECASTS

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 16**. Growth projections have been shown on **Page 45** of the AM Plan Overview document.

Where costs are known, these additional demands, as well as anticipated operations and maintenance costs, have been encompassed in the Lifecycle Models in **Section 8.2**.

5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets is shown in **Table 16**. Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Opportunities identified to date for demand management are shown in **Table 16**. Climate change adaptation is included in **Table 22**.

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Table 16: Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Population Growth	565,000 with 222,805 households.	625,000 with approximately 258,100 households. (10-year projection)	Currently, CHH has 31 social housing units per 1000 households. To maintain this level of service, which is already deemed insufficient, CHH needs to add a minimum of 1,138 net new units in the next 10 years. With the increasing population, the demand for more social housing will increase. The current waitlist is managed by Housing Services and shows that demand already significantly exceeds supply.	CHH is currently developing a sustainable 20-year long-term housing growth and development strategy for Hamilton.
Regulatory Obligations Adequate Temperature By-law	Air conditioning is provided to very few and an unknown number of individual units. Air-conditioned common areas are available in many buildings.	Air conditioning is to be provided for all 6,931 units	If an adequate temperature by-law comes into effect, then CHH will need to budget for the acquisition, operational, maintenance and eventual renewal costs of air conditioning systems in future years.	Develop capital and operating plans, assess impacts of legislated change and request additional funding to ensure compliance with by-laws.
Customer expectations State of good repair of buildings	Maintenance and repairs are based on BCA and subject matter expertise and are funded by capital funding.	Tenants will increasingly request non-critical replacements of in-suite features or new facility components/enhancements , such as a new community room, which may not be currently budgeted.	As these items are not budgeted, a lack of funding based on full lifecycle costs for these new facility components can increase the funding shortfall for CHH.	Develop a streamlined lifecycle review process which reviews additional funding increases for each new facility component added to CHH facilities

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5.4 ASSET PROGRAMS TO MEET DEMAND

The new assets required to meet demand may be acquired, donated or constructed. For **CHH** typically assets are acquired or constructed.

At this time there are approximately **\$150.2 Million** in assets planned to be constructed over the next five years, and more are anticipated to be added over the 30-year planning period. Acquiring or constructing new assets will commit CHH to ongoing operations, maintenance and renewal costs for the amount of time that the service is required. These future costs have been estimated when possible, using available information in the Lifecycle Management Plans in **Section 8**, but should be quantified further for future iterations of the report for consideration in developing higher confidence forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan. There is also a need for CHH to reduce reliance on tax-supported subsidies by creating financially sustainable assets. This could be achieved through diversifying the income mix of the households CHH serves to increase rental revenue.

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6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk¹³.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

6.1 CRITICAL ASSETS

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified along with their typical failure mode, and the impact on service delivery is summarized in **Table 17**. Failure modes may include physical failure, collapse or essential service interruption.

Table 17: Critical Assets

CRITICAL ASSET	FAILURE MODE	IMPACT
Mechanical Systems	Physical	Tenant housing may be impacted by failures, e.g., loss of water supply, fire suppression, and climate control systems.
Electrical Systems	Physical	Tenant housing may be impacted by loss of power and/or failure of electrical equipment. Water pumps and elevators might not run; backup power systems are limited in scope and duration.

¹³ ISO 31000:2009, p 2

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CRITICAL ASSET	FAILURE MODE	IMPACT
Elevators	Physical	Tenants and guests may not have access to their units. Tenants with mobility issues may not be able to leave or access their units. Emergency responders may have difficulty reaching some tenants' units.
Foundation and Structural Integrity	Physical	Unsafe for tenants to continue to live in the buildings based on the engineering studies/reports.
Building Envelope	Physical	Units are unusable while repair work is in progress, tenants may need to be relocated.

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, the evaluation of the risk and the development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan are shown in **Table 18**. It is essential that these critical risks and costs are reported to management. Additional risks will be developed in future iterations of the plan and are identified in **Table 29** in the continuous improvement section of the plan.

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Table 18: Risks and Treatment Plan

SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
Facilities	Electrical Issues	High	Along with reactive maintenance, perform preventative maintenance activities.	Medium	Currently implemented: budgeted \$82,000 annually
	Plumbing Failures	High	Preventative maintenance to check for leaks.	Medium	TBD
			Address plumbing concerns promptly to limit significant water damage.		TBD
	Foundation/ Structural Issues	High	Planned inspections and timely repairs and maintenance of all facilities with known foundation concerns.	Medium	TBD
	Elevator Failures	High	Perform planned preventative maintenance and prompt elevator repairs and replacements to minimize service disruptions.	Medium	Currently implemented: budgeted \$307,000
	Water Leakage (Basement Flooding, Infiltration, Roof Leakage)	High	Inspect properties for exterior drainage issues, conduct preventative maintenance on downspouts and grading, and replace roofing materials before failure, as funding allows.	High	TBD
	Fuel Tank Leakage (Generators)	High	Complete annual inspection checks.	TBD	\$1000 - \$2000 / tank
Implement regular continuous leak detection.			Medium		
Eliminate fuel tanks and switch to natural gas.			Medium	TBD	

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SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
Staff	Safety Concern	Very high	CHH has issued mobile phones to all staff working on-site.	Medium	Currently implemented: annual cost \$300-\$500 / phone
			On-site security staff present at select locations for staff and tenant security.	Medium	Estimated \$35/hour
			CHH has implemented a disaster management plan which is regularly updated and distributed to employees so that they know what steps to take to help stay safe if an incident occurs.	Medium	N/A – already implemented
			Regularly review the staff alert list for buildings where there are known safety concerns and train staff on how to adequately respond to complex incidents.	Medium	TBD
Tenants	Safety Concerns	Very high	On-site security staff present at select locations for staff and tenant security on all properties.	Medium	Estimated \$35/hour
Capital projects	Legal/Contract Failures	High	A current measure is to use standard construction contracts and well-defined insurance and bonding requirements to mitigate loss and potential contractual risk.	Medium	N/A – already implemented
External contractors	Work Quality Assessment	High	In the process of formalizing and implementing an audit program of external contractors completed work to ensure quality services are being provided to tenants' standards.	Medium	TBD

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6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City and CHH need to understand its capacity to ‘withstand a given level of stress or demand’, and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City and CHH to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment and crisis leadership.

6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective of achieving the optimum benefits from the available resources.

The following table outlines what activities CityHousing Hamilton cannot afford to do over the next 10 years with their existing budget and provides the associated service and risk tradeoffs.

Table 19: Service and Risk Trade-offs

WHAT WE CANNOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
Complete all recommended Preventative Maintenance tasks.	Currently unable to complete some preventative maintenance activities on the recommended scheduled frequency. This includes eavestrough cleaning, garbage chute cleaning, catch basin cleaning, sump pump testing, residential duct cleaning, commercial duct cleaning, window washing and sewer stack cleaning.	Risk of reactive maintenance and disruption of service to tenants occupying the facilities.
Replace End of Life building envelope(s).	Older Roofing materials are at greater risk of failure and can lead to water intrusion into the building.	Possible water intrusion into buildings and units, more extensive damage, and rehabilitation costs.

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WHAT WE CANNOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
Modernize and renew all high-rise building elevators at the end of estimated service life.	Service interruptions to tenants due to higher maintenance needs, longer timelines, and more expensive repairs.	Risk of reactive maintenance and disruption of service to tenants occupying the facilities.
Complete all recommended substructure/foundation repairs.	Concrete-poured foundation walls will continue to deteriorate. Weeping tiles and spalling in basements will continue to worsen and cause water ingress. Tenants may need to be relocated for any reactive foundation repairs which can impact the supply of available units.	Possible public safety risk. This may lead to relocation.
Renewing all buildings' windows, railings, and balconies at the needed rate.	The building will continue to deteriorate. Water membrane damage will weaken the concrete slabs and will require reapplication of waterproofing. The balcony railing will chip and will continue to corrode.	Possible public safety risks, and safety concerns.
Replace asphalt as needed. (Surface parking lots)	Surface lots will continue to deteriorate. Unable to improve lighting and mitigate localized flooding risk. Higher reactive maintenance costs.	Risk of injury to users from trips/falls. Reputational impacts, safety concerns.

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WHAT WE CANNOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
<p>Replacing and updating security systems including card access security, and security cameras.</p>	<p>Intermittent or lack of security coverage. Tenants are unable to access their homes if the system fails which could cause major service disruptions and reactive maintenance.</p>	<p>Possible risk to public safety. Possible service interruption and higher reactive maintenance costs to repair security systems.</p>
<p>Renewal of all interiors (including kitchens, bathrooms, flooring, wall finishes, door finishes, and common area refurbishments) before the end of service life or at the needed rate.</p>	<p>The interiors of the units continue to deteriorate and may be renovated upon unit turnover to a new tenant.</p>	<p>Discomfort to tenants occupying the buildings. Accelerated deterioration of interior finishes, and reputational risk.</p>
<p>Unable to keep up with housing demand due to capital and operation funding constraints.</p>	<p>Unable to diversify housing portfolio to meet tenants and public needs.</p>	<p>Increasing rate of housing unaffordability, and reputational risk.</p>

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7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we have already begun to experience (adaptation). At a minimum, the City and CHH must consider how to manage our existing assets given the potential climate change impacts for our region.

Changes to Hamilton's climate will impact City and CHH assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and,
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models as well as levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan.

7.1 CLIMATE CHANGE MITIGATION

Climate Mitigation refers to human intervention to reduce GHG emissions or enhance GHG removals (e.g. electric vehicles, net-zero buildings). The City of Hamilton's Community Energy + Emissions Plan¹⁴ (CEEP includes five Low-carbon Transformations necessary to achieve the City's target of net-zero GHG emissions by 2050:

- Innovating our industry;
- Transforming our buildings;
- Changing how we move;
- Revolutionizing renewables; and,
- Growing Green.

¹⁴ Newbold, Skidmore, Chessman, Imhoff, & McDowell, 2022

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Mitigation Demand Analysis

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City’s modelled targets for the low carbon transformations that applied to the service/asset;
- Discussing the impact, the targets would have on the service/asset; and,
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050 as shown in **Table 20** below.

As previously mentioned, due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below have not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AM Plan.

Moving forward, the Climate Lens tool discussed in the AM Plan Overview will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

Table 20: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Changing How We Move	100% of new municipal small and light-duty vehicles will be electric by 2040.	Currently, this topic is under review. CHH will review electric fleet options upon the renewal of vehicles dependent on the availability.	Develop a business case for transition to electric fleet and installations of electric charging stations.
Revolutionizing Renewables	By 2050, 50% of municipal buildings will add rooftop solar PV, covering 30% of the building’s electrical load.	As CHH buildings have multiple units, the electric load to meet the 30% target may be unachievable.	Assessment of the metric and how it applies to multiple units in the building.
Transforming Our Buildings	By 2050, all municipal buildings will be retrofitted to achieve 50% energy efficiency relative to 2016.	CHH's existing CMHC target includes achieving a 25% energy reduction by 2028.	Existing funding to 25% energy reduction. Develop a management plan to meet an additional 25% target by 2050.

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CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
		CHH would require more funding to meet an additional 25% energy reduction.	
Transforming Our Buildings	By 2050, all new municipal buildings achieve net-zero emissions.	All new housing is passive standard.	Current procedures are in place to meet the net-zero target.
Transforming Our Buildings	Post-retrofits, switch buildings to heat pumps for space and water heating by 2050.	Currently planning to meet the target.	Develop a plan to distinguish the costs generated by heat pumps from tenant costs in current building projects. For new builds, specific plans are in place, with some heat pumps covered under existing CMHC funding.

CURRENT MITIGATION PROJECTS

Mitigation projects CHH is currently pursuing are outlined below in **Table 21**. These projects may already be included in the budget and may be quantified in the lifecycle models.

Table 21: Asset Climate Mitigation Projects

PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
Canada Mortgage Housing Corporation (CMHC) Energy Efficiency Project	Transforming Our Buildings	Complete projects that will impact 6,290 units through improved outcomes related to affordability, energy efficiency and accessibility. CHH is committed to meeting the CMHC target by 2028. Targets are shown in Technical Levels of Service, Table 15 .	Reduce GHG emissions and energy reduction associated with facility operation.

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PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
<p>All New Developments After 2022</p>	<p>Transforming Our Buildings</p>	<p>All new construction projects initiated after 2022 adhere to the Passive House high-performance standard, buildings consume up to 90 percent less heating and cooling energy than conventional buildings and incorporate solar.</p> <p>This makes these facilities nearly net-zero energy and already meet the City of Hamilton’s 2050 climate goals.</p>	<p>Reduce GHG emissions and energy reduction associated with facility operation.</p>

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7.2 CLIMATE CHANGE ADAPTATION

Climate Adaptation refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads).

The impacts of climate change may have a significant impact on the assets we manage and the services we provide. Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.¹⁵

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report¹⁶ guided by ICLEI’s Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP) (ICLEI, 2021). The BARC Framework identified thirteen high-impact areas.

Adaptation Demand Analysis

Table 22: Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	BASELINE ¹⁷ (1976-2005)	AVERAGE PROJECTED CHANGE ¹⁵ in 2021-2050 (Assuming RCP4.5 ¹⁸ Scenario)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Reduced capacity of flood protection measures and water storage caused by an increase in rainfall intensity leading to flooding.	6.7 Total Heavy Precipitation Days (20 Mm)	7.7 Total Heavy Precipitation Days (20 Mm)	Flooding poses a risk of damaging facilities, leading to increased costs for remediation and impacting the operational budget. Presently, efforts to address basement flooding involve implementing foundation repairs.	Currently not a concern. Plan to create a mitigation strategy for any potential flooding mitigation strategy.

¹⁵ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

¹⁶ City of Hamilton & Local Governments for Sustainability Canada, 2021

¹⁷ ICLEI Canada 2022.

¹⁸ RCP4.5 Scenario: Moderate projected GHG concentrations, resulting from substantial climate change mitigation measures. It represents an increase of 4.5 W/m² in radiative forcing to the climate system. RCP 4.5 is associated with 580-720ppm of CO₂ and would more than likely lead to 3°C of warming by the end of the 21st century.

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ADAPTATION IMPACT STATEMENT	BASELINE ¹⁷ (1976-2005)	AVERAGE PROJECTED CHANGE ¹⁵ in 2021-2050 (Assuming RCP4.5 ¹⁸ Scenario)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
More frequent and intense heatwaves will increase instances of heat-related health and safety issues, particularly for households without access to reliable air-conditioning.	2.1 Average Annual Heat Waves	4.7 Average Annual Heat Waves	CHH offers cooling spaces in select buildings. The potential enactment of the Adequate Temperature By-law could increase the operation and maintenance budget requirements.	Develop a demand management plan, considering the costs associated with purchasing, operating, maintaining, and replacing A/C units if needed for all individual units to comply with proposed by-laws.
Prolonged power outages during winter months due to an increase in ice storms resulting in safety concerns for tenants.	187mm Average Total Winter Precipitation	204mm Average Total Winter Precipitation	Power outages may result in interruption of heating, water supply, and elevator operations, posing health and safety concerns and preventing people from accessing their homes.	CHH employs emergency measures in collaboration with community organizations. Responses are customized based on the specific situation.
Increased intensity and frequency of ice storms leading to increased hazardous roads, pathways, and sidewalk conditions.	187mm Average Total Winter Precipitation	204mm Average Total Winter Precipitation	Potential increase in injuries to tenants and staff. Increase the scope of snow removal contracts and catch-basin cleaning.	Further, define service contracts for snow removal and catch basins. Implement ongoing performance monitoring to ensure that contractors are consistently meeting the specified requirements.
Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.	6.7 Heavy Precipitation Days (20mm)	7.7 Heavy Precipitation Days (20mm)	Flooding poses a risk of damaging facilities, leading to issues like mold, and physical damage. This could result in increased costs for remediation and an impact on the operational budget. To address	Currently not a concern. Plans to create a mitigation strategy for any potential flooding.

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ADAPTATION IMPACT STATEMENT	BASELINE ¹⁷ (1976-2005)	AVERAGE PROJECTED CHANGE ¹⁵ in 2021-2050 (Assuming RCP4.5 ¹⁸ Scenario)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
			basement flooding, ongoing efforts are in place, focusing on foundation repairs.	
Increase in average annual temperatures (especially in the summer) leading to increased food insecurity in the region (i.e., decrease in local crop yields, food cost fluctuations, etc.)	13.1 Degrees Celsius Average Annual Temperature	15.1 Degrees Celsius Average Annual Temperature	Currently, CHH supports tenant-led food security programs.	CHH will continue to work with community agencies and tenants to help support food security programs provided to CHH tenants.
Rising summer temperatures and extreme heat will increase energy demand for air conditioning, causing a financial burden for low-income households.	25.9 Degrees Celsius Average Summer Seasonal Temperature	27 Degrees Celsius Average Summer Seasonal Temperature	Some tenants are expected to cover utility bills, depending upon their lease arrangements, but with the increasing cost of living, it may become more difficult for tenants to make rent payments.	Resources available from other parties for relief (utility company etc.). CHH works with tenants to collaborate with community organizations for support.

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ADAPTATION RISK ANALYSIS

Additionally, the City and CHH should consider the risks for the asset or service as a result of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Similarly, to the exercise above and using the risk process in **Section 6.2**, asset owners:

- Reviewed the likelihood scores in the Vulnerability and Risk Assessment Report for the adaptation impact occurring;
- Identified the consequence to the asset/service if the event did happen to develop a risk rating; and,
- If the risk was identified as high, the asset owner produced a preliminary risk adaptation plan shown below in **Table 23**.

It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of mitigating the risks below has not been included in the lifecycle and financial models at this time. The adaptation plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should consider these risks during the planning and design processes. Future changes will be incorporated into future iterations of the AM Plan. Moving forward, the Climate Lens tool will assess projects based on these targets and will assist with the prioritization of climate adaptation projects.

Table 23: Adapting to Climate Change

ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns.	Electrically powered HVAC equipment, elevators, water supply equipment, and security systems.	Tenant safety concerns and marginalized population safety concerns.	High	CHH has developed and implemented emergency plans for extreme conditions, such as hot and cold weather.

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CURRENT ADAPTATION PROJECTS

CHH is adapting to make newly developed facilities climate resilient. The impact of climate change on assets and how the City and CHH will adapt is a new and complex discussion and further opportunities will be developed in future revisions of this AM Plan.

Table 24: Asset Climate Adaptation Projects

PROJECT	ADAPTATION IMPACT STATEMENT	PROJECT DESCRIPTION OF CLIMATE CHANGE ADAPTATION
Climate Adaptation for New Developments	Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.	CHH’s newly developed buildings integrate climate-resilient measures. These features include thermal resistance to sustain interior temperatures during power outages, sufficient cooling for extreme heat days, and Low Impact Development (LID) practices for water management.
	Increased intensity and frequency of ice storms leading to increased hazardous roads, pathways, and sidewalk conditions.	
	Rising summer temperatures and extreme heat will increase energy demand for air conditioning, causing a financial burden for low-income households.	

CLIMATE ADAPTATION DISCUSSION

Adaptation to climate change impacts such as increased temperatures, precipitation, and ice storms is being addressed through the implementation of climate-resilient features in newly developed facilities. However, the majority of CHH facilities are on average 40 years old, with newly developed facilities representing only a small portion of the overall CHH portfolio. As CHH completes full building retrofits, opportunities to incorporate these adaptation measures will be considered.

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8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how CHH plans to manage these assets at the agreed levels of service and the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budgets. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options. However, at this time the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding. Details on the financial data used to develop the lifecycle plan are detailed in **Section 10.1**.

8.1 ACQUISITION PLAN

The acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs. Assets are typically acquired through the construction of new assets which are mostly related to population growth.

CURRENT PROJECT DRIVERS – 10-YEAR PLANNING HORIZON

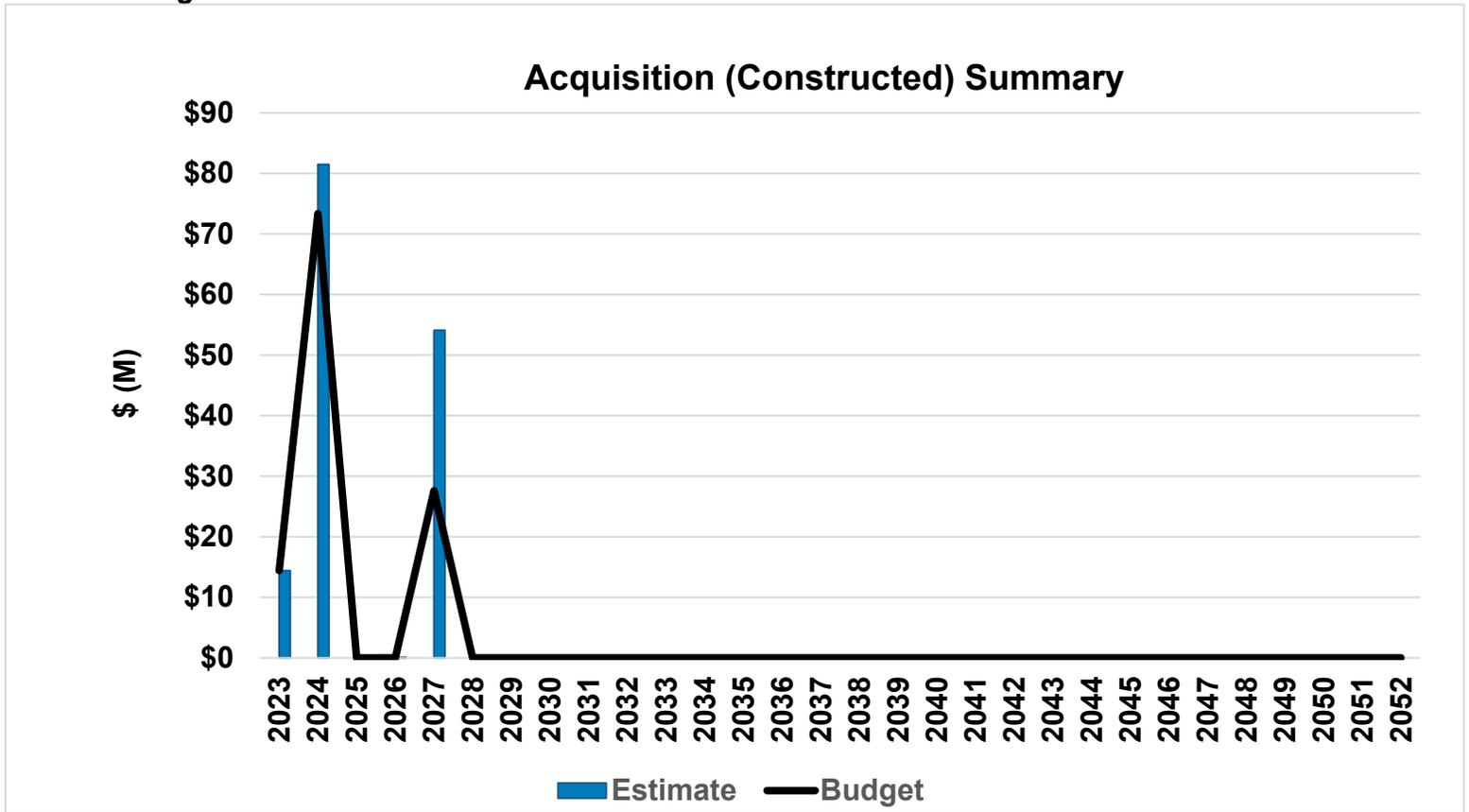
CHH is developing these project drivers at the time of writing this AM Plan. These drivers will include legal compliance, risk mitigation, operation and maintenance impacts, growth impacts, health and safety, reputation, and others. Once developed, these drivers should be reviewed during each iteration of the AM Plan to ensure they are appropriate and effective in informing decision-making and used by CHH as part of their capital project prioritization matrix.

CONSTRUCTED OR PURCHASED ACQUISITIONS

Over the next ten-year planning period CHH will acquire approximately **\$150.2M** of purchased or constructed assets as shown below in **Figure 14**. However, the ongoing development of the Long-term Development Strategy may influence these plans, which may include additional acquisitions and dispositions of assets. CHH and the City will continue to monitor constructed and purchased assets and use this data to update future AM Plans when new information becomes available.

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Figure 14: Acquisition (Constructed) Summary
 All Figure Values Are Shown In 2023 Dollars.



Approved major acquisition expenditures over the next ten years include:

- **\$149.7 Million** in 2023-2028 acquisitions for new development projects to increase CHH housing portfolio: and,
- **\$450 Thousand** for new additional vehicle acquisitions

CHH will acquire approximately **\$150.2 Million** of assets, and with **\$116.4 Million** of planned budget for acquisition. CHH does not have a sufficient budget for its planned constructed acquisitions at this time. CHH is in the process of identifying funding sources for some of these future acquisitions.

The acquisition forecast consists of approved projects identified until 2027. This forecast does not detail any future acquisitions beyond this time and future acquisitions are expected to continue to meet future housing demand.

As mentioned in the section above, CHH is currently conducting a planning process to establish a Long-term Development Strategy which will guide long-term growth, including informing

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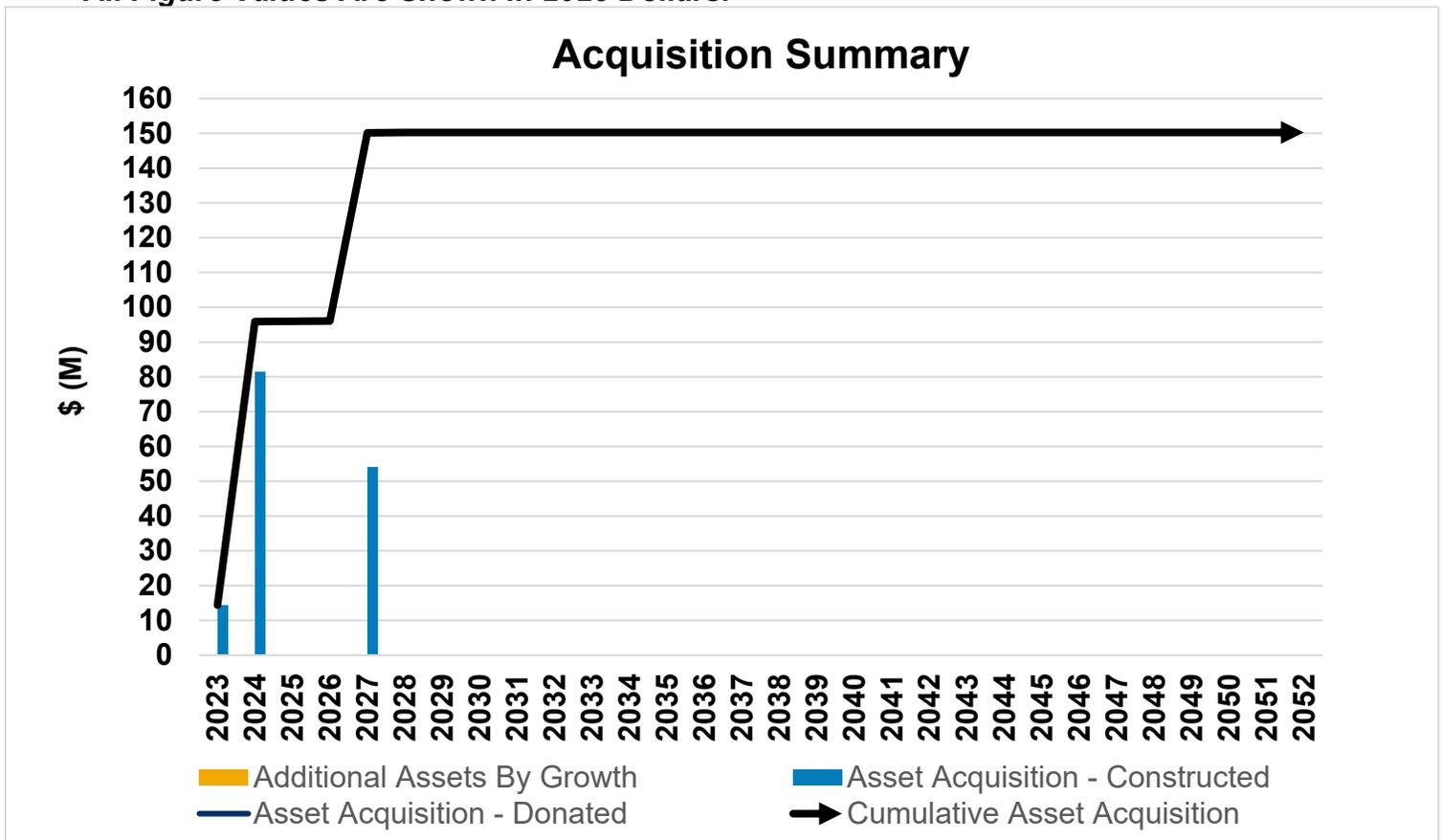
disposition and acquisition of CHH assets. This strategy will likely impact acquisitions in future years and will be considered in the future AM Plans as information becomes available.

In addition, as Asset Management knowledge, practices and abilities mature within the City and CHH, it is likely that there will be significant projects with equally significant costs that will appear within the later years of the 30-year planning horizon.

ACQUISITIONS SUMMARY

Forecast acquisition asset costs are summarized in **Figure 15** and show the cumulative effect of asset acquisitions over the next ten 10-year planning period.

Figure 15: Acquisition Summary
 All Figure Values Are Shown In 2023 Dollars.



When CHH commits to constructing new assets, it must be prepared to fund future operations, maintenance, and renewal costs. CHH must also account for future depreciation when reviewing long-term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in **Figure 15**. CHH

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and the City will need to address how to best fund these ongoing costs as well as the costs to construct the assets while seeking the highest level of service possible.

8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal, and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons. Examples of typical operational activities include operating assets, utility costs, inspections, and the necessary staffing resources to perform these activities.

- **\$11.4 Million** in employee-related costs in 2023 (i.e., salaries, wages, benefits);
- **\$11.3 Million** in utility billings (i.e., hydro, water & sewer, and heating (natural gas) fuel);
- **\$3.6 Million** in contractual operating costs (grounds snow removal, building security, broiler, and machinery); and,
- **\$3.1 Million** in legislated and routine preventative maintenance costs in 2023.

Maintenance should be viewed as the ongoing management of asset deterioration. The purpose of planned maintenance is to ensure that the correct interventions are proactively applied to assets and to ensure they reach their intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition. Examples of typical maintenance activities include equipment repairs and component replacements along with appropriate staffing and material resources required to perform these activities. For this AM Plan, maintenance also includes component renewal of the facilities, i.e., replacement of elevators, kitchen renewals, HVAC replacements or roofing replacements are considered as maintenance in the AM Plan as they contribute to the overall asset, the Facility (entire building), reaching the estimated service life.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. CHH needs to plan and properly fund its maintenance to ensure the CHH buildings are reliable and can achieve the desired level of service.

Major maintenance projects CHH plans to continuously manage over the next 10 years include:

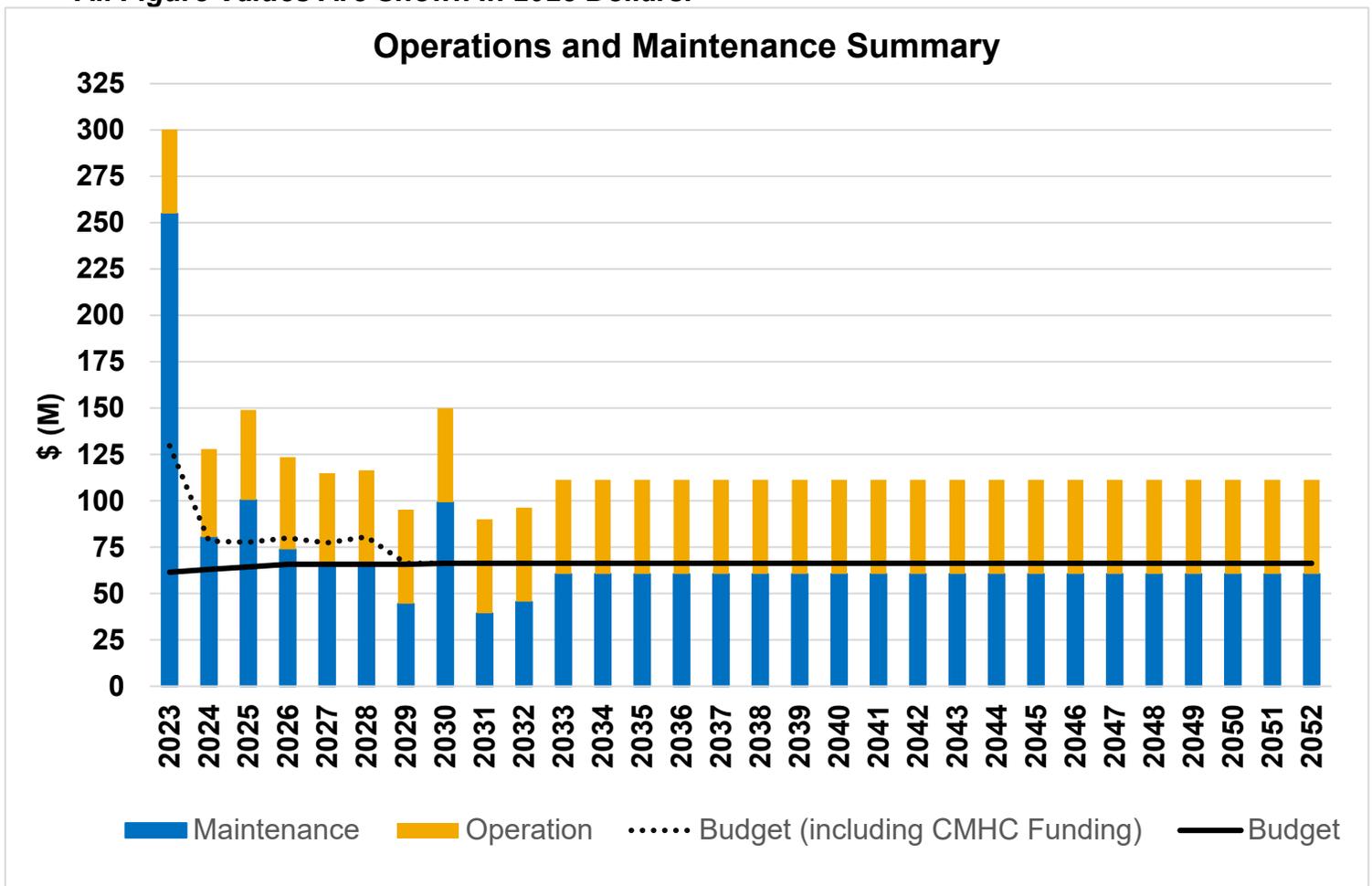
- **\$131.5 Million (2023-2029)** for revitalizing the current housing portfolio and improving energy efficiency by 25%, largely supported by dedicated CMHC grant funding;
- **\$0.5 Million** to update Building Condition Assessments;
- **\$0.9 Million** for legislated preventative maintenance activities; and,
- **\$2.2 Million** for routine preventative maintenance activities.

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These investments for maintenance are intended to allow these assets to reach their estimated service life and minimize reactive maintenance costs. These forecast costs do not yet fully include the recommended works that need to be undertaken to ensure the entire inventory of assets will achieve their desired service lives and level of service.

Forecast operations and maintenance costs vary in relation to the total value of the asset registry. When additional assets are acquired, future operations and maintenance costs are forecast to increase. When assets are disposed the forecast operation and maintenance costs are reduced. **Figure 16** shows the forecast operations and maintenance costs relative to the proposed operations and maintenance budget.

Figure 16: Operations and Maintenance Summary
 All Figure Values Are Shown In 2023 Dollars.



The forecasted operations and maintenance needs will increase steadily over time with the addition of new CHH assets, such as new facilities, administrative assets, and tools and equipment. Forecasted operational and maintenance costs for additional acquired assets are not included in this AM Plan due to data limitations.

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As per **Figure 16**, there is a significant funding shortfall spanning from 2023 to 2032. This shortfall is primarily due to unfunded repairs to CHH facilities based on the Building Condition Assessments. Priority repairs are being completed on these facilities, and the facilities are in overall fair condition as shown in **Table 4**. However, due to budget constraints, many facility repairs are deferred annually, resulting in a backlog of recommended maintenance activities. For 2023, the maintenance needs shown in the graph above include **\$38.2 Million** of planned maintenance work for 2023, along with **\$131.1 Million** of backlog maintenance work which has accumulated over time, as per the BCA's. The 2023 to 2032 funding shortfall also includes an average of **\$1.5M** per year of additional operational activities.

As discussed in **Section 3.2.1.1**, the estimated service of 75 years was selected for the shell of the building. This estimated service did not include the service life of the building component, as each component has a unique estimated service. These components typically require timely replacement to ensure the facility remains functional and reaches its intended estimated service life. For instance, in a facility with a 75-year expected service life, components such as the roof, installed during construction, may have a separate estimated service life of 25 years. Therefore, the roof would need replacement in year 25 and again in year 50. The costs associated with these two roof replacements are considered part of the maintenance expenses necessary to sustain the building's functionality and ensure it reaches its estimated service life of 75 years.

A significant spike of **\$131.1 Million** in deferred maintenance activity is shown for 2023 including the following repair work:

- **\$2.3 Million** of deferred repair work to the substructure of facilities which includes repair work to the basement and foundation of the building;
- **\$39 Million** of deferred maintenance work which includes roofing, exterior doors, exterior walls, and substructure;
- **\$76.3 Million** in deferred repair work for interior and electrical and mechanical repair; and,
- **\$13.5 Million** in parking lot surfacing and lighting.

From 2024 – 2032, the maintenance spikes average to **\$37.5M** per year, which signifies forecast ongoing maintenance repairs taken from BCA's required to keep facilities in good condition. As mentioned in **Section 3.2.1.2**, BCAs are completed every five years, and these forecasted needs may change depending on the results of the new BCAs.

As BCAs are only completed for a 10-year period, maintenance needs from 2033-2052 are projected based on average BCA maintenance needs from 2023-2032. The average projected BCA need without incorporating backlog is **\$41.8M** per year and this is included in the forecast costs in **Figure 16** above.

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It is anticipated that at the current budget levels, there will be insufficient budget to address all operating and maintenance needs over the 30-year planning horizon. The graph above illustrates that without increased funding or changes to lifecycle activities, there is a significant shortage of funding which will lead to:

- Impacts on tenants' homes and well-being;
- Possible reduction to the availability of the assets;
- Higher cost reactive maintenance;
- Increased financial and reputational risk; and,
- Assets do not reach estimated service life.

As previously mentioned, CHH created a three-year operating budget which included operations, maintenance, and renewal items until 2026. This multi-year forecast was included in **Figure 16** above with the operations and maintenance portions of the Operating budget, and then these numbers were carried flat across the 30-year forecast from 2027-2052. The dotted line on the graph shows the CMHC and CHH contributed funding available until 2029. More discussion can be in **Section 3.2.1.1** and **Table 21**.

8.3 RENEWAL PLAN

Renewal is major work which does not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Asset renewals are typically undertaken to either ensure the asset's reliability or quality will meet the service requirements set out by CHH. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 25** and are based on the estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2023 however they will be reviewed annually until their accuracy reflects the City's and CHH's current practices.

For the purposes of this AM Plan, facilities were considered "renewed" if the undertaken work was substantial enough to consider that the service life of the entire facility (asset) was reset. This typically involves complete replacement or extensive renovation which essentially reconstructs the entire facility. Such activities are infrequent, and CityHousing allocates significant funds on maintenance activities that replace individual components but might not impact the overall service life of the entire facility (building). As an example, a facility with an ESL of 75 years might have a roof lasting 25 years. If the roof undergoes replacement twice

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during the life of the facility, it is considered a maintenance activity as it does not extend the ESL of the facility but is required to help the asset reach the estimated service life.

Table 25: Useful Lives of Assets

ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Facilities	75*
Vehicles	8
Computers	4-5
Mobile Phones	2
Tools	8-10
Fridges	10
Stoves	10

*A facility with an ESL of 75 years that is nearing 75 years of age that has a condition rating of good or very good condition might also have the ESL extended on a case-by-case basis if data is available to support the increase in ESL.

The estimates for renewals in this AM Plan were based on the register method which utilizes the data from the City’s and CHH asset registry to analyze all available lifecycle information and then determine the optimal timing for renewals based on the ESL.

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).¹⁹

Future methodologies may be developed to optimize and prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure;
- Have high use and the subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have the potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.²⁰

¹⁹ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

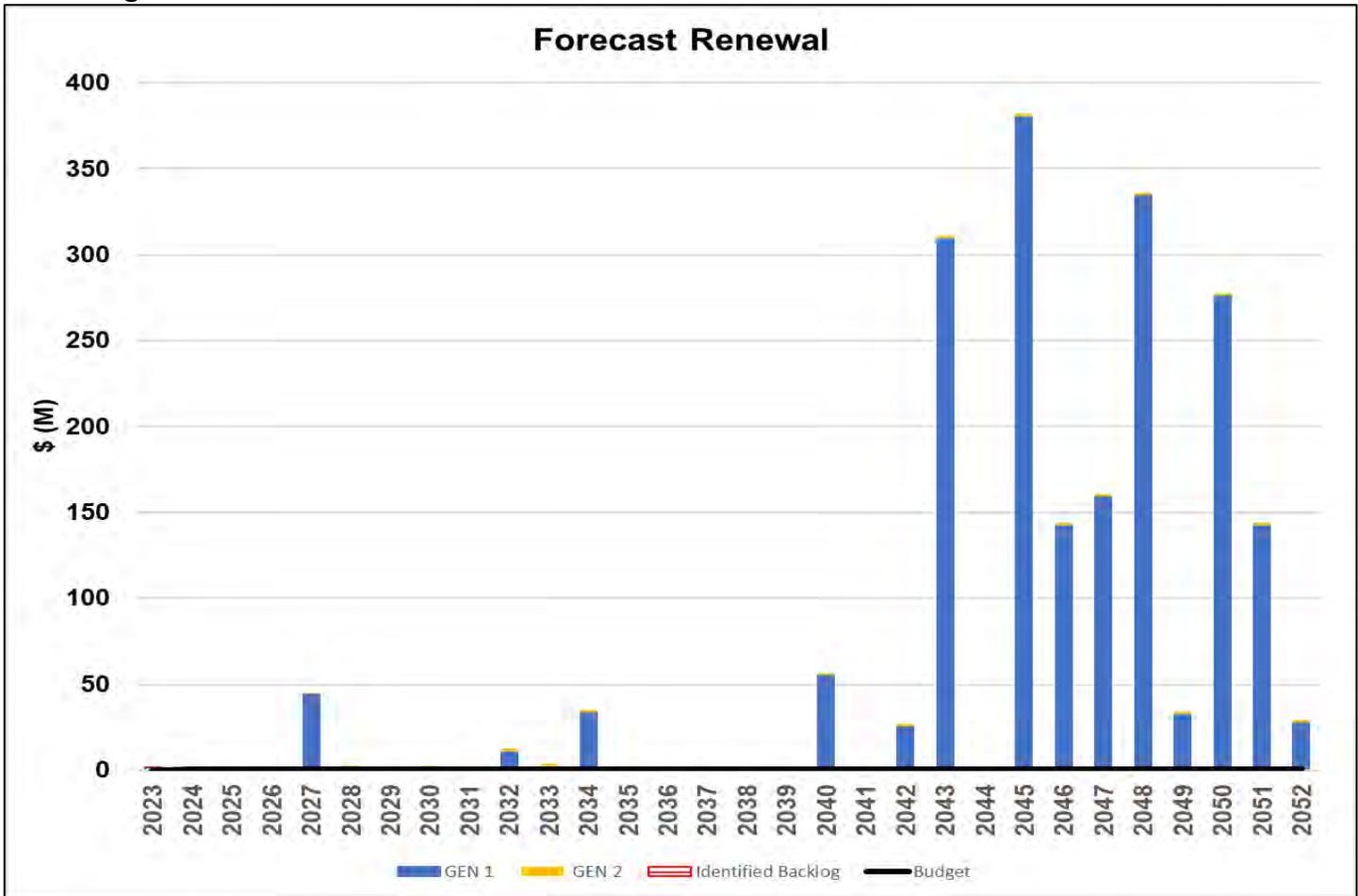
²⁰ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

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SUMMARY OF FUTURE RENEWAL COST

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in **Figure 17**.

Figure 17: Forecast Renewal Costs
 All Figure Values Are Shown In 2023 Dollars.



Although difficult to see on this graph, 2023 represents the cumulative backlog of deferred renewal. This backlog is nearly \$1.4 million of deferred renewals that have been accumulated over time which includes two single facilities past their estimated service life and the rest are administrative assets due for renewals.

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Other major forecast renewal costs include the following:

- 2027: **\$42.7 Million** renewal forecast for renewal of 85 semis and singles;
- 2032: **\$10.8 Million** renewal forecast for renewal of 11 facilities and 48 computers; and,
- 2034: **\$33.3 Million** renewal forecast for renewal of 64 semis and singles.

The significant spikes from 2040 onwards are driven by renewals of facilities. As discussed in **Section 3.2.1.1**, the facility's estimated service life is 75 years and as most facilities are 40 years, these facilities would reach their estimated service life in the next 30 years and renewal will need to be considered. These facility renewals will be an extremely large expenditure for CHH and will require careful financial planning. CHH has begun to strategically plan for these upcoming renewals.

Deferring renewals (assets identified for renewal and not funded) creates risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. Continuously deferring renewals works ensures CHH will not achieve intergenerational equality. If CHH continues to push out necessary renewals, there is a high risk that future generations will be unable to maintain the level of service the customers currently enjoy. It will burden future generations with significant costs that inevitably they will be unable to sustain. Prioritization of these projects will need to be funded and managed over time to ensure renewal occurs at the optimal time.

Properly funded and timely renewals will ensure the assets perform as expected and it is recommended to continue to analyze asset renewals based on criticality and availability of funds for future AM Plans.

8.4 DISPOSAL PLAN

Disposal includes any activity associated with the disposal of a decommissioned asset including the sale, possible closure of service, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen.

Assets identified for possible decommissioning and disposal are shown in **Table 26**. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposal of the assets are also outlined in **Table 26**. The current progression of a Long-term Development Strategy will influence decisions regarding future disposition, as discussed in **Section 8.1**. Any costs or revenue gained from asset disposals is included in future iterations of the plan and the long-term financial plan.

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Table 26: Assets Identified for Disposal

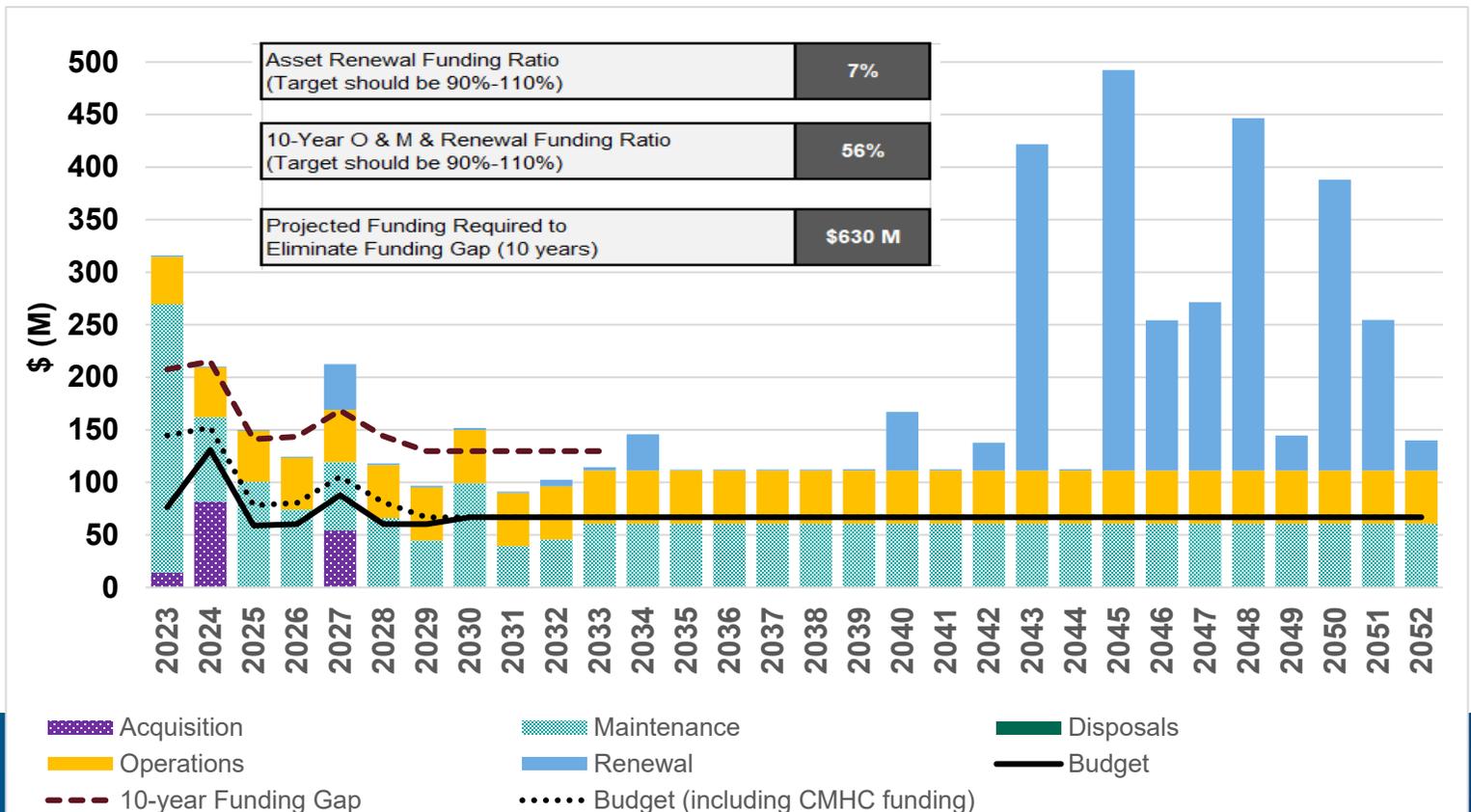
ASSET	REASON FOR DISPOSAL	TIMING	DISPOSAL COSTS	OPERATIONS & MAINTENANCE ANNUAL SAVINGS
Facilities (units)	Strategic Realignment	TBD	Unknown	Unknown
Vehicles	End of Life	TBD	N/A	N/A

8.5 LIFECYCLE COST SUMMARY

The financial projections from this asset plan are shown in **Figure 18**. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs estimated to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving a balance between costs, levels of service and risk to achieve the best value outcome.

Figure 18: Lifecycle Summary
 All Figure Values Are Shown In 2023 Dollars



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There is insufficient budget to address all lifecycle activities by CHH. The underfunded activities include operational activities and deferred maintenance work. CHH needs to continue increasing its operation and maintenance budgets annually to fund all the forecast operation activities, deferred maintenance activities and to fund increasing reactive maintenance work that can occur due to aging facilities. The 10-year funding gap is explained in **Section 9.1**.

CHH currently has no approved budget to address the renewal work that is projected over the 30-year horizon. There is significant forecasted renewal work projected from 2040 – 2052, this accounts for 63% of the current CHH portfolio due for renewal in this period, with a renewal value of \$1.88 Billion.

Without sufficient funding, CHH has little option but to defer these necessary lifecycle activities. Deferring important lifecycle activities is never recommended. The City would benefit from incorporating these considerations into its long-term financial analysis of CHH's operating and capital budget needs. Funding these activities helps to ensure the assets are compliant, safe, and effectively deliver the service the customers need and desire.

Deferring renewals (assets identified for renewal and not funded) creates risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance and is not an optimal recommendation.

The number of acquisitions in 2023, 2024 and 2027 will also commit CHH to additional ongoing operations, maintenance, and renewal costs throughout these acquired assets' lifecycles. The actual acquisitions will fluctuate with changing housing demands over the 30-year period and will have an impact on the lifecycle management of CHH.

As previously mentioned, due to the lack of data confidence in the current levels of service information, CHH will need to collect more data before proposing any new levels of service. It has been assumed in the interim that the current levels of service will be the proposed levels of service continuing forward past 2025 in accordance with O. Reg 588/17.

The City and CHH will continue to improve lifecycle data, and this will allow for informed choices as to how best to mitigate impacts and how to address the funding gap itself. In future plans, this gap in funding will be refined over the next three years to improve the confidence and accuracy of the forecasts.

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9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will ensure CHH provides the appropriate level of service for CHH and the City to achieve their goals and objectives. Reporting to stakeholders on service and financial performance ensures the City and CHH are transparently fulfilling stewardship accountabilities.

Long-term financial planning (LTFP) is critical for CHH to ensure that lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. CHH is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly; CHH will have difficult choices to make in the future which will include options such as higher costs reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all the asset needs will be met while the City and CHH are finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

9.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- Medium-term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio²¹ 7%

The Asset Renewal Funding Ratio is used to determine if CHH is accommodating asset renewals optimally and cost-effectively from a timing perspective and relative to financial constraints, the risk CHH is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable, however, the expenditures are below this level in some service areas predominantly due to underinvestment,

²¹ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

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including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

If assets are not renewed at the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to the City's and CHH's reputation and risk of fines or legal costs

This low Asset Renewal Funding Ratio outlines that this service is underfunded and while CHH is completing priority repairs to keep their assets functional, CHH will not be able to renew and maintain assets at an appropriate rate. This ratio is largely driven by the significant costs anticipated to renew whole facilities at the end of their useful life.

The lack of renewal resources will be addressed in future AM plans while aligning the plan to the City's LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate.

MEDIUM-TERM – 10 YEAR FINANCIAL PLANNING PERIOD

10-Year Operating, Maintenance & Renewal Ratio 56%

Although this AM Plan includes forecast projections to 30 years, the higher confidence numbers are typically within the first 10 years of the lifecycle forecast. The 10-year Operating, Maintenance & Renewal Ratio compares the Planned Budget with the Lifecycle Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the AARF, the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization's risk and service level commitments.

The forecast operations, maintenance and renewal costs over the 10-year planning period is **\$142.3 Million** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The proposed (budget) operations, maintenance and renewal funding is **\$79.3 Million** on average per year giving a 10-year funding shortfall of **\$63.0 Million** per year or **\$630 Million** over the 10-year planning period. This funding shortfall stems from costs of facility renewal, as discussed in **Section 8.3**, additional operational costs and maintenance needs identified in the BCA, as mentioned in **Section 8.2**. These costs are currently not fully funded and should be prioritized based on the criticality of components.

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This indicates that **56%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget, which is outside of the 90-110% range. Therefore, it can be concluded that CHH is not able to fund its assets at an acceptable rate. Note, that these calculations **exclude** acquisition costs.

This gap will need to be managed over time to reduce it sustainably and limit financial shock to customers. Options for managing the gap include;

- Financing strategies – increased funding, block funding for specific lifecycle activities, long-term debt utilization;
- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets;
- Influence level of service expectations or demand drivers;
- Developing and implementing the Long-term Development Strategy; and,
- Making incremental investments and improvements in resources and policies which drive effective and optimal day-to-day management of CHH's diverse portfolio of facilities assets.

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of **90-110%** for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

9.2 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Table 27 shows the forecast costs (outlays) required for consideration in the 30-year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

CHH will manage the 'gap' by continuing to develop this AM Plan to guide future service levels and resources required to provide these services in consultation with the community. Options to

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manage the gap include reduction and closure of low-use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

The completion and implementation of the Long-Term Development Strategy can also play a role in managing the gap.

**Table 27: Forecast Costs (Outlays) For the Long-Term Financial Plan Forecast
 Costs Are Shown In 2023 Dollar Values**

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2023	\$ 14,400,000	\$ 45,241,540	\$ 254,998,848	\$ 1,420,922	\$ -
2024	\$ 81,490,000	\$ 47,448,092	\$ 80,440,472	\$ 905,212	\$ -
2025	\$ 90,000	\$ 48,553,872	\$ 100,486,888	\$ 904,357	\$ -
2026	\$ 90,000	\$ 49,687,292	\$ 73,862,400	\$ 796,399	\$ -
2027	\$ 54,090,000	\$ 49,687,292	\$ 65,231,648	\$ 43,500,912	\$ -
2028	\$ 90,000	\$ 50,687,292	\$ 65,811,000	\$ 1,377,461	\$ -
2029	\$ -	\$ 50,687,292	\$ 44,523,112	\$ 1,429,429	\$ -
2030	\$ -	\$ 50,687,292	\$ 99,227,664	\$ 1,836,640	\$ -
2031	\$ -	\$ 50,687,292	\$ 39,348,808	\$ 1,100,116	\$ -
2032	\$ -	\$ 50,687,292	\$ 45,644,168	\$ 6,111,194	\$ -
2033	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 3,170,870	\$ -
2034	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 34,496,684	\$ -
2035	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 799,357	\$ -
2036	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 886,399	\$ -
2037	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 944,381	\$ -
2038	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 856,961	\$ -
2039	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 1,208,929	\$ -
2040	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 55,820,640	\$ -
2041	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 995,116	\$ -

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YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2042	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 26,410,694	\$ -
2043	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 310,499,360	\$ -
2044	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 1,184,683	\$ -
2045	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 381,173,920	\$ -
2046	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 142,991,904	\$ -
2047	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 160,215,888	\$ -
2048	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 335,357,472	\$ -
2049	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 33,259,928	\$ -
2050	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 276,781,632	\$ -
2051	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 143,237,120	\$ -
2052	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 28,627,694	\$ -

9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in CHH's operational budget and multi-year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM Plan will provide service delivery options and alternatives to optimize limited financial resources.

9.4 VALUATION FORECASTS

Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and remove the high costs of renewal obligations. At this

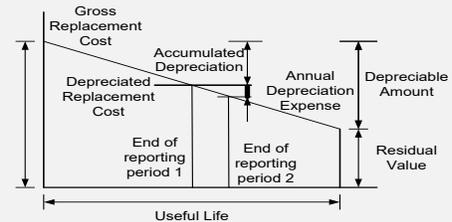
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time, it is not possible to separate the disposal costs from the renewal or maintenance costs, however this will be improved for the next iteration of the plan.

9.5 ASSET VALUATION

Replacement Cost (Current/Gross)	\$2,951,342,848
Depreciable Amount	\$2,951,307,520
Depreciated Replacement Cost²²	\$1,203,954,816
Depreciation	\$ 40,125,408



The current replacement cost is the most common valuation approach for specialized infrastructure assets. The methodology includes establishing a comprehensive asset registry, assessing replacement costs (based on market pricing for the modern equivalent assets) and useful lives, determining the appropriate depreciation method, testing for impairments, and determining remaining useful life.

As CHH matures its asset data, it is highly likely that these valuations will fluctuate significantly over the next 30 years, and they should increase over time based on improved market equivalent costs as well as anticipated cost changes due to climate change mitigation and adaptation strategies.

9.6 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 30-year horizon and encompass additional operational needs, where known, but do not address all other operational needs that may not yet be identified;
- Maintenance forecasts are based on current budget allocations and encompass anticipated needs, where known, but do not necessarily identify all asset needs at this time; and,
- Replacement costs were based on historical costing and subject matter expertise. They were also made without determining what the asset would be replaced with in the future.

²² Also reported as Written Down Value, Carrying or Net Book Value.

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9.7 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the AM Plan Overview.

Table 28: Data Confidence Assessment for Data Used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	Medium	Based on the 2022 Housing assessment report and SME expertise.
Growth Projections	Medium	Population data is of high confidence. Current growth projections will need to be vetted and improved.
Acquisition Forecast	Low	Additional assets beyond those identified are anticipated.
Operation Forecast	Low	Currently budget-based and additional operational costs for approved future acquired assets are not accounted for and the operational needs for acquired assets are under-reported in this AM Plan.
Maintenance Forecast	Low	Legislated and routine preventative maintenance activities costs are high confidence numbers and are accounted for in operational and capital budgets. BCA forecast is available until 2032, and maintenance needs are projected beyond 2032. BCA numbers have low confidence. Additionally, maintenance needs for acquired assets are not included in the budget needs or the BCA, leading to underreporting of the additional maintenance needs.
Renewal Forecast - Asset Value	Medium	Most Facility's assets renewal costs are based on recent market value. Tools and appliance renewal costs are high-level estimates and are based on SME (subject matter experts) estimates.
Renewal Forecast - Asset Useful Lives	Medium	Based on SME opinion. Tools and appliances have a high-level estimated useful life and may need to be reviewed in the future.

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DATA	CONFIDENCE ASSESSMENT	COMMENT
Renewal Forecast - Condition Modelling	Low	Condition information was only known for multi-unit facilities. Many assets are replaced according to a renewal schedule, do not have conditions assigned and are often based on age.
Disposal Forecast	Very Low	Not included in AM Plan. Continuous improvements are required to ensure accurate data is available.

The estimated confidence level for and reliability of data used in this Asset Management Plan is considered to be a Medium confidence level.

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10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PRACTICES²³

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2023 Approved Operating Budget;
- 2024-2025 Multi-Year Operating Forecast;
- 2023 Approved Capital Budget;
- 2021-2028 CMHC/Capital funding proposed projects;
- 2023 Vacancy Renewal and Management Plan (Report #23009)
- 2023-2027 CHH Strategic Plan 2023 Q1 Progress Update
- Building Condition Assessment Reports;
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc.);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter expert opinion and anecdotal information; and,
- Reports from the mandatory inspections, operational & maintenance activities internal reports.

²³ ISO 55000 Refers to this as the Asset Management System

CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

10.2 IMPROVEMENT PLAN

It is important that the City and CHH recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision-making. The tasks listed below are essential to improving the AM Plan and CHH’s ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning, and plans to physically improve the assets.

The Improvement Plan **Table 29** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this AM Plan will provide updates on these improvement plans. The costs and resources to complete each of these tasks have not been included in the lifecycle models to date, and resource requirements and prioritization would need to be reviewed for internal resource-driven projects.

Table 29: Improvement Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1	Design and develop a condition assessment for all major assets based on the Long-term Development Strategy	CHH	TBD	Initiate in 2025-2026
2	Developing a detailed asset register with an accurate number of assets, age, and replacement costs for all assets.	CHH	\$5000 Internal Resources	Q4 2024
3	Design, analyze and develop condition assessment for all assets.	CHH	\$5000 Internal Resources	Q4 2024
4	Develop tenant satisfaction and tenant complaints metrics.	CHH	Internal resources of the CHH team and City of Hamilton staff	2024-2025
5	Benchmarking common sector KPIs with other local housing corporations.	CHH	\$10,000 per year	2024-2026
6	Design, analyze and develop a preventative maintenance plan for deferred maintenance.	CHH	Approximately \$ 1.2M per year	2024-2026

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#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
7	Develop a renewal priority the ranking criterion to allocate capital to renewal projects using multi-criteria evaluation approach (i.e. condition, age, environmental impact, health and safety).	CHH	\$50,000 annually in internal resources	TBD
8	Develop a priority criterion for future acquisitions which will include factors such as proximity to transit, percent vacant, purchase and improvement cost.	CHH	Included within the Long-term Development Strategy planning process	2025
9	Investigate incorporating a condition rating during regular vehicle inspection /maintenance activities per 5-point scale.	CHH/ Fleet	TBD 40 hours of internal resources	TBD
10	Improve the survey process by incorporating telephone surveys or IP controls.	CAM	N/A	2025-2028
11	Clarify verbiage regarding CHH responsibility for Q18-Importance question.	CAM	N/A	2024-2025

10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated regularly to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

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10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one to ten 10-year detailed works programs, budgets, business plans and corporate structures consider the 'global' work program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 110%).

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CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

12. APPENDIX A – SURVEY ANALYSIS



Hamilton

Corporate Asset Management

CityHousing Hamilton

Survey Period: September 5th - October 10, 2023

January 2024

Survey Response Demographics

09/05/2023 to 10/10/2023

54 Respondents	133 Survey Questions	9 Demographic Questions	2992 Survey Responses	346 Demographic Responses
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Age	% Pop. by Age	% of Respondents	Respondents
18 to 34	22.1%	16.7%	9
35 to 64	41.7%	51.9%	28
65+	19.5%	29.6%	16

Gender	% of Respondents	Respondents
Female	57.4%	31
Male	31.5%	17
Prefer not to answer	9.3%	5
Other	1.9%	1

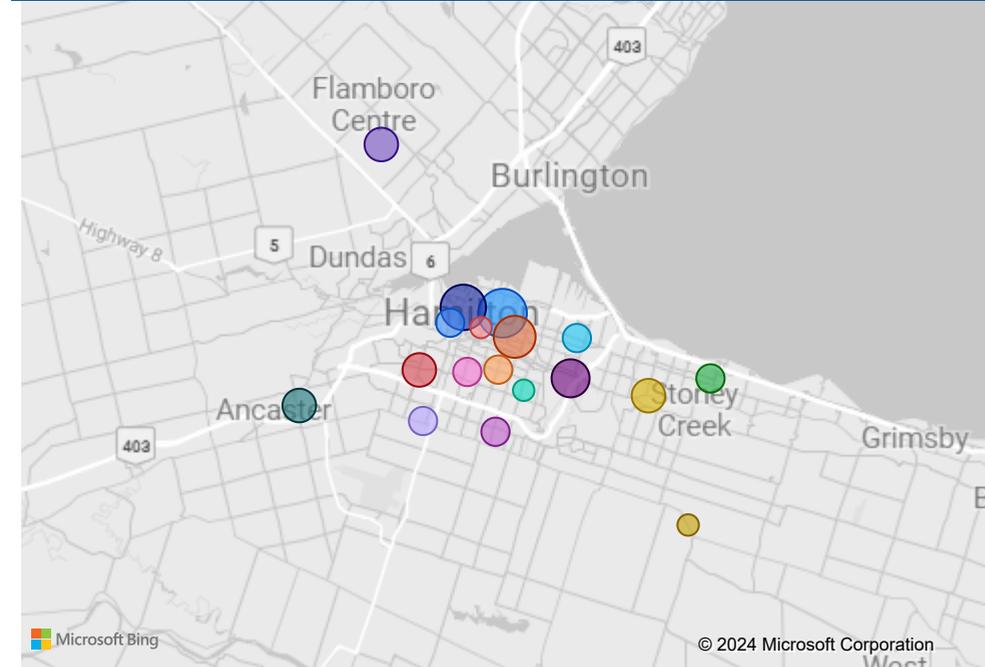
Residency	% of Respondents	Respondents
I live in Hamilton	90.7%	49
I work in Hamilton	46.3%	25
I'm retired	24.1%	13
Other	3.7%	2

Identity	% of Respondents	Respondents
Marginalized group	51.9%	34
I do not identify with any of the above groups	44.4%	24

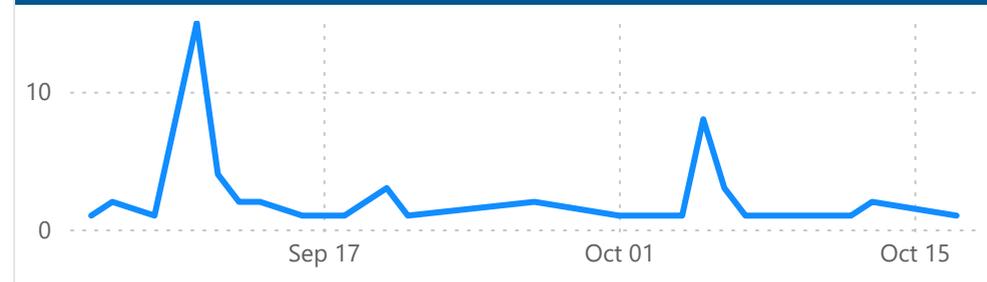
Region	% of Pop. by Region	Population	% of Respondents	Respondents
Lower	45.6%	432375	59.3%	32
Upper	37.3%	353485	27.8%	15
Rural	17.1%	161840	7.4%	4

These tables may not sum to 100% because the survey allowed respondents to choose multiple options or opt out of the question

Respondent Density Map

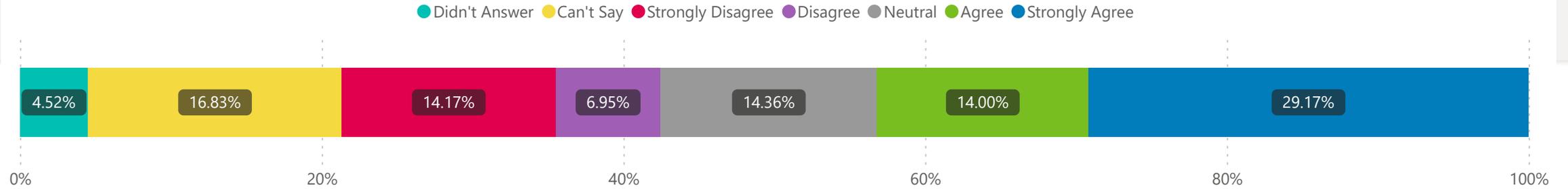


Respondents by Day



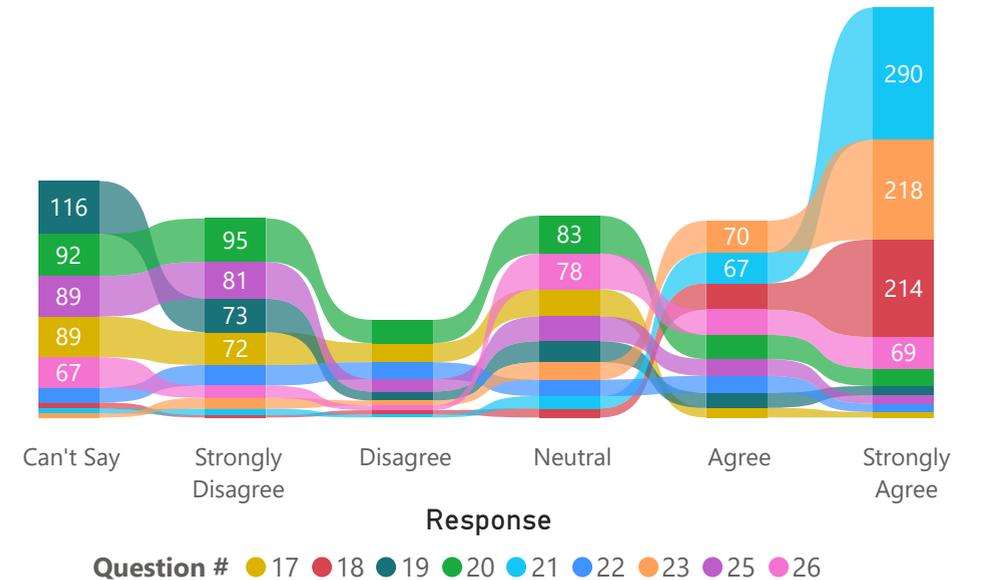
Summary of Survey Results - General Questions

Total Responses
2421
 Respondents
54



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.50	3.47	53.70	657	21.3%
Q18 Importance of Services - All Respondents	0.88	4.52	85.43	17	5.2%
Q21 Building Ideal Conditions - All Respondents	0.94	4.52	83.66	28	6.5%
Q23 Importance of City Wide Services - All Respondents	1.17	4.24	80.53	17	4.5%
Q26 Funding Rate Changes - All Respondents	1.26	3.54	51.11	85	26.2%
Q22 CityHousing Hamilton - All Respondents	1.34	2.69	42.04	43	19.9%
Q20 Building Current Conditions - All Respondents	1.37	2.65	38.33	112	25.9%
Q19 Recommendation to Others - All Respondents	1.41	2.52	28.83	132	40.7%
Q25 Value for Money - All Respondents	1.36	2.48	32.28	106	32.7%
Q17 Overall Performance - All Respondents	1.21	2.32	27.90	117	36.1%

Distribution of Question Responses



Survey Question Summary

Total Responses

2421

Respondents

54

Survey Question	n	σ (Consistency)	Margin of Error (Confidence Level \pm)
Q17 Over the last 24 months, how do you feel CityHousing Hamilton has performed overall in the following services?	31	1.21	18%
Q18 How important should the following services be as a responsibility for CityHousing Hamilton?	44	0.88	15%
Q19 How likely would you be to recommend these CityHousing Hamilton services to others?	28	1.41	19%
Q20 What is Your Opinion on The Current Condition of CHH Buildings	35	1.37	17%
Q21 What is Your Opinion on The Ideal Condition of CHH Buildings	44	0.94	15%
Q22 What is Your Opinion on The Comfort and Inclusion of CHH Buildings	38	1.34	16%
Q23 Please rate the following City-wide services based on their importance to you.	45	1.17	15%
Q25 How would you rate CityHousing Hamilton for providing good value for money in the infrastructure and services provided to your community?	33	1.36	17%
Q26 With the above information in mind, is the current funding reasonable for the CityHousing Hamilton services provided? Would you prefer to see funding rates rise to increase or maintain service, or would you rather see services reduced to maintain current funding rates?	34	1.26	17%

Data Disclaimer

Insufficient Sample Size

This report contains a wealth of data; however, a significant limitation arises from insufficient data. The data for the questions regarding tenant opinions (Q10 - Q16) are well below the level with which we feel comfortable dispersing and promoting to leverage for decision making.

Due to such low survey response to the Tenant survey questions, these results have been excluded from the analysis. The data has also been excluded from the following survey analysis for privacy reasons.



Question

Overall Performance - All Respondents

17

Over the last 24 months, how do you feel CityHousing Hamilton has performed overall in the following services?

Responses

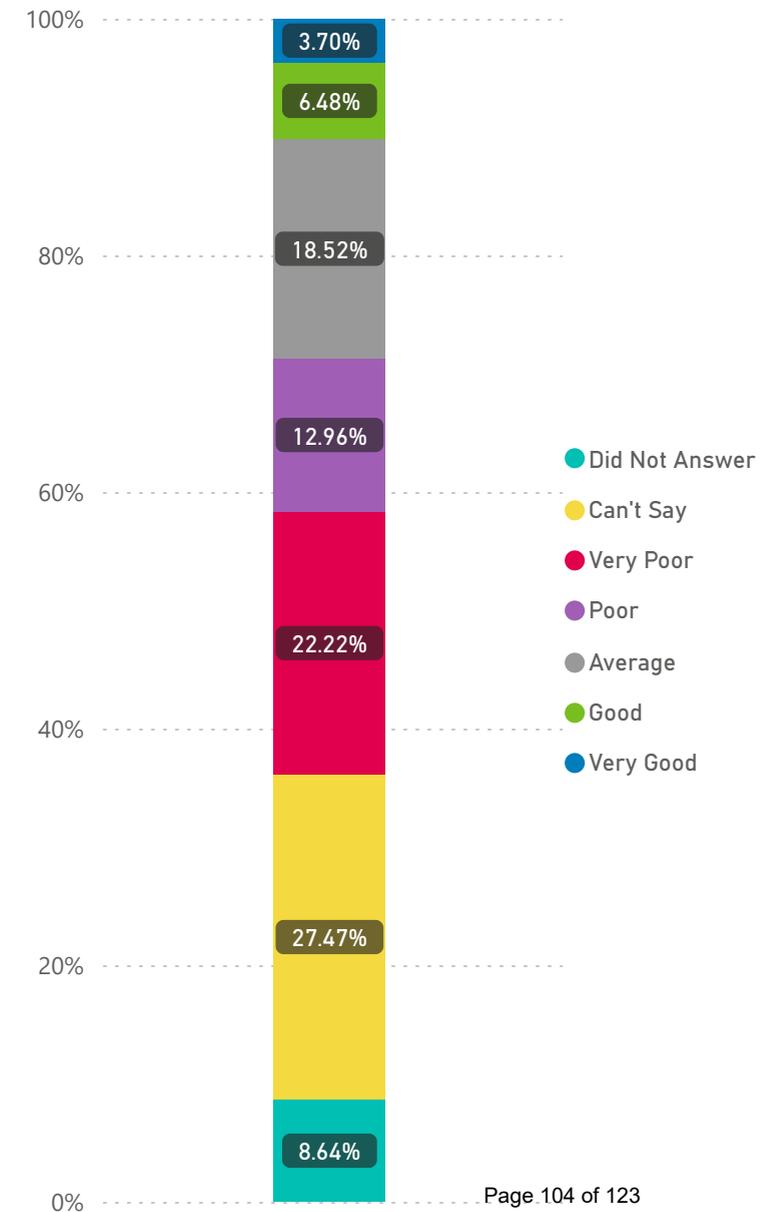
207

Respondents

48

Service Area	Very Poor	Poor	Average	Good	Very Good
Total	72	42	60	21	12
Waste Management	8	7	9	5	4
Tenant Services At Properties	8	5	10	5	
Resolving Safety Concerns	13	9	6	2	1
Redevelopment, Revitalization And Renewal Of The Housing Supply	23	7	8	2	1
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	9	8	11	3	6
Exterior Care / Condition Of Building	11	6	16	4	

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
Total	2.32	46.4%	1.21	117	36.1%
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	2.70	54.1%	1.35	17	31.5%
Waste Management	2.70	53.9%	1.31	21	38.9%
Tenant Services At Properties	2.43	48.6%	1.08	26	48.1%
Exterior Care / Condition Of Building	2.35	47.0%	1.02	17	31.5%
Resolving Safety Concerns	2.00	40.0%	1.08	23	42.6%
Redevelopment, Revitalization And Renewal Of The Housing Supply	1.80	36.1%	1.06	13	24.1%



Question

Importance of Services - All Respondents

How important should the following services be as a responsibility for CityHousing Hamilton?

Responses

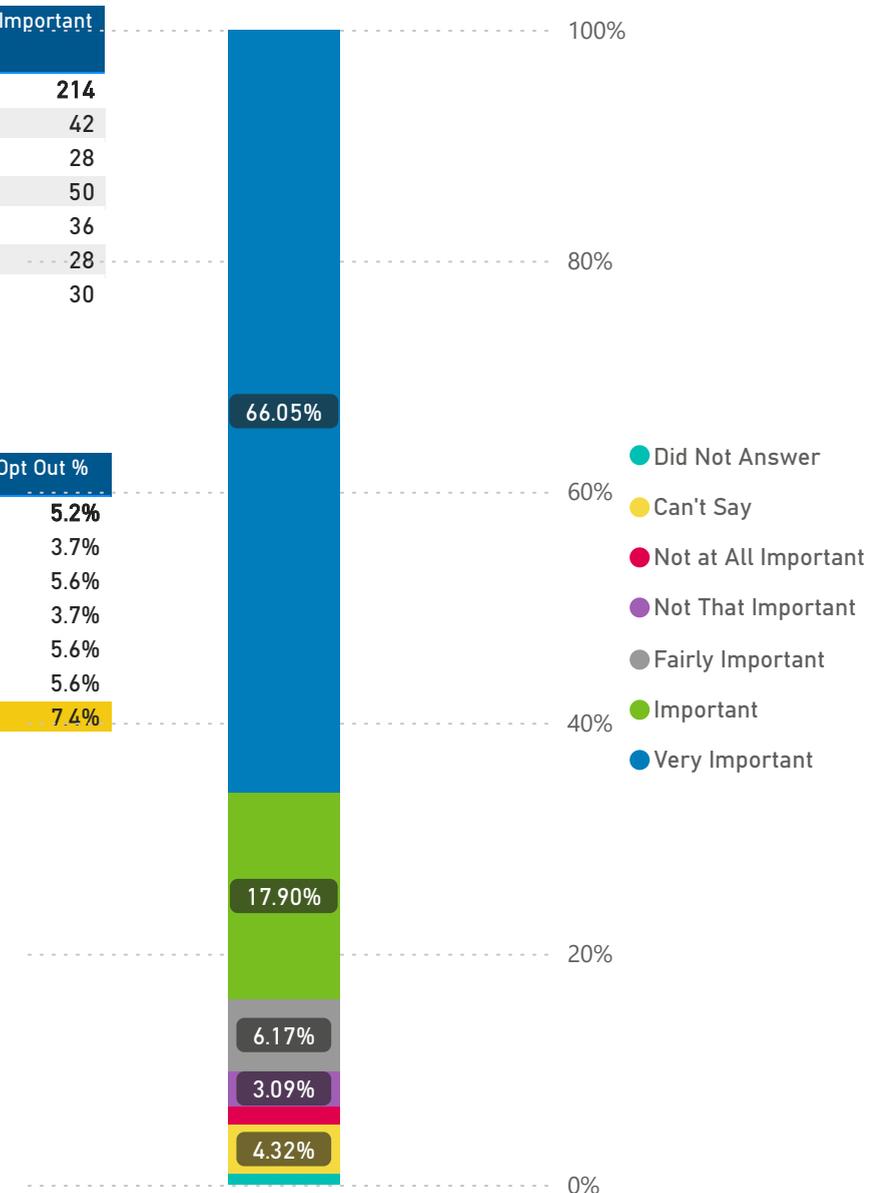
307

Respondents

53

Service Area	Not at All Important	Not That Important	Fairly Important	Important	Very Important
Total	5	10	20	58	214
Waste Management			3	6	42
Tenant Services At Properties	1	3	6	12	28
Resolving Safety Concerns			1	1	50
Redevelopment, Revitalization And Renewal Of The Housing Supply	2	3	3	7	36
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	1	3	4	15	28
Exterior Care / Condition Of Building	1	1	3	17	30

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
Total	4.52	90.4%	0.88	17	5.2%
Resolving Safety Concerns	4.94	98.8%	0.30	2	3.7%
Waste Management	4.76	95.3%	0.55	3	5.6%
Exterior Care / Condition Of Building	4.42	88.5%	0.84	2	3.7%
Redevelopment, Revitalization And Renewal Of The Housing Supply	4.41	88.2%	1.09	3	5.6%
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	4.29	85.9%	0.98	3	5.6%
Tenant Services At Properties	4.26	85.2%	1.02	4	7.4%



Service Areas Importance vs. Performance

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

514

Respondents

54

Service Area	Importance (index score)	Performance (index score)	Net Differential	Opt Out %
Total	90	46	-44	21%
Resolving Safety Concerns	99	40	-59	23%
Redevelopment, Revitalization And Renewal Of The Housing Supply	88	36	-52	15%
Exterior Care / Condition Of Building	88	47	-41	18%
Waste Management	95	54	-41	22%
Tenant Services At Properties	85	49	-37	28%
Landscaping (E.G. Grass Cutting, Snow Clearing, Etc)	86	54	-32	19%

Performance

Q17 Over the last 24 months, how do you feel CityHousing Hamilton has performed overall in the following services?

Importance

Q18 How important should the following services be as a responsibility for CityHousing Hamilton?

The Net Differential is calculated by getting the average score for Performance and Importance. Then, the average score for Performance and Importance is multiplied by 20. Finally, the Importance score is subtracted from the Performance score. A negative differential indicates a higher perceived importance than performance. A positive differential indicates a higher perceived performance than importance.



Question

Recommendation to Others - All Respondents

How likely would you be to recommend these CityHousing Hamilton services to others?

19

Responses

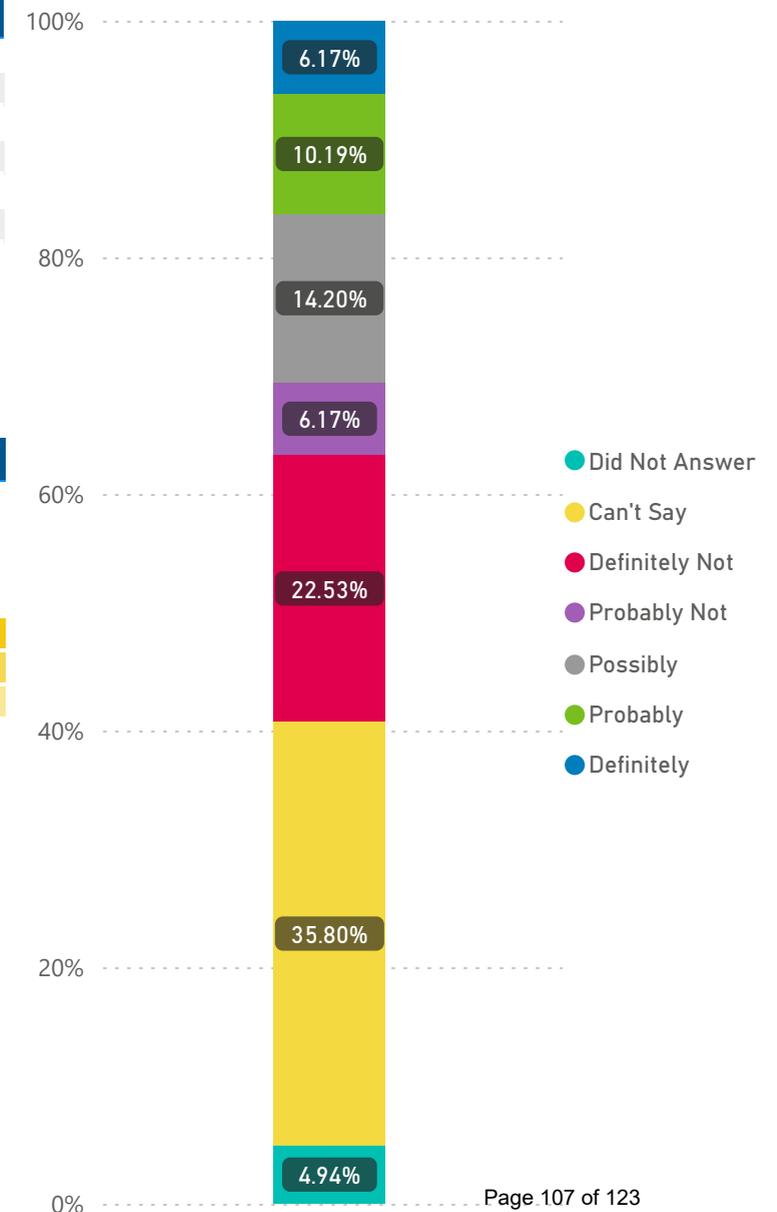
192

Respondents

39

Service Area	Definitely Not	Probably Not	Possibly	Probably	Definitely
Total	73	20	46	33	20
Waste Management	10	2	10	7	4
Tenant Services At Properties	11	4	6	6	2
Resolving Safety Concerns	14	2	7	4	3
Redevelopment, Revitalization And Renewal Of The Housing Supply	16	2	6	3	4
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	9	5	9	6	4
Exterior Care / Condition Of Building	13	5	8	7	3

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
Total	2.52	50.3%	1.41	132	40.7%
Waste Management	2.79	55.8%	1.39	21	38.9%
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	2.73	54.5%	1.35	21	38.9%
Exterior Care / Condition Of Building	2.50	50.0%	1.36	18	33.3%
Tenant Services At Properties	2.45	49.0%	1.35	25	46.3%
Resolving Safety Concerns	2.33	46.7%	1.42	24	44.4%
Redevelopment, Revitalization And Renewal Of The Housing Supply	2.26	45.2%	1.48	23	42.6%



Question

19

Responses

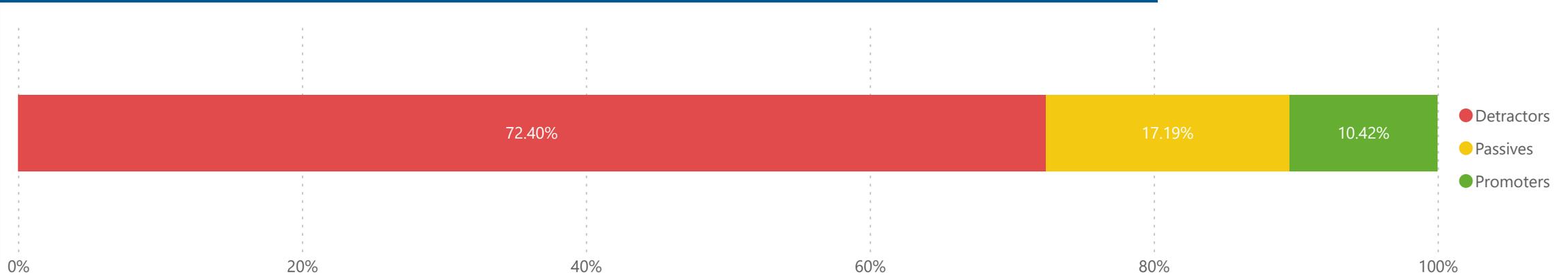
192

Respondents

39

Net Promoter Score

Typically the Net Promoter Score is used to measure customer loyalty.



Service Area	σ	NPS	Detractors	Passives	Promoter
All Service Areas	1.41	-61.98	139	33	20
Resolving Safety Concerns	1.42	-66.67	23	4	3
Tenant Services At Properties	1.35	-65.52	21	6	2
Redevelopment, Revitalization And Renewal Of The Housing Supply	1.48	-64.52	24	3	4
Exterior Care / Condition Of Building	1.36	-63.89	26	7	3
Landscaping (E.G. Grass Cutting, Snow Clearing, Etc)	1.35	-57.58	23	6	4
Waste Management	1.39	-54.55	22	7	4



Hamilton

Q19 How likely would you be to recommend these CityHousing Hamilton services to others?

Likert choices less than or equal to 3 are considered 'Detractors', 4s are 'Passive' and 5s are considered 'Promoters'. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Detractors) from (% Promoters).

Question

20

Building Current Conditions - All Respondents

Please let us know if you agree with the following statements

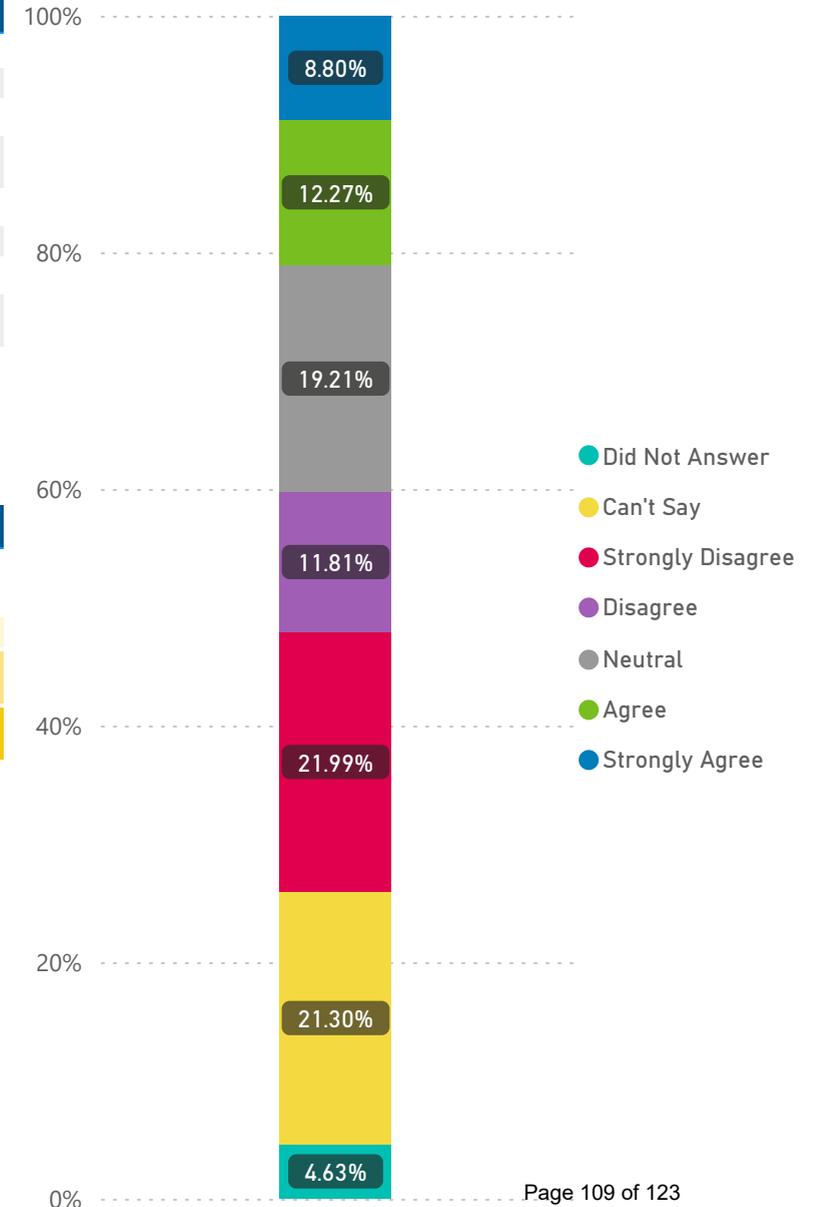
Responses

320

Respondents

47

Service Area	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Total	95	51	83	53	38
Safe, Equitable And Inclusive Spaces For All.	16	7	8	7	4
Inviting, Appealing And Attractive	18	7	12	5	3
Energy Efficient, Helping The City Meet Energy Targets And Reduce Utility Usage.	10	5	10	5	3
Easy To Enter, With Clearly Marked Public Entrances.	7	4	13	7	7
Comfortable With Appropriate Levels Of Lighting And Noise.	14	5	10	7	4
Clean And In Good Repair	17	12	7	7	2
Accessible, Meeting Provincial Minimum Standards Per Aoda (Accessibility For Ontarians With Disabilities Act, 2005).	6	8	11	6	5
Accessible By Public Transportation.	7	3	12	9	10



Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
Total	2.65	53.0%	1.37	112	25.9%
Accessible By Public Transportation.	3.29	65.9%	1.37	13	24.1%
Easy To Enter, With Clearly Marked Public Entrances.	3.08	61.6%	1.33	16	29.6%
Accessible, Meeting Provincial Minimum Standards Per Aoda (Accessibility For Ontarians With Disabilities Act, 2005).	2.89	57.8%	1.26	18	33.3%
Energy Efficient, Helping The City Meet Energy Targets And Reduce Utility Usage.	2.58	51.5%	1.30	21	38.9%
Comfortable With Appropriate Levels Of Lighting And Noise.	2.55	51.0%	1.38	14	25.9%
Safe, Equitable And Inclusive Spaces For All.	2.43	48.6%	1.38	12	22.2%
Inviting, Appealing And Attractive	2.29	45.8%	1.28	9	16.7%
Clean And In Good Repair	2.22	44.4%	1.23	9	16.7%



Question

21

Building Ideal Conditions - All Respondents

Please let us know if you agree with the following statements

Responses

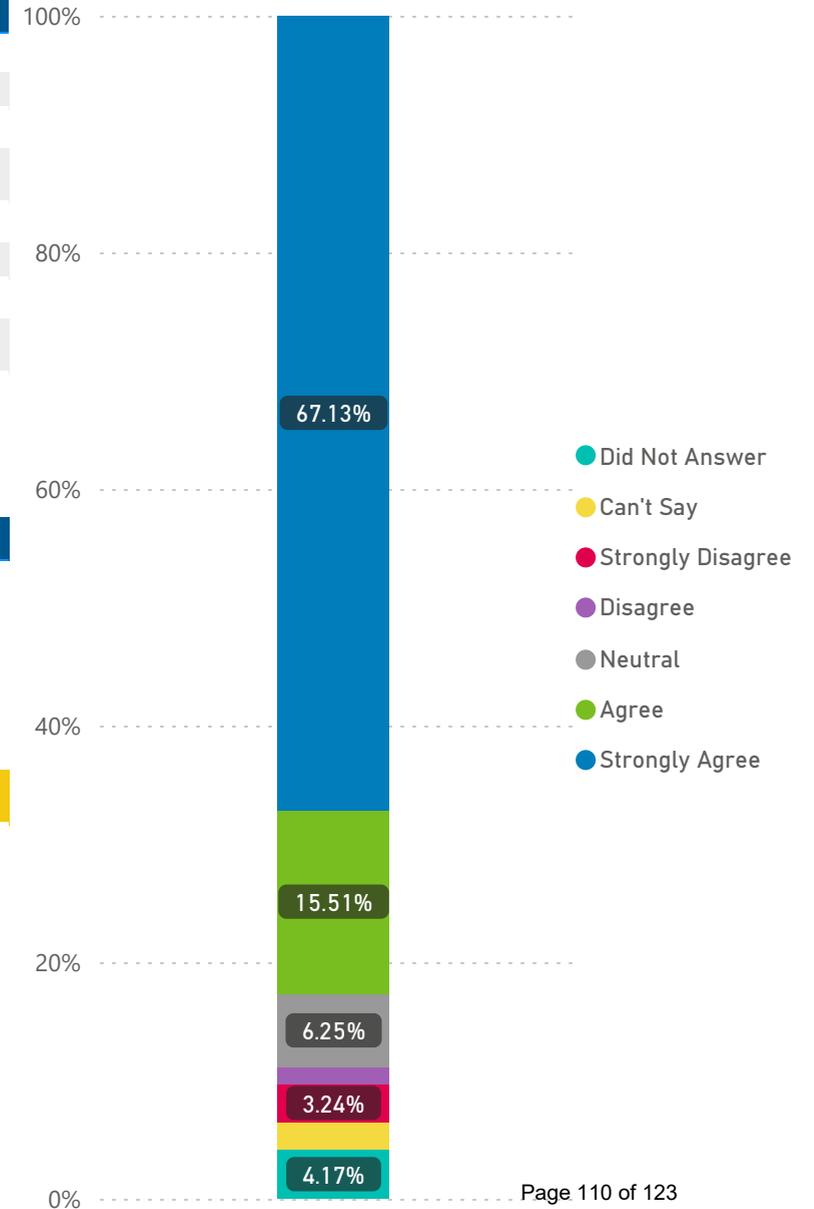
404

Respondents

51

Service Area	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Total	14	6	27	67	290
Safe, Equitable And Inclusive Spaces For All.	2		4	3	42
Inviting, Appealing And Attractive	1	1	7	13	28
Energy Efficient, Helping The City Meet Energy Targets And Reduce Utility Usage.	1	2	2	12	32
Easy To Enter, With Clearly Marked Public Entrances.	2	2	3	13	31
Comfortable With Appropriate Levels Of Lighting And Noise.	1		3	8	39
Clean And In Good Repair	2		3	5	41
Accessible, Meeting Provincial Minimum Standards Per Aoda (Accessibility For Ontarians With Disabilities Act, 2005).	2	1	1	6	41
Accessible By Public Transportation.	3		4	7	36

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
Total	4.52	90.3%	0.94	28	6.5%
Comfortable With Appropriate Levels Of Lighting And Noise.	4.65	92.9%	0.76	3	5.6%
Accessible, Meeting Provincial Minimum Standards Per Aoda (Accessibility For Ontarians With Disabilities Act, 2005).	4.63	92.5%	0.93	3	5.6%
Clean And In Good Repair	4.63	92.5%	0.91	3	5.6%
Safe, Equitable And Inclusive Spaces For All.	4.63	92.5%	0.93	3	5.6%
Energy Efficient, Helping The City Meet Energy Targets And Reduce Utility Usage.	4.47	89.4%	0.91	5	9.3%
Accessible By Public Transportation.	4.46	89.2%	1.06	4	7.4%
Easy To Enter, With Clearly Marked Public Entrances.	4.35	87.1%	1.03	3	5.6%
Inviting, Appealing And Attractive	4.32	86.4%	0.93	4	7.4%



Question

22

CityHousing Hamilton - All Respondents

Please let us know if you agree with the following statements

Responses

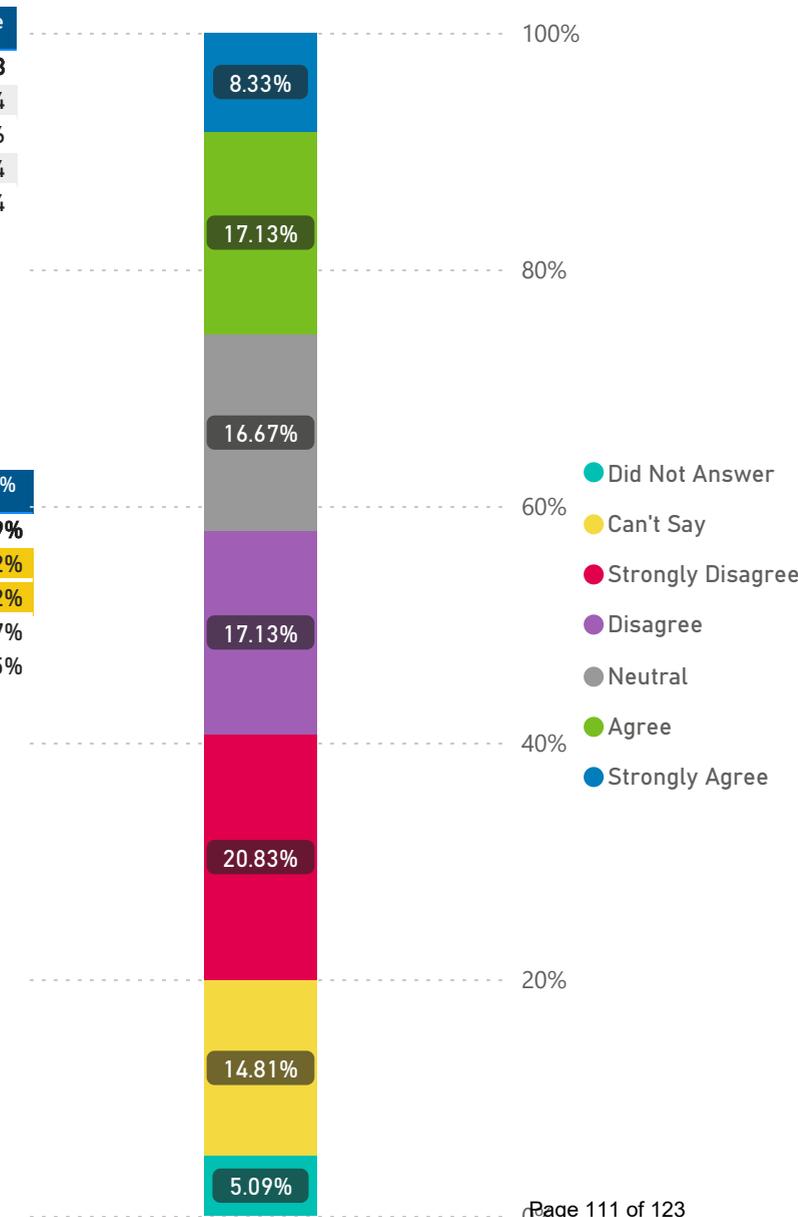
173

Respondents

46

Service Area	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Total	45	37	36	37	18
Buildings Are Safe Places To Live.	11	10	9	8	4
Fosters, Equitable, Diverse, And Inclusive Communities	9	7	8	12	6
Keeps Their Units And Buildings In A State Of Good Repair.	16	9	7	9	4
Provides Comfortable And Pleasant Living Spaces.	9	11	12	8	4

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
Total	2.69	53.8%	1.34	43	19.9%
Buildings Are Safe Places To Live.	2.62	52.4%	1.31	12	22.2%
Fosters, Equitable, Diverse, And Inclusive Communities	2.98	59.5%	1.37	12	22.2%
Keeps Their Units And Buildings In A State Of Good Repair.	2.47	49.3%	1.38	9	16.7%
Provides Comfortable And Pleasant Living Spaces.	2.70	54.1%	1.24	10	18.5%



Question

23

Importance of City Wide Services - All Respondents

Please rate the following City-wide services based on their importance to you.

Responses

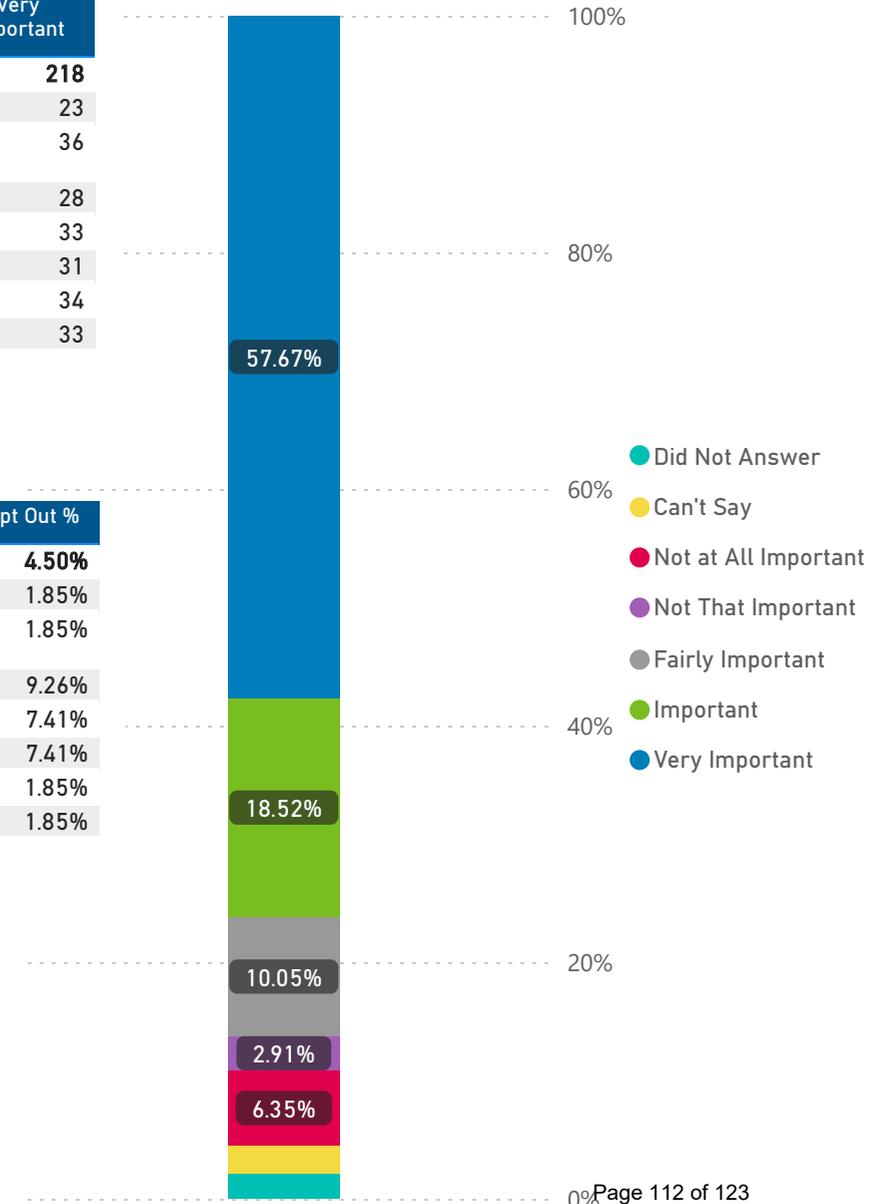
361

Respondents

53

Service Area	Not at All Important	Not That Important	Fairly Important	Important	Very Important
Total	24	11	38	70	218
Renewable Energy Generation Projects	4	1	11	14	23
Provide Affordable Mixed Housing To Support All Residents Of Hamilton And All Life Stages.	4	2	3	8	36
Play Spaces For Children And Adults	2	3	8	12	28
Outdoor Greenspace	1	3	3	13	33
More Units With Supports For Tenants With Disabilities	4		5	9	31
More Subsidized Housing Units	5	1	3	7	34
Access To Subsidized Housing Across The Communities Of Hamilton	4	1	5	7	33

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
Total	4.24	84.8%	1.17	17	4.50%
Outdoor Greenspace	4.40	87.9%	0.96	1	1.85%
Provide Affordable Mixed Housing To Support All Residents Of Hamilton And All Life Stages.	4.32	86.4%	1.21	1	1.85%
More Units With Supports For Tenants With Disabilities	4.29	85.7%	1.18	5	9.26%
Access To Subsidized Housing Across The Communities Of Hamilton	4.28	85.6%	1.22	4	7.41%
More Subsidized Housing Units	4.28	85.6%	1.28	4	7.41%
Play Spaces For Children And Adults	4.15	83.0%	1.11	1	1.85%
Renewable Energy Generation Projects	3.96	79.2%	1.18	1	1.85%



Question

Value for Money - All Respondents

How would you rate CityHousing Hamilton for providing good value for money in the infrastructure and services provided to your community?

25

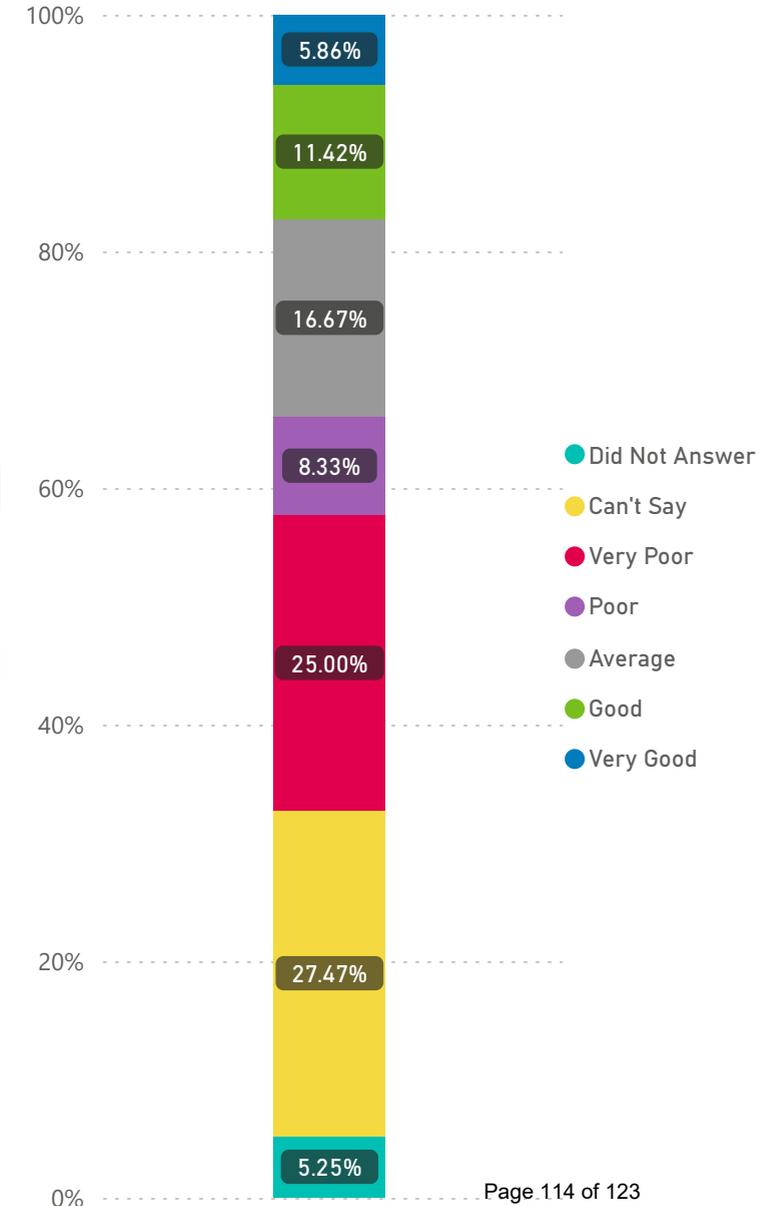
Responses

218

Respondents

43

Service Area	Very Poor	Poor	Average	Good	Very Good
Total	81	27	54	37	19
Waste Management	12	1	11	9	4
Tenant Services At Properties	12	2	10	6	2
Resolving Safety Concerns	14	3	8	4	4
Redevelopment, Revitalization And Renewal Of The Housing Supply	19	7	6	5	2
Landscaping (E.G. Grass Cutting, Snow Clearing, Etc)	11	8	9	6	4
Exterior Care / Condition Of Building	13	6	10	7	3



Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
Total	2.48	49.5%	1.36	106	32.7%
Waste Management	2.78	55.7%	1.40	17	31.5%
Landscaping (E.G. Grass Cutting, Snow Clearing, Etc)	2.58	51.6%	1.33	16	29.6%
Exterior Care / Condition Of Building	2.51	50.3%	1.32	15	27.8%
Tenant Services At Properties	2.50	50.0%	1.32	22	40.7%
Resolving Safety Concerns	2.42	48.5%	1.44	21	38.9%
Redevelopment, Revitalization And Renewal Of The Housing Supply	2.08	41.5%	1.27	15	27.8%



Funding Rate Changes - All Respondents

Question

26

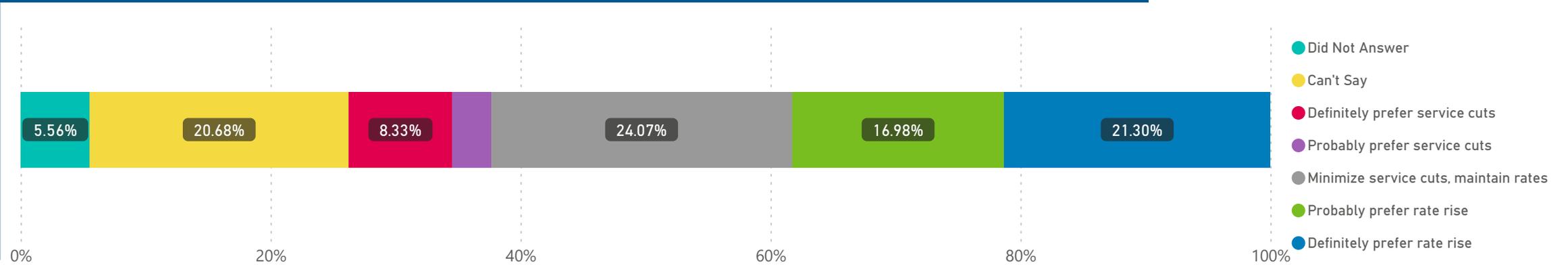
Would you prefer to see funding rates rise to increase or maintain service, or would you rather see services reduced to maintain current funding rates?

Responses

239

Respondents

45



Service Area	Definitely prefer service cuts	Probably prefer service cuts	Minimize service cuts, maintain rates	Probably prefer rate rise	Definitely prefer rate rise
Total	27	10	78	55	69
Waste Management	3	3	14	9	11
Tenant Services At Properties	4	4	11	10	8
Resolving Safety Concerns	5		9	9	16
Redevelopment, Revitalization And Renewal Of The Housing Supply	4	2	11	7	19
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	6	1	19	6	8
Exterior Care / Condition Of Building	5		14	14	7

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
Total	3.54	70.8%	1.26	85	26.2%
Redevelopment, Revitalization And Renewal Of The Housing Supply	3.81	76.3%	1.30	11	20.4%
Resolving Safety Concerns	3.79	75.9%	1.32	15	27.8%
Waste Management	3.55	71.0%	1.18	14	25.9%
Exterior Care / Condition Of Building	3.45	69.0%	1.16	14	25.9%
Tenant Services At Properties	3.38	67.6%	1.24	17	31.5%
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	3.23	64.5%	1.23	14	25.9%



Service Areas Rates vs. Value for Money

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

457

Respondents

54

Service Area	Rates (index score)	Value for Money (index score)	Net Differential	Opt Out %
Total	71	50	-21	29%
Redevelopment, Revitalization And Renewal Of The Housing Supply	76	42	-35	24%
Resolving Safety Concerns	76	48	-27	33%
Exterior Care / Condition Of Building	69	50	-19	27%
Tenant Services At Properties	68	50	-18	36%
Waste Management	71	56	-15	29%
Landscaping (E.G. Grass Cutting, Snow Clearing, Etc)	65	52	-13	28%

Value for Money *Q25 How would you rate CityHousing Hamilton for providing good value for money in the infrastructure and services provided to your community?*

Rates *Q26 With the above information in mind, is the current funding reasonable for the CityHousing Hamilton services provided? Would you prefer to see funding rates rise to increase or maintain service, or would you rather see services reduced to maintain current funding rates?*

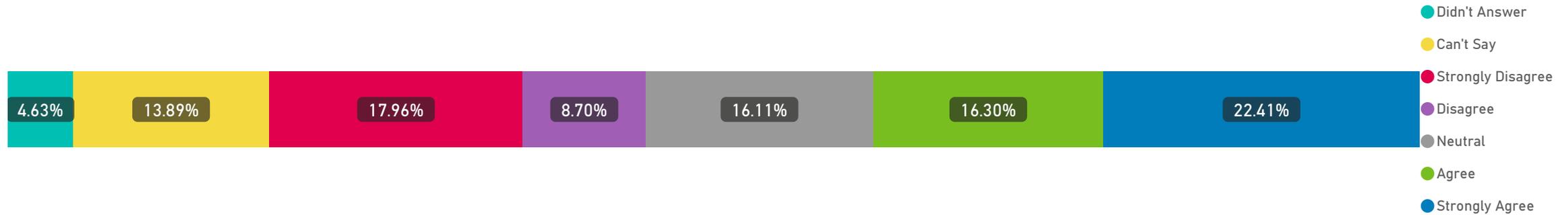
The Net Differential is calculated by getting the average score for Rates and Value for Money. Then, the average score for Rates and Value for Money is multiplied by 20. Finally, the Rates score is subtracted from the Value for Money score. A negative differential indicates higher perceived Rates than Value for Money. A positive differential indicates a higher perceived Value for Money than Rates.



Summary of Specific Service Areas over Several Questions

General - Exterior Condition /Cleanliness

Responses
440
 Respondents
54



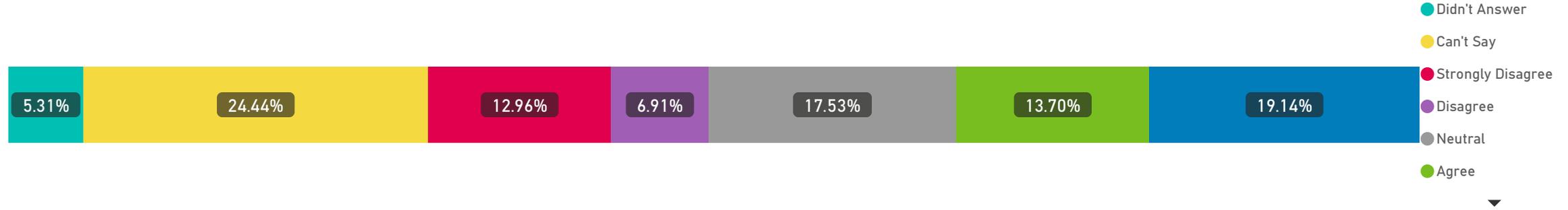
Question	σ	Avg.	Avg. %	Opt Out	Opt Out %	Count
All Questions	1.50	3.20	64.0%	100	18.5%	540
Q21 Please let us know if you agree with the following statements	0.93	4.48	89.5%	7	6.5%	108
Q18 How important should the following services be as a responsibility for CityHousing Hamilton?	0.84	4.42	88.5%	2	3.7%	54
Q26 With the above information in mind, is the current funding reasonable for the CityHousing Hamilton services provided? Would you prefer to see funding rates rise to increase or maintain service, or would you rather see services reduced to maintain current funding rates?	1.16	3.45	69.0%	14	25.9%	54
Q25 How would you rate CityHousing Hamilton for providing good value for money in the infrastructure and services provided to your community?	1.32	2.51	50.3%	15	27.8%	54
Q19 How likely would you be to recommend these CityHousing Hamilton services to others?	1.36	2.50	50.0%	18	33.3%	54
Q22 Please let us know if you agree with the following statements	1.38	2.47	49.3%	9	16.7%	54
Q17 Over the last 24 months, how do you feel CityHousing Hamilton has performed overall in the following services?	1.02	2.35	47.0%	17	31.5%	54
Q20 Please let us know if you agree with the following statements	1.25	2.26	45.1%	18	16.7%	108



Summary of Specific Service Areas over Several Questions

Services

Responses
569
 Respondents
52



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %	Count
All Questions	1.43	3.27	65.4%	241	29.8%	810
Q18 How important should the following services be as a responsibility for CityHousing Hamilton?	0.90	4.44	88.8%	10	6.2%	162
Q26 With the above information in mind, is the current funding reasonable for the CityHousing Hamilton services provided? Would you prefer to see funding rates rise to increase or maintain service, or would you rather see services reduced to maintain current funding rates?	1.23	3.38	67.7%	45	27.8%	162
Q19 How likely would you be to recommend these CityHousing Hamilton services to others?	1.37	2.66	53.3%	67	41.4%	162
Q25 How would you rate CityHousing Hamilton for providing good value for money in the infrastructure and services provided to your community?	1.36	2.63	52.5%	55	34.0%	162
Q17 Over the last 24 months, how do you feel CityHousing Hamilton has performed overall in the following services?	1.27	2.62	52.4%	64	39.5%	162

Summary of Specific Service Areas over Several Questions

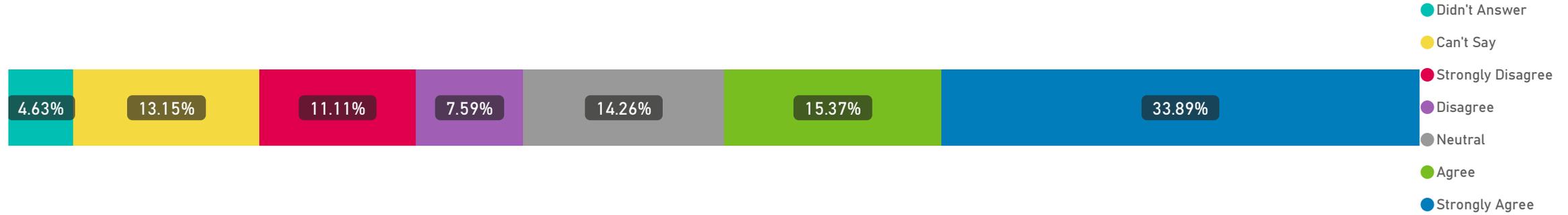
Accessible Facilities

Responses

444

Respondents

52



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %	Count
All Questions	1.43	3.65	73.0%	96	17.8%	540
Q21 Please let us know if you agree with the following statements	0.96	4.52	90.4%	13	6.0%	216
Q20 Please let us know if you agree with the following statements	1.36	2.95	59.1%	61	28.2%	216
Q22 Please let us know if you agree with the following statements	1.31	2.84	56.7%	22	20.4%	108

Summary of Specific Service Areas over Several Questions

Climate Initiative

Responses
135
 Respondents
53



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %	Count
All Questions	1.34	3.81	76.1%	27	16.7%	162
Q21 Please let us know if you agree with the following statements	0.91	4.47	89.4%	5	9.3%	54
Q23 Please rate the following City-wide services based on their importance to you.	1.18	3.96	79.2%	1	1.9%	54
Q20 Please let us know if you agree with the following statements	1.30	2.58	51.5%	21	38.9%	54

Summary of Specific Service Areas over Several Questions

City-wide housing supply needs

Responses

329

Respondents

53



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %	Count
All Questions	1.19	4.26	85.3%	103	23.8%	432
Q23 Please rate the following City-wide services based on their importance to you.	1.16	4.29	85.7%	16	4.9%	324
Q15 Please rate the following services based on their importance to you	1.53	3.95	79.0%	87	80.6%	108

Data Grading Scales

Definition and Ranking of Consistency and Confidence

Grade	Data Consistency Standard Deviation (σ , Consistency of Responses)	Confidence Level Margin of Error (at 95% Confidence in Sample Size)
A Very High	0 to 0.5 - results are tightly grouped with little to no variance in response	0% to 5% - Minimal to no error in results, can generally be interpreted as is
B High	0.5 to 1.0 - results are fairly tightly grouped but with slightly more variance in response	5% to 10% - Error has become noticeable, but results are still trustworthy
C Medium	1.0 to 1.5 - results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - Error is a significant amount and will cause uncertainty in final results
D Low	1.5 to 2.0 - results show a high variance with a fair amount of disparity in responses	20% to 30% - Error has reached a detrimental level and results are difficult to trust
E Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - Significant error in results, hard to interpret data in much of a meaningful way

$$\text{Margin of Error} = \frac{0.98}{\sqrt{n}}$$

Assigning a lower consistency value (Standard Deviation) to a higher grade doesn't imply that the data is "better" or "worse". Instead, it helps in understanding how divided or similar people are in their responses. When high consistency is observed, it indicates that most respondents agree on a question. But when the consistency is low, opinions are split, with some rating higher and others lower. The key is to understand why the split occurs which provides valuable insights into the data.

The margin of error is calculated using a standard factor of 0.98 and the sample size (n). The margin of error helps assess if the sample size of the survey is suitable. The margin of error, expressed as a percentage, indicates the range around the calculated sample average where the true population average is likely to be. A smaller margin of error suggests a more accurate estimate, while a larger one implies less precision.

Corporate Asset Management Fleet Services and EAM 2024 Asset Management Plan



CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

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CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

SUMMARY AND QUICK FACTS

SERVICE PROFILE



Corporate Asset Management Division (CAM) oversees sections that have either city-wide responsibilities (such as Asset Management and Fleet Services) or department-wide responsibilities as well as the GM's Office. This plan focused on Fleet Services, addressing its dual role: as a service provider supporting various city service areas, and as an asset owner with resources dedicated to facilitating this service delivery.

ASSET SUMMARY



Replacement Value
87.4 M

Poor Condition
Average Age of **27** years
or **36%** of the average
remaining service life



LEVEL OF SERVICE SUMMARY

Customer

- Customer Levels of Service were not identified.

Technical

- 96% of monthly of Periodic Mandatory Commercial Vehicle Inspections (PMCVI) are completed by their due date.
- On average Fleet Services meets the set targets for Fleet maintenance invoices.
- 75% of Fleet Services vehicles are over their estimated service life.

ASSET HIGHLIGHTS

ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION	STEWARDSHIP MEASURES
Vehicles – Fleet Services	20	\$0.8M	Poor	Vehicles are inspected twice a year.
Equipment (including fuel stations, EV chargers, and tools)	2,386	\$20.0M	Fair	Annual and monthly visual inspections completed by subject matter experts.
Facilities (garages)	4	\$62.9M	Very Poor	Building Condition Assessments are completed every 5 years.
Technology (computers and EAM)	132	\$3.7M	Very Good	Assets are replaced at the end of their useful lives.

DATA CONFIDENCE



VERY HIGH

MEDIUM

VERY LOW

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

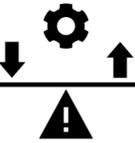
KEY DEMAND DRIVERS



Population change – The forecasted population of the City of Hamilton is expected to reach 820,000 by 2051. This will drive the demand for City services and will require Fleet Services to support service growth in other service areas.



Technological Changes - The transition from internal combustion engine (ICE) vehicles to battery electric vehicles (BEV) generates some technological demands for Fleet Services, such as staff training and resources for BEV vehicle maintenance. The transition to BEVs will also change the supply of fuel delivery infrastructure that Fleet Services manages.



RISK

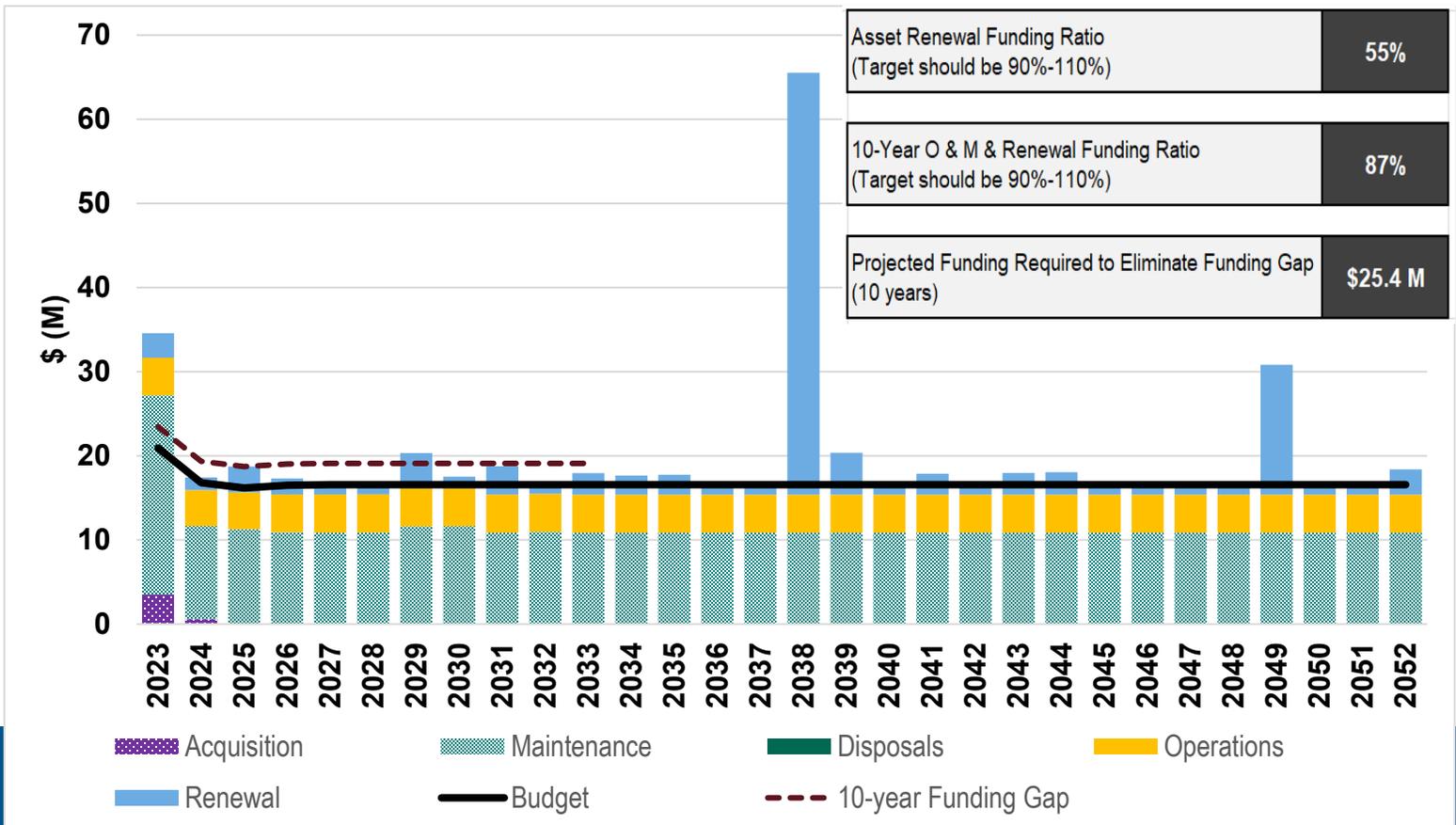
- The fuel management system has been identified as a critical asset for Fleet Services and Corporate Asset Management at this time.

CLIMATE CHANGE MITIGATION



- Promoting fleet renewals with new battery electric vehicles and proposing providing alternate fuels such as natural gas, biodiesel and EcoDiesel, to achieve the goal of net zero carbon by 2050.

LIFECYCLE SUMMARY



CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

1. INTRODUCTION

The Corporate Asset Management (CAM) Division within Public Works was created in 2023 to align Sections whose focus is either City-wide (Asset Management and Fleet Services) or Department-wide, Public Works Departmental Programs and Initiatives, Technology, and Innovation (which includes the Enterprise Asset Management (EAM) Project), and the General Manager's Office.

The purpose of this Asset Management Plan (AM Plan) is to ensure that the Corporate Asset Management Division, has fulfilled the Asset Management Planning requirements outlined in O. Reg 588/17¹ for current levels of service.

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements and required funding to provide the appropriate levels of service over the 2023-2052 planning period.

Fleet Services as a Service Provider:

This AM Plan covers the assets of the Corporate Asset Management Division. This plan will concentrate on the Fleet Services group since it holds most of the assets. The other groups in the CAM Division are mainly administrative and will have less emphasis in this plan.

Fleet Services is both a service provider supporting service areas across the city and an asset owner with their own assets that support this service. This plan will focus on Fleet Services in their capacity as a service provider and their own assets used to support the delivery of the service.

City-Wide Fleet and Equipment Asset Discussion:

A brief section of this AM Plan will also discuss all city-wide fleet assets managed by Fleet Services. These fleet assets are across the corporation. Detailed discussion on age, condition, replacement value and renewal schedules for city-wide fleet assets have been built into separate individual service area AM Plans as these assets support the delivery of multiple services.

It is important however to take a broad view of the City-wide Fleet Asset Summary, presented in **Table 4**, and renewal costs of the entire city-wide fleet, detailed in **Section 8.3**, as it relates to the fleet reserve which is managed by Fleet Services. However, it is important to note that these financial gaps or asset renewals and conditions are already accounted for in the other AM Plans. The overall fleet data provided here serves for information only and is compiled into a single location to illustrate the overall condition of the fleet assets.

Since Sunday, February 25, 2024, the City of Hamilton experienced a cyber incident that disabled some of the IT systems. As a result, this AM Plan was created based on the data that was accessible at the time of publication.

¹ Government of Ontario, 2017

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2. BACKGROUND

The information in this section is intended to provide background on the CAM division service areas by providing a service profile, outlining legislative requirements, and defining the asset hierarchy used throughout the report. This section will provide the necessary background for the remainder of the AM Plan.

2.1 SERVICE PROFILE

Listed below are related documents reviewed in preparation of the Asset Management Plan:

- *Asset Management Plan Overview Document; and,*
- *PW03147(e) (City Wide) - Green Fleet Strategy Report & Action Plan (May 31, 2021)*².

Additional financial-related documents are identified in **Section 10** Plan Improvement and Monitoring.

2.1.1 SERVICE HISTORY

The mission of the CAM Division is to drive optimal and sustainable service delivery across the organization through the implementation of Asset and Quality Management, the provision of Fleet Services, and the improvement of operational and climate performance.

The CAM Office was formed in July 2021 with the objective of meeting the City's obligations under O. Reg. 588/17³ and to develop a Corporate Asset Management Program for the City of Hamilton. Program elements include the development of the Strategic Asset Management Policy, relevant strategies, and procedures as well as training and education programs to embed asset management into city processes. The CAM Office in partnership with asset owners and key stakeholders across the City worked to create the first iteration of AM Plans for all assets by July 2024 which define current levels of service and the costs to maintain them. CAM is also working to develop proposed Levels of Service and the costs to maintain them by July 2025.

In February 2023, the General Manager of the Public Works Department (GM PW) identified an opportunity to balance divisional portfolios and leverage service alignment by transferring the Fleet Services section (Fleet) from the Corporate Facilities and Energy Management (CFEM) to the Corporate Asset Management Division (CAM).

The Fleet Services section's client groups span throughout the corporation, including Public Works, Planning and Economic Development (Building Division and Municipal Licensing and Bylaw Division), Library (bookmobiles) and Healthy and Safe Communities (Recreation Division

² Kagianis & Parker (2021)

³ Government of Ontario, 2017

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and Public Health Division, i.e. dental buses). Fleet Services does not manage assets for Emergency Services (Fire, Police, Paramedics) or Transit (HSR).

The Departmental Programs and Initiatives section/GM's Office was formed in 2016 and specifically focuses on improving the operational performance of Public Works through the implementation of quality and asset management principles and processes as well as other strategic initiatives. This section is also responsible for the overall Public Works response to the climate emergency declared by the City in 2019, supporting the Office of Climate Change Initiatives at the corporate level. This group manages the Quality Management System for Public Works.

The Technology and Innovation section drives improving operational performance from a technology lens and the desire to innovatively improve performance. The recognition in 2018 that Public Works has 11 different information systems resulted in the launch of the Enterprise Asset Management (EAM) project in 2020, with the intention of bringing all of Public Works into one system.

This will help streamline the process of managing the lifecycle of physical assets to maximize their use; save money; improve quality and efficiency; and safeguard health, safety, and the environment.

2.1.2 SERVICE FUNCTION

The CAM Division has many unique characteristics, the primary focus of this AM Plan will be on Fleet Services as a service provider.

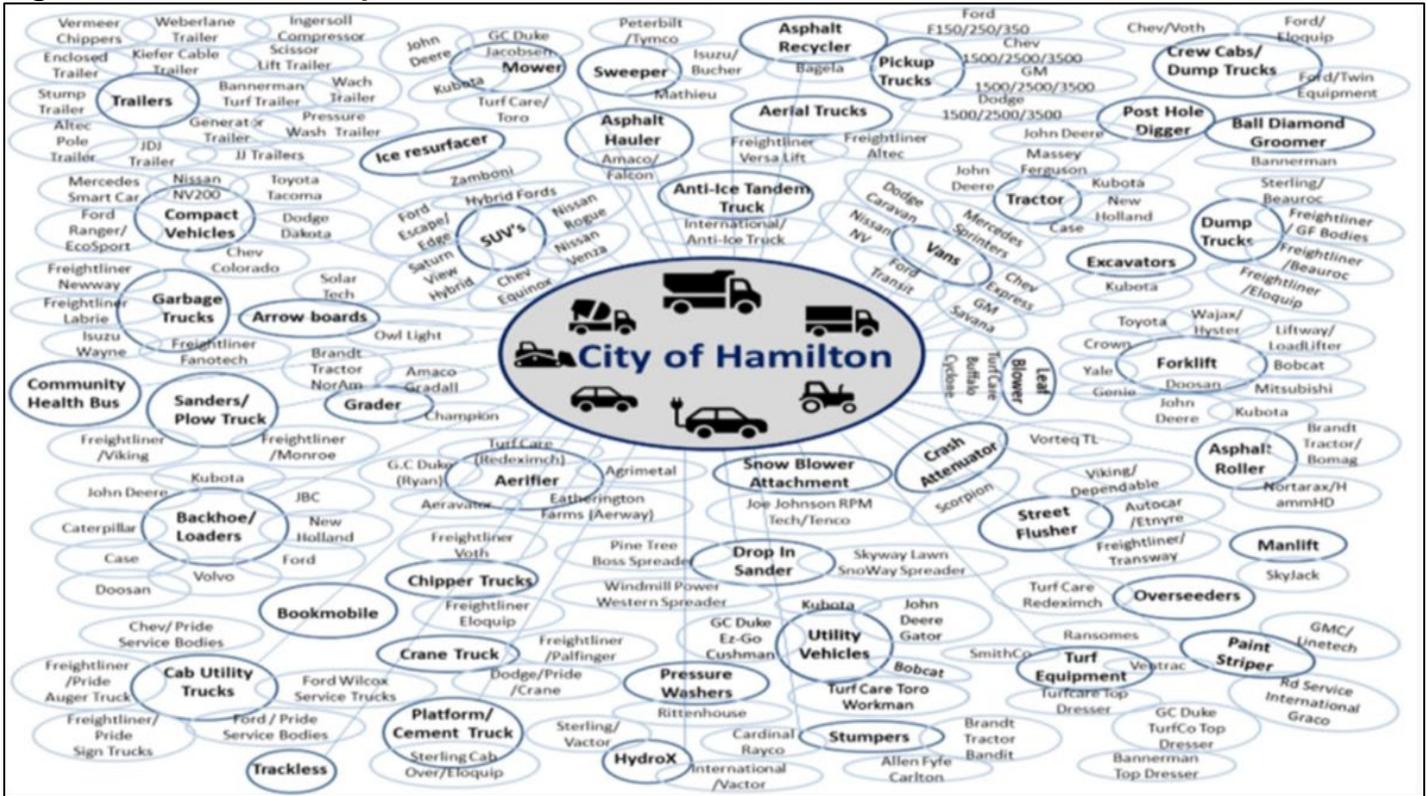
Fleet Services serves departments such as Roads and Transportation, Engineering, Water, Wastewater, Environmental, Recreation and Parks, Cemetery, Buildings Controls and Facilities, By-law, and Housing Operations. The remaining four categories, HSR Transit, Fire, Police, and Paramedic Services, each independently manage their respective fleets and are not within the scope of this AM Plan.

Fleet Services manages approximately 1,536 vehicle assets, which include 1,381 active, 9 surplus and 146 extended-use assets. These assets include vehicles, trailers, landscape equipment, road maintenance vehicles and waste collection vehicles, and pieces of equipment. Fleet Services does not manage small equipment valued under \$5,000 or those lacking seats and/or wheels and not registered for use on the road. These assets are managed directly by the service areas. Fleet Services purchases, manages, and maintains vehicles, equipment, and fuel. Fleet Services provides responsive and efficient fleet management services to the City of Hamilton's divisions that maximize safety and environmental sustainability and minimize lifecycle costs.

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Figure 1 below shows the variety of vehicles, and equipment Fleet Services maintains and highlights the wide range of skills, training and inventory needed to manage such a diverse fleet.

Figure 1: Scale and Scope of Fleet Services Providers



Fleet Services provides a range of essential services across the City and has four core business units:

- **Maintenance:** Licensed by the Ministry of Transportation, Fleet Services conducts and manages repairs, maintenance and safety inspections on all vehicles and equipment in the Fleet Services portfolio across the city, internally and externally. Service areas are charged a fee for each vehicle maintained to cover all operational expenses;
- **Materials and Fuel:** Manages the City’s private fuel stations and a varied inventory of parts and supplies related to fleet services across multiple locations. Fuel charges billed to service areas are expected to cover the cost of fuel, and all other operating expenses related to the fuel station;
- **Regulatory Compliance:** Facilitates driver education and training for all operators of fleet vehicles and manages the licensing and Commercial Vehicle Operator Registration (CVOR) requirements for the City. Driver training and vehicle license renewals are charged back to the service areas; and,

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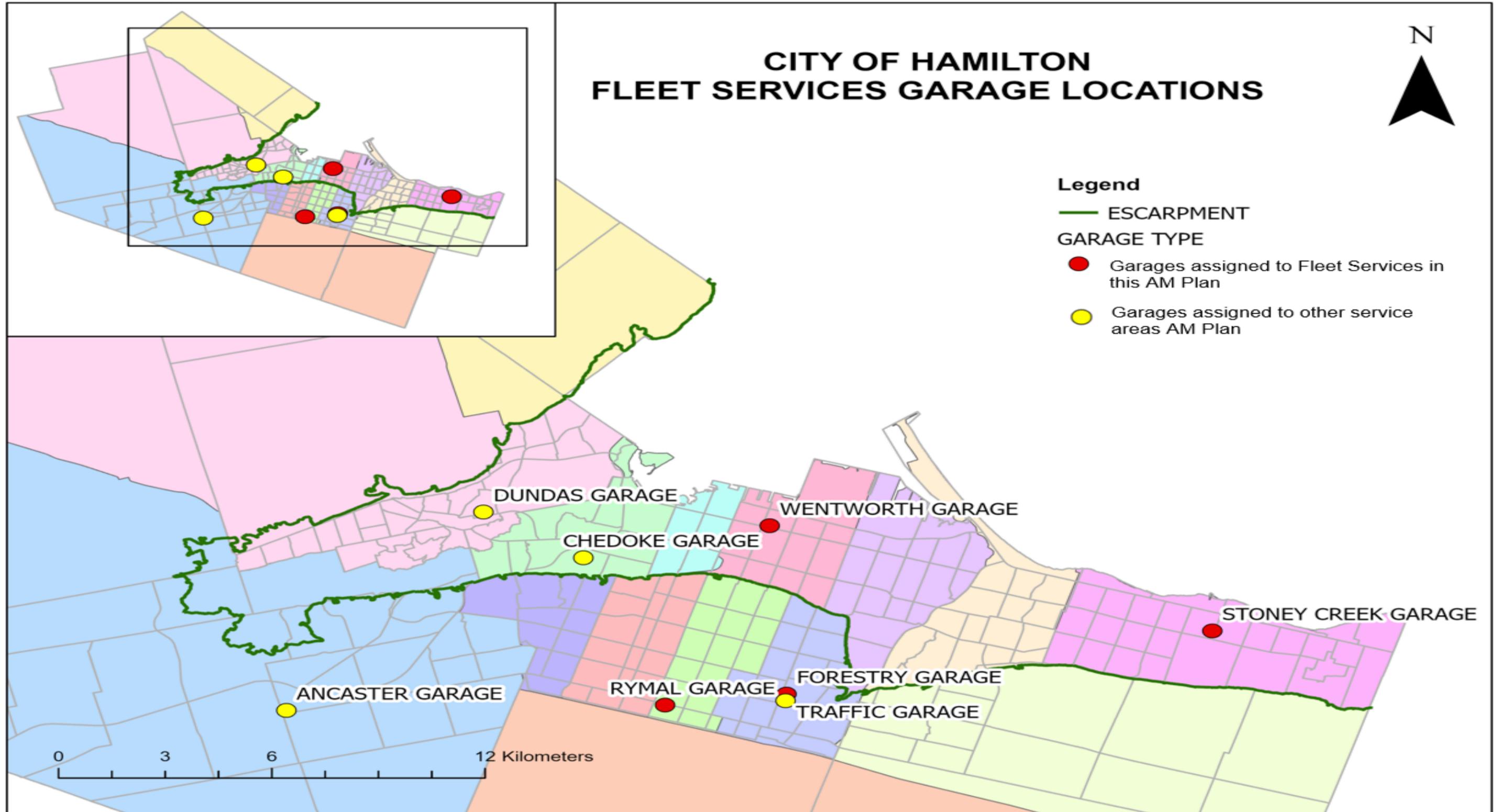
- **Capital Planning:** Plans for capital renewal of existing fleet and develops technical specifications and documents to procure fleet vehicles/equipment and arranges for upfitting to prepare vehicles to come into service. Fleet renewals, are funded through the Fleet Capital Reserve Account, discussed further in **Section 8.3**. Funds are transferred from each service area into this account to be set aside for future renewal of assets at the end of their service life and based on other parameters discussed in **Section 3.2.5.2**. This fund is in a deficit, indicating that the charge rates for fleet renewal should be reviewed in detail to ensure sustainable funding for vehicle renewals.

Fleet Services has undertaken an ongoing Consultant assignment to analyze and provide fleet management improvement solutions discussed in **Section 2.14** with recommendations expected in 2024. A key component of this assignment is to develop recommendations relating to funding fleet renewals and the current cost allocation to the reserve.

2.1.3 USERS OF THE SERVICE

The users of service for the Corporate Asset Management Division primarily comprise the internal City of Hamilton staff, and some contractors working for Fleet Services. As mentioned in **Section 2.1.1**, the user groups span throughout the corporation, serving over 50 service areas in the City of Hamilton.

Figure 2: Fleet Garage Locations



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2.1.4 UNIQUE SERVICE CHALLENGES

Corporate Asset Management has many challenges relating to:

- The development of Asset Management Plans, training, procedures and policy within a regulated timeline and limited resources; and,
- The capacity for asset owners and their teams to support the development of plans and to implement and develop continuous improvement items.

Fleet Services has many challenges relating to:

- **Vehicle Availability:** Supply chain disruptions have hindered the timely replacement of fleet assets, a situation expected to persist until at least 2025. This often means vehicles and equipment used are extended beyond their estimated service life and may need increased or more extensive repairs to remain safe and serviceable;
- **Market for Fleet Assets:** Replacement costs have soared beyond funding availability due to sharp increases in average Manufacturers Suggested Retail Prices, leading to vendors hesitating to bid competitively and meet delivery deadlines. This often results in limited bids for equipment supply contracts or bids exceeding projected costs;
- **Increased Parts and Supply Contract Pricing:** Rising prices of parts and supply contracts are impacting vehicle repair costs city-wide. This along with utilizing vehicles beyond their estimated service life has raised ongoing operation and maintenance costs of city-wide vehicles;
- **Long Wait Times for Parts:** Delays in obtaining parts hinder efficient vehicle repairs, prolonging the time vehicles are out of service which can affect the ability to deliver services to the public;
- **Unsustainable Fleet Reserve Contributions:** The rate/fund contributed by client groups to the fleet reserve is unsustainable, resulting in a negative balance. The expense of replacing vehicles surpasses available funds, delaying timely vehicle renewal and inflating total ownership costs;
- **Diverse Equipment and Vehicles:** The wide and diverse variety of equipment and vehicles operated by the City, as shown in **Figure 1**, necessitates maintaining a diverse assortment of parts and diverse staff training, directly impacting operational efficiency;
- **Renewal of Fuel Sites and Equipment:** Capital funding for renewal or extensive maintenance of fuel sites and shop equipment has not kept pace with needs. This funding is coming from the vehicle reserve, in some cases, which further reduces available funding for fleet renewal; and,

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- **Inadequate Data Collection from Current Systems:** Existing systems cannot collect all necessary data components required for fleet services operations. This presents a challenge for fleet management in effectively monitoring and managing the fleet portfolio.

In June 2023, Fleet Services initiated a consulting assignment⁴ to develop a Fleet Management Strategy that will investigate and recommend actions relating to:

- Fleet Replacement Reserve Sustainability (Renewal);
- Competitive Service Provider (Operations and Maintenance);
- Fleet Maintenance Resources (Future Demand);
- Parts Management (Operations and Maintenance/Inventory);
- Fleet Rightsizing / Replacement Plan (Green Fleet);
- Safety and Compliance; and,
- Procurement (Renewal).

The recommended actions are expected to significantly change how Fleet Services operates and serves customers with the goal of improving all aspects of the operation. The final recommendations are anticipated in the second quarter (Q2) of 2024. Once implemented these changes will help to reduce identified funding gaps and better define Levels of Service for Fleet Services. These changes will be incorporated into the next AM Plan, where known, and will help to address some of the challenges identified above.

The Technology & Innovation team has many challenges relating to:

- **Tight Timelines for EAM Implementation:** Pressing deadlines for Enterprise Asset Management (EAM) implementation and resource constraints pose challenges; and,
- **Change Management** will be a key challenge as all of Public Works is transitioned to new systems.

The Departmental Programs and Initiatives Section has many challenges relating to:

- **Ongoing Management System Implementation:** Due to resource pressures and departmental culture, the continuous implementation of the management system presents challenges.

2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of Asset Management and Fleet Services are outlined in **Table 1**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

⁴ Ward (2023)

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Table 1: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENT
Environmental Protection Act R.S.O. 1990	The purpose of this Act is to provide for the protection and conservation of the natural environment. The Act makes provisions for the improved control of pollution to the air, water, and land by regulating the management of waste and the control of emissions.
Highway Traffic Act	This is an Ontario regulation describing the rules of operating vehicles on public roads including types of operators, drivers, and loads.
O. Reg. 424/97: Commercial Motor Vehicle Operators' Information	The Ministry of Transportation has developed an annual renewal program whereby Commercial Vehicle Operators Registration (CVOR) holders are required to update their operating information on an annual basis.
Ministry of Transportation (MTO)	Adhere to all sections that pertain to daily functions performed in Fleet Services.
Occupational Health & Safety Act (OSHA)	Adhere to all sections that pertain to daily functions performed in Fleet Services.
O. Reg 588/17: Asset Management Planning for Municipal Infrastructure	The regulation sets out requirements for municipal asset management planning to help municipalities better understand their infrastructure needs and inform infrastructure planning and investment decisions.
Technical Standards and Safety Authority (TSSA)	Compliance with the Liquid Fuels Handling code that regulates the requirements of our fuel sites.
Canadian Motor Vehicles Safety Act	Regulates the modification and build requirements of motor vehicles.
American National Standards	Provides standards in reference to certain aspects of vehicle modifications.

2.3 COUNCIL PRIORITIES

As referenced in the **AM Plan Overview** in **Section 5.4**, Strategic Alignment, The City’s strategic goals and objectives are shaped by internal drivers such as Council-approved strategies and plans, as well as external forces such as citizen expectations, and legislative and regulatory requirements. The specific legislative and regulatory requirements for service areas are provided in each AM Plan.

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City objectives provide asset owners with direction regarding levels of service and asset investment priorities. This AM Plan will demonstrate how the City's objectives for non-core assets can influence levels of service and direct asset expenditures.

2.4 ASSET HIERARCHY

In order to deliver reliable and safe services, Fleet Services and the remainder of the CAM Division require assets. The Fleet Service area has been broken down into four asset classes for the purpose of this AM Plan:

- **Vehicles:** refers to vehicles, equipment and attachments listed in Fleet Services inventory that are used specifically by Fleet Services to perform their service. This does not include other equipment and vehicles used by other areas of the city for the delivery of their services;
- **Equipment:** refers to all tools and equipment including fuel stations and EV Chargers, used to deliver Fleet Services; and,
- **Facilities:** refers to garages utilized by Fleet Services staff to deliver their services.

The remainder of the CAM Division has been broken down into a single asset class for the purposes of this AM Plan:

- **Information Technology:** refers to the hardware and software, including Enterprise Asset Management (EAM) software used by Fleet Services and the remainder of CAM Division and service areas.

Asset hierarchy is also being developed for the implementation of the EAM system. The hierarchy presented in this AM Plan may be different from the EAM hierarchy.

The asset class hierarchy outlining assets included in this section is shown below in **Table 2**.

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Table 2: Asset Class Hierarchy

DIVISION	CORPORATE ASSET MANAGEMENT			
SERVICE AREA	FLEET SERVICES			CORPORATE ASSET MANAGEMENT
ASSET CLASS	VEHICLES	EQUIPMENT	FACILITIES	INFORMATION TECHNOLOGY
Asset	SUV Van Pickup Fleet Equipment	Hoists Vehicle Service Tools Fuel Stations EV Charging Stations	Garages	CAM IT Equipment Fleet Services IT Enterprise Asset Management (EAM) Software ⁵

⁵ EAM Software is a shared asset, and the costs are shared across different service areas in Public Works Department. EAM software will be part all AM Plans utilizing this software in the next iteration of AM Plans.

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3. SUMMARY OF ASSETS

This section provides a detailed summary and analysis of the existing inventory information as of August 2023 including age profile, condition methodology, condition profile, asset usage, and performance for each of the asset classes. The information provided in this AM Plan is sourced from a combination of data retrieved from the City's database and other relevant sources. Inventory information does change often, and this is a snapshot of information available as of August 2023.

Table 3 displays the detailed summary of assets for the Fleet Services and the remainder of the CAM Division service area assets.

The City owns approximately **\$87.4 Million** in CAM Division service area assets which are on average in **Poor** condition. Assets are a weighted average of **27 years** of age, which is **36%** of the average remaining service life (RSL).

Fleet Services:

The City owns approximately **\$83.8 Million** in Fleet Services assets which are on average in **Very Poor** condition. Assets are a weighted average of **29 years** of age, which is **33%** of the average remaining service life (RSL).

Corporate Asset Management (CAM):

The City owns approximately **\$3.6 Million** in CAM section assets including CAM IT and EAM software. These assets are on average in **Very Good** condition and have a weighted average of **1 year** in age, which is **99%** of the average remaining service life (RSL). The majority of the weighting for these averages comes from the Enterprise Asset Management software asset class.

The Corporate Asset Management (CAM) Division recognizes that certain tasks and projects are continually progressing, and as a result, some of the deficiencies mentioned may have already been addressed by the time this document is published. Furthermore, the assets listed below are assumed to be in operation and in use at the time of writing. It is also important to note that there could be assets not owned by Public Works but still considered Corporate Asset Management assets, which might not be included in this inventory. This issue has been marked as an area for ongoing enhancement in **Table 28**.

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Table 3: Detailed Summary of Assets
***Weighted Average based on Replacement Costs**

VEHICLES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
SUV	5	\$165.0 K	4 years (45%)	4 – POOR
Data Confidence	High	Medium	High	Medium
Van	9	\$443.0 K	16 YEARS (0%)	5 – VERY POOR
Data Confidence	High	Medium	High	Medium
Pickup	3	\$43.0 K	13 YEARS (4%)	5 – VERY POOR
Data Confidence	High	Medium	High	Medium
Fleet equipment	3	\$165.0 K	8.5 YEARS (23%)	4 – POOR
Data Confidence	High	Medium	High	Medium
SUBTOTAL		\$816.0 K	11 YEARS* (12%)*	4 –POOR*
Data Confidence	High	High	High	Medium

EQUIPMENT				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Hoists	6	\$2.2 M	19 years (24%)	4 – POOR
Data Confidence	Medium	Medium	Medium	Low
Vehicle Service Tools	2,309	\$4.5 M	No Data	No Data
Data Confidence	Medium	Medium		
Fuel stations	22	\$12.6 M	21 YEARS (40 %)	4 – POOR
Data Confidence	High	Medium	Medium	Low
EV charging stations	47 Level II and 2 Level III	\$757 K ⁶	1 year (100 %)	1 – VERY GOOD ⁷
Data Confidence	High	High	High	High
SUBTOTAL		\$20.0M	15 YEARS* (32%)*	3-FAIR*
Data Confidence	Medium	Low	Low	Low

⁶ Infrastructure connection/construction costs not included as they are To Be Determined. The replacement value is for the charger only.

⁷ Fleet Services began installing EV chargers in September 2023, with the majority expected to be installed in 2024.

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FACILITIES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Garages	4	\$62.9 M	33 years (34%)	5 – VERY POOR
Data Confidence	High	High	High	High
SUBTOTAL		\$62.9 M	33 YEARS* (34%) *	5 – VERY POOR*
Data Confidence	High	High	High	High

TECHNOLOGY				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Corporate Asset Management				
CAM IT Equipment (e.g., laptops, desktops, and mobiles)	47	\$61.9K	3 YEARS (35%)	3 - FAIR
Data Confidence	High	Medium	High	Medium
Fleet IT Equipment (e.g., laptops, desktops, and mobiles)	84	\$102.4 K	4 YEARS (23%)	4 – POOR
Data Confidence	High	Medium	High	Medium
Enterprise Asset Management (EAM) Software	1	\$3.5M	0 years (100%)	1 – VERY GOOD
Data Confidence	Very High	High	Very High	Very High
SUBTOTAL		\$3.7M	0 YEARS* (97%) *	1 – VERY GOOD*
Data Confidence	High	High	Very High	Very High
TOTAL		\$87.4M	27 years* (36%) *	4 –POOR*
DATA CONFIDENCE		Medium	Medium	Medium

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Table 4 – City Wide Fleet Asset Summary – For Information Only

VEHICLES – CITY WIDE ⁸				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
City-wide Fleet ⁹	1,536	\$131M ¹⁰	7 Years (34%)	4-POOR
Data Confidence	High	Medium	Medium	Medium
TOTAL		\$131.0 M	7 Years (34%)	4-POOR
Data Confidence		Medium	Medium	Medium

The overall replacement value data confidence for the registry is **Medium**. For facilities, these replacement costs are calculated using an internal tool which encompasses current market rates, building type and size. Fleet, and technology assets replacement costs were gathered from the most recent purchase price for similar assets. For Fleet renewal costs if we have not purchased that specific type of vehicle/equipment recently it is likely the replacement costs used in the preceding calculations are less than current market rates. Replacement values for fuel stations are determined by subject matter expertise and are dependent on the infrastructure installed, such as the number of underground fuel tanks, fuel pumps, etc. Additionally, replacement costs may increase depending on the condition of these components at the time of disposal.

Please refer to the AM Plan Overview, **Section 6.2.2** for a detailed description of data confidence.

⁸ City-wide Fleet includes vehicles utilized by Roads and Transportation, Engineering, Water, Wastewater, Environmental, Recreation and Parks, Cemetery, Buildings Controls and Facilities, By-law, and Housing Operations.

⁹ Fleet Inventory List as of June 2023

¹⁰ Excludes “Active – Extended Use” from replacement value as these vehicles have typically already been replaced in the fleet complement however the replaced vehicle is kept in service for some period. Active-Extended Use vehicles are included in the Age, %RSL and Condition calculations as these vehicles are still maintained by the City of Hamilton and as such these factors are important to consider in how they can deliver services.

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3.1 ASSET CONDITION GRADING

Condition refers to the physical state of the Fleet Services assets and is a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, **Table 5** below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in **Table 28**, is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

Table 5: Equivalent Condition Conversion Table



EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	FACILITIES CONDITION INDEX (FCI)	EQUIPMENT	VEHICLES	TECHNOLOGY
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance is required only.	>79.5%	N/A	Very Good	Very Good	Very Good
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on the asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	< 5%	Good	Good	Good
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset usage. Minor to significant maintenance is required.	39.5% - 69.4%	>= 5% to < 10%	Fair	Fair	Fair
4 Poor	The asset has significant defects and deterioration. Deterioration has an impact on asset usage. Rehabilitation or major maintenance is required in the next year.	19.5% -39.4%	>= 10% to <30%	Poor	Poor	Poor
5 Very Poor	The asset has serious defects and deterioration. The asset is not fit for use. Urgent rehabilitation or closure is required.	<19.4%	>= 30%	Very Poor	Very Poor	Very Poor
0 - Unknown	Asset condition is based on other factors (such as age) and is unknown.	Unknown	N/A	Unknown	N/A	N/A

The following conversion assumptions were made:

- A condition assessment was not completed for Technology and Vehicle assets, the condition was based on the percent of remaining service life;
- Facilities Condition Index was based on ranges provided by the consultant who completed the Building Condition Assessment (BCA) which corresponds to a 4-Point scale; therefore, facilities will not be able to attain a score of 1 – Very Good; and,
- Fuel station condition is based on results from annual inspections. The rest of the equipment assets do not have a formalized inspection and the condition was based on the percent of remaining service life.

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3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile, and Performance Issues for each of the asset classes.

- The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life (ESL) where they can be planned for replacement. Some lower-cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if an asset's condition is based on age, it is typically considered to be of a low confidence level. Although typically, age is used when projecting replacements beyond the 10-year forecast to predict degradation;
- Condition refers to the physical state of assets and is a measure of the physical integrity of assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected/assessed at different frequencies and using different methodologies to determine their condition which are noted in this section; and
- Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

3.2.1 FLEET SERVICES FACILITIES

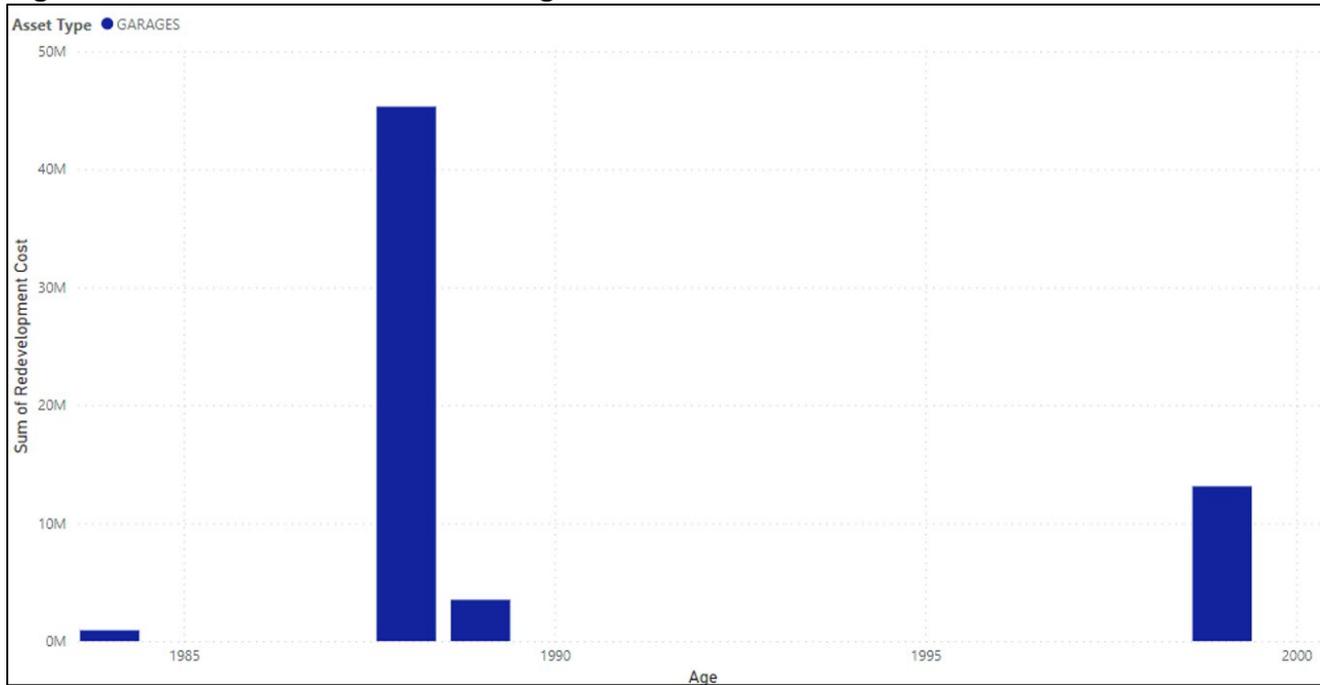
Fleet Services operates from eight facilities, of which four are considered shared-use facilities that consist of fleet garages. Fleet Services has a presence at four other city locations to swiftly respond to maintenance and repair needs. These locations are not classified as fleet assets; instead, they are co-located with the service groups that rely on their support. These are identified as garages owned by other service area locations in the map shown in **Figure 2**.

3.2.1.1. AGE PROFILE

The age profile of facility assets is shown in **Figure 3**. The data confidence for age is typically high for these facility assets because this data was formally recorded at the time of construction.

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Figure 3: Fleet Services Facilities Age Profile



The estimated Service Life (ESL) of these facilities was provided by Corporate Facilities and Energy Management (CFEM) as 50 years. Three of these facilities were built in the 1980s and one was more recently built in 1999. The average age of these facilities is 33 years with 34 percent of RSL.

3.2.1.2. CONDITION METHODOLOGY & PROFILE

The condition for Fleet Services facilities is determined based on the results of a Building Condition Assessment (BCA). The condition conversion from FCI (Facility Condition Index) to the standardized 5-point scale used in Asset Management is shown in **Table 5**. BCAs are completed on these facilities every five years and output a score called a Facility Condition Index (FCI) which is typically considered to be a high confidence level source in the AM Plans. The FCI is calculated based on a ratio of the cost of work required on the facility to the total replacement cost of the facility. FCI is a financial condition assessment.

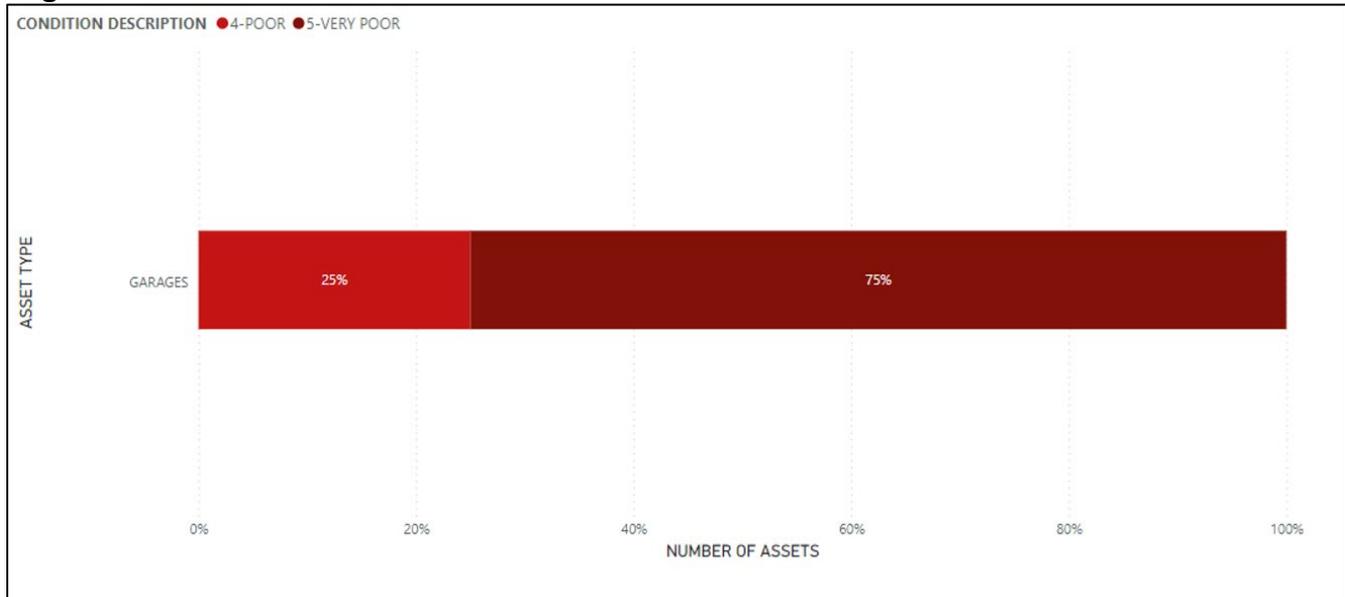
Table 6: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Garages	5 Year Regular Facilities Inspection	2019, Mantecon, Admin Transit Yards	Facility Condition Index (0% - 100%)
	5 Year Regular Facilities Inspection	2018, Mantecon, Recreation Facilities	Facility Condition Index (0% - 100%)

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Per the BCA, all facilities are in Very Poor or Poor condition. However, the BCA is a visual, surface-level inspection which is typically a high confidence indicator of condition in the AM Plans but does not involve detailed analysis such as cutting into walls or removing mechanical panels, and therefore occasionally additional findings arise during detailed analysis which can result in modifications to the condition score. The condition profile of the City's Fleet Services facilities assets is shown below in **Figure 4**.

Figure 4: Facilities Condition Distribution



3.2.1.3. ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. However, there are often insufficient resources to address all known deficiencies.

The known service performance deficiencies in **Table 7** were identified using staff input.

Table 7: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Garages	Rymal	Poor building design	The building design does not allow the mobile hoist to easily move because of the pillars and support beams.
		Insufficient building components	Bay doors patched and corroded, insufficient lighting, crumbling floors, insufficient parts storage, insufficient number, and size of bays for the volume of work and size of vehicles, continually failing HVAC, and insufficient floor drains.

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ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
	Wentworth	Insufficient parking	Efficiency reduced to accommodate all vehicles in for service.
		Insufficient building security and non-compliant with AODA (Accessibility for Ontarians with Disabilities Act)	Not compliant with AODA and requires more building security.
	Stoney Creek	Insufficient garage space	Insufficient space for efficient repair operations.
	Rymal		
	Forestry		
All garages	Insufficient garage space for BEV servicing	Currently, only the Wentworth garage can meet specific space criteria required for the installation of EV chargers. All the rest of the garages cannot meet these requirements even with modifications.	

3.2.2 FLEET SERVICES VEHICLES PROFILE

3.2.2.1. AGE PROFILE

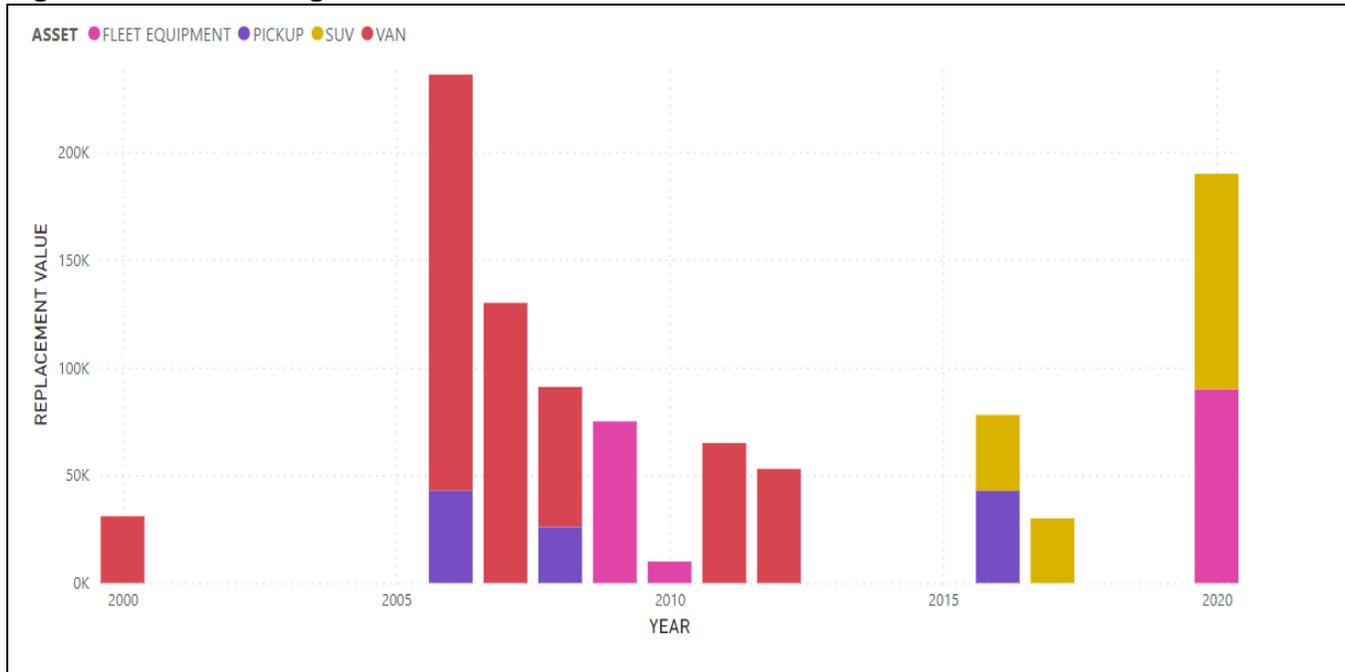
The age profile of Vehicle assets is shown in **Figure 5**. For Fleet Services assets, the data confidence for age is typically high because asset ages are formally tracked. Renewal forecast is based on the age of vehicles, but actual vehicle replacement criteria include other parameters such as maintenance costs, mileage and years exceeding estimated service life. A consultant study¹¹ is ongoing to review these criteria and provide recommendations.

Vehicles presented in this section of the AM Plan are the only vehicles operated by Fleet Services directly to provide their services. A high-level citywide fleet analysis for other equipment and vehicles can be seen in **Section 3.2.5**. A detailed analysis of those vehicles and equipment is contained in the individual Asset Management Plans for the service areas.

¹¹ Ward (2023)

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

Figure 5: Vehicles Age Profile



3.2.2.2. CONDITION METHODOLOGY & PROFILE

Vehicles are inspected and maintenance activities are conducted at specific intervals throughout the asset’s lifecycle, however, no formal condition rating is assigned to each vehicle.

A continuous improvement item identified in **Table 28** is to develop and incorporate a condition rating during regular vehicle inspection/maintenance activities. This will assist Fleet Services with capital forecasting for all vehicles and provide information to make decisions about vehicle renewal in addition to their vehicle renewal formula.

Table 8: Inspection and Condition Information

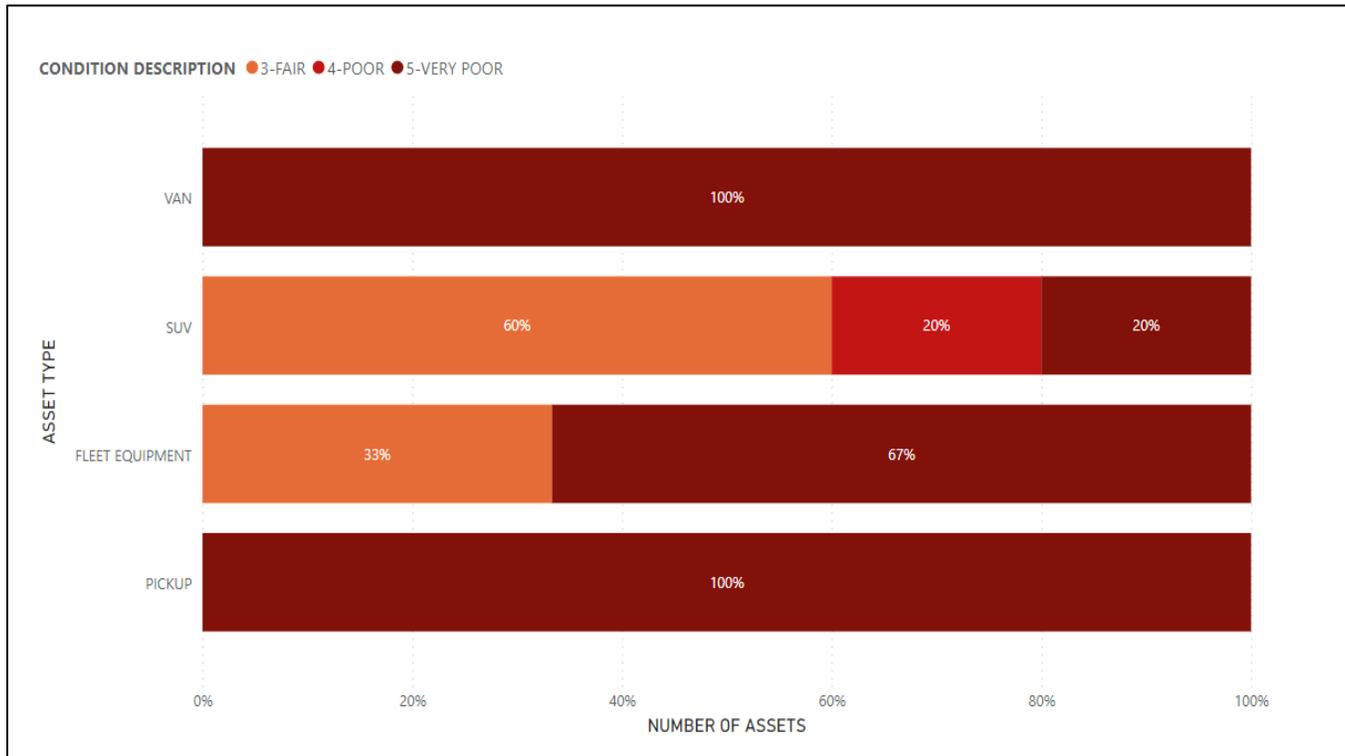
ASSET	INSPECTION TYPE	DESCRIPTION	FREQUENCY	CONDITION SCORE OUTPUT
Vehicles	Servicing vehicle	Various maintenance checks are completed for vehicles	Minimum twice a year	N/A
Vehicles	PMCVI	Safety inspection for Commercial Vehicle Operator Registration (CVOR) vehicles (>4500kg)	Once a year	Pass/Fail

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Asset Condition Profile

The condition profile of Fleet Services assets is shown in **Figure 6**. Most of the vehicles and equipment are in Poor or Very Poor condition, with some in Fair condition. Condition is based solely on the percent of remaining service life converted to a condition score as per **Table 5**.

Figure 6: Vehicles Condition Profile



3.2.2.3. ASSET USAGE AND PERFORMANCE

Table 9: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Vehicles	Various	Vehicles used beyond expected replacement interval.	Increases in maintenance costs and vehicle downtime affect daily operations.

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3.2.3 EQUIPMENT

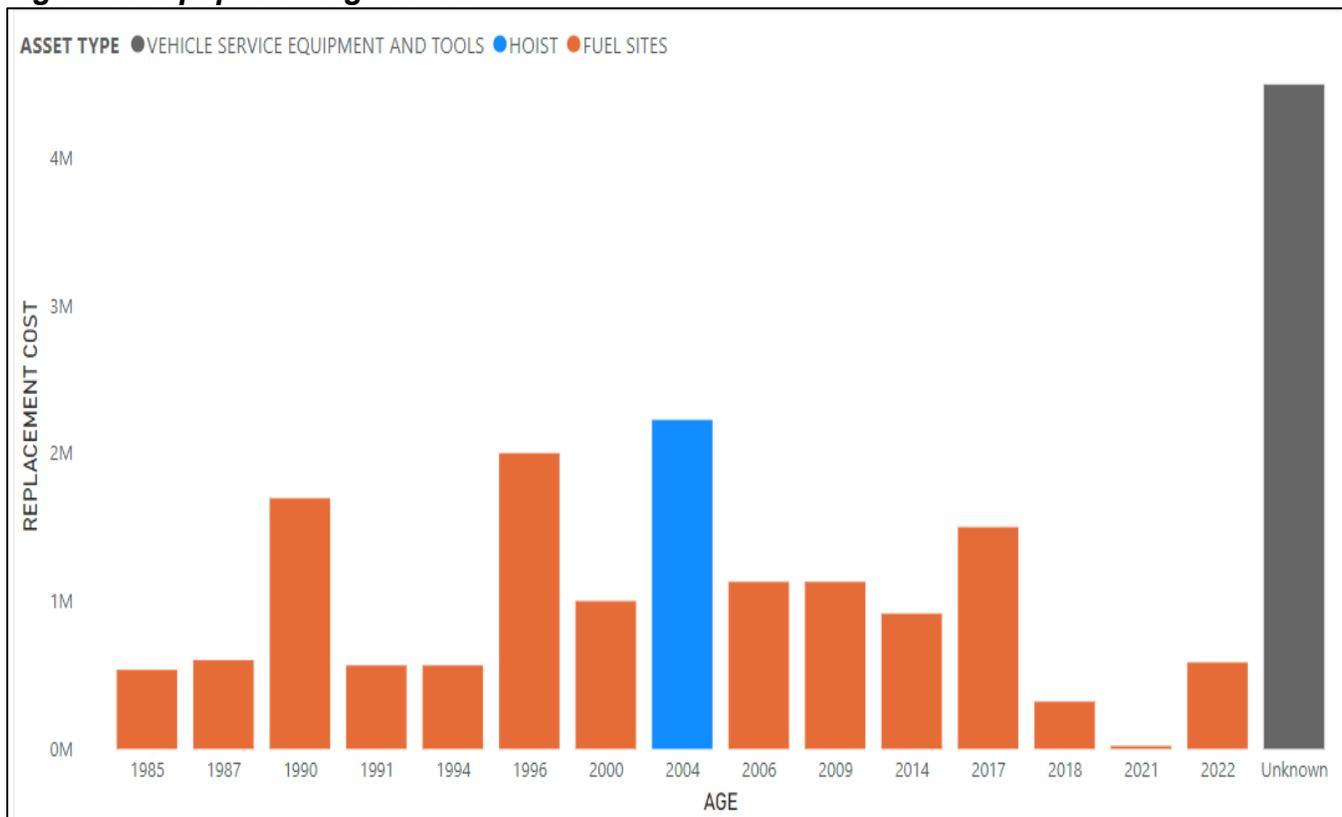
3.2.3.1. AGE PROFILE

For fuel station assets, the data confidence for age is typically low because no formal construction date was recorded for some of these fuel stations. Age was estimated from the age of underground fuel tanks.

The Estimated Service Life (ESL) for the fuel stations is provided by Subject Matter Expertise (SME) and is based on the estimated service life of underground fuel tanks. This ESL is considered a low confidence level as the physical condition of underground fuel tanks is more challenging to examine.

There was no age or condition data available on vehicle service equipment and tools, shown as unknown age in **Figure 7**. The age of the Hoists was estimated based on the age of the facility.

Figure 7: Equipment Age Profile



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3.2.3.2. CONDITION METHODOLOGY AND PROFILE

Vehicle Service Equipment, Tools, and Hoists are inspected, and maintenance activities are conducted at specific intervals throughout the asset’s lifecycle as shown in **Table 10**, however, no formal condition rating is assigned to these assets. The Fuel Stations are inspected annually by an external expert to ensure fuel stations are in a good state of repair and to identify any costs for required repairs, renewal, or upgrades for each site. Repair costs identified from the 2023 inspection were used to calculate a Financial Condition Indicator using a ratio of estimated repair costs to replacement costs. This is similar to the way the Facility Condition Index condition is calculated for Facilities. A continuous improvement item identified in **Table 28** is to use this regular inspection program to develop a 5-point scale for use during the inspection so a higher confidence condition can be determined.

Table 10: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Hoists	Annual inspection	2023	Based on subject matter expertise.
Vehicle Service Equipment and Tools	Annual inspection for overhead crane devices	2023	
	An annual inspection of the Generator	2023	
	Annual inspection of Fuel Generator	2024	
	An annual inspection of Torch sets	2023	
	Annual Calibration of Torque wrenches	2023	
	An annual inspection of Chain lifting devices	2022	
	Monthly inspection of Rolling Staircases	2024	
	Monthly inspection of Ladders	2024	
	An annual inspection of Racking	2024	
	An annual inspection of the Drum attachment	2023	
	An annual inspection of the Lifting attachment	2023	
	An annual inspection of Jacks	2023	
Fuel Stations	Annual	2023	No Formal Condition. %FCI calculated from inspection reports and subject matter expertise.

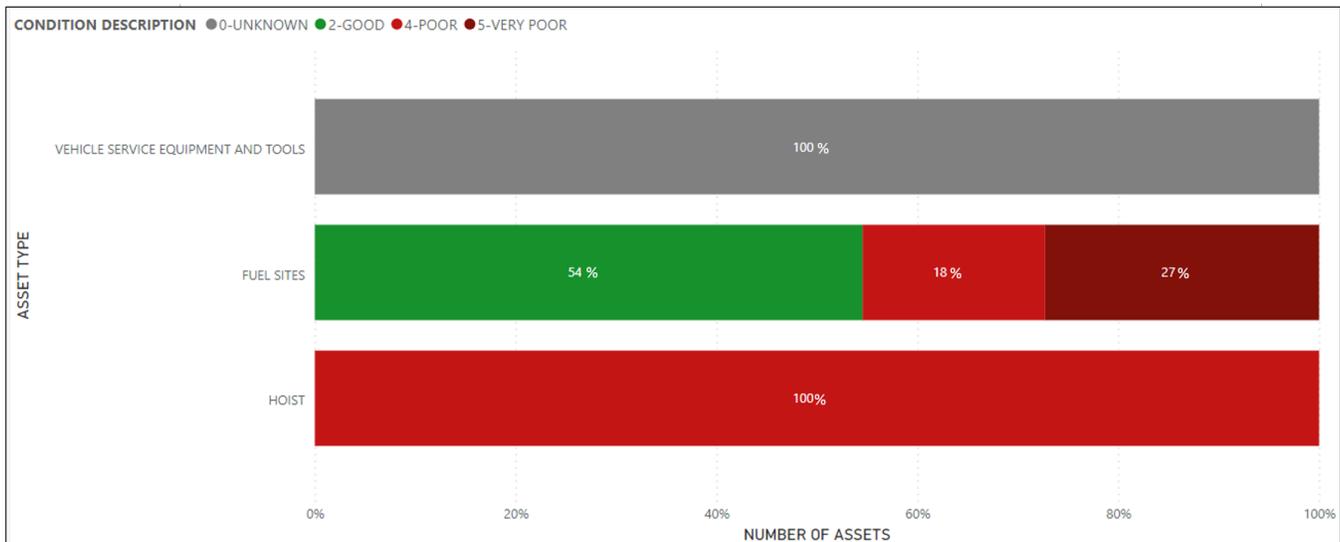
CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

Based on the condition, the fuel stations were divided into Good condition (55%), Poor condition (18%) and Very Poor condition (27%). This aligns with the findings from the 2023 fuel station inspection which suggests that nearly half of the fuel stations will require renewal (full reconstruction) in the next five years.

In line with the current Council-approved action plan to achieve net-zero carbon emissions by 2050, and the potential transition away from diesel fuel by 2035, Fleet Services is investing in Electric Vehicle (EV) charging station infrastructure as part of its transition to Battery Electric Vehicles (BEVs). As part of this transition, Fleet Services is participating in a Yards study led by Corporate Facilities and Energy Management (CFEM), to strategize the optimal use of fuel stations and potential decommissioning of underutilized locations as a strategy to eliminate future renewal costs.

The replacement value for each fuel station was provided based on the Fleet Services team’s subject matter expertise and is considered a medium confidence value. The condition ratio used for Fuel Stations was calculated using the most recent inspection information and is considered a low-confidence number.

Figure 8: Equipment Condition Distribution



3.2.3.3. ASSET USAGE AND PERFORMANCE

Table 11: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Equipment (Hoists)	Wentworth Street Operations Centre	Potential leaking inground hoists.	Leaking hydraulic oil could cause potential environmental damage and cause service delays if the hoist needs to be repaired.

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ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Fuel Stations	Various	Fuel stations with dispensing infrastructure that exceeds Estimated Service Life.	Potential service interruption and higher repair costs.
Fuel Stations	Multiple Locations	Insufficient electrical systems for EV stations.	Current electrical infrastructure is insufficient to support EV charging stations and electrical upgrades are required.
	Ancaster and Chedoke	Asphalt in poor condition.	Signs of cracking and settlement throughout the parking lots.
	Airport Fuel Station and Rockton Yard Fuel Station and Rockton site	Yard utilization changes.	Yards underutilized due to operational changes.

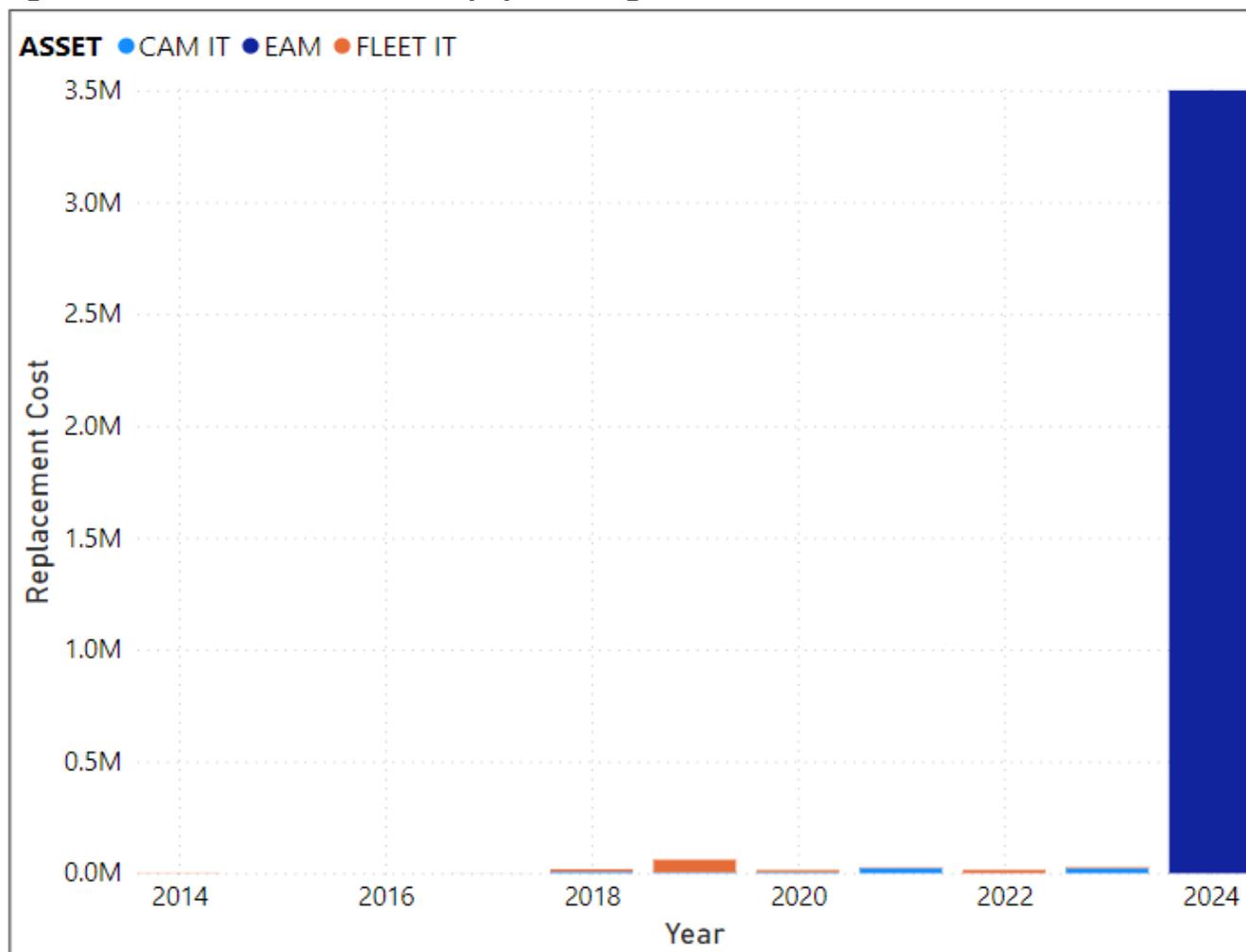
CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

3.2.4 TECHNOLOGY PROFILE

3.2.4.1. AGE PROFILE

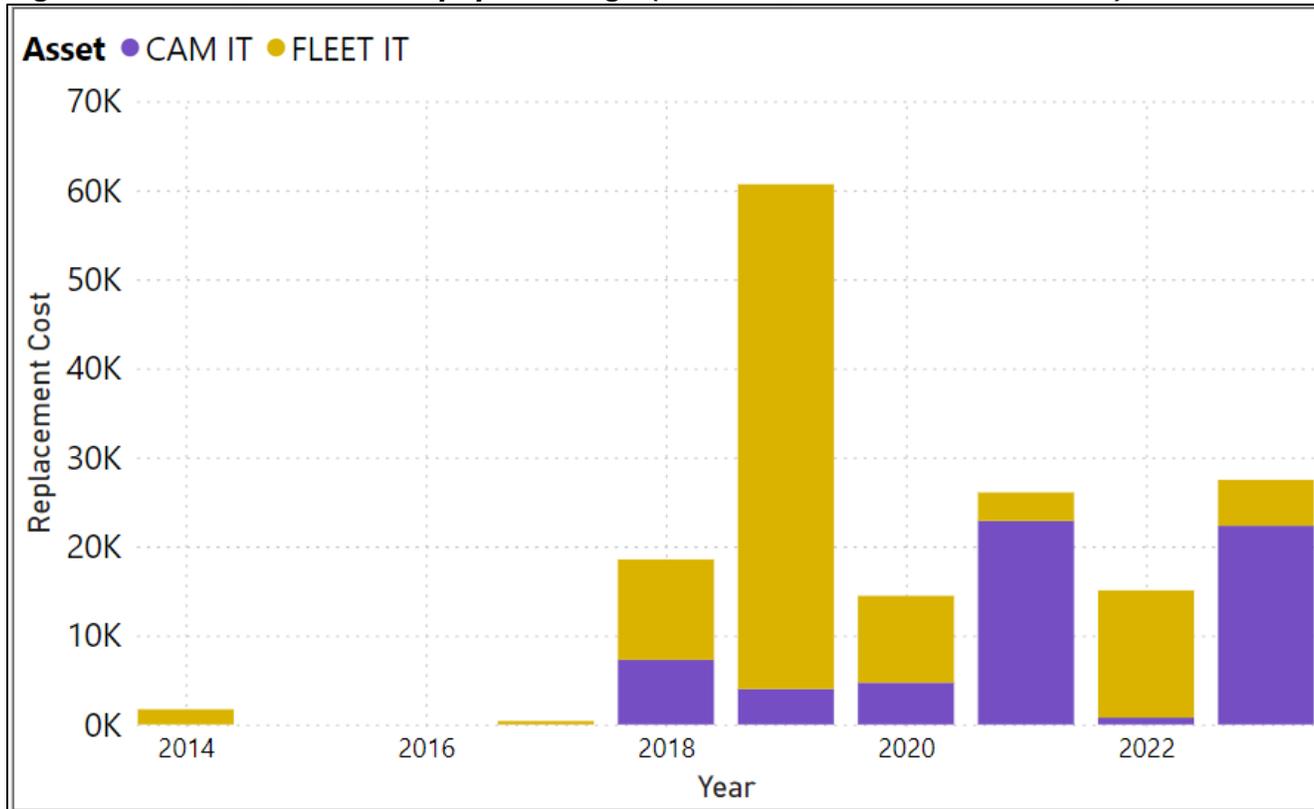
The age profile for Technology assets is shown in **Figure 10 and Figure 11**. **Figure 11** shows Fleet Services and CAM IT age profiles at a different scale to provide better detail. Many technology assets have estimated service lives of five to 15 years. Since these assets have relatively short ESLs, they will repeat throughout the renewal forecast shown in **Section 8.3**.

Figure 9: Fleet, CAM & EAM IT Equipment Age



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Figure 10: Fleet, & CAM IT Equipment Age (No EAM, Revised Y Axis scale)



3.2.4.2. CONDITION METHODOLOGY & PROFILE

Currently, Technology assets do not have a formal method to determine condition and therefore age has been used to estimate the condition of these assets where age is known. This has been identified as a continuous improvement item in **Table 28**.

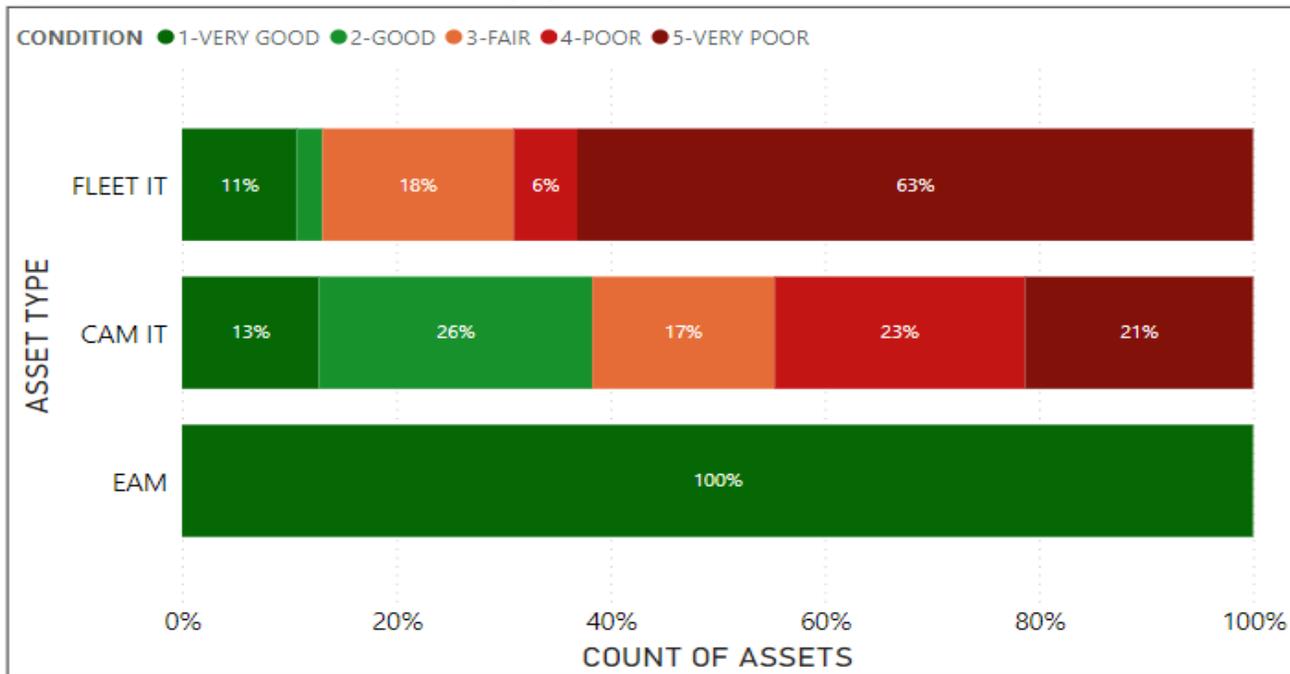
Table 12: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
CAM and Fleet IT Equipment	Ad Hoc	Ad Hoc	None

The condition profile of the City’s assets is shown in **Figure 12**. Currently, the average weighted condition of technology is considered to be Very Good. Most of the weighting is from EAM software. The average condition is considered to be Poor for Fleet IT and Fair for CAM IT. Due to the condition methodology, a number of assets are showing poor or very poor condition because they are approaching or beyond their ESL.

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Figure 11: Fleet, CAM & EAM IT Equipment Condition Distribution



3.2.4.3. ASSET USAGE AND PERFORMANCE

At present, no performance deficiencies have been identified with Technology assets. The Enterprise Asset Management (EAM) system is currently in the implementation stage, and its service performance cannot yet be assessed.

3.2.5 VEHICLES PROFILE – CITY-WIDE FLEET

As mentioned in **Section 2.1.2**, Fleet Services manages approximately 1,546 city-wide assets which include vehicles, trailers, landscape equipment, road maintenance vehicles waste collection vehicles, and road-going pieces of equipment. This section provides an overview of the age and condition of these assets.

3.2.5.1. AGE PROFILE

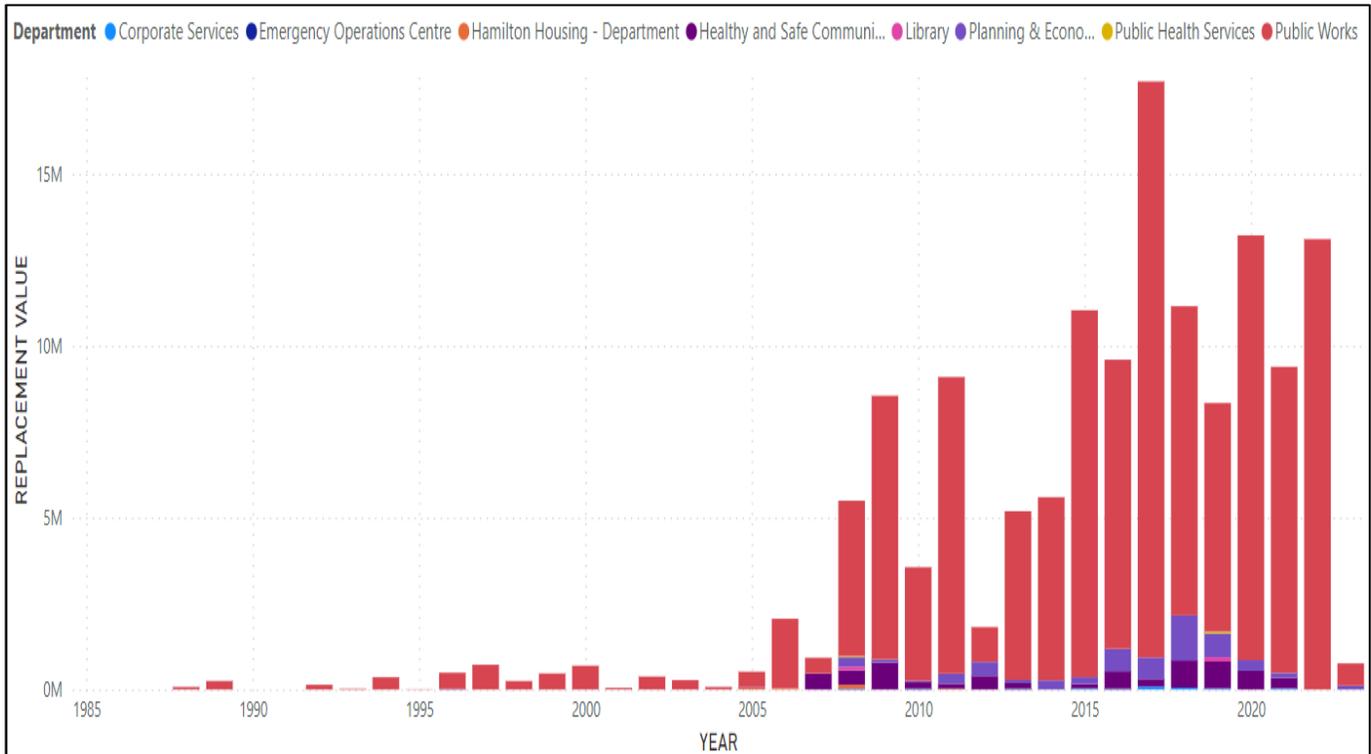
The age profile of the city-wide vehicle assets is shown in **Figure 13**. For these assets, the data confidence for age is typically high because asset ages are formally tracked. Renewal forecast is based on the age of vehicles, but actual vehicle replacement criteria include other parameters such as maintenance costs, mileage and years exceeding estimated service life. A consultant study¹² is ongoing to review these criteria and provide recommendations.

¹² Ward (2023)

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The detailed analysis of the equipment and vehicles below is within the other individual Asset Management Plans for those service areas. The average estimated service life (non-weighted to type or value) is 10 years. Assets in **Figure 13** to the left of 2014 are possibly beyond or approaching their ESL.

Figure 12: Vehicles Age Profile - CITY WIDE



3.2.5.2. CONDITION METHODOLOGY & PROFILE

Vehicles are inspected and maintenance activities are conducted at specific intervals throughout the asset’s lifecycle, however, no formal condition rating is assigned to each vehicle.

Vehicle replacement is based on the Fleet Capital Replacement Schedule established by Fleet Services. The schedule is compiled using a various data point to assess whether fleet assets meet the replacement criteria, which include but not limited to:

- Planned replacement year (Based on Estimated Service Life);
- Condition assessment;
- Dollars spent on maintenance Life to Date versus the estimated replacement cost;
- Fuel consumption and Green House Gas emissions; and,
- Kilometres and/or hour meter reading.

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Further discussions take place between Fleet Services and the service area to discuss any specific operational concerns that will affect fleet requirements such as:

- Consideration of size/weight of equipment carried (in vehicle and/or trailers);
- Capability of tow vehicles;
- Fit for purpose; and,
- Green options available.

Fleet Services will consider delaying the replacement of a vehicle where extending its life will not cause significant operational concerns or financial impacts to align with the purchase of an available Battery Electric Vehicle (BEV).

A continuous improvement item identified in **Table 28** is to develop and incorporate a condition rating during regular vehicle inspection/maintenance activities. This will assist Fleet Services with capital forecasting for all vehicles and provide information to make decisions about vehicle renewal in addition to their vehicle renewal formula.

Table 13: Inspection and Condition Information

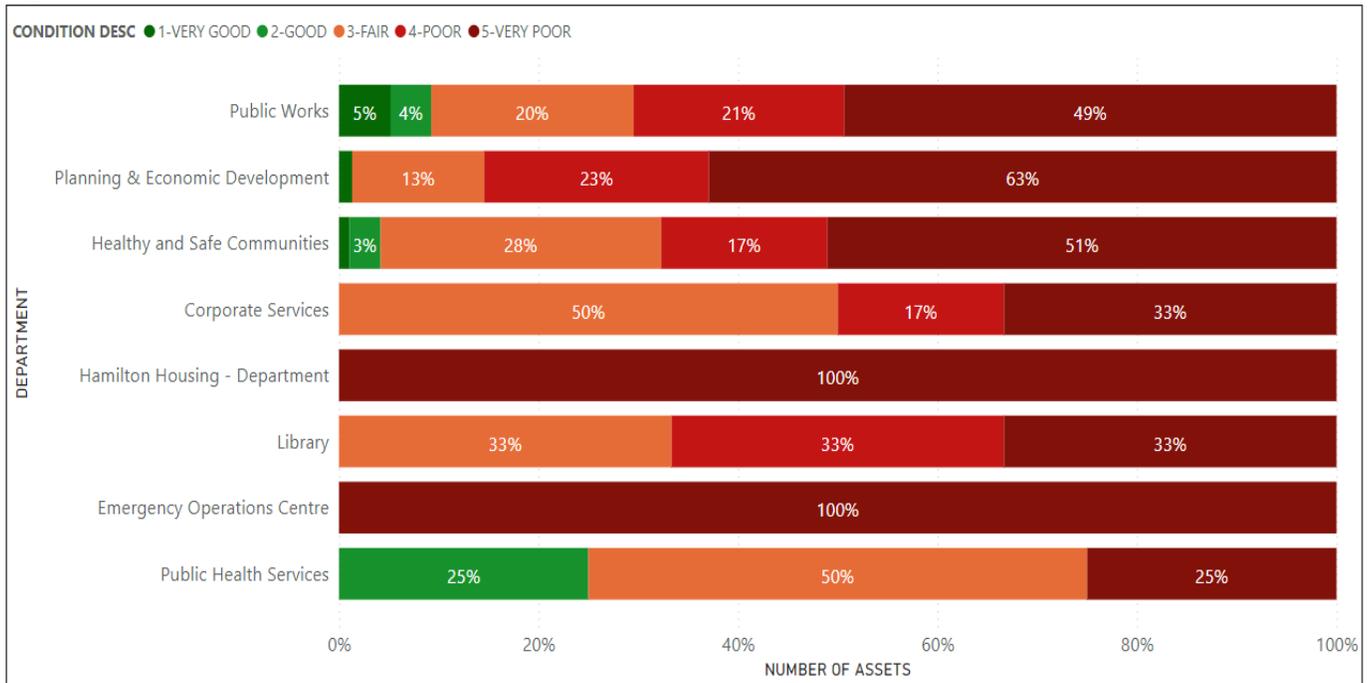
ASSET	INSPECTION TYPE	DESCRIPTION	FREQUENCY	CONDITION SCORE OUTPUT
Vehicles	Servicing vehicle	Various maintenance checks are completed for vehicles.	Minimum twice a year.	N/A
Vehicles	PMCVI	Safety inspection for Commercial Vehicle Operator Registration – (CVOR) vehicles (>4500kg).	Once a year.	Pass/Fail

Asset Condition Profile

The condition profile of the city-wide fleet assets is shown in **Figure 14**. The majority of the vehicles and equipment are in Poor or Very Poor condition. Condition is based solely on the percent of remaining estimated service life converted to condition as per the table in **Section 4**. This data is presented here for information purposes as the detailed analysis of the equipment and vehicles below is within the other individual AM Plans for those service areas.

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

Figure 13: Vehicles Condition Profile - CITY WIDE



3.2.5.3. ASSET USAGE AND PERFORMANCE

Table 14: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Vehicles	Various	Vehicles used beyond the expected replacement interval.	Increases in maintenance costs and vehicle downtime affect daily operations.

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4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what the City provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that the City provides those services.

O.Reg 588/17¹³ does not define levels of service for CAM assets and therefore the City has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in Section 7.5 of the **AM Plan Overview**.

4.1 SURVEY METHODOLOGY

A Customer Engagement Survey is typically completed to develop customer values and customer levels of service. CAM is mainly a service provider to internal customers and other City of Hamilton groups. At this time, an internal survey of customers who use CAM Division and Fleet Services has not been completed. A continuous improvement item in **Table 28** is to develop an internal services survey to help develop customer values and customer levels of service for future Asset Management Plans.

4.2 CUSTOMER VALUES

A customer survey was not conducted for CAM Division and Fleet Services and no Customer Levels of Service were identified for this iteration of AM Plan.

4.2.1 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance, and management. The metrics should demonstrate how the City delivers its services in alignment with its customer values; and should be viewed as levers to impact and influence the Customer Levels of Service. The City will measure specific lifecycle activities to demonstrate how the City is performing in delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.¹⁴

Table 15 shows the activities expected to be provided under the current 10-year Planned Budget allocation and the forecast activity requirements being recommended in this AM Plan.

¹³ Government of Ontario, 2017

¹⁴ IPWEA, 2015, IIMM, p 2|28.

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Table 15: Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE 2023	CURRENT TARGET PERFORMANCE 2023	PROPOSED 10-YEAR PERFORMANCE
Operation	Ensure assets and operators are safe and reliable and comply with regulations.	Average monthly CVOR (Commercial Vehicle Operator's Rating).	57.5 (December 2023)	50.0	50.0
		# of time CVOR data is pulled per year.	248	258	258
		# of driver abstracts review processed per year for Fleet Compliance.	6230	5800	5800
		# of spot checks completed by the driver trainers per year.	83	84	84
		Average monthly % of Periodic Mandatory Commercial Vehicle Inspections (PMCVI) completed by their due dates.	96%	100%	100%
		Fleet Training and Compliance Costs	\$600K	\$600K	Not yet quantified
	Ensure all city-wide vehicles are repaired in a timely manner.	Average number of Fleet maintenance invoices open for over 30 days.	47	120	120
		Maintenance Lifecycle Costs	\$11.7 M	\$11.7 M	Not yet quantified
		Average monthly % of parts returned by the technicians back to inventory.	1%	3%	3%
		Average monthly % of direct purchases returned to the vendor.	5%	8%	8%
		Average monthly % of orders filled by stock availability.	60%	55%	55%
		Average monthly % of stock issued before replenishment is triggered.	54%	50%	50%
		Vehicle Parts Costs	\$2.0M	\$2.0M	Not yet quantified
	Renewal	Ensure Fleet Services vehicles are renewed, as necessary.	% of vehicles pass their estimated service life.	75%	To Be Determined
Fleet Renewal Costs			\$769.0K	\$769.0K	Not yet quantified

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It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

It is important to note that these metrics were created specifically for this 2023 AM Plan with available data. Many of these metrics should be improved to include a target to be in line with SMART objectives identified on **Page 43** of the ***AM Plan Overview***. In addition, performance measure data should be both easy to extract and measured over time, and a data collection process may need to be created.

4.2.2 PROPOSED LEVELS OF SERVICE DISCUSSION

It is evident per **Table 15** that CAM Division and Fleet Services are often meeting its current technical standards with some exceptions. However, since a customer survey was not conducted for this iteration of the Asset Management Plan, we are unable to compare customer expectations with internal technical targets.

It has been assumed in the interim that the current levels of service will be the proposed levels of service moving forward past 2025 in accordance with O. Reg 588/17¹⁵.

CONDITION / QUALITY

No changes are proposed at this time for CAM Division and Fleet Services relating to Condition/Quality. Proposed levels of service may be developed upon completion of the Fleet Management Strategy.

FUNCTION

No changes are proposed at this time for CAM Division and Fleet Services relating to Function. Proposed levels of service may be developed upon completion of the Fleet Management Strategy.

CAPACITY

No changes are proposed at this time for CAM Division and Fleet Services relating to Capacity. Proposed levels of service may be developed upon completion of the Fleet Management Strategy.

¹⁵ Government of Ontario, 2017

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5. FUTURE DEMAND

Demand is defined as the desire customers have for assets or services that they are willing to pay for. These desires are for either new assets/services or current assets.

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of services required.

5.1 DEMAND DRIVERS

For the Fleet Services service area, the key drivers are population change, technological changes, and expansion of service programs.

- **Population Change** – The City of Hamilton’s population is forecast to be 820,000¹⁶ by 2051 which will increase the demand for City services and will require Fleet Services to support service growth in other service areas.
- **Technological Changes** – City Council approved a phase-in strategy of 89 internal combustion type engines to be converted to Battery Electric Vehicle (BEV) to be replaced in 2022 to 2024. The development and implementation of the BEV strategy is a critical component of transitioning the City of Hamilton to a low-carbon city and its journey to meeting aggressive targets by 2050. The transition from internal combustion type engines to BEV also generates some technological demands for Fleet Services. The transition to BEV will also change the supply of fuel delivery infrastructure that Fleet Services manages.

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5.2 DEMAND FORECASTS

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 16**. Growth projections have been shown on **Page 45** of the **AM Plan Overview** document.

Where costs are known, these additional demands as well as anticipated operations and maintenance costs have been encompassed in the Lifecycle Models in **Section 8**.

¹⁶ Census Profile, 2021 Census of Population, 2021

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5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets is shown in **Table 16**. Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Opportunities identified to date for demand management are shown in **Table 16**. Climate change adaptation is included in **Table 21**.

Table 16: Demand Management Plan

SERVICE AREA	DEMAND DRIVER	CURRENT POSITION	PROJECTION - 10-YEAR HORIZON	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Fleet Services	Population Growth	565,000 population	625,000 ¹⁷ population	Increasing demand for more City services will raise the demand for more vehicles from service areas.	<p>Develop an annual Fleet Planning Process to identify and capture future fleet needs to improve planning and operational effectiveness.</p> <p>Develop fleet utilization strategy to ensure efficient use of all existing vehicles.</p>
	Technological Changes	City-wide 89 electric vehicles	The city's mission is to have net zero greenhouse gas emissions by 2050 which will mean more electric vehicle acquisitions.	New Battery Electric Vehicle (BEV) training is required for technicians to service BEVs acquired by the City.	<p>Develop a standardized BEV servicing training program for technicians.</p> <p>Increase funding to acquire appropriate diagnostic tools and equipment for BEV servicing.</p>

¹⁷ Census Profile, 2021 Census of Population, 2021

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5.4 ASSET PROGRAMS TO MEET DEMAND

The new assets required to meet demand may be acquired, donated, or constructed. For **the** CAM Division, assets are typically acquired or constructed.

There is about \$4.1M (EAM Software) in assets acquired over the next 2 years. Acquiring new assets will commit the CAM Division to ongoing operations, maintenance and renewal costs for the time required. These future costs have been estimated at a high level in the Lifecycle Models in **Section 8** but should be quantified further for future iterations of the report for consideration in developing higher confidence forecasts of future operations, maintenance, and renewal costs for inclusion in the long-term financial plan.

Fleet Services acquires vehicle and equipment assets for other service areas, with the need for additional vehicles identified in individual plans or as part of the annual capital budget process. Funding for acquisitions is typically allocated within the capital budgets of the requesting service areas. Therefore, acquisition costs and additional forecasted needs are generally reflected in the individual Asset Management Plans of those service areas but have an impact on Fleet Services, particularly the acquisition and maintenance of vehicles beyond the existing fleet portfolio.

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6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk¹⁸.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

6.1 CRITICAL ASSETS

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified, and along with their typical failure mode, and the impact on service delivery, are summarized in **Table 17**. Failure modes may include physical failure, collapse or essential service interruption.

Table 17: Critical Assets

CRITICAL ASSET(S)	FALIURE MODE	IMPACT
Fuel Management System	Essential Service Interruption	Inability to dispense fuel.

By identifying critical assets and failure modes, an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

¹⁸ ISO 31000:2009, p 2

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6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, the evaluation of the risk and the development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan are shown in **Table 18**. It is essential that these critical risks and costs are reported to management.

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

Table 18: Risks and Treatment Plans

SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
Fuel Station	Underground fuel tanks can leak and cause potentially detrimental environmental damage.	High	Implemented regular continuous leak detection through software and regular vacuum testing.	Low	\$44,000 annually for specialized fuel tank leak inspections.
			Reduce the number of fueling stations overall as transition to alternative fuels/yards study and eliminate or renew older facilities.	Medium	TBD
Fuel Station (Above ground fuel tank)	Above-ground fluid storage tanks can leak and potentially cause environmental damage.	High	Plan to complete condition assessment on all fuel storage tanks.	Medium	Consultant costs TBD.
Facilities (Underground fuel tank)	Underground automotive storage tanks can leak and cause potentially detrimental environmental damage.	High	Eliminate or discontinue the use of underground fluid storage tanks at facilities where possible.	High	TBD
Equipment (In-Ground Hoists)	Hydraulic fluids can leak and contaminate the environment.	High	Develop a programmed leak inspection program.	Medium	\$27,000 to develop a programmed hydraulic leak inspection program.
			Consider substituting it for non-hazardous hydraulic fluid.	Medium	TBD

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SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
Vehicles	Inadequate funding of Reserve based on non-current replacement values.	Very High	Consultant's Fleet Service Delivery review ¹⁹ aims to adjust user group contributions to the Fleet Reserve, ensuring adequate funding for fleet replacements and accurately accounting for fleet management costs.	Medium	Minimal treatment costs and increased contributions to reserve will affect all service areas using Fleet Services
Corporate Asset Management Plans	Unable to complete all AM Plans for non-core assets by the July 2024 deadline to meet the O. Reg 588/17 ²⁰ requirement, discussed further in Section 2.1.1 .	High	Comprehensive project management plans and project charters have been implemented for each asset management plan to ensure that all work is completed by the deadline.	Medium	CAM internal resources

¹⁹ Ward (2023)

²⁰ Government of Ontario, 2017

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6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to 'withstand a given level of stress or demand,' and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment, and crisis leadership.

6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective of achieving the optimum benefits from the available resources.

Table 19 below outlines what activities Fleet Services cannot afford to do over the next 10 years with their existing budget and provides the associated service and risk tradeoffs.

Table 19: Service and Risk Tradeoffs

WHAT WE CAN NOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
Fully fund the vehicle-renewal reserve and replace vehicles at the optimum time.	Increases in frequency and costs of repairs and delays in repairs and maintenance.	Vehicles are kept on the road longer resulting in interruptions to service groups across the city, increased operational costs and reduced efficiency. Levels of service at risk.
Absence of a fuel station strategy	Risk downtime and major failure triggered capital funding requirement	Fuel stations using aged components and replacement parts will be increasingly difficult to source. Despite robust leak detection and tank gauging systems, the risk of failure increases with age.

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<p>Inefficient Maintenance Operations</p>	<p>Additional staff resources will be required to manage 8 maintenance facilities.</p> <p>The facilities are not specifically designed for fleet operations, resulting in inefficiencies, heightened risks to employee safety, and adverse environmental impacts.</p> <p>Without an effective system scheduling work efficiently and setting benchmarks for service standards will continue to be challenging.</p>	<p>Consultant review of operations to provide recommendations to improve efficiencies</p>
<p>Procure ICE vehicles</p>	<p>Greenhouse gas targets will not be met. Additionally contributes to climate change and impacts to the environment.</p>	<p>Continue to investigate viable alternative power options including naturally derived or lower impact fuels, electric and hydrogen</p>

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7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we have already begun to experience (adaptation). At a minimum, the City must consider how to manage our existing assets given the potential climate change impacts for our region.

Changes to Hamilton's climate will impact City assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models and levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan.

7.1 CLIMATE CHANGE MITIGATION

Climate Mitigation refers to human intervention to reduce GHG emissions or enhance GHG removals (e.g. building transportation infrastructure that can support cycling and public transit and reduce the need for car travel). The City of Hamilton's Community Energy + Emissions Plan²¹ (CEEP includes five Low-carbon Transformations necessary to achieve the City's target of net-zero GHG emissions by 2050):

- Innovating our industry;
- Transforming our buildings;
- Changing how we move;
- Revolutionizing renewables; and
- Growing Green.

²¹ Newbold, Skidmore, Chessman, Imhoff, & McDowell, 2022

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Mitigation Demand Analysis

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City’s modelled targets for the low carbon transformations that applied to the service/asset;
- Discussing the impact, the targets would have on the service/asset; and
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050 as shown in **Table 20** below.

As previously mentioned, due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below has not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AM Plan.

Moving forward, the Climate Lens tool discussed in the AM Plan Overview will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

Mitigation Demand Analysis

Table 20: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Changing How We Move	100% of new municipal small and light-duty vehicles are electric by 2040.	Electric vehicle (EV) chargers will need to be installed at all stations. Initial upfront capital costs for electric vehicles.	Develop a business case for an electric vehicle (EV) conversion as an internal combustion-type engine (ICE) vehicle reaches its estimated service life and determines full-lifecycle costs.
	100% of new municipal heavy-duty vehicles switch to clean hydrogen by 2040.	BEV vehicle training for Fleet Services maintenance staff to complete EV repairs within the City as there may be a risk of dealers backing away from being EV certified.	Develop business case for EV charging stations to support growing EV demand. Some dealers are backing away from EV certification due to high costs which may lead to future service challenges. The city should ensure EV providers can service vehicles adequately. The city may need to consider performing its own EV maintenance if dealers are

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CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
			not authorized for repairs or if the nearest service centre is inaccessible.
		Decommissioning select fuel sites based on the replacement of internal combustion engine (ICE) vehicles.	Currently, a consultant study ²² is underway which will offer recommendations for maximizing garage utilization, potentially including the decommissioning of underutilized garages.

MITIGATION RISK ANALYSIS

Additionally, since the risk of not completing climate change mitigation projects is that the City continues to contribute to climate change in varying degrees which were modelled in the Climate Science Report for the City of Hamilton completed by ICLEI Canada, a risk analysis has not been completed in this AM Plan for not completing climate mitigation projects (ICLEI Canada, 2021).

CURRENT MITIGATION PROJECTS

On March 27, 2019, Hamilton City Council declared a Climate Change Emergency, committing to achieving net zero greenhouse gas emissions by 2050 and preparing for climate change impacts. The 2021 Green Fleet Strategy²³ recommended freezing the renewal of internal combustion engine (ICE) vehicles in anticipation of a transition to battery-electric vehicles (BEVs). Concerns were raised about the potential obsolescence of ICE vehicles as BEVs become more widespread. With the possibility of BEV prices decreasing, and reaching price similarity with ICEs by 2025, it was suggested that, if feasible based on the condition of current Hamilton fleet ICE vehicles, their lifecycles be extended until BEV replacements are available.

Following these recommendations from Green Fleet Strategy²³, Fleet Services and service areas discuss any operational concerns including renewing ICE vehicles as BEVs for all fleet renewals and acquisitions as discussed in **Section 3.2.5.2**. If viable BEV options are not available, the service areas will review the following items prior to requesting an ICE vehicle:

²² Ward (2023)

²³ Kajianis & Parker (2021)

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1. Lease or Rent to bridge the gap until an electric vehicle becomes available;
2. Perform condition assessment of vehicle to be replaced and defer replacement; and,
3. If available, provide an extended-use city-wide fleet vehicle until electric options become available.

If the above options cannot be satisfied and cause significant operational concerns or financial impacts, the service area will be required to provide an email to Fleet Planning with the Director's approval to support reasons why the electric option does not meet their operational requirements.

Fleet Services is also exploring alternative fuel options such as natural gas, biodiesel, and EcoDiesel. As more technology advances are made and incorporated into Fleet Services operations, these advancements and updates will be integrated into the next iteration of the AM Plan.

7.2 CLIMATE CHANGE ADAPTATION

Climate Adaptation refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads).

The impacts of climate change may have a significant impact on the assets we manage and the services we provide. Climate change impacts on assets will vary depending on the location and the type of services provided, as will how those impacts are responded to and managed.²⁴

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report²⁵ guided by ICLEI's Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP) (ICLEI, 2021). The BARC Framework identified thirteen high-impact areas.

²⁴ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

²⁵ City of Hamilton & Local Governments for Sustainability Canada, 2021

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Adaptation Demand Analysis

Table 21: Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	BASELINE (1976 – 2005) ²⁶	AVERAGE PROJECTED CHANGE 2021-2050 ²⁵ ASSUMING RCP4.5 ²⁷ SCENARIO)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
<p>Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns.</p>	<p>187 mm average total winter precipitation.</p>	<p>204 mm average total winter precipitation.</p>	<p>Inability to charge vehicles.</p>	<p>Investigate alternate power sources for emergency EV charging.</p>
			<p>Fuel stations operation disruption when power is out.</p>	<p>Ensure generators are available at the fuel station.</p>
<p>Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.</p>	<p>6.7 heavy precipitation days (20 mm)</p>	<p>7.7 heavy precipitation days (20 mm)</p>	<p>Flooding-related erosion may cause issues with underground fuel tanks. Rapid moving water can erode backfill that is covering the underground fuel tanks and piping systems.</p>	<p>More frequent maintenance may be needed which may require more funding to address these potential damages.</p>
			<p>Extreme rainfall may strain the roofing and drainage systems of buildings leading to more frequent repairs and earlier replacement of roof and drainage systems.</p>	
<p>Increased instances of heat-related issues due to extreme heat.</p>	<p>16.1 average days where the temperature is 30 degrees Celsius or more</p>	<p>34.4 average days where the temperature is 30 degrees Celsius or more</p>	<p>Heat advisories impact staff activities (i.e., working in garages if proper air conditioning is not provided).</p>	<p>Investigate workspace cooling options for maintenance staff working in garages.</p>

²⁶ ICLEI Canada, 2022

²⁷ RCP4.5 Scenario: Moderate projected Green House Gas concentrations, resulting from substantial climate change mitigation measures. It represents an increase of 4.5 W/m² in radiative forcing to the climate system. RCP 4.5 is associated with 580-720 ppm of CO₂ and would more than likely lead to 3°C of warming by the end of the 21st century.

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ADAPTATION RISK ANALYSIS

Additionally, the City should consider the risks for the asset or service as a result of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Similarly, to the exercise above and using the risk process in **Section 6**, asset owners:

- Reviewed the likelihood scores in the Vulnerability and Risk Assessment Report for the adaptation impact occurring;
- Identified the consequence to the asset/service if the event did happen to develop a risk rating; and,
- If the risk was identified as high, the asset owner produced a preliminary risk adaptation plan shown below in **Table 22**.

It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of mitigating the risks below has not been included in the lifecycle and financial models at this time. The adaptation plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should consider these risks during the planning and design processes. Future changes will be incorporated into future iterations of the AM Plan. Moving forward, the Climate Lens tool will assess projects based on these targets and will assist with the prioritization of climate adaptation projects.

Table 22: Adapting to Climate Change

ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns.	EV Charging Station	Unable to charge vehicles	High	Investigate redundancy in power sources at EV charging stations. Ensure proper maintenance of the backup power system.

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ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
	Fuel Stations	The potential impact of the fuel management system at fueling stations	Medium	Major fuel station locations have backup building generators.
		Supply chain disruption for delivery to City's fuel stations	High	Working with fuel suppliers to prioritize the City's fuel supply in emergencies. Investigate mobile re-fueling for emergency use

CURRENT ADAPTATION PROJECTS

Currently, Fleet Services and the remainder of CAM Division service areas do not have any current or past climate change adaptation-specific projects identified. The impact of climate change on assets and how the City will adapt is a new and complex discussion and further opportunities will be developed in future revisions of this AM Plan.

CLIMATE ADAPTATION DISCUSSION

Currently, Fleet Services has focused its climate change efforts on mitigation efforts and not yet on adaptation methods. This is because climate effects are more difficult to assess on Fleet Services and assets and need to be investigated further which has been identified as a continuous improvement item in **Table 28**.

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8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budgets. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated together and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options. However, at this time the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

Fleet Services is a service provider to various City of Hamilton service areas. Fleet Services relies on interdepartmental funding and the majority of the funding is in the form of cost allocations that are charged as a fee to user groups from other departments. Fleet has a total operational budget of \$15.7M, with \$15.4M from interdepartmental funding. The service costs are allocated to user groups within departments.

8.1 ACQUISITION PLAN

The acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs.

CURRENT PROJECT DRIVERS – 10-YEAR PLANNING HORIZON

The City prioritizes capital projects based on various drivers to help determine ranking for project priorities and investment decisions. As part of future AM Plans, the City will continue to develop its understanding of how projects are prioritized and ensure that multiple factors are being considered to drive investment decisions in the next iteration of the AM Plan. These drivers will include legal compliance, risk mitigation, operation and maintenance impacts, growth impacts, health and safety, reputation, and others. These drivers should be reviewed during each iteration of the AM Plan to ensure they are appropriate and effective in informing decision-making. Fleet Services and CAM do not assume any assets. Asset acquisitions are purchased or constructed for these service areas.

Fleet Services acquires vehicle and equipment assets for other service areas with acquisition requests originating from the service areas. The acquisition budgets are allocated to the service area's budgets. Fleet Services does not have any of its own acquisitions identified at this time.

CAM Division is implementing EAM software which is considered an acquisition for CAM. The priority ranking criteria for EAM acquisition can be seen in **Table 23**.

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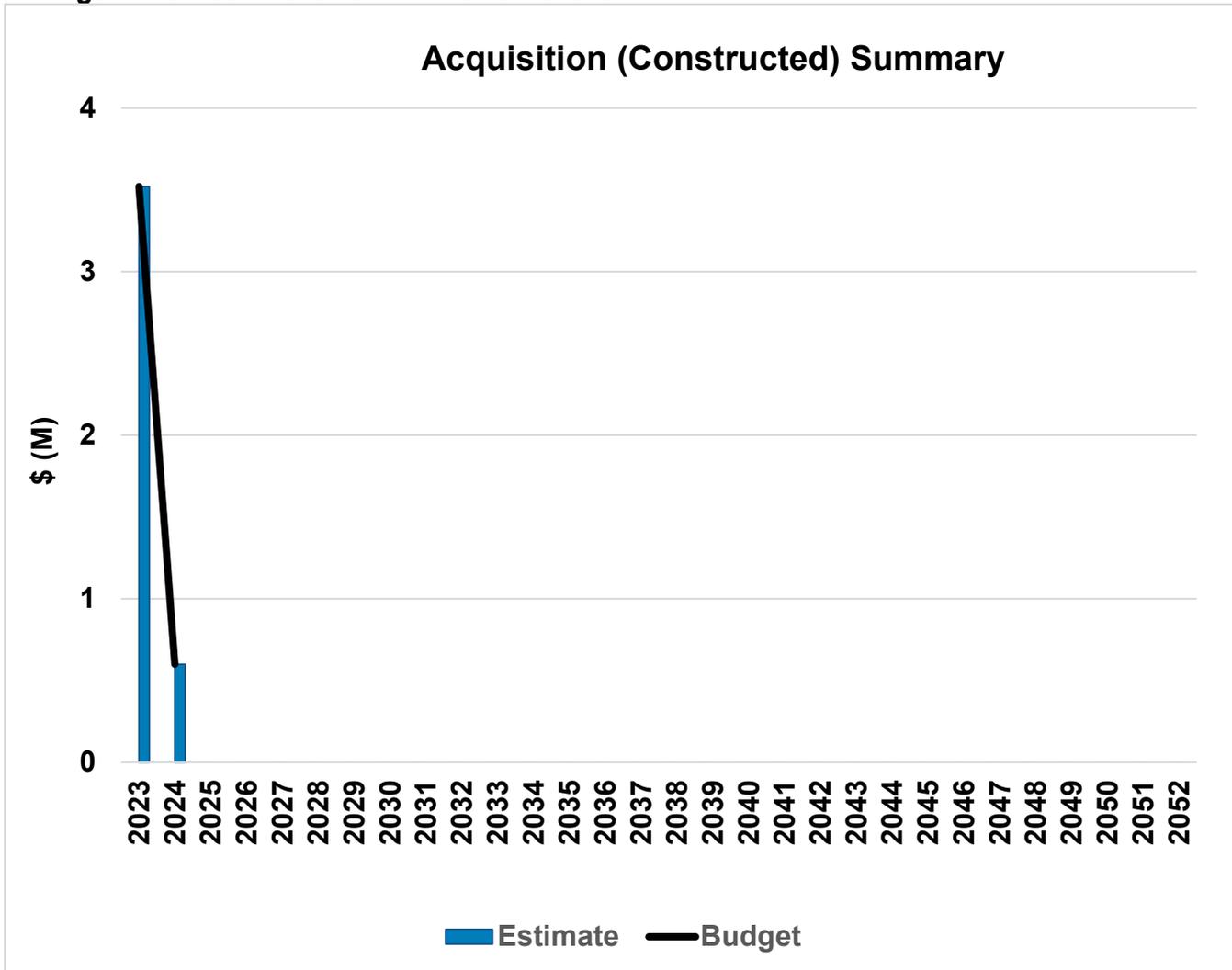
Table 23: Priority Ranking Criteria for EAM Acquisition

CRITERIA	WEIGHTING
Operational efficiency	50%
Cost reduction	50%
Total	100%

CONSTRUCTED OR PURCHASED ACQUISITIONS

Over the next two-year planning period, the City will spend \$4.1M in EAM acquisition.

Figure 14: Acquisition Constructed Summary
 All Figure Values Are Shown In 2023 Dollars

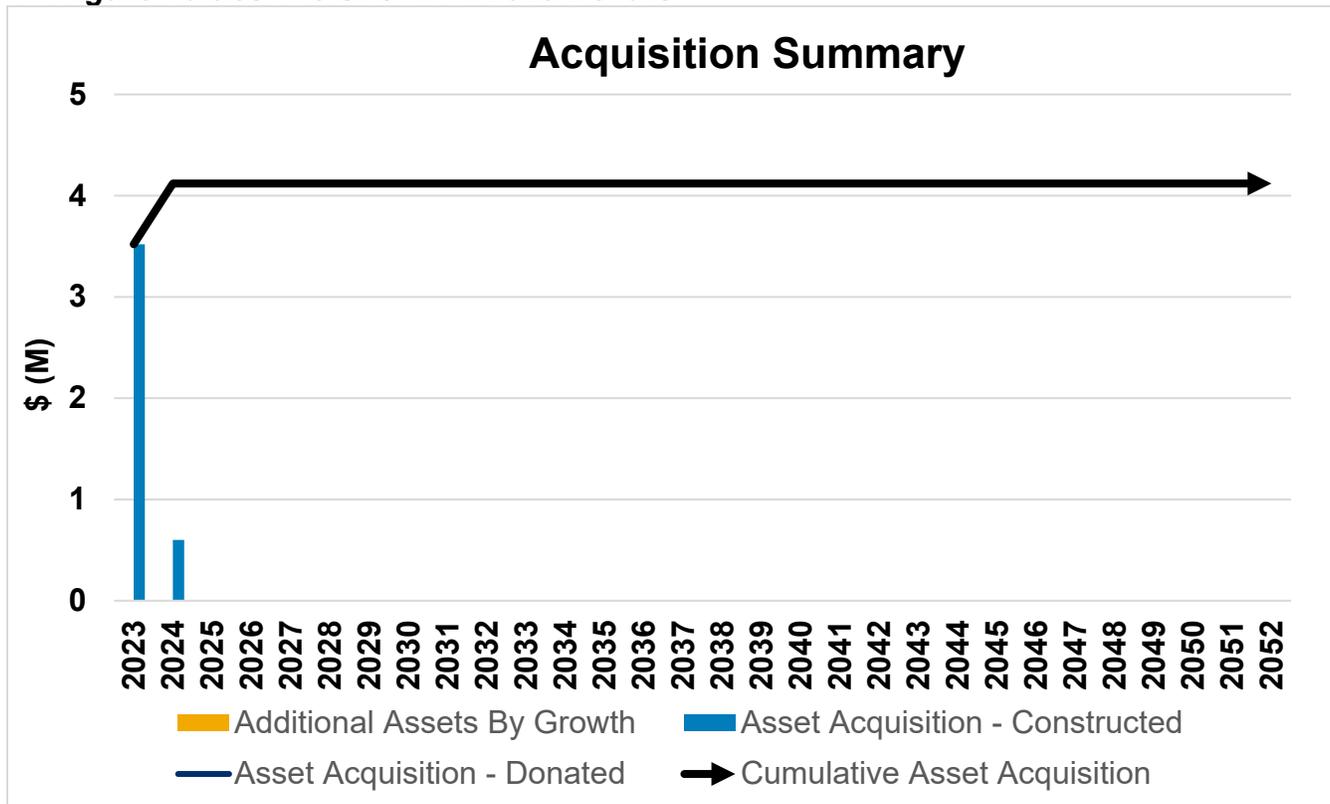


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ACQUISITIONS SUMMARY

Forecast acquisition asset costs are summarized in **Figure 16** and show the cumulative effect of asset acquisitions over the next 10-year planning period.

Figure 15: Acquisition Summary
All Figure Values Are Shown in 2023 Dollars



8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal, and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons.

- **\$1.6 Million** annually for employee-related costs for the operation of Fleet Services (including Driver Training, Management, and Inventory Stores and Fuel); and,
- **\$1.9 Million** annually for employee-related costs for Corporate Asset Management.

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are proactively applied to assets and to ensure they reach its intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition. Examples of typical maintenance activities include equipment repairs and

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component replacements along with appropriate staffing and material resources required to perform these activities.

Proactively planned maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure the CAM and Fleet Services assets are reliable and can achieve the desired level of service.

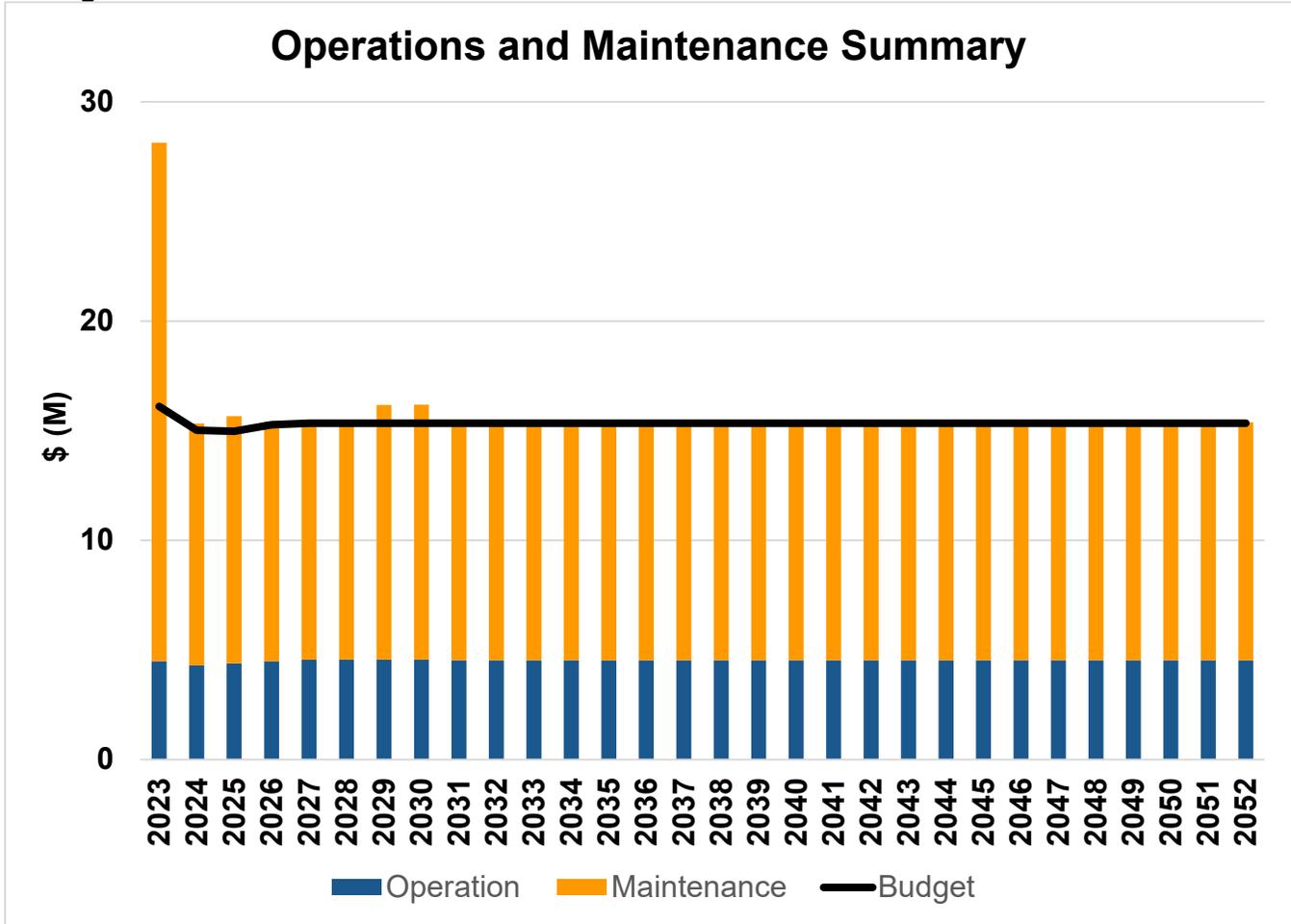
Major maintenance activities the City plans to complete over 10 years include:

- **\$4.6 Million** annually for employee-related costs for maintenance staff;
- **\$2.0 Million** annually for purchasing vehicle parts;
- **\$3.3 Million** annually for outside maintenance service;
- **\$883 Thousand** annually for maintenance shop supplies;
- **\$80 Thousand** annually on fuel station maintenance; and,
- **\$342 Thousand** for 2024 to upgrade dispensers at fuel station sites (carry-over project).

Forecast operations and maintenance costs vary in relation to the total value of the asset registry. When additional assets are acquired, future operations and maintenance costs are forecast to increase. When assets are disposed of the forecast operation and maintenance costs are reduced. **Figure 17** shows the forecast operations and maintenance costs relative to the proposed operations and maintenance planned budget.

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Figure 16: Operations and Maintenance Summary
All Figure Values Are Shown In 2023 Dollars.



The forecasted operations and maintenance needs will increase steadily over time with the addition of new assets that CAM Division and Fleet Services manages, such as new city-wide fleet assets, administrative assets, and vehicle service tools and equipment. Forecasted operational and maintenance costs for additional acquired assets are not included in this AM Plan due to data limitations.

As per **Figure 17**, Fleet Services and CAM Division has insufficient funding from the current year budget and multi-year forecast 2023-2026 to achieve the majority of operations and maintenance requirements to ensure that Fleet Services and CAM Division will be able to continue delivering their current levels of service. However, it is expected that these projections follow better costing models as recommended by ongoing consultant assignments.

For 2023, the maintenance needs shown in the graph above include \$11.96 Million of deferred maintenance work which has accumulated over time, as per the BCAs. The operational and maintenance forecasted needs include some unfunded activities maintenance activities

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identified in the BCA, and additional operational activities identified in the risk management plans as part of the risk assessment.

Generally, Fleet Services is largely funded through user fees charged to other service areas. When maintenance is performed on a vehicle, the parts and labour are charged to the service area, when a vehicle is fuelled the fuel cost is recovered from the service area. When licensing or driver services are used the costs are also recovered. Increases in operation and maintenance needs would be offset by increased charges to other city service areas as the approved budget allows.

Fleet Services and CAM Division created a three-year multi-year operating budget which included operations, maintenance, and renewal items until 2026. This multi-year forecast was included in the figure above with the operations and maintenance portions of the Operating budget, and then these numbers were carried flat across the thirty-year forecast from 2027-2052.

As the City continues to develop condition profiles and necessary works are identified based on their condition, it is anticipated these operation and maintenance forecasts will change. Future iterations of this plan will provide a more thorough analysis of operations and maintenance costs including types of expenditures for BEV vehicle maintenance training, mandatory certifications, staffing costs and requirements, equipment, and maintenance activities.

8.3 RENEWAL PLAN

Renewal is major work which does not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Asset renewals are typically undertaken to ensure the asset's reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 24** and are based on the estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2022 however they will be reviewed annually until their accuracy reflects the City's current practices.

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Table 24: Useful Lives of Assets

ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
CAM and Fleet Services IT Equipment	4-5
EAM Software	15
EV Charging Stations	10
Facilities	50
Fuel Stations – added in based on FCI and age of fuel infrastructure	35
Hoists	25
Vehicles	8-15
Vehicle Service Equipment and Tools	10

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).²⁸

Future methodologies may be developed to optimize and prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure;
- Have high use and the subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have the potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.²⁹

²⁸ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

²⁹ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

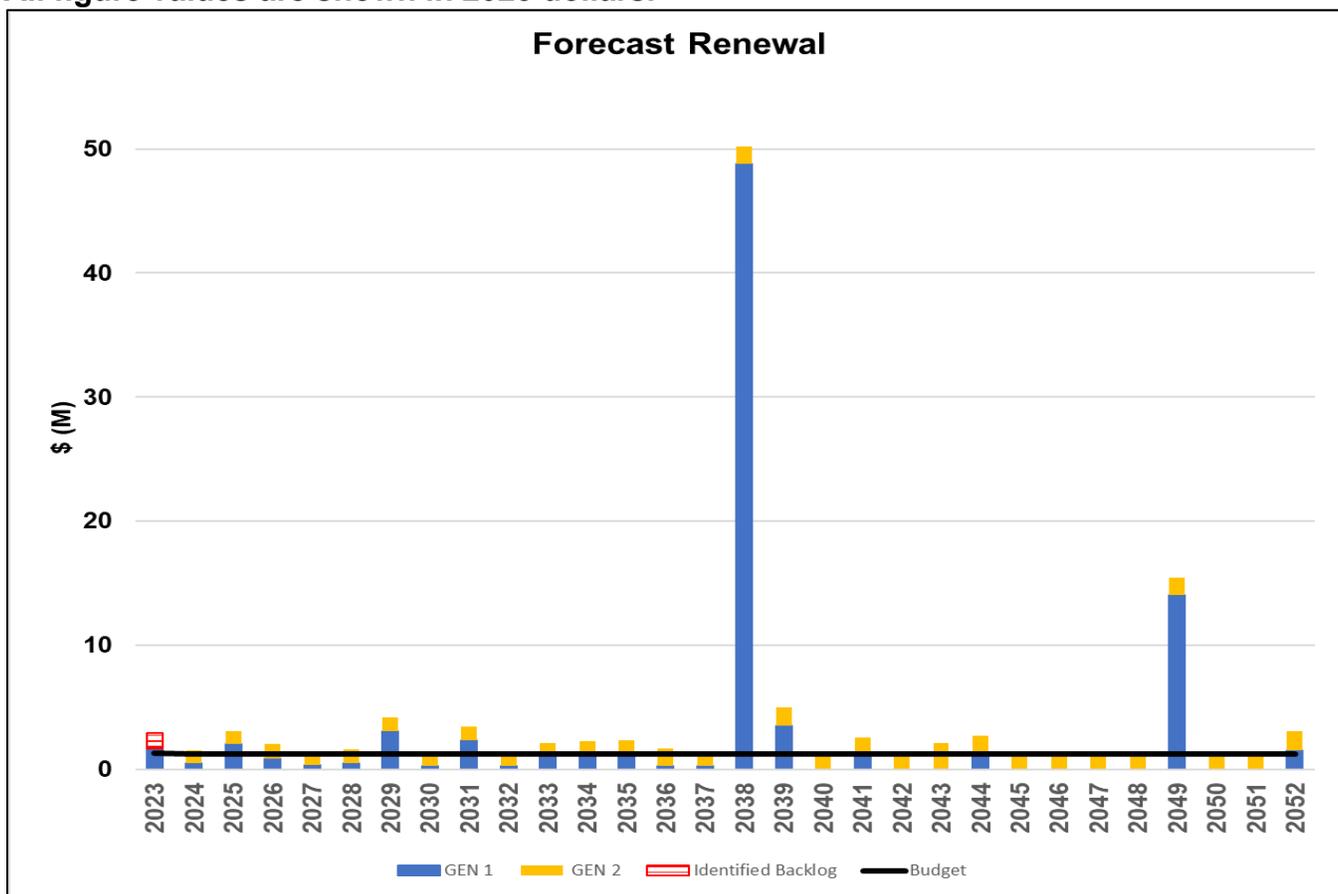
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SUMMARY OF FUTURE RENEWAL COST

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in **Figure 18**.

In the figure below, Generation 1 (Gen 1) costs refer to renewals that occur for the first time in the model based on the estimated service life and Generation 2+ (Gen 2+) costs refer to renewals that have occurred twice or more based on the estimated service life.

Figure 17: Forecast Renewal Costs
 All figure values are shown in 2023 dollars.



Currently, CAM Division and Fleet Services have a backlog of **\$1.3 M**, shown in red in 2023. This cumulative backlog represents the deferred work needed to be completed that has been identified through its current estimated service life, **Table 24**. The major backlog items for Fleet Services include:

- \$443 thousand for 11 vehicle renewals; and,
- \$835 thousand for two fuel station renewals.

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In addition to the backlog, a significant spike of \$48.8 million in 2038 is related to the renewal of the Fleet Services allocated portion of the Wentworth Street Operation Centre and the renewal of EAM software.

Other renewal spikes include:

- 2029: \$4.1 million in renewals, including:
 - Renewal of one fuel station (\$565K);
 - Renewal of six hoists (\$2.2M); and,
 - Renewals of vehicle service tools and technology (\$350K).

- 2038: \$50.1 million in renewals, including:
 - Renewal for one fleet facility (\$45.3M);
 - EAM software renewal (\$3.5M); and,
 - Renewals of vehicle service tools and technology (\$330K).

- 2049: \$15.4 million in renewals, including:
 - Renewal for one fleet facility (\$13.1M); and,
 - Renewal of two fuel stations (\$915K).

Deferring renewals creates risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. Continuously deferring renewals work ensures the City of Hamilton will not achieve intergenerational equality. If the City of Hamilton continues to push out necessary renewals, there is a high risk that future generations will be unable to maintain the level of service the customers currently enjoy. It will burden future generations with significant costs that inevitably they will be unable to sustain.

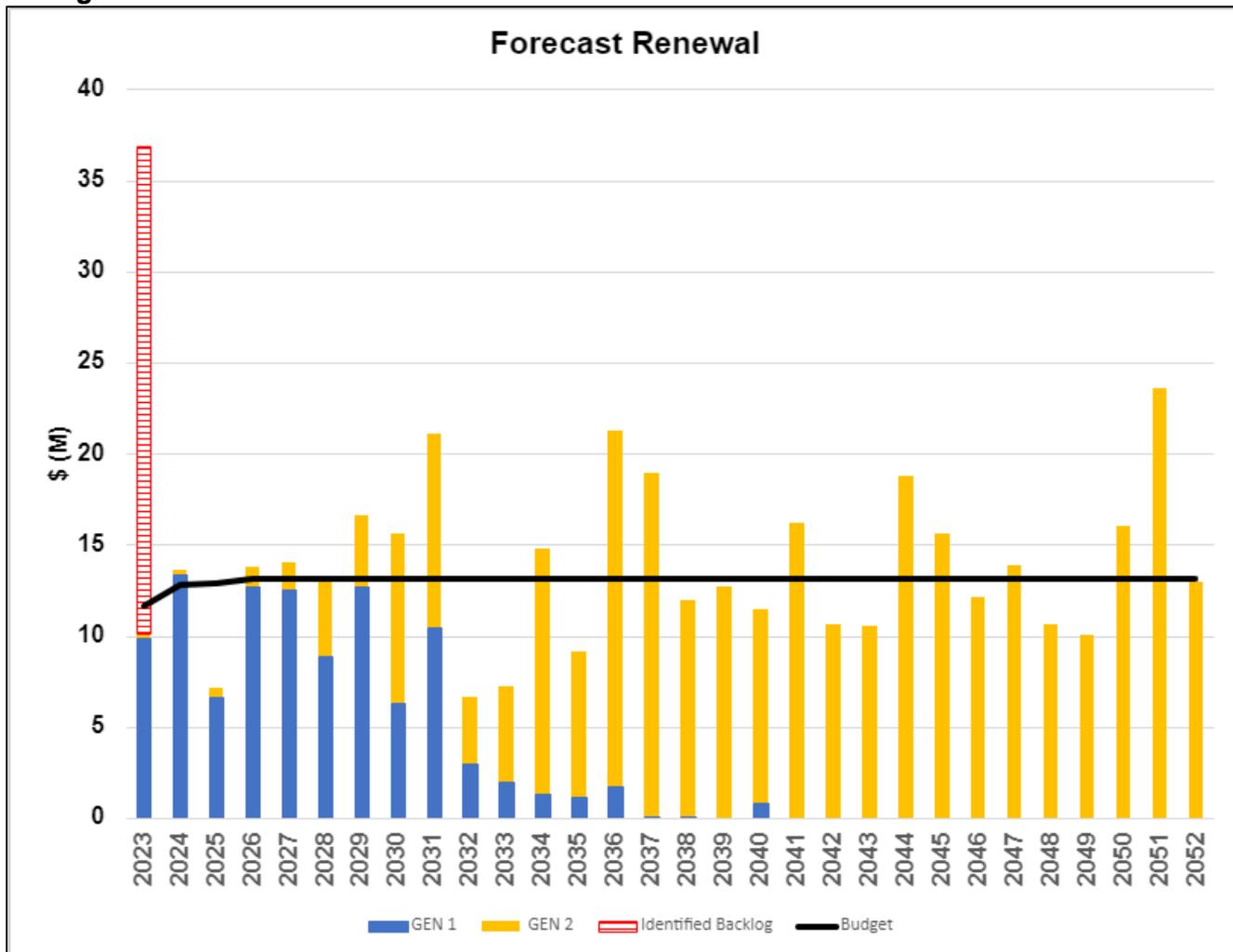
Properly funded and timely renewals will ensure the assets perform as expected and it is recommended to continue to analyze asset renewals based on criticality and availability of funds for future AM Plans.

Summary of Future Renewal Costs for City-Wide Fleet

The renewal graph for the city-wide fleet is shown below in **Figure 19**. A backlog of \$26.7 million is shown in red in 2023. This backlog represents the deferred renewals of 351 City-wide Fleet assets that are past their estimated service life.

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Figure 18: Forecast Renewal Costs for City-wide Fleet Renewal
 All Figure Values Are Shown In 2023 Dollars



As discussed in **Section 2.1.2**, the fleet renewals are funded from the Fleet Capital Reserve account, which receives monthly contributions from service areas. These contributions are calculated by Fleet Services based on the last purchase price of the vehicle divided by the estimated service life of the year, aiming to fully cover the replacement costs of vehicles at the end of their service life. However, with the Fleet Capital Reserve account in deficit, these monthly contributions are considered insufficient and require a thorough review. One reason for this deficit could be the use of the original purchase price to calculate contributions, which fails to account for inflation-driven increases in vehicle prices over time. Updating replacement values for these assets has been identified as a continuous improvement item in **Table 28**.

A consultant study³⁰ is underway to conduct an impact assessment of the current fleet capital replacement funding model, identify gaps and make recommendations for lifecycle

³⁰ Ward (2023)

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management. The recommendations from this study are anticipated by the second quarter (Q2) 2024 and will be considered in the next iteration of the AM Plan where implemented. A renewal strategy recommendation is also being prepared as part of this consultant study.

The forecast vehicle costs in this AM Plan do not include the renewal of internal combustion engine (ICE) vehicles with battery electric vehicles (BEV). On average, it is expected that renewing an ICE vehicle with a BEV would require an additional 62% of funding which does not include the installation of a charging structure. Therefore, incorporating these BEV renewals would significantly increase the overall costs beyond what is currently estimated in this AM Plan. The funding gap depicted in **Figure 19** is likely to be larger than indicated here once these additional costs are factored in.

8.4 DISPOSAL PLAN

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen.

Assets identified for possible decommissioning and disposal are shown in **Table 25**. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in **Table 25**. Any costs or revenue gained from asset disposals is included in future iterations of the plan and the long-term financial plan.

Table 25: Assets Identified for Disposal

ASSET	REASON FOR DISPOSAL	TIMING	DISPOSAL COSTS	OPERATIONS & MAINTENANCE ANNUAL SAVINGS
Fuel Stations	Transition to EV charging stations as part of net zero greenhouse gas emission goal by 2050.	2050	\$115K per fuel station.	TBD
Vehicles ³¹	Replacement at end of useful life.	Ad Hoc	N/A	No data available

³¹ Residual Value from auctioned fleet assets is transferred to the Fleet Reserve.

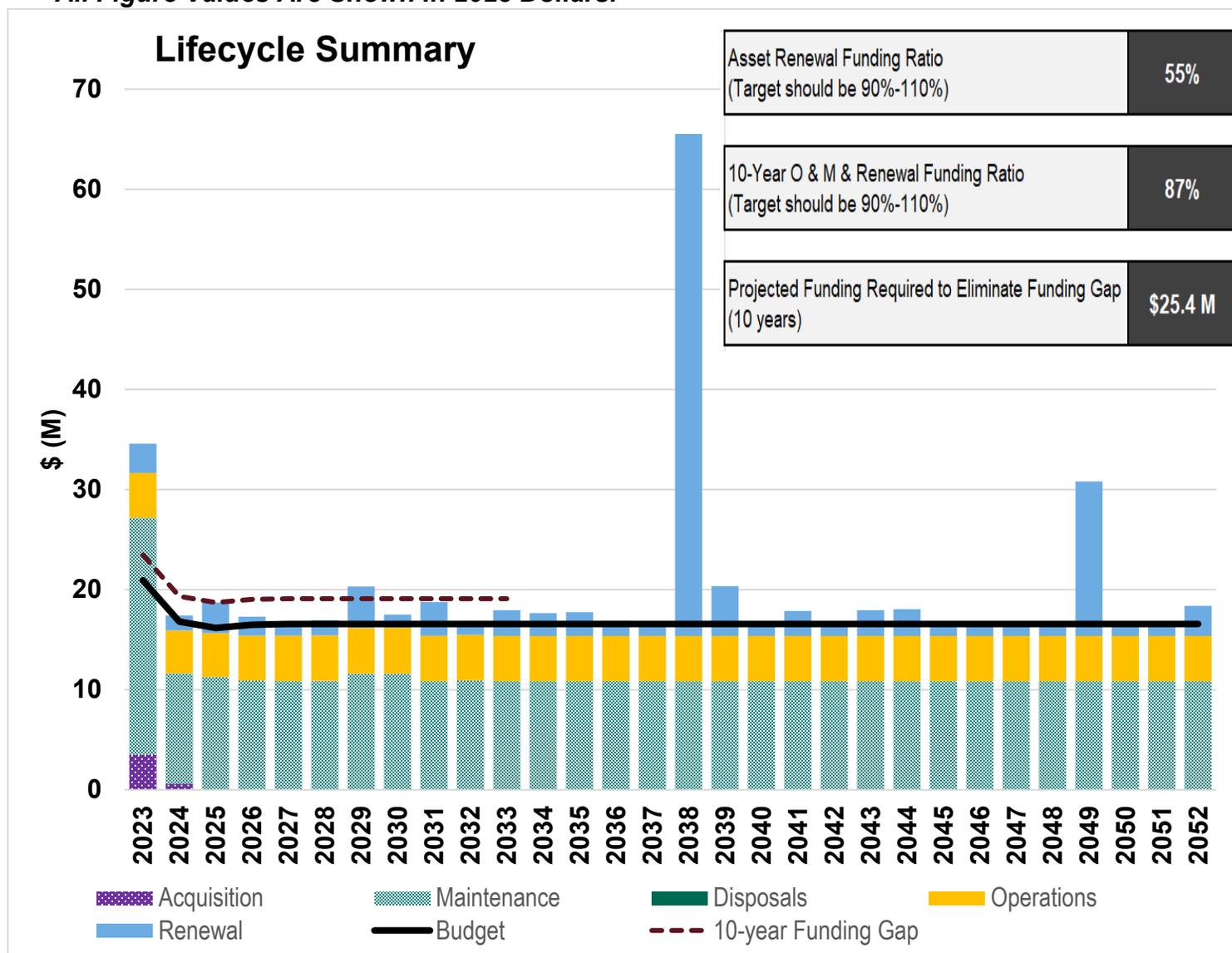
CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

8.5 LIFECYCLE COST SUMMARY

The financial projections from this asset plan are shown in **Figure 20**. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs estimated to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving a balance between costs, levels of service and risk to achieve the best value outcome.

Figure 19: Forecast Renewal Costs
All Figure Values Are Shown In 2023 Dollars.



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As per **Figure 20**, there is insufficient budget to address all lifecycle activities by Fleet Services and CAM Division. The underfunded activities include deferred facility maintenance activities, additional forecasted operational activities, and underfunded asset renewals. It is anticipated that this gap will evolve as Fleet Services investigates the reasons behind the Fleet Reserve Renewal account deficit and assesses whether the cost allocations for services provided are sufficient to cover 100% of the operational costs related to the service.

The City will continue to improve its lifecycle data, and this will allow for informed choices as to how best to mitigate impacts and how to address the funding gap itself. This gap in funding for future plans will be refined in the future to improve the confidence and accuracy of the forecasts.

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure its CAM and Fleet Services provide the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-term financial planning (LTFP) is critical for the City to ensure that network lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for CAM and Fleet Services; the City will have difficult choices to make in the future which will include options such as higher costs reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all the network needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

9.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- Medium-term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio³² **55%**

The Asset Renewal Funding Ratio (ARFR) is used to determine if the City is accommodating asset renewals in an **optimal** and **cost-effective** manner from a timing perspective and relative to financial constraints, the risk the City is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable, however, the expenditures are below this level in some service areas predominantly

³² AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

The Asset Renewal Funding Ratio is influenced by the upcoming renewals of nine fuel stations (\$6.0 M) and six hoists (\$2.2M) within the next 10 years, for which no planned budget has been allocated. Approximately \$2M has been approved for hoist renewal in the 2024 Capital budget, which will help close the funding gap. This has not been included in this lifecycle model.

If assets are not renewed at the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to the City's reputation and risk of fines or legal costs.

The lack of renewal resources will be addressed in future AM Plans while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

City-Wide Fleet

Asset Renewal Funding Ratio³³ **Not Yet Quantified**

As outlined in **Section 8.3**, Fleet Services currently has a consultant report³⁴ in progress to tackle identified deficiencies with the sustainability of the Fleet Capital Reserve Account and assess the monthly contributions it receives from service areas. Upon completion of the consultant study³³, the AM Plan will be revised accordingly, and the Asset Renewal Funding Ratio will be updated for the next iteration of the AM Plan.

MEDIUM-TERM – 10 YEAR FINANCIAL PLANNING PERIOD

10-Year Operating, Maintenance and Renewal Ratio 87%

Although this AM Plan includes forecast projections to 30 years, the higher confidence numbers are typically within the first 10 years of the lifecycle forecast. The 10-year Operating, Maintenance and Renewal Ratio compares the Planned Budget with the Lifecycle Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the ARFR, the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization's risk and service level commitments.

³³ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

³⁴ Ward (2023)

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The forecast operations, maintenance, and renewal costs over the 10-year planning period are **\$19.1M** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The proposed (budget) operations, maintenance and renewal funding is **\$16.6M** on average per year giving a 10-year funding shortfall of **\$2.54M** per year or **\$25.4M** over the 10-year planning period. This indicates that **87%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget, which is outside of the 90-110% range. Therefore, it can be concluded that Fleet Services is funding its assets at a lower-than-acceptable rate. Note, that these calculations exclude acquired assets.

Funding an annual funding shortfall or funding 'gap' should not be addressed immediately. The overall gap in funding city-wide will require vetting, planning and resources to begin to incorporate gap management into the future budgets for all City services. This gap will need to be managed over time to reduce it in a sustainable manner and limit financial shock to customers. Options for managing the gap include;

- Financing strategies – increased funding, block funding for specific lifecycle activities, long-term debt utilization;
- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets;
- Influence level of service expectations or demand drivers;
- Analyze the charge rates for all services provided by Fleet Services to assess if they are sufficient to cover the service; and,
- Conduct a cost analysis of the Fleet Capital Reserve account.

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of **90-110%** for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

9.2 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Table 26 shows the forecast costs (outlays) required for consideration in the 30-year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

The city will manage the ‘gap’ by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low-use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

Table 26: Forecast Costs (Outlays) For the Long-Term Financial Plan
Forecast Costs Are Shown In 2023 Dollar Values.

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2023	\$ 3,520,000	\$ 4,490,173	\$ 23,651,560	\$ 2,920,479	\$ -
2024	\$ 600,000	\$ 4,293,017	\$ 10,694,869	\$ 1,495,361	\$ -
2025	\$ -	\$ 4,391,381	\$ 11,274,482	\$ 3,050,218	\$ -
2026	\$ -	\$ 4,491,339	\$ 10,920,260	\$ 1,884,887	\$ -
2027	\$ -	\$ 4,561,913	\$ 10,855,399	\$ 1,358,293	\$ -
2028	\$ -	\$ 4,561,913	\$ 10,875,308	\$ 1,508,231	\$ -
2029	\$ -	\$ 4,561,913	\$ 11,613,863	\$ 4,144,428	\$ -
2030	\$ -	\$ 4,561,913	\$ 11,626,262	\$ 1,322,427	\$ -
2031	\$ -	\$ 4,561,913	\$ 10,858,051	\$ 3,358,293	\$ -
2032	\$ -	\$ 4,561,913	\$ 10,949,977	\$ 1,388,611	\$ -
2033	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 2,560,972	\$ -
2034	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 2,271,278	\$ -
2035	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 2,360,833	\$ -
2036	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 1,500,611	\$ -
2037	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 1,322,678	\$ -
2038	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 50,136,164	\$ -
2039	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 4,968,199	\$ -
2040	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 1,391,151	\$ -
2041	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 2,482,678	\$ -
2042	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 1,319,887	\$ -

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2043	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 2,566,587	\$ -
2044	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 2,662,361	\$ -
2045	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 1,325,218	\$ -
2046	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 1,319,887	\$ -
2047	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 1,358,293	\$ -
2048	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 1,396,231	\$ -
2049	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 15,424,224	\$ -
2050	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 1,322,427	\$ -
2051	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 1,358,293	\$ -
2052	\$ -	\$ 4,561,913	\$ 10,852,946	\$ 3,000,611	\$ -

9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in the City’s operational budget and the 10-year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM plan will provide service delivery options and alternatives to optimize limited financial resources.

9.4 VALUATION FORECASTS

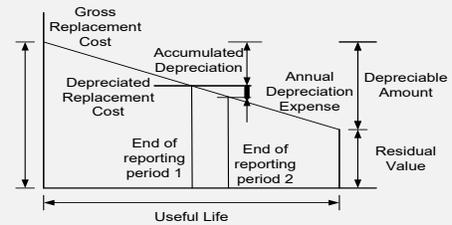
Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and remove the high costs of renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs however this will be improved for the next iteration of the plan.

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

9.5 ASSET VALUATION

Replacement Cost (Current/Gross)	\$87.4 M
Depreciable Amount	\$87.4 M
Depreciated Replacement Cost³⁵	\$33.9 M
Depreciation	\$ 2.4 M



The current replacement cost is the most common valuation approach for specialized infrastructure assets. The methodology includes establishing a comprehensive asset registry, assessing replacement costs (based on market pricing for the modern equivalent assets) and useful lives, determining the appropriate depreciation method, testing for impairments, and determining remaining useful life.

As the City matures its asset data, it is highly likely that these valuations will fluctuate significantly over the next three years, and they should increase over time based on improved market equivalent costs as well as anticipated cost changes due to climate change mitigation and adaptation strategies.

9.6 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM Plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 30-year horizon and encompass additional operational needs, where known, but do not address all other operational needs that may not yet be identified;
- Maintenance forecasts are based on current budget allocations and encompass anticipated needs, where known, but do not necessarily identify all asset needs at this time; and,
- Replacement costs were based on historical costing and subject matter expertise. They were also made without determining what the asset would be replaced with in the future.

³⁵ Also reported as Written Down Value, Carrying or Net Book Value.

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

9.7 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the **AM Plan Overview**.

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a **Medium** confidence level.

Table 27: Data Confidence Assessment for Data Used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	Low	<p>The impacts from the identified demand drivers were not added to the lifecycle model for this iteration of the AM plan.</p> <p>The overall demand for city-wide vehicles is spread across AM Plans of other service areas and the overall vehicle demand forecast is not included and is out of scope for this AM Plan.</p>
Acquisition Forecast	Low	<p>Fleet Services acquisitions are captured in the other service area budgets.</p> <p>CAM Division EAM software implementation is added as an acquisition based on the capital project budget.</p>
Operation Forecast	Medium	<p>Currently budget-based with few additional forecast operational activities.</p> <p>Additional forecast operational activities may be added after completion of the consultant study, as mentioned in Section 2.14.</p>
Maintenance Forecast	Low	<p>Maintenance forecasts in this Asset Management Plan are typically based on the results of the Building Condition Assessment which have been updated by the Corporate Facilities and Energy Management division and are assumed to be a medium confidence.</p> <p>The maintenance forecast for vehicles is based on budget. Additional maintenance KPIs (Key Performance Indicators) may be included after the implementation of EAM software which may trigger additional maintenance activities. The maintenance forecast of vehicle servicing tools and hoists is not clearly forecasted in this AM plan and is based on budget.</p>

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

DATA	CONFIDENCE ASSESSMENT	COMMENT
Renewal Forecast - Asset Value	Low	The renewal forecast for vehicles is of medium confidence however as part of the Fleet Capital Reserve cost analysis, these vehicle renewal values are expected to change. Renewal values of vehicle service equipment and tools are low confidence. The renewal of ICE vehicles with BEVs is not modelled into the lifecycle model, as mentioned in Section 8.3 , and the renewal costs are underreported.
Renewal Forecast - Asset Useful Life	Medium	Estimated service lives of assets were based on subject matter expertise. Estimated service lives for vehicles, facilities, fuel stations and technology renewals were medium confidence. Vehicle service equipment and tools' estimated service lives are low confidence due to a lack of detailed inventory data.
Renewal Forecast - Condition Modelling	Medium	Condition assessments were conducted for facilities based on Building Condition Assessment reports. The condition of fuel stations was determined using the Financial Condition Index calculated for this AM Plan. For vehicles and technology assets, assessments relied on subject matter expertise. However, no condition information was available for vehicle service equipment and tools.
Disposal forecast	Not Applicable	No disposals were integrated into the forecast.

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PRACTICES³⁶

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2023 Approved CAM and Fleet Operating Budget;
- 2024-2025 Multi-Year CAM and Fleet Operating Forecast;
- 2023 Approved CAM and Fleet Capital Budget;
- 2024-2032 Multi-Year Capital Forecast;
- Building Condition Assessment Reports;
- Asset Management Data Collection Templates; and,
- Historical cost and estimates of budget allocation based on SME expertise.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter Expert Opinion and Anecdotal Information; and,
- Reports from the mandatory inspections, operational and maintenance activities internal reports.

10.2 IMPROVEMENT PLAN

It is important that the City recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision-making. The tasks listed below are essential to improving the AM Plan and the City's ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning and plans to physically improve the assets.

The Improvement Plan **Table 28** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this AM Plan will provide updates on these improvement plans.

³⁶ ISO 55000 Refers to this as the Asset Management System

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

Table 28: Improvement Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1.	Design and develop a condition assessment for all equipment and tools assets.	Fleet Services	Internal Resources	2024-2025
2.	Deploy an Enterprise Asset Management System to comply with fleet operational requirements.	Fleet Services and Corporate Asset Management	Training, dedicated hours to support	Commencement of EAM
3.	Complete resource assessment for Fleet Services to determine staffing needs.	Fleet Services	Internal Resources	TBD
4.	Conduct cost analysis for Fleet Capital Reserve account and update vehicle replacement costs, additional changes from modern technology, and monthly charges paid by service areas.	Fleet Services / Finance	TBD	TBD
5.	Develop an internal services survey to help develop customer values and customer levels of service for future Asset Management Plans.	Corporate Asset Management / Fleet Services	Internal Resources	In the next iteration of the AM Plan
6.	Investigate incorporating a condition rating during regular vehicle inspection / maintenance activities on a 5-point scale.	Fleet Services	Internal Resources	TBD
7.	Enhance methodology for vehicle-specific Key Performance Indicators such as vehicle downtime, mileage etc., and build into EAM software.	Fleet Services	Internal Resources	TBD

CORPORATE ASSET MANAGEMENT (FLEET SERVICES AND EAM) - 2024 ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
8.	Develop a strategy to optimize the Fleet Services vehicle portfolio utilization.	Fleet Services	Internal and External Resources	TBD
9.	Investigate incorporating a condition rating during annual fuel station inspection activities per a 5-point scale.	Fleet Services	Internal Resources	2025

10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated regularly to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one-to-ten-year detailed works programs, budgets, business plans and corporate structures consider the ‘global’ works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 110%).

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Corporate Facilities and Energy Management Asset Management Plan 2024



CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

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DEMAND DRIVERS



Population Change – Hamilton’s population is growing, necessitating the expansion of facilities citywide to accommodate this increase. Consequently, there will be a need for additional personnel to effectively oversee these expansions and manage the growing facility demands.



Climate Change - CFEM is focused on ensuring that its facilities transition to meet the City of Hamilton’s climate change goals with a focus on enhancing operational resiliency and decreasing its carbon footprint. These climate change goals set forth by the Pathway to NetZero are planned to be met by 2050.

RISK



Critical Assets were identified at the facility level, which impacts the overall function of the City. These include:

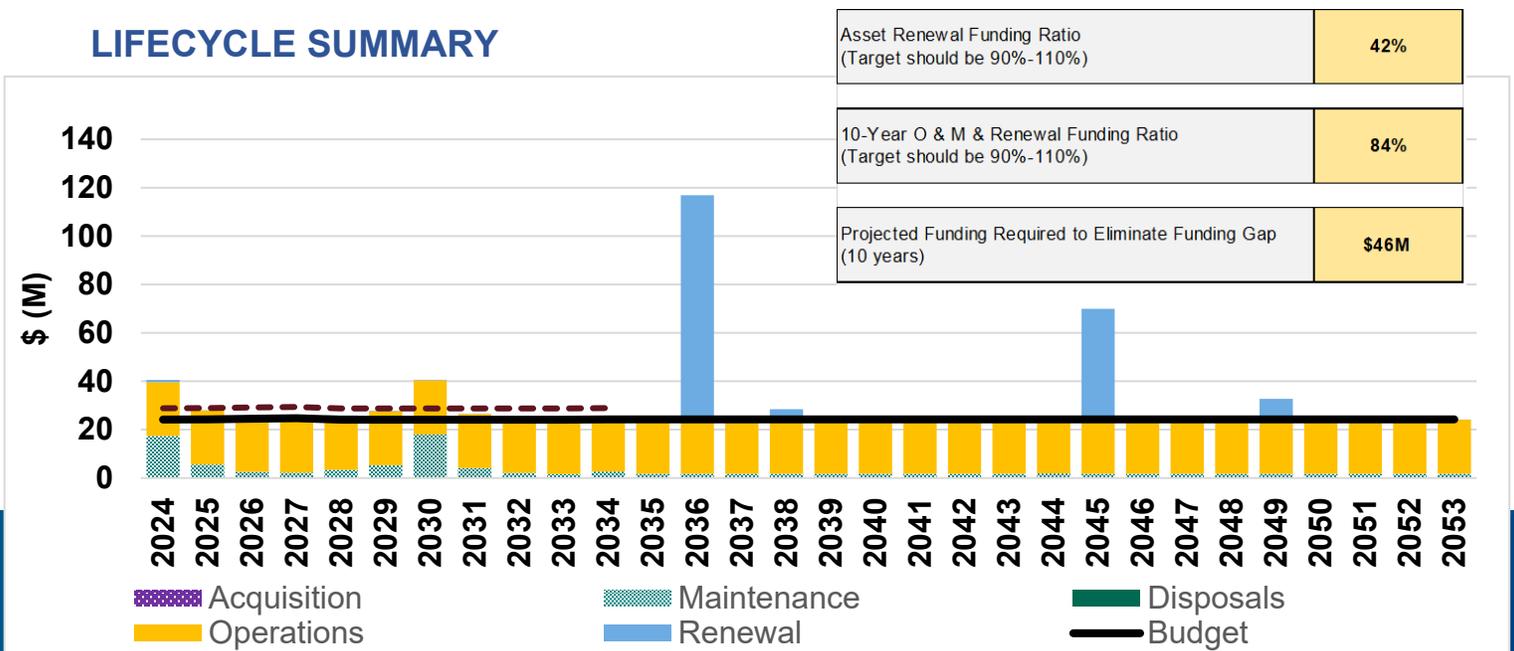
- Wentworth Street Operations Centre
- Stoney Creek City Hall
- Provincial Offences Administration
- Lister Block
- Hamilton City Hall

CLIMATE CHANGE MITIGATION



- Net Zero facility design projects have been adopted into major renovation new construction projects at the Macassa Lodge and proposed Waterdown Police and Fire Station.
- Enhancing operational resiliency through energy efficient equipment retrofit, low carbon fuel transition and other assessments is included in feasibility studies and assessment as a regular practice.

LIFECYCLE SUMMARY



CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

1. INTRODUCTION

Corporate Facilities and Energy Management (CFEM) provides facility services to various internal City divisions which includes supporting the operations and maintenance functions of a diverse portfolio of 500+ city facilities as well as ensuring the efficient management of their energy usage. In addition, CFEM supports the operation and maintenance of Tim Hortons Field which is an entertainment sports facility that is the home stadium for the Hamilton Tiger-Cats professional Canadian football team and Forge FC Canadian professional soccer club.

The purpose of this Asset Management Plan (AM Plan) is to ensure that CFEM has the required assets to deliver its services. It also aims to communicate the requirements for the sustainable delivery of these services through the management of assets, compliance with regulatory requirements (i.e. O. Reg 588/17)¹, and required adequate funding to provide an acceptable state of good repair with appropriate levels of service over the 2024-2053 planning period.

¹ Government of Ontario, 2017

CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

2. BACKGROUND

The information in this section is intended to provide background on the CFEM services by providing a service profile, outlining legislative requirements, and defining the asset hierarchy used throughout the report. This section will provide the necessary background for the remainder of the AM Plan. While CFEM is responsible for providing facility management services for many facilities owned across the City, the facilities listed below are identified as ones CFEM has primary oversight over. The scope of this plan includes both the Facilities with the primary owner and responsibility by CFEM and the resources and assets required for the overall facility management services they provide across the city.

Table 1: Facilities with Primary Responsibility by CFEM

ADMINISTRATIVE FACILITIES	YARD / MAINTENANCE FACILITIES	TIM HORTONS FIELD
<ul style="list-style-type: none"> • Hamilton City Hall • Hamilton City Hall Garage • Lister Block • Dundas Town Hall • Stoney Creek City Hall • Glanbrook Town Hall • Provincial Offences Administration 	<ul style="list-style-type: none"> • Central Services Workshops (Barton Yard) • Wentworth Street Operations Centre 	<ul style="list-style-type: none"> • Tim Hortons Field

2.1 SERVICE PROFILE

Listed below are related documents reviewed in preparation for the Asset Management Plan:

- **Asset Management Plan Overview Document**;
- Corporate Energy and Sustainability Policy; and,
- Pathway to Net Zero for Corporate Buildings.

Additional financial-related documents are identified in **Section 10** Plan Improvement and Monitoring.

2.1.1 SERVICE HISTORY

The CFEM division operates within the Public Works Department. A reorganization of the Public Works structure in 2017 led to the establishment of the Energy, Fleet and Facilities Management Division. Subsequently, a minor reorganization in 2022 resulted in the removal of the Fleet Section, with the division now focusing solely on facility assets under the name Corporate Facilities and Energy Management (CFEM) Division.

CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

CFEM oversees a diverse portfolio of more than 500 facilities across multiple divisions of the city, with a total value exceeding \$4 billion as of 2023. While CFEM is a service provider to these city-owned facilities, for the purposes of this AM Plan, only the assets that CFEM needs in order to provide its services are contained in this Plan. All other facilities are contained in their respective AM Plans. Within CFEM, the Office of Energy Initiatives was founded in 2006 to monitor the City's energy usage, costs, energy and Greenhouse Gas (GHG) intensity, and data reporting, and to facilitate, lead and support energy efficiency projects. The City of Hamilton became the first municipality in Ontario to gain acceptance from the Ontario Energy Financial Corporation for the construction of a sustainable renewable energy generator, achieved through the development of a biogas cogeneration plant in 2006.

Other established components within the division include the Operations and Maintenance group, the Strategic Planning, Capital Construction and Compliance group, and the Facilities Planning and Business Solutions group. Most recently, a distinct section within the division, Corporate Security, was established in 2024, having previously been integrated under the Facilities Planning and Business Solutions umbrella. Additionally, Tim Horton's Field, the multi-purpose stadium, commenced operations in September 2014.

2.1.2 SERVICE FUNCTION

CFEM's primary responsibilities revolve around operations and maintenance by preserving, improving, and guaranteeing the efficient functioning of a variety of city-owned and leased facilities. They offer a wide range of services for the City's entire facility asset portfolio, while also serving as asset owners for their own facilities. The subsequent service functions detailed below showcase the group's capabilities as they apply on a city-wide scale. These sections operate under the CFEM umbrella, delineating the varied roles and functions of the division, all of which contribute to the city's overall welfare and functionality:

- **Operations and Maintenance**
 - Maintenance and Repair Facilities
 - Work Requests
 - Building Security
 - Contract Management
 - Project Coordination
- **Planning, Capital Construction and Compliance**
 - Capital Planning
 - Facility Condition Assessments
 - Renovations (Major and Minor)
 - Refurbishing
 - Office Relocations
 - New Furniture Requests
 - Accessibility Reviews
 - Project Management Services
 - Capital Projects (Large and Small)
 - Compliance Programs

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- **Facilities Planning and Business Solutions**
 - Facilities Planning
 - Facilities Service Centre
 - Leased Facility Management
 - Technical Services includes space planning.
 - Property and tenant Management
- **Corporate Security**
 - Security Planning Services
 - Incident Management and Reporting
 - Public Engagement and special initiatives support.
- **Tim Horton's Field**
 - Home stadium to Hamilton Tiger-Cats and Forge FC sports clubs
 - Events venue
 - Community rental space
- **Energy Management**
 - Utilities
 - Energy data reporting
 - Utility billing
 - Commodity procurement
 - Energy Engineering
 - Energy efficiency project delivery and support
 - Energy management benchmarking and planning
 - Incentive applications
 - Net Zero and renewable energy
 - Demand Management

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2.1.3 USERS OF THE SERVICE

2.1.3.1 CORPORATE SUPPORT (INTERNAL USERS)

Users of the service include internal staff working within the City's facilities such as corporate employees, Hamilton Fire Department (HFD), Hamilton Public Library (HPL), Recreation, Hamilton Police Service (HPS), and Long-Term Care (LTC) clients. Staff members can submit requests to access services offered by the CFEM team. Similarly, internal staff operating City-owned facilities are the primary users of energy management services, collaborating on energy efficiency and Greenhouse Gas (GHG) reduction projects and utility procurement and usage monitoring.

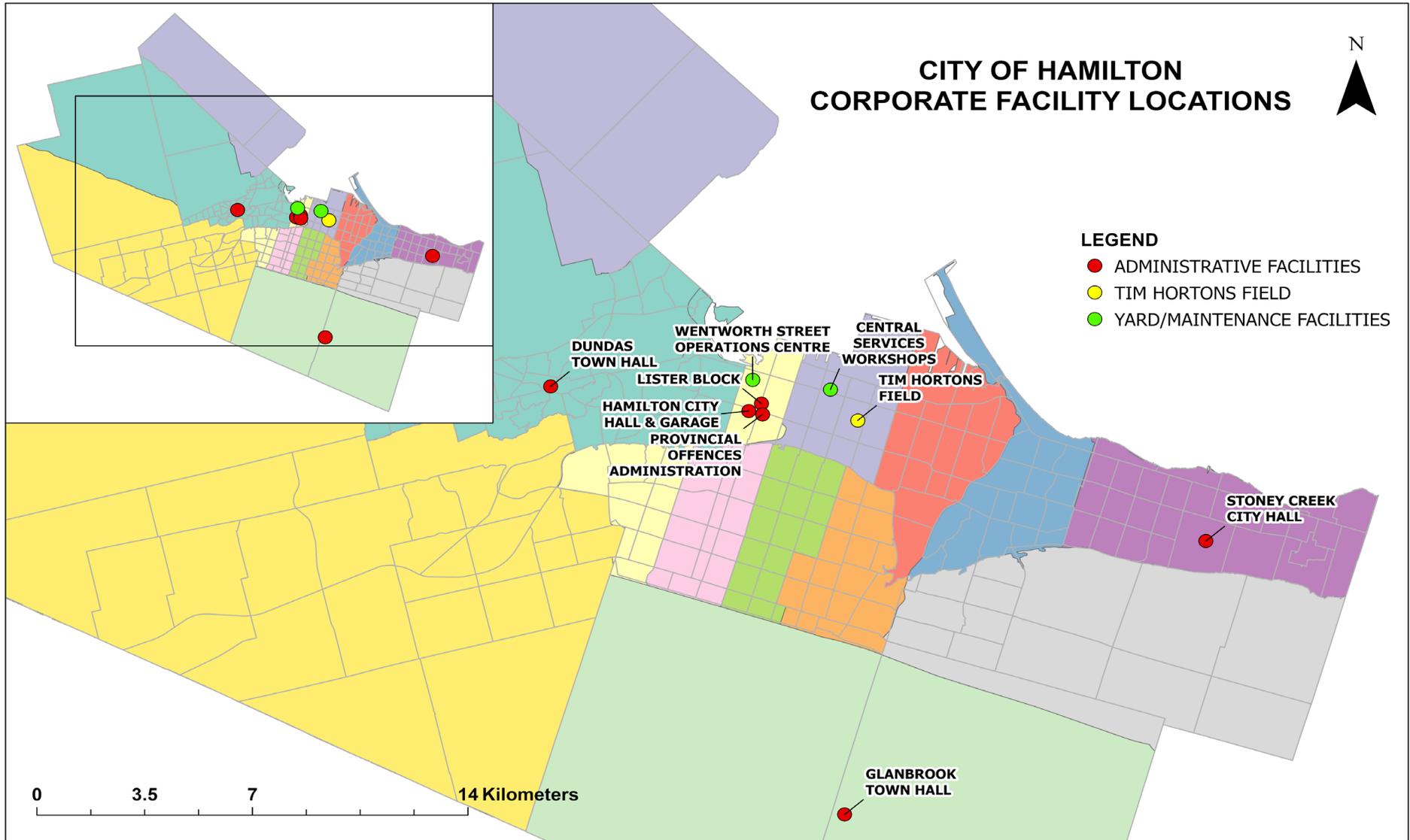
2.1.3.2 COMMUNITY FACILITIES (EXTERNAL USERS)

Users of these services also include the public, who benefit from the maintenance and operations of community facilities provided by the CFEM team. In this regard, physical assets serve as the resources provided to these service users and their experience visiting these facilities. Additionally, these users consist of both the attendees of events at Tim Horton's Field, and the sports organizations in long-term contracts with the facility.

Presented in **Figure 1** is a map of facilities with primary responsibility by CFEM. This list of facilities is included in **Table 1**, consisting of assets for use by both internal and external users.

CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

Figure 1: Facilities with Primary Responsibility by CFEM



CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

2.1.4 UNIQUE SERVICE CHALLENGES

CFEM has some unique service challenges which will be discussed throughout this report:

- The primary service challenge facing CFEM stems from financial limitations from annual operations and maintenance budget allocation. With escalating facility-related expenses, the significant challenge lies in the insufficient budget allocation necessary to effectively manage the workload and costs required to ensure facilities are in a good state of repair and in adequate working order. Due to this, many asset lifespans have had to be extended beyond their expected service life, increasing emergency failure rates and downtime in operations. This has resulted in shut shutdown of recreational facilities impacting public programs and other services provided by these facilities which is further discussed in the Recreation AM Plan. Balancing the infrastructure needs with the programming needs continues to be a priority for CFEM. By incorporating all deferred work at a facility whenever another project objective arises, the operating impacts and closures of facilities can be minimized.
- Internal staff capacity issues have been noted specific to vendor management. CFEM currently manages over 120 vendors with contracts responsible for a variety of facility operations, which they are underequipped to manage with their current staffing capacity. Technical Standards and Safety Authority (TSSA) inspections and other regulatory bodies assist in identifying gaps in service delivery of contracts at CFEM facilities. CFEM staff-to-facility ratio is much lower than similarly sized municipalities which has impacted adequate and routine quality control of service providers across the portfolio. Additionally, there have been noted shortages in the number of internal skilled trade staff, as well as shortcomings in emergency response protocols. As this first version of the AM plan is limited to current levels of service, it does not address the optimization of resources needed to achieve the desired level of service. This has been noted as a continuous improvement item in **Section 10.2**.
- Implementing the integration of Internet of Things (IoT) devices into existing facility equipment inventory has been noted as a challenge. These devices impose additional operational workloads on staff that were previously non-existent, necessitating further training to implement.
- Given the energy intensity and Greenhouse Gas (GHG) emission reduction targets established in the Corporate Energy and Sustainability Policy (CESP), the predominant service challenge for the energy management team is the implementation of necessary projects to reach the goals established. In part of this challenge, there are additional barriers to reaching the outlined goals as the Office of Energy Initiatives (OEI) has no direct control of facility users (e.g., optimized operations through HVAC post-implementation). The effective operation of the upgraded systems is dictated by user

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behaviors which may require additional education to ensure impactful energy use reductions are realized. Additionally, incremental funding above and beyond the life cycle renewal funding is a key challenge to bring facilities to Net Zero-ready condition.

- Alongside financial restraints, a major obstacle in climate adaptation lies in the existing limitations in the capacity of the electrical infrastructure grid. As the installation of EV (electric vehicle) chargers and the transition from fuel-burning to electrified equipment in facilities demand greater power, situations may arise where the current electrical grid lacks sufficient capacity for these systems to be feasibly implemented. Moreover, the City of Hamilton is unable to directly address this limitation as the electrical grid is owned and operated by a separate entity.
- Service challenges for the operation of Tim Hortons Field revolve around meeting contractual obligations with sports organizations and commitments to maintaining the asset as a first-class facility. With limitations in funding, the possibility of breaching contracts poses a risk of litigation and subsequent reputational and financial costs.
- Delivering new construction projects with long lead times requires larger and strengthened collaboration with other City departments and divisions, followed by adequate resourcing of both staff and finances to deliver these capital projects. Alternate delivery and integrated project delivery models are to be explored to enable the effective execution of these projects to keep up with new facility needs at pace with growth.

2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of the respective asset group’s services are outlined in **Table 2**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

Table 2: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENT
O. Reg. 332/12: Building Code	Requirements for the construction of new and alterations of existing facilities. Additionally, the building code outlines energy efficiency requirements for buildings.
O. Reg. 191/11: Integrated Accessibility Standards	Accessibility requirements for facility construction and renovations.
O. Reg. 278/05: Designated Substance	Requirements for the management of asbestos on construction projects in buildings and repair operations.

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LEGISLATION OR REGULATION	REQUIREMENT
COH By-Law 10-103	A by-law respecting the prevention of backflow into the water distribution system of the City of Hamilton.
TSSA (Technical Standards and Safety Authority)	Ontario's public safety regulations for Elevating and Amusement Devices, Ski Lifts, Fuels, Boilers and Pressure Vessels, and Operating Engineers.
COH By-Law 11-078	A by-law respecting the control of Legionella bacteria in cooling towers.
O. Reg. 213/07: Fire Code	As related to the Ontario Building Code, specific regulations aimed at limiting the probability of fire in facilities.
ESA (Electrical Safety Authority)	Electrical safety standards and requirements for facilities.
OSHA (Occupational Safety and Health Act)	Health and safety standards ensure safe and healthful working conditions for workers.
R.R.O. 1990, Regulation 565	Regulations aimed to prevent or reduce the risks of water-borne disease or injury and promote healthy recreational water use.
Procurement Policy By-law 21-255	A by-law respecting the procurement policy for the City of Hamilton.
Ontario Heritage Act, R.S.O. 1990, c. O.18	Guidelines related to the preservation of properties deemed culturally significant.
O. Reg 25/23 Broader Public Sector (BPS): Energy Reporting and Conservation Demand Management Plans	Made under the Electricity Act, of 1998, BPS organizations are required to report annually to the Ministry of Energy and update their plans every five years.

2.3 ASSET HIERARCHY

In order to deliver services, CFEM requires assets. The CFEM service areas have been broken down into **four** asset classes for the purpose of this AM Plan which are shown in **Table 3**:

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- **Facilities:** refers to City-owned facilities that CFEM provides primary oversight on and that they are required to deliver their widespread facility services.
- **Fleet:** refers to vehicles which are used for CFEM services, as well as ones for use at Tim Horton’s Field.
- **Equipment:** refers to all equipment used for CFEM service delivery including facilities maintenance equipment and Tim Horton’s Field equipment such as media room and ticketing software, and kitchen and food concessions equipment.
- **IT:** describes different IT assets required to deliver the service including desktops, laptops, tablets, mobile equipment and digital solutions.

Table 3 : Asset Class Hierarchy

SERVICE AREA	CORPORATE FACILITIES AND ENERGY MANAGEMENT, TIM HORTONS FIELD			
ASSET CLASS	FACILITIES ^{2 3}	FLEET	EQUIPMENT	IT
CFEM ASSETS	<ul style="list-style-type: none"> • Administrative Facilities • Yard/Maintenance Facilities 	<ul style="list-style-type: none"> • Pickup Truck • Van • Scissor lift 	<ul style="list-style-type: none"> • Floor scrubbers • Snowblowers • Vacuum pump • Gas detector • Handheld sprayer • Air Compressors 	<ul style="list-style-type: none"> • Desktop Computers • Laptops • Mobile Phones • Facility Mgmt. Software (e.g., ARCHIBUS, Asset Planner)
TIM HORTONS FIELD (THF) ASSETS	Tim Hortons Field (THF) Facility	<ul style="list-style-type: none"> • Tractor • Truck w/ Dump • Forklift • Turf Utility • Sidewalk Sweeper • Ride on Sprayer 	<ul style="list-style-type: none"> • Point of Sale machines • Fridges and Freezers • Popcorn Machines 	<ul style="list-style-type: none"> • Desktop Computers • Laptops • Mobile Phones

² Included are the buildings listed in Section 2 – Background, which CFEM has been designated as the asset owner.

³ Embedded within facility replacement costs are components such as building automation systems, servers, key scanners, etc.

CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

3. SUMMARY OF ASSETS

This section provides a detailed summary and analysis of the existing inventory information as of March 2024 including age profile, condition methodology, condition profile, asset usage, and performance for each of the asset classes.

Table 4 displays the detailed summary of assets for the CFEM service areas. Data for these summary tables were provided by the CFEM team from the City's internal database. It is important to note that inventory information does change often and that this is a snapshot of information available as of March 2024.

The City owns approximately **\$912.7M** in CFEM assets which are on average in **Good** condition. Assets are a weighted average of **39 years** in age which is **18%** of the average remaining service life (RSL). The weighted average calculation is based on the replacement cost of the assets, therefore majority of the weighting for these averages comes from facility assets. For most assets, this means that the City should be completing preventative, preservation, and minor maintenance activities per the Building Condition Assessment (BCA) report as well as operating activities (e.g., inspection, cleaning) to prevent any premature failures.

The overall replacement value data confidence for the registry is **Medium**. Replacement values are generally based on staff expert opinion or inflated values of original purchase/replacement cost estimates. For facilities, replacement costs are calculated using an internal CFEM tool which encompasses current market rates, building type and size and were escalated to include additional soft costs. Fleet costs are typically **Medium** confidence due to challenges in maintaining current replacement value costs. IT assets replacement costs were gathered from the most recent purchase price for similar assets and are considered **High**. Equipment cost is overall **Medium** due to estimates from staff as per ongoing market rates.

The overall average age data confidence is rated as Very High as most of the highest replacement value asset classes data is based on facilities where data confidence is much higher as the date of construction or purchase is reliably known. The data confidence for the number of assets is considered Very High for facilities, fleet, and IT as these assets are well documented. Data confidence for the number of equipment assets is considered Very Low as limited asset listing was available at the time of writing.

The overall average condition data confidence is rated as High. The majority of the replacement costs are comprised of facility assets, where the condition is based on a Facility Condition Index (%FCI) which is considered to have high data confidence. For some assets, the condition is based on age and not based on actual physical inspection or data condition analysis. More details can be found in **Section 3.1**.

A continuous improvement item identified in **Section 10.2** is to ensure inventory data is accurate and includes key database fields as well as metadata and follows the newly developed City Data Standard through the creation of an Asset Registry for CFEM. Additionally, it should be noted that the City is in possession of a number of civic properties which have not been captured within

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the current iteration of this asset management planning exercise. These civic properties consist of buildings with varied uses (e.g., schools, warehouses, single-family dwellings, etc.) that are predominantly vacant. In addition to these civic properties, an exhaustive review of the City’s entire facility asset list has been noted as a continuous improvement item in **Section 10.2**, in order to better align asset ownership and responsibilities across all divisions.

Finally, the incremental cost to enhance operational resiliency and achieve Net Zero goals is not quantified at this point. Future iterations of the AM Plan seek to incorporate these costs into the lifecycle models.

Please refer to page 31 of the **AMP Overview** for a detailed description of data confidence.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. In addition, the assets included below are assets that are assumed and in service at the time of writing.

Table 4: CFEM Assets

FACILITIES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Administrative Facilities	7	\$446.3M	65 years (37%)	2 - GOOD
DATA CONFIDENCE	Very High	Medium	Very High	High
Yards/Maintenance Facilities	2	\$16.1M ⁴	73 years (0%)	3 - FAIR
DATA CONFIDENCE	Very High	Medium	Very High	High
Tim Hortons Field	1	\$442.9M	9 years (82%)	2 - GOOD
DATA CONFIDENCE	Very High	Medium	Very High	High
SUBTOTAL		\$906,931,800	67 years (30%)	2 - GOOD
DATA CONFIDENCE		Medium	Very High	High

⁴Partial replacement values for both facilities (Wentworth Street Operations Centre and Barton Yard) were incorporated using a ratio of the floor area occupied by CFEM respective to each building.

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FLEET				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
CFEM Fleet	13	\$0.5M	11 years (0%)	4 - POOR
DATA CONFIDENCE	High	Medium	High	Low
THF Fleet	14	\$0.8M	11 years (11%)	4 - POOR
DATA CONFIDENCE	High	Medium	High	Low
SUBTOTAL		\$1.3M	11 years (4%)	4 - POOR
DATA CONFIDENCE		Medium	High	Low

EQUIPMENT				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
CFEM Equipment	21	\$0.05M	Unknown	Unknown
DATA CONFIDENCE	Very Low	Very Low	N/A	N/A
THF Equipment	22	\$4.3M	10 years (47%)	3 - FAIR
DATA CONFIDENCE	Medium	Medium	High	Medium
SUBTOTAL		\$4.3M	10 years (47%)	3 - FAIR
DATA CONFIDENCE		Medium	High	Medium

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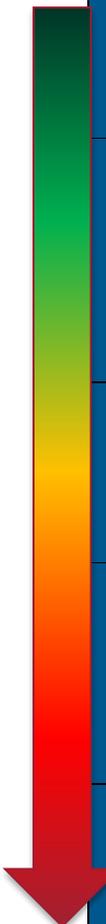
IT				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Desktop	49	\$0.08M	4 years (19%)	4 - POOR
DATA CONFIDENCE	High	High	High	Low
Laptop	78	\$0.1M	3 years (30%)	4 - POOR
DATA CONFIDENCE	High	High	High	Low
Mobile Phone	30	\$0.01M	2 years (49%)	4 - POOR
DATA CONFIDENCE	High	High	High	Medium
Tablet	5	\$0.01M	5 years (0%)	5 – VERY POOR
DATA CONFIDENCE	High	High	High	Low
Intangible Assets (i.e., Data, Software)	Not yet quantified		N/A	N/A
DATA CONFIDENCE				
SUBTOTAL	\$0.2M		3 years (28%)	4 - POOR
DATA CONFIDENCE	High		High	Low
TOTAL	\$912.7M		39 years (18%)	2 - GOOD
DATA CONFIDENCE	Medium		High	Medium

3.1 ASSET CONDITION GRADING

Condition refers to the physical state of the assets and is a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, **Table 5** below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in **Section 10.2**, is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

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Table 5: Equivalent Condition Conversion Table



EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	FACILITIES CONDITION INDEX (FCI)
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance is required only.	>79.5%	N/A
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on the asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	< 5%
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset usage. Minor to significant maintenance is required.	39.5% - 69.4%	>= 5% to < 10%
4 Poor	The asset has significant defects and deterioration. Deterioration has an impact on asset usage. Rehabilitation or major maintenance is required in the next year.	19.5% -39.4%	>= 10% to <30%
5 Very Poor	The asset has serious defects and deterioration. The asset is not fit for use. Urgent rehabilitation or closure is required.	<19.4%	>= 30%

The following conversion assumptions were made:

- For assets where a condition assessment was not completed, but age information was known, the condition was based on the % of remaining service life.
- Facilities Condition Index was based on ranges provided by the consultant who completed the Building Condition Assessment (BCA).

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3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile, and Performance Issues for each of the asset classes.

- The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life (ESL) where they can be planned for replacement. Some lower-cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if an asset's condition is based on age, it is typically considered to be of a low confidence level. Although typically, age is used when projecting replacements beyond the 10-year forecast to predict degradation.
- Condition refers to the physical state of assets and is a measure of the physical integrity of assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected/assessed at different frequencies and using different methodologies to determine their condition which are noted in this section.
- Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

3.2.1 FACILITIES PROFILE

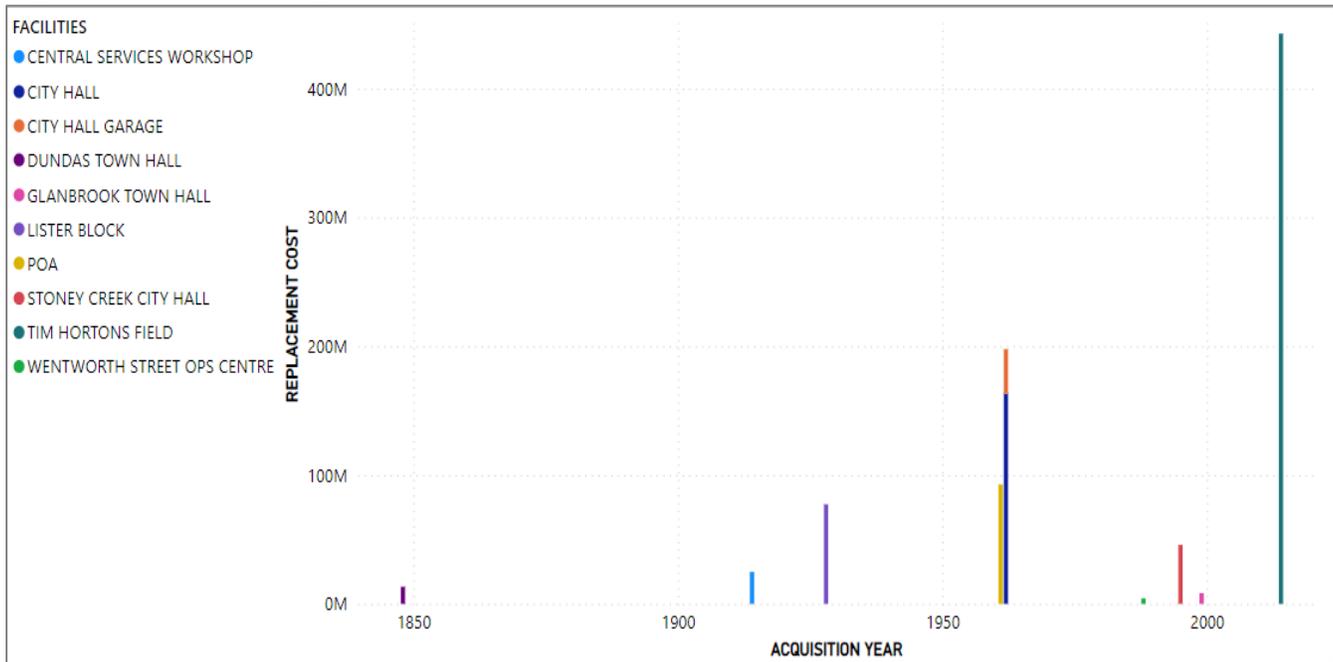
3.2.1.1 AGE PROFILE

The age profile of CFEM Facilities assets is shown in **Figure 2**, displaying both the replacement cost and year of construction (i.e., acquisition year). For facility assets, the data confidence for age is typically Very High because this information was recorded during construction. The oldest facility in scope is the Dundas Town Hall, built in 1848, while the most recent addition is Tim Horton's Field, which was completed in 2014. Established by CFEM, the Estimated Service Life (ESL) of facilities is typically set for 50 or 75 years. While these values do provide estimates for the lifespan of a typical structure, all facilities do not require full replacements at the end of their ESL, as major improvements can extend these anticipated lifespans. These timeframes do prove useful as a flag to review the outlook of facilities as they approach the end of their ESL. Given the current ESL values provided, the Provincial Offences Administrative and Stoney Creek City Hall buildings will reach the end of their anticipated lifespans in 2036 and 2045, respectively.

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For facilities with a heritage designation, the Expected Service Life (ESL) is extended indefinitely to preserve its cultural significance. Additional investigation is needed to determine a more consistent framework for calibrating the ESLs of both standard and heritage buildings, which has been noted as a continuous improvement item in **Section 10.2**. Within CFEM’s portfolio of buildings, Hamilton City Hall, Hamilton City Hall Garage, Lister Block, and Dundas Town Hall have been designated as heritage buildings.

Figure 2: Facilities Age Profile



3.2.1.2 CONDITION METHODOLOGY AND PROFILE

The condition for CFEM facilities is determined based on the results of a Building Condition Assessment (BCA). BCAs are typically completed on these facilities on a five-year cycle and output a score called a Facility Condition Index (FCI). The FCI is a financial indicator of condition and is calculated based on a ratio of the cost of work required on the facility to the total replacement cost of the facility. It is important to acknowledge that this FCI value calculation also incorporates costs identified for exterior site elements (e.g., parking lots, fences, etc.) that are not indicative of the condition of the facility itself. This has been identified as a continuous improvement item in Section 10. The condition conversion from FCI to the standardized 5-point scale used in this AM Plan is shown in **Table 6**.

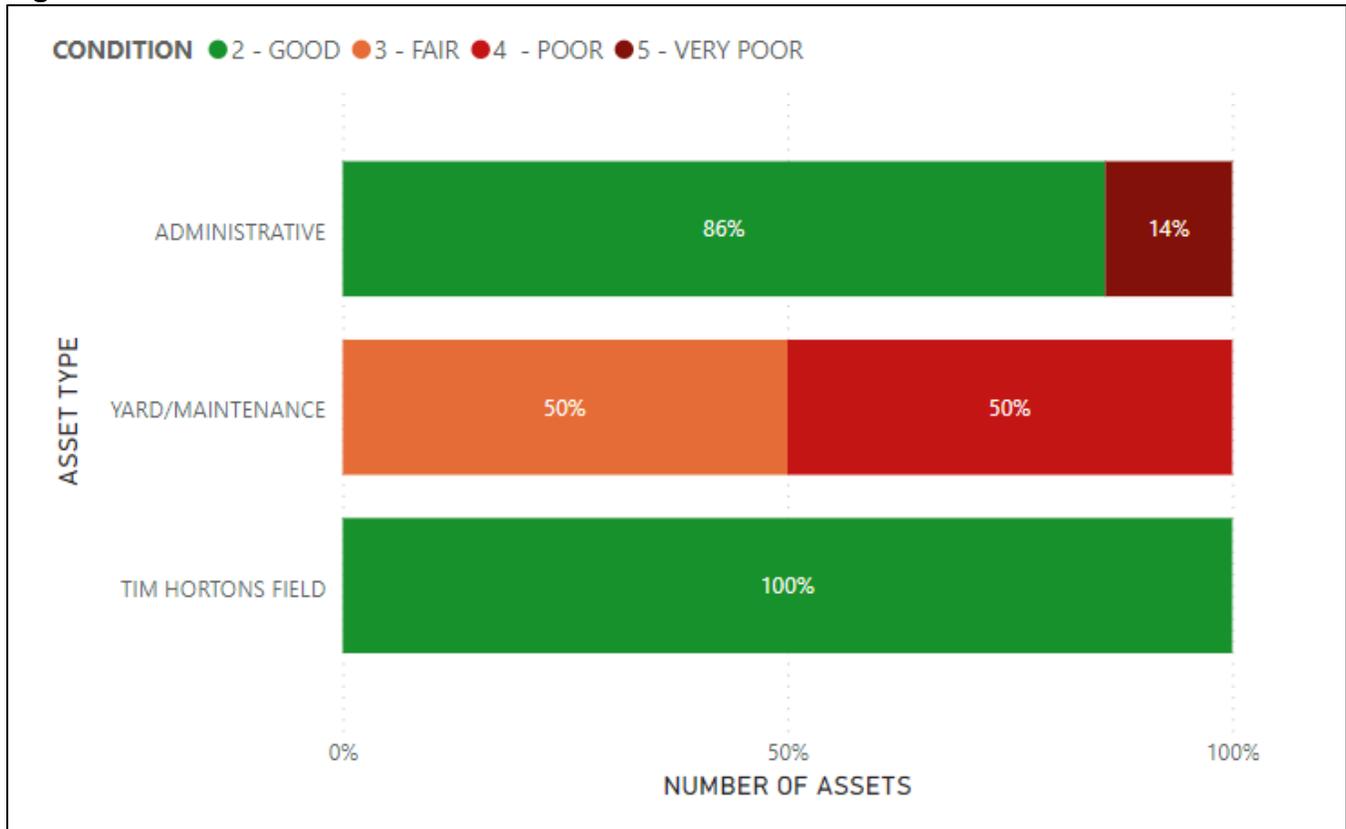
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Table 6: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Facilities	Every 5 years	Varied	Facility Condition Index (0% - 100%)

The weighted average by replacement cost for all facilities is GOOD condition. The Yard/Maintenance facilities were noted to be in poorer condition overall when compared to the administrative facilities. Major capital work projects are included in **Table 7**.

Figure 3: Facilities Asset Condition Distribution



Included within the Administrative facilities asset category, Dundas Town Hall’s current condition score is rated “5 – VERY POOR”. This low condition score is primarily driven by the high-cost work identified in the foundation, as indicated by the BCA report completed in 2019.

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3.2.1.3 ASSET USAGE AND PERFORMANCE

Facility performance deficiencies have been separated into two tables, consisting of notable deficiencies specific to CFEM facilities and common performance deficiencies observed in facilities City-Wide, as seen in **Table 7** and **Table 8**, respectively.

Table 7 below comprises the deficiencies with the highest costs. These suggested actions stem from inspections conducted by third-party consultants and documented in BCA reports.

Table 7: Known Service Performance Deficiencies (CFEM Facilities)

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
FACILITY	Tim Horton's Field	Scoreboard	End-of-life replacement
		Turf Play Field – Artificial Grass	End-of-life replacement
		Interior Lighting	LED retrofit to the entire building
		Play Field Lighting	Lifecycle Replacement for 'out-of-warranty' stadium lighting fixtures
	Central Services Workshop	Exterior Windows	End-of-life replacement
		Parking Lots - Asphalt	Areas with cracking and spots for potential ponding
	Wentworth Street Operations Centre	Built-Up Roof	Visible areas of ponding
		Sealed Concrete Floor	Visible cracks and damage
		Asphalt Paving	Visible cracking and areas of ponding
		Footings and Foundations	Visible deterioration on the poured concrete walls
		Electrical Service Equipment	End-of-life replacement
	Dundas Town Hall	Footings and Foundations	Visible signs of cracking.
	City Hall	Carpeting	End-of-life replacement
		Bitumen Roofing	Visible pooling and vegetation growth, end-of-life replacement
		Parking Lot	Asphalt and concrete curbs – visible cracking, end-of-life replacement

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Generally, CFEM facilities are functioning at an acceptable level. Of note, Tim Horton’s Field is expected to replace multiple systems as part of its fulfillment of contractual obligations.

In addition, the capital works team has identified the common deficiencies and capital programs in **Table 8** below. Consequently, specific funding blocks have been established to allocate annual budgets for remedying these common, high-cost deficiencies in facilities across the city.

Table 8: Funding Categories for Typical Performance Deficiencies (City-Wide)

ASSET	PROGRAM	DESCRIPTION
FACILITY (CITY-WIDE)	Roof Management	Replacement of roof coverings to preserve the integrity of the building structure and foundation
	Parking Lot Management	Resurfacing/replacement of parking lots with inclusion of Electric Vehicle chargers and solar power.
	Diesel Generator Upgrades	Low carbon fuel implementation via upgrades to diesel generators and transition to clean fuels
	Recreation Centre Retrofits	Standard retrofit projects specific to recreation facilities, and include energy and Greenhouse Gas mitigation features
	Mechanical Infrastructure Lifecycle Renewal	Replacement of mechanical equipment (e.g., HVAC units) with more energy and greenhouse-gas-efficient options that result in increased operational resiliency

The above programs provide annual reserves of funding to be allocated for specific projects on individual buildings. While this approach offers flexibility in applying yearly capital disbursements, it lacks a secure funding outlook for anticipated projects. The allocation of capital to specific projects occurs reactively on a yearly basis, with resources prioritized to complete projects of the highest urgency. This reactive approach is necessitated by factors such as general underfunding, variability in quoted project costs, scheduling conflicts, new issues or failures in facilities, and insufficient or underleveraged data. This funding allocation model needs to be reviewed to reflect the status of asset conditions and the annual increase must align with market inflation around material and construction costs.

Consequently, this method has hindered the accuracy of lifecycle modelling, as capital budgets cannot be specifically allocated to individual buildings. Adopting a more proactive strategy to forecast expected major works for assets managed by CFEM would result in a more cost-effective approach to asset management. This approach is well accepted as best practice in the industry and would minimize reactive maintenance costs, identify opportunities to bid on multiple projects simultaneously, reduce closures, and afford divisions more time to plan their schedules around shutdowns. The creation of a healthy reserve fund across the facility portfolio to address

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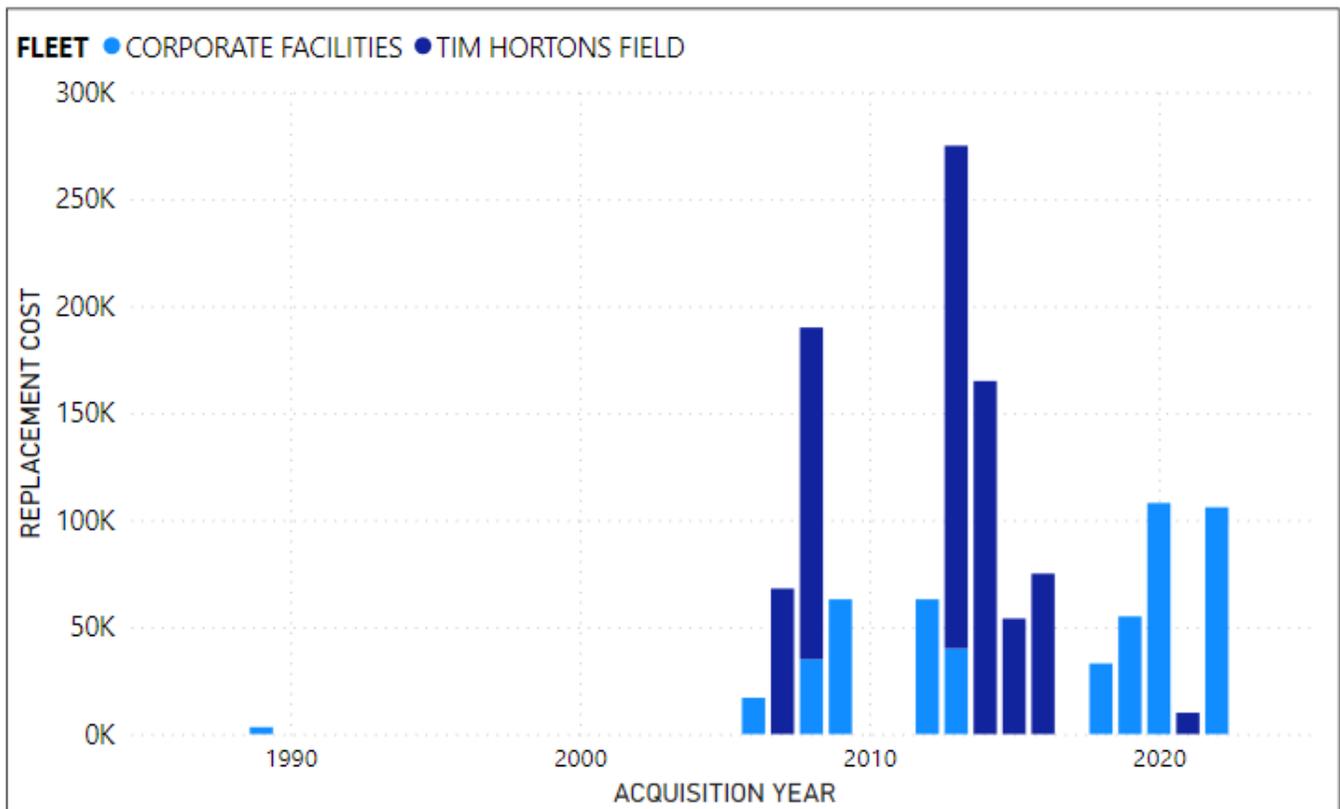
emergency breakdown and equipment replacement needs is essential to bring the facility back into operation with minimal impact on public programs. Continuing to drive this proactive strategy has been included as a continuous improvement item in **Section 10.2**.

3.2.2 FLEET PROFILE

3.2.2.1 AGE PROFILE

The age profile for Fleet assets is shown in **Figure 4**. Data confidence for the age of Fleet assets is typically High because asset age is formally recorded, and vehicle models typically include the year of manufacture. An analysis of the age profile is provided below.

Figure 4: Fleet Age Profile



Most of the CFEM vehicles were acquired from 2005 to 2022. Since the Estimated Service Life (ESL) for vehicles is an average of 11.3 years, any vehicles purchased before 2012 are beyond their service life and will appear in the Renewal backlog in **Section 8.3**.

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3.2.2.2 CONDITION METHODOLOGY AND PROFILE

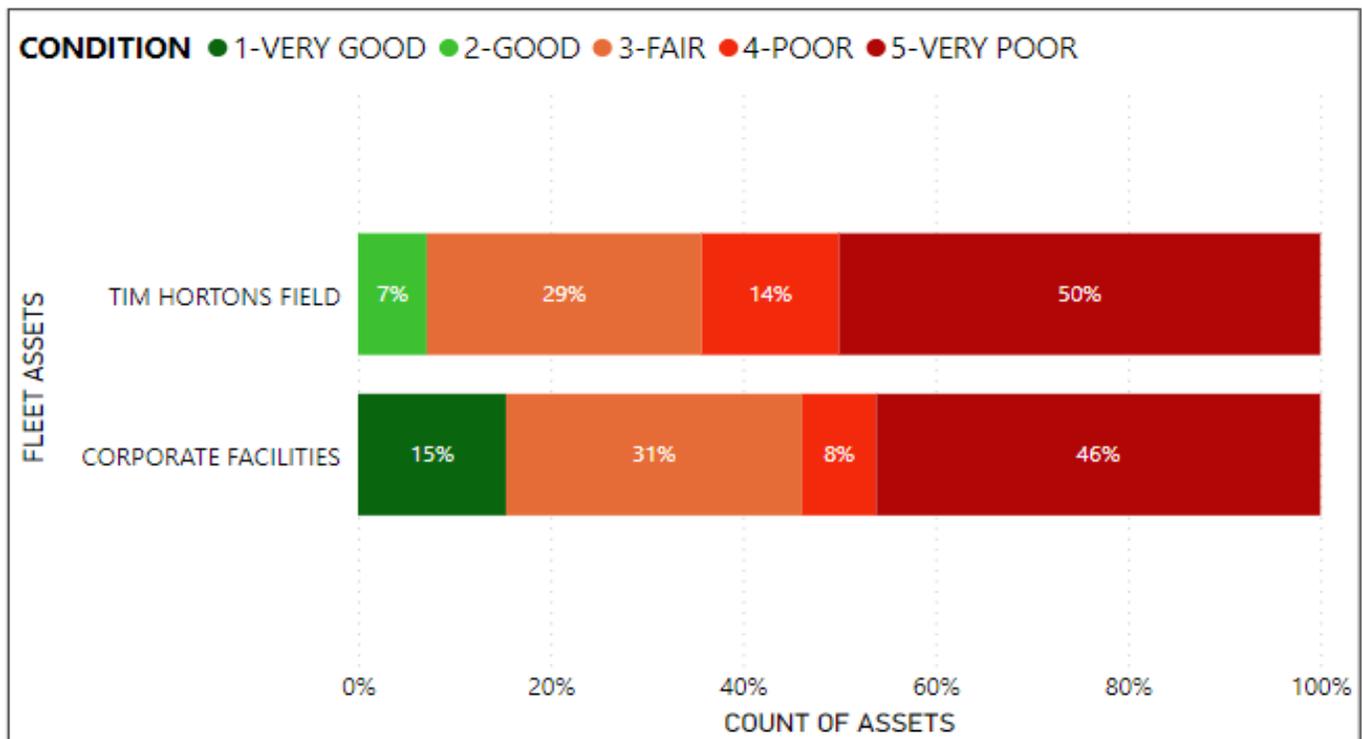
Vehicles are inspected and maintenance activities are conducted at specific intervals throughout the asset’s lifecycle however no formal condition rating is assigned to each vehicle. CFEM relies on the City of Hamilton Fleet services to assist with the inspection, maintenance and procurement of vehicles on their behalf, as described in **Table 9** below. Age has been used to estimate the condition of these assets where age is known which is considered to be low data confidence. This has been identified as a continuous improvement item in **Section 10.2**.

Table 9: Inspection and Condition Information

ASSET	INSPECTION TYPE	DESCRIPTION	FREQUENCY	CONDITION SCORE OUTPUT
Fleet	Servicing of vehicle	Regular maintenance checks are completed for vehicles	Based on Milage or Time passed	N/A

The condition profile for CFEM Fleet assets is shown below in **Figure 5**. It is evident that the majority of CFEM Fleet assets are in Fair or less than Fair condition. The condition of vehicles is based only on age and estimated service life and is considered a Low confidence level. The condition scores were developed from the RSL as detailed in **Table 5**.

Figure 5: Fleet Asset Condition Profile



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3.2.2.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. As shown in **Table 10** below, known service performance issues for vehicle assets involve assets being beyond their Estimated Service Life which for Fleet assets involve an accumulation of Poor to Very Poor condition assets.

Table 10: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Fleet	Various	CFEM vehicles past estimated service life recommendations	Results in increases in maintenance costs, potential safety concerns, and potentially interrupted service with more staff downtime

3.2.1 EQUIPMENT PROFILE

3.2.1.1 AGE PROFILE

The age profile of the equipment assets is shown in **Figure 6**. The age of these assets is considered to be high data confidence because they were recorded at the time of purchase. The majority of equipment was acquired in 2014 when Tim Horton’s Field was constructed.

Figure 6: Equipment Age Profile

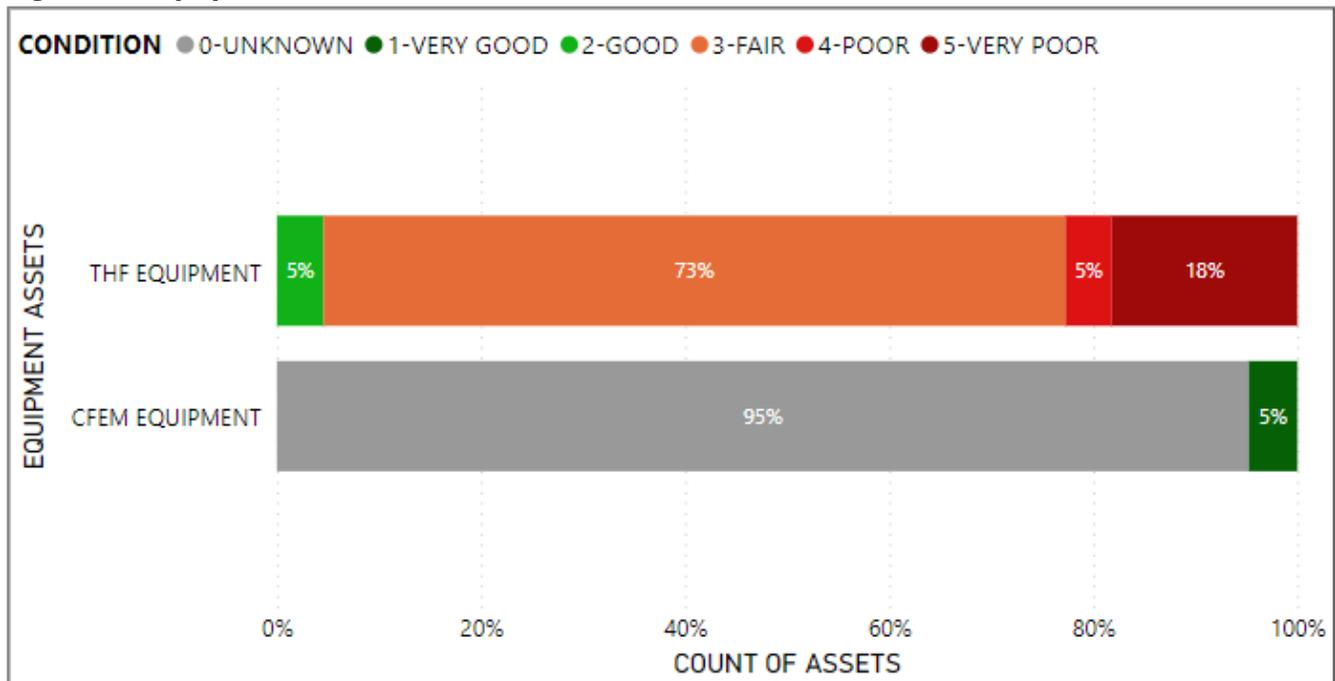


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3.2.1.2 CONDITION METHODOLOGY AND PROFILE

Since there is currently no condition data available for equipment, conditions were based on age with respect to the ESL, where available. A continuous improvement item indicated in **Section 10.2** is to develop a condition methodology to assess the condition of these assets. Furthermore, it is expected that in the future these assets will be integrated into the broader Enterprise Asset Management (EAM) system which is currently under development. This has been identified as a continuous improvement item in **Section 10.2**.

Figure 7: Equipment Condition Profile



As can be seen in **Figure 7**, the majority of the equipment assets with data available are in Fair condition. A portion of equipment was included which did not include age data, therefore condition is currently unknown.

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3.2.1.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. Known service performance issues are included in **Table 11** below.

Table 11: Known Service Performance Deficiencies

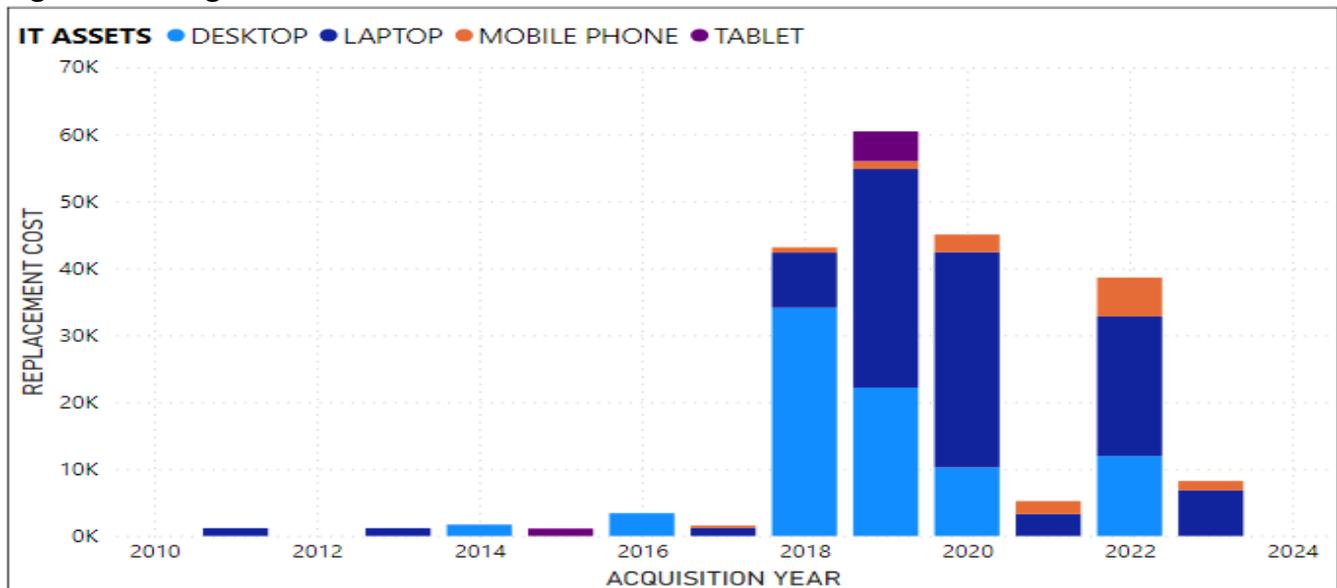
ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Generator	Lister Block	Generator Under Variance	The current fuel system is under variance and a future solution for energy and cost efficiency is in review.

3.2.2 IT PROFILE

3.2.2.1 AGE PROFILE

The age profile of the CFEM IT assets is shown in **Figure 8**. For IT assets the data confidence for age is typically High because asset age is formally tracked and many assets are replaced based on age. IT assets have an estimated service life of four to five years. Any assets older than 2019 should be reviewed and where necessary renewal should be considered. It should be noted that the intangible IT assets (i.e., facility management software) have been excluded from this analysis, which has been included as a continuous improvement item in **Section 10.2**.

Figure 8: IT Age Profile

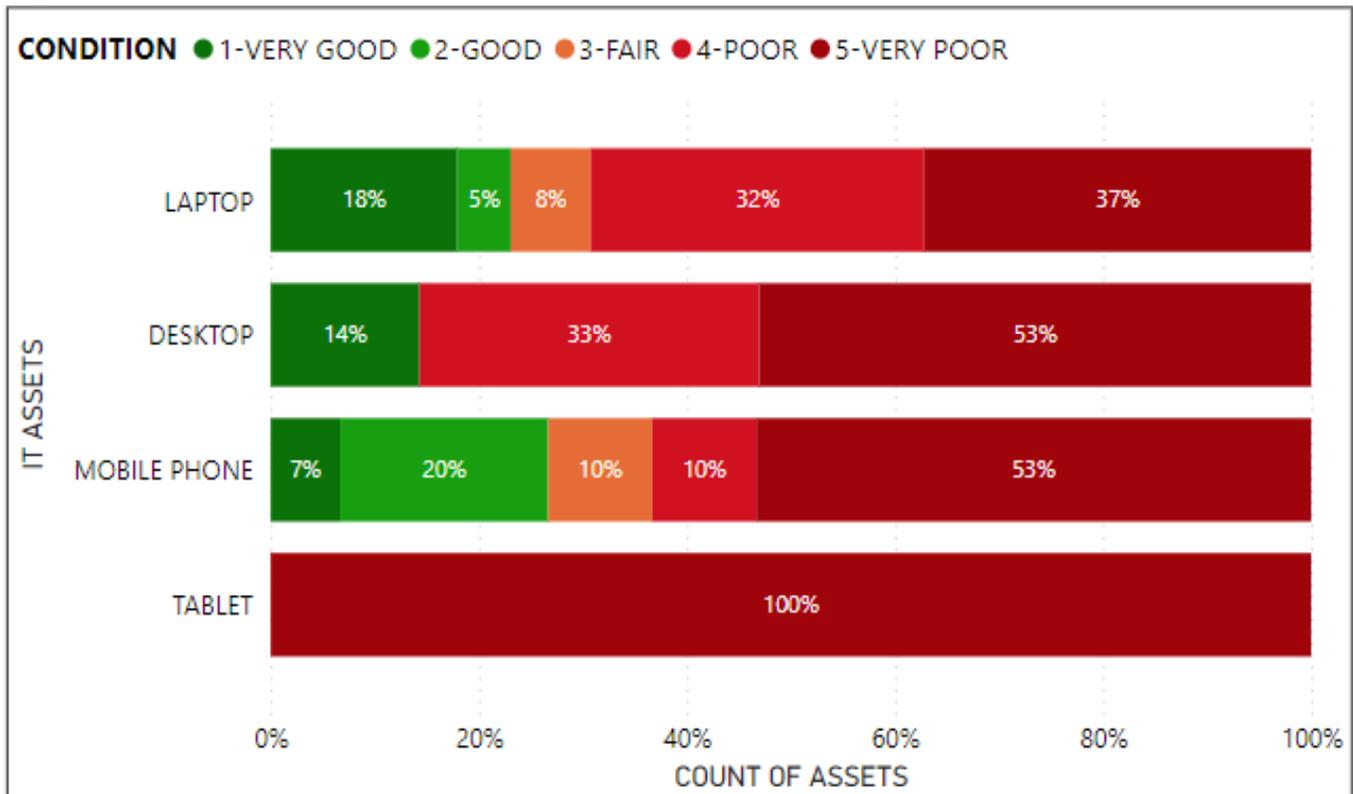


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3.2.2.2 CONDITION METHODOLOGY AND PROFILE

The majority of IT assets do not have a formal inspection program that provides a condition rating. The condition of IT assets is based only on age and estimated service life. The condition scores were developed from the RSL as detailed in **Table 5**.

Figure 9: IT Condition Profile



As can be seen in **Figure 9** above IT assets condition 37% of computer assets and 53% of both desktop and mobile assets are in Very Poor condition. However, it should be noted that this classification does not necessarily imply that these assets are not in acceptable working condition, as the calculation is purely age-based these assets should be investigated further prior to replacement.

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3.2.2.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. Known service performance issues for technology assets involve assets being beyond their Estimated Service Life, as shown in **Table 12** below.

Table 12: Known Service Performance Deficiencies

ASSET	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
All IT Assets	Various purchases before 2019.	Beyond Service Life

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4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what the City provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that the City provides those services.

O.Reg 588/17 does not define levels of service for these assets and therefore the City has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in **Section 7.5** of the **AMP Overview**.

4.1 SURVEY METHODOLOGY

To develop customer values and customer levels of service, a Customer Engagement Survey entitled *Let's Connect, Hamilton – City Services and Assets Review: Corporate and Public Facilities Survey* was released on January 8, 2023, on the Engage Hamilton platform and closed on February 5, 2024. The survey results can be found in Appendix "A."

The survey received submissions from 86 respondents and contained 5 questions related to Corporate and Public Facilities. For the purpose of this report, data was evaluated from a confidence level perspective (margin of error at 95% confidence in sample size) and a data consistency (Standard deviation) perspective per **Table 13** below.

Table 13: Data Confidence Levels

GRADE	DATA CONSISTENCY (STANDARD DEVIATION)	CONFIDENCE LEVEL (MARGIN OF ERROR AT 95% CONFIDENCE IN SAMPLE SIZE)
Very High	0 to 0.5 – results are tightly grouped with little to no variance in response	0% to 5% - minimal to no error in results, can generally be interpreted as is
High	0.5 to 1.0 – results are tightly grouped but with slightly more variance in response	5% to 10% - error has become noticeable, but results are still trustworthy
Medium	1.0 to 1.5 – results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - error is a significant amount and will cause uncertainty in the final results
Low	1.5 to 2.0 – results show a high variance with a fair amount of disparity in responses	20% to 30% - error has reached a detrimental level and results are difficult to trust
Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - significant error in results, hard to interpret data in a meaningful way

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Based on an approximate population size of 570,000 and the table above, a sample size of 86 correlates to a 10.6% margin of error at 95% confidence, and therefore these survey results correspond with a maximum Medium confidence level. It is important to note that respondents were allowed to opt out of questions, and so different questions may have different confidence levels depending on the opt-out rate for that question. Therefore, the confidence levels presented differ throughout this section but remain within the Medium range.

Although the sample size correlates to a maximum medium confidence level, the data consistency also differed between questions. A high data consistency means that respondents came to the same conclusion more often for a question, whereas a low data consistency means that there is a split in respondent's opinions. Therefore, while CAM may be able to improve survey confidence levels over time by increasing the survey sample size, it may not be possible to improve data consistency over time as this depends on the opinions of the respondents and may require additional insight into why respondents' opinions are split. A low consistency of data does not mean the data is bad, but it does mean that it is difficult to make decisions using that information. Overall, data consistency was typically medium across all questions indicating most respondents are generally in agreement.

While the survey was used to establish customer values and customer performance measures, it is important to note that there were limitations to the survey methodology which may also reduce the confidence level in the survey data. The survey was released using an online platform and paper copies were made available at 6 municipal service centres and all 23 library branches. However, the survey did not include telephone surveys and consequently, there is no way to confirm the identity information provided in the survey. The location of the surveys meant that the participant pool would be limited to those who had visibility, time, and access to the survey. In addition, the survey did not control for IP addresses, and therefore it is possible that respondents could complete the survey more than once and skew the survey results.

The demographic responses for the survey did not indicate any clear evidence that the survey results had been skewed. When comparing the age and postal code demographics from the survey to the age and postal code demographics for the City, there does not appear to be a significant over-representation of any age or postal code demographic within the survey. In addition, the responses were distributed across the City with responses from most communities, however, there were limited responses from those who identified as marginalized. When assessing the spikes in respondents per day, the results were distributed across different ages and postal codes.

In summary, although there are limitations with the survey methodology and sample size, these results can be used to provide a general overview of the impressions from respondents. However, decisions should not be made based on these surveys alone and further investigation is required prior to proposing new levels of service.

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These results will be reviewed and improved upon for the next iteration of the AM Plan, which has been noted in **Section 10.2** as a continuous improvement item. The future intent is to repeat this survey over time and to measure the trends in customer satisfaction and ensure that the City is providing the agreed level of service.

Furthermore, it is crucial to emphasize that the results of these surveys cannot be solely attributed as an accurate indication of the performance of the CFEM Division. This is because although they provide oversight for many City facilities, they are not directly responsible for all services indicated in the survey across all facilities throughout the City. Various services are managed in-house by individual Asset Owners or by contracted third parties procured by Facilities adhering to the city's procurement policy by-law 21-255. However, the survey results do provide an overall indicator of how customers perceive the City to be performing in delivering facilities and services.

4.2 CUSTOMER VALUES

Customer values are what the customer can expect from their tax dollar in "customer speak" which outlines what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

Customer Values indicate:

- What aspects of the service are important to the customer;
- Whether they see value in what is currently provided; and,
- The likely trend over time based on the current budget provision.

As previously mentioned, the customer values below were determined using the results from the *Let's Connect, Hamilton – City Services and Assets Review: Hamilton Corporate and Public Facilities* survey and are shown in **Table 14** below.

Table 14: Customer Values

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CUSTOMER VALUES	CURRENT FEEDBACK	CONSISTENCY	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
It is most important to customers that facilities are accessible by providing ramps, snow-clearing, and accessible entryways.	The average survey respondent rated physical access as a very important service area.	High	Maintain
The following qualities are important to the community: Public facilities should be located nearby, should be inclusive and welcoming to promote a diverse and safe environment, and should be kept clean and in good repair.	The average survey respondent rated these service areas as important.	High	Maintain
Ensuring city facilities are environmentally conscious, considerate of climate, net-zero, and energy efficiency goals are not as important as other services being delivered.	The average survey respondent rated this service area as fairly important.	High	Maintain

4.3 CUSTOMER LEVELS OF SERVICE

Ultimately customer performance measures are the measures that the City will use to assess whether it is delivering the level of service the customers desire. Customer level of service measurements relates to how the customer feels about the City’s Corporate Facility and Tim Hortons Field services in terms of their quality, reliability, accessibility, responsiveness, sustainability and over the course, their cost. The City will continue to measure these customer levels of service to ensure a clear understanding of how the customers feel about the services and the value of their tax dollars.

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or underused? Do we need more or less of these assets?

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In **Table 15** under each of the service measures types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current allocation.

Table 15: Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET			
QUALITY / CONDITION	Ensure corporate and public facilities are maintained at an optimal level.	2024 Corporate and Public Facilities Survey	Average survey respondent opinion on how the City has performed overall in all aspects of corporate and public facilities.	Average Performance	Maintain			
						Confidence Level		Medium
						Data Consistency		Medium
	Ensure that corporate and public facilities are clean and in good repair.	2024 Corporate and Public Facilities Survey	Average respondent opinion on performance regarding the cleanliness and good repair of corporate and public facilities.	Average Performance	Maintain			
						Confidence Level		Medium
						Data Consistency		Medium
	Ensure that corporate and public facilities are accessible to the public.	2024 Corporate and Public Facilities Survey	Average survey respondent opinion on if corporate and public facilities were inclusive and welcoming.	Average Performance	Maintain			
						Confidence Level		Medium
						Data Consistency		Medium
FUNCTION	Provide attractive and comfortable public facilities.	2024 Corporate and Public Facilities Survey	Average survey respondent's opinion on whether they agree that Hamilton's public facilities are comfortable, with appropriate levels of light and noise.	Probably Agree	Maintain			
						Confidence Level		Medium
						Data Consistency		Medium

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TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
FUNCTION	Provide public facilities that are well kept and functional.	2024 Corporate and Public Facilities Survey	Average survey respondents' opinion on whether they agree that walkways at Hamilton's public facilities are free from snow and debris.	Possibly Agree	Maintain
		Confidence Level		Medium	
		Data Consistency		Medium	
CAPACITY	Ensure that corporate and public facility sites and services are accessible to the public.	2024 Corporate and Public Facilities Survey	Average survey respondent opinion on whether they can find empty garbage receptacles around Hamilton's facilities.	Possibly Agree	Maintain
		Confidence Level		Medium	
		Data Consistency		Medium	
			Average survey respondent opinion on if corporate and public facilities are at a nearby location.	Average Performance	Maintain
		Confidence Level		Medium	
Data Consistency		Medium			

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4.3.1 CUSTOMER INDICES

The indices are calculated to assess how customer expectations for a service align with the perceived performance for corporate services as listed below in **Table 16**. These indices are explained and analyzed in detail in the sections below. Based on the results of the table, since the net differential exceeds 20 points overall for the service, there is generally a mismatch between customer expectations and perceptions.

Table 16: Customer Indices

CUSTOMER INDICES	AVERAGE RESULT
Service Importance Versus Performance Net Differential ⁵	-21
Net Promoter Score (%) ⁶	-30

As previously mentioned, since the survey had a sample size corresponding to a maximum medium confidence level, there is a minimum margin of error throughout the survey results of 11%. With a confidence level of only medium, it is difficult to make any conclusive decisions based on this survey alone. The information below is intended to provide context around the survey results to assist with finding areas to further investigate before proposing any new levels of service.

SERVICE IMPORTANCE VERSUS PERFORMANCE INDICE

The Service Importance versus Performance indices is used to determine if a service's importance correlates with the perceived performance. Service areas where the average importance rating exceeds the average performance rating by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale.

Per **Figure 10** below, many of the net differentials exceed 20 points for the services with a medium data consistency meaning that typically there is a mismatch between the importance of the service and how facilities are perceived to be performing in that aspect of the service. The services with the largest mismatch are "physical access" and "clean and in good repair." There could be investigation into improving the performance if different levels of service are proposed. To reduce the net differential, there would have to be an increase in performance to Very Good which would be accomplished by altering the Technical Levels of Service, as explained in **Section 4.3.3**.

⁵ For these indices, a value close to 0 is considered a match, and a value exceeding 20 points indicates a mismatch between customer expectations, and perception or service levels.

⁶ A positive net promoter score indicates customers would recommend the service to others, a negative score indicates they would not, and a value close to 0 indicates a neutral feeling about the service.

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Figure 10: Importance versus Performance Index Score

ServiceArea	Importance (index score)	Performance (index score)	Net Differential	Opt Out %
Total	84	63	-21	11%
Physical access (Examples: Ramps, snow-clearing, entryways)	93	66	-27	9%
Clean and in good repair (Examples: Condition, cleanliness, air quality, Heating, Ventilation and Air Conditioning (HVAC))	90	63	-27	8%
Location (Example: Nearby)	85	63	-21	7%
Inclusive and welcoming (Examples: Diverse and safe)	82	68	-14	13%
Environmentally conscious (Examples: Climate goals, Net-Zero, energy efficient)	72	54	-18	19%

NET PROMOTER SCORE INDICE

The Net Promoter Score indices outline how likely an individual is to recommend a service to another person and measure customer loyalty. For municipal services, this score is difficult to interpret because oftentimes individuals do not have many alternatives for utilizing different services and also there may be internal biases for certain service areas, however, this score does provide valuable information for if customers would recommend using the service or whether they may seek alternatives or avoid using the service altogether.

Likert⁷ choices less than a score of 4 are considered 'Detractors' meaning that they would not recommend the service, while scores of 5 are considered 'Promoters' who would recommend the service, and scores of 4 are considered 'Passive' which means they do not have strong feelings about the service. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Promoters) and (% Detractors). The Standard Deviation (σ) is calculated in percent, the same units as the Net Promoter Score.

Based on the results below in **Figure 11**, a net negative net promoter score indicated that on average, customers would not recommend the use of the identified facilities to others. Specifically, City Hall was rated as having a worse net promoter score as compared to Municipal Service Centres. With a data consistency of only medium, the survey alone should not be used for decision-making. Additionally, it should be noted that with public facilities such as City Hall or a Municipal Service Centre, this score is difficult to interpret because often individuals do not have many alternatives for utilizing different services.

⁷ A Likert scale is a rating scale used to measure opinions, attitudes, or behaviors. It consists of a series of five answer statements which are consistently written the same way (e.g. Very Good to Very Poor, Very Satisfied to Very Unsatisfied).

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Figure 11: Net Promoter Score

Service Area	σ	NPS	Detractors	Passives	Promoter	Avg.
All Service Areas	1.24	-30.07	75	36	32	3
City Hall	1.24	-36.99	41	18	14	3
Municipal Service Centres/Town Halls	1.23	-22.86	34	18	18	3

4.3.2 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how the City delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. The City will measure specific lifecycle activities to demonstrate how the City is performing in delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners create, implement and control technical service levels to influence the service outcomes.⁸

Table 17 shows the activities expected to be provided under the current 10-year Planned Budget allocation and the Forecast activity requirements being recommended in this AM Plan. Currently, these values are estimated based on the budget, but were not perfectly delineated in the capital and operating budgets and forecasts and may change in future iterations of the plan. This has been noted as a continuous improvement item in **Section 10.2**.

Table 17 : Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE 2023	CURRENT TARGET PERFORMANCE 2023	PROPOSED 10-YEAR PERFORMANCE
ACQUISITION	Introduce environmentally conscious facility assets.	Number of Net-Zero and LEED-certified buildings constructed.	0	0	1
		Budget	Captured in respective plans		
OPERATION	Maintain operational	Actual Operating	TBD	90-100%	90-100%

⁸ IPWEA, 2015, IIMM, p 2|28.

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LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE 2023	CURRENT TARGET PERFORMANCE 2023	PROPOSED 10-YEAR PERFORMANCE
	contracts to ensure facilities are operated and maintained to standards	Expenditures vs Planned Budget			
		Budget	Not yet quantified ⁹		
		Percentage of Tim Horton Field's total scheduled operating hours used for community rentals	1168	10% of scheduled hours (or 1100 hours annually)	10% of scheduled hours (or 1100 hours annually)
		Budget	TBD	TBD	TBD
		Percentage of ARCHIBUS work orders addressed within 30 days	85%	80%	80%
		Budget	TBD	TBD	TBD
MAINTENANCE	Assure facility maintenance and capital budgets rely on current and accurate information	Percentage of buildings with BCA's completed within a 5-year cycle	74%	100%	100% ¹⁰
		Budget	\$0.5M	\$0.9M	\$5.4M
RENEWAL	Ensure that facility	Average Facility	7.6%	5-10%	5-10%

⁹ This has been noted as a continuous improvement item in Section 10.2.

¹⁰ This has been noted as a continuous improvement item in Section 10.2.

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LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE 2023	CURRENT TARGET PERFORMANCE 2023	PROPOSED 10-YEAR PERFORMANCE
	assets are maintained in good condition.	Condition Index of CFEM Facilities			
		Budget	Not yet quantified		
		Average Facility Condition Index of all City of Hamilton facilities	11%	5-10%	5-10%
		Budget	\$20.2M	Not yet quantified	
		Percentage of infrastructure life-cycle renewal projects meeting the latest standards for Accessibility and Building Code requirements	100%	100%	100%
		Budget	\$14.4M	\$14.4M	\$143.5M

4.3.3 PROPOSED LEVELS OF SERVICE DISCUSSION

Per the Technical Levels of Service, **Table 17**, it can be concluded that CFEM often meets technical standards with some exceptions. However, customer preferences and expectations do not always align with internal technical targets. The purpose of this section is to link the customer and technical levels of service to determine areas where different levels of service could be proposed. As previously mentioned, since the 2023 survey results have only a medium level of data confidence, it is difficult to make any conclusive decisions based on this initial survey. The discussion below is intended to provide context to direct CFEM to areas for further investigation based on these initial results before proposing any new levels of service.

In addition, the activity measures listed in the Technical Levels of Service table are not exhaustive and require additional data inputs to develop more specific measurements. As a

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continuous improvement item, the development of additional technical measurements to better compare customer and technical levels of service has been identified in **Section 10.2**. Further to this, another continuous improvement item identified is to incorporate the master accommodations plan into the development of survey metrics in the next iteration of the AM Plan.

CONDITION / QUALITY

Based on the Customer Levels of Service **Table 15**, it is evident that survey respondents think that the City has an Average Performance overall in all aspects of the services included. As indicated in **Section 4.2**, the two most important service areas identified is maintaining physical access to facilities (e.g., ramps, snow-clearing, and entryways) and ensuring facilities are kept clean and in good repair. This service area can be linked to the following technical performance measures: percentage of lifecycle renewal projects meeting the latest standards for Ontario Building Code requirements, and percentage of ARCHIBUS work orders addressed within 30 days (with respect to orders related to providing accessible/clear entryways). Currently, CFEM is exceeding targets for ARCHIBUS work order turnaround and meeting expectations for completion of building code requirements.

The Customer Level of Service quality measurement of maintaining facilities in clean and good repair can be related to the Technical Levels of Service **Table 17** through the average Facility Condition Index of all City of Hamilton facilities metric. At the time of writing, the average FCI for all facilities was calculated to be 11 percent, which leaves room for improvement as the target value for the metric is between 5 and 10 percent.

Additionally, there is an opportunity for growth regarding the frequency of BCA inspections completed on City facilities. Currently, 74 percent of the buildings are inspected on a 5-year cycle, and in order to meet the target of 100 percent in year 1, additional budget and staffing would be required. This should be investigated following this report. As previously mentioned, CFEM does not yet have an internal survey to collect data from internal staff on the services provided. This has been identified as a continuous improvement item in **Section 10.2**.

FUNCTION

While survey respondents thought that the City was providing an overall average level of performance in the service areas included, there are not technical performance measures currently available in order to propose levels of service as they relate to function. This requires more data accessible to accurately track performance. Potential metrics to track might include the frequency of snow clearing, grass cutting, or facility cleaning, which could be used to verify performance levels and better calibrate the CFEM teams' proposed level of service.

CAPACITY

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Respondents agreed that the location of facilities was an important metric in the survey, in which there was a mismatch in relation to performance. With a net differential of -21, this indicates there is room for improvement in ensuring facilities are at a nearby location. This may suggest there is potentially a shortage of public buildings as it relates to overall population size, or there is a mismatch in where facilities are located in reference to the distribution of population density. More investigation in this area is required to better inform proposed levels of service, but this research may be beneficial in informing facility acquisition targets and locations.

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5. FUTURE DEMAND

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of service required.

CFEM's demands are diverse, as they function not only as a service provider in various capacities but also cater to different divisions within the city, each with distinct facility-related requirements. Given the multitude of design and legislative requirements specific to the construction and operation of facilities within each division, a comprehensive understanding of these demands is essential.

5.1 DEMAND DRIVERS

For CFEM the key drivers are population growth, legislative requirements, aging infrastructure and funding backlog.

- Population Growth
 - o Per page 45 in the ***AMP Overview***, it is evident that Hamilton's population will continue to grow to 2052. With a growing population, it is anticipated that an increased number of buildings will be constructed with corresponding maintenance and operational cost requirements.
- Legislative Requirements
 - o As regulatory requirements (e.g., energy efficiency, accessibility, etc.) for facilities expand, there are additional costs and challenges associated with their design and management. Particularly, incorporating Climate Change resiliency and Net Zero lens has been a priority for CFEM in major retrofits and new construction projects. This discussion has been identified in **Section 7**.
- Aging Infrastructure
 - o As the existing stock of managed buildings continues to age, it is expected there will be an increased demand for both costs and labour hours of the operations and maintenance and capital delivery teams required to upkeep those deteriorating assets.
- Vendor Contracts
 - o Demands related to managing vendor contracts are anticipated to increase over time, requiring additional staffing to meet this growth.

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- Funding Backlog
 - o While maintaining focus on handling high-priority projects, there exists a backlog of projects with associated costs that need to be addressed.

5.2 DEMAND FORECASTS

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 18**. Growth projections have been shown on Page 45 in the **AMP Overview** document.

These additional demands as well as anticipated operations and maintenance costs have not been encompassed in the Lifecycle Models in **Section 8**. At this time these costs cannot be quantified due to insufficient data. This has been identified as a Continuous Improvement item in **Section 10.2**. In future versions, there is an opportunity to consolidate facility-related demand data from all non-core asset management plans. This can serve as a means to quantify the overall costs anticipated for the CFEM group going forward.

5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets is shown in **Table 18**. Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Opportunities identified to date for demand management are shown in **Table 18**. Climate change adaptation is included in **Table 24**.

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Table 18: Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Population Growth	Hamilton's current population is 565,000.	In 10 years, the population expected to grow to approximately 625,000.	Increased population drives a need to acquire new Facilities. Increased costs and resources will be required for CFEM to maintain the required assets.	Adjust AM Plan to include for operating impacts and the cost of owning and maintaining these additional assets. Analyze staff, equipment and funding over the 10-year horizon to ensure it is sufficient to meet legislative requirements. Incorporate resource requirements within the AM Plan and budgets to anticipate and communicate resourcing needs proactively.
Aging Infrastructure	City Facilities are on average, 49 years old.	It is expected that the average age will continue to increase	Increased average age of facilities leads to a need to do more infrastructure renewal and maintenance. Increased costs and resources will be required for Hamilton to maintain the required assets.	Adjust the AM Plan to include operating impacts and the cost of owning and maintaining older assets. Analyze staff, equipment and funding over a 10-year horizon to ensure it is sufficient to meet legislative requirements. Incorporate resource requirements within the AM Plan and budgets to anticipate and communicate resourcing needs proactively.
Historical and current annual infrastructure funding backlog	An accumulated backlog of costs currently exists. (unquantified)	The funding gap will continue grow moving forward.	Historical and current backlog in annual infrastructure renewal funding means that assets are at high risk of failure and require greater ongoing maintenance and resources.	Adjust AM Plan to include historical and current backlog in annual infrastructure renewal funding. Analyze staff, equipment and funding over a 10-year horizon to ensure it is sufficient to meet legislative requirements. Incorporate resource requirements within the AM Plan and budgets to anticipate and communicate resourcing needs proactively.
Number of vendors with operational contracts	Status Quo (122)	May increase or decrease.	Additional staffing requirements. Either increase staff required to manage procurements or increase internal trade staff to perform services in-house.	Cost-benefit analysis to determine optimal path forward.
Technological Changes	Facilities are equipped with standard systems	Advancements in building technology will continue (e.g., Internet of Things devices)	Increased costs related to the installation, commissioning, and operation of new technology. Additional training to adapt staffing knowledge at pace with new technologies.	Analyze staff, equipment, and funding over the 10-year horizon to ensure it is sufficient to adopt technological changes. Research upcoming trends in facility technologies to prepare for adoption of new systems.
Legislative Requirements (E.g., accessibility, energy efficiency, structural requirements)	Existing facilities are compliant with building code requirements.	Energy efficiency, accessibility requirements, and additional structural requirements will increase for new builds.	Increased average costs to construct new facilities and additional costs necessary to retrofit existing facilities.	Continue constructing facilities within requirements set forth by Ontario's Building Code. Maintain path forward to reach NetZero targets.

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5.4 ASSET PROGRAMS TO MEET DEMAND

The new assets required to meet demand may be acquired, donated or constructed. For CFEM assets are typically acquired or constructed. It is also essential to add full-time staff resources to compliment operations and maintenance of newly added facility assets.

At this time no asset acquisitions have been identified by the CFEM service groups, however, any growth in a number of facilities city-wide will commit the CFEM division to additional costs to provide their services to these assets. These future costs have not been estimated at this time in the Lifecycle Management Plan in **Section 8** but should be quantified further for future iterations of the report for consideration in developing higher confidence forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan.

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6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk’¹¹.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

6.1 CRITICAL ASSETS

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in **Table 19**. Failure modes may include physical failure, collapse or essential service interruption.

Table 19: Critical Assets

CRITICAL ASSET	FAILURE MODE	IMPACT
Wentworth Street Operations Centre	Physical Failure	User groups/tenants are unable to access facilities resulting in service interruptions
Stoney Creek City Hall	Physical Failure	
Provincial Offences Administration	Physical Failure	
Lister Block	Physical Failure	
Hamilton City Hall	Physical Failure	

¹¹ ISO 31000:2009, p 2

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CRITICAL ASSET	FAILURE MODE	IMPACT
THF Fire Life Safety Equipment	Physical Failure	Unable to provide occupancy of the building to tenants (Hamilton Sports Group). Legal implications Negative reputation
THF Field of Play (Turf, Lights, Scoreboard)	Essential Service Interruption	Legal implications Negative reputation

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

Critical risks are those assessed with ‘Very High’ (requiring immediate corrective action) and ‘High’ (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in **Table 20**. It is essential that these critical risks and costs are reported to management. Additional risks will be developed in future iterations of the plan and are identified in **Section 10.2** as a continuous improvement item.

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Table 20: Risks and Treatment Plans

SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
CITY FACILITIES	Flooding	High	Evaluate Facilities Install sump pumps. Review the condition lifecycle model and adjust preventative maintenance measures.	Medium	TBD
CITY FACILITIES	Prolonged Power Outages	High	Demand review at each facility. Review the condition lifecycle model and adjust preventative maintenance measures. Investigate costing and feasibility of installing backup generators at all critical facilities.	Medium	TBD
CITY FACILITIES	Closing Facilities Due to Insufficient A/C (HVAC) Capacity	High	Demand review at each facility. Prioritize replacements for end-of-life equipment.	Medium	TBD
CITY FACILITIES	Building Declared Unsafe /Unusable	High	Building Condition Assessments. Preventative Maintenance Program. Regular visits by trained facilities staff.	Medium	TBD

Treatment costs outlined in **Table 20** are currently unknown and have not yet been incorporated into the lifecycle model. This has been identified as a Continuous Improvement item in **Section 10.2**.

6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to ‘withstand a given level of stress or demand’, and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

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Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment and crisis leadership.

6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective to achieve the optimum benefits from the available resources.

Table 21 below outlines what activities CFEM cannot afford to do over the next 10 years with their existing budget and provides the associated service and risk tradeoffs.

Table 21: Service and Risk Tradeoffs

WHAT WE CAN NOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
Fund backlog of maintenance projects	Reduced levels of service. Service interruptions due to unforeseen closures of buildings.	Elevated costs due to reactive maintenance. Health and safety risks. Reputational risks.
Fund-targeted climate change mitigation projects	Continued contribution to climate change.	Reputational risks.
Tim Horton’s Field Scoreboard Replacement	Reduced levels of service.	Reputational Risk. Potential funding taken from other groups.

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7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we've already begun to experience (adaptation). At a minimum, the City must consider how to manage our existing assets given the potential climate change impacts for our region.

Changes to Hamilton's climate will impact City assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models as well as levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan. This has been identified as a Continuous Improvement item in **Section 10.2**.

Further to the mitigation and adaptation projects required for the facilities within the scope of CFEM, it is crucial to highlight the additional demands imposed by the division to assist in city-wide implementation. With oversight on the entire inventory of City buildings, the projects mandated for execution on assets owned by each divisional group necessitate coordination with the CFEM team.

7.1 CLIMATE CHANGE MITIGATION

Climate Mitigation refers to human intervention to reduce GHG emissions or enhance GHG removals (e.g. building CFEM infrastructure that can support EV charging and adopt renewable energy generation). The City of Hamilton's Community Energy + Emissions Plan¹² (CEEP) includes five Low-carbon Transformations necessary to achieve the City's target of net-zero GHG emissions by 2050:

- Innovating our industry;
- Transforming our buildings;
- Changing how we move;
- Revolutionizing renewables; and
- Growing Green.

¹² Newbold, Skidmore, Chessman, Imhoff, & McDowell, 2022

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Mitigation Demand Analysis

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City’s modelled targets for the low carbon transformations that applied to the service/asset;
- Discussing the impact the targets would have on the service/asset; and
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050 as shown in **Table 22** below.

As previously mentioned, due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below have not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AM Plan. This has been identified as a continuous improvement item in **Section 10.2**.

Moving forward, the Climate Lens tool discussed in the **AMP Overview** will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

Mitigation Demand Analysis

Table 22: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
<p>Transforming our Buildings</p>	<p>Post-retrofits, switch buildings to heat pumps for space and water heating by 2050</p>	<p>Facilities may be out of service for a period of time during the transition. Increased staffing needs to deliver projects.</p>	<p>Policies in place that support these initiatives. Facilities will need to be assessed to determine the feasibility of the proposed conversion. Funding will need to be acquired to retrofit buildings. Staff will need to be trained on a new system</p>

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CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
<p>Transforming Our Buildings</p>	<p>By 2050, all municipal buildings will be retrofitted to achieve 50% energy efficiency relative to 2016</p>	<p>Facilities may be out of service for a period of time during the transition. Increased staffing needs to deliver projects.</p>	<p>Facilities will need to be assessed to determine the feasibility of the proposed conversion.</p> <p>Funding will need to be acquired to retrofit buildings. Determine construction schedule and financial forecast for funding required</p>
<p>Transforming Our Buildings</p>	<p>By 2050, all new municipal buildings achieve net-zero emissions</p>	<p>Any new buildings must be designed to Net Zero standard which will increase overall costs to any project from design through to build.</p>	<p>Consider FTE focused on funding opportunities and application process to assist in securing needed resources for new and retrofit opportunities. Policies in place that support these initiatives. Determine \$/SF value to convert buildings to NetZero to get an estimate of the total portfolio (500 buildings).</p>
<p>Changing How We Move</p>	<p>100% of new municipal small and light-duty vehicles are electric by 2040</p>	<p>Electrical Vehicle chargers will need to be installed at most facilities. Compensation for staff who charge City vehicles at home will need to be considered. Initial upfront capital costs for electric vehicles</p>	<p>A business case for electric vehicle conversion will be developed.</p> <p>All Facility infrastructure (electrical load) will be impacted and plan for increased costs above actual charging station installation.</p>

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CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
<p>Revolutionizing Renewables</p>	<p>By 2050, 50% of municipal buildings will add rooftop solar PV, covering 30% of the building's electrical load</p>	<p>Initial capital costs are required. Facilities may require closure during installation.</p>	<p>The impact on the entire grid infrastructure will need to be considered to ensure this can reasonably happen.</p> <p>Considerations to new builds and retrofit roofs structure for load impact of Solar PV.</p>
<p>Revolutionizing Renewables</p>	<p>Purchase of remaining RNG is needed to replace all remaining natural gas demand by 2050, starting in 2025.</p>	<p>Increased costs on utilities budget</p>	<p>Consider circular economies and regional opportunities for potential future supply to assist in reducing costs.</p>

MITIGATION RISK ANALYSIS

Additionally, since the risk of not completing climate change mitigation projects is that the City continues to contribute to climate change in varying degrees which were modelled in the Climate Science Report for the City of Hamilton completed by the International Council for Local Environmental Initiatives (ICLEI) Canada, a risk analysis has not been completed in this AM Plan for not completing climate mitigation projects (ICLEI Canada, 2021).

CURRENT MITIGATION PROJECTS

Mitigation projects CFEM is currently pursuing are outlined below in **Table 23**. These projects are not included in the lifecycle models, as their funding is not yet secured.

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Table 23: Asset Climate Mitigation Projects

PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
Macassa Lodge Equipment Upgrades	Transforming our Buildings	Replacement of atmospheric boilers with higher efficiency condensing boilers.	GHG reductions.
Recreation Pools Heat Reclaim	Transforming our Buildings	Installation of heat reclaim and controls in all recreation centres' indoor pool systems	GHG reductions.
Low Flow Showerheads and Drain Heat Recovery	Transforming our Buildings	Replacement of existing showerheads in recreation facilities public showers to low flow models and implement heat recovery from drains	GHG reductions.
Harry Howell Arena, Fire Station 5, and Ryerson Recreation Centre Equipment Retrofits	Transforming our Buildings	Electrification of equipment in facilities.	GHG reductions.

CLIMATE MITIGATION DISCUSSION

Updates to the boiler system are to occur at Macassa Lodge which will improve the operational efficiency of the facility. Electrification of equipment at this facility is currently not being considered as the existing electrical service capacity cannot support such conversions. This scenario highlights the challenges faced by CFEM, which will be a widespread issue across the portfolio of buildings they manage. Each facility will require independent analysis to determine the feasibility of electrifying equipment in support of reaching the Net-Zero goals established.

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7.2 CLIMATE CHANGE ADAPTATION

Climate Adaptation refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads).

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.¹³

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report¹⁴ guided by ICLEI’s Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP) (ICLEI, 2021). The BARC Framework identified thirteen high-impact areas.

Adaptation Demand Analysis

Climate adaptation demands for CFEM are shown below in **Table 24**.

Table 24: Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	BASELINE (1976 - 2005) ¹⁵	AVERAGE PROJECTED CHANGE 2021-2050 ¹⁵ (ASSUMING RCP4.5 ¹⁶ SCENARIO)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties	6.7 total heavy precipitation days (20mm)	7.7 total heavy precipitation days (20mm)	Flooding	Inspect and verify the adequacy of sump pumps in existing facilities. Investigate flood potential in new builds.

¹³ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

¹⁴ City of Hamilton & Local Governments for Sustainability Canada, 2021

¹⁵ ICLEI Canada, 2022

¹⁶ RCP4.5 Scenario: Moderate projected Green House Gas concentrations, resulting from substantial climate change mitigation measures. It represents an increase of 4.5 W/m² in radiative forcing to the climate system. RCP 4.5 is associated with 580-720ppm of CO₂ and would more than likely lead to 3°C of warming by the end of the 21st century.

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ADAPTATION IMPACT STATEMENT	BASELINE (1976 - 2005) ¹⁵	AVERAGE PROJECTED CHANGE 2021-2050 ¹⁵ (ASSUMING RCP4.5 ¹⁶ SCENARIO)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Increases in heat-related issues due to extreme heat	16.1 average days where the temperature is 30 degrees Celsius or more	34.4 average days where the temperature is 30 degrees Celsius or more	Increased load and chance of failure in HVAC systems	Ensure timely preventative maintenance routines. Calibrate HVAC system upgrades to match the expected increase in cooling demand.
Increased intensity and frequency of ice storms lead to increased hazardous roads, pathways and sidewalk conditions.	187 mm average total winter precipitation	204 mm average total winter precipitation	Elevated risk of injury	Increase snow removal contracts. Ensure salt bins are available at all facilities.
Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns.	187 mm average total winter precipitation	204 mm average total winter precipitation	Lack of power to provide all services.	Fully reliable backup generation to all systems in all potential warming stations that will provide safety to citizens.

ADAPTATION RISK ANALYSIS

Additionally, the City should consider the risks for the asset or service as a result of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

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Similarly, to the exercise above and using the risk process in **Section 6**, asset owners:

- Reviewed the likelihood scores in the Vulnerability and Risk Assessment Report for the adaptation impact occurring;
- Identified the consequence to the asset/service if the event did happen to develop a risk rating; and,
- If the risk was identified as high, the asset owner produced a preliminary risk adaptation plan shown below in **Table 25**.

It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of mitigating the risks below has not been included in the lifecycle and financial models at this time. The adaptation plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should consider these risks during the planning and design processes. Future changes will be incorporated into future iterations of the AM Plan. Moving forward, the Climate Lens tool will assess projects based on these targets and will assist with the prioritization of climate adaptation projects. This has been identified as a continuous improvement item in **Section 10.2**.

Table 25: Adapting to Climate Change

ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns	Facilities	Prolonged power outages due to an increase in ice storms	High	Review the condition of and/or install backup generators augmented by renewables and battery storage
Reduced capacity of flood protection measures and water storage caused by an increase in rainfall intensity leading to flooding.	Facilities	Increase in rainfall intensity leading to flooding	High	Review requirements for new buildings to include stricter stormwater management designs and criteria

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CURRENT ADAPTATION PROJECTS

A current climate change adaptation project is shown below in **Table 26**.

Table 26: Asset Climate Adaptation Projects

PROJECT	ADAPTATION IMPACT STATEMENT	PROJECT DESCRIPTION
Mountain Transit Centre (MTC) Stormwater Review	Changes in the frequency of extreme rainfall events will result in increased instances of flooding.	A study to evaluate the existing conditions of the MTC to develop preventative alternatives to ensure that adequate drainage/diversion measures exist to properly service the site.

CLIMATE ADAPTATION DISCUSSION

The adaptation project mentioned in the preceding table is presently in the study phase, with no implementation plans or funding arrangements in place. Findings from the study will inform opportunities for adapting to future climate change impacts, particularly concerning stormwater management. Extensive examination is necessary throughout the City's entire land and facility holdings to determine the proper measures for adapting to anticipated climate change impacts.

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8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budgets. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated together and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of Whole-Life-Costs and funding options, which has been noted as a continuous improvement item in **Section 10.2**. However, at this time the plan is limited on those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

8.1 ACQUISITION PLAN

The acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs. Assets can either be donated through development agreements to the City or through the construction of new assets which are mostly related to population growth.

Currently, the CFEM group has not identified acquisitions related to the needs required of their division. However, as part of their management of buildings for divisions across the city, the acquisitions identified within the asset management plans respective to each division will impose additional demands on the CFEM team in the form of additional staff for operations. At this stage, this aggregate growth in facility acquisitions across the city has not been quantified. Incorporating these cumulative costs through an increased level of collaboration between the CFEM team and each division throughout the city has been established as a continuous improvement item.

8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons. Examples of operational activities include electrical system safety inspections, building condition assessments, cleaning, or painting.

Currently, the facilities management team is responsible for managing contracts for 122 vendors across the City. As previously mentioned in Section 2, the operational needs included within the

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lifecycle model as outlined in **Figure 12** consist of both the costs associated with operating the 10 facilities CFEM has been identified as an asset owner of, in addition to the full staffing costs for the CFEM group which carries out work for facilities on a city-wide scale. These responsibilities would include budgets for work such as capital planning, leased facility management, compliance programs, and contract management.

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure it reaches their intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition.

Examples of typical maintenance activities include equipment repairs and component replacements along with appropriate staffing and material resources required to perform these activities.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure the full network is reliable and can achieve the desired level of service. These investments for maintenance are intended to allow these assets to reach their estimated service life and minimize reactive maintenance costs.

Capital projects are typically established on a yearly basis and prioritized according to the severity of need. This triaged model of funding allocation is based on an overall lack of funding to meet an existing backlog of maintenance needs, while the implementation of preventative maintenance projects poses an even greater financial hurdle. In this model, funding "blocks" are established for standard high-cost capital works (e.g., roof replacements), which are not designated to specific facilities but instead allow flexibility for distribution as necessary based on priority. It is noted as a continuous improvement item in **Section 10.2** for the facilities team to develop a more systematic model of forecasting major maintenance projects through leveraging data provided by BCA reports as well as asset management plans.

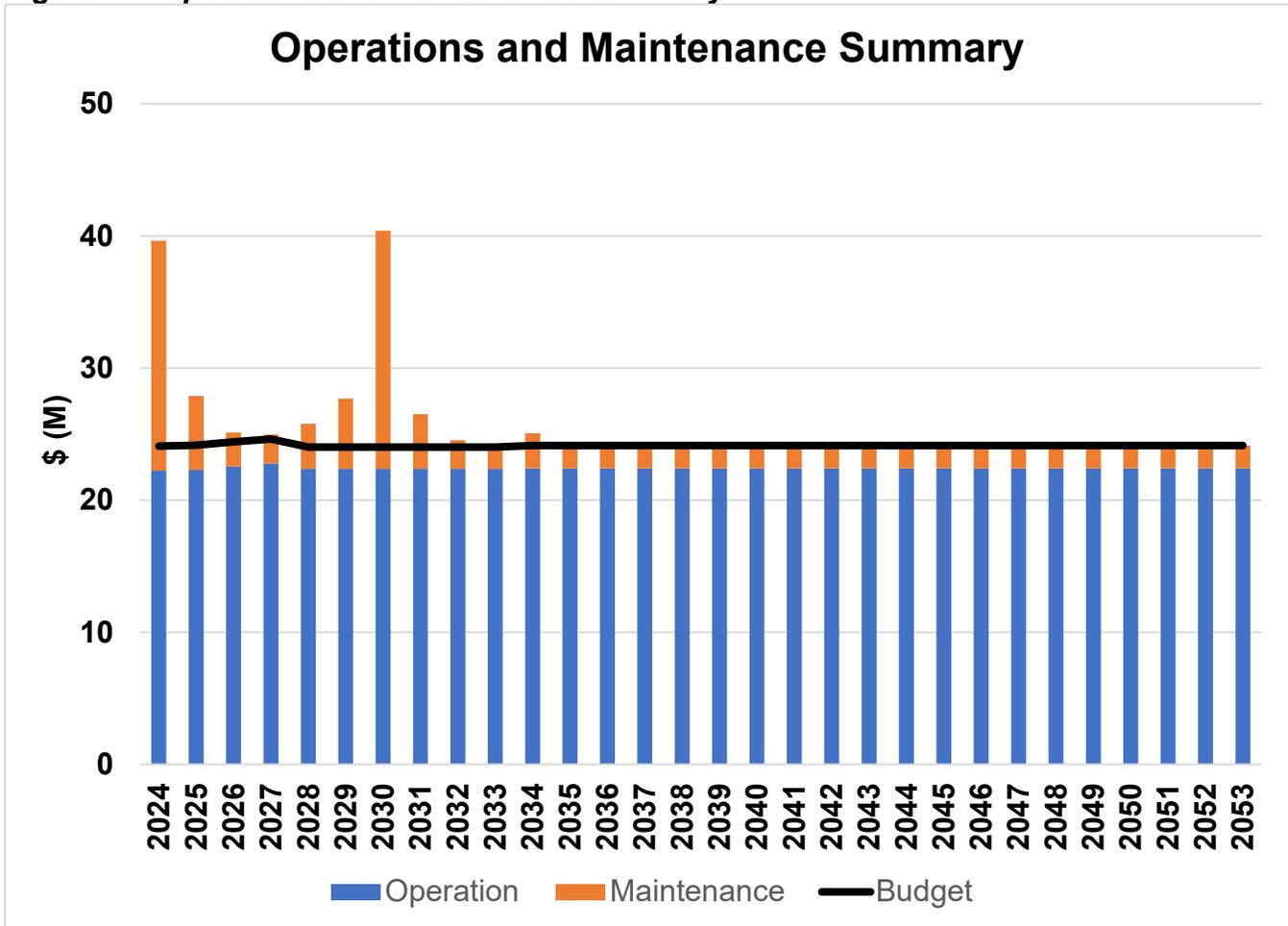
It should be acknowledged that these forecasted costs only include lifecycle replacements and do not yet fully include the recommended works that need to be undertaken to ensure the entire inventory assets achieve their desired service lives and level of service. Additionally, it should be noted that as the City continues to grow and invest in new facilities, these assets will impose further demands on the CFEM team to implement and carry out the necessary operations and maintenance projects ongoing.

Deferred maintenance (i.e. works that are identified for maintenance activities but unable to be completed due to available resources) will be included in the infrastructure risk management plan in future iterations once those works have been identified and prioritized. Currently, aggregate data on the full maintenance backlog for all City facilities has not been quantified due to a lack of reliable data. This has been noted as a continuous improvement item in **Section 10.2**.

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The maintenance costs included within the lifecycle model as outlined below in **Figure 12** consist exclusively of the 10 facilities CFEM has been identified as an asset owner. Future iterations of this asset management plan are anticipated to incorporate the entire maintenance backlog of all facilities across the city, but at this time has been noted as a continuous improvement item.

Figure 12: Operations and Maintenance Summary



Per **Figure 12** above, it is evident that there are major spikes in maintenance needs over the planning term. The elevated maintenance needs in the initial year (2024) represent the backlog of deferred maintenance projects that are unresolved due to budget constraints. Another unfunded spike in maintenance requirements is observed in 2030, which includes large replacement costs for audio-visual equipment in Tim Horton’s Field. These currently unfunded maintenance works are necessary updates as required by their existing contractual obligations with the Hamilton Tiger-Cats and Forge FC, which will require funding to complete. This poses a risk to the availability of capital funding for other divisions of the city, as these system upgrades are non-negotiable and may take precedence over other required works.

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8.3 RENEWAL PLAN

Renewal is major works which does not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs

Asset renewals are typically undertaken to either ensure the assets' reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 27** and are based on the estimated design life for this iteration. Future iterations of the AM Plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2023 however they will be reviewed annually until their accuracy reflects the City's current practices.

Table 27: Useful Lives of Assets

ASSET SUBCATEGORY	AVERAGE ESTIMATED SERVICE LIFE (YEARS)
Facilities	50 or 75
Heritage Facilities	150
Equipment	18
IT Assets	4.5
Fleet	11.3

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).¹⁷

¹⁷ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

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Future methodologies may be developed to optimize and prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure;
- Have high use and the subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have the potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.¹⁸

SUMMARY OF FUTURE RENEWAL COST

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in **Figure 13**.

Please note that the facilities listed below have been granted heritage status:

Hamilton City Hall and Garage:

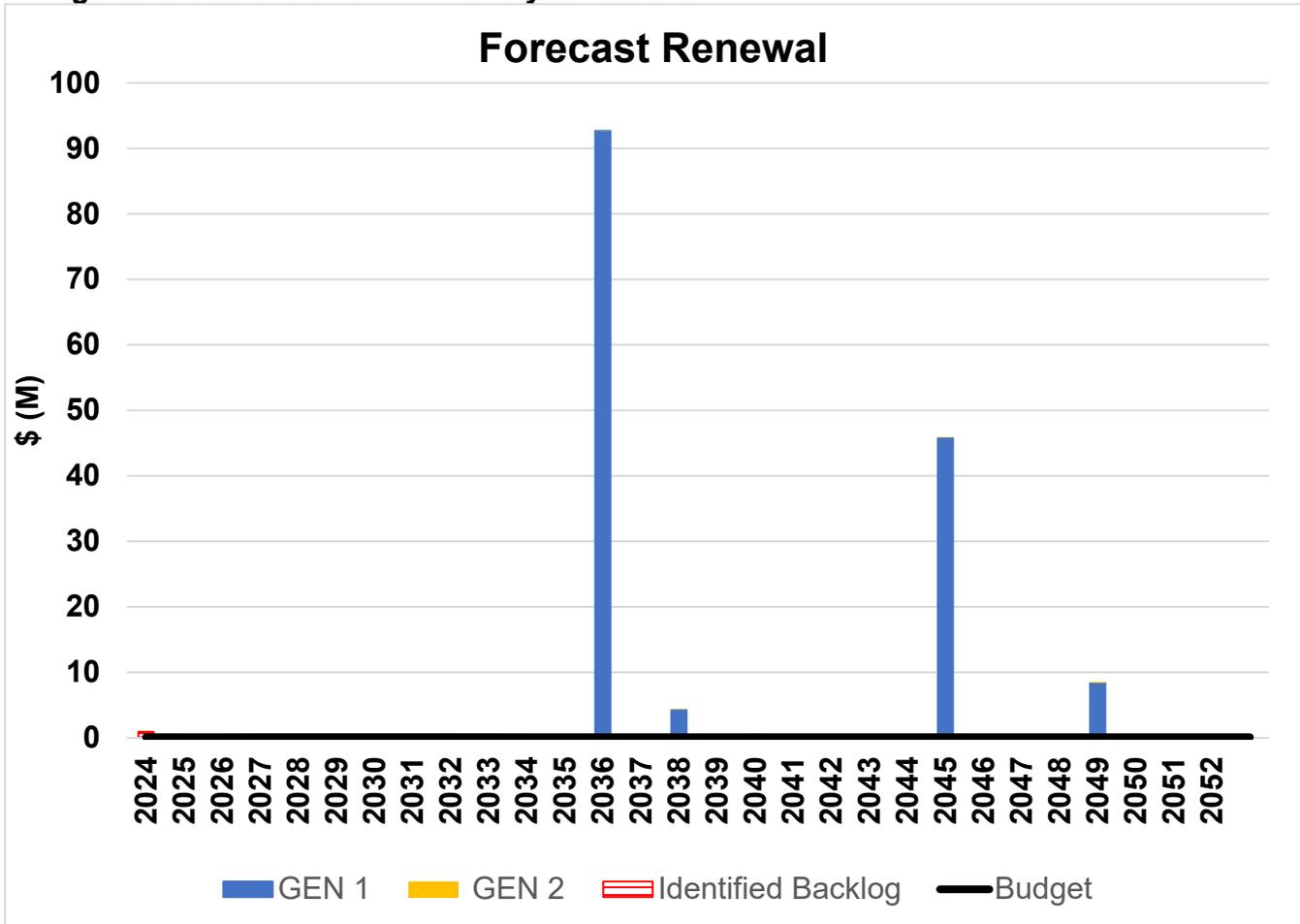
- Lister Block
- Dundas Town Hall

Consequently, their estimated service life (ESL) has been extended as a full renewal is not planned. Instead, maintenance projects will be carried out continuously. Although these buildings have surpassed the standard ESL for typical facilities, they are not part of the renewal schedule outlined in **Figure 13**.

¹⁸ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

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Figure 13: Forecast Renewal Costs
 All figure values are shown in 2023 year dollars.



Major renewals included in the above graph include the Provincial Offences Administration building in 2036 and Stoney Creek City Hall in 2049. These facilities are set for renewal based on the estimated service life (75 and 50 years, respectively) of each asset, as provided by the Facilities division. While these unfunded renewals have been included in the lifecycle forecast, a detailed review of these facilities is expected to occur at a time closer to their anticipated replacement year to determine a sound financial strategy for the asset. At that time the building should be evaluated based on factors such as condition, usage, capital works required, etc., to determine if a full replacement is necessary. It is evident that there are minimal renewal costs required in the initial 10-year cost projection, particularly when compared to the renewal values estimated for the aforementioned facilities. This aspect is crucial to bear in mind when interpreting the results of the renewal funding rates calculated in **Section 9.1**. Also included in the above graph is the anticipated renewal of the Wentworth Street Operations Centre in 2038. However, it is important to highlight that only a fraction of the total replacement value of the building was incorporated, based on the percentage of floor area (3.2%) occupied by CFEM at the time of writing. As a shared occupier of the facility, the remaining total replacement value of the building is captured in the individual AM plans of each additional occupant.

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8.4 DISPOSAL PLAN

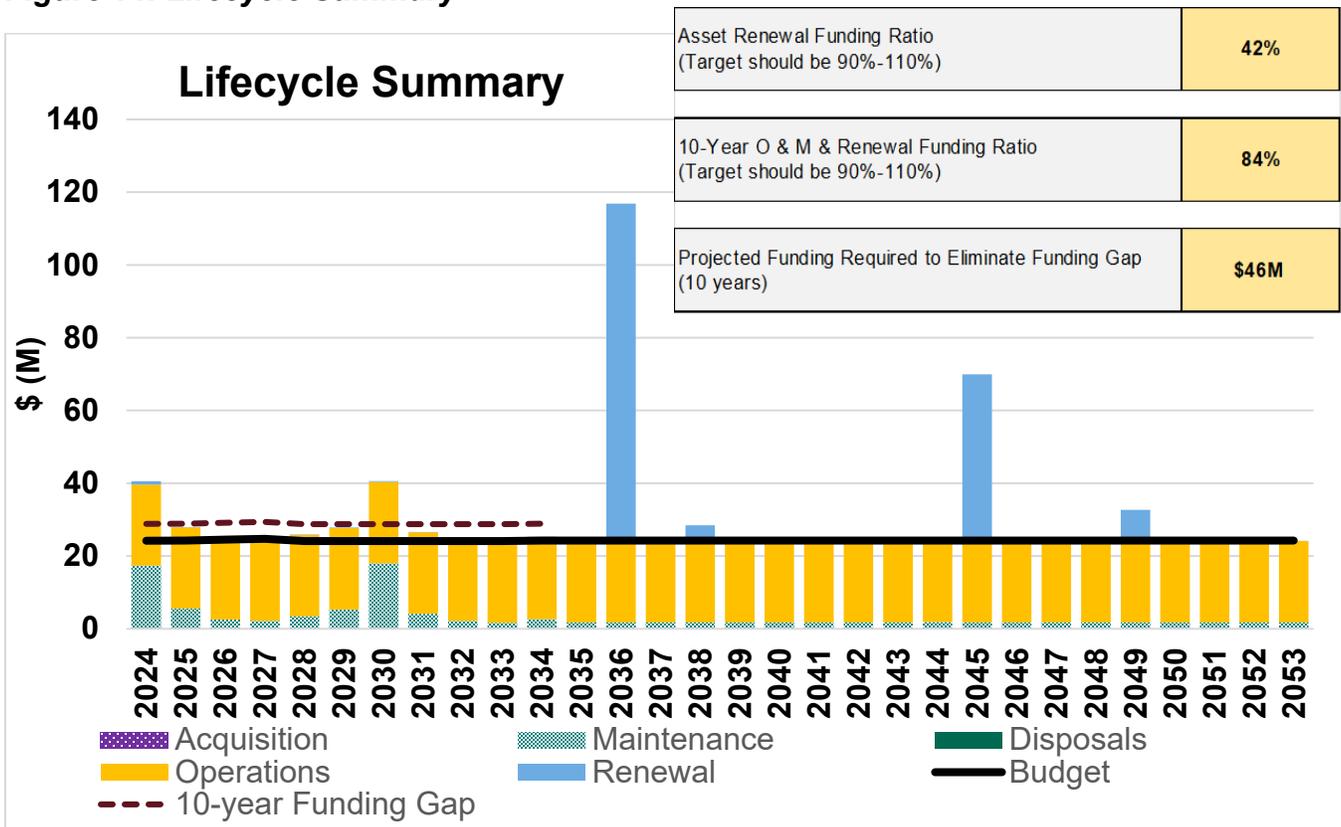
Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen. No disposals were identified or incorporated into the lifecycle model.

8.5 LIFECYCLE COST SUMMARY

The financial projections from this asset plan are shown in **Figure 14**. These projections include forecast costs for operation, maintenance, and renewal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs estimated to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving a balance between costs, levels of service and risk to achieve the best value outcome.

Figure 14: Lifecycle Summary



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The above lifecycle summary presents an overall picture of the financial status of CFEM as it relates specifically to the ten facilities identified in scope. There are funding gaps observed due to previous funding deficits creating a backlog of deferred maintenance, as well as upcoming maintenance projects that are not currently identified within the group's budgets. CFEM will need to continue to increase its budget annually to fund these deferred maintenance activities, address identified future maintenance and to fund increasing reactive maintenance work that can occur due to the aging infrastructure. The 10-year funding gap is further explained in **Section 9.1**.

In addition, while this figure provides a snapshot of the gaps identified within the CFEM portfolio of buildings, it is important to note that CFEM is also responsible for managing buildings across the City which consists of a much larger aggregated funding gap that is spread across all individual AM Plans. At the time of writing, this gap has not yet been quantified in full. Furthermore, because no acquisitions were identified, the operations costing remain fixed as we assume the status quo. Although it is anticipated these costs will increase in the future due to the demand drivers previously outlined, these remain unquantified.

Currently, CFEM has no planned budget to address the renewal work that is projected over the 30-year horizon. There are significant forecasted asset renewals projected for 2036 with renewal values of \$93M and \$46M in 2045. CFEM would benefit from seeking out long-term financial strategies to adequately plan for this significant future expenditures.

Without sufficient funding, the City has little option but to defer these necessary lifecycle activities. Deferring important lifecycle activities is never recommended. The City will benefit from allocating sufficient resources to developing its long-term financial plan to ensure that over time the City can fully fund the necessary lifecycle activities. Funding these activities helps to ensure the assets are compliant, safe, and effectively deliver the service the customers need and desire.

The City will continue to improve its lifecycle data, and this will allow for informed choices as to how best to mitigate impacts and how to address the funding gap itself. In future plans, this funding gap will be refined over the next three years to improve the confidence and accuracy of the forecasts.

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9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure CFEM provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-term financial planning (LTFP) is critical for the City to ensure that network lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for CFEM the City will have difficult choices to make in the future which will include options such as higher costs reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all of the network's needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

9.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- Medium-term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio¹⁹ **42%**

The Asset Renewal Funding Ratio is used to determine if the City is accommodating asset renewals in an **optimal** and **cost-effective** manner from a timing perspective and relative to financial constraints, the risk the City is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable, however, the expenditures are below this level in some service areas predominantly

¹⁹ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

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due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

If assets are not renewed at the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to the City's reputation and risk of fines or legal costs.

The lack of renewal resources will be addressed in future AM Plans while aligning the plan to the LTFF. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

The Asset Renewal Funding Ratio (ARFR) is calculated for only the first 10 years of the planning term. In CFEM's case, their renewals in this period consist of IT hardware, maintenance equipment, vehicles, and fleet equipment utilized in maintaining the Tim Horton's Field stadium and field of play. While the ARFR is currently below the optimally funded range (90-100%), the average annual gap in funding in absolute dollars is approximately \$132K per year. This includes a backlog of renewals identified at a value of \$835K. In relation to the overall budgets identified for the group, these values are less substantial in size by comparison. Additionally, it should be noted that several of the expected service lives of these equipment renewals are estimates and will require inspection prior to making the decision to expense a replacement. This speaks to the value in updating and maintaining an accurate inventory of asset data, in order to present reliable forecasts in funding requirements.

MEDIUM-TERM – 10 YEAR FINANCIAL PLANNING PERIOD

10-Year Operations, Maintenance and Renewal Financial Ratio 84%

Although this AM Plan includes forecast projections to 30 years, the higher confidence numbers are typically within the first ten years of the lifecycle forecast. The 10-year Operations, Maintenance and Renewal Financial Ratio compares the Planned Budget with the Lifecycle Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the AARF, the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization's risk and service level commitments.

The forecast operations, maintenance and renewal costs over the 10-year planning period is **\$28.9M** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The proposed (budget) operations, maintenance and renewal funding is **\$24.3M** on average per year giving a 10-year funding shortfall of **\$4.6M** per year or **\$46M** over the 10-year planning period. This indicates that **84%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed

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budget, which is not within the 90-110% range. While this value falls short of the optimal funding targets, it is within range of the ideal value. Financial shortcomings identified in the lifecycle modelling exercise indicate that both a backlog of and anticipated need for major maintenance projects are primarily driving the gap. Specifically, there are high-cost system replacements required for the Tim Horton's Field facility that are not currently captured with a secured budget which has an impact on the ratio. Note, that these calculations **exclude** acquired assets. It should also be noted that the CFEM group supports closing the funding gap across all divisions, which has been quantified respective to each AM Plan. Accurately quantifying this funding gap for all facilities across the city has been noted as a continuous improvement item in Section 10.

Funding an annual funding shortfall or funding 'gap' should not be addressed immediately. The overall gap in funding city-wide will require vetting, planning and resources to begin to incorporate gap management into the future budgets for all City services. This gap will need to be managed over time to reduce it in a sustainable manner and limit financial shock to customers. Options for managing the gap include:

- Financing strategies – increased funding, block funding for specific lifecycle activities, long-term debt utilization;
- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets; and,
- Influence level of service expectations or demand drivers.

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of **90-110%** for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

9.2 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Table 28 shows the forecast costs (outlays) required for consideration in the 30-year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

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The City will manage the ‘gap’ by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low-use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

Table 28: Forecast Costs for the Long-Term Financial Plan

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2024	\$-	\$22,244,066	\$17,390,694	\$906,630	\$-
2025	\$-	\$22,306,182	\$5,583,103	\$71,689	\$-
2026	\$-	\$22,557,412	\$2,562,302	\$38,272	\$-
2027	\$-	\$22,775,968	\$2,187,838	\$44,804	\$-
2028	\$-	\$22,375,968	\$3,404,100	\$112,044	\$-
2029	\$-	\$22,375,968	\$5,306,602	\$151,556	\$-
2030	\$-	\$22,375,968	\$18,009,668	\$212,272	\$-
2031	\$-	\$22,375,968	\$4,132,290	\$94,689	\$-
2032	\$-	\$22,375,968	\$2,163,319	\$641,628	\$-
2033	\$-	\$22,375,968	\$1,641,705	\$14,420	\$-
2034	\$-	\$22,413,944	\$2,649,955	\$258,139	\$-
2035	\$-	\$22,413,944	\$1,725,705	\$31,689	\$-
2036	\$-	\$22,413,944	\$1,725,705	\$92,735,952	\$-
2037	\$-	\$22,413,944	\$1,725,705	\$54,804	\$-
2038	\$-	\$22,413,944	\$1,725,705	\$4,310,484	\$-
2039	\$-	\$22,413,944	\$1,725,705	\$317,806	\$-
2040	\$-	\$22,413,944	\$1,725,705	\$660,513	\$-
2041	\$-	\$22,413,944	\$1,725,705	\$19,689	\$-
2042	\$-	\$22,413,944	\$1,725,705	\$169,387	\$-

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YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2043	\$-	\$22,413,944	\$1,725,705	\$34,420	\$-
2044	\$-	\$22,413,944	\$1,863,705	\$275,380	\$-
2045	\$-	\$22,413,944	\$1,725,705	\$45,823,932	\$-
2046	\$-	\$22,413,944	\$1,725,705	\$113,272	\$-
2047	\$-	\$22,413,944	\$1,725,705	\$14,804	\$-
2048	\$-	\$22,413,944	\$1,725,705	\$567,044	\$-
2049	\$-	\$22,413,944	\$1,725,705	\$8,556,125	\$-
2050	\$-	\$22,413,944	\$1,725,705	\$168,272	\$-
2051	\$-	\$22,413,944	\$1,725,705	\$29,689	\$-
2052	\$-	\$22,413,944	\$1,725,705	\$166,628	\$-
2053	\$-	\$22,413,944	\$1,725,705	\$14,420	\$-

9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in the City’s operational budget and 10-year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM Plan will provide service delivery options and alternatives to optimize limited financial resources.

9.4 VALUATION FORECASTS

Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and remove the high costs of renewal obligations. At this

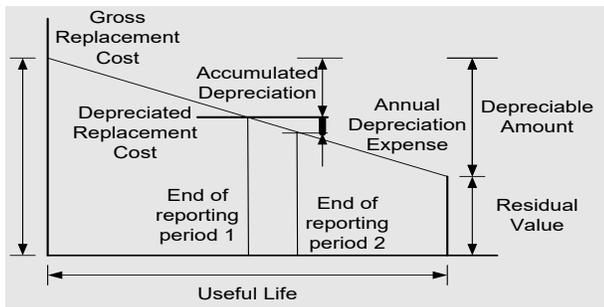
CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

time, it is not possible to separate the disposal costs from the renewal or maintenance costs however this will be improved for the next iteration of the plan.

9.5 ASSET VALUATION

The best available estimate of the value of assets included in this AM Plan are shown below. The assets are valued at estimated replacement costs:

Replacement Cost (Current/Gross)	\$908,473,017
Depreciable Amount	\$908,465,889
Depreciated Replacement Cost²⁰	\$624,614,656
Depreciation	\$12,488,587



9.6 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM Plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 30-year horizon and do not address other operational needs not yet identified;
- Maintenance forecasts are based on current budget allocations and do not identify asset needs at this time. It is solely based on planned activities; and,
- Replacement costs were based on historical costing. They were also made without determining what the asset would be replaced with in the future.

²⁰ Also reported as Written Down Value, Carrying or Net Book Value.

CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

9.7 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the **AM Plan Overview**.

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a **Low-Medium** confidence level using the information in **Table 29**.

Table 29: Data Confidence Assessment for Data Used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	Very Low	Further investigation is required to quantify demands, this has not been included.
Growth Projections	Very Low	Further investigation is required to quantify growth, this has not been included.
Acquisition Forecast	Very Low	There is no clear acquisition forecast, this has not been included.
Operation Forecast	Medium	First 4 years are accurate, remaining years are uncertain.
Maintenance Forecast	Medium	Forecasted numbers driven from BCA reporting data.
Renewal Forecast - Asset Value	Low	Most assets are based on recent market value.
Renewal Forecast - Asset Useful Life	Medium	Assets are not always replaced per their renewal schedule, more review required.
Renewal Forecast - Condition Modelling	Low	Many assets are replaced according to a renewal schedule, do not have conditions assigned and are often based on age.
Disposal forecast	Very Low	There is no clear disposal forecast, this has not been included.

CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PRACTICES

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2023 Approved Operating Budget;
- 2023-2026 Multi-Year Operating Forecast;
- 2023 Approved Corporate Facilities and Energy Management Capital Budget;
- Building Condition Assessment Reports;
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc.);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter Expert Opinion and Anecdotal Information; and,
- Reports from the mandatory inspections, operational and maintenance activities internal reports.

10.2 IMPROVEMENT PLAN

It is important that the City recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision-making. The tasks listed below are essential to improving the AM Plan and the City's ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning and to plans to physically improve the assets.

The Improvement Plan **Table 30** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this AM Plan will provide updates on these improvement plans.

CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

Table 30: Improvement Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1	Enhance the asset inventory database. Improve on condition evaluation methodologies, capturing of data, consistency in reporting, etc.	CFEM	Internal and external resources	2024-2025
2	Develop a framework for calibrating facility ESLs	CAM/CFEM	Internal Resources	Ongoing
3	Gather technical levels of service measurements that are not currently being measured.	CFEM	Internal Resources	Ongoing
4	Quantify costs of demand management and risk adaptation plans.	CAM	Internal Resources	Ongoing
5	Investigate asset costs for future climate change mitigation and adaptation targets	CAM/CFEM	Internal and external resources	Ongoing
6	Review and categorize the full facility asset list, aligning asset ownership and responsibilities across divisions (specifically noted for civic properties).	CAM/CFEM	Internal and external resources	2024-2025
7	Aligning overall budgets, refining methodology, and further leveraging BCA data and reports.	CAM/CFEM	Internal Resources	2027
8	Meet the target of 100% to review and complete building condition assessments.	CAM/CFEM	Internal and external resources	2025-2028
9	Rework public survey, improve volume of engagement, create an internal survey	CAM/CFEM	Internal Resources	Ongoing
10	Incorporate more whole life costs into LC Model	CAM/CFEM	Internal Resources	Ongoing

CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
11	Improve the accommodations and inclusivity implementation into future AM Plan iterations	CAM	Internal Resources	Ongoing
12	Increased collaboration between facilities and each division's AM Plan development/updates	CAM/CFEM	Internal Resources	Ongoing
13	Integrating EAM into AM Plan	CAM/CFEM	Internal and external resources	Ongoing
14	Quantify total backlog of maintenance costs for all city facilities	CAM/CFEM	Internal Resources	2027
15	Review existing internal asset condition assessments and ensure they are revised to report on 5-point scale with equivalent descriptions	CAM/CFEM	Internal Resources	2027
16	Climate Lens tool to be used to assess projects and prioritize climate adaptation projects.	CFEM	Internal and external resources	2027
17	Quantify operational contract budgets to track technical performance measures	CFEM	Internal and external resources	2024
18	Build a more concrete capital works forecast. Develop reserve fund for emergency breakdown and equipment replacement needs.	CFEM	Internal and external resources	2027
19	Quantify costs for intangible assets	CAM/CFEM	Internal Resources	2027

CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated on a regular basis to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one to ten-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 110%).

CORPORATE FACILITIES AND ENERGY MANAGEMENT - 2024 ASSET MANAGEMENT PLAN

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CORPORATE FACILITIES 2024 ASSET MANAGEMENT PLAN

12. APPENDIX "A" – SURVEY ANALYSIS



Corporate and Public Facilities

Survey Period: January 8th - February 5th, 2024

February 2024

86 Respondents	32 Survey Questions	5 Demographic Questions	2191 Survey Responses	393 Demographic Responses
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Age	% Pop. by Age	% of Respondents	Respondents
18 to 34	22.1%	20.9%	18
35 to 64	41.7%	58.1%	50
65+	19.5%	12.8%	11

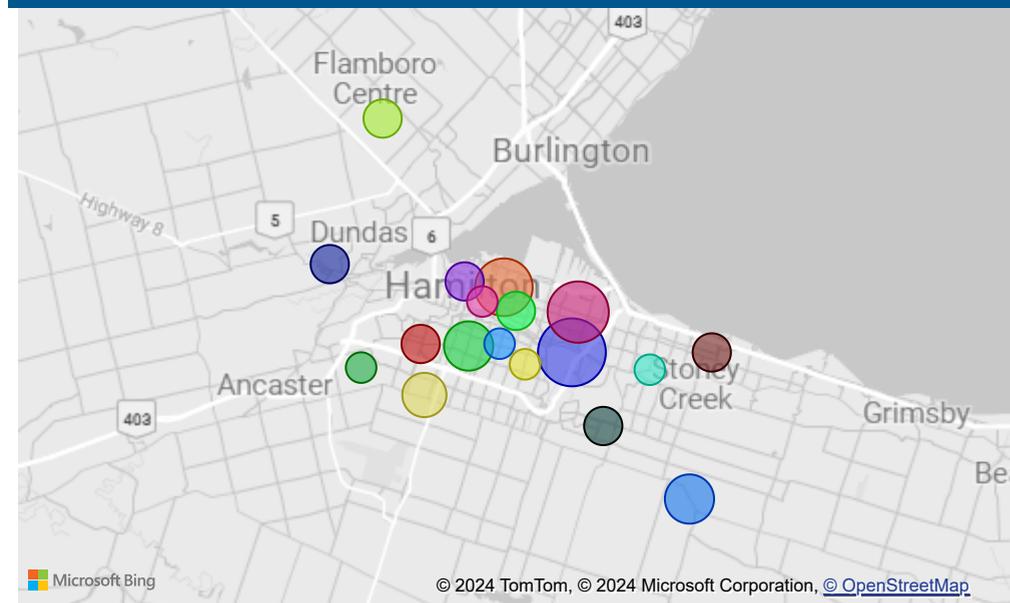
Residency	% of Respondents	Respondents
Owned by you or a member of your household	74.4%	64
Other	12.8%	11
Rented by you or a member of your household	12.8%	11

Region	% Pop. by Region	Population	% of Respondents	Respondents
Lower	45.6%	432,375	37.2%	32
Upper	37.3%	353,485	16.3%	14
Rural	17.1%	161,840	7.0%	6

Identity	% of Respondents	Respondents
No	60.5%	52
Yes	22.1%	19
I would prefer not to answer	10.5%	9
Other	8.1%	7
Can't say	3.5%	3

These stats will add to over 100% because the survey allowed responders to choose multiple options for each of the questions

Respondent Density Map



Respondents By Day



Responses Respondents

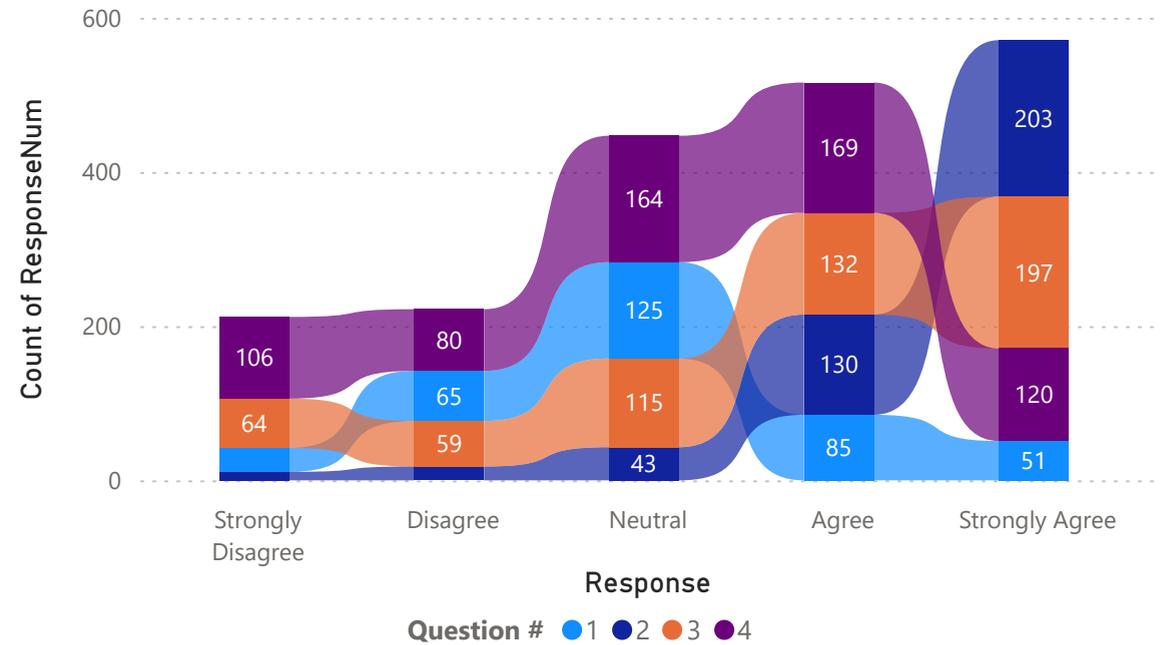
1968 86

Summary of Survey Results

● Didn't Answer ● Can't Say ● Strongly Disagree ● Disagree ● Neutral ● Agree ● Strongly Agree



Questions	σ	Avg.	Opt Out	Opt Out %
All Questions	1.30	3.51	268	11.99%
Q2 Importance of services	0.99	4.22	25	5.81%
Q3 Recommendation to Others	1.35	3.60	121	17.59%
Q4 Experience with services	1.33	3.18	49	7.12%
Q1 Performance of services	1.14	3.17	73	16.98%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Responses Respondents

1968

86

Survey Question Summary

Question #	Survey Question	n (Sample Size)	σ (Consistency)	Margin of Error (Confidence Level \pm)
1	How do you feel the City has performed over the last 2 years with respect to the City's Corporate and Public Facilities?	51	1.14	14%
2	How would you rate the importance of the following, with respect to the City's Corporate and Public Facilities?	58	0.99	13%
3	How likely would you be to recommend the use of these Corporate and Public Facilities?	81	1.35	11%
4	Based on your experience with the City of Hamilton's Corporate and Public Facilities over the last 2 years, do you agree with the following statements?	91	1.33	10%

Question

1

Performance of services

How do you feel the City has performed over the last 2 years with respect to the City's Corporate and Public Facilities?

Responses

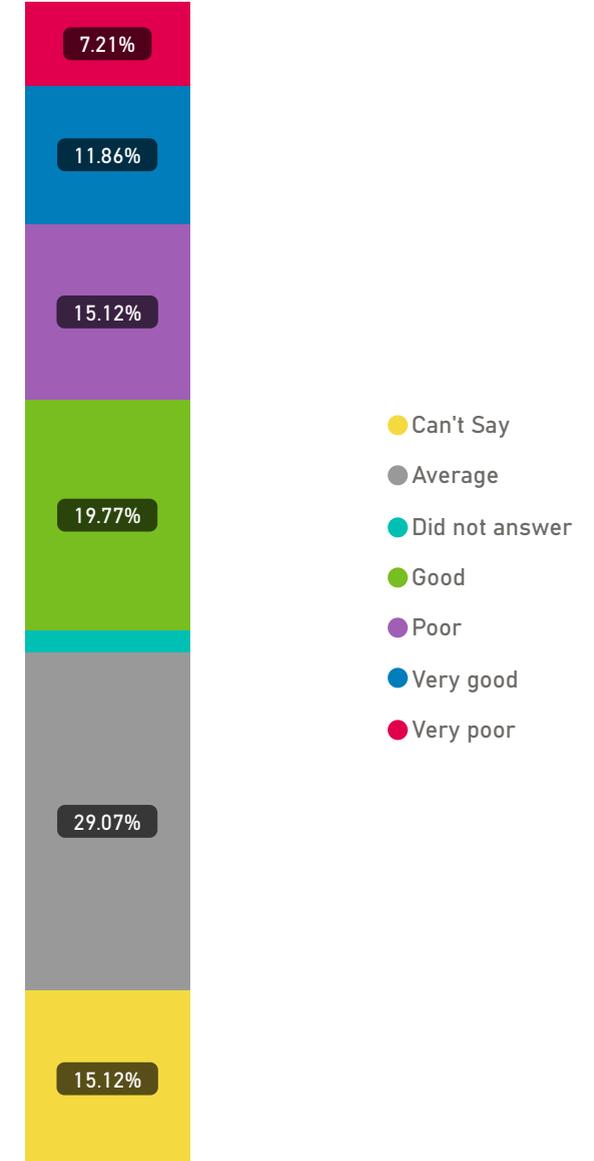
357

Respondents

82

Service Area	Very poor	Poor	Average	Good	Very good
Total	31	65	125	85	51
Clean and in good repair (Examples: Condition, cleanliness, air quality, Heating, Ventilation and Air Conditioning {HVAC})	8	12	24	24	8
Environmentally conscious (Examples: Climate goals, Net-Zero, energy efficient)	7	20	19	7	5
Inclusive and welcoming (Examples: Diverse and safe)	6	6	26	18	14
Location (Example: Nearby)	5	15	31	16	11
Physical access (Examples: Ramps, snow-clearing, entryways)	5	12	25	20	13

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.14	3.17	73	17.0%
Inclusive and welcoming (Examples: Diverse and safe)	1.15	3.40	16	18.6%
Physical access (Examples: Ramps, snow-clearing, entryways)	1.13	3.32	11	12.8%
Location (Example: Nearby)	1.09	3.17	8	9.3%
Clean and in good repair (Examples: Condition, cleanliness, air quality, Heating, Ventilation and Air Conditioning {HVAC})	1.14	3.16	10	11.6%
Environmentally conscious (Examples: Climate goals, Net-Zero, energy efficient)	1.10	2.71	28	32.6%



Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

2

Importance of services

How would you rate the importance of the following, with respect to the City's Corporate and Public Facilities?

Responses

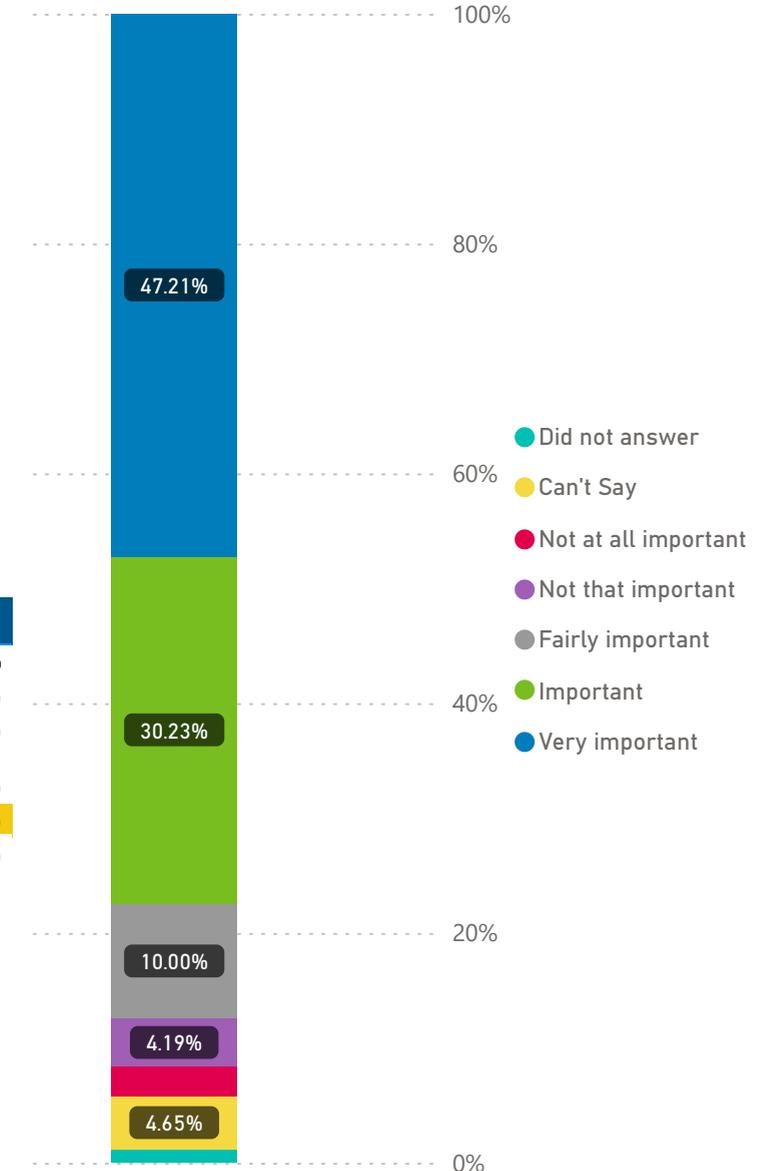
405

Respondents

84

Service Area	Not at all important	Not that important	Fairly important	Important	Very important
Total	11	18	43	130	203
Physical access (Examples: Ramps, snow-clearing, entryways)			4	19	58
Location (Example: Nearby)	1	2	9	35	35
Inclusive and welcoming (Examples: Diverse and safe)	4	4	8	28	35
Environmentally conscious (Examples: Climate goals, Net-Zero, energy efficient)	6	12	14	24	25
Clean and in good repair (Examples: Condition, cleanliness, air quality, Heating, Ventilation and Air Conditioning {HVAC})			8	24	50

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	0.99	4.22	25	5.8%
Physical access (Examples: Ramps, snow-clearing, entryways)	0.57	4.67	5	5.8%
Clean and in good repair (Examples: Condition, cleanliness, air quality, Heating, Ventilation and Air Conditioning {HVAC})	0.67	4.51	4	4.7%
Location (Example: Nearby)	0.83	4.23	4	4.7%
Inclusive and welcoming (Examples: Diverse and safe)	1.09	4.09	7	8.1%
Environmentally conscious (Examples: Climate goals, Net-Zero, energy efficient)	1.26	3.62	5	5.8%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.



Differential of Importance and Performance

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

762

Respondents

50

Service Area	Performance (index score)	Importance (index score)	Net Differential	Opt Out %
Total	63	84	-21	11%
Physical access (Examples: Ramps, snow-clearing, entryways)	66	93	-27	9%
Clean and in good repair (Examples: Condition, cleanliness, air quality, Heating, Ventilation and Air Conditioning {HVAC})	63	90	-27	8%
Location (Example: Nearby)	63	85	-21	7%
Inclusive and welcoming (Examples: Diverse and safe)	68	82	-14	13%
Environmentally conscious (Examples: Climate goals, Net-Zero, energy efficient)	54	72	-18	19%

Performance

Q1 How do you feel the City has performed over the last 2 years with respect to the City's Corporate and Public Facilities?

Importance

Q2 How would you rate the importance of the following, with respect to the City's Corporate and Public Facilities?



The Net Differential is calculated here by taking the average Likert score for each service area and multiplied by 20, the difference between performance and importance is then calculated as our final product. Negative differential indicates a higher perceived level of importance vs performance and positive is the opposite.

Question

3

Recommendation to Others

How likely would you be to recommend the use of these Corporate and Public Facilities?

Responses

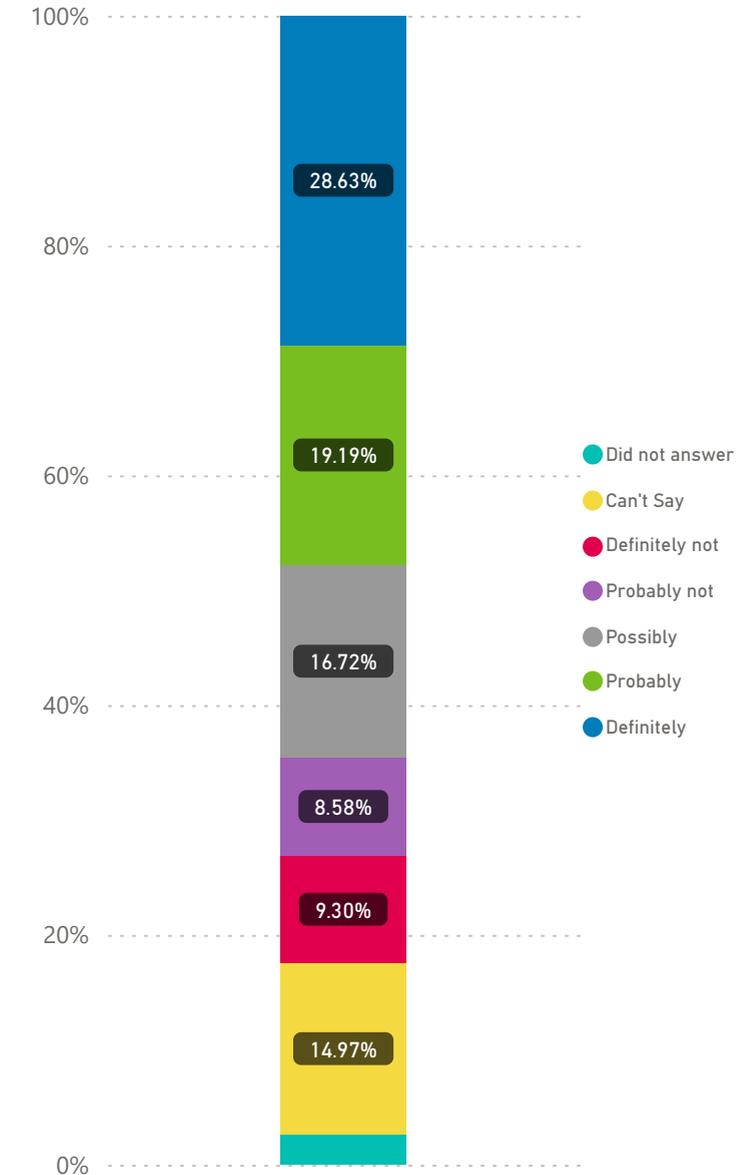
567

Respondents

82

Service Area	Definitely not	Probably not	Possibly	Probably	Definitely
Total	64	59	115	132	197
Public Health facilities	9	9	17	9	17
Park facilities	9	10	12	18	31
Museums	6	3	14	23	26
Municipal Service Centres/Town Halls	6	8	20	18	18
Long-term care homes	15	15	11	7	8
Hamilton Public Libraries	4	5	7	22	41
Gage Park Greenhouse	6	1	10	17	42
City Hall	9	8	24	18	14

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.35	3.60	121	17.6%
Gage Park Greenhouse	1.19	4.16	10	11.6%
Hamilton Public Libraries	1.14	4.15	7	8.1%
Museums	1.20	3.83	14	16.3%
Park facilities	1.39	3.65	6	7.0%
Municipal Service Centres/Town Halls	1.23	3.49	16	18.6%
City Hall	1.24	3.27	13	15.1%
Public Health facilities	1.39	3.26	25	29.1%
Long-term care homes	1.37	2.61	30	34.9%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.



Question

3

Net Promoter Score

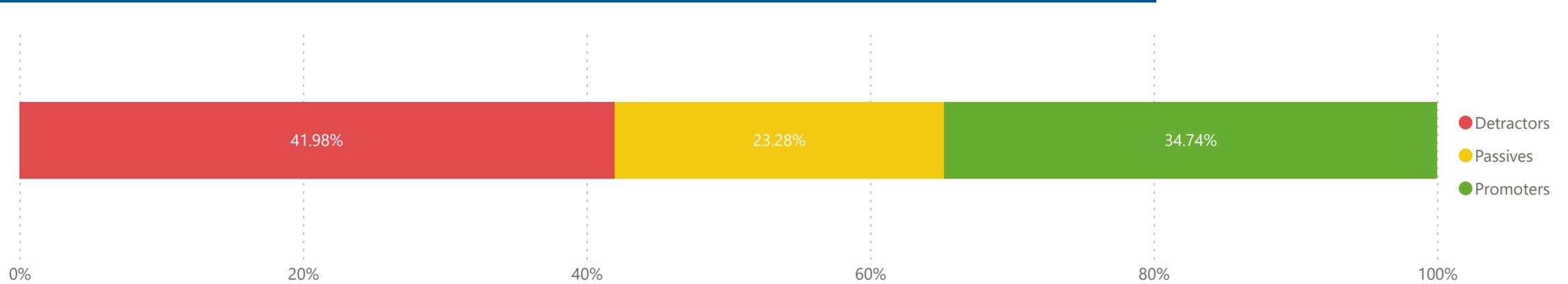
How likely would you be to recommend the use of these Corporate and Public Facilities?

Responses

567

Respondents

82



Service Area	σ	NPS	Detractors	Passives	Promoter
All Service Areas	1.35	-7	238	132	197
Gage Park Greenhouse	1.19	33	17	17	42
Hamilton Public Libraries	1.14	32	16	22	41
Museums	1.20	4	23	23	26
Park facilities	1.39	0	31	18	31
Municipal Service Centres/Town Halls	1.23	-23	34	18	18
Public Health facilities	1.39	-30	35	9	17
City Hall	1.24	-37	41	18	14
Long-term care homes	1.37	-59	41	7	8

Typically the Net Promoter Score is used to measure customer loyalty.



Likert choices less than 4 are considered 'Detractors' while 5s are considered 'Promoters' and 4s are 'Passive'. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Detractors) from (% Promoters). σ (Standard Deviation) is calculated in percent, the same units as the Net Promoter Score.

Question

4

Experience with services

Based on your experience with the City of Hamilton's Corporate and Public Facilities over the last 2 years, do you agree with the following statements?

Responses

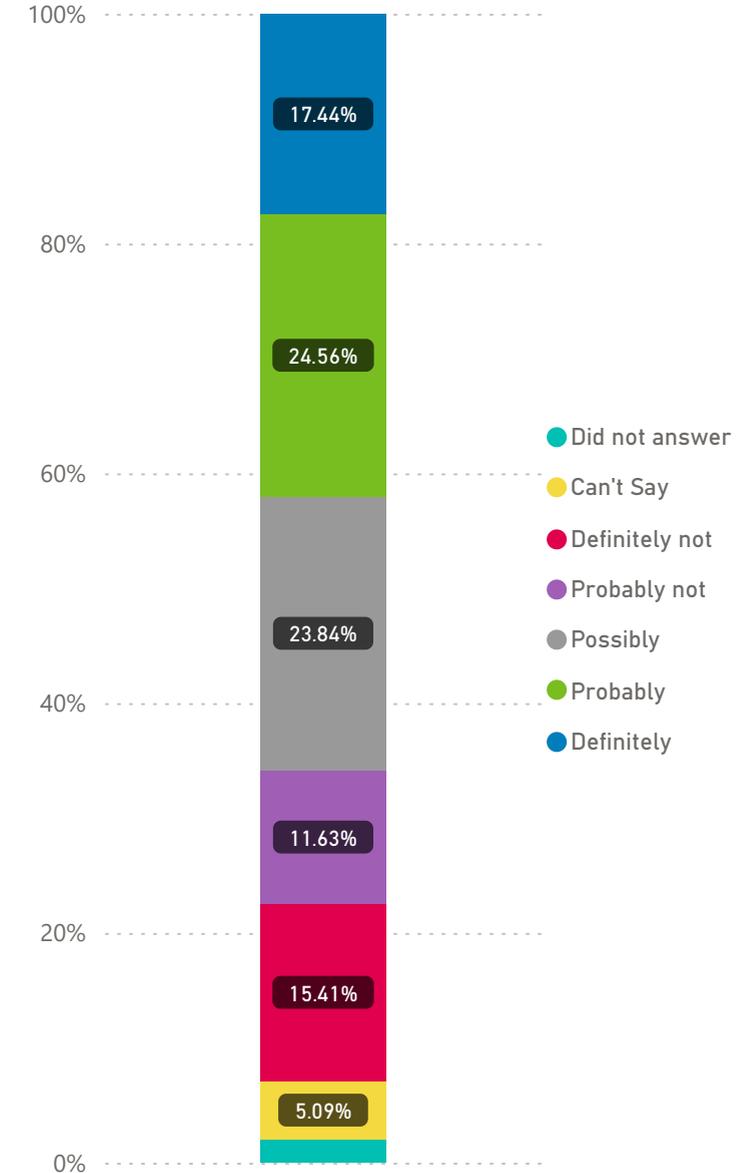
639

Respondents

84

Service Area	Definitely not	Probably not	Possibly	Probably	Definitely
Total	106	80	164	169	120
Washrooms in Hamilton's public facilities are well-maintained and clean	15	11	17	21	13
Walkways to Hamilton's public facilities are free of snow and debris	8	14	22	23	15
The grassy areas and landscaping around Hamilton's public facilities are well-maintained and regularly cut	8	5	20	24	21
I would be willing to increase taxation to provide better public facilities	33	12	15	5	15
I can find an empty garbage receptacle when I need one around Hamilton's facilities	15	10	24	17	13
Hamilton's public facilities provide good value for the City	11	7	19	26	17
Hamilton's public facilities meet my needs	9	13	26	22	12
Hamilton's public facilities are comfortable, with appropriate levels of light and noise	7	8	21	31	14

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.33	3.18	49	7.1%
The grassy areas and landscaping around Hamilton's public facilities are well-maintained and regularly cut	1.24	3.58	8	9.3%
Hamilton's public facilities are comfortable, with appropriate levels of light and noise	1.14	3.46	5	5.8%
Hamilton's public facilities provide good value for the City	1.29	3.39	6	7.0%
Walkways to Hamilton's public facilities are free of snow and debris	1.22	3.28	4	4.7%
Hamilton's public facilities meet my needs	1.19	3.18	4	4.7%
Washrooms in Hamilton's public facilities are well-maintained and clean	1.37	3.08	9	10.5%
I can find an empty garbage receptacle when I need one around Hamilton's facilities	1.33	3.04	7	8.1%
I would be willing to increase taxation to provide better public facilities	1.52	2.46	6	7.0%



Respondents who did not answer or selected 'Can't Say' are included in opt out.



Definition and Ranking of Consistency and Confidence

Data Grading Scales

Grade	Data Consistency Standard Deviation (σ , Consistency of Responses)	Confidence Level Margin of Error (at 95% Confidence in Sample Size)
A Very High	0 to 0.5 - results are tightly grouped with little to no variance in response	0% to 5% - Minimal to no error in results, can generally be interpreted as is
B High	0.5 to 1.0 - results are fairly tightly grouped but with slightly more variance in response	5% to 10% - Error has become noticeable, but results are still trustworthy
C Medium	1.0 to 1.5 - results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - Error is a significant amount and will cause uncertainty in final results
D Low	1.5 to 2.0 - results show a high variance with a fair amount of disparity in responses	20% to 30% - Error has reached a detrimental level and results are difficult to trust
E Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - Significant error in results, hard to interpret data in much of a meaningful way

$$\text{Margin of Error} = \frac{0.98}{\sqrt{n}}$$

Here we attribute a lower value of consistency of response (Standard Deviation) to a higher confidence grade, but it does not necessarily mean that the data is "better". In reality we receive more insight in the data regardless. With a high consistency we can tell that respondents more often come to the same conclusion on a response for a question, whereas with low consistency we would see a split in people's opinion, some with a very high rating and others with a very low rating. Knowing this and then understanding why is the most important aspect.

The margin of error is calculated using the factor n (sample size). The margin of error mainly tells us whether the sample size of the survey is appropriate. This is because in the calculation above, sample size is the only factor and thus has the biggest impact. The margin of error is represented as a percentage and indicates the range above and below the calculated average the true value is likely to fall. A smaller margin of error indicates a more precise estimate and vice versa.

Forestry & Horticulture Asset Management Plan 2024



FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

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SUMMARY AND QUICK FACTS

SERVICE PROFILE



The City of Hamilton's Forestry & Horticulture section aims to both promote and preserve sustainable urban forests and green infrastructure through best management practices while ensuring biodiversity, risk management, climate resiliency, professionalism, community engagement and awareness.

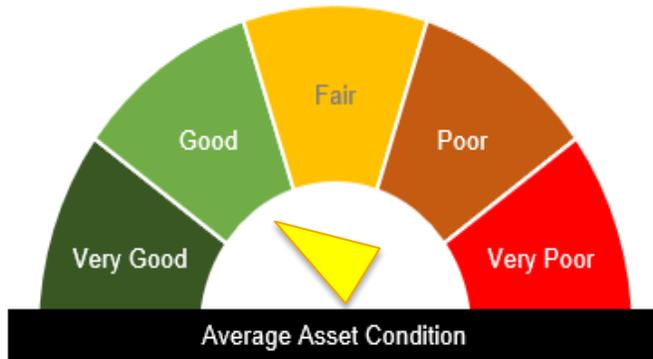
ASSET SUMMARY



Replacement Value
\$390M

GOOD CONDITION

Average Age of **26** years
or **48%** of the average
remaining service life



LEVEL OF SERVICE SUMMARY

Customer

- Customers feel Forestry & Horticulture has **GOOD** performance overall in the last 24 months in all service areas.
- Customers feel the Forestry & Horticulture **MEETS NEEDS** overall.
- Customers are **SATISFIED** with their ability to access Forestry & Horticulture sites and services.

Technical

- Forestry planted over 15,000 trees in 2023.
- Forestry responds to storm related tree damage within 24 hours.

ASSET HIGHLIGHTS

ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION	STEWARDSHIP MEASURES
Public Trees	273,618	\$351.5M	Good	Street trees are trimmed every 7 years.
Forestry & Horticulture Facilities	8	\$27.7M	Fair	Building Condition Assessments are completed every 5 years.

DATA CONFIDENCE



FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

DEMAND DRIVERS

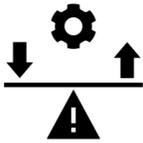


Customer Preferences – Green Street Design and increased tree canopy targets will increase the need for tree planting programs and the overall number of assets Forestry & Horticulture will care for.



Environmental Benefit – An increase in invasive species and conversion from annual beds to perennial beds will result in Forestry & Horticulture's need to pivot and potentially acquire different assets.

RISK



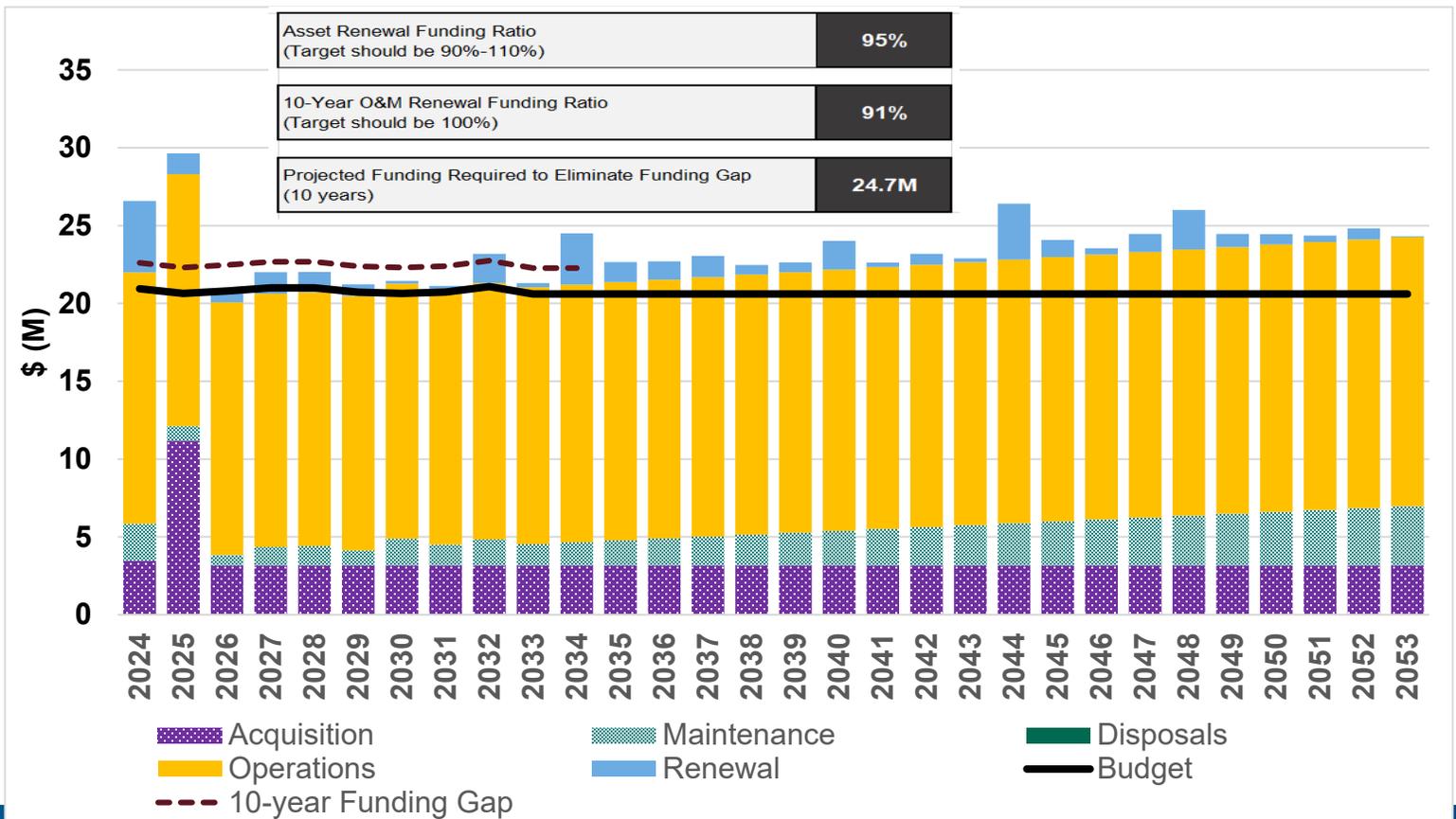
- Critical Assets are identified as trees, the Forestry Operations Centre, the Production and Tropical Greenhouses, and GIS asset inventories.

CLIMATE CHANGE MITIGATION



- The City has committed to planting 20,000/year of the 50,000/year Growing Green Mitigation Transformation target through capital and operating budgets and programs.

LIFECYCLE SUMMARY



FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

1. INTRODUCTION

The City of Hamilton's Forestry & Horticulture section aims to both, promote and preserve sustainable urban forests and green infrastructure through best management practices while ensuring biodiversity, risk management, climate resiliency, professionalism, community engagement and awareness. The Purpose of this Asset Management Plan (AM Plan) is to ensure that Forestry & Horticulture has the required assets to deliver beautiful and sustainable Forestry & Horticulture services to the City.

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements (i.e. O.Reg 588/17¹), and required funding to provide the appropriate levels of service over the 2023-2052 planning period.

¹ Government of Ontario, 2017

2. BACKGROUND

The information in this section is intended to provide background on the Forestry & Horticulture service by providing a service profile, outlining legislative requirements, and defining the asset hierarchy used throughout the report. This section will provide the necessary background for the remainder of the AM Plan.

2.1 SERVICE PROFILE

Forestry & Horticulture (F&H) provides the following services within the City of Hamilton.

- Tree planting and tree maintenance programs;
- Public tree permits and development reviews;
- Forest health programs;
- Emergency and storm response related to public trees;
- Production Greenhouse;
- Tropical Greenhouse;
- Floral Shows;
- Horticultural maintenance of high-profile public parks, civic properties, and right-of-way; and,
- Public outreach and education.

Listed below are related documents reviewed in preparation of the Asset Management Plan:

- [Asset Management Plan Overview Document](#);
- [Hamilton's Urban Forest Strategy](#); and,
- [Hamilton's Climate Action Strategy](#).

Additional financial-related documents are identified in **Section 10.1** Plan Improvement and Monitoring.

2.1.1 SERVICE HISTORY

The forest ecosystem in Hamilton and the surrounding Southwestern Ontario area is known as the Carolinian forest. This ecozone is rare in Canada, representing only 1% of the country's forests but containing a greater variety of plants and animals than any other ecosystem in the country including one-third of Canada's rare and endangered species. Over the past 250 years, the zone has been reduced in size by over 90% as settlers cleared land for agriculture and cities grew and developed. The area is also home to the Niagara Escarpment, winding through the urban area and providing natural connecting corridors and greenspaces. The escarpment is home to some of the oldest cliff-dwelling trees in the world, including the oldest living eastern white cedar at 1,050 years old.

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

Urban neighborhoods have grown around original trees making original trees some of the oldest features in our streets. Development history and land use have shaped the way the urban forest is distributed across the City. Historical industrial and commercial areas of the city have generally fewer trees and less canopy cover while areas of the City with large parks or mature residential neighbourhoods benefit from increased canopy cover. Protecting and caring for our urban forest is critical to the city's sustainability, green infrastructure and resident's health and well-being.

Gage Park was established in 1918 when the City purchased the land from Robert Russel Gage to beautify the eastern entrance. The park was designed to include various landscaped gardens and indoor horticultural displays in the greenhouses originally built in 1921 and continues in the tradition to the present day with the Memorial Rose Gardens, reflective and perennial gardens and the tropical greenhouse. The iconic Chrysanthemum Show (Fall Mum Show) has been hosted at the greenhouses every fall for over a century, with the first show in 1921. The show has continually expanded and in 1976 began incorporating themes which are creative and change every year. The show now incorporates over 200 varieties of chrysanthemums, 100,000 blooms grown at the Gage Park Greenhouse and over 20,000 square feet of displays.

2.1.2 SERVICE FUNCTION

Forestry & Horticulture is separated into two sections: Forestry and Horticulture.

The Forestry section is mandated by the City of Hamilton Public Tree Preservation and Sustainability Policy and the City of Hamilton By-Law 15-125 to regulate trees on or affecting public property. This policy and bylaw also influence Forestry and Arboriculture best management practices, which provide the following directives:

- The Urban Forest benefits the city by, amongst other things, providing natural habitat, better air quality, shade, stormwater control, and an improved pedestrian experience through enhanced landscapes and aesthetic beauty.
- The City promotes and preserves a sustainable Urban Forest through the diversity of tree species, health management, and community awareness to increase the tree canopy coverage in the city to over 35%.
- The maintenance of trees on or affecting the highways to protect the city's highways and those using the highways.

In addition to these services, Forestry also offers education programs, free tree giveaways and a street tree planting program.

The Horticulture section intends to elevate civic pride across the City by transforming Hamilton's urban landscapes through horticultural excellence and innovative floral displays.

2.1.3 USERS OF THE SERVICE

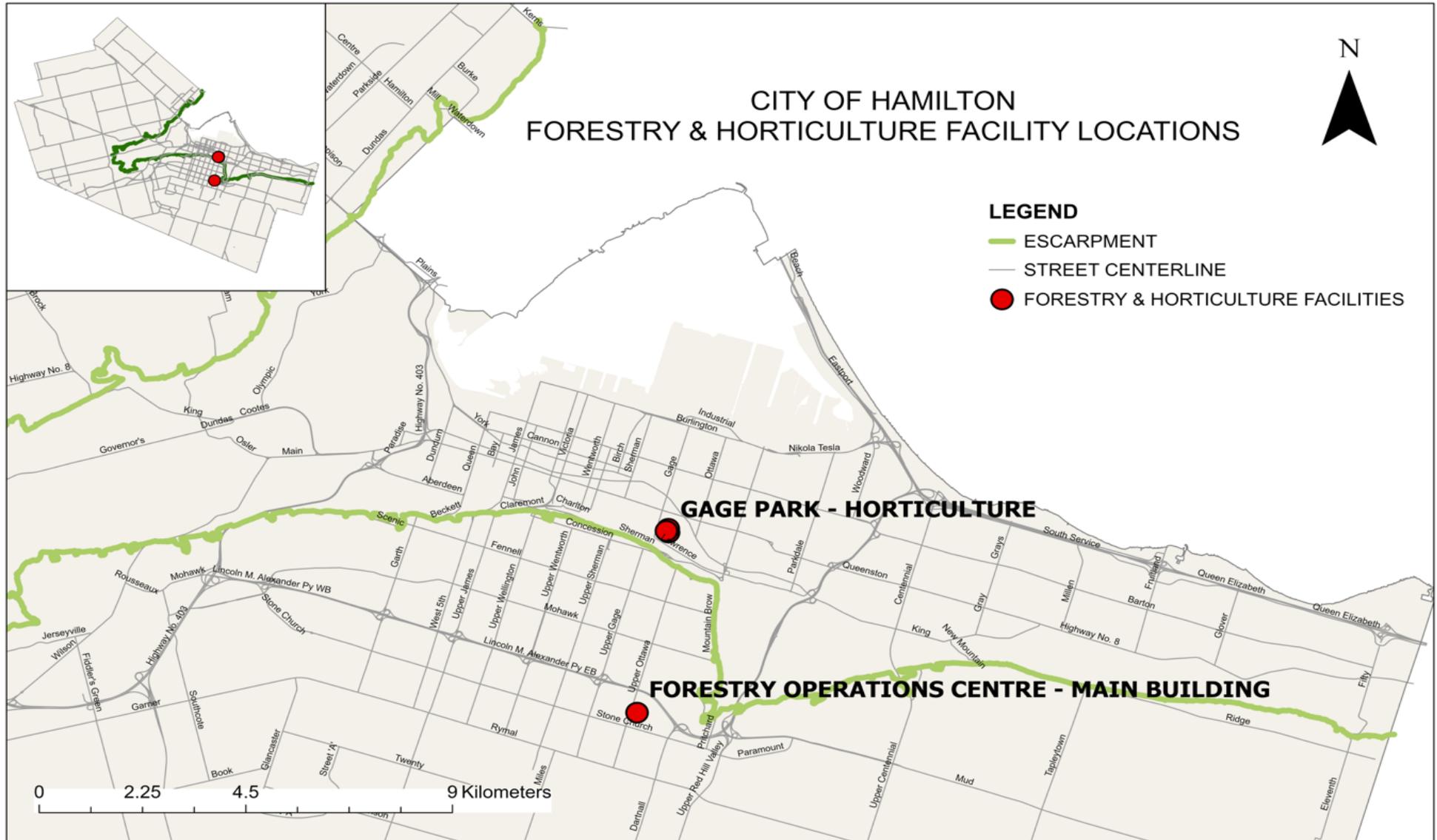
Forestry & Horticulture customers include all Hamilton residents & visitors to the City who enjoy the benefits of the existing urban forest canopy and the garden beds, planters and baskets throughout the City. Based on the 2021 (2016) Census results, Hamilton's population is 569,353 (536,917), and the average household size is 2.5 (2.5) people. ²

Other user groups include those who are interested in participating in community planting initiatives, homeowners who are interested in enhancing the urban forest canopy through street tree planting, and visitors to the Gage Park Greenhouses. **Figure 1** below shows the facility locations for Forestry & Horticulture.

²Census Profile, 2021 Census of Population, 2021

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

Figure 1: Forestry & Horticulture Operations Map:



FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

2.1.4 UNIQUE SERVICE CHALLENGES

Since urban trees and plants are considered enhanced natural assets³, these assets do not follow traditional asset management practices for traditional assets. Some differences between enhanced natural assets and traditional assets include:

- Enhanced natural assets do not have an end-of-life or replacement schedule and are typically maintained in perpetuity unless the asset dies or is irreparably damaged;
- Desired service capacity can take decades to achieve, and assets increase in value over time. Therefore, replacement costs are not calculated simply based on acquiring a new sapling;
- Enhanced natural assets also provide other ecosystem services that benefit the City but may not be able to be quantified monetarily at this time (e.g. carbon sequestration benefits, wildlife habitat etc.). These services should eventually be incorporated into a replacement costing methodology;
- These assets are typically not included in Generally Accepted Accounting Principles (GAAP) or the Tangible Capital Assets (TCA) reports which means they are treated differently in the City's financial reporting.
- Currently, there are few available best practices for green infrastructure asset management which could be used to develop this plan.

Due to these variances, Corporate Asset Management (CAM) has finalized this Asset Management (AM) Plan to align it with the current asset management program. A continuous improvement item identified in **Table 31** will address this once additional best practice documents have been developed for green infrastructure asset management.

In addition, the Forestry & Horticulture section has some unique service challenges which will be discussed throughout this report:

- The City has committed to facilitating the planting of 50,000 trees per year to 2050 and Forestry is committing to adding 20,000 trees to the urban canopy annually. This will commit the Forestry section to ongoing operations and maintenance.
- Forestry is currently only responsible for public trees (i.e. street trees and parks trees), but it is anticipated that their responsibility may grow to be responsible for all city-owned trees.
- Forestry encountered an unprecedented number of new invasive species in 2022 and 2023 (i.e. hemlock woolly adelgid, spotted lantern fly and oak wilt) which has led to an increase in tree treatment and monitoring in order to support the canopy.
- Most Horticulture staff are seasonal. This results in significant staff time annually for training and recruitment, and half of these staff do not return.

³ Enhanced natural assets are natural assets which were not naturally formed or inherited, but were strategically placed or constructed.

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

- As the City continues to prioritize biodiversity, there is a desire to convert annual garden beds to perennial, pollinator garden beds, which is a change in operations and may require additional assets, training, resources and operational requirements to deliver.
- Horticulture arrangements bring beautification value to the City, but some practices are costly (i.e. hanging baskets require frequent watering, and horticulture installments require significant staff time and budget). There may be opportunities for savings if certain activities are modified, but there is a cost-benefit analysis required for this change.

2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of Forestry & Horticulture services are outlined in **Table 1**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

Table 1: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENT
Migratory Birds Convention Act	States harming or killing bird populations through forestry operations is illegal, therefore all forestry activities should be planned outside of normal nesting periods.
Pest Control Products Act	To protect people living in Canada and the environment and ensure that all pest control products in the marketplace can be used safely and effectively, therefore staff plan and use products as per regulations.
Public and Private Tree/Woodland Bylaws: <ul style="list-style-type: none"> • 15 –125 To Regulate Trees on or Affecting Public Property • 2000-118 Town of Ancaster • 4513-99 Town of Dundas • 4401-96 Stoney Creek • 14-212 Urban Woodland Conservation By-law • R00-054 Woodland Conservation 	Regulate the preservation and destruction of public trees and woodlands as well as private trees in Ancaster, Dundas, Stoney Creek and woodlands.

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

LEGISLATION OR REGULATION	REQUIREMENT
Canadian Landscape Standard	Provides guidelines and recommendations for major aspects of the Forestry and Horticulture nursery and landscape industry and sets standards for landscape construction projects.
Arborist Safe Work Practices	Provides arboricultural safety requirements for planting, pruning, repairing, maintaining, and removing woody plants (trees) including the use of equipment and techniques. Referenced by the Ministry of Labour for safe work practices within the Urban Forestry industry.

2.3 ASSET HIERARCHY

In order to deliver sustainable levels of service, Forestry & Horticulture requires assets. The Forestry & Horticulture Service Area has been broken down into **six** asset classes for the purpose of this AM Plan:

- **Public Trees:** refers to all trees in municipal parks and cemeteries & within the public Right of Way (ROW). Exclusions include City trees at City-owned facilities (e.g., libraries, recreation centres, etc.) and on all other City-owned land.
- **Facilities:** refers to any City-owned facilities necessary to deliver Forestry & Horticulture services.
- **Vehicles:** describes different types of vehicles (i.e., motor vehicles, trailers, aerial devices, and chippers) which are used for delivering services provided by Forestry & Horticulture.
- **Small Equipment:** refers to small equipment/tools used for delivering services provided by Forestry & Horticulture.
- **Technology:** describes the different types of technology required to deliver services including computers, and mobile equipment.
- **Horticulture Equipment:** refers to city-owned gardens, planters, hanging baskets, tropical greenhouse plants, and irrigation systems.

The asset class hierarchy outlining assets included in this section is shown below in **Table 2**.

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

Table 2: Asset Class Hierarchy

SERVICE AREA	FORESTRY & HORTICULTURE					
ASSET CLASS	PUBLIC TREES	FACILITIES	VEHICLES	SMALL EQUIPMENT	TECHNOLOGY	HORTICULTURE EQUIPMENT
Asset	Street Trees	Horticulture Facilities including: <ul style="list-style-type: none"> Horticulture Operations Gage Park 1919 Building Tropical Greenhouse Production Greenhouse 	Heavy Duty (Greater than 10,000 lbs)	Includes: <ul style="list-style-type: none"> Auger post-hole Batteries and battery chargers Blower Concrete saws, handheld Generators Landscaping trim tools Rototiller/rotovator Saws chain-generic Washer/pumps Weedeater/ attachments 	Computer	Beautification Assets
	Park Trees (including cemetery trees)	Forestry Facility (i.e., Forestry Operations Centre)	Medium Duty (less than 10,000 lbs, greater than 4,000 lbs)		Mobile	Irrigation Equipment
	Rural Trees	Poly Houses	Light Duty (less than 4,000 lbs)		Tropical Greenhouse (TGH) Plants	
	Other City Trees on City-owned Properties					

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

3. SUMMARY OF ASSETS

This section provides a detailed summary and analysis of the existing inventory information as of November 2023 including age profile, condition methodology, condition profile, and asset usage and performance for each of the asset classes. **Table 3** displays the summary of assets for the **Forestry & Horticulture** service area. The information used for this report was sourced from various City databases discussed in Section 10.1. It is important to note that inventory information changes often, and that this is a snapshot in time of information.

The City owns approximately **\$390M** in **Forestry & Horticulture** assets. A weighted average calculation has been completed based on replacement cost and excludes assets where information is currently unavailable.

Assets are a weighted average of **26 years** which is **48%** of the average remaining service life and excludes Public Trees because the age of trees is not a factor for determining tree replacement. Therefore, the majority of the weighting for this average comes from the **Facilities** asset class.

The assets in this category are on average in **Good** condition which is mostly weighted toward the Public Trees assets. For most assets, this means that the City should be completing preventative maintenance activities per the inspection reports as well as essential operating activities (e.g. inspection, cleaning).

Data confidence descriptions are outlined on page 32 of the **AMP Overview Document**. For this asset management plan, the Public Trees asset class has the highest replacement value at **\$351M**.

It is important to note that Public Trees are considered enhanced natural assets and increase in value over time (e.g., tree canopy increases with age) instead of depreciating in value like traditional assets (e.g., asset conditions worsen with age). Therefore, the Public Trees in this report were not calculated by assuming a mature tree would be replaced with a sapling because a mature tree would deliver a higher service level than a sapling. Instead, Public Tree replacement costs were calculated using an industry-standard tree appraisal methodology which values trees based on several factors including trunk diameter, overall condition, species, growing space, site suitability and competing infrastructure. For this analysis, an average unit cost was calculated for both Street Trees and Park's Trees based on an average tree in Fair⁴ condition. Although this is a robust methodology, the data confidence in this replacement value is Low due to the assumptions embedded in the unit cost; since this is the highest-value asset, the overall data confidence for replacement cost is Low. A continuous improvement item identified in **Table 31** is to investigate also valuing trees from an ecological service perspective

⁴ Fair condition was used because Good condition trees would escalate the replacement cost calculation significantly which did not appear to be correct based on subject matter expert opinion.

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as well since trees provide ecological services (e.g., carbon sequestration, wildlife habitat) that are difficult to quantify at this time.

For facilities, replacement costs are calculated using an internal tool which encompasses current market rates, building type and size and is considered to be Medium data confidence. Replacement costs for the vehicles, equipment and technology asset classes were gathered from the most recent purchase price for similar assets and are considered to be High data confidence.

Additionally, replacement costs and other inventory information for Horticulture Equipment is not currently available which includes the perennial plants in the Production Greenhouse. In addition, Rural Trees and other City-owned trees were not included in this report due to a lack of inventory information. These items have been identified as continuous improvement items in **Table 31**.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication of this AM plan. In addition, the assets included below are assets that are assumed and in service at the time of writing.

Table 3: Detailed Summary of Assets
**Weighted Average Based on Replacement Cost*

PUBLIC TREES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Street Trees	201,877	\$297M	N/A	2-GOOD
Data Confidence	LOW	LOW		LOW
Parks Trees ⁵	71,741	\$54.3M		2-GOOD
Data Confidence	LOW	LOW		LOW
Rural Trees	No Data	No Data		No Data
Data Confidence	VERY LOW	VERY LOW		VERY LOW
Other City Trees on City-owned Properties	No Data	No Data		No Data
Data Confidence	VERY LOW	VERY LOW		VERY LOW
SUBTOTAL	\$351.5M			2-GOOD
DATA CONFIDENCE	LOW			LOW

⁵ Also includes trees in cemeteries.

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FACILITIES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Forestry Facility	1	\$ 8.8M	29 years (61%)	4 - POOR
Data Confidence	HIGH	MEDIUM	HIGH	HIGH
Horticulture Facilities	4	\$18.9M	37 years (62%)	4 - POOR
Data Confidence	HIGH	MEDIUM	HIGH	HIGH
Poly Houses	3	\$2.7M	6 years (70%)	3 - FAIR
Data Confidence	HIGH	MEDIUM	HIGH	MEDIUM
SUBTOTAL	\$27.7M		21 years (73%)*	3 - FAIR*
DATA CONFIDENCE	HIGH	MEDIUM	HIGH	HIGH

VEHICLES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Vehicles	101	\$ 10.4M	9 years (10%)	4 - POOR
Data Confidence	HIGH	MEDIUM	HIGH	LOW
SUBTOTAL	\$ 10.4M		9 years (10%)	4 - POOR
DATA CONFIDENCE	MEDIUM		HIGH	LOW

SMALL EQUIPMENT				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Small Equipment	237	\$0.2M	9 years (10%)	4 - POOR
Data Confidence	MEDIUM	MEDIUM	MEDIUM	LOW
SUBTOTAL	\$0.2M		9 years (10%)	4-POOR
DATA CONFIDENCE	MEDIUM		MEDIUM	LOW

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TECHNOLOGY				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
IT Equipment	107	\$0.1M	3 years (25%)	4 - POOR
Data Confidence	HIGH	HIGH	HIGH	LOW
SUBTOTAL	\$0.1M		3 years (25%)	4-POOR
DATA CONFIDENCE	HIGH		HIGH	LOW

HORTICULTURE EQUIPMENT				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Horticulture Beautification (e.g. baskets, planters)	2519	No Data	No Data	No Data
Data Confidence	HIGH			
Irrigation equipment	188	No Data	No Data	No Data
Data Confidence	HIGH			
TGH Plants	449	\$0.1M	N/A	No Data
Data Confidence	HIGH	LOW		
SUBTOTAL	NO DATA		NO DATA	NO DATA
DATA CONFIDENCE	NO DATA		NO DATA	NO DATA
TOTAL	\$390.0M		26 years (48%)*⁶	2-GOOD*
DATA CONFIDENCE	LOW		HIGH	LOW

⁶ This weighted average calculation excludes Public Tree assets.

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

3.1 ASSET CONDITION GRADING

Condition refers to the physical state of assets. It is a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, **Table 4** below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan.

Table 4: Equivalent Condition Conversion Table



EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	PUBLIC TREES	FACILITIES CONDITION INDEX (FCI)
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance is required only.	>79.5%	N/A	N/A
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on the asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	Good	< 5%
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset usage. Minor to significant maintenance is required.	39.5% - 69.4%	Fair	>= 5% to < 10%
4 Poor	The asset has significant defects and deterioration. Deterioration has an impact on asset usage. Rehabilitation or major maintenance is required in the next year.	19.5% -39.4%	Poor	>= 10% to <30%
5 Very Poor	The asset has serious defects and deterioration. The asset is not fit for use. Urgent rehabilitation or closure is required.	<19.4%	Dead	>= 30%

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The following conversion assumptions were made:

- Average condition of public trees was estimated based on a four-point scale used by Forestry as shown above (i.e. Good, Fair, Poor, Dead).
- For assets where a condition assessment was not completed, but age information was known (small equipment, vehicles, technology assets) the condition was based on the % of remaining service life; and,
- Facilities Condition Index was based on ranges provided by the consultant who completed the Building Condition Assessment (BCA) or subject matter expert opinion if this information is not available.

3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile, and Performance Issues for each of the asset classes.

- The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life (ESL) where they can be planned for replacement. Some lower-cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if an asset's condition is based on age, it is typically considered to be of a low confidence level. Although typically, age is used when projecting replacements beyond the 10-year forecast to predict degradation.
- Condition refers to the physical state of assets and is a measure of the physical integrity of assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected or assessed at different frequencies and using different methodologies to determine their condition which are noted in this section.
- Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

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3.2.1 PUBLIC TREES PROFILE

3.2.1.1 AGE PROFILE

As previously mentioned, since the age of trees is not a factor for determining tree replacement, an age profile has not been created for this asset class.

3.2.1.2 CONDITION METHODOLOGY & PROFILE

The condition of Public Trees is assessed by Forestry staff using industry standards per the inspection frequency shown in **Table 5** below. The methodology includes a visual inspection completed from the ground including but not limited to the presence of deadwood, leaf size, leaf colour, growth rate, and the presence of insect or disease, which are all used to determine a specific condition score from good, fair, poor or dead.

Table 5: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	DESCRIPTION	LAST INSPECTION	CONDITION SCORE OUTPUT
Street Trees	7 years	Grid Program – Trees are Inspected and Trimmed	Varies	4-Point Scale
Parks Trees	7 years	Trees are Inspected and Trimmed as needed		

For this iteration of the plan, Public Trees were given an overall condition of Good, but a condition profile was not able to be completed at this time.

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3.2.1.3 ASSET USAGE AND PERFORMANCE

Service deficiencies with public trees include trees being affected by invasive species and rural trees being reactively managed.

Table 6: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
PUBLIC TREES	Various	Invasive Species	Invasive species may result in the trees approaching the end of life and may cause a reduction in the tree canopy.
RURAL TREES	Rural Areas of the City	Reactive management	There is currently no maintenance program available for these trees, and these trees are maintained on a reactive basis.
OTHER CITY TREES ON CITY-OWNED PROPERTIES	City Facilities		

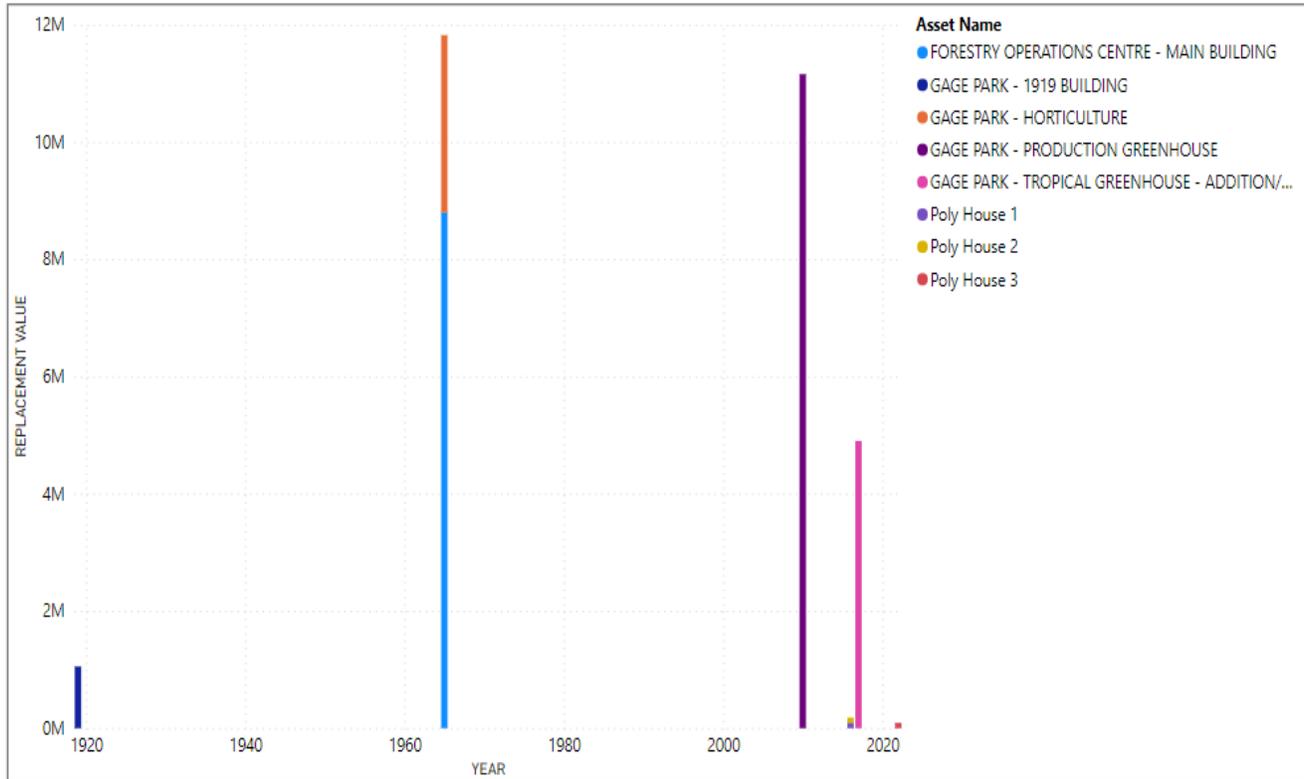
3.2.2 FACILITIES PROFILE

3.2.2.1 AGE PROFILE

The age profile for Forestry & Horticulture Facilities is shown below in **Figure 2**. For these assets, the age data confidence is Medium because there were discrepancies encountered during the development of this AM Plan between staff knowledge of the building age versus what was in the Corporate Facilities and Energy Management (CFEM) database. For the purposes of this plan, the facility ages were estimated by Forestry staff, but a continuous improvement item identified in **Table 31** is to confirm the facility ages with available documentation and ensure they are accurately recorded in the CFEM database.

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Figure 2: Forestry & Horticulture Facilities Age Profile



Most Forestry & Horticulture facilities have an Estimated Service Life (ESL) of 75 years except for heritage facilities which have an assumed ESL of 150 years, and the three Poly Houses have been assumed to have a useful life of 20 years. The oldest facility in this asset plan is the 1919 Gage Park building which was constructed in 1919 and is considered to be a heritage facility and is therefore not being considered for replacement.

3.2.2.2 CONDITION METHODOLOGY & PROFILE

The condition for Forestry & Horticulture facilities is typically determined based on the results of a Building Condition Assessment (BCA) with the exception of the Poly Houses which were assumed based on subject matter expert opinion.

BCAs are completed on these facilities every five years by the Corporate Facilities and Energy Management (CFEM) division and output a score called a Facility Condition Index (FCI) which is considered to be a high confidence level source. The FCI is a financial indicator of condition and is calculated based on a ratio of the cost of work required on the facility to the total replacement cost of the facility. The condition conversion from FCI to the standardized 5-point scale used in this AM Plan is shown in **Table 4**. A continuous improvement item identified in **Table 31** is to ensure Poly Houses are inspected by CFEM staff and given condition ratings.

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Table 7: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Forestry Facility	5 years	2020	Facilities Condition Index
Horticulture Facilities	5 years		
Poly Houses	None	None	None

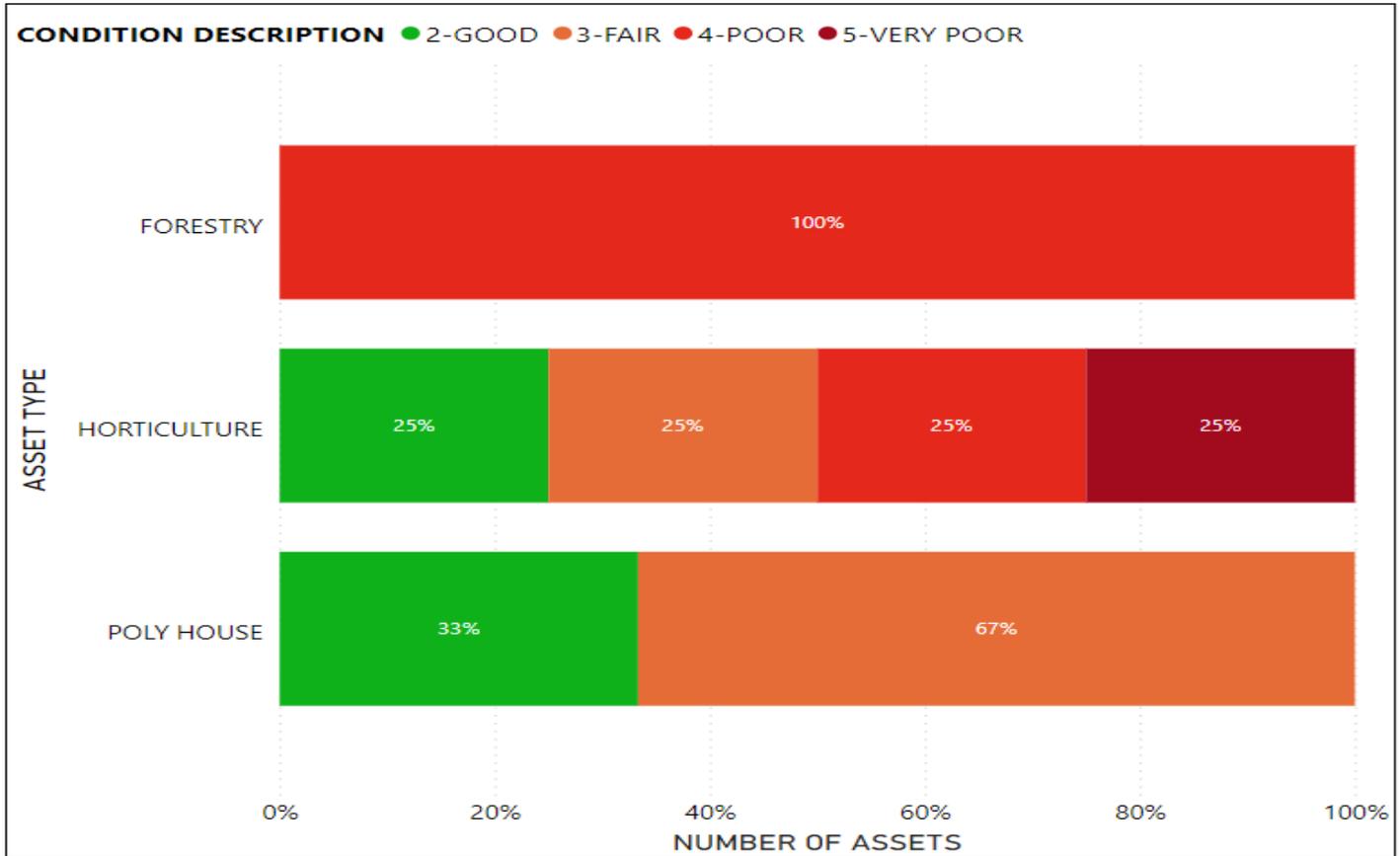
The condition profile for Forestry & Horticulture facilities can be found in **Figure 3**. The weighted average by replacement cost for all facilities is Fair condition. It is evident that 100% of Forestry Facilities are in Poor condition which represents the Forestry Operations Centre. It is important to note that the Forestry Operations Centre was renovated in 2012, but there are costly site maintenance items discussed in **Table 7** which have resulted in the facility showing a Poor condition FCI.

In addition, 50% of Horticulture Facilities (representing Gage Park – 1919 Building and the Tropical Green House) are in Poor condition or worse meaning there is significant rehabilitation work required on these facilities. Although the Tropical Greenhouse is a fairly new building, there was an incident in December 2022 where wind damaged the roof during a significant weather event, and a roof panel replacement is required.

The maintenance work required to restore these buildings to Good condition has been included in the maintenance forecast in **Section 8.2**. Currently, Forestry & Horticulture intends to replace the Horticulture Operations building with an expanded acquisition discussed in **Section 8.1**, but no other buildings are being planned for replacement and so these buildings are not represented in the backlog in **Section 8.3**.

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Figure 3: F & H Facilities Condition Distribution



3.2.2.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. Known service performance issues are included in **Table 8** below.

Table 8: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
FACILITIES	Forestry Operations Centre – Main Building	Roadway Asphalt Replacement	Repair or replacement work is required on these building components.
		Vehicle Fuelling Station Replacement	
	Gage Park – Horticulture	Built-Up Roof	

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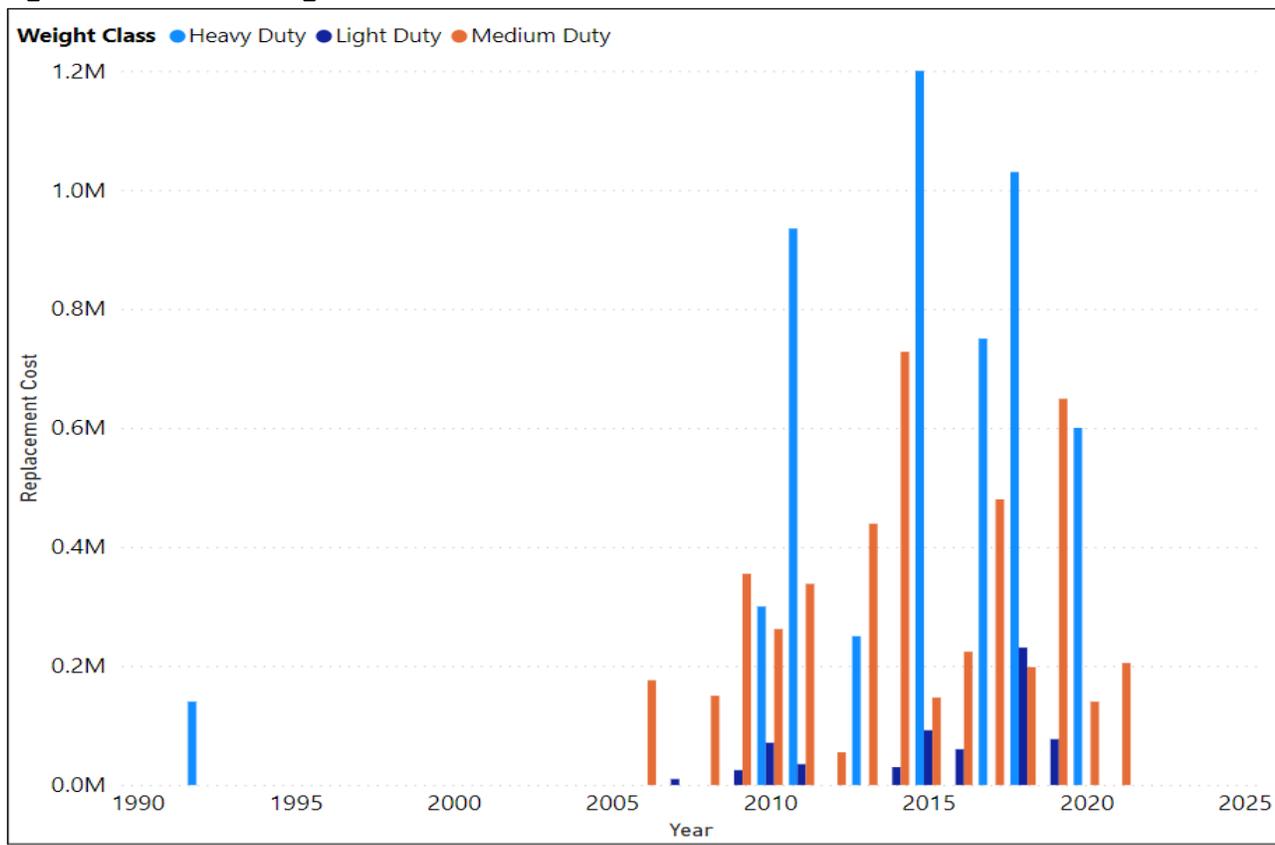
ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
	Gage Park - Tropical Greenhouse	Roof Repair	
	Gage Park – 1919 Building	Built-Up Roof	
		Structural Repairs	

3.2.3 VEHICLES PROFILE

3.2.3.1 AGE PROFILE

The age profile of the Forestry & Horticulture vehicles assets is shown in **Figure 4**. The age of these assets is considered to be high data confidence because they are recorded at the time of purchase. An analysis of the age profile is provided below.

Figure 4: Vehicles Age Profile



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Most of the Forestry & Horticulture vehicles were acquired from 2005 to 2022. Since the Estimated Service Life (ESL) for vehicles is an average of 10 years, any vehicles purchased before 2014 are beyond their service life and will appear in the Renewal backlog in **Section 8.3**. The oldest vehicle Forestry & Horticulture owns is a water tank truck which was purchased in 1992 and is 21 years past its Replacement date. This vehicle has been difficult to procure and is currently on the replacement list.

3.2.3.2 CONDITION METHODOLOGY & PROFILE

Vehicles are inspected and maintenance activities are conducted at specific intervals throughout the asset’s lifecycle however no formal condition rating is assigned to each vehicle as shown in **Table 9**. Forestry & Horticulture relies on the Fleet Section in the Corporate Asset Management (CAM) division to assist with the inspection, maintenance and procurement of vehicles on their behalf. Age has been used to estimate the condition of these assets where age is known which is considered to be low data confidence. This has been identified as a continuous improvement item in **Table 31**.

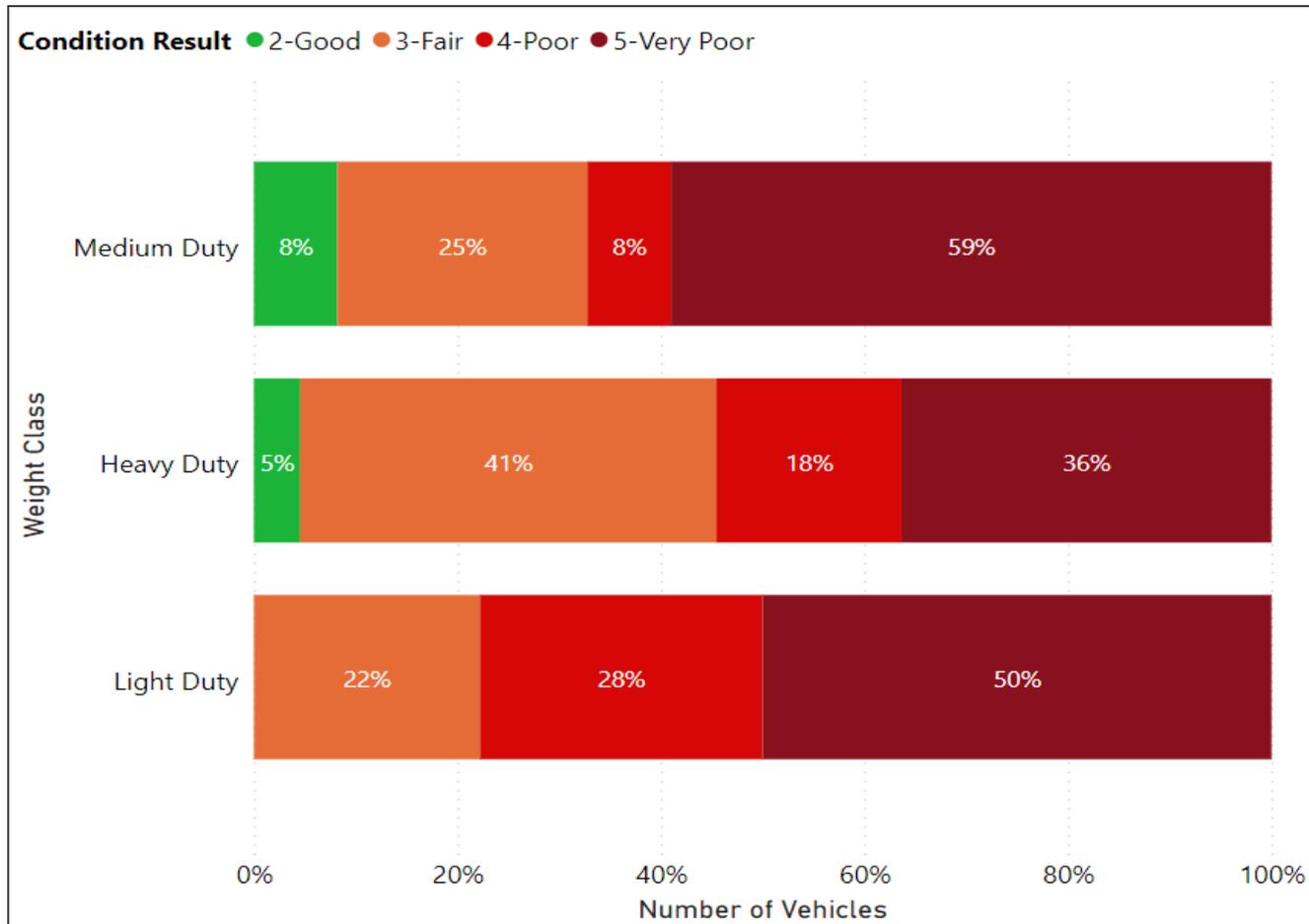
Table 9: Inspection and Condition Information

ASSET	INSPECTION TYPE	DESCRIPTION	FREQUENCY	CONDITION SCORE OUTPUT
Vehicles	Inspection	Regular Maintenance Inspection	Scheduled twice per year	N/A

Per the condition profile in **Figure 5** on the following page, Forestry & Horticulture has 59% of Medium duty vehicles, 36% of Heavy-Duty Vehicles and 50% of Light Duty vehicles in Very Poor condition. The replacement of Vehicles occurs per processes outlined by the Fleet Section. The condition of vehicles is based only on age and estimated service life and is consistent with many vehicles being beyond their ESLs as explained in the age profile section above.

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Figure 5: Vehicles Condition Profile



3.2.3.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. Known service performance issues for vehicle assets involve assets being beyond their Estimated Service Life as shown in **Table 10**.

Table 10: Known Service Performance Deficiencies - Vehicles

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Vehicles	Various	Vehicles past estimated service life recommendations	Results in increases in maintenance costs, potential safety concerns, and potentially interrupted service with more staff downtime

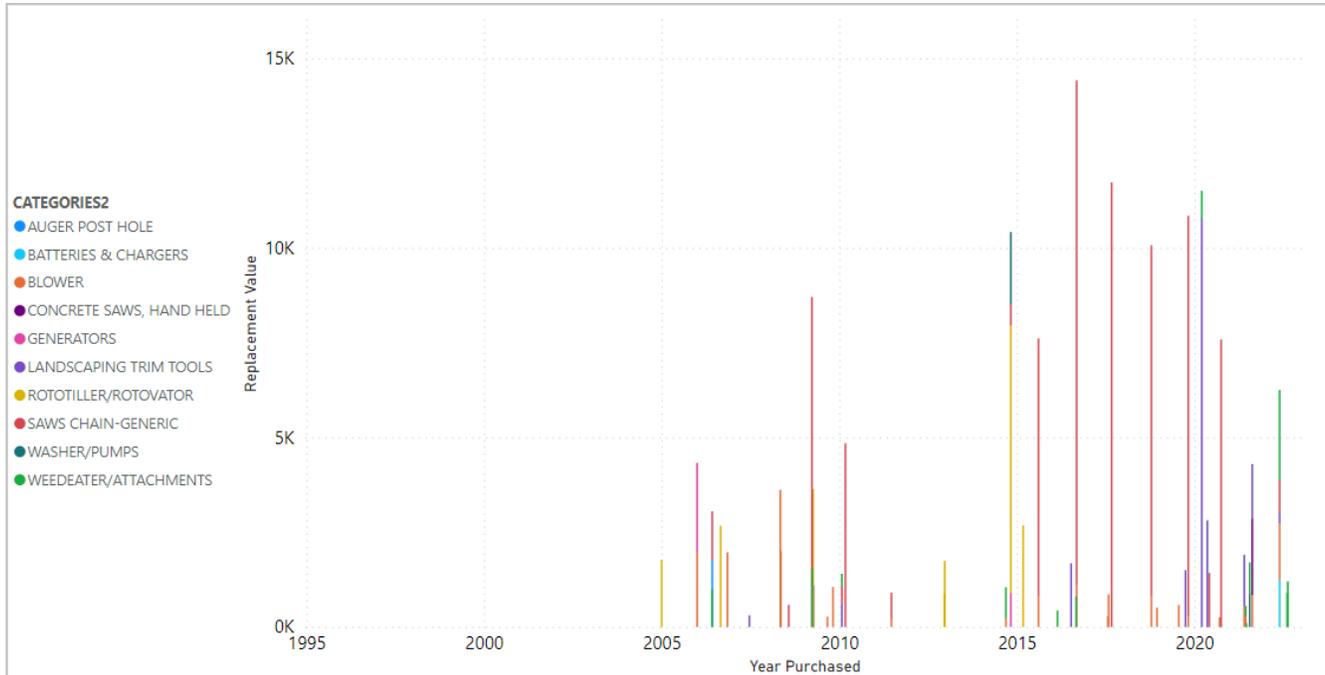
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3.2.4 SMALL EQUIPMENT PROFILE

3.2.4.1 AGE PROFILE

The age profile of the Forestry & Horticulture Small equipment assets is shown in **Figure 6**. The age of these assets is considered to be medium data confidence because there were some gaps in the data. Estimated Service Life (ESL) was recorded as 10 years.

Figure 6: Small Equipment Age Profile



The above figure shows Replacement Value by Year Purchased for the Small Equipment asset class and indicates that **\$47K or 28%** of the small equipment assets are beyond their Estimated Service Life.

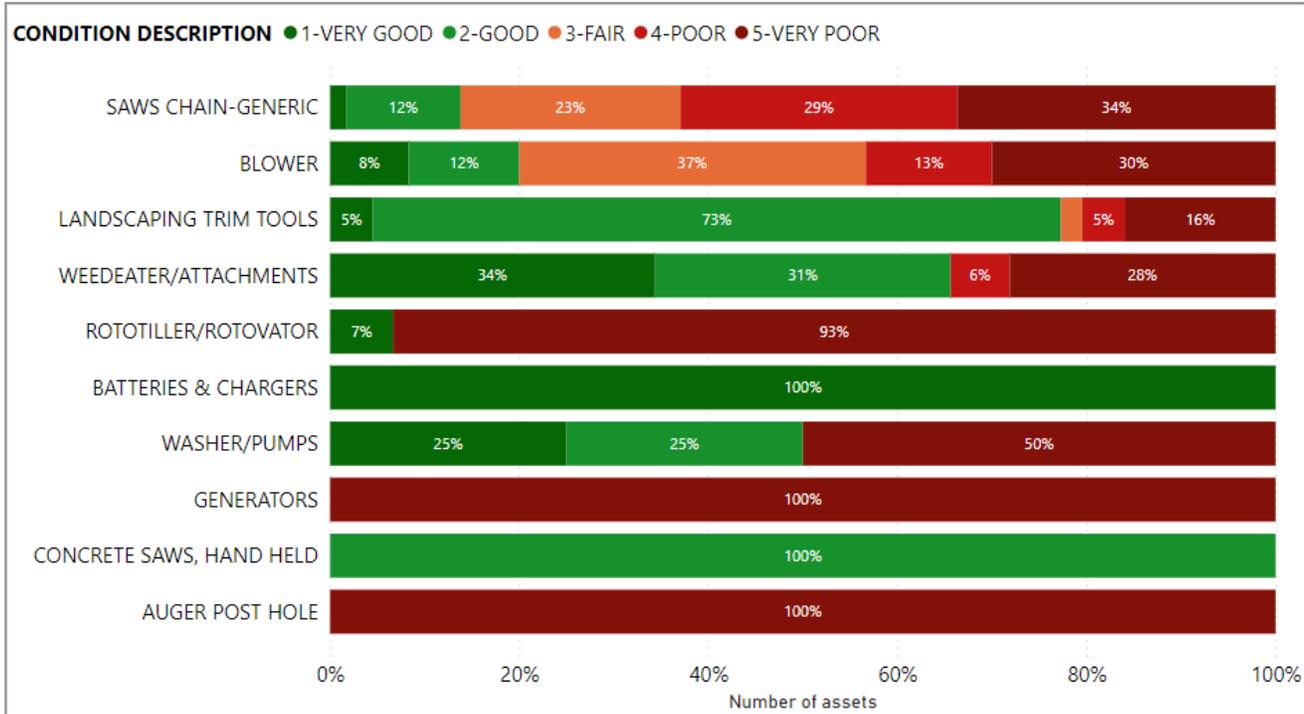
3.2.4.2 CONDITION METHODOLOGY & PROFILE

There is currently no formal inspection process in place for the Small Equipment asset class. There are plans in place to perform inspections of small equipment on an annual basis in 2024. This has been identified as a continuous improvement item in **Table 31**.

The condition of small equipment is based only on age and estimated service life and is considered to be low data confidence. Based on the information in the Condition profile in Figure 7, Auger Post Hole, Generators and rototiller/rotavator equipment are in Very Poor condition. The rest of the equipment in this category is in Fair to Good condition.

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Figure 7: Small Equipment Condition Profile



3.2.4.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. Known service performance issues for small equipment assets involve assets being beyond their Estimated Service Life as shown in **Table 11**.

Table 11: Known Service Performance Deficiencies – Small Equipment

ASSET	LOCATION	SERVICE DEFICIENCY
Technology	Equipment purchased before 2014	Beyond estimated service life

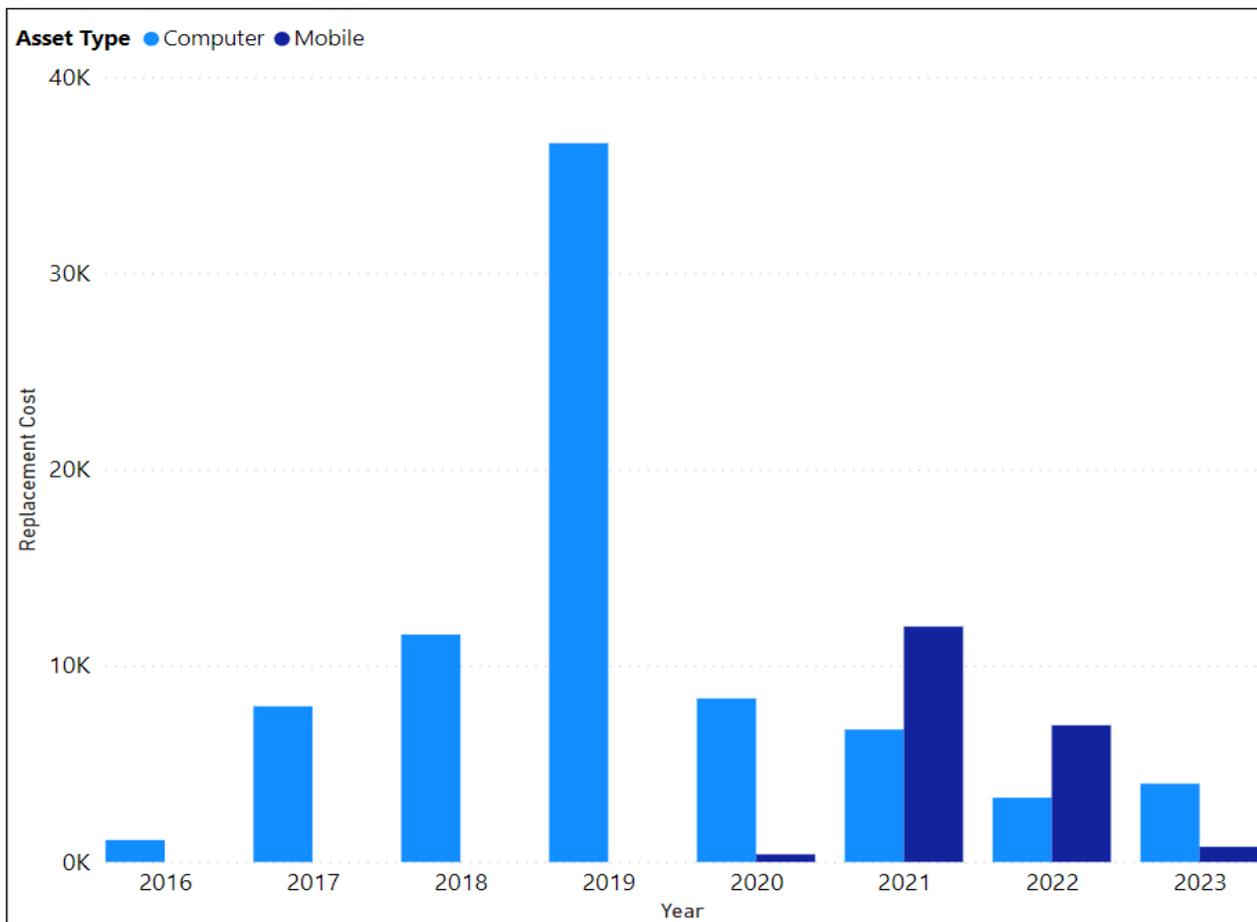
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3.2.5 TECHNOLOGY PROFILE

3.2.5.1 AGE PROFILE

The age profile of the Forestry & Horticulture technology assets is shown in **Figure 8**. The age of these assets is considered to be high data confidence because they are recorded at the time of purchase. An analysis of the age profile is provided below. In the Technology age profile figure below, the computer (desktop & laptop) assets have a useful life of five years while the remaining assets have a useful life of four years. As can be seen from the figure, most of the assets are at or close to the end of their ESLs.

Figure 8: Technology Age Profile



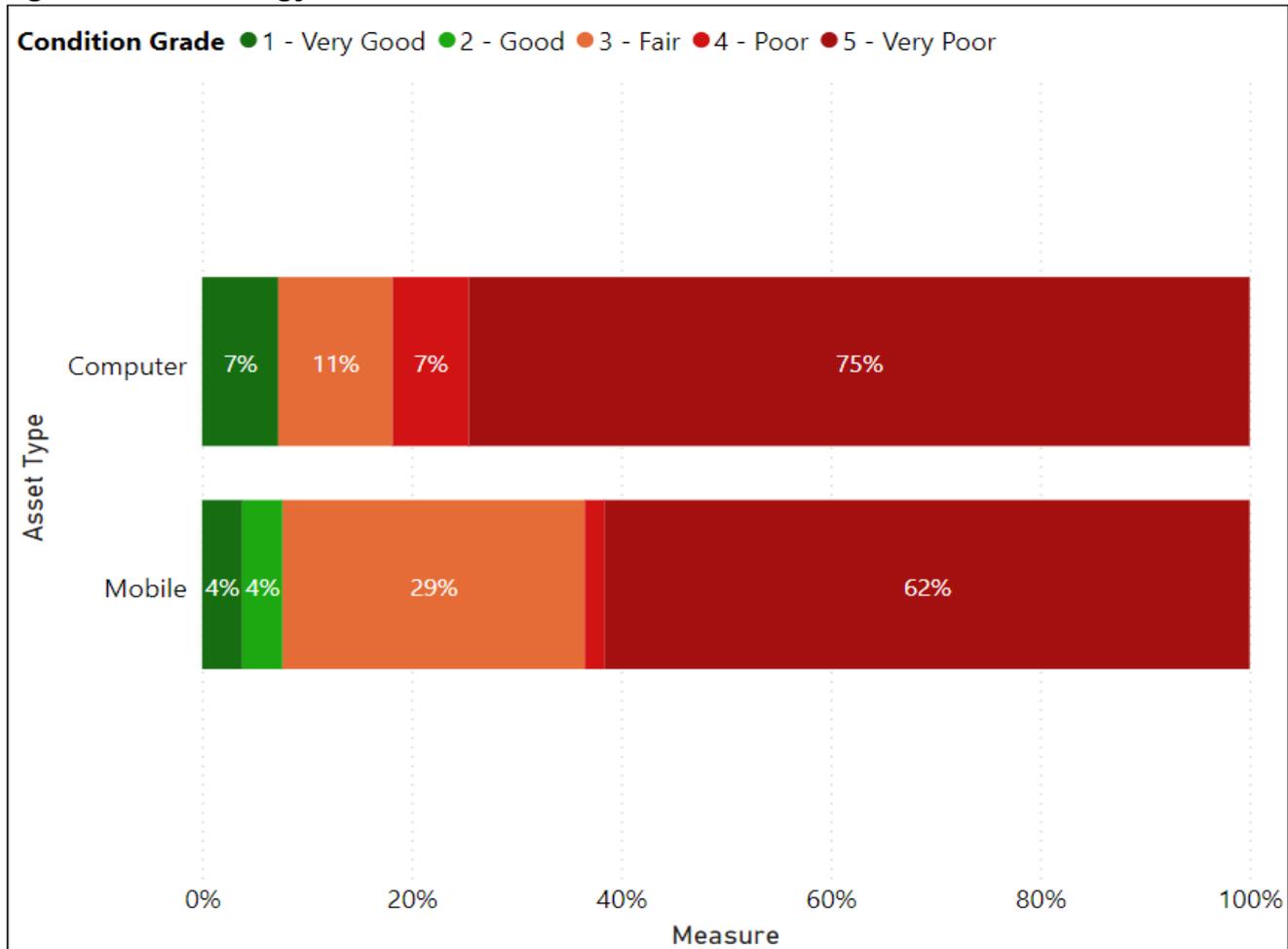
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3.2.5.2 CONDITION METHODOLOGY & PROFILE

Currently Technology assets do not have a formal method to determine condition and therefore age has been used to estimate the condition of these assets where age is known which is considered to be low data confidence. This has been identified as a continuous improvement item in **Table 31**.

Figure 9 indicates that 62% of mobile assets and 75% of computer assets are in **Very Poor**. These assets will appear in the Renewal backlog in **Section 8.3**.

Figure 9: Technology Condition Distribution



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3.2.5.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. Known service performance issues for technology assets involve assets being beyond their Estimated Service Life.

Table 12: Known Service Performance Deficiencies - Technology

ASSET	LOCATION	SERVICE DEFICIENCY
Technology	Technology purchased before 2019	Beyond estimated service life

3.2.6 HORTICULTURE EQUIPMENT PROFILE

Since there is currently no age or condition data available for horticulture equipment, age and condition profiles were not created. A continuous improvement item indicated in **Table 31** is to develop an asset registry for these items as well as a condition methodology to assess the condition of these assets.

3.2.6.1 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. Known service performance issues are included in **Table 13** below.

Table 13: Known Service Performance Deficiencies – Horticulture Equipment

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Irrigation Systems	Various	Non-compliance with City By-laws	Some irrigation systems are not currently compliant with City Backflow By-law 10-103. Backflow preventers must be installed.

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4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what the City provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that the City provides those services.

O.Reg 588/17 does not define levels of service for Forestry & Horticulture assets and therefore the City has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in **Section 7.5** of the AMP Overview Document.

4.1 SURVEY METHODOLOGY

To develop customer values and customer levels of service, a Customer Engagement Survey entitled *Let’s Connect, Hamilton – City Services & Assets Review: Forestry & Horticulture* was released on **November 7, 2023**, on the Engage Hamilton platform and closed on **December 13, 2023**. The survey results can be found in Appendix “A.”

The survey received submissions from **69** respondents and contained **17** questions related to the Forestry & Horticulture service delivery. For the purposes of this report, data has been evaluated from a confidence level perspective (margin of error at 95% confidence in sample size) and a data consistency (standard deviation) perspective per **Table 14** below.

Table 14: Data Confidence Levels

GRADE	DATA CONSISTENCY (STANDARD DEVIATION)	CONFIDENCE LEVEL (MARGIN OF ERROR AT 95% CONFIDENCE IN SAMPLE SIZE)
Very High	0 to 0.5 – results are tightly grouped with little to no variance in response	0% to 5% - minimal to no error in results, can generally be interpreted as is
High	0.5 to 1.0 – results are tightly grouped but with slightly more variance in response	5% to 10% - error has become noticeable, but results are still trustworthy
Medium	1.0 to 1.5 – results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - error is a significant amount and will cause uncertainty in the final results
Low	1.5 to 2.0 – results show a high variance with a fair amount of disparity in responses	20% to 30% - error has reached a detrimental level and results are difficult to trust
Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - significant error in results, hard to interpret data in a meaningful way

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Based on the number of responses, a sample size of **69** correlates to a **MEDIUM** confidence level with a **12%** margin of error based on an approximate population size of **580,000**. This was determined to be an acceptable confidence level to use to develop the customer values and customer performance measures for this AM Plan. It is important to note that survey respondents were allowed to opt out of questions, and so, different questions may have varying confidence levels depending on the opt-out rate for that question.

Although the sample size correlates to a maximum medium confidence level, the data consistency also differed between questions. A high data consistency means that respondents came to the same conclusion more often for a question, whereas a low data consistency means that there is a split in respondent's opinions. Therefore, while Corporate Asset Management may be able to improve survey confidence levels over time by increasing the survey sample size, it may not be possible to improve data consistency over time as this depends on the opinions of the respondents and may require additional insight on why respondent's opinions are split. A low consistency of data does not mean the data is wrong, but it does mean that it is difficult to make decisions using that information. Overall, Forestry & Horticulture's survey data consistency was typically medium across all questions indicating most respondents are generally in agreement.

While these surveys were used to establish customer values and customer performance measures, it is important to note that there were also limitations to the survey methodology which may further reduce the confidence level in the survey data. The survey was only released using an online platform and did not include telephone surveys and consequently, there is no way to confirm the identity information provided in the survey. In addition, the survey did not control for IP addresses, and therefore it is possible that respondents could complete the survey more than once and skew the survey results. This has been identified as a continuous improvement item identified in **Table 31**.

Although there are limitations to the survey methodology and the number of responses was not at a high confidence level, these results can be used to provide some context about the feelings customers have about the services that the Forestry & Horticulture sections provide. However, decisions should not be made based on this survey alone and further investigation is required prior to proposing new levels of service.

4.2 CUSTOMER VALUES

Customer values are what the customer can expect from their tax dollar in "customer speak" which outlines what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

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Customer Values indicate:

- What aspects of the service are important to the customer;
- Whether they see value in what is currently provided; and,
- The likely trend over time based on the current budget provision.

As previously mentioned, the customer values below were determined using the results from the *Let's Connect, Hamilton – City Services & Assets Review: Forestry & Horticulture* and are shown in **Table 15** below.

Table 15: Customer Values

CUSTOMER VALUES	CURRENT FEEDBACK	DATA CONSISTENCY	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Street & Park Trees are Forestry & Horticulture’s most important service area and increasing tree planting on City properties and trees is desired.	The average survey respondent rated Street & Park Trees as a very important service area and increased tree planting as a very important potential service.	Medium-High	Maintain
Customers are willing to increase tax rates to improve local services related to the Street and Park Tree service area.	The average survey respondent would prefer to minimize tax rate increases for Forestry & Horticulture services, except for Street and Park trees where they would probably prefer to see tax rates increase to improve services.	Medium	Maintain
The following existing services are important to the community: Tree Health & Education, Gage Park Tropical Greenhouse, and Garden Beds and Hanging Baskets.	The average survey respondent rated these service areas as important.	Medium	Maintain
Providing Floral Shows and Special Installations Across the City are not as important as other services that Forestry & Horticulture delivers.	The average survey respondent rated this service area as fairly important.	Medium	Maintain

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CUSTOMER VALUES	CURRENT FEEDBACK	DATA CONSISTENCY	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
The following potential services are important to the community: increase rain gardens, pollinator plants in City gardens, and greening school programs.	All these services were listed as important.	Medium	Increase
Customers are divided on decommissioning diesel vehicles as part of the Green Fleet Strategy and providing nature-based programs for children at the Gage Park Tropical Greenhouse.	The average survey respondent considered these important, but the data consistency was approaching low.	Medium-Low	Medium
Forestry & Horticulture sites should meet the Accessibility for Ontarians with Disabilities Act (AODA) ⁷	The average survey respondent strongly agreed that services should meet this requirement.	High	Maintain
Most customers agree that Forestry & Horticulture services should be comfortable; inviting, appealing and attractive; safe, equitable and inclusive; clean and in good repair; and accessible by public transit. However, many customers couldn't say whether they agreed.	Many survey respondents (35-48%) opted out of these questions, but those who responded, on average, agreed with these service expectations.	Medium	Maintain
The majority of customers can't say if they agree that Forestry & Horticulture services should be energy efficient and reduce greenhouse gas emissions.	The majority of customers (61%) opted out of this question.	Medium	Maintain

⁷ This question will be revised in future surveys since all City facilities are compliant with the Accessibility for Ontarians with Disabilities Act.

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4.3 CUSTOMER LEVELS OF SERVICE

Ultimately customer performance measures are the measures that the City will use to assess whether it is delivering the level of service the customers desire. Customer level of service measurements relate to how the customer feels about the City's Forestry & Horticulture services in terms of their quality, reliability, accessibility, responsiveness, sustainability and, over the course, their cost. The City will continue to measure these customer levels of service to ensure a clear understanding of how the customers feel about the services and the value of their tax dollars.

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or underused? Do we need more or less of these assets?

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In **Table 16** under each of the service measure types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current allocation.

Table 16: Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET							
Quality / Condition	Provide beautiful and sustainable Forestry & Horticulture services.	2023 Forestry & Horticulture Services & Assets Review Survey	Average survey respondent opinion on how Forestry & Horticulture have performed overall in all aspects of the service.	Good Performance	Maintain							
						Confidence Level		Medium				
						Data Consistency		Medium				
	Ensure that Forestry & Horticulture services & assets are maintained in good condition.	2023 Forestry & Horticulture Services & Assets Review Survey	Average survey respondent opinion on if Forestry & Horticulture facilities and services are clean & in good repair.	Agree	Maintain							
						Confidence Level		Medium				
						Data Consistency		Medium				
	Ensure that Forestry & Horticulture sites & services are accessible to the public.	2023 Forestry & Horticulture Services & Assets Review Survey	Average survey respondent opinion on if customers were comfortable accessing Forestry & Horticulture sites & services.	Comfortable	Maintain							
						Confidence Level		Medium				
						Data Consistency		Medium				
	Be fiscally responsible when delivering Forestry & Horticulture services.	2023 Forestry & Horticulture Services & Assets Review Survey	Average survey respondent opinion on whether Forestry & Horticulture is providing good value for money for sites and services.	Good Performance	Maintain							
						Confidence Level		Medium				
						Data Consistency		Medium				
Function	Provide beautiful and sustainable Forestry & Horticulture services.	2023 Forestry & Horticulture Services & Assets Review Survey	Average survey respondent opinion on whether Forestry & Horticulture is meeting service needs overall for all services.	Meets Needs	Maintain							
						Confidence Level		Medium				
						Data Consistency		High				
	Ensure Forestry can reliably respond to calls within an acceptable timeframe.	2023 Forestry & Horticulture Services & Assets Review Survey	Average survey respondent opinion on whether a response time of 24 hours meets the needs for storm-related tree damage.	Meets Needs	Maintain							
						Confidence Level		Medium				
						Data Consistency		Medium				
Capacity	Ensure that Forestry & Horticulture sites & services are accessible to the public.	2023 Forestry & Horticulture Services & Assets Review SurveyL	Average survey respondent opinion on whether they are satisfied with their ability to access Forestry & Horticulture sites and services.	Satisfied	Maintain							
						Confidence Level						
						Data Consistency						
						Average survey respondent opinion on whether Forestry & Horticulture sites & services are accessible per the Accessibility for Ontarians with Disabilities Act (AODA)		Agree	Maintain			
										Confidence Level		Low
										Data Consistency		Medium
	Average survey respondent opinion on whether Forestry & Horticulture sites & services are accessible by public transportation.		Agree	Maintain								
					Confidence Level							
Data Consistency		Medium										

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4.3.1 CUSTOMER INDICES

The three indices calculated to assess how customer expectations for a service align with the perceived performance for a service are listed below in **Table 17**. Based on the results of the table, since the net differential indices do not exceed 20 points overall for the Forestry & Horticulture service, there is generally a match between customer expectations and perceptions. In addition, since the Net Promoter Score is positive, it indicates customers would be willing to recommend the service to others. These indices are explained and analyzed in more detail in the sections below with areas to investigate further.

Table 17: Customer Indices

CUSTOMER INDICES	AVERAGE RESULT
Service Importance Versus Performance Net Differential ⁸	-5
Net Promoter Score (%) ⁹	23.24%
Service Rates Versus Value for Money Net Differential ⁵	9

As previously mentioned, since the survey had a sample size corresponding to a maximum medium confidence level there is a minimum margin of error throughout the survey results of 10%. The information below is intended to provide context around the survey results to assist **Forestry & Horticulture** with areas to further investigate before proposing any new levels of service.

SERVICE IMPORTANCE VERSUS PERFORMANCE INDICES

The Service Importance versus Performance Indices is used to determine if a service’s importance correlates with the perceived performance. Service areas where the average importance rating exceeds the average performance rating by 20 points are indicative of a mismatch between expectations and service levels, equal to one point on the Likert¹⁰ scale.

As previously mentioned, since the net differential indices do not exceed 20 points overall for the Forestry & Horticulture service, there is generally a match between customer expectations (performance) and perceptions (importance). However, **Figure 10** below indicates the net differential exceeds or is approaching -20 points for the Street & Park Trees and the Tree Health & Education Programs service areas, respectively. This indicates that the perceived importance

⁸ For these indices, a value close to 0 is considered a match, and a value exceeding 20 points indicates a mismatch between customer expectations, and perception or service levels.

⁹ A positive net promoter score indicates customers would recommend the service to others, a negative score indicates they would not, and a value close to 0 indicates a neutral feeling about the service.

¹⁰ A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g., Very Good to Very Poor, Very Satisfied to Very Unsatisfied).

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of these services exceeds the performance expectations meaning that customers feel that these service areas are Very Important and Important respectively, but that the overall performance from the City in providing these assets or services is only Good. To reduce the net differential, Forestry & Horticulture would have to increase their performance to Very Good for these services, which they would accomplish by altering their Technical Levels of Service explained in **Section 4.4**. As a result, these service areas are potential areas where Forestry could further investigate proposing different service levels.

In addition, it is important to note that the Gage Park Tropical Greenhouse and Floral Shows & Special Installations Across the City are two service areas where the performance expectations exceeded the perceived importance of the service by over 10 points. Although this net differential mismatch is not as significant as the ones listed above, it is still worth mentioning that these results suggest that customers feel we are currently overperforming in these service areas. These are additional service areas where Horticulture could further investigate proposing different service levels.

Proposed levels of service are discussed further in **Section 4.5**.

Figure 10: Importance versus Performance Index Score

ServiceArea	Performance	Importance	Net Differential
Total	75.64	81	-5
Street and Park Trees	69.12	96	-27
Tree Health and Education Programs	64.24	83	-19
Garden Beds and Hanging Baskets (Along the street and on City property)	73.03	77	-3
Gage Park Tropical Greenhouse	90.00	80	10
Floral Shows and Special Installations Across the City	80.85	68	13

NET PROMOTER SCORE INDICE

The Net Promoter Score indices outline how likely an individual is to recommend a service to another person and measure customer loyalty. For municipal services, this score is difficult to interpret because oftentimes, individuals do not have many alternatives for utilizing different services and also there may be internal biases for certain service areas, however, this score does provide valuable information on whether customers would recommend using the service or whether they may seek alternatives or avoid using the service altogether.

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Likert¹¹ choices less than a score of 4 are considered 'Detractors' meaning that they would not recommend the service, while scores of 5 are considered 'Promoters' who would recommend the service. Scores of 4 are considered 'Passive' which means they do not have strong feelings about the service. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Detractors) and (% Promoters). The Standard Deviation (σ) is calculated in percent and has the same units as the Net Promoter Score.

As previously mentioned, and based on the results below in **Figure 11**, Forestry & Horticulture has a positive Net Promoter Score indicating that on average customers would recommend Forestry & Horticulture services to others. The highest scoring service area is Street and Park Trees which also has a high data consistency, and the lowest scoring service area is the Floral Shows and Special Installations Across the City which customers do not recommend, but it is evident that the data consistency is medium indicating respondents were more divided on this service area.

Figure 11: Net Promoter Score

ServiceArea	σ	NPS
All Service Areas	1.21	23.24
Street and Park Trees	0.57	85.29
Tree Health and Education Programs	1.08	25.40
Gage Park Tropical Greenhouse	1.17	17.19
Garden Beds and Hanging Baskets (Along the street and on City property)	1.32	10.14
Floral Shows and Special Installations Across the City	1.29	-25.40

SERVICE RATES VERSUS VALUE FOR MONEY INDICE

The Service Rates versus Value for Money indices are used to determine if the rate an individual is paying for a service correlates with the perceived value for money. Service areas where “rate level” ratings exceed “value for money” ratings by 20 points are indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale. A positive Net Differential values indicate that 'Value for Money' was greater than willingness for 'Rates'. Low index scores in 'Rates' indicate that respondents are not willing to pay increased rates for the service area. All values were calculated and then rounded to the nearest whole number.

¹¹ A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g. Very Good to Very Poor, Very Satisfied to Very Unsatisfied).

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As previously mentioned, since the net differential indices do not exceed 20 points overall for the Forestry & Horticulture service, there is generally a match between customer expectations (value for money) and service levels (tax rates). However, per **Figure 12** below, survey respondents generally perceived they were getting Good value for money across all services except for the Tree Health and Education Programs which were rated as Average. The two service areas where there is a mismatch between Value for Money and Tax Rates are Gage Park Tropical Greenhouse, and Floral Shows and Special Installations Across the City. This mismatch indicates that although customers believe they are receiving good value for money for these service areas, they would prefer to minimize service cuts and maintain rates. Therefore, if Horticulture is proposing to increase levels of service for these service areas, they would want to ensure they are educating and seeking agreement from the public.

In addition, it is important to note that the Street and Park Trees is a service area where increasing the tax rate measure exceeded the value of money by almost 10 points. Although this net differential mismatch is not as significant as the ones listed above, it is still worth mentioning that these results suggest that customers feel the City could investigate increasing levels of service for this service area.

Figure 12: Rates versus Value for Money Index Score

ServiceArea	Value for Money	Tax Rates	Net Differential
Total	73%	64%	9
Street and Park Trees	72%	80%	-9
Tree Health and Education Programs	67%	66%	1
Garden Beds and Hanging Baskets (Along the street and on City property)	72%	61%	12
Floral Shows and Special Installations Across the City	72%	52%	20
Gage Park Tropical Greenhouse	83%	62%	21

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4.4 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how the City delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. The City will measure specific lifecycle activities to demonstrate how the City is performing in delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.¹²

Table 18 shows the activities expected to be provided under the current 10-year Planned Budget allocation and the Forecast activity requirements being recommended in this AM Plan. A continuous improvement item in **Table 31** is to create an application to collect and share key technical measures and make the data publicly accessible i.e., Tracking Grid, Statistics, and Service Requests.

¹² IPWEA, 2015, IIMM, p 2|28.

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Table 18: Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE 2023	CURRENT TARGET PERFORMANCE 2023	PROPOSED 10-YEAR PERFORMANCE
Acquisition	Ensure that Forestry & Horticulture sites & services are accessible to the public.	Total number of trees planted through Forestry-led programs.	15,256	12,000	120,000 (12,000/year)
		Tree canopy Coverage	20%	20%	29%
		Budget	\$ 3.2M	\$4.1M	\$ 53.0M
Operation	Ensure Forestry can reliably respond to calls within an acceptable timeframe.	Response Time for storm-related tree damage	>24 hours	24 hours	24 hours
		Budget	Not able to be quantified		
	Provide beautiful and sustainable Forestry & Horticulture services.	Frequency of hanging basket watering	Daily	Daily	Daily
		Budget	Not able to be quantified		
Ensure Forestry & Horticulture are fiscally responsible when delivering services.	Actual Operating Expenditures vs Planned Budget	90-100%	90-100%	90-100%	
Maintenance	Provide beautiful and sustainable Forestry & Horticulture services.	Centimetres of tree trimming per crew per day.	373 cm/day	400cms/day	400 cm/day
		Budget	\$866K	\$807K	\$8.66M
		The average cm of stump removal completed per day	338 cm/day	200 cm/day	200 cm/day
		Budget	\$97.7K	\$165K	\$1.0M
Renewal	Ensure that Forestry & Horticulture services & assets are maintained in good condition.	Average Facility Condition Index Forestry & Horticulture Facilities	13%	<5%	<5%
		Budget	\$0.13M	\$2.4M	\$3.7M

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4.5 PROPOSED LEVELS OF SERVICE DISCUSSION

Per the Technical Levels of Service **Table 18** described above, it can be concluded that Forestry & Horticulture is often meeting technical standards with some exceptions. However, customer preferences and expectations do not always align with internal technical targets. This section links the customer and technical levels of service to determine areas where different levels of service could be proposed. As previously mentioned, since the 2023 survey results have only a medium level of data confidence, it is difficult to make any conclusive decisions based on this initial survey. The discussion below is intended to provide context to direct Forestry & Horticulture to areas for further investigation based on these initial results before proposing any new levels of service.

In addition, the activity measures listed in the Technical Levels of Service table are not exhaustive and do not currently contain many Horticulture-specific measurements. Additional technical measurements will be created in future to better compare customer and technical levels of service which has been identified as a continuous improvement item in **Table 31**.

CONDITION / QUALITY

Based on the Customer Levels of Service **Table 16**, it is evident that customers think that Forestry & Horticulture has Good Performance overall in all aspects of the service. As indicated in **Section 4.3.1**, the most important service area for Forestry & Horticulture is Street and Public Trees. This Customer Level of Service quality measurement can be linked to the Technical Levels of Service Table Y through the stump removal and tree trimming measurements which are major activities Forestry completes to maintain the condition of Street and Parks Trees. At the time of writing, Forestry is not achieving the daily target for daily tree trimming but is exceeding its target for stump removal. Since tree performance was an area where there was a mismatch in customer performance expectations and perceived importance, Forestry may want to consider increasing levels of service for Public Trees. An increase in service levels may include Forestry investigating expanding the urban tree maintenance grid program to rural areas as well as to trees on City-owned properties. As previously mentioned, there is no inventory for these trees at this time so the cost to expand the service is currently unknown, but these City-owned assets are not being pro-actively managed and can result in unknown costs for the City in reactive maintenance.

In addition, in Customer Levels of Service **Table 16** survey respondents agreed that Forestry & Horticulture facilities and services were clean and in good repair and said they felt comfortable accessing the sites and services. Since the only facilities the public would typically access are the Gage Park Tropical Greenhouse and the Production Greenhouse, and both facilities were determined to be in Good condition based on the Building Condition Assessments discussed in **Section 3.2.2.1**, there is a match between customer and technical levels of service. However, the City is not currently meeting the Facility Condition Index target overall and this should be investigated further.

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Per Customer Levels of Service **Table 16**, survey respondents indicated that Forestry & Horticulture had Good Performance when providing good value for money, but as explained in **Section 4.3.1**, they also opted to minimize service cuts and maintain tax rates overall for most service areas most notably with Gage Park Tropical Greenhouse, and Floral Shows and Special Installations Across the City service areas. The exception to this is Street and Park Trees where respondents felt the City could increase tax rates to increase levels of service. Therefore, if Forestry & Horticulture were to propose a different level of service, Street and Park Trees is an area where the focus should be. However, as previously mentioned, it is difficult to make this decision with the limited customer data available in this Asset Management Plan. When comparing the customer to technical levels of service, Forestry & Horticulture were in range in 2023 showing that Forestry & Horticulture are fiscally responsible with their current budget.

FUNCTION

Per Customer Levels of Service **Table 16**, Forestry & Horticulture are meeting customer needs overall in most service areas except for exceeding needs at the Gage Park Tropical Greenhouse. When comparing these results to the Technical Levels of Service **Table 18**, the frequency of hanging basket watering target is being met. In addition, survey respondents also indicated that a 24-hour response time to clear or remove tree damage after a storm event also met needs, and **Table 18** shows Forestry is currently meeting the 24-hour response time target. Since customer needs and technical targets are both being met, this indicates there is a match between customer and technical levels of service. Currently, there are currently no areas to further investigate in this section to propose different levels of service.

As previously mentioned, additional technical measurements should be formulated in future to better compare the technical performance to the customer expectations. Additional response time measurements could be included, as well as the frequency of other key activities for critical assets.

CAPACITY

Results from the survey indicated customers were satisfied with their ability to access sites and services. In addition, survey respondents agreed that sites and services were compliant with the Accessibility for Ontarians with Disabilities Act (AODA) and were accessible by public transportation. All City facilities are AODA compliant, and the Horticulture facilities at Gage Park are on a bus route, and so it can be concluded that the City is meeting technical performance measures even though there are no direct measurements in **Table 18** indicating a match between customer expectations and technical performance.

The only technical levels of service measure related to capacity in **Table 18** is the total number of trees planted through Forestry-led programs where the City is exceeding its target in 2023, the survey did indicate that survey respondents wanted increased tree planting on City properties and streets as part of potential services that the City could offer. Therefore, with the information available, there is a match between customer expectations and technical performance.

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Other potential services survey respondents thought were important include the implementation of rain gardens for City sites and increased pollinator plants in City gardens, which should also be investigated if Forestry & Horticulture are proposing to change levels of service.

Additional technical measurements should be formulated in future to better compare the technical performance to the customer expectations. Measurements related to proposed acquisitions such as garden beds, hanging baskets, pollinator beds, and rain gardens should be included in future drafts.

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5. FUTURE DEMAND

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

The ability for the City to be able to predict future demand for services enables the City to plan and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of services required.

5.1 DEMAND DRIVERS

For the Forestry & Horticulture service area, the key drivers are related to population growth, customer preferences, and environmental benefits as discussed in **Table 19**.

5.2 DEMAND FORECASTS

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 19**. Growth projections have been shown on **Page 45** of the AMP Overview Document.

Where costs are known, these additional demands as well as anticipated operations and maintenance costs have been encompassed in the Lifecycle Management Plan in **Section 8**.

5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets are shown in **Table 19**. Demand for new services will be managed through a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Climate change mitigation and adaptation demands are included in **Section 7**. A continuous improvement item identified in **Table 31** is to investigate enhancing the demand management plans identified in this AM Plan.

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Table 19: Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Customer Preference & Expectation	Current Canopy= 20%	2033 Canopy = 29% 2050 Canopy = 40%	Increase to current tree planting programs and need for additional programs.	Submit requests through the budget process, and where required, create Council Reports and Business Cases based on data-driven strategic planting plans, to increase planting numbers and types of trees/plants and identify required resources to support the lifecycle requirements for these assets. Submit requests through the budget process, and where required, create Council Reports and Business Cases to support the lifecycle requirements for these proposed assets.
Growth (Population Change)	580,000	633,000	Increased population leads to densification as well as expansion of the urban boundary requiring an increased number of assets and resources.	
Customer Preference & Expectation	Status quo	Additional assets required related to Green Street Design	Increased assets and required resources to ensure assets are maintained.	
Environmental Benefit	Status Quo	Annual Garden Beds Converted to Perennial Pollinator Beds	Increased Horticultural assets and required resources to ensure assets are maintained.	
Environmental Benefit	Unprecedented two new invasives in one year (i.e., spotted lantern fly, and oak wilt)	Continued increase in new invasive species	Additional treatments on trees and monitoring will be required. Potential impact on canopy if trees are dying.	

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5.4 ASSET PROGRAMS TO MEET DEMAND

The new assets required to meet demand may be acquired, donated or constructed. For Forestry & Horticulture, typically assets are acquired or constructed. Occasionally assets are donated (e.g. commemorative trees, other donations), but this is minimal.

At this time there are approximately **\$40M** in assets anticipated to be acquired over the **next 10 years**, and an anticipated **\$104M** over the 30-year planning period as discussed in **Section 8.1**. Acquiring new assets will commit Forestry & Horticulture to ongoing operations, maintenance and renewal costs for the amount of time that the service is required. These future costs have been estimated at a high level in the Lifecycle Management Plan in **Section 8** but should be quantified further for future iterations of the report for consideration in developing higher confidence forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan.

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6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk¹³.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

6.1 CRITICAL ASSETS

Critical assets are defined as those assets that have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in **Table 20**. Failure modes may include physical failure, collapse or essential service interruption.

Table 20: Critical Assets

CRITICAL ASSET	FAILURE MODE	IMPACT
Trees	Weather event or pest/disease infestation	Severe Environmental Impacts (i.e., air quality, stormwater mitigation etc.)
Forestry Operations Centre	Weather event or lifecycle failure	Service disruption

¹³ ISO 31000:2009, p 2

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CRITICAL ASSET	FAILURE MODE	IMPACT
Tree & Other GIS Inventory	IT Failure/ Cyberattack	Service disruption/inability to provide storm response/loss of valuable information resulting in a major investment required to rebuild databases
Production & Tropical Greenhouses - loss of mechanical controls (irrigation, temperature/climate control, fertilization etc)	Mechanical Failure	Loss of valuable plant assets/service disruption

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, the evaluation of the risk and the development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

Critical risks are those assessed with ‘Very High’ (requiring immediate corrective action) and ‘High’ (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan are shown in **Table 21**. It is essential that these critical risks and costs are reported to management. Risk treatment costs will be quantified and included in future iterations of the plan and are identified in **Table 31** in **Section 10.2** of the plan.

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Table 21: Risks and Treatment Plans

SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
Public Trees in Rural Areas	Without proactive management of public trees in rural areas tree health could decline, risk claims could be incurred, and property damage or injury to the public could occur.	High	Implement tree inspections in rural areas and complete risk mitigation work as required. The industry standard is a 10-year cycle for inspections, so should be a minimum of every 10 years.	Low	Unknown currently. Identified as a Continuous Improvement item.
Public Trees on other City Properties	Currently, these trees are being managed on an ad hoc basis by asset owners who do not have the expertise to manage these assets. Similarly, to above, without proactive management, tree health could decline, risk claims could be incurred, and property damage or injury to the public could occur.	High	To manage the Urban Forest, Forestry & Horticulture responsibilities may need to expand to include management of all public trees, not just those in parks and the right of way.	Low	Unknown currently. Identified as a Continuous Improvement item.
Horticulture Assets	Horticulture staff are hired seasonally, and many do not return, requiring significant recruitment and training time every season.	High	Investigate increasing dual staff whose positions transfer between work locations seasonally and would be permanent staff.	Low	Unknown currently. Identified as a Continuous Improvement item.
Irrigation System	Some systems not compliant with City Backflow By-law 10-103, water contamination could occur.	High	Utilize approved contractors to assess all irrigation systems to quantify compliance levels. Potentially request additional budget to resolve the issue.	Low	Unknown currently. Identified as a Continuous Improvement item.

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6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment and crisis leadership.

6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective of achieving the optimum benefits from the available resources.

Table 22 outlines what activities Forestry & Horticulture cannot afford to do over the next 10 years with their existing budget and provides the associated service and risk tradeoffs. Other than the proposed Horticulture Facility, due to unknown costs, these projects have not been included in the Lifecycle Management Plan in **Section 8** and should be investigated in future AM Plans.

Table 22: Service and Risk Trade-Offs

WHAT WE CANNOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
Ensure irrigation system compliance with City Backflow By-law 10-103.	Status quo. Service will continue to be delivered, but some systems are non-compliant with city bylaws.	Health & Safety risk of water contamination. Financial penalties may occur. The reputational risk of noncompliance with own bylaws
Rural Trees Service Level Increase	Status quo. Delays to clean up rural trees. Delays to Urban Grid Maintenance program.	Work on rural trees is more reactive and more expensive than the Urban Grid Maintenance Program Potential Health & Safety risks due to falling branches and potential utility outages.

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WHAT WE CANNOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
		The reputational risk with rural customers having lower service levels than urban customers.
Replace existing Horticulture Facility with Expanded Facility Acquisition	Space constraints for expansion required for growth. May be unable to meet service delivery requirements in future. May be unable to accommodate maintenance of new assets.	Financial risk due to delays to repairs. Health and Safety concerns for staff operating out of that facility.
Roof Panel Replacement on Tropical Greenhouse	Definite facility closure. Inability to maintain tropical plants which can be expensive. Loss of affordable rentable space for events.	Reputational risk due to closure and inability to rent. Health and Safety concerns for staff operating out of that facility. Financial risk for replacement of expensive plants.
Upgrades to Production Green House	The quality of plants may decline and may be difficult to pivot to perennial growth demand. Services like the Mum show may not be able to run.	Financial risk with plant cost increases due to purchasing plants versus in-house growing.
Irrigation Systems Repair	The system may fail, and hand watering would be required for garden beds throughout the City. This would lead to inconsistent watering, and plants potentially not surviving/ growing.	Financial risks due to increased water consumption/contracted-out watering and/or reactive maintenance. Reputational risks due to blocked traffic lanes to facilitate hand watering.

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7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we have already begun to experience (adaptation). At a minimum, the City must consider how to manage our existing assets given the potential climate change impacts for our region.

Changes to Hamilton's climate will impact City assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models and levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan. This has been identified as a Continuous Improvement item in **Table 31**.

7.1 CLIMATE CHANGE MITIGATION

Climate Mitigation refers to human intervention to reduce GHG emissions or enhance GHG removals (e.g. building transportation infrastructure that can support cycling and public transit and reduce the need for car travel). The City of Hamilton's Community Energy + Emissions Plan¹⁴ (CEEP includes five Low-carbon Transformations necessary to achieve the City's target of net-zero GHG emissions by 2050:

- Innovating our industry.
- Transforming our buildings.
- Changing how we move.
- Revolutionizing renewables; and
- Growing Green.

¹⁴ Newbold, Skidmore, Chessman, Imhoff, & McDowell, 2022

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Mitigation Demand Analysis

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City's modelled targets for the low carbon transformations that applied to the service/asset.
- Discussing the impact, the targets would have on the service/asset; and,
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050 as shown in **Table 23** below.

As previously mentioned, due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below have not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AMP, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AM Plan. This has been identified as a continuous improvement item in **Table 31**.

Moving forward, the Climate Lens tool discussed in the **AMP Overview Document** will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

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Table 23: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Growing Green	Planting 50,000 trees a year through to 2050	More Forestry staff would be required to maintain new trees on City properties. This target will also require participation from all sectors within Hamilton because most of the viable planting space within the city is privately owned.	The City has committed to planting 20,000 of this 50,000 tree target through capital and operating budgets and programs.
Changing How We Move	100% of new municipal small and light-duty vehicles are electric by 2040. 100% of new municipal heavy-duty vehicles switch to clean hydrogen by 2040.	Electric Vehicle Chargers will need to be installed at all Yards. Compensation for staff who charge City vehicles at home will need to be considered. Initial upfront capital costs for electric vehicles.	The vehicle conversion schedule for the existing fleet will be developed in partnership with Fleet to convert where feasible and as the market allows. Limitations may exist for heavy-duty vehicles due to availability within the market. Capital budgets will reflect increased costs related to conversions and additions to the existing fleet. Capital budgets will also be developed and submitted for charging stations on facilities.
Transforming Our Buildings	Post-retrofits, switch buildings to heat pumps for space and water heating by 2050.	The conversion may not be straightforward and may require the facility to be out of service for a period.	Facilities will need to be assessed to figure out the feasibility of the proposed conversion. Funding will need to be acquired to retrofit buildings. Staff will need to be trained on the new system.
	By 2050, all new municipal buildings achieve net-zero emissions.		
Revolutionizing Renewables	By 2050, 50% of municipal buildings will add rooftop solar PV, covering 30% of the building's electrical load.		

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CURRENT MITIGATION PROJECTS

Mitigation projects Forestry & Horticulture is currently pursuing are outlined below in **Table 24**. These projects may already be included in the budget and may be quantified in the lifecycle models.

Table 24: Asset Climate Mitigation Projects

PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
Urban Tree Canopy Equity Analysis	Growing Green	Analysis of equity in relation to the tree canopy to assist in strategic tree planting initiatives and reduce equity gaps identified.	An increase in the urban tree canopy is related to air quality, reduced heat island effect, improved stormwater management, and carbon sequestration
Annual Tree Planting Programs		Addition of 20,000 trees to the urban forest each year through forestry-led programs (i.e., Community Tree Planting, Street Tree Planting, Free Tree Giveaways)	
Mulching Program		Installation of mulched tree rings for public trees.	Reduced need for watering during drought and improvement of tree health which relates to the ecological benefits trees provide.
Electric Equipment Pilot		Currently piloting electric small equipment.	Reduced emissions associated with the use of small equipment used to maintain public trees.

7.2 CLIMATE CHANGE ADAPTATION

Climate Adaptation refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads).

The impacts of climate change may have a significant impact on the assets we manage and the services we provide. Climate change impacts on assets will vary depending on the location and

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the type of services provided, as will the way in which those impacts are responded to and managed.¹⁵

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report¹⁶ guided by ICLEI's Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP). The BARC Framework identified thirteen high-impact areas.

Adaptation Demand Analysis

Climate adaptation demands for Forestry & Horticulture are shown on the following page in **Table 25**.

¹⁵ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

¹⁶ City of Hamilton & Local Governments for Sustainability Canada, 2021

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Table 25: Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	BASELINE (1976 - 2005) ¹⁷	AVERAGE PROJECTED CHANGE 2021-2050 ¹⁷ (ASSUMING RCP4.5 ¹⁸ SCENARIO)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Increased instances of heat-related issues due to extreme heat.	16.1 Average Days Where the Temperature is 30 Degrees Celsius or More	34.4 Average Days Where the Temperature is 30 Degrees Celsius or More	Increased days of Heat warnings may reduce employee productivity and daily accomplishments.	Explore options to shift change or manage expectations for daily workloads for frontline staff.
			Possible decline in tree health and extension of the growing season leading to weaker wood.	Request budget to increase services that regulate impacts of heat (i.e., Tree watering and mulching). Request budget to increase the use of technologies such as watering bags and storm retention systems
			Possible decline in plant health and ability to maintain planters and hanging baskets due to significant need for water during high heat periods.	Review approved plant lists to increase the use of drought-tolerant plants. Review current planting practices to implement mulching where possible to reduce soil moisture loss. Explore the reduction of hanging baskets and planter assets. Investigate creating requirements for designs to include stormwater retention to reduce manual watering needs.
Increased intensity and frequency of ice storms leading to increased hazardous roads, pathways and sidewalk conditions.	187mm Average Total Winter Precipitation	204mm Average Total Winter Precipitation	Increased loss of canopy from trees damaged. Periods of reduced proactive maintenance on Trees because of the increase in storm maintenance and its impact on staffing and contractual resources. Increase in Insurance claims related to tree-related property damages.	Proactively complete tree risk assessments. Request increase for Planting and Maintenance budgets to replace and maintain trees to ensure a 7-year cycle is maintained.
Changes in precipitation resulting in erosion of natural systems (i.e. water banks, escarpment erosion) leading to washouts of bridges and roadways.	844mm Average Annual Total Precipitation	886mm Average Annual Total Precipitation	Increased loss of canopy from trees damaged or trees that require removal due to root instability	
Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.	6.7 Heavy Precipitation Days (20mm)	7.7 Heavy Precipitation Days (20mm)	Increased Fungal Diseases, and root rot.	Provide Public Education on Diseases, Property maintenance and good gardening practices to reduce flood effects on soil and plant roots.
More intense summer precipitation combined with increasing temperatures lowering the water supply as well as increasing water demand for drinking, landscaping, and irrigation. (Rural)	217mm Average Total Summer Precipitation	221mm Average Total Summer Precipitation	Increased loss of canopy from trees damaged. Periods of reduced proactive maintenance on Trees because of the increase in storm maintenance and its impact on staffing and contractual resources. Increase in Insurance claims related to tree-related property damages.	Proactively complete tree risk assessments. Request increase for Planting and Maintenance budgets to replace and maintain trees to ensure a 7-year cycle is maintained. Provide Public Education on the importance of planting appropriate species, watering correctly and utilizing mulch to reduce water loss.
Increase in average annual temperatures (especially in the summer) leading to increased food insecurity in the region (i.e. decrease in local crop yields, food cost fluctuations, etc.)	13.1 Degrees Celsius Average Annual Temperature	15.1 Degrees Celsius Average Annual Temperature	Longer Growing Seasons will create the formation of weak wood in trees making them more susceptible to storm damage.	Request increase to storm damage and Maintenance budgets.

¹⁷ ICLEI Canada, 2022

¹⁸ RCP4.5 Scenario: Moderate projected Green House Gas concentrations, resulting from substantial climate change mitigation measures. It represents an increase of 4.5 W/m² in radiative forcing to the climate system. RCP 4.5 is associated with 580-720ppm of CO₂ and would more than likely lead to 3°C of warming by the end of the 21st century.

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ADAPTATION RISK ANALYSIS

Additionally, the City should consider the risks for the asset or service because of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Similarly, to the exercise above and using the risk process in **Section 6**, asset owners:

- Reviewed the likelihood scores in the Vulnerability and Risk Assessment Report for the adaptation impact occurring;
- Identified the consequence to the asset/service if the event did happen to develop a risk rating; and,
- If the risk was identified as high, the asset owner produced a preliminary risk adaptation plan shown below in **Table 26**.

It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of mitigating the risks below has not been included in the lifecycle and financial models at this time. The adaptation plans discussed in this section should be explored by asset owners in more detail following the AMP, and new projects should consider these risks during the planning and design processes. Future changes will be incorporated into future iterations of the AMP. Moving forward, the Climate Lens tool will assess projects based on these targets and will assist with the prioritization of climate adaptation projects.

Table 26: Adapting to Climate Change

ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.	Public Trees	Deterioration of tree health.	Medium	Implementation of rain gardens for City sites to improve stormwater management and climate resilience.

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CURRENT ADAPTATION PROJECTS

Forestry & Horticulture are currently working on climate adaptation projects as outlined in **Table 27**.

Table 27: Current Adaptation Projects

PROJECT	ADAPTATION IMPACT STATEMENT	PROJECT DESCRIPTION
Changes to fertilizer and irrigation practices	Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.	Changed from the scheduled application of fertilizer and use of irrigation systems to informed decision-making. Irrigation is based on the real moisture condition of gardens/planters. Fertilizer is only used when needed based on soil testing.
LID Features		Installation of rain gardens

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8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budgets. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options. However, currently, the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

8.1 ACQUISITION PLAN

The acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs. Assets can either be donated through agreements with the City, through land acquisitions, or through the construction or purchase of new assets.

CURRENT PROJECT DRIVERS – 10-YEAR PLANNING HORIZON

The City prioritizes capital projects based on various drivers to help determine ranking for project priorities and investment decisions. As part of future AM Plans, the City will continue to develop its understanding of how projects are prioritized and ensure that multiple factors are being considered to drive investment decisions in the next iteration of the AM Plan. These drivers will include legal compliance, risk mitigation, O&M impacts, growth impacts, health and safety, reputation, and others. These drivers should be reviewed during each iteration of the AM Plan to ensure they are appropriate and effective in informing decision-making. These drivers will be developed as part of a future iteration of this plan.

DONATED ACQUISITIONS

Occasionally assets are donated (e.g. commemorative trees, other donations), but this is minimal. For the Forestry & Horticulture group, there were no donated assets reported as part of the analysis.

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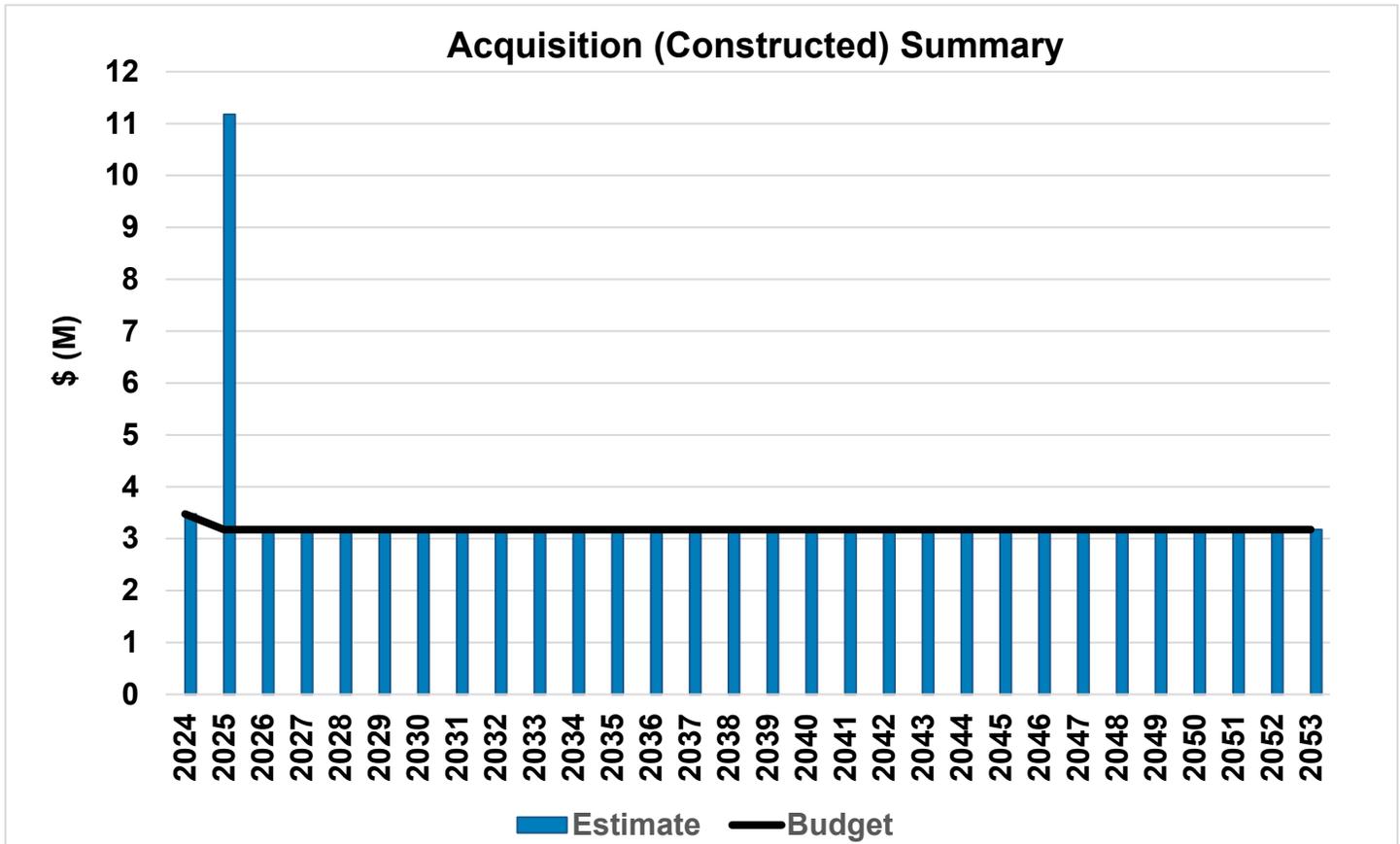
CONSTRUCTED OR PURCHASED ACQUISITIONS

Over the next 10-year planning period **2024 to 2033**, the City will acquire approximately **\$32M** of new trees which relates to 20,000 trees (6,000 street trees, 9,000 parks trees and 5,000 giveaway trees) or \$3.2M per year in **Figure 13** below which have been assumed to be funded over the next 30 years.

The City currently has a sufficient budget for these planned tree acquisitions. However, this budget does not address future asset needs that may need to be constructed to ensure service levels are maintained over the long term for these assets. There is an **\$8M unfunded acquisition** for a Horticulture building in 2025 which is required to support increased accommodations for front-line and administrative staff due to past and anticipated growth of Horticulture managed assets citywide.

With competing needs for resources across the entire city, there will be a need to investigate trade-offs and design options to further optimize asset decisions and ensure intergenerational equity can be achieved. Hamilton will continue to monitor its constructed and/or purchased assets annually and update the AM Plan when new information becomes available.

Figure 13: Acquisition (Constructed) Summary

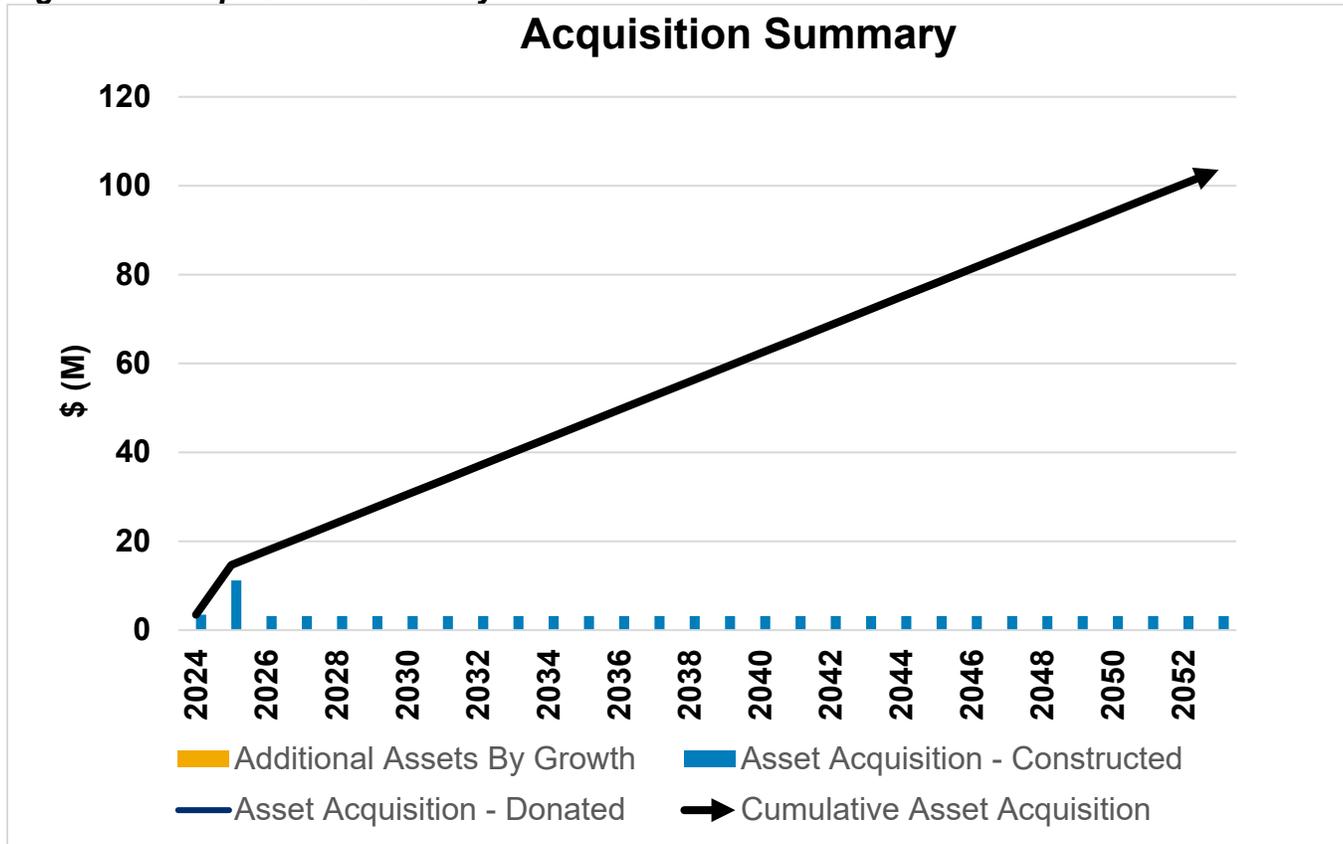


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ACQUISITIONS SUMMARY

Forecast acquisition asset costs are summarized in **Figure 14** and show the cumulative effect of asset assumptions over the next 10-year planning period.

Figure 14: Acquisition Summary



When Hamilton commits to constructing or purchasing new assets, the municipality must be prepared to fund future operations, maintenance, and renewal costs, which are estimated in the sections below. Of the \$96M of trees anticipated over the 30-year forecast, approximately 25% (5,000 trees) will consist of trees included in Free Tree Giveaways to the public and will therefore not commit the City to additional operations and maintenance activities.

Hamilton must also account for future depreciation when reviewing long-term sustainability, but this does not apply to natural-enhanced assets like public trees. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by Hamilton. The cumulative value of all acquisition work, including assets that are constructed and contributed is shown in **Figure 14**. The City of Hamilton will need to address how to best fund these ongoing costs as well as the costs to construct the assets while seeking the highest level of service possible.

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8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal, and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons. Examples of typical operational activities include operating assets, utility costs, inspections, and the necessary staffing resources to perform these activities.

Some of the major operational investments over the next 10 years include:

- **\$10.4 million** allocated for employee-related costs in 2024 (i.e., salaries, wages, benefits, contractual agreement etc.)

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure it reaches their intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition. Examples of typical maintenance activities include tree maintenance, equipment repairs, and component replacements along with the appropriate staffing and material resources required to perform these activities.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure the Forestry & Horticulture assets are reliable and can achieve the desired level of service.

Major maintenance projects the City plans to complete over the next 10 years include:

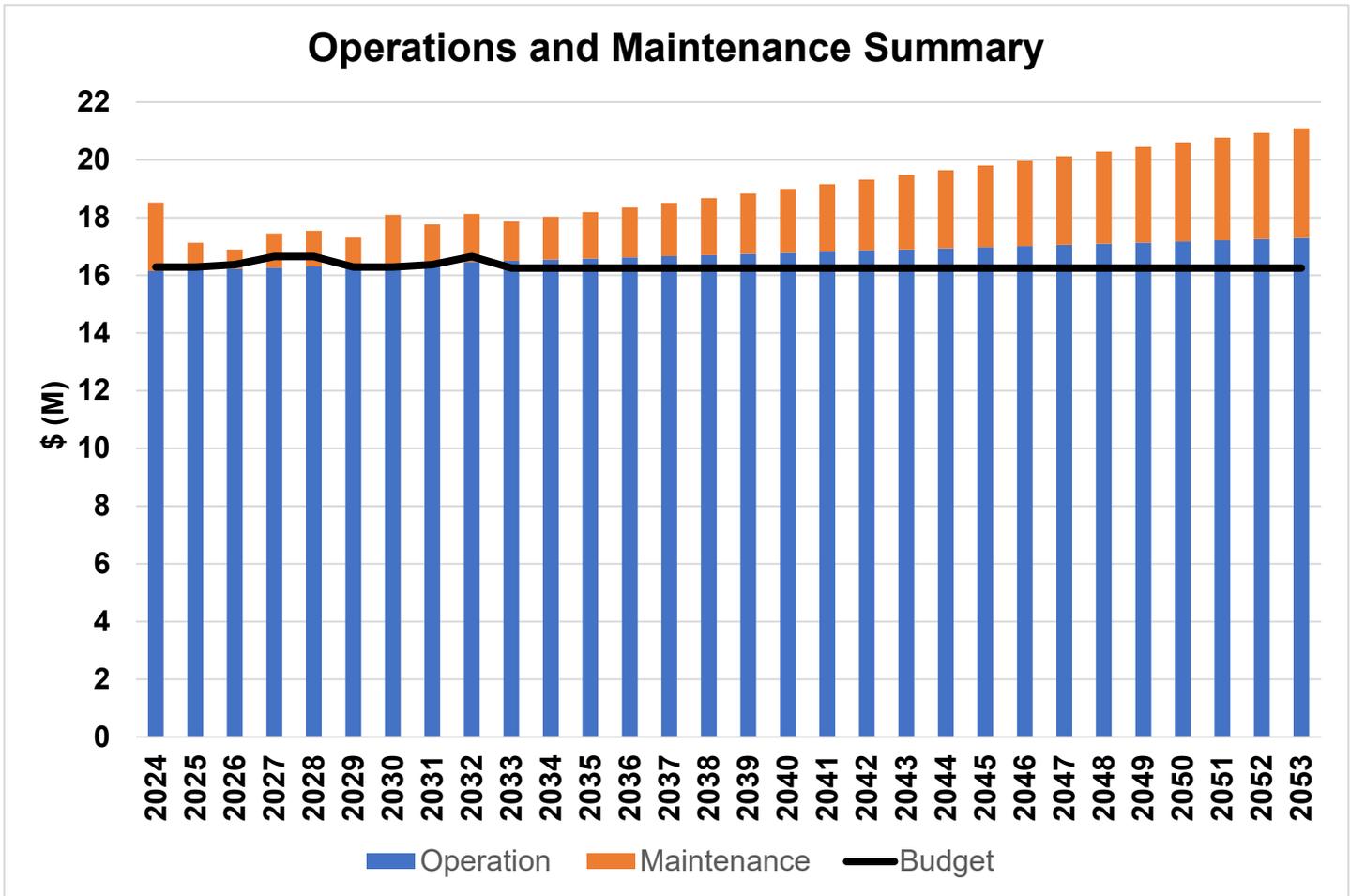
- **\$1.6 Million** allocated across 2024 to 2032 for Spongy Moth Program; and,
- **\$0.13 Million** allocated in 2024 for facilities maintenance.

Forecast operations and maintenance costs vary in relation to the total value of the asset registry. When additional assets are acquired, the future operations and maintenance costs are forecasted to increase. When assets are disposed of the forecast operation and maintenance costs are reduced.

It is important to note that Street Trees are considerably more expensive in maintenance costs than Parks Trees since Street Trees require more proactive management to ensure they are not affecting surrounding infrastructure. Of the 20,000 trees acquired per year approximately 30% (6,000) are Street Trees and approximately 45% (9,000) are Parks trees. As previously mentioned, approximately 25% (5,000) of trees acquired by the City are donated to the public through Free Tree Giveaways and do not cost the City additional operations and maintenance costs over time. Additional O&M costs for the acquisitions of these trees are included in **Figure 15** which also shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

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Figure 15: Forestry & Horticulture Operations & Maintenance Summary



Per **Figure 15** above, it is evident that operations and maintenance needs are growing for the Forestry & Horticulture section over the next 30 years due to increased tree planting throughout the City. O&M costs to support these future acquisitions were based on the anticipated needs for Street and Parks Trees. At this time these additional O&M requirements have been assumed to be unfunded and will need to be presented in future budgets. If the City endorses the requested Forestry & Horticulture budget on an annual basis and Forestry & Horticulture quantifies the lifecycle costing associated with the addition of these trees, it is predicted that there will be sufficient operating budget to deliver the service at the current service level. It is important to note that this forecast only includes the additional O&M required to support the proposed 15,000 trees Hamilton is acquiring per year and does not include additional anticipated O&M requirements for other demands, risks, climate change demands/risks, or proposed levels of services identified in **Sections 4 through 7** which will be quantified in future AM Plans.

Facilities maintenance amounts beyond the existing budget are assumed to be unfunded. The maintenance spike in 2024 is considered a maintenance backlog because it includes deferred maintenance due to budget constraints within the Corporate Facilities and Energy Management division over time. A key unfunded project included in this maintenance backlog is the roof panel

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replacement of the Tropical Greenhouse roof which was damaged in 2022 and is estimated to cost \$1M. This backlog should be investigated following the completion of this Asset Management Plan to ensure critical components have been prioritized in the Corporate Facilities and Energy Management and the Forestry & Horticulture budget forecasts.

As the City continues to develop condition methodologies and necessary works are identified based on their condition, it is anticipated these operation and maintenance forecasts will change. Future iterations of this plan will provide a more thorough analysis of operations and maintenance costs including types of expenditures for training, mandatory certifications, insurance, staffing costs and requirements, equipment, and maintenance activities.

8.3 RENEWAL PLAN

Renewal is major work which does not increase the asset’s design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs

Asset renewals are typically undertaken to either ensure the asset’s reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 28** and are based on the estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary from design life. Asset useful lives were last reviewed in 2022 however they will be reviewed annually until their accuracy reflects the City’s current practices.

Table 28: Useful Lives of Assets

ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Computers	5
Laptops	4
Mobile Devices	4
Vehicles	10
Facilities	20 - 75
Small Equipment	10
Irrigation system	20 – 25

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RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).¹⁹

Future methodologies may be developed to optimize and prioritize renewals by identifying assets of Forestry & Horticulture that:

- Have a high consequence of failure;
- Have high use and the subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have the potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.²⁰

SUMMARY OF FUTURE RENEWAL COST

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in the figure below.

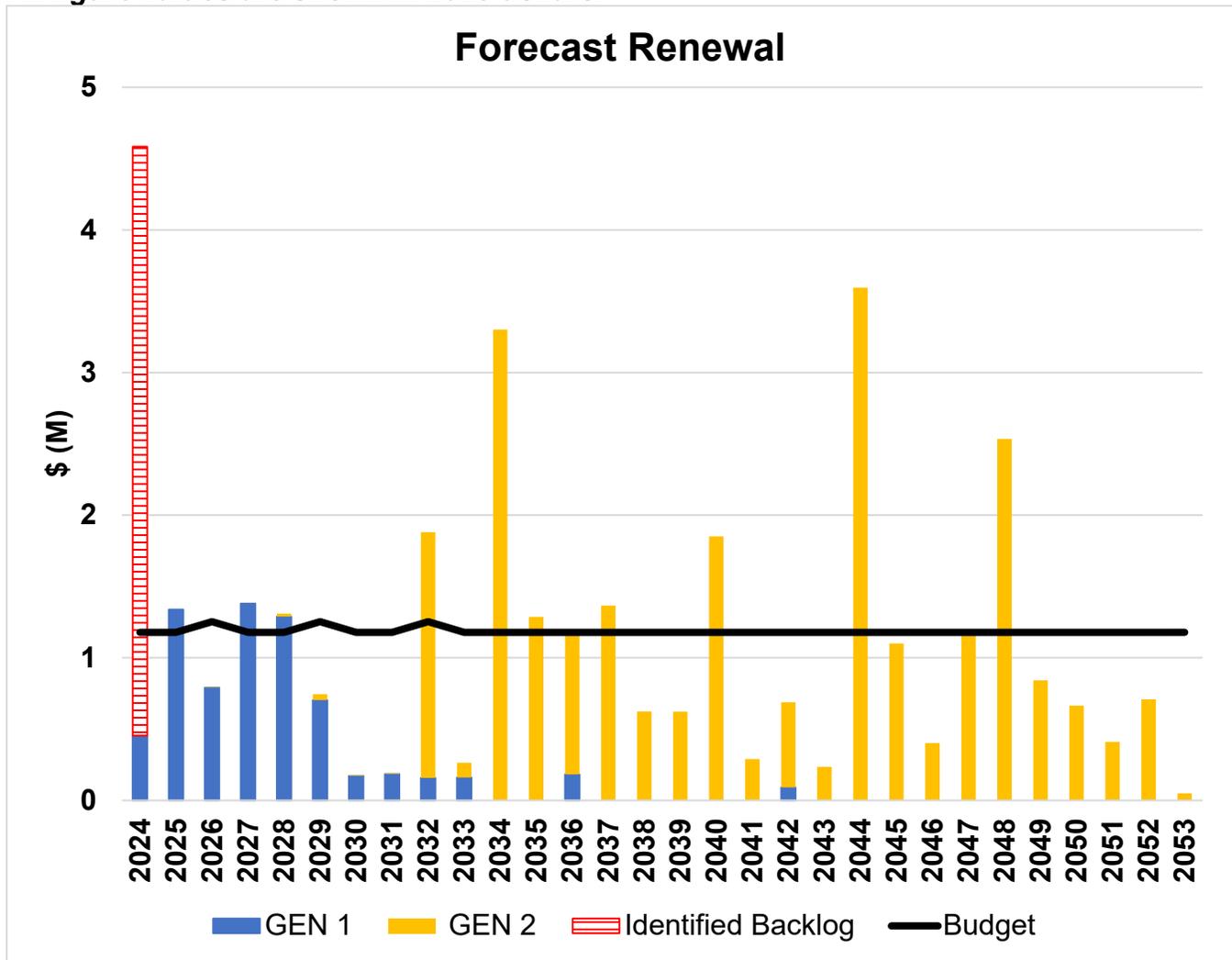
In **Figure 16** below, Generation 1 (Gen 1) costs refer to renewals that occur for the first time in the model based on the estimated service life and Generation 2+ (Gen 2+) costs refer to renewals that have occurred twice or more based on the estimated service life.

¹⁹ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

²⁰ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

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Figure 16: Forecast Renewal
 All figure values are shown in 2023 dollars.



Currently, there is mostly sufficient funding to accomplish all the renewals that are planned over the next 10 years with a few exceptions as noted below:

- There is a \$4.1M backlog amount in 2024 consisting of Vehicle assets that have exceeded their estimated service life. Since most vehicles are replaced on a 10-year lifecycle, this amount occurs again in 2034. Forestry & Horticulture should continue to work with Fleet Services to ensure these vehicles are renewed on a regular cycle.

It is important to note that the Public Trees asset class has not been included in the Renewals model because trees are maintained in perpetuity unless the asset dies or is irreparably damaged, and the condition for trees is not yet known on an individual basis and so no estimate could be created.

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Properly funded and timely renewals ensure the assets perform as expected. Deferring renewals creates risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. It is recommended to continue to analyze asset renewals based on criticality and availability of funds in future AM Plans.

8.4 DISPOSAL PLAN

Disposal includes any activity associated with the disposal of a decommissioned asset including the sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen.

No assets were identified for disposal in this plan. However, if the Horticulture Building becomes funded, the existing Horticulture Operations building will be disposed of. In addition, the Forestry and Horticulture section creates Wood Chips as part of the Tree disposal process. The costs and revenue associated with this process will be included as part of future iterations of this plan.

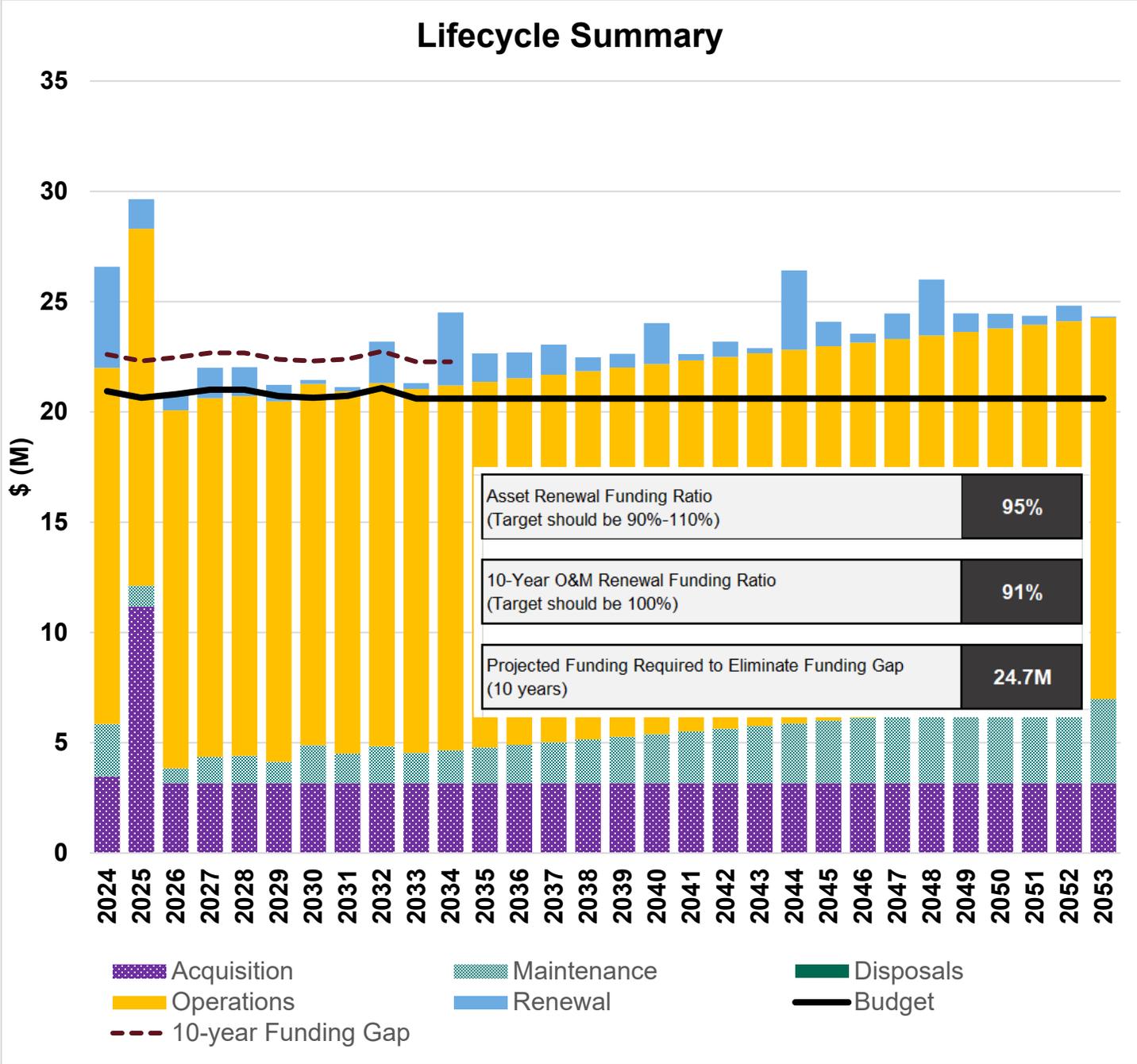
8.5 LIFECYCLE COST SUMMARY

The financial projections from this asset plan are shown in **Figure 17**. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving a balance between costs, levels of service and risk to achieve the best value outcome.

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Figure 17: Forestry and Horticulture Lifecycle Cost Summary



The figure above indicates that there is mostly sufficient budget over the 10-year planning period to address lifecycle needs except for 2024 and 2025. As previously mentioned, the unfunded needs in 2024 are mostly related to the vehicle-renewal and facility maintenance backlogs, and the unfunded need in 2025 is related to the proposed Horticulture Facility acquisition required to support increased accommodations for front-line and administrative staff due to past growth of Horticulture managed assets citywide.

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Though operations and maintenance budgets are currently sufficient, the annual acquisitions of trees through the tree planting program will commit the City to additional operations and maintenance costs across the lifecycle of the tree. If the City continues to acquire 15,000 City-owned trees per year, the City will also need to increase the operating budget to support these assets. It was estimated in this forecast that this would be an additional \$40 Thousand in operations costs and \$122 Thousand in maintenance costs with each year's tree planting program. By 2053 this will result in a required increase of \$1.2 Million and \$3.7 Million to the operations and maintenance budgets respectively. If the City endorses the requested Forestry & Horticulture budget on an annual basis and Forestry & Horticulture quantifies the lifecycle costing associated with these trees, it is predicted that there will be sufficient operating budget to deliver the service at the current service level.

It is important to note that this forecast does not include additional anticipated lifecycle activities for other demands or risks discussed in **Section 5** or **Section 6** which will be quantified in future AM Plans.

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9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure its Forestry & Horticulture provide the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-Term Financial Planning (LTFP) is critical for the City to ensure the service's lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for its Forestry & Horticulture assets; the City will have difficult choices to make in the future which will include options such as higher costs reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all the service's needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

9.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- Medium-term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio²¹ **95%**

The Asset Renewal Funding Ratio is used to determine if the City is accommodating asset renewals in an **optimal** and **cost-effective** manner from a timing perspective and relative to financial constraints, the risk the City is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result indicates that service levels are achievable, however, the expenditures are below this level in some service areas due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

²¹AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

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If assets are not renewed at the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to the City's reputation and risk of fines or legal costs

The lack of renewal resources will be addressed in future AM Plans while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

MEDIUM-TERM – 10 YEAR FINANCIAL PLANNING PERIOD

10-Year O&M and Renewal Ratio **91%**

Although this AM Plan includes forecast projections to 30 years, the higher confidence numbers are typically within the first ten (10) years of the lifecycle forecast. The 10-year O&M and Renewal Ratio compares the Planned Budget with the Lifecycle Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the AARF, the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization's risk and service level commitments.

The forecast operations, maintenance and renewal costs over the 10-year planning period is **\$19.3M** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The proposed (budget) operations, maintenance and renewal funding is **\$17.6M** on average per year giving a 10-year funding shortfall of **\$167K** per year or **\$1.67M** over the 10-year planning period. This indicates that **91%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget, which is within the 90-110% range. Therefore, it can be concluded that Forestry & Horticulture is funding their assets at an acceptable rate. Note, that these calculations exclude acquired assets, but include the O&M costs associated with anticipated acquisitions.

If the City continues to acquire 15,000 City-owned trees per year, the City will also need to increase the operating budget to maintain an acceptable financial ratio. If the City endorses the requested Forestry & Horticulture budget on an annual basis and Forestry & Horticulture quantifies the lifecycle costing associated with these trees, it is predicted that there will likely be sufficient operating budget to deliver the service at the current service level. However, as discussed throughout the report, there are opportunities for proposing new levels of service (e.g., expanding the maintenance program for Rural Trees and Other City-Owned trees, ensuring compliance with City Backflow By-law 10-103, and investigating dual staff) which should be investigated further when reporting on proposed levels of service by 2025 and have not yet been encompassed in this value.

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Funding an annual funding shortfall or funding 'gap' should not be addressed immediately. The overall gap in funding city-wide will require vetting, planning and resources to begin to incorporate gap management into the future budgets for all City services. This gap will need to be managed over time to reduce it sustainably and limit financial shock to customers. Options for managing the gap include;

- Financing strategies – increased funding, block funding for specific lifecycle activities, long-term debt utilization;
- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets; and,
- Influence level of service expectations or demand drivers.

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of **90-110%** for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

9.2 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Table 29 shows the forecast costs (outlays) required for consideration in the 30-year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

The City will manage the 'gap' by continuing to develop this AM Plan to guide future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low-use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

Table 29: Forestry & Horticulture Lifecycle Costs

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2024	\$3,476,000	\$16,147,945	\$2,374,185	\$4,583,894	\$-
2025	\$11,176,000	\$16,187,445	\$942,290	\$1,337,828	\$-
2026	\$3,176,000	\$16,226,945	\$671,430	\$793,071	\$-
2027	\$3,176,000	\$16,266,445	\$1,184,294	\$1,380,219	\$-
2028	\$3,176,000	\$16,305,945	\$1,234,634	\$1,309,505	\$-
2029	\$3,176,000	\$16,345,445	\$960,811	\$744,716	\$-
2030	\$3,176,000	\$16,384,945	\$1,711,862	\$176,523	\$-
2031	\$3,176,000	\$16,424,445	\$1,339,292	\$189,315	\$-
2032	\$3,176,000	\$16,463,945	\$1,665,706	\$1,880,602	\$-
2033	\$3,176,000	\$16,503,445	\$1,362,699	\$264,403	\$-
2034	\$3,176,000	\$16,542,945	\$1,484,699	\$3,301,222	\$-
2035	\$3,176,000	\$16,582,445	\$1,606,699	\$1,286,828	\$-
2036	\$3,176,000	\$16,621,945	\$1,728,699	\$1,172,743	\$-
2037	\$3,176,000	\$16,661,445	\$1,850,699	\$1,366,219	\$-
2038	\$3,176,000	\$16,700,945	\$1,972,699	\$623,833	\$-
2039	\$3,176,000	\$16,740,445	\$2,094,699	\$622,716	\$-
2040	\$3,176,000	\$16,779,944	\$2,216,699	\$1,851,195	\$-
2041	\$3,176,000	\$16,819,444	\$2,338,699	\$289,315	\$-
2042	\$3,176,000	\$16,858,944	\$2,460,699	\$687,930	\$-
2043	\$3,176,000	\$16,898,444	\$2,582,699	\$235,403	\$-
2044	\$3,176,000	\$16,937,944	\$2,704,699	\$3,595,894	\$-
2045	\$3,176,000	\$16,977,444	\$2,826,699	\$1,100,828	\$-
2046	\$3,176,000	\$17,016,944	\$2,948,699	\$402,071	\$-
2047	\$3,176,000	\$17,056,444	\$3,070,699	\$1,159,219	\$-
2048	\$3,176,000	\$17,095,944	\$3,192,699	\$2,534,505	\$-

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2049	\$3,176,000	\$17,135,444	\$3,314,699	\$841,716	\$-
2050	\$3,176,000	\$17,174,944	\$3,436,699	\$664,523	\$-
2051	\$3,176,000	\$17,214,444	\$3,558,699	\$410,315	\$-
2052	\$3,176,000	\$17,253,944	\$3,680,699	\$708,602	\$-
2053	\$3,176,000	\$17,293,444	\$3,802,699	\$49,403	\$-

9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in the City’s operational budget and 10-year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM plan will provide service delivery options and alternatives to optimize limited financial resources.

9.4 VALUATION FORECASTS

Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

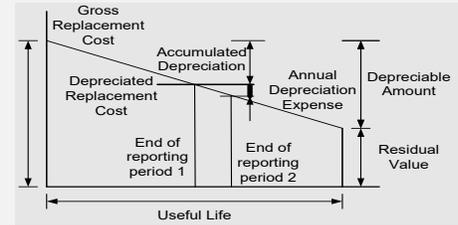
Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and remove the high costs of renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs however this will be improved for the next iteration of the plan.

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

9.5 ASSET VALUATION

The best available estimate of the value of assets included in this Asset Management Plan is shown below. The assets are valued at estimated replacement costs:

Replacement Cost (Current/Gross)	39,982,593
Depreciable Amount	38,463,133
Depreciated Replacement Cost²²	24,254,940
Depreciation	1,547,600



The current replacement cost is the most common valuation approach for specialized infrastructure assets. The methodology includes establishing a comprehensive asset registry, assessing replacement costs (based on market pricing for the modern equivalent assets) and useful lives, determining the appropriate depreciation method, testing for impairments, and determining remaining useful life. As previously mentioned, Public Trees were not included in the depreciation as enhanced natural assets do not depreciate.

As the City matures its asset data, it is highly likely that these valuations will fluctuate significantly over the next three years, and they should increase over time based on improved market equivalent costs as well as anticipated cost changes due to climate change mitigation and adaptation strategies.

9.6 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- 30-year operational and maintenance forecasts are based on current budget allocations as well as subject matter expert estimates on O&M activities for additional Public Tree acquisitions. O&M forecasts were not estimated for the proposed Horticulture Facility;
- Public Trees asset class was not included in the Renewals model because trees are maintained in perpetuity unless the asset dies or is irreparably damaged, and the condition for trees is not yet known on an individual basis; and,
- Replacement costs in the renewal forecast were based on market value pricing where known and historical costs where market value prices were not available.

²² Also reported as Written Down Value, Carrying or Net Book Value.

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

9.7 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the AMP Overview Document.

The estimated confidence level for and reliability of data used in this AM Plan is a **Low** confidence level as estimated using the information in **Table 30** below.

Table 30: Data Confidence Assessment for Data Used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	Low	Demand drivers were determined using subject matter expert opinion.
Acquisition Forecast	Medium	Anticipated acquisitions required to support service were included in the Capital Budget.
Operation Forecast	Medium	Operations costs for new tree acquisitions were estimated as described in Section 8.2 using subject matter expert opinion.
Maintenance Forecast	Medium	Maintenance costs for new tree acquisitions were estimated as described in Section 8.2 using subject matter expert opinion.
Renewal Forecast - Asset Value	Low	Market pricing was used for renewal replacement costs for facilities, vehicles, small equipment and IT equipment which have generally medium confidence. There was no data available for horticulture beautification assets and tree renewals were not included in the model due to data and methodology limitations resulting in an overall confidence of low.
Renewal Forecast - Asset Useful Lives	Low	There is a high confidence in age data for fleet and IT assets. Age and service lives for facilities assets had to be estimated by staff based on discrepancies in the corporate facilities data. There was no data available for horticulture beautification assets and tree renewals were not included in the model due to data and methodology limitations resulting in an overall confidence of low.

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

DATA	CONFIDENCE ASSESSMENT	COMMENT
Renewal Forecast - Condition Modelling	Low	<p>Condition data was only known for facilities. The condition of vehicles, small equipment, and IT assets was based on age and estimated service life.</p> <p>There was no data available for horticulture beautification assets and tree renewals were not included in the model due to data and methodology limitations resulting in an overall confidence of low.</p>
Disposal forecast	Very Low	No disposals were integrated into the forecast

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PRACTICES

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2024 Approved Operating Budget;
- 2024-2025 Multi-Year Operating Forecast;
- 2024 Approved Capital Budget;
- 2024-2032 Multi-Year Capital Forecast;
- Building Condition Assessment Reports;
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc.);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter Expert Opinion and Anecdotal Information; and,
- Reports from the mandatory inspections and operations & maintenance internal reports.

10.2 IMPROVEMENT PLAN

It is important that the City recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision-making. The tasks listed below are essential to improving the AM Plan and the City's ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning and plans to physically improve the assets.

The Improvement Plan **Table 31** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this AM Plan will provide updates on these improvement plans.

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

Table 31: Improvement Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1	Review and revise this AM Plan once additional best practice documents have been developed for green infrastructure asset management.	CAM	Internal Resources	Q2-2025
2	Investigate valuing trees from an ecological service perspective in alignment with natural asset management best practices.	CAM	Internal Resources	Q2-2025
3	Complete inventory for Horticulture Equipment including age, condition, and replacement cost.	Horticulture Operations	Internal Resources	Q4-2026
4	Create a process to inventory all perennial plants in the Production Greenhouse including condition and replacement cost.	Horticulture Operations	Internal Resources	Q3 2024
5	Complete inventory for Public Rural Trees within the ROW including age, condition, and replacement cost.	Forestry Operations	Unknown	Q4-2026
6	Complete inventory for Other City Trees on City-owned Properties (e.g., Facilities, EMS, Libraries etc.) including age, condition and replacement cost.	Forestry Operations	Unknown	Q4-2026
7	Confirm Forestry & Horticulture facility ages with available documentation and ensure they are accurately recorded in the CFEM database	CFEM and Forestry & Horticulture Operations	Internal Resources	Q3-2024
8	Ensure Poly Houses are inspected by CFEM staff on a 5-year basis and given a condition score.	CFEM	Internal Resources	Q2 - 2025
9	Complete condition assessments on small equipment as part of regular operations.	Forestry & Horticulture Business Programs	Internal Resources	Q1 - 2025
10	Complete condition assessments on fleet assets as part of the regular inspection cycle.	Fleet Services	Internal Resources	Q2 – 2025

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
11	Create a process to better estimate the condition of technology assets.	Information Technology	Internal Resources	Q2 - 2025
12	Create online/ public facing dashboards to share asset info i.e., Grid Maintenance Program, Proposed Tree Planting, Tree Permits, Upcoming Tree Removals, Statistics	Forestry Operations/IT	Internal Resources	2025
13	Improve the survey process to increase responses and data confidence levels by incorporating other methodologies (e.g. telephone surveys, IP address control).	CAM	Internal Resources / Consultant	Ongoing
14	Create additional technical measurements to better compare customer and technical levels of service	CAM and Forestry & Horticulture Operations	Internal Resources	Q2 - 2025
15	Review and investigate implementing Demand Management Plans.	CAM and Forestry & Horticulture Operations	Internal Resources	Ongoing
16	Quantify Risk Treatment costs. Review and investigate implementing Risk Treatment Plans.	CAM and Forestry & Horticulture Operations	Unknown	Ongoing
17	Quantify the effects of climate change mitigation and adaptation projects in the next iterations of the AM Plan.	CAM and Forestry & Horticulture Operations	Internal Resources	Q2 - 2025
18	Incorporate metrics around the completion of Continuous Improvement items.	CAM	Internal Resources	Q2-2025

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated regularly to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one-to-ten-year detailed works programs, budgets, business plans and corporate structures consider the 'global' work program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 110%).

FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

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FORESTRY & HORTICULTURE 2024 ASSET MANAGEMENT PLAN

12. APPENDIX A – SURVEY ANALYSIS



Hamilton

Corporate Asset Management

Forestry & Horticulture

Survey Period: November 7th - January 2nd, 2024

January 2024

69 Respondents	75 Survey Questions	5 Demographic Questions	4346 Survey Responses	271 Demographic Response
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Age	% Pop. by Age	% of Respondents	Respondents
18 to 34	22.1%	20.29%	14
35 to 64	41.7%	57.97%	40
65+	19.5%	14.49%	10

Identity	% of Respondents	Respondents
No	57.97%	40
Yes	20.29%	17
I would prefer not to answer	14.49%	10
Other	2.90%	2

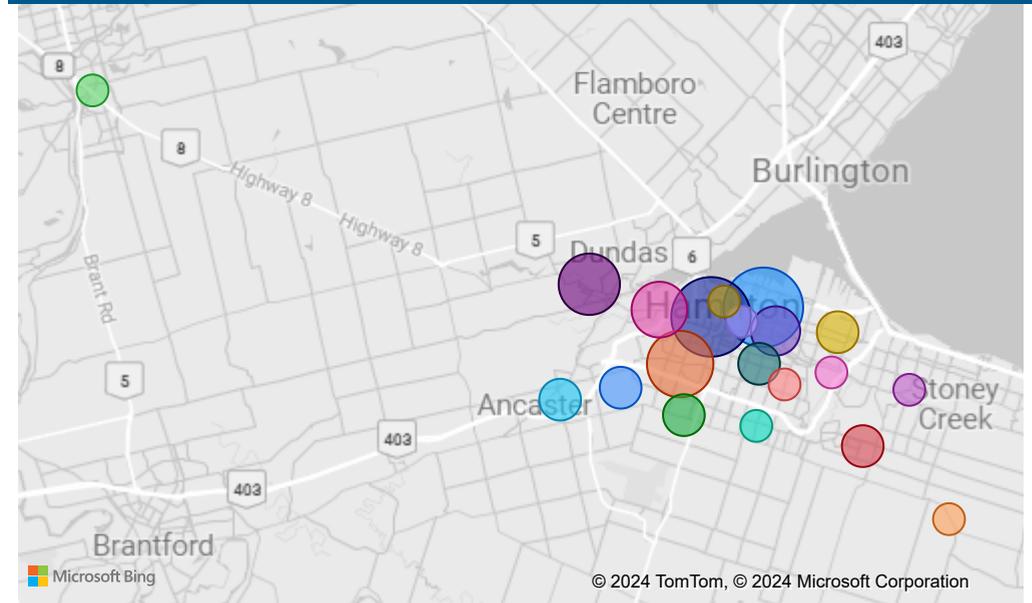
Region	% Pop. by Region	Population	% of Respondents	Respondents
Lower	45.6%	432,375	52.17%	36
Upper	37.3%	353,485	26.09%	18
Rural	17.1%	161,840	1.45%	1

Residency	% of Respondents	Respondents
I live in Hamilton	91.30%	63
I work in Hamilton	44.93%	31
I am retired in Hamilton	15.94%	11
I run a Hamilton-based business	8.70%	6
I run a business outside of Hamilton	1.45%	1

These stats will add to over 100% because the survey allowed responders to choose multiple options for each of the questions



Respondent Density Map



Respondents By Day



Responses Respondents

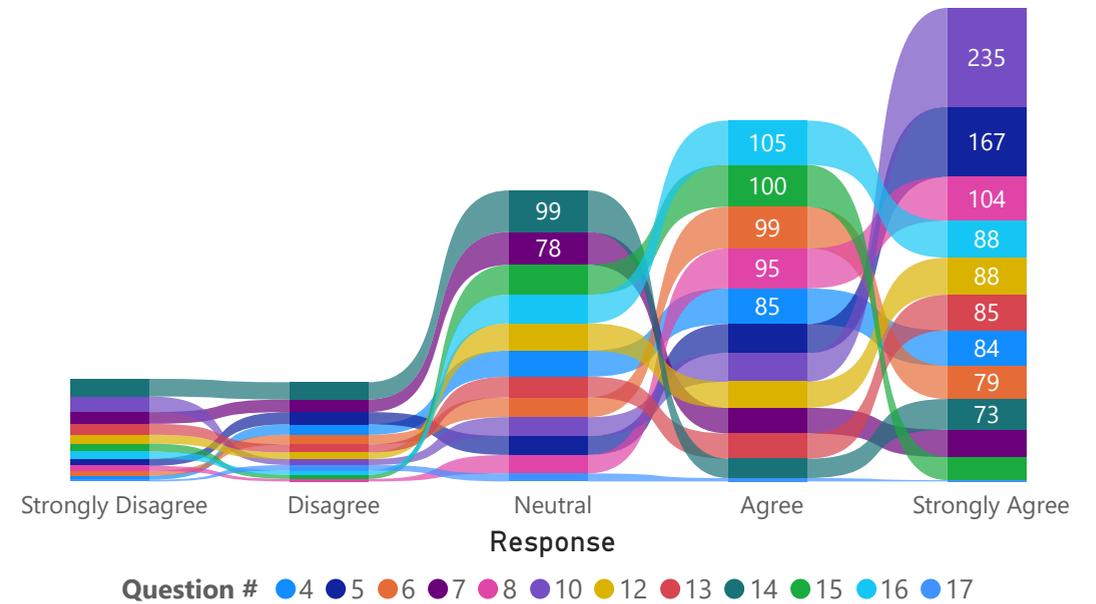
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Summary of Survey Results

● Didn't Answer ● Can't Say ● Strongly Disagree ● Disagree ● Neutral ● Agree ● Strongly Agree



Questions	σ	Avg.	Opt Out	Opt Out %
All Questions	1.23	3.76	1053	25.02%
Q10 Potential Services	1.29	4.13	15	3.62%
Q8 Comfortability Accessing Services	1.03	4.05	84	24.35%
Q5 Importance of Services	1.21	4.04	18	5.22%
Q16 Service Level Expectation	1.09	3.82	195	40.37%
Q6 Satisfaction with Services	1.09	3.82	86	24.93%
Q4 Performance of Services	1.10	3.78	79	22.90%
Q12 Recommendation of Services	1.24	3.71	93	26.96%
Q13 Value for Services	1.32	3.67	106	30.72%
Q15 Service Level Rating	1.09	3.64	228	47.20%
Q7 Needs are Being Met	1.27	3.40	83	24.06%
Q14 Tax Rates	1.33	3.22	44	12.75%
Q17 Response Time	1.01	2.85	22	31.88%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Responses Respondents

3358

69

Survey Question Summary

Question #	Survey Question	n (Sample Size)	σ (Consistency)	Margin of Error (Confidence Level \pm)
4	How do you feel Forestry & Horticulture have preformed overall in the following services?	53	1.10	13%
5	How important to you are the Forestry & Horticulture services listed below?	65	1.21	12%
6	How satisfied are you with your ability to access Forestry & Horticulture's sites and services?	52	1.09	14%
7	Do the following Forestry & Horticulture sites and services meet your needs?	52	1.27	14%
8	Do you feel comfortable accessing these sites and services provided by Forestry and Horticulture?	52	1.03	14%
10	Please rate the following potential Forestry & Horticulture services based on their importance to you.	67	1.29	12%
12	How likely would you be to recommend the following Forestry & Horticulture sites and services to others?	50	1.24	14%
13	How would you rate Forestry & Horticulture in providing good value for money for the following sites and services?	48	1.32	14%
14	If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rates.	60	1.33	13%
15	Forestry & Horticulture's buildings and services rating	36	1.09	16%
16	Forestry & Horticulture's buildings and services expectations	41	1.09	15%
17	Does the following response time meet your needs and expectations for an effective response?	47	1.01	14%

Question

Who did you visit with?

2

In the last 24 months, which of the Forestry & Horticulture sites and services have you visited or used, and who did you go with?

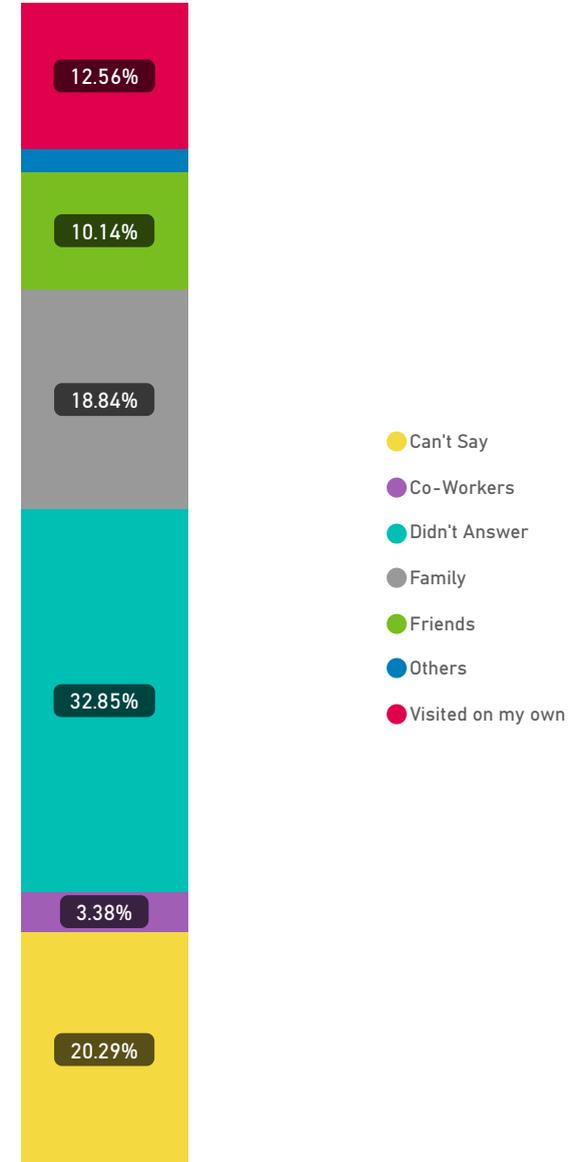
Responses

97

Respondents

55

ServiceArea	Co-Workers	Family	Friends	Others	Visited on my own
Total	7	39	21	4	26
Floral Show ad Special Installations Across the City	2	11	9	1	12
Gage Park Tropical Greenhouse	1	26	10	2	9
Tree Health and Education Programs	4	2	2	1	5



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

Age of visitors

3

If you have visited or used any of the Forestry & Horticulture sites or services below, what are the ages of the people who visited with you?

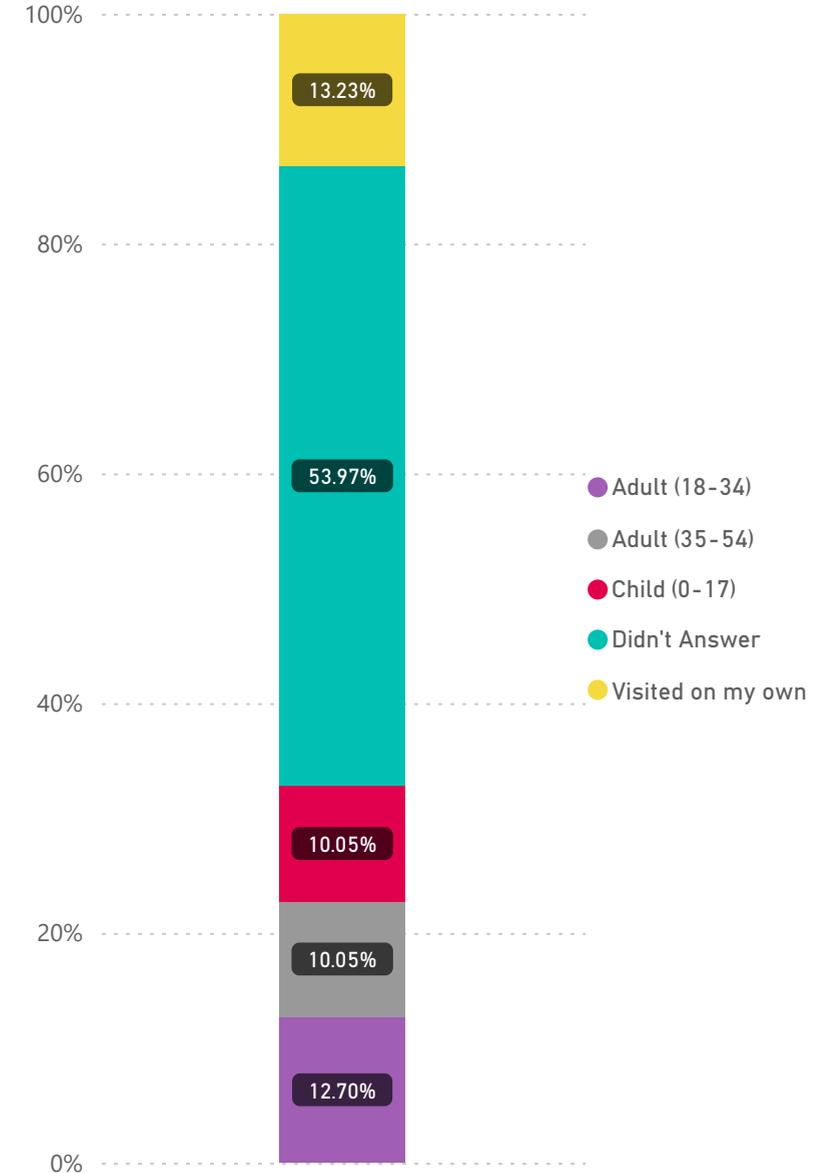
Responses

105

Respondents

54

ServiceArea	Adult (18-34)	Adult (35-54)	Adult (55 plus)	Child (0-17)	Visited on my own
Total	24	19	18	19	25
Floral Show ad Special Installations Across the City	9	5	8	5	12
Gage Park Tropical Greenhouse	12	10	9	12	6
Tree Health and Education Programs	3	4	1	2	7



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.



Question

4

Performance of Services

How do you feel Forestry & Horticulture have performed overall in the following services?

Responses

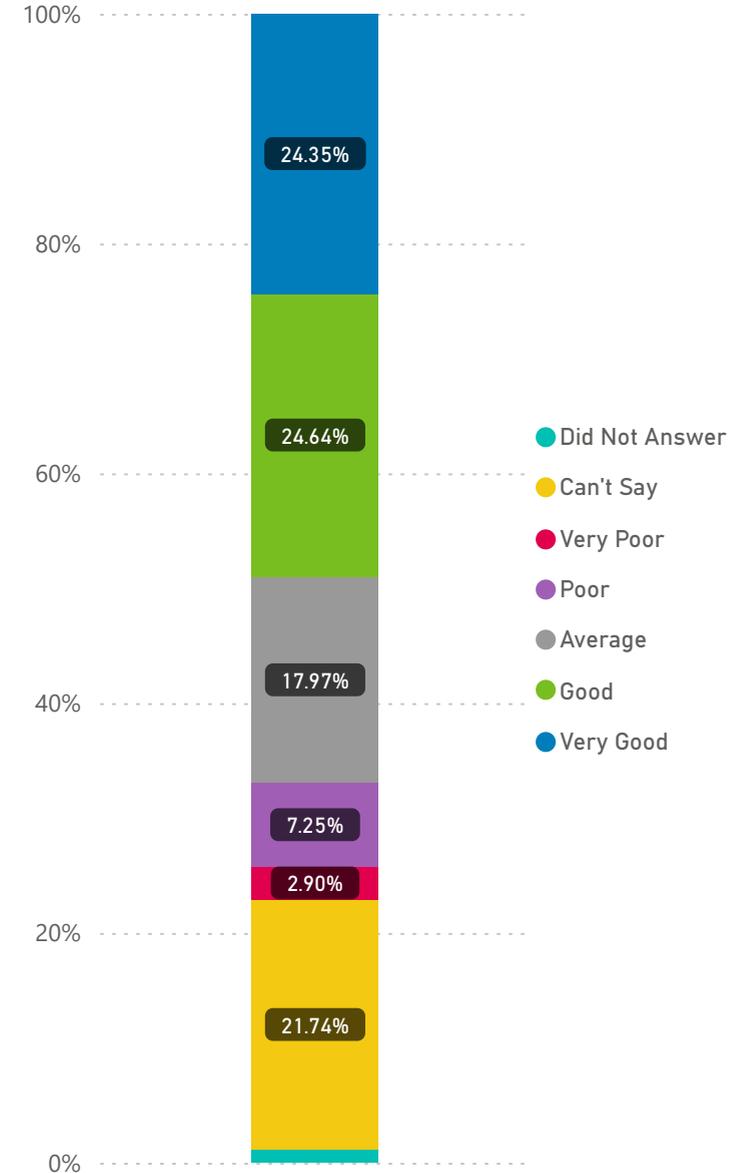
266

Respondents

69

ServiceArea	Very Poor	Poor	Average	Good	Very Good
Total	10	25	62	85	84
Floral Shows and Special Installations Across the City		3	9	18	17
Gage Park Tropical Greenhouse			4	18	30
Garden Beds and Hanging Baskets (Along the street and on City property)	1	8	19	23	15
Street and Park Trees	6	8	20	17	17
Tree Health and Education Programs	3	6	10	9	5

ServiceArea	σ	Avg.	Opt Out	Opt Out %
Total	1.10	3.78	79	22.9%
Gage Park Tropical Greenhouse	0.64	4.50	17	24.6%
Floral Shows and Special Installations Across the City	0.90	4.04	22	31.9%
Garden Beds and Hanging Baskets (Along the street and on City property)	1.01	3.65	3	4.3%
Street and Park Trees	1.23	3.46	1	1.4%
Tree Health and Education Programs	1.17	3.21	36	52.2%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Differential of Importance and Performance

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

593

Respondents

69

ServiceArea	Performance (index score)	Importance (index score)	Net Differential	Opt Out %
Street and Park Trees	69	96	-27	1%
Tree Health and Education Programs	64	83	-19	30%
Gage Park Tropical Greenhouse	90	80	10	16%
Garden Beds and Hanging Baskets (Along the street and on City property)	73	77	-3	2%
Floral Shows and Special Installations Across the City	81	68	13	20%

Performance

Q4 How do you feel Forestry & Horticulture have preformed overall in the following services?

Importance

Q5 How important to you are the Forestry & Horticulture services listed below?



The Net Differential is calculated here by taking the average Likert score for each service area and multiplied by 20, the difference between performance and importance is then calculated as our final product. Negative differential indicates a higher perceived level of importance vs performance and positive is the opposite.

Question

5

Importance of Services

How important to you are the Forestry & Horticulture services listed below?

Responses

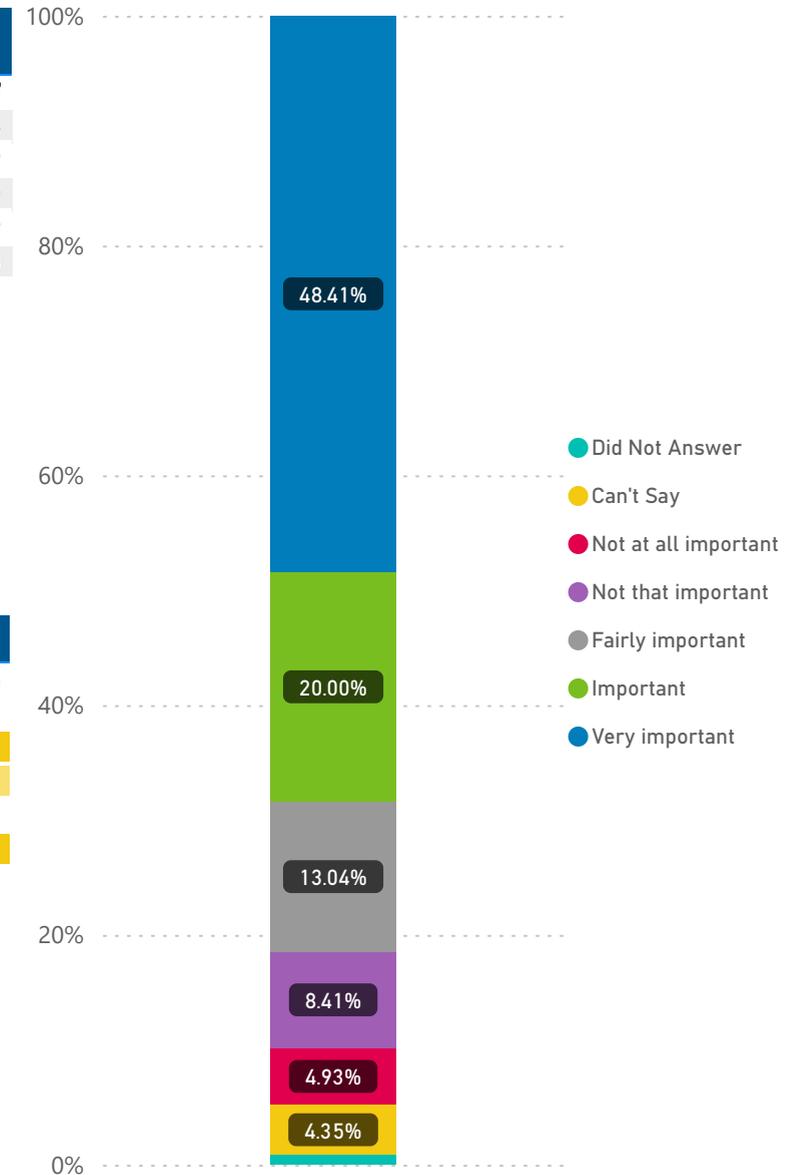
327

Respondents

69

ServiceArea	Not at all important	Not that important	Fairly important	Important	Very important
Total	17	29	45	69	167
Floral Shows and Special Installations Across the City	6	11	15	15	16
Gage Park Tropical Greenhouse	2	8	8	17	29
Garden Beds and Hanging Baskets (Along the street and on City property)	6	7	10	16	30
Street and Park Trees	1			8	59
Tree Health and Education Programs	2	3	12	13	33

ServiceArea	σ	Avg.	Opt Out	Opt Out %
Total	1.21	4.04	18	5.2%
Street and Park Trees	0.57	4.82	1	1.4%
Tree Health and Education Programs	1.08	4.14	6	8.7%
Gage Park Tropical Greenhouse	1.17	3.98	5	7.2%
Garden Beds and Hanging Baskets (Along the street and on City property)	1.32	3.83		
Floral Shows and Special Installations Across the City	1.29	3.38	6	8.7%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

5

Net Promoter Score

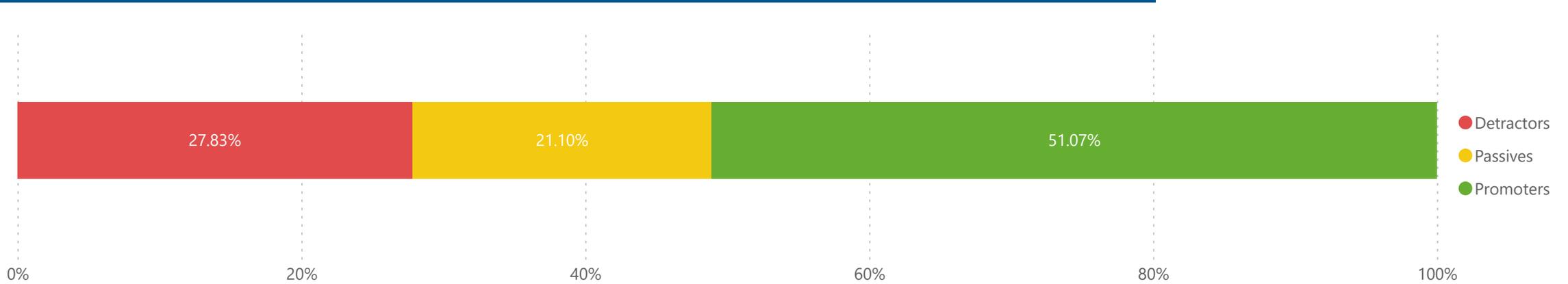
How important to you are the Forestry & Horticulture services listed below?

Responses

327

Respondents

69



ServiceArea	σ	NPS	Detractors	Passives	Promoter
All Service Areas	1.21	23	91	69	167
Street and Park Trees	0.57	85	1	8	59
Tree Health and Education Programs	1.08	25	17	13	33
Gage Park Tropical Greenhouse	1.17	17	18	17	29
Garden Beds and Hanging Baskets (Along the street and on City property)	1.32	10	23	16	30
Floral Shows and Special Installations Across the City	1.29	-25	32	15	16

Typically the Net Promoter Score is used to measure customer loyalty.



Likert choices less than 4 are considered 'Detractors' while 5s are considered 'Promoters' and 4s are 'Passive'. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Detractors) from (% Promoters). σ (Standard Deviation) is calculated in percent, the same units as the Net Promoter Score.

Question

Satisfaction with Services

6 *How satisfied are you with your ability to access Forestry & Horticulture's sites and services?*

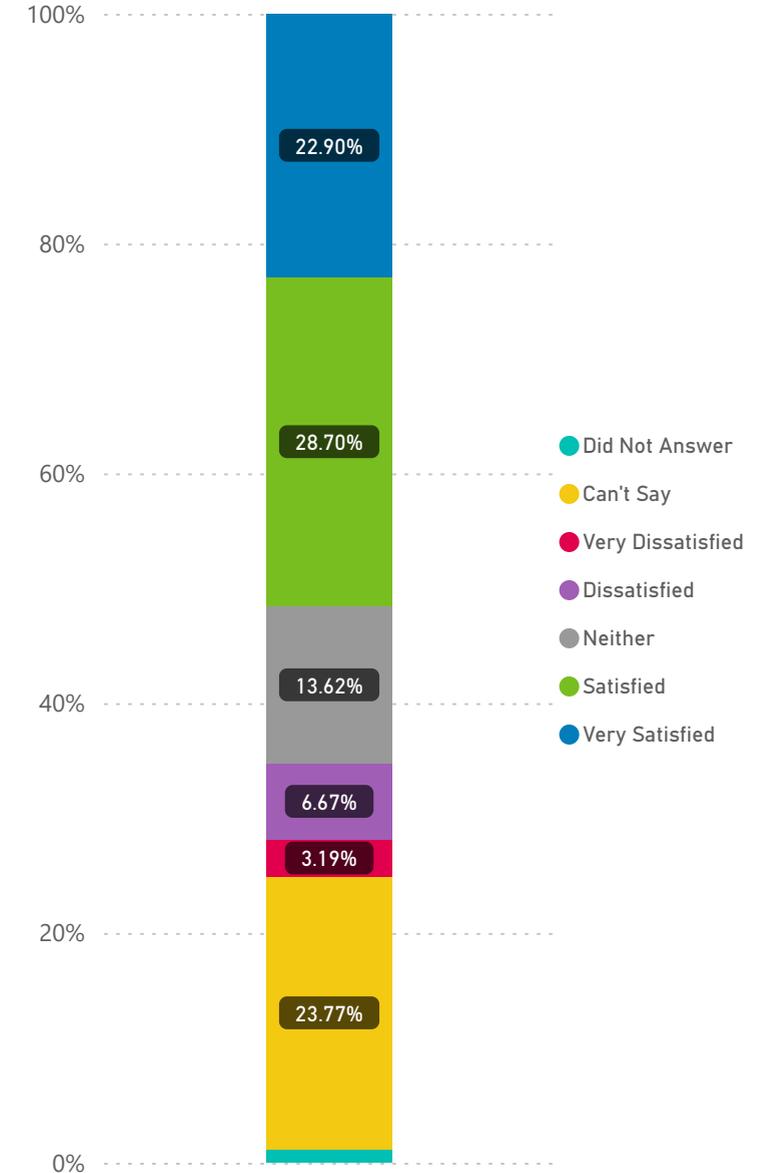
Responses

259

Respondents

66

ServiceArea	Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
Total	11	23	47	99	79
Floral Shows and Special Installations Across the City	1	2	9	22	15
Gage Park Tropical Greenhouse	1	2	7	22	23
Garden Beds and Hanging Baskets (Along the street and on City property)	2	3	12	23	16
Street and Park Trees	4	9	10	21	19
Tree Health and Education Programs	3	7	9	11	6



ServiceArea	σ	Avg.	Opt Out	Opt Out %
Total	1.09	3.82	86	24.9%
Gage Park Tropical Greenhouse	0.91	4.16	14	20.3%
Floral Shows and Special Installations Across the City	0.91	3.98	20	29.0%
Garden Beds and Hanging Baskets (Along the street and on City property)	1.01	3.86	13	18.8%
Street and Park Trees	1.22	3.67	6	8.7%
Tree Health and Education Programs	1.19	3.28	33	47.8%

Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

7

Needs are Being Met

Do the following Forestry & Horticulture sites and services meet your needs?

Responses

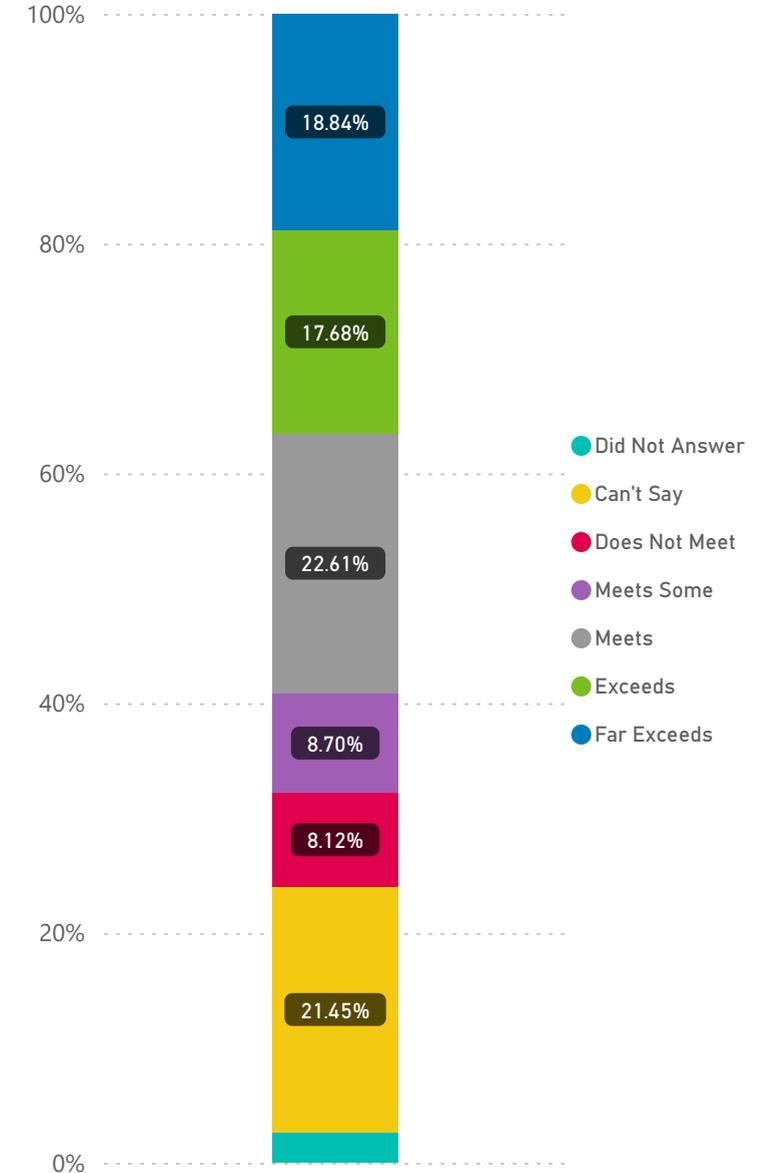
262

Respondents

68

ServiceArea	Does Not Meet	Meets Some	Meets	Exceeds	Far Exceeds
Total	28	30	78	61	65
Floral Shows and Special Installations Across the City	5		16	10	17
Gage Park Tropical Greenhouse	2	3	11	17	21
Garden Beds and Hanging Baskets (Along the street and on City property)	6	4	23	16	11
Street and Park Trees	12	16	18	11	11
Tree Health and Education Programs	3	7	10	7	5

ServiceArea	σ	Avg.	Opt Out	Opt Out %
Total	1.27	3.40	83	24.1%
Gage Park Tropical Greenhouse	1.07	3.96	15	21.7%
Floral Shows and Special Installations Across the City	1.24	3.71	21	30.4%
Garden Beds and Hanging Baskets (Along the street and on City property)	1.15	3.37	9	13.0%
Tree Health and Education Programs	1.19	3.13	37	53.6%
Street and Park Trees	1.32	2.90	1	1.4%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

Comfortability Accessing Services

8

Do you feel comfortable accessing these sites and services provided by Forestry and Horticulture?

Responses

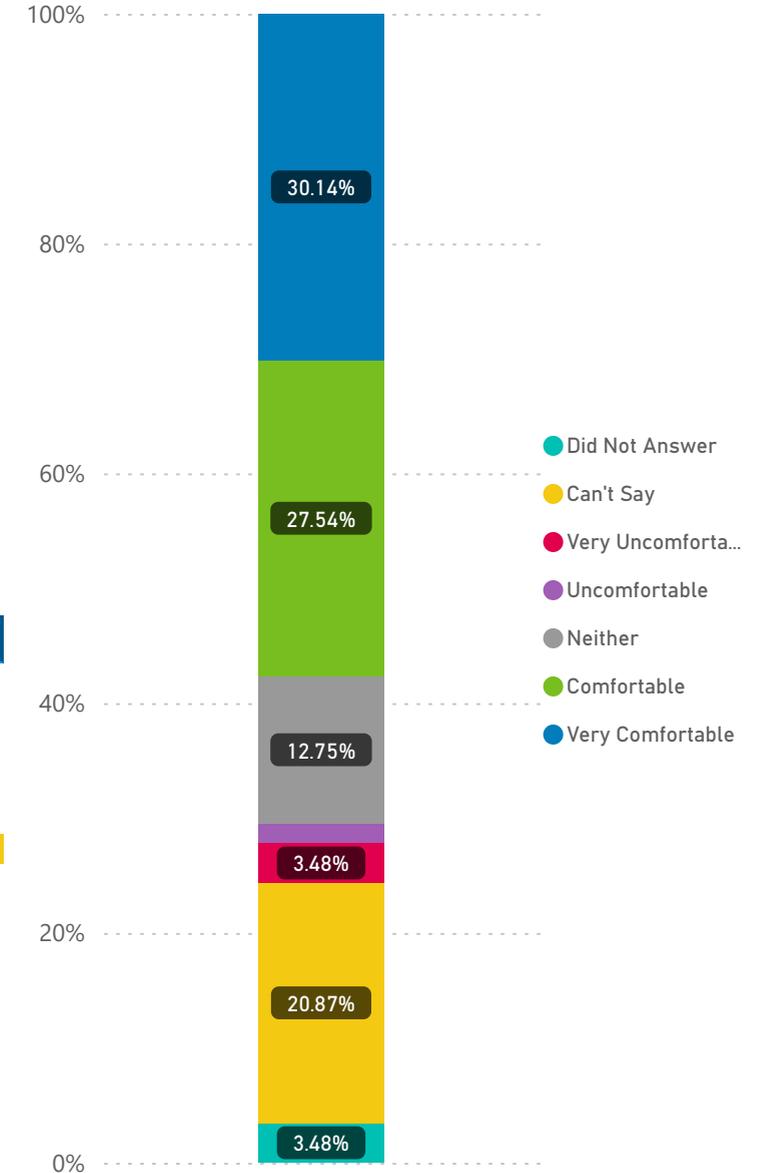
261

Respondents

64

ServiceArea	Very Uncomfortable	Uncomfortable	Neither	Comfortable	Very Comfortable
Total	12	6	44	95	104
Floral Shows and Special Installations Across the City	2	2	7	17	22
Gage Park Tropical Greenhouse	1	1	6	16	29
Garden Beds and Hanging Baskets (Along the street and on City property)	3	2	10	23	21
Street and Park Trees	3	1	10	28	20
Tree Health and Education Programs	3		11	11	12

ServiceArea	σ	Avg.	Opt Out	Opt Out %
Total	1.03	4.05	84	24.3%
Gage Park Tropical Greenhouse	0.89	4.34	16	23.2%
Floral Shows and Special Installations Across the City	1.04	4.10	19	27.5%
Street and Park Trees	0.99	3.98	7	10.1%
Garden Beds and Hanging Baskets (Along the street and on City property)	1.06	3.97	10	14.5%
Tree Health and Education Programs	1.14	3.78	32	46.4%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

10

Potential Services

Please rate the following potential Forestry & Horticulture services based on their importance to you.

Responses

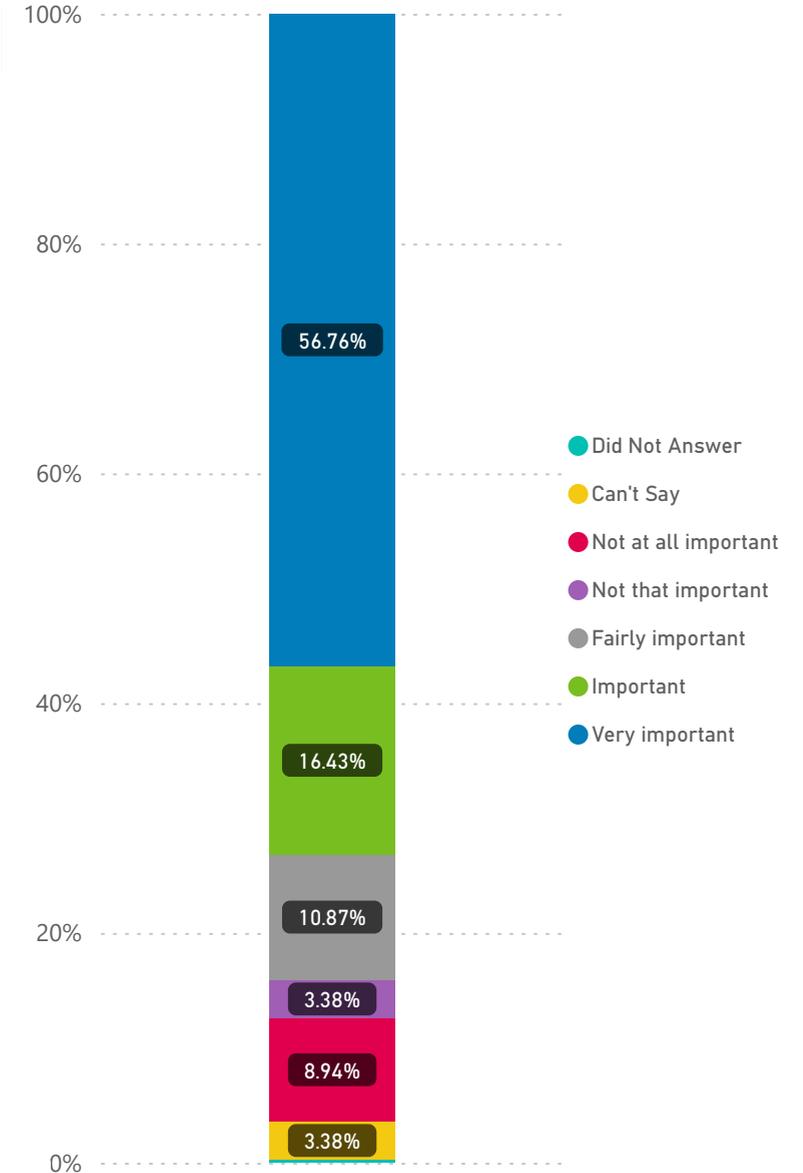
399

Respondents

69

ServiceArea	Not at all important	Not that important	Fairly important	Important	Very important
Total	37	14	45	68	235
De-commissioning of diesel forestry vehicles (Green Fleet Strategy)	12	3	9	16	23
Increased implementation of rain gardens for City sites (to improve stormwater management and climate resilience)	1	3	7	13	43
Increased planting of pollinator plants in City gardens	6		5	7	50
Increased tree-planting on City properties and streets	5	1	4	3	55
Schoolyard greening program (tree planting, garden installations)	5	3	6	16	38
Tropical green house nature-based programs for elementary school children	8	4	14	13	26

ServiceArea	σ	Avg.	Opt Out	Opt Out %
Total	1.29	4.13	15	3.6%
Increased tree-planting on City properties and streets	1.16	4.50	1	1.4%
Increased implementation of rain gardens for City sites (to improve stormwater management and climate resilience)	0.95	4.40	2	2.9%
Increased planting of pollinator plants in City gardens	1.20	4.40	1	1.4%
Schoolyard greening program (tree planting, garden installations)	1.21	4.16	1	1.4%
Tropical green house nature-based programs for elementary school children	1.37	3.69	4	5.8%
De-commissioning of diesel forestry vehicles (Green Fleet Strategy)	1.49	3.56	6	8.7%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

Recommendation of Services

12

How likely would you be to recommend the following Forestry & Horticulture sites and services to others?

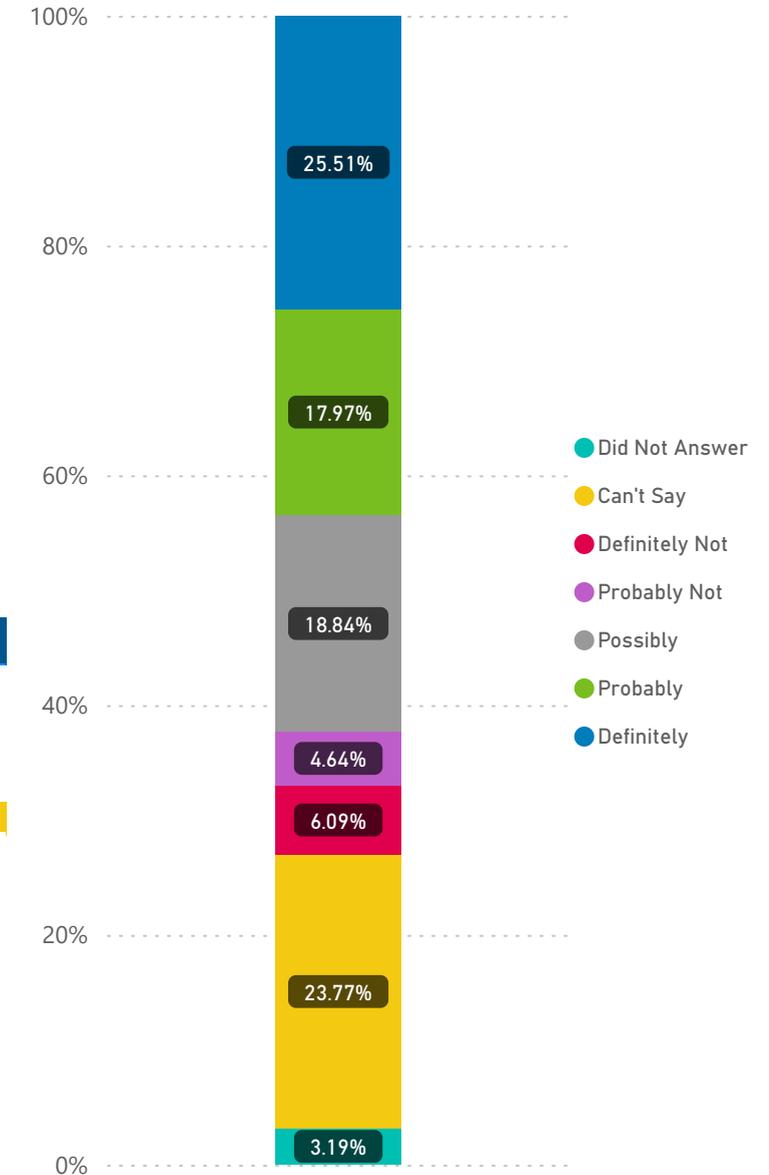
Responses

252

Respondents

63

ServiceArea	Definitely Not	Probably Not	Possibly	Probably	Definitely
Total	21	16	65	62	88
Floral Shows and Special Installations Across the City	3	2	18	10	19
Gage Park Tropical Greenhouse	2	1	6	15	31
Garden Beds and Hanging Baskets (Along the street and on City property)	7	4	15	20	12
Street and Park Trees	7	3	17	12	16
Tree Health and Education Programs	2	6	9	5	10



ServiceArea	σ	Avg.	Opt Out	Opt Out %
Total	1.24	3.71	93	27.0%
Gage Park Tropical Greenhouse	0.99	4.31	14	20.3%
Floral Shows and Special Installations Across the City	1.15	3.77	17	24.6%
Street and Park Trees	1.31	3.49	14	20.3%
Tree Health and Education Programs	1.27	3.47	37	53.6%
Garden Beds and Hanging Baskets (Along the street and on City property)	1.23	3.45	11	15.9%

Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

13

Value for Services

How would you rate Forestry & Horticulture in providing good value for money for the following sites and services?

Responses

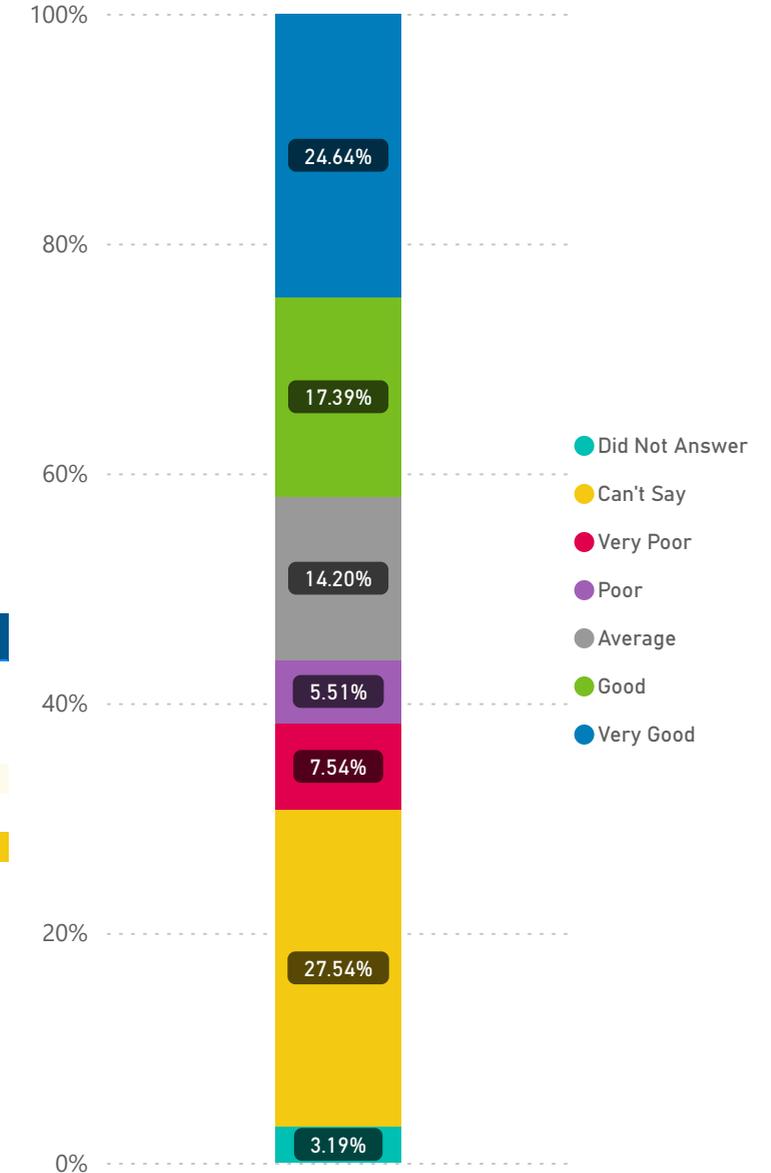
239

Respondents

60

ServiceArea	Very Poor	Poor	Average	Good	Very Good
Total	26	19	49	60	85
Floral Shows and Special Installations Across the City	6	4	9	9	17
Gage Park Tropical Greenhouse	3	2	6	9	26
Garden Beds and Hanging Baskets (Along the street and on City property)	7	3	13	15	18
Street and Park Trees	7	5	11	19	17
Tree Health and Education Programs	3	5	10	8	7

ServiceArea	σ	Avg.	Opt Out	Opt Out %
Total	1.32	3.67	106	30.7%
Gage Park Tropical Greenhouse	1.20	4.15	23	33.3%
Garden Beds and Hanging Baskets (Along the street and on City property)	1.32	3.61	13	18.8%
Floral Shows and Special Installations Across the City	1.40	3.60	24	34.8%
Street and Park Trees	1.30	3.58	10	14.5%
Tree Health and Education Programs	1.22	3.33	36	52.2%



Respondents who did not answer or selected 'Can't Say' are included in opt out.



Differential of Value for Money and Tax Rates

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between value for money and tax rates, equal to one point on the Likert scale used.

Responses

540

Respondents

69

ServiceArea	Value for Money	ServiceLevel	ValueDiff	Opt Out %
Street and Park Trees	72	80	-9	10%
Tree Health and Education Programs	67	66	1	37%
Gage Park Tropical Greenhouse	83	62	21	23%
Garden Beds and Hanging Baskets (Along the street and on City property)	72	61	12	14%
Floral Shows and Special Installations Across the City	72	52	20	25%

Value for Money

Q13 How would you rate Forestry & Horticulture in providing good value for money for the following sites and services?

Tax Rate

Q14 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rates.



The Net Differential is calculated here by taking the average Likert score for each service area and multiplied by 20, the difference between performance and importance is then calculated as our final product. Negative differential indicates a higher perceived level of importance vs performance and positive is the opposite.

Question

Tax Rates

14

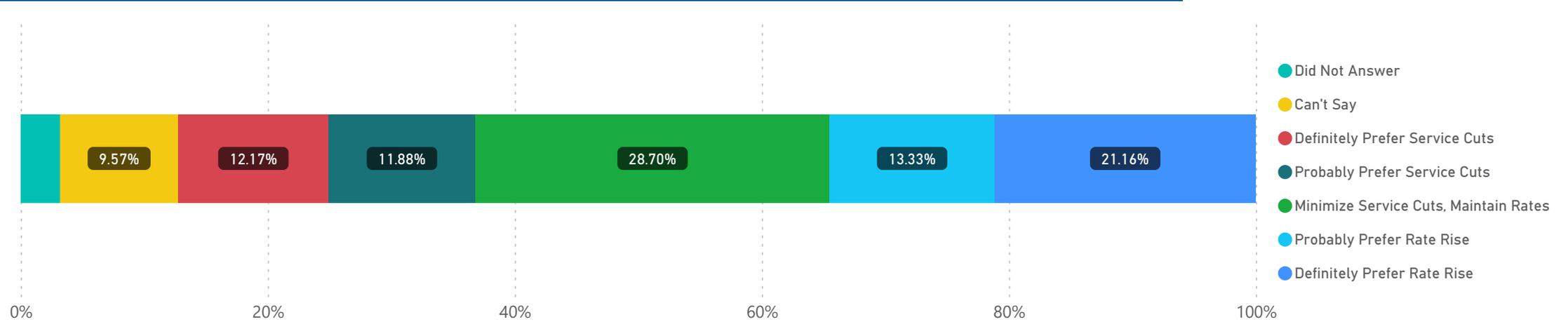
If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rates.

Responses

301

Respondents

65



ServiceArea	Definitely Prefer Service Cuts	Probably Prefer Service Cuts	Minimize Service Cuts, Maintain Rates	Probably Prefer Rate Rise	Definitely Prefer Rate Rise
Total	42	41	99	46	73
Floral Shows and Special Installations Across the City	15	14	18	4	8
Gage Park Tropical Greenhouse	7	6	29	9	9
Garden Beds and Hanging Baskets (Along the street and on City property)	10	13	17	11	12
Street and Park Trees	3	2	18	10	32
Tree Health and Education Programs	7	6	17	12	12

ServiceArea	σ	Avg.	Opt Out	Opt Out %
Total	1.33	3.22	44	12.8%
Street and Park Trees	1.14	4.02	4	5.8%
Tree Health and Education Programs	1.29	3.30	15	21.7%
Gage Park Tropical Greenhouse	1.14	3.12	9	13.0%
Garden Beds and Hanging Baskets (Along the street and on City property)	1.33	3.03	6	8.7%
Floral Shows and Special Installations Across the City	1.30	2.59	10	14.5%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Question

15

Responses

255

Respondents

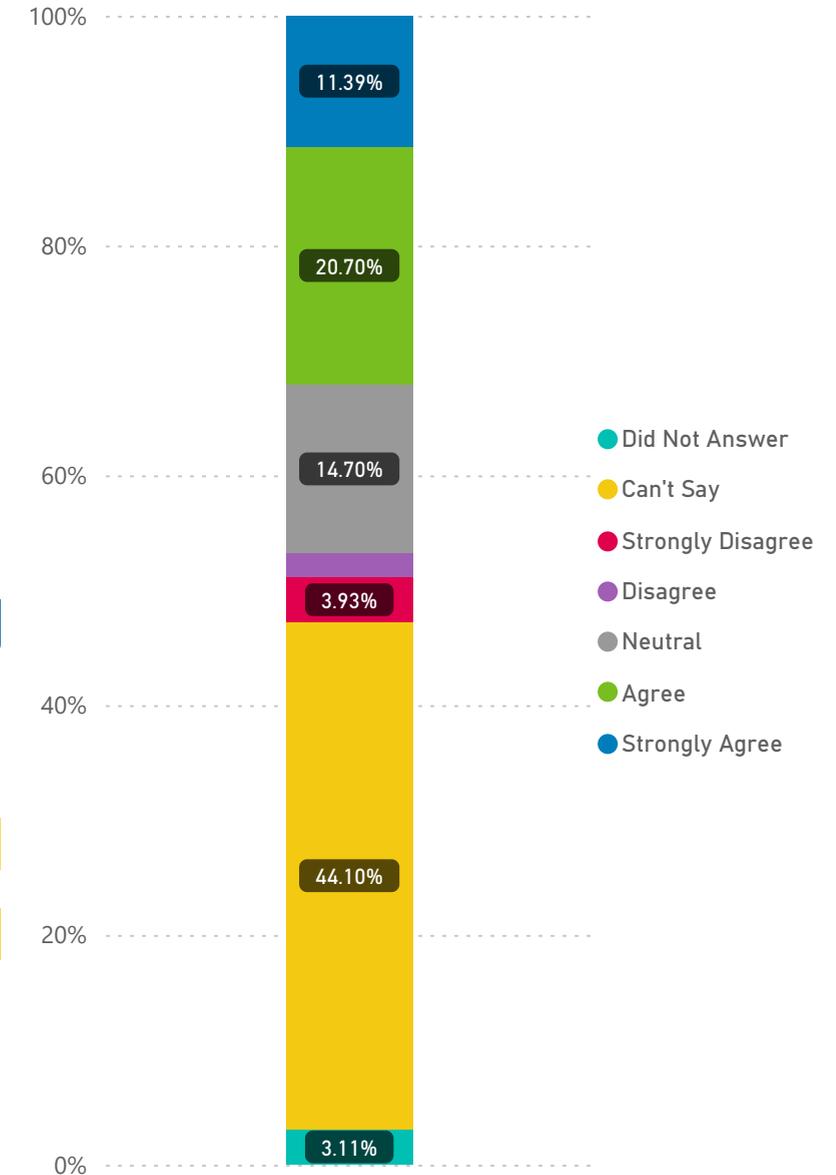
49

Service Level Rating

Forestry & Horticulture's buildings and services rating

ServiceArea	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Total	19	10	71	100	55
Accessible by public transportation	3	2	7	17	7
Accessible; meets the Accessibility for Ontarians with Disabilities Act (AODA), 2005 standards	3		8	10	7
Clean and in good repair	3	1	12	20	8
Comfortable with appropriate levels of lighting and noise	2	2	9	15	11
Energy efficient, reduce greenhouse gas emissions (Example: Reducing greenhouse gases by decreasing utility use)	3	2	12	7	3
Inviting, appealing and attractive	1	3	13	19	9
Safe, equitable and inclusive spaces for all	4		10	12	10

ServiceArea	σ	Avg.	Opt Out	Opt Out %
Total	1.09	3.64	228	47.2%
Comfortable with appropriate levels of lighting and noise	1.07	3.79	30	43.5%
Inviting, appealing and attractive	0.93	3.71	24	34.8%
Safe, equitable and inclusive spaces for all	1.20	3.67	33	47.8%
Clean and in good repair	1.02	3.66	25	36.2%
Accessible; meets the Accessibility for Ontarians with Disabilities Act (AODA), 2005 standards	1.17	3.64	41	59.4%
Accessible by public transportation	1.11	3.64	33	47.8%
Energy efficient, reduce greenhouse gas emissions (Example: Reducing greenhouse gases by decreasing utility use)	1.09	3.19	42	60.9%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Question

16

Responses

288

Respondents

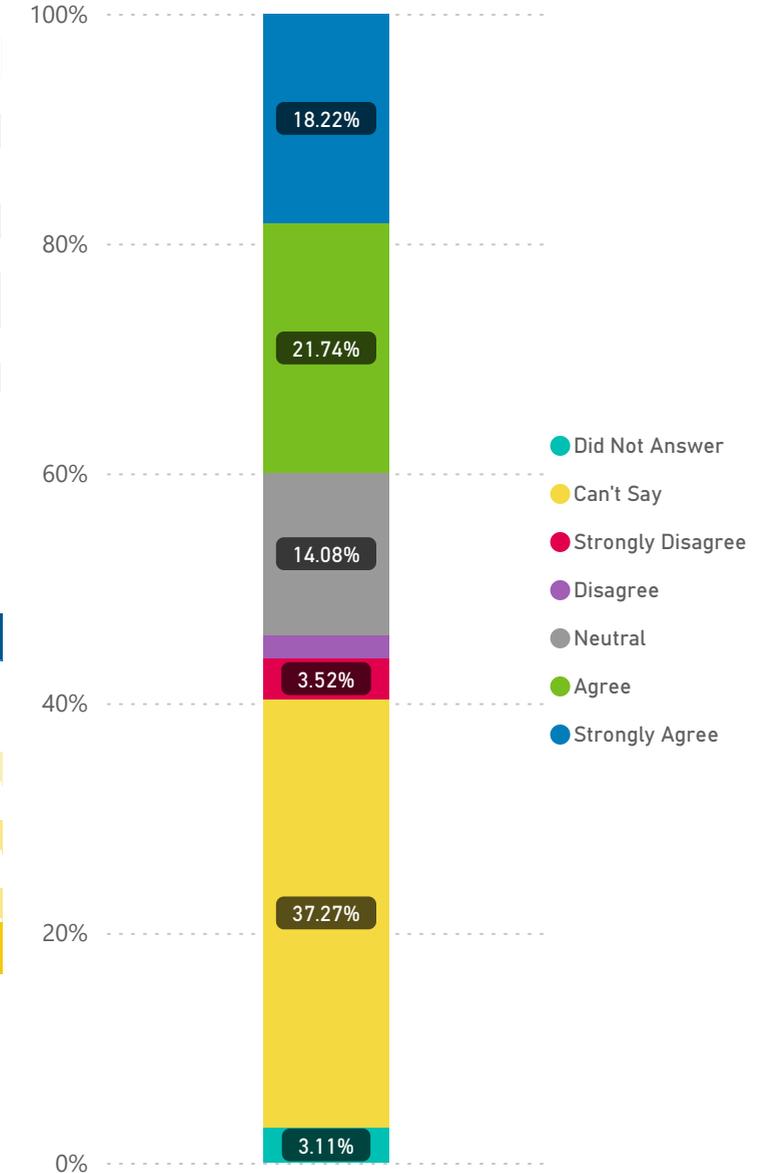
64

Service Level Expectation

Forestry & Horticulture's buildings and services expectations

ServiceArea	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Total	17	10	68	105	88
Accessible by public transportation	3	2	7	17	7
Accessible; meets the Accessibility for Ontarians with Disabilities Act (AODA), 2005 standards	1		5	15	40
Clean and in good repair	3	1	12	20	8
Comfortable with appropriate levels of lighting and noise	2	2	9	15	11
Energy efficient, reduce greenhouse gas emissions (Example: Reducing greenhouse gases by decreasing utility use)	3	2	12	7	3
Inviting, appealing and attractive	1	3	13	19	9
Safe, equitable and inclusive spaces for all	4		10	12	10

ServiceArea	σ	Avg.	Opt Out	Opt Out %
Total	1.09	3.82	195	40.4%
Accessible; meets the Accessibility for Ontarians with Disabilities Act (AODA), 2005 standards	0.78	4.52	8	11.6%
Comfortable with appropriate levels of lighting and noise	1.07	3.79	30	43.5%
Inviting, appealing and attractive	0.93	3.71	24	34.8%
Safe, equitable and inclusive spaces for all	1.20	3.67	33	47.8%
Clean and in good repair	1.02	3.66	25	36.2%
Accessible by public transportation	1.11	3.64	33	47.8%
Energy efficient, reduce greenhouse gas emissions (Example: Reducing greenhouse gases by decreasing utility use)	1.09	3.19	42	60.9%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

17

Response Time

Does the following response time meet your needs and expectations for an effective response?

Responses

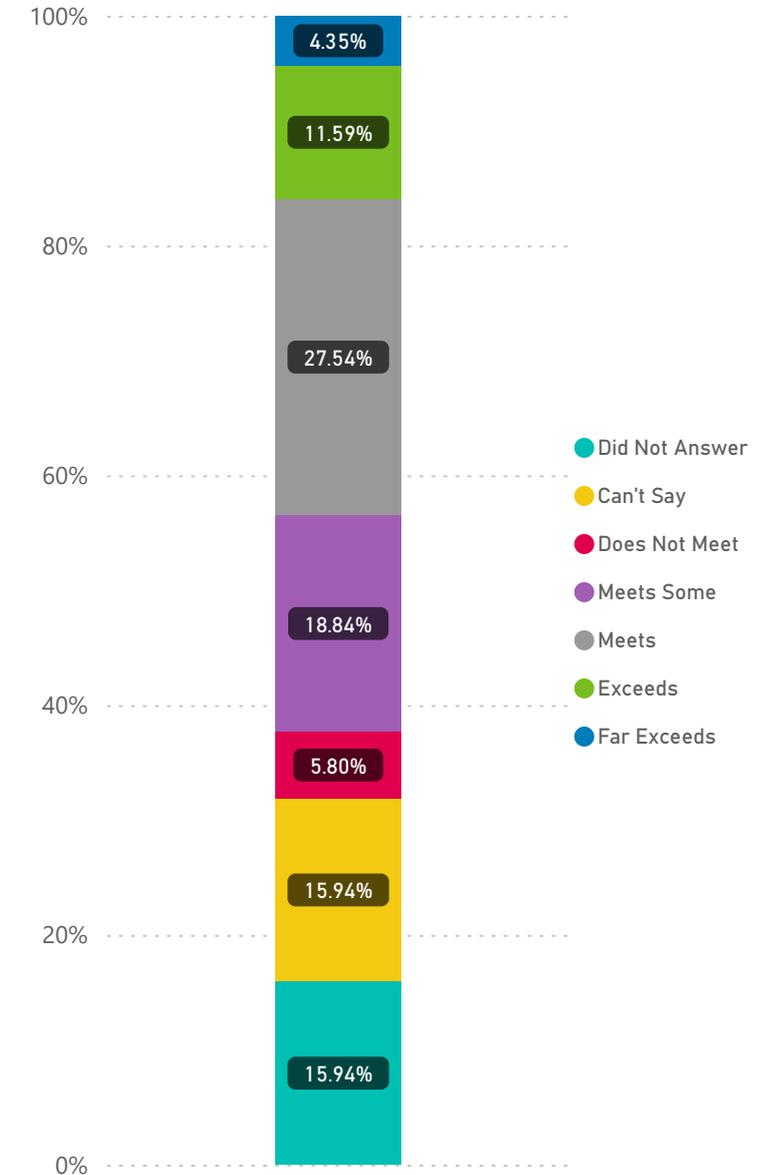
47

Respondents

47

Question	Does Not Meet	Meets Some	Meets	Exceeds	Far Exceeds
Total	4	13	19	8	3
Does the following response time meet your needs and expectations for an effective response?	4	13	19	8	3

QText	σ	Avg.	Opt Out	Opt Out %
Total	1.01	2.85	22	31.9%
Does the following response time meet your needs and expectations for an effective response?	1.01	2.85	22	31.9%



Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

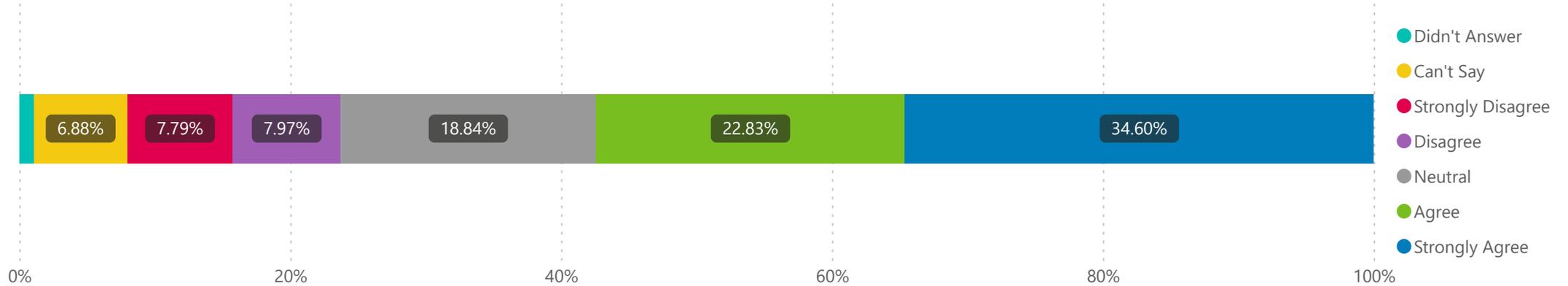
Street and Park Trees

Responses

465

Respondents

69



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.27	3.74	74.88	44	7.97%
Q5 How important to you are the Forestry & Horticulture services listed below?	0.57	4.82	96.47	1	1.45%
Q14 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rates.	1.14	4.02	80.31	4	5.80%
Q8 Do you feel comfortable accessing these sites and services provided by Forestry and Horticulture?	0.99	3.98	79.68	7	10.14%
Q6 How satisfied are you with your ability to access Forestry & Horticulture's sites and services?	1.22	3.67	73.33	6	8.70%
Q13 How would you rate Forestry & Horticulture in providing good value for money for the following sites and services?	1.30	3.58	71.53	10	14.49%
Q12 How likely would you be to recommend the following Forestry & Horticulture sites and services to others?	1.31	3.49	69.82	14	20.29%
Q4 How do you feel Forestry & Horticulture have preformed overall in the following services?	1.23	3.46	69.12	1	1.45%
Q7 Do the following Forestry & Horticulture sites and services meet your needs?	1.32	2.90	57.94	1	1.45%

Respondents who did not answer or selected 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

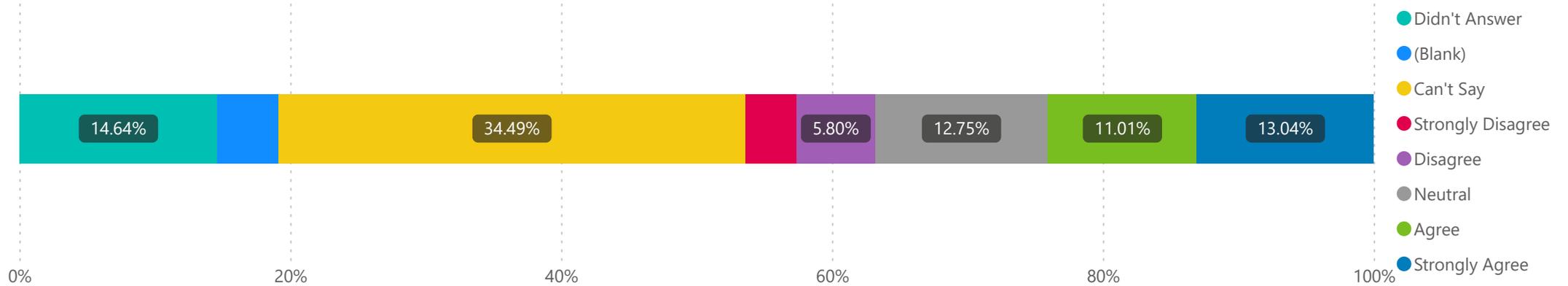
Tree Health and Education Programs

Responses

325

Respondents

66



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.24	3.51	70.25	232	42.03%
Q5 How important to you are the Forestry & Horticulture services listed below?	1.08	4.14	82.86	6	8.70%
Q8 Do you feel comfortable accessing these sites and services provided by Forestry and Horticulture?	1.14	3.78	75.68	32	46.38%
Q12 How likely would you be to recommend the following Forestry & Horticulture sites and services to others?	1.27	3.47	69.38	37	53.62%
Q13 How would you rate Forestry & Horticulture in providing good value for money for the following sites and services?	1.22	3.33	66.67	36	52.17%
Q14 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rates.	1.29	3.30	65.93	15	21.74%
Q6 How satisfied are you with your ability to access Forestry & Horticulture's sites and services?	1.19	3.28	65.56	33	47.83%
Q4 How do you feel Forestry & Horticulture have preformed overall in the following services?	1.17	3.21	64.24	36	52.17%
Q7 Do the following Forestry & Horticulture sites and services meet your needs?	1.19	3.13	62.50	37	53.62%

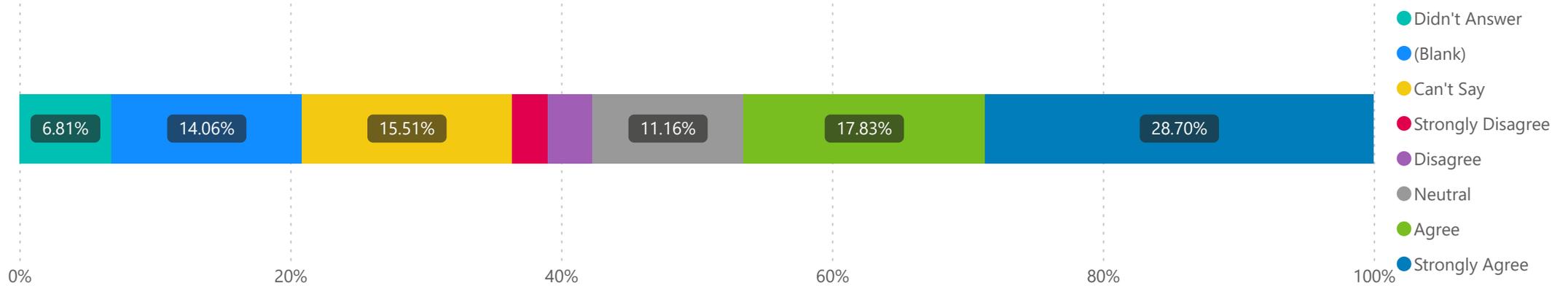
Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

Gage Park Tropical Greenhouse

Responses
518
 Respondents
65



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.10	4.05	80.96	113	20.47%
Q4 How do you feel Forestry & Horticulture have preformed overall in the following services?	0.64	4.50	90.00	17	24.64%
Q8 Do you feel comfortable accessing these sites and services provided by Forestry and Horticulture?	0.89	4.34	86.79	16	23.19%
Q12 How likely would you be to recommend the following Forestry & Horticulture sites and services to others?	0.99	4.31	86.18	14	20.29%
Q6 How satisfied are you with your ability to access Forestry & Horticulture's sites and services?	0.91	4.16	83.27	14	20.29%
Q13 How would you rate Forestry & Horticulture in providing good value for money for the following sites and services?	1.20	4.15	83.04	23	33.33%
Q5 How important to you are the Forestry & Horticulture services listed below?	1.17	3.98	79.69	5	7.25%
Q7 Do the following Forestry & Horticulture sites and services meet your needs?	1.07	3.96	79.26	15	21.74%
Q14 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rates.	1.14	3.12	62.33	9	13.04%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

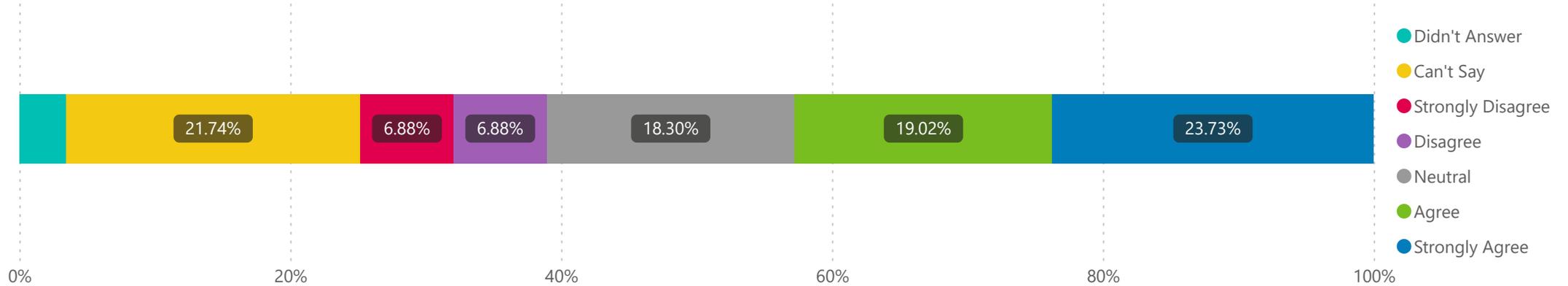
Floral Shows and Special Installations Across the City

Responses

375

Respondents

67



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.27	3.61	72.25	139	25.18%
Q8 Do you feel comfortable accessing these sites and services provided by Forestry and Horticulture?	1.04	4.10	82.00	19	27.54%
Q4 How do you feel Forestry & Horticulture have preformed overall in the following services?	0.90	4.04	80.85	22	31.88%
Q6 How satisfied are you with your ability to access Forestry & Horticulture's sites and services?	0.91	3.98	79.59	20	28.99%
Q12 How likely would you be to recommend the following Forestry & Horticulture sites and services to others?	1.15	3.77	75.38	17	24.64%
Q7 Do the following Forestry & Horticulture sites and services meet your needs?	1.24	3.71	74.17	21	30.43%
Q13 How would you rate Forestry & Horticulture in providing good value for money for the following sites and services?	1.40	3.60	72.00	24	34.78%
Q5 How important to you are the Forestry & Horticulture services listed below?	1.29	3.38	67.62	6	8.70%
Q14 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rates.	1.30	2.59	51.86	10	14.49%

Respondents who did not answer or selected 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

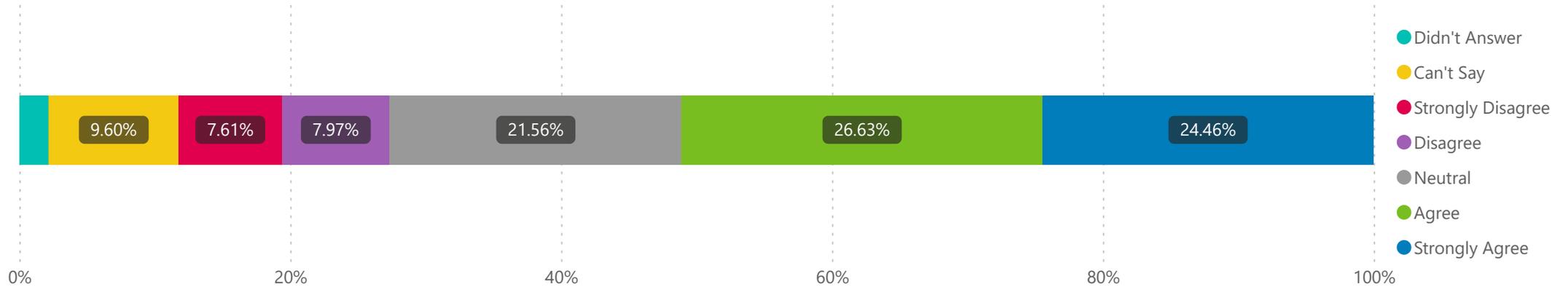
Garden Beds and Hanging Baskets (Along the street and on City property)

Responses

445

Respondents

69



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.22	3.59	71.87	65	11.78%
Q8 Do you feel comfortable accessing these sites and services provided by Forestry and Horticulture?	1.06	3.97	79.32	10	14.49%
Q6 How satisfied are you with your ability to access Forestry & Horticulture's sites and services?	1.01	3.86	77.14	13	18.84%
Q5 How important to you are the Forestry & Horticulture services listed below?	1.32	3.83	76.52		
Q4 How do you feel Forestry & Horticulture have preformed overall in the following services?	1.01	3.65	73.03	3	4.35%
Q13 How would you rate Forestry & Horticulture in providing good value for money for the following sites and services?	1.32	3.61	72.14	13	18.84%
Q12 How likely would you be to recommend the following Forestry & Horticulture sites and services to others?	1.23	3.45	68.97	11	15.94%
Q7 Do the following Forestry & Horticulture sites and services meet your needs?	1.15	3.37	67.33	9	13.04%
Q14 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rates.	1.33	3.03	60.63	6	8.70%

Respondents who did not answer or selected 'Can't Say' are included in opt out.

Definition and Ranking of Consistency and Confidence

Data Grading Scales

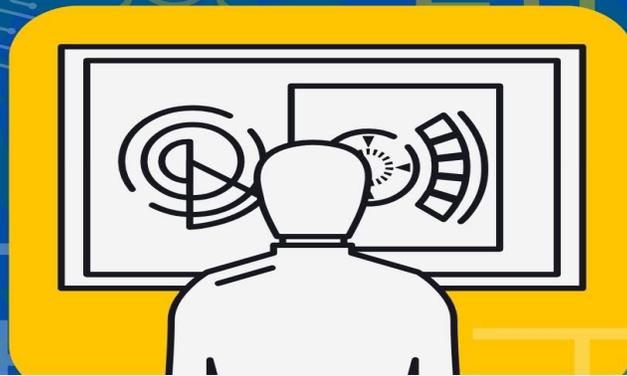
Grade	Data Consistency Standard Deviation (σ , Consistency of Responses)	Confidence Level Margin of Error (at 95% Confidence in Sample Size)
A Very High	0 to 0.5 - results are tightly grouped with little to no variance in response	0% to 5% - Minimal to no error in results, can generally be interpreted as is
B High	0.5 to 1.0 - results are fairly tightly grouped but with slightly more variance in response	5% to 10% - Error has become noticeable, but results are still trustworthy
C Medium	1.0 to 1.5 - results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - Error is a significant amount and will cause uncertainty in final results
D Low	1.5 to 2.0 - results show a high variance with a fair amount of disparity in responses	20% to 30% - Error has reached a detrimental level and results are difficult to trust
E Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - Significant error in results, hard to interpret data in much of a meaningful way

$$\text{Margin of Error} = \frac{0.98}{\sqrt{n}}$$

Here we attribute a lower value of consistency of response (Standard Deviation) to a higher confidence grade, but it does not necessarily mean that the data is "better". In reality we receive more insight in the data regardless. With a high consistency we can tell that respondents more often come to the same conclusion on a response for a question, whereas with low consistency we would see a split in people's opinion, some with a very high rating and others with a very low rating. Knowing this and then understanding why is the most important aspect.

The margin of error is calculated using the factor n (sample size). The margin of error mainly tells us whether the sample size of the survey is appropriate. This is because in the calculation above, sample size is the only factor and thus has the biggest impact. The margin of error is represented as a percentage and indicates the range above and below the calculated average the true value is likely to fall. A smaller margin of error indicates a more precise estimate and vice versa.

Information Technology 2024 Asset Management Plan



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SUMMARY AND QUICK FACTS

SERVICE PROFILE



The Information Technology (IT) Division provides secure and reliable IT services across the City of Hamilton. Since IT services affects most, if not all city services, ensuring a seamless IT experience is vital for the smooth operation of city services for internal and external users alike.

ASSET SUMMARY



Replacement Value: \$25.2 M
Average Condition: FAIR
Average Age: 7 years or 16% of the average service life remaining



LEVEL OF SERVICE SUMMARY

Customer Values

- IT devices and data are properly secured.
- IT Service Desk is responsive and effective.

Customer Levels of Service

- Enable access to reliable data and information.
- Enable the City workforce with access to tools and training to deliver services effectively.

Technical Levels of Service (not yet measured)

- Average time for the service desk to answer calls.
- Network uptime.
- Unscheduled database downtime.

ASSET HIGHLIGHTS

ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION	STEWARDSHIP MEASURES
Networking Equipment	1750	\$6.7 M	No Data	Funding is allocated for Infrastructure Asset Management in a 10-year capital plan.
Datacentre Assets	135	\$4.7 M	No Data	

DATA CONFIDENCE



INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

DEMAND DRIVERS

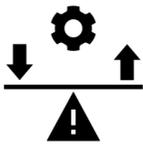


Ongoing response to cybersecurity incident – Complete recovery from the incident is an ongoing process and an opportunity for the City to rebuild its systems and make them stronger and more resilient.



Market Changes – Vendors are moving away from selling solutions and moving toward subscription and transaction-based models.

RISK



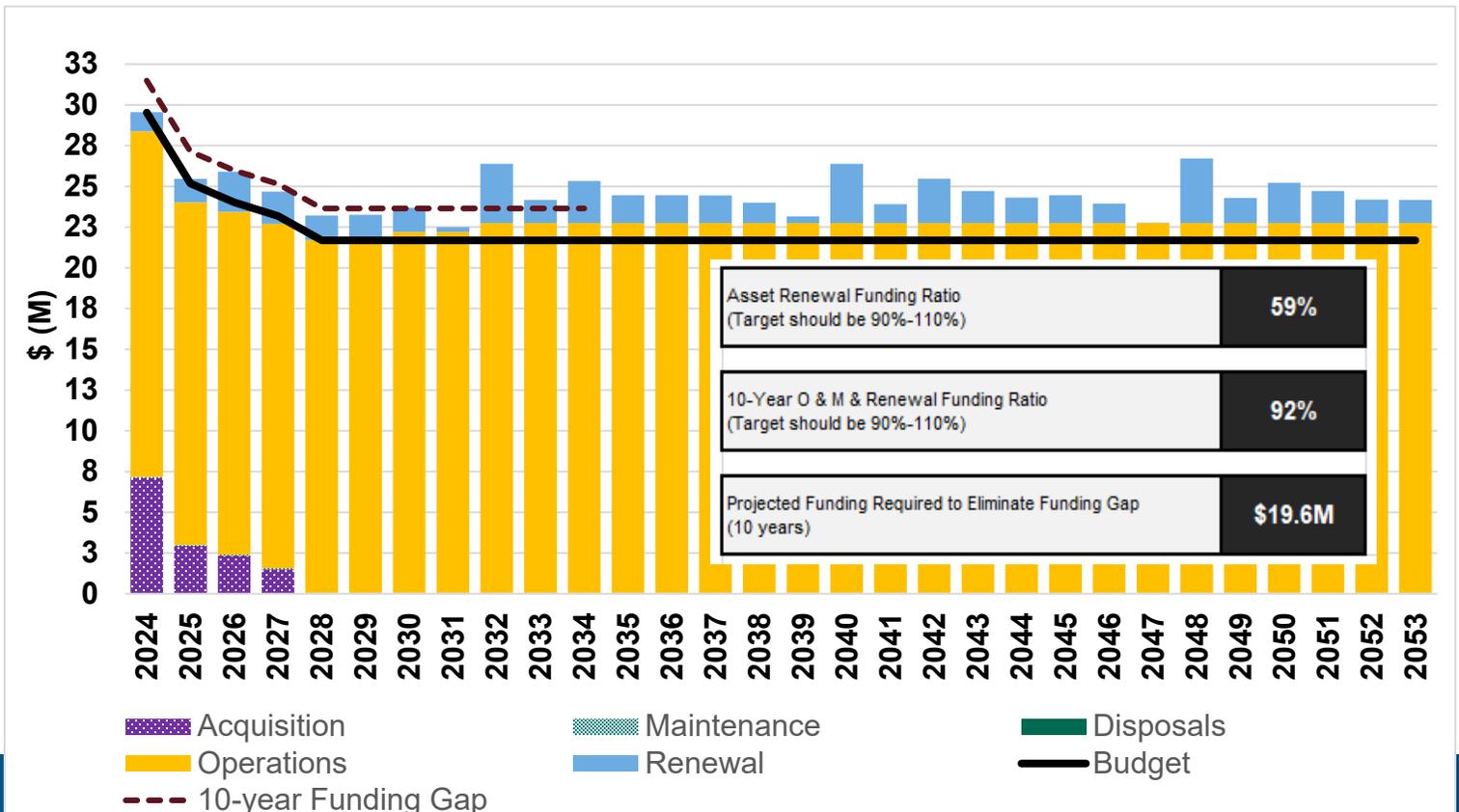
- Critical Assets are identified as networking equipment and data centre assets, critical business applications and data assets, and the uninterruptible power supply (UPS) system.
- Critical risks are cybersecurity risks and power supply interruption risks.

CLIMATE CHANGE ADAPTATION



- There would be an increase in requests for real-time authoritative data to support reports and online services. IT Division will continue to work with business units across the City to identify demands emerging from climate change.

LIFECYCLE SUMMARY



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1. INTRODUCTION

The Information Technology (IT) Division delivers information technology services within the City of Hamilton to both internal and external users. It provides and maintains the technology infrastructure necessary for the city to operate its services and provides end-user devices and IT service desk support to City staff. In addition, the IT Division provides business applications support, spatial solutions, data services as well as technology solutions to support departmental goals. Finally, through the provision of online web-based services, the IT Division allows residents to access municipal services and perform civic duties. The purpose of this Asset Management Plan (AM Plan) is to ensure that the IT Division has the required assets to deliver secure and reliable information technology services to the City.

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements and required funding to provide the appropriate levels of service over the 2024-2053 planning period.

Since Sunday, February 25, 2024, the City of Hamilton experienced a cyber incident that disabled some of the IT systems. As a result, this AM Plan was created based on the data that was accessible at the time of publication.

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2. BACKGROUND

The information in this section is intended to give a snapshot in time of the current state of the IT Division service area by providing a service profile, outlining legislative requirements, and defining the asset hierarchy used throughout the report. This section will provide the necessary background for the remainder of the AM Plan.

2.1 SERVICE PROFILE

Listed below are related documents reviewed in preparation of the Asset Management Plan:

- Asset Management Plan Overview Document;
- 2024 Proposed Operating and Capital Budget Presentation;
- 2023 Enterprise Data Management Update;
- 2023 City of Hamilton's Digital Strategy;
- 2023-2026 IT Strategy;
- 2022 City of Hamilton IT Satisfaction Scorecard: Department Report; and,
- 2022 Improving Online/Digital Services Survey.

Additional financial-related documents are identified in **Section 10** Plan Improvement and Monitoring.

2.1.1 SERVICE HISTORY

The Information Technology (IT) Division originally consisted of two sections: 'Business Applications' and 'Infrastructure and Operations.' In 2018, by council direction, the IT division began the process of centralizing departmental IT resources and a new section, 'Strategy and Architecture', was created. In 2021, the 'Infrastructure and Operations' section was divided into two distinct sections: 'IT Operations' and 'Infrastructure and Security'. In 2023, in response to information gathered during the development of the IT Strategy, a new section, 'Data Services', was created to provide data and analytics-related services to city departments.

In 2024, the City of Hamilton experienced a cybersecurity incident. IT Division staff responded to the extraordinary challenge and were able to keep many of the City's systems running. The City's response to the incident is ongoing and it may take months before the recovery is complete.

2.1.2 SERVICE FUNCTION

The IT Division provides and maintains the hardware and software necessary for the City of Hamilton to deliver all municipal services. The IT Division is composed of the following sections:

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- IT Infrastructure and Security: Provides and maintains datacentre operations, communications and networking infrastructure, and IT security to support city services;
- IT Operations: Provides and maintains end-user devices and software, and includes service desk support services to City of Hamilton staff;
- Business Applications: Provides and maintains the business applications used across the organization to support internal and external business processes;
- Strategy and Architecture: Provides strategy enablement and enterprise architecture services for value realization and project services for technology implementation; and,
- Data Services: Provides enterprise spatial solutions, and data and analytics services, including data literacy to City staff and public.

Some of the areas identified as priorities by users of the service which are mentioned in **Section 4.2** are:

- Organizational devices and data are properly secured;
- Communication systems and networks are reliable;
- Business applications meet needs;
- IT service desk is responsive and effective;
- Staff devices meet needs; and,
- Digital services have a clear and simple process to navigate.

2.1.3 USERS OF THE SERVICE

The IT Division plays a vital role in supporting both internal and external municipal functions within the City of Hamilton.

Internally, IT is responsible for providing essential information technology resources and support to over 8,000 City employees. ¹ City staff rely on the IT Division for devices, IT service desk support, as well as for business applications to perform vital organizational activities. IT is the custodian of the City's datacentre which allows storage and computing capacity to deliver all City services. Effective communication and networking tools provided by the IT Division enable seamless collaboration among staff across different departments. Business units across the city rely on the IT Division's expertise in planning for and implementing technology solutions. Finally, the newly added Data Services section is set to help departments utilize data insights to make more informed decisions.

Externally, the IT Division extends its support to residents, businesses, and community partners, offering a diverse range of digital services. These services cater to a broad user base, encompassing different demographics and needs. City websites, such as the recreation page, waste collection website, and open data portal, are examples of these digital services hosted by IT. A recent survey conducted by the City of Hamilton revealed that 60% of survey respondents

¹ (City of Hamilton, 2022)

are frequent users of digital services². While precise web traffic data for these services is presently unavailable, the use of online services to access municipal services and perform civic duties is set to grow.

2.1.4 UNIQUE SERVICE CHALLENGES

The IT Division has some unique service challenges which will be discussed throughout this report. Some of these challenges are summarized below:

- Unauthorized use of IT resources outside established governance frameworks, also known as 'shadow IT', undermines the integrity of IT systems. The City of Hamilton's resolve to rebuild a secure, reliable and robust IT infrastructure can only be possible with trained and vigilant City staff that eliminates the use of 'shadow IT'.
- The information technology landscape has largely shifted from perpetual and on-premises solutions to subscription-based and cloud services. Most vendors that the IT Division works with now operate through these 'technology as a service' models. To adapt to this changing reality requires a new way of thinking including but not limited to how the IT Division budgets, procures and hires;
- Certain applications, platforms and devices have reached the end of life and are now either without support, warranty, or both. Naturally, not all legacy systems can be updated simultaneously. However, the most critical of these systems need to be identified and prioritized to ensure seamless service delivery;
- More residents are using digital services to engage with the City when it comes to accessing municipal services, seeking information on programs, or performing civic duties. Many of these digital services are hosted by the IT Division. As the City continues to develop and implement its digital and enterprise customer service strategies, the IT Division will need to play a critical role as an enabler of these advancements;
- The *2022 IT Department Scorecard* suggested dissatisfaction with the IT Division from other business units within the City with respect to the ability to get IT capacity to complete projects. Additionally, various City departments have requested enhanced data and analytics services for improved decision making. The new IT Strategy emphasizes business relationship management and enterprise data management as the IT Division continues to aim to meet the needs of its partners;

² (City of Hamilton, 2023)

- The IT Division competes directly with the private sector for recruiting and retention of top talent. Compensations in the private sector for in demand IT professionals may be much higher leaving the IT Division at a disadvantage when it comes to attracting the best human resources; and,
- The Uninterrupted Power Supply (UPS) system for the City’s datacentre does not meet IT Division’s assessment of its needs.

2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of IT Division services are outlined in **Table 1**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

Table 1: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENT
Municipal Freedom of Information and Protection of Privacy Act (MFIPPA) ³	Protect the privacy of individuals concerning personal information about themselves held by institutions and provide individuals with a right of access to that information.

2.3 ASSET HIERARCHY

To deliver secure and reliable services, the IT Division requires assets. The IT Division service area has been broken down into four asset classes for the purpose of this AM Plan:

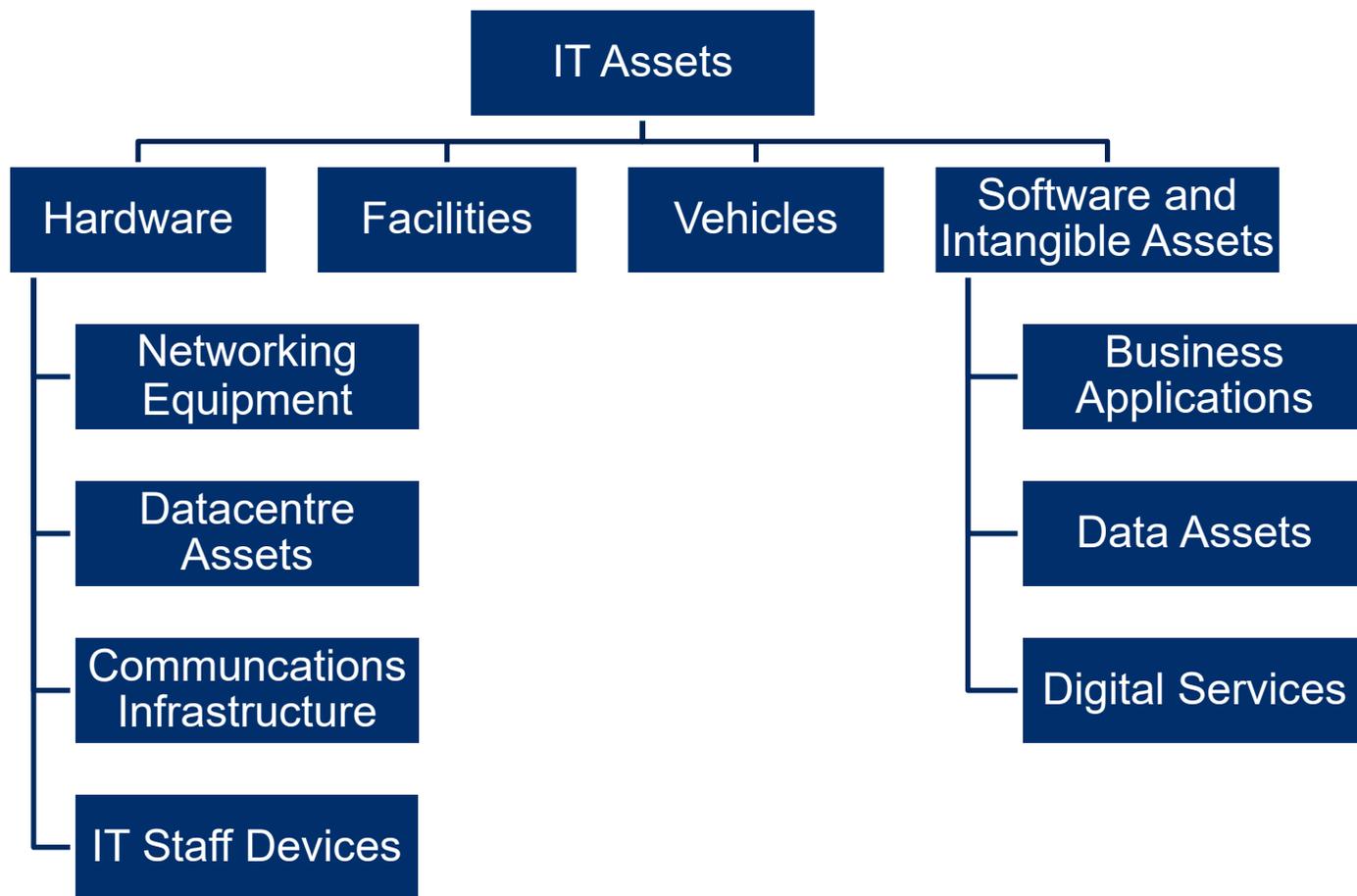
- **Hardware:** refers to the IT infrastructure provided and maintained by the IT Division as well as all the end-user devices used by IT staff;
- **Facilities:** refers to any City-owned facilities necessary to deliver IT services;
- **Vehicles:** describes different types of vehicles which are used to enable IT services; and,
- **Software and Intangible Assets:** describes the business applications, data assets and digital services provided and maintained by the IT Division.

The detailed asset hierarchy of the IT Division is shown in **Figure 1**.

³ <https://www.ontario.ca/laws/statute/90m56>

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

Figure 1: IT Division Asset Hierarchy



An explanation of each of these asset classes can be found in **Section 3**.

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

3. SUMMARY OF ASSETS

This section provides a detailed summary and analysis of the existing inventory information as of June 2023 including age profile, condition methodology, condition profile, asset usage and performance for each of the asset classes.

Table 2 displays the detailed summary of assets for the IT Division service area. The sources for this information are a combination of data included in the City's database information which is included in **Section 10.1**. It is important to note that inventory information does change often, and that this is a snapshot of information available as of June 2023. An asset registry for IT Division assets does not exist and the development of one has been recognized as a continuous improvement item in **Table 28**.

The City owns approximately **\$25.2 million**⁴ in IT Division assets which are on average in **FAIR** condition. Assets are a weighted average of **7 years** in age which is **16%** of the average remaining service life (RSL).

Note that replacement values of the asset class *software and intangible assets* have not been determined and hence are not included in the total. It is recognized that these may be potentially high value assets and thus the total for replacement cost of IT Division assets may be significantly higher. Determination of replacement costs for this asset class has been identified as a continuous improvement item in **Table 28**.

Data confidence descriptions are outlined on **page 32** of the AMP Overview. The replacement costs below are typically at a **MEDIUM** data confidence level overall. Replacement costs for hardware assets were provided by staff based on historical records and market information. Replacement values for facilities and vehicles were provided by Corporate Facilities and Energy Management and Fleet Services, respectively. Replacement values of software and intangible assets are as yet undetermined.

Data confidence for average age is **MEDIUM** overall as most hardware assets do not have their ages formally tracked. On the other hand, the average equivalent condition has a **LOW** data confidence as no asset class has a formal condition scoring methodology. Continuous improvement items identified in **Table 28** include developing methodologies to determine asset conditions for IT Division's assets.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. In addition, the assets included below are assets that are assumed and in service at the time of writing. This has been identified as a continuous improvement item in **Table 28**.

⁴ The total does not include hardware, software, or intangible assets owned by other City of Hamilton departments and divisions. Those assets have been broken out into each individual plan.

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Table 2: Detailed Summary of Assets
 *(Weighted Average based on Replacement Cost)

HARDWARE				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Networking Equipment	1750	\$6.7M	No Data	No Data
DATA CONFIDENCE	High	Medium		
Datacentre Assets	135	\$4.7M	7 years (13%)	No Data
DATA CONFIDENCE	High	Medium	High	
Communications Infrastructure	4800	\$1.6M	No Data	No Data
DATA CONFIDENCE	High	Medium		
IT Staff Devices	350	\$0.4M	3 years (40%)	3-FAIR
DATA CONFIDENCE	High	Medium	High	Low
SUBTOTAL		\$13.4M	7 years (15%)	3-FAIR
DATA CONFIDENCE		Medium	Medium	Low

FACILITIES ⁵				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Central Public Library (Offices and Datacentre)	1	\$11.4M	39 years (48%)	2-GOOD
DATA CONFIDENCE	Very High	Medium	High	High
Lister Block (Offices)	1	\$0.3M	95 years (37%)	2-GOOD
DATA CONFIDENCE	Very High	Medium	High	High
SUBTOTAL		\$11.7M	67 years (42%)*	2-GOOD*
DATA CONFIDENCE		Medium	High	High

⁵ Facility list includes City of Hamilton facilities where IT Division occupies floor space.

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VEHICLES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
SUV	2	\$0.07M	4 years (50%)	3-FAIR
DATA CONFIDENCE	Very High	High	High	Medium
Van	1	\$0.07M	5 years (50%)	3-FAIR
DATA CONFIDENCE	Very High	High	High	Medium
SUBTOTAL		\$0.14M	4 years (50%)	3-FAIR
DATA CONFIDENCE		High	High	Medium

SOFTWARE AND INTANGIBLE ASSETS				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Business Applications	No Data	No Data	Not Applicable	Not Applicable
Data Assets				
Digital Services				

TOTAL	\$25.2M	7 Years (16%)*	3-FAIR*
DATA CONFIDENCE	Medium	Medium	Low

*To best represent the IT Division assets, the total average age and condition estimates exclude Facilities' values from the weighting.

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

3.1 ASSET CONDITION GRADING

Condition refers to the physical state of the IT Division assets and is a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, **Table 4** below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan.

Table 3: Equivalent Condition Conversion Table



EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	FACILITIES CONDITION INDEX (FCI)
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance is required only.	>79.5%	N/A
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	< 5%
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset usage. Minor to significant maintenance is required.	39.5% - 69.4%	>= 5% to < 10%
4 Poor	The asset has significant defects and deterioration. Deterioration has an impact on asset usage. Rehabilitation or major maintenance is required in the next year.	19.5% -39.4%	>= 10% to <30%
5 Very Poor	The asset has serious defects and deterioration. The asset is not fit for use. Urgent rehabilitation or closure is required.	<19.4%	>= 30%

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

The following conversion assumptions were made:

- Facilities Condition Index was based on ranges provided by the consultant who completed the Building Condition Assessment (BCA);
- For assets where a condition assessment was not completed, but age information was known, the condition was based on the percent of remaining service life e.g., vehicles and staff devices;
- As previously mentioned, development of methodologies to determine asset conditions for IT Division assets has been identified as a continuous improvement item in **Table 28**.

3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile, and Performance Issues for each of the asset classes.

- The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life (ESL) where they can be planned for replacement. Some lower-cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if an asset's condition is based on age, it is typically considered to be of a low confidence level. Although typically, age is used when projecting replacements beyond the 10-year forecast to predict degradation.
- Condition refers to the physical state of assets and is a measure of the physical integrity of assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected/assessed at different frequencies and using different methodologies to determine their condition which are noted in this section.
- Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

3.2.1 HARDWARE PROFILE

IT Hardware is the physical and tangible technology assets that play a critical role in the administration of City services. IT Hardware consists of networking equipment, communications infrastructure, datacentre assets, and IT staff devices. Note that staff devices for other service groups are included in their respective plans.

Networking assets form a critical component of IT systems, facilitating seamless connectivity within and between different departments. These assets, such as routers and switches, serve

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as the backbone of network infrastructure, ensuring that City of Hamilton employees can access the resources and information they need to perform their duties effectively.

Data Centre assets play a vital role in securely storing and managing the vast amount of data generated by the City of Hamilton. Servers and data storage systems are integral components of our data centre infrastructure, providing reliable storage solutions for the diverse range of information used in municipal operations. These assets ensure that data is safely stored and accessible to authorized personnel when needed.

Effective communication is essential for fostering collaboration and productivity within our organization. Communication assets, such as IP telephones, enable the City of Hamilton employees to communicate efficiently with colleagues, partners, and stakeholders. By providing reliable communication tools, we ensure that staff can easily connect with each other, regardless of their location or department, facilitating smoother workflows and improved information sharing.

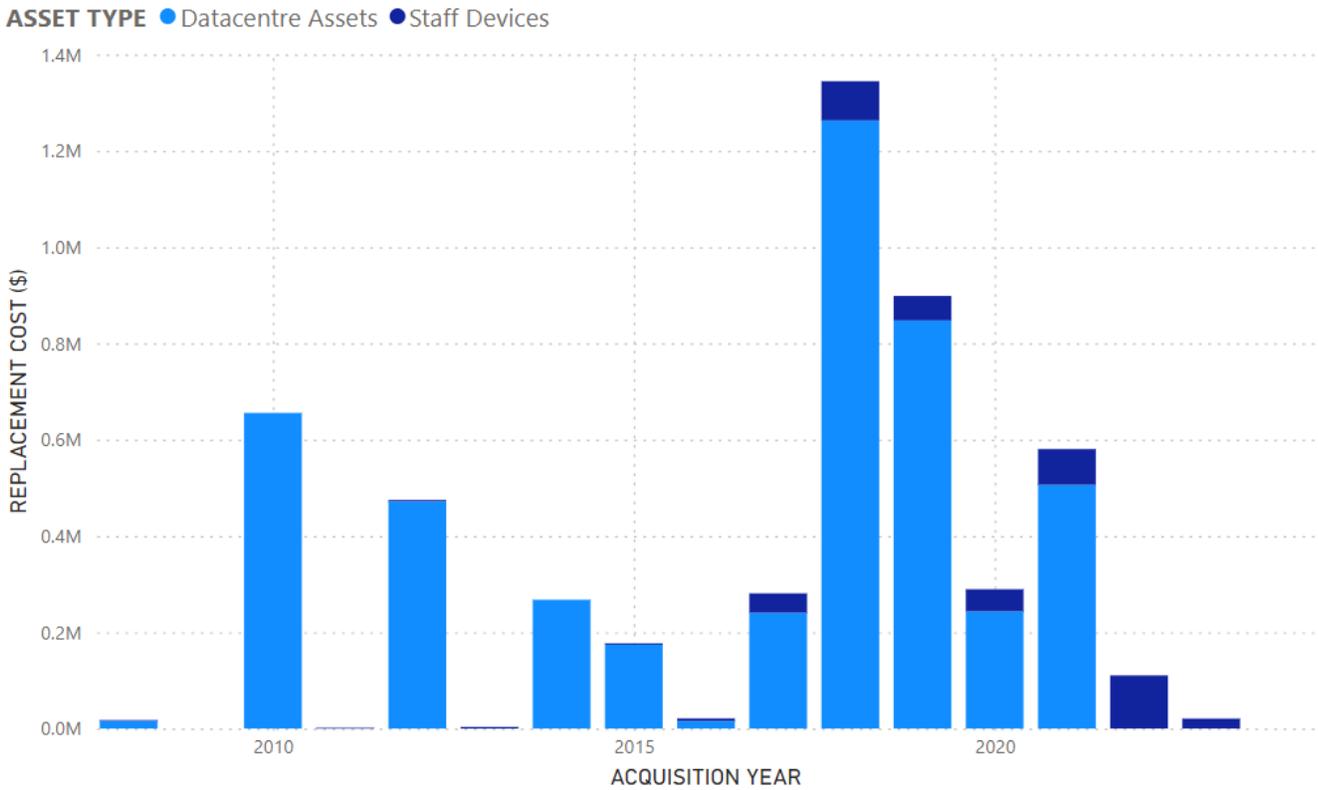
IT staff devices are used by IT Division staff to conduct administrative tasks and manage the processes of various city services. Some examples of devices within IT operations are laptops and mobile phones. These devices are essential for tasks such as email communication, document creation, data analysis, accessing software systems, and coordinating with other departments. The devices also support service desk functions.

3.2.1.1. AGE PROFILE

The Age profile for hardware assets used by IT Division is shown in **Figure 2**. Currently, there is no available data regarding the age of communication and networking equipment. Therefore, the age profile provided in **Figure 2** only relates to data centre assets and staff devices. As a result, for Hardware assets, the data confidence for the age is Medium. The estimated service life (ESL) is between four to five years for staff devices, and therefore it is evident that many devices are approaching or beyond their ESL. It is also important to note that tablets have been categorized under computers for staff devices. With an estimated service life (ESL) of eight years for data centre assets, it is apparent that many devices are nearing or have surpassed their ESL.

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

Figure 2: IT Hardware Age Profile

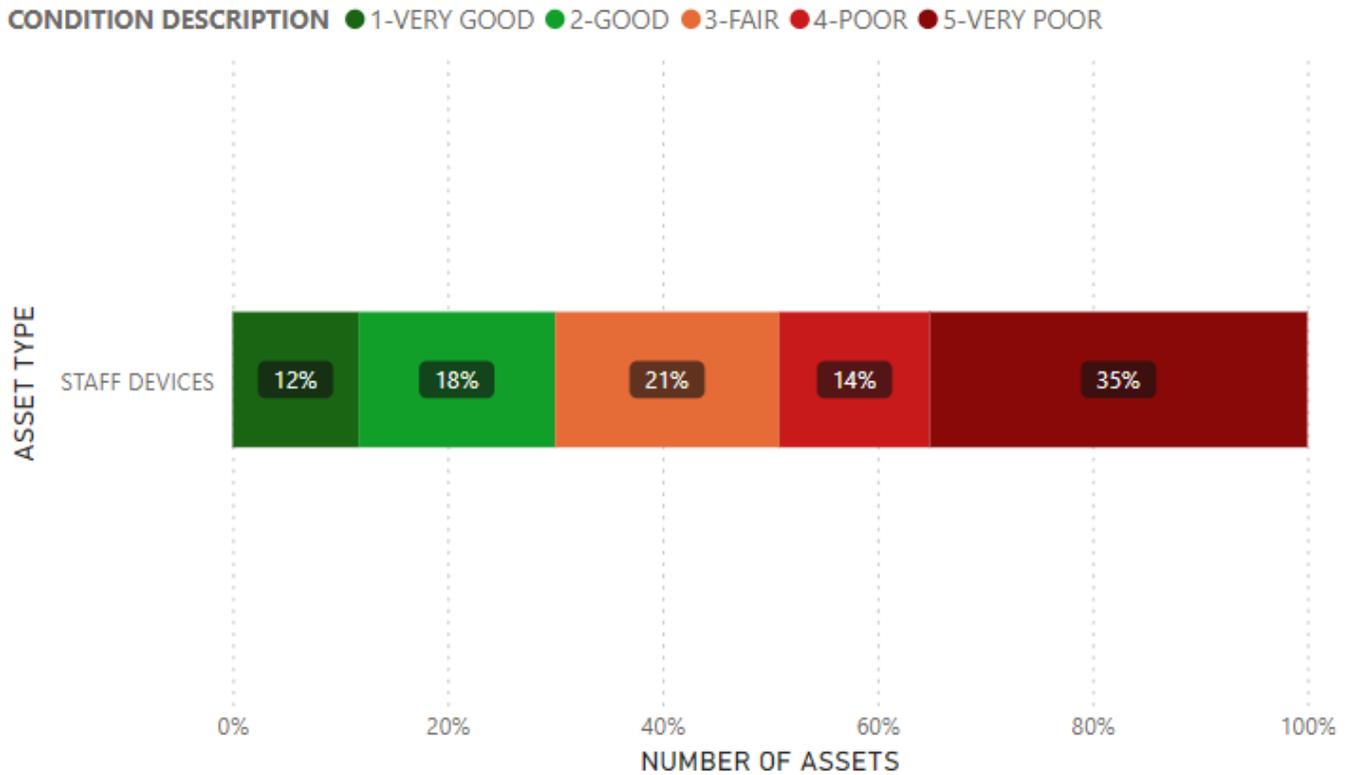


3.2.1.2. CONDITION METHODOLOGY AND PROFILE

There is no formal methodology to assess the condition for IT assets. Condition data for datacentre assets, networking equipment, and communication infrastructure is unavailable at this time. It is known that the networking equipment is near end of life and needs to be replaced as soon as possible. For IT staff devices, the condition is based on the estimated service life (ESL), which as previously mentioned, is between four to five years. Devices are not inspected unless there is a reported deficiency, and an incident management triage process is employed to resolve it. **Figure 3** shows the condition profile of IT’s Hardware assets (data is available only for staff devices). As shown in **Figure 3**, around half the staff devices are shown to be in POOR or VERY POOR condition based on ESL.

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

Figure 3: IT Hardware Condition Distribution



3.2.1.3. ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. Known service performance issues for technology assets involve some assets being beyond their Estimated Service Life (ESL).

3.2.2 FACILITIES PROFILE

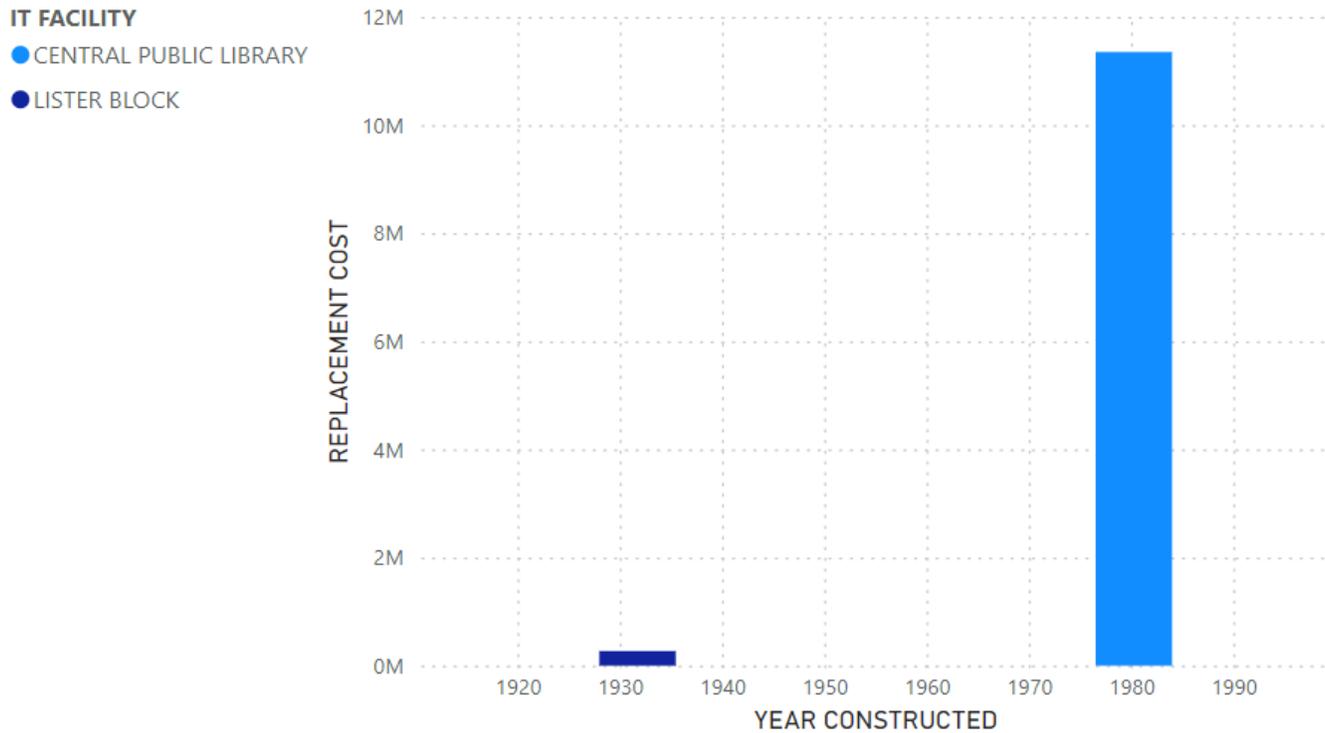
IT Division shares all their facility locations with business units within the City of Hamilton. For the purposes of this report, IT facilities have been considered with replacement values allocated based on the proportion of the building that IT uses.

3.2.2.1. AGE PROFILE

The age profile for IT assets is shown in **Figure 4**. For IT Facility assets, the data confidence for age is typically Very High because this information was recorded during the construction of the facilities.

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

Figure 4: IT Facilities Age Profile



The spike in 1984 is due to the acquisition of Central Public Library. IT shares this facility with Hamilton Public Library. IT facilities have varying Estimated Service Life (ESLs) depending on the building. Central Public Library has an ESL of 75 years and Lister block 150 years. Both buildings are within their ESL.

3.2.2.2. CONDITION METHODOLOGY AND PROFILE

The condition of IT facilities is determined based on the results of a Building Condition Assessment (BCA) completed by the Corporate Facilities and Energy Management (CFEM) division. The BCA identifies necessary major and minor maintenance activities in a 10-year forecast with projected costs and outputs a detailed report outlining methodology over findings, and conditions.

BCAs are completed on IT facilities every five years and output a score called a Facility Condition Index (FCI) which is considered to be a high confidence level source for condition. The FCI is a ratio of the total cost for required repairs, renewal, or upgrades to the replacement value of building components.

A summary of the Facilities’ condition methodology is provided in **Table 5**. The condition conversion from FCI to the standardized 5-point scale used in Asset Management is shown in **Table 4**.

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

Table 4: Inspection and Condition Information

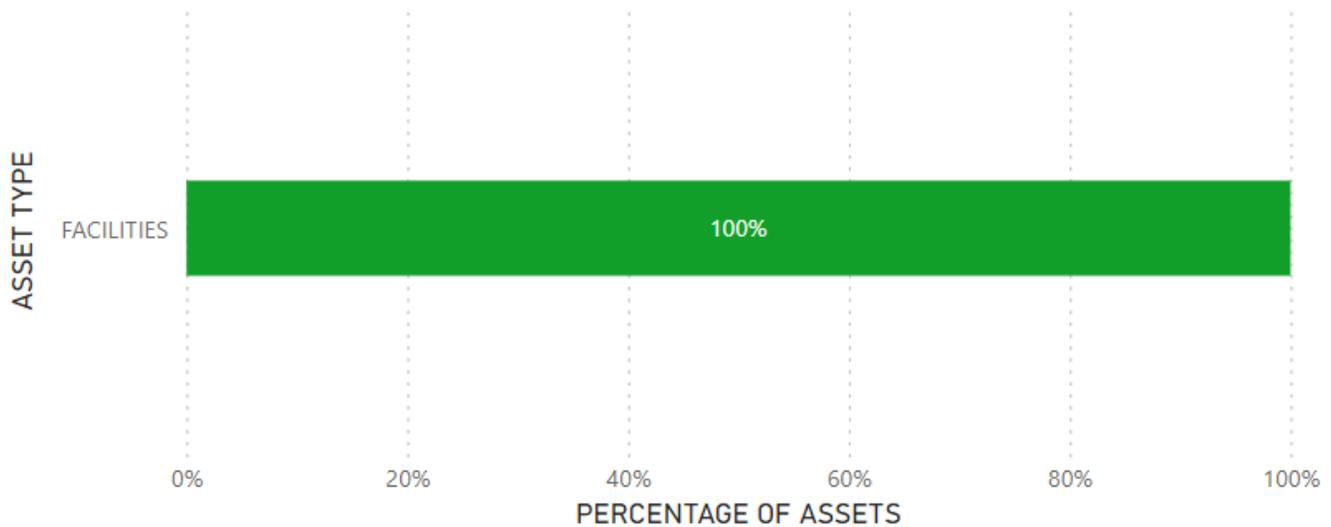
ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
All Facilities	5 years	2021	Facilities Condition Index (0% - 100%)

The condition profile for IT Facilities assets is shown below in

Figure 5. It is important to note that Central Public Library had a major renovation in 2010. Since IT shares much of its space with libraries, the renovation of the building contributed to the overall Good condition of the library. Lister Block, which was built in 1923, also had major renovations in 2011 bringing the condition of the facility to a Good rating as well.

Figure 5: IT Facilities Condition Distribution

CONDITION DESCRIPTION ● 2-GOOD



3.2.2.3. ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available.

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Table 5: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Facility	Central Public Library	Limited Staff Bathrooms	Lack of adequate number of bathroom facilities for staff
		Insufficient Space	Current office space can only accommodate 60% of staff

3.2.3 VEHICLES PROFILE

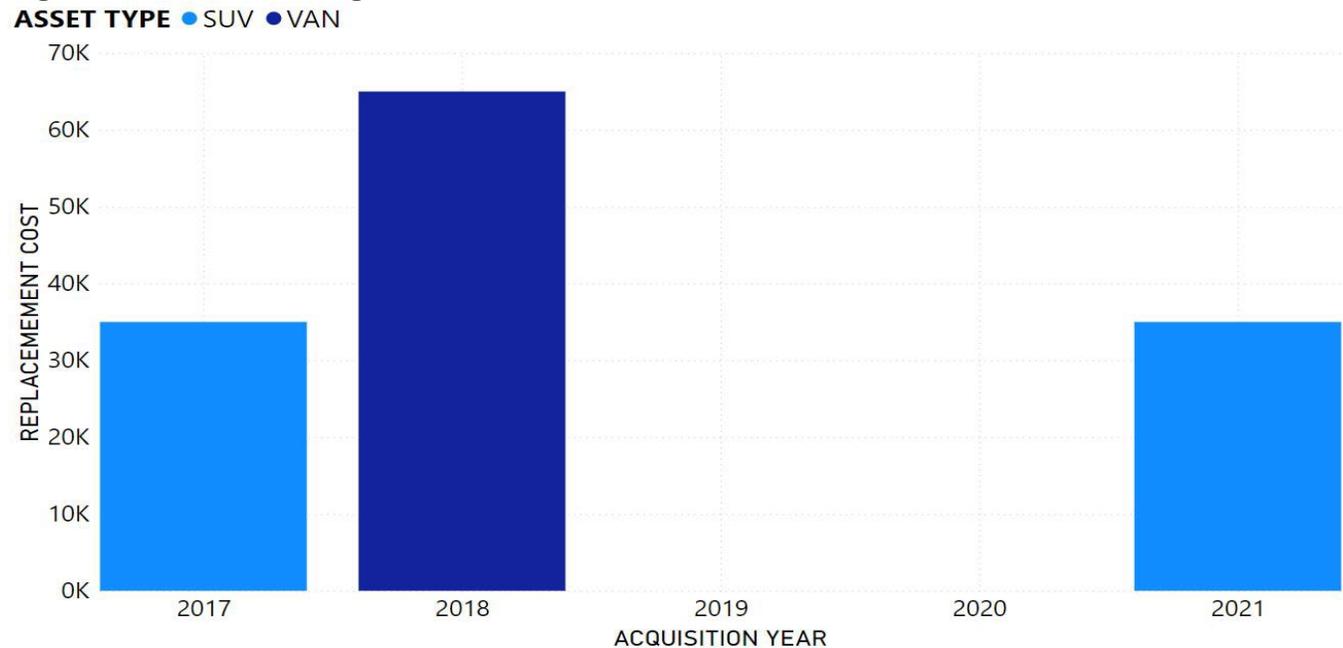
Vehicles consist of a small proportion of IT’s assets. The IT Division owns three vehicles including two SUVs and a van.

3.2.3.1. AGE PROFILE

The age profile of the IT Division Vehicles assets is shown in

Figure 6.

Figure 6: IT Vehicles Age Profile



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The Estimated Service Life (ESL) of both SUVs is 8 years and the van is 10 years. All vehicles are currently within their ESL.

3.2.3.2. CONDITION METHODOLOGY AND PROFILE

Vehicles are inspected and maintenance activities are conducted at specific intervals throughout the asset’s lifecycle however no formal condition rating is assigned to each vehicle. IT Division relies on the Fleet section in the Corporate Asset Management (CAM) division to assist with the inspection, maintenance, and procurement of vehicles on their behalf. In the absence of a formal condition methodology, the condition has been assigned based on the asset owner opinion. Developing a condition methodology has been identified as a continuous improvement item in **Table 6**.

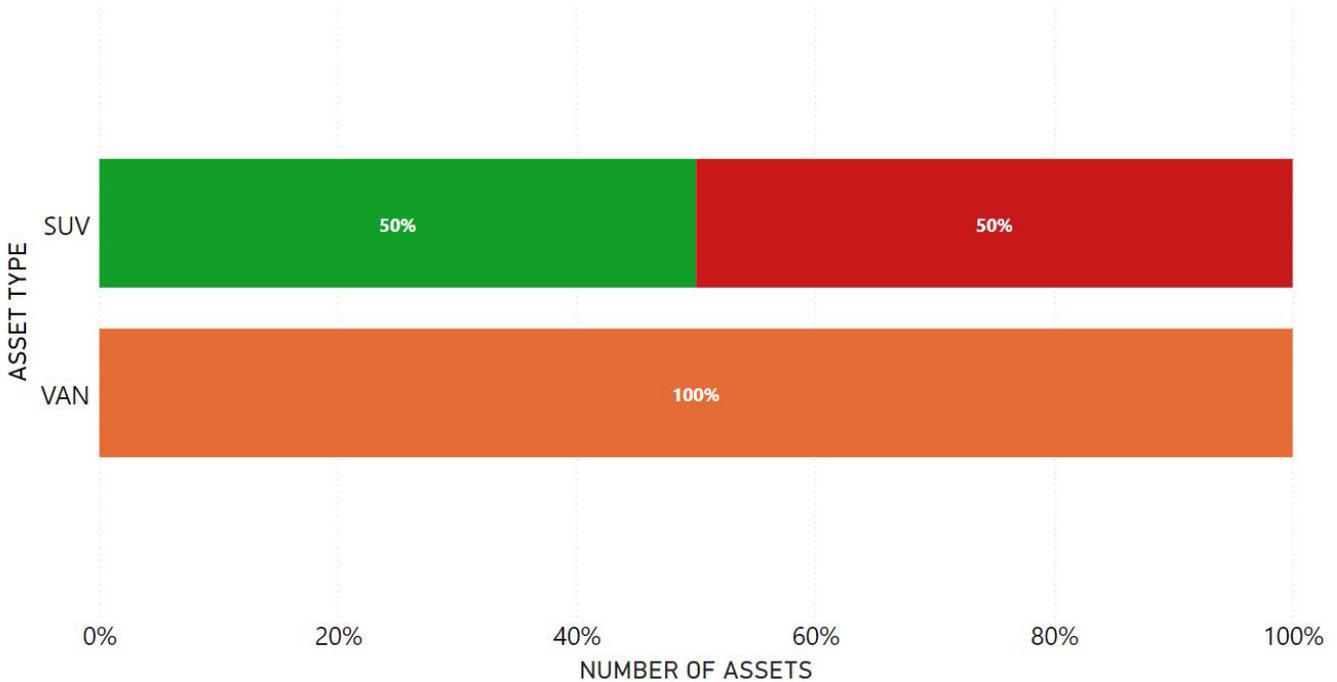
Table 6: Inspection and Condition Information

ASSET	INSPECTION TYPE	DESCRIPTION	FREQUENCY	CONDITION SCORE OUTPUT
Vehicles	Inspection	Regular Maintenance Inspection	Scheduled twice per year	N/A

Figure 7: IT Vehicles Condition Profile

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CONDITION DESCRIPTION ● 2-GOOD ● 3-FAIR ● 4-POOR



3.2.3.3. ASSET USAGE AND PERFORMANCE

The only deficiency identified was one of the SUVs approaching its end of service life.

Table 7: Known Service Performance Deficiencies

ASSET	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
SUV	End-of-Service Life	A SUV acquired in 2017 is approaching the end of its service life in 2025 and is deemed to be in POOR condition.

3.3 SOFTWARE AND INTANGIBLE ASSETS

Software and intangible assets rely on the hardware assets to run, connect, and store the library of data and tools the City of Hamilton uses. Software and intangible assets refer to these three subcategories: business applications, data assets and digital services.

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For this asset management plan, software and intangible assets are not assigned values and hence replacement costs are not available. It is recognized that these yet unquantified replacement costs are most likely significant. The standard methodology to assess condition and age profiles used for physical assets is also not directly applicable to software and intangible assets. Developing a consistent methodology for the assessment of quantity, replacement cost, age and condition of software and intangible assets has been identified as a continuous improvement item and may be added to the next iteration of IT Division’s Asset Management Plan. The following sections provide a brief introduction to the three categories of IT Division’s software and intangible assets.

3.3.1 BUSINESS APPLICATIONS

Business applications are software solutions or a set of programs that provide business functionality and are used to support business processes. These applications run on, maintain, and generate data that belongs to the City. Departments and divisions across the City depend on these business applications to provide services to their respective customers. City of Hamilton’s own internal processes including human resources and finance related functions and services are also made possible through these business applications. **Table 8** presents examples of some of the business application assets owned by IT:

Table 8: IT Business Applications

BUSINESS APPLICATION	FUNCTION
Peoplesoft HCM	Employee Life-Cycle Management
AMANDA	Permitting and Licensing for Planning and Economic Development
Hamilton Fire Hexagon Dispatching Software	Dispatching of Vehicles/Personnel to Emergency Events
Transit Trapeze Software	Transit System Management Software
Vailtech Tax Billing / Receiving Software	Property Tax Management
PeopleSoft Financial Management Software	Enterprise Finance Software – G/L, Procurement, Accounts Receivable /Payable

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3.3.2 DATA ASSETS

Data Asset refers to a digital object that:

- a.** Is stored in a database, file, or folder; or
- b.** Is compiled to meet an IT-related business need (e.g., system or application); or
- c.** Is used to transform or move data between systems (e.g., scripts, processes)

For this plan, IT Division's data assets include:

- a.** Datasets (tables, records, etc.) and processes (ETLs, scripts, etc.) required for IT to operate as a business unit.
- b.** Databases owned and supported in IT, whether for IT or non-IT purposes (tables and records may be owned by non-IT business units). For example, an Oracle database may belong to IT, but the contents may belong to a non-IT business unit.

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Table 10 presents some examples of data assets owned by IT:

Table 9: IT Data Assets

DATA ASSETS	FUNCTION
Geospatial data	Provides the location (point, line, polygon) of various City assets, services, properties, activities and related metadata and attributes. The majority of GIS data is owned and stewarded by business units. Where they are not identified and the data is critical to a service, IT provides stewardship. Data can be either internal, external, or private.
Data marts, warehouses, and lake houses	These datasets have been architected and curated for Open Data and Business Intelligence reports and analytics
Microsoft user account data in Active Directory	Critical data that governs the access to applications, systems, and data
Service Request and Incident data in IVANTI (Service Desk Online)	Transactional data used to manage the status of incidents and service requests being service levels
Project Management Data	Data used to manage IT capacity for project resources and measure and report project status/progress

3.3.3 DIGITAL SERVICES

Digital services refer to the vast array of online services provided and maintained by the IT Division. These include public-facing transactional services such as licensing and permit applications, and ticket paying platforms; informational services such as open data platforms, voting information and maps; feedback services such as experience surveys and frozen pipe reporting; and internal and administrative Services.

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Table 10 presents some examples of digital services assets owned by IT:

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Table 10: IT Digital Services

DIGITAL SERVICES	FUNCTION
Transactional Services	Public-facing online services to complete a transaction with the City, such as permit applications, Licensing, or ticket payment
Informational Services	Online services to provide information to citizens such as open data platforms, and interactive maps to locate parks or snowplows.
Feedback Services	Online services to provide feedback or experience results or report issues to the City such as frozen pipes.
Internal and Administrative services	For internal management of processes and services, such as freedom of information requests, or administrative services such as job postings and contract bid opportunities

3.3.4 ASSET USAGE AND PERFORMANCE

Each Software and intangible asset subcategory has its own unique deficiencies. **Table 12** below describes the unique challenges related to business applications, data assets, and digital services.

Table 11: Known Service Performance Deficiencies

ASSET	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Business Applications	A number of critical business applications are legacy systems that have reached the end of support and/or lack consumer-grade user experience (UX).	Some business applications (e.g., PeopleSoft HCM) are legacy systems which means they are outdated with newer alternatives available.
		Legacy systems require higher maintenance, find it difficult to ‘talk’ with newer technologies, and some do not receive security and/or software updates.
		Some of the business applications in use due to their legacy status lack newer features that enhance user experience (UX).

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ASSET	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Data Assets	Redundancies in both data and services/solutions.	There are multiple applications doing the same thing and duplicate datasets at different levels of accuracy and completeness.
Digital Services	An estimated 30% of online services are built on a platform that is end of life or identified for replacement within the next 1-3 years.	Platforms that have reached the end of life are identified for replacement. Services are on an active work plan to transition to a new or updated platform.

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4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what the city provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that the city provides those services.

O.Reg 588/17 does not define levels of service for IT assets and therefore the City has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in **Section 7.5** of the AMP Overview.

4.1 SURVEY METHODOLOGY

To develop customer values and customer levels of service, two different surveys were utilized for this report and are discussed below. Data confidence and data consistency were not measured for these surveys, but the results can still provide some insight into the level of service provided by the IT Division.

- The *City of Hamilton: IT Satisfaction Scorecard: Department Report* was an internal customer engagement survey which was released on June 14, 2022. The purpose of this survey was to gain insight into customer satisfaction for the internal services that the IT Division provides city staff as part of the IT Division's strategy refresh. This survey received submissions from 54 director level employees at City of Hamilton and has been used in this report to determine the internal customer values and levels of service.
- The *City of Hamilton's Digital Services* survey was released on November 18, 2022. This was a public survey and received a total of 172 responses. It is important to note that this survey was done by the City's Digital and Innovation Office as part of the development of the City's Digital Strategy. This survey has been used in this report to gauge the public's customer values and levels of service for the online services that the IT Division provides to the public.

It is important to note that a Corporate Asset Management (CAM) survey has not been conducted. For future iterations of the plan, surveys may be developed and performed to capture the opinions of external and internal users while also measuring confidence levels and data consistency. This has been noted in **Table 28** as a continuous improvement item.

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4.2 CUSTOMER VALUES

Customer values are what the customer can expect from their tax dollar in “customer speak” which outline what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

Customer Values indicate:

- What aspects of the service is important to the customer;
- Whether they see value in what is currently provided; and,
- The likely trend over time based on the current budget provision.

As previously mentioned, the customer values below were determined using the results from the *City of Hamilton: IT Satisfaction Scorecard: Department Report 2022* and the *City of Hamilton’s Digital Strategy Survey 2023*.

It is important to note that since the cyber security incident in 2024, the results of the survey may not reflect today’s customer values or customer levels of service.

Table 12: Customer Values

SERVICE OBJECTIVE			
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Organizational devices and data are properly secured	2022 IT Satisfaction Scorecard: Department Report	Survey respondents rated device and data security as the most important IT service.	Increase
Communication systems and networks are reliable		Survey respondents feel network and communication infrastructure is the 2 nd most important IT service.	
Business applications meet needs		Survey respondents feel business apps are the 3 rd most important IT service.	Maintain
IT Service Desk is responsive and effective		Survey respondents feel the IT Service Desk is the 4 th most important IT service.	Maintain

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SERVICE OBJECTIVE			
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Staff devices meet needs		Survey respondents feel provision and maintenance of staff devices is the 5 th most important IT service.	Maintain
Digital services have a clear and simple process to navigate	Digital Services Survey 2023	Survey respondents feel a clear and simple process to navigate digital services is the most important criteria to improve service delivery.	Increase

4.3 CUSTOMER LEVELS OF SERVICE

Ultimately, customer performance measures are the measures that the City will use to assess whether it is delivering the level of service the customers desire. Customer levels of service measurements relate to how the customer feels about the City’s IT Division in terms of their quality, reliability, accessibility, responsiveness, sustainability and, over the course, their cost. The City will continue to measure these customer levels of service to ensure a clear understanding on how the customers feel about the services and the value for their tax dollars.

The Customer Levels of Service are considered in terms of:

- Condition** How good is the service? What is the condition or quality of the service?
- Function** Is it suitable for its intended purpose? Is it the right service?
- Capacity/Use** Is the service over or underused? Do we need more or less of these assets?

In **Note** that confidence levels were not measured in the 2022 IT Satisfaction Scorecard: Department Report nor the Digital Strategy Survey 2023. In future iterations, a CAM survey for IT Division may consider confidence levels, data consistency, and a broader range of survey respondent demographics.

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Table 13 under each of the service measure types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current allocation. Note that confidence levels were not measured in the 2022 IT Satisfaction Scorecard: Department Report nor the Digital Strategy Survey 2023. In future iterations, a CAM survey for IT Division may consider confidence levels, data consistency, and a broader range of survey respondent demographics.

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Table 13: Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
Quality/ Condition	Improve IT service delivery execution	2022 IT Satisfaction Scorecard: Department Report	Average survey respondent satisfaction level with the IT Division and its ability to support their needs	Satisfied	Increase
			Average survey respondent satisfaction level with the value of the IT Division relative to cost and staffing	Satisfied	Maintain
		Digital Strategy Survey 2023	Average survey respondent satisfaction with the delivery of services	Satisfied	Increase
Function	Enable access to reliable data and information.	2022 IT Satisfaction Scorecard: Department Report	Average survey respondent opinion on if data access friction is acceptable	Very Satisfied	Maintain
	City digital services are simple and easy to use.	Digital Strategy Survey 2023	Average survey respondent opinion on level of competency using digital services	Very Satisfied	Maintain
Capacity	Enable the City workforce with access to tools and training to deliver services effectively	2022 IT Satisfaction Scorecard: Department Report	Average survey respondent satisfaction with the ability to get IT capacity to complete projects	Neutral	Maintain
			Average survey respondent satisfaction with responsiveness and effectiveness of service desk	Satisfied	Maintain

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4.3.1 CUSTOMER INDICES

The 2022 IT Satisfaction Scorecard survey only contains one index calculated to assess how customer expectations for a service align with the perceived performance for a service listed below in **Table 15**. In addition, this index was only included for internal customers. The information below is intended to provide context around the survey results to assist IT Division with areas to further investigate before proposing any new levels of service.

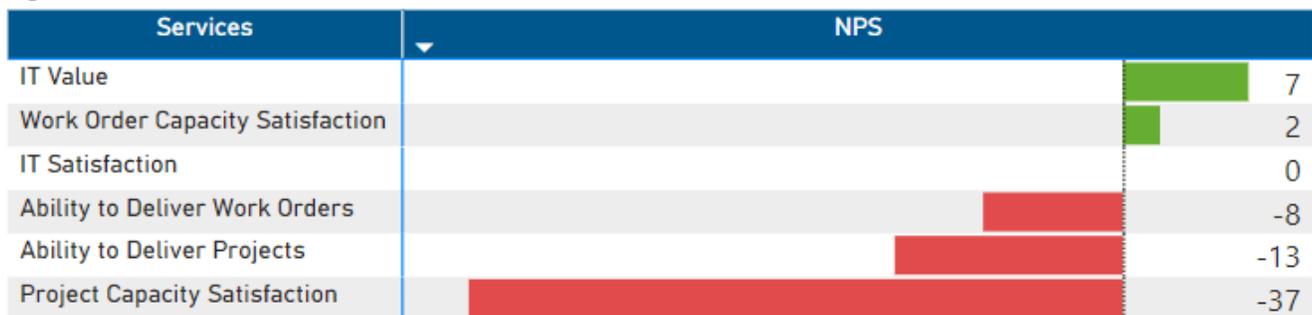
NET PROMOTER SCORE INDICE

The Net Promoter Score (NPS) indices outline how likely an individual is to recommend a service to another person and measure customer loyalty. This score provides valuable information for determining if customers would recommend using the service or whether they may seek alternatives or avoid using the service altogether.

Respondents who selected a score less than four are considered 'Detractors' meaning that they would not recommend the service, while scores of five are considered 'Promoters' who would recommend the service. Scores of four are considered 'Passive' which means they do not have strong feelings about the service and so they are not considered in the Net Promoter score calculation. In addition, respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. The Detractor and Promoter scores were then converted to a percentage, and the Net Promoter Score was calculated by subtracting Detractors from Promoters. The exact number of detractors and promoters was not provided in this survey.

Based on the results of the Net Promoter Score shown in **Figure 15**, users are generally neutral about the IT Division’s service since most of these results are approaching zero. However, for the Project Capacity Satisfaction service, the NPS is -37 which suggests an opportunity for improvement for the IT Division to explore increasing their capacity to support the delivery of projects. It is important to note that the survey results were a sample of director-level staff and may not reflect average customer indices for all city staff. In future iterations, a CAM survey for IT Division may consider a broader range of survey respondent demographics as well as confidence level and data consistency measurements.

Figure 14: Net Promoter Score



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4.3.2 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how the city delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. The city will measure specific lifecycle activities to demonstrate how the city is performing on delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.⁶

Table 16 shows the activities expected to be provided under the current 10 year Planned Budget allocation and the Forecast activity requirements being recommended in this AM Plan.

Table 15: Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE (2023)	CURRENT TARGET PERFORMANCE (2023)	PROPOSED 10-YEAR PERFORMANCE
Operations	Improve IT service delivery execution	Percent of production server availability	Not yet measured	Not determined	Not determined
		Average time to answer calls	Not yet measured	Not determined	Not determined
Maintenance	Enable access to reliable data and information	Network uptime	Not yet measured	Not determined	Not determined
		Unscheduled database downtime	Not yet measured	Not determined	Not determined
Renewal	Enable workforce with access to tools and training to deliver services effectively	Percent of IT Division assets that are beyond the end of support	Not yet measured	Not determined	Not determined
Budget			Not determined	Not determined	Not determined

⁶ IPWEA, 2015, IIMM, p 2|28.

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4.3.3 PROPOSED LEVELS OF SERVICE DISCUSSION

Currently, performance metrics to determine the quality of IT Division services are not being measured. As a result of this limitation, it is not possible to present a comprehensive analysis of proposed levels of service at this time. However, the following are some areas that could be explored further when proposing service levels:

- Security and reliability of data and devices has been rated as the most important IT Division service by survey respondents. However, the recent cybersecurity incident highlighted the need for improvement in the City's cybersecurity protocols. Going forward, the IT Division must invest in the resources required to develop a robust IT infrastructure system as it continues to recover from the incident and rebuild trust with its user base. Organizational level security would also require participation from City of Hamilton employees and Shadow IT would also need to be addressed.
- Digital services are becoming increasingly more important as residents prefer to engage with the City online. The City has recently developed a Digital Strategy and an Enterprise Customer Service Strategy is currently in development. The recommendations from these strategies may result in changes to levels of service.
- Business units across the City are looking towards the IT Division for enhanced data and analytics services. As a result, the IT Division has recently created a Data Services section that will support the link between various departments and the Enterprise Data Management Steering Committee, as well as actively championing and enforcing data standards and policies. Its role in promoting uniformity in data collection, storage and utilization will significantly improve inter-departmental collaboration and elevate the overall performance of data management throughout the corporation.
- The IT Division plays a key role in any City project that involves significant planning and implementation of technology solutions. The 2022 IT Satisfaction Scorecard reveals that a number of survey respondents felt that the IT Division's capacity constrained and prevented them from reaching their strategic goals. This is highlighted by a Net Promoter Score of -37 for satisfaction with the ability to get IT capacity to complete projects (see **Section 4.3.1**). A new IT Strategy has been developed with an increased emphasis on business relationship management. It is anticipated that, as a result, satisfaction with IT's capacity will increase.
- Although some performance measures have been proposed in **Section 4.3.2** (e.g., average time to answer calls and network uptime), the IT Division is currently not measuring its technical levels of service. Additional technical metrics may be proposed in future iterations of the plan and should include target performance.

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5. FUTURE DEMAND

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of services required.

5.1 DEMAND DRIVERS

For the IT Division service area, the key drivers are:

- Ongoing response to cybersecurity incident;
- Market changes; and
- Demands arising from various City of Hamilton projects and initiatives

5.2 DEMAND FORECASTS

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 16: Demand Management Plan**. Growth projections have been shown on **Page 45** in the **AMP Overview Document**.

Since the assessment of costs associated with these demands is ongoing, these costs have not been added separately to the lifecycle management plan in **Section 8**.

5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets are shown in *Error! Reference source not found.7*. Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Opportunities identified to date for demand management are shown in **Table 16: Demand Management Plan**. Climate change adaptation is included in **Table 22**.

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Table 16: Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Ongoing Response to Cybersecurity Incident	Since Sunday, February 25, 2024, the City of Hamilton experienced a cyber incident that disabled some of the IT systems.	The City is expected to continue its efforts to strengthen its technological security.	While the City has kept many of its services running, some services have been compromised as a result of the incident.	Complete recovery from the incident is an ongoing process and an opportunity for the City to rebuild its systems and make them stronger and more resilient.
Market Changes	Currently, the IT Division utilizes a mix of perpetual (purchased) and subscription-based products.	Vendors are moving away from selling solutions and moving toward subscription and transaction-based models.	There is a need to shift from capital expenditure to operating expenditure. New employee skills and new procurement methods are necessitated.	Work with finance to evolve the IT Division's cost model and budget process to deliver enterprise-level services.
Projects and work order requests from other business units within the City of Hamilton	Capacity forecast related to bandwidth, storage, and backup is not clear due to both technology changes and limited visibility to department work plans and growth forecasts.	Business units within the City of Hamilton will continue to rely on the IT Division to meet strategic goals related to technology planning and implementation.	There may be potential lags in service delivery and system performance due to reacting to demand rather than planning with line of sight to future plans and forecasts.	Work through the Business Relationship Management program to identify department-level strategies and priorities.
Enterprise Data Management	There is a need to put structure in place around inventorying and governing the City of Hamilton's data, while supporting employees in understanding data processes, how to better manage and use data, and increasing transparency to the public.	Strong data governance will become an increasingly important consideration for the City.	Enterprise Data Management will help to advance the City's practices around: <ul style="list-style-type: none"> • Data Management and Standardization; • Data Literacy and Utilization; and, • Data Sharing and Reporting. 	A Data Services section has been established within the IT Division. This new section will support the link between various departments and the Enterprise Data Management Steering Committee. Its role in promoting uniformity in data collection, storage and utilization will significantly boost inter-departmental collaboration and elevate the overall efficiency of data management throughout the corporation.
Various City of Hamilton initiatives	Various City initiatives such as the NG 9-1-1 project, Digital Strategy implementation and Enterprise Customer Service Strategy development rely on IT's key role in enabling these advancements.	IT will continue to play a critical role as the City looks to modernize its systems and build a high-performing public service.	IT will need more staff and resources to support these City initiatives.	The following business cases have been presented to and approved by Council. <ul style="list-style-type: none"> • 1 FTE: IT Support for City 311 and Digital Strategy • 1 FTE: IT Architect to modernize and integrate City systems. Additional business cases will be presented to Council as they become necessitated.

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5.4 ASSET PROGRAMS TO MEET DEMAND

The new assets required to meet demand may be acquired, donated or constructed. For IT Division, typically assets are acquired or constructed.

At this time there are approximately **\$13.9 million** in assets acquired over the next 10 years. Acquiring new assets will commit the IT Division to ongoing operations, maintenance and renewal costs for the amount of time that the service is required. These future costs have been estimated at a high level in the Lifecycle Models in **Section 548**, but should be quantified further for future iterations of the report for consideration in developing higher confidence forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan.

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6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk⁷.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The city utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

6.1 CRITICAL ASSETS

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in **Table 18**. Failure modes may include physical failure, collapse or essential service interruption.

⁷ ISO 31000:2009, p 2

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Table 17: Critical Assets

CRITICAL ASSET	FAILURE MODE	IMPACT
Networking Equipment	Cyber-attack, physical failure, loss of critical vendor support	Various City of Hamilton internal and external services will be lost while others may need to be temporarily disabled.
Datacentre Assets		Failure will result to an extent in decrease in level of service for the whole City of Hamilton. Failure repercussions may also be financial, legal and/or reputational.
Critical Business Applications	Essential service iinterruption	Loss of critical business application function
Critical Data Assets	Essential service iinterruption	Permanent loss of critical data
UPS	Essential service iinterruption	Loss of power to City supported technology

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

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6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, the evaluation of the risk and the development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan are shown in **Table 19**. It is essential that these critical risks and costs are reported to management. Additional risks will be developed in future iterations of the plan and are identified in **Table 28** in the Continuous Improvement Section of the plan. Since the assessment of treatment costs associated with these risks is ongoing, these costs have not been added separately to the lifecycle management plan in **Section 8**.

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Table 18: Risks and Treatment Plans

RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	TREATMENT COSTS
Cyber Security Risk	<p>Cyber-attacks can leave critical city services unavailable for both internal and external users.</p> <p>Additional threats include privacy breaches and/or loss of critical data.</p>	Very High	Ongoing assessment	Ongoing assessment
Power Supply Interruption Risk	Loss of power to critical City IT services	Very High	Complete redesign of the UPS power delivery system.	Ongoing assessment
Application Failure Risk	Certain applications, platforms and devices have reached end of life and are now either without support, warranty, or both.	High	Update legacy systems or acquire new application systems on a case-by-case basis.	Ongoing assessment
Shadow IT Usage Risk	Unauthorized use of IT resources (Shadow IT) can lead to data loss, data leaks, disconnected network access, and security vulnerabilities.	High	Establish clear compliance mandates for staff to adhere to IT policies and procedures. Provide approved alternatives to meet the needs of users.	Ongoing assessment
Talent Management Risk	<p>The IT Division competes directly with the private sector for recruiting and retention of top talent.</p> <p>Compensations in the private sector for in demand IT professionals may be much higher.</p>	High	Not yet determined	Ongoing assessment

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6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to ‘withstand a given level of stress or demand’, and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment and crisis leadership.

6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective to achieve the optimum benefits from the available resources.

The following table outlines what activities the IT Division cannot afford to do over the next 10 years with their existing budget and provides the associated service and risk tradeoffs.

Table 19: Service and Risk Tradeoffs

WHAT WE CAN NOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
Upgrading all legacy systems including outdated software, customer apps, database systems, hardware, and more.	Slower services of apps, servers, and devices. Reduced effectiveness of city services	More reliance on legacy devices and systems. Increased vulnerability and attack surface leading to cybersecurity compromise, data loss, or worse.

Legacy systems present a significant challenge for the City of Hamilton. Dependence on outdated hardware and software elevates the likelihood of cybersecurity incidents and operational breakdowns. Furthermore, antiquated systems impede efficiency, diminishing the quality of services provided.

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7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we have already begun to experience (adaptation). At a minimum, the City must consider how to manage our existing assets given the potential climate change impacts for our region.

Changes to Hamilton's climate will impact City assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models as well as levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan. This has been identified as a Continuous Improvement item in **Table 28**.

7.1 CLIMATE CHANGE MITIGATION

Climate Mitigation refers to human intervention to reduce GHG emissions or enhance GHG removals (e.g. building transportation infrastructure that can support cycling and public transit and reduce the need for car travel). The City of Hamilton's Community Energy + Emissions Plan (CEEP) includes five Low-carbon Transformations necessary to achieve the City's target of net-zero GHG emissions by 2050:

- Innovating our industry;
- Transforming our buildings;
- Changing how we move;
- Revolutionizing renewables; and
- Growing Green.

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Mitigation Demand Analysis

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City’s modelled targets for the low carbon transformations that applied to the service/asset;
- Discussing the impact, the targets would have on the service/asset; and
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050 as shown in **Table 21** below.

As previously mentioned, due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below have not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AM Plan. This has been identified as a continuous improvement item in **Table 28**.

Moving forward, the Climate Lens tool discussed in the AMP Overview will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

Mitigation Demand Analysis

Table 20: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Changing How We Move	100% of new municipal small and light-duty vehicles are electric by 2040.	Electric Vehicle Chargers will need to be installed at all Yards. Compensation for staff who charge City vehicles at home will need to be considered. Initial upfront capital costs for electric vehicles.	The vehicle conversion schedule for the existing fleet will be developed in partnership with Fleet to convert where feasible and as the market allows. Limitations may exist for heavy-duty vehicles due to availability within the market. Capital budgets will reflect increased costs related to conversions and additions to the existing fleet. Capital budgets will also be developed and submitted for charging stations on facilities.

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MITIGATION RISK ANALYSIS

Since the risk of not completing climate change mitigation projects is that the City continues to contribute to climate change in varying degrees which were modelled in the Climate Science Report for the City of Hamilton completed by ICLEI Canada, a risk analysis has not been completed in this AM Plan for not completing climate mitigation projects (ICLEI Canada, 2021).

7.2 CLIMATE CHANGE ADAPTATION

Climate Adaptation refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads).

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.⁸

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report guided by ICLEI's Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP) (ICLEI, 2021). The BARC Framework identified thirteen high-impact areas.

⁸ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

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Adaptation Demand Analysis

Table 21: Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
<p>All Impact Statements</p>	<p>IT will need to respond to requests from other business units for effective delivery of city services.</p> <p>There may be an increase in requests for real-time data to support reports and online services</p> <p>Increased demand for mapping services (e.g., beach closures, building locations etc.).</p>	<p>Continue to work with business units across the City to identify demands emerging from climate change.</p> <p>Continue to improve the robustness of IT infrastructure and systems across the City.</p> <p>Continue to develop an Enterprise Data Management strategy.</p>

ADAPTATION RISK ANALYSIS

Additionally, the City should consider the risks for the asset or service as a result of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Similarly, to the exercise above and using the risk process in **Section 6**, asset owners:

- Reviewed the likelihood scores in the Vulnerability and Risk Assessment Report for the adaptation impact occurring;
- Identified the consequence to the asset/service if the event did happen to develop a risk rating; and,
- If the risk was identified as high, the asset owner produced a preliminary risk adaptation plan shown below in **Table 24**.

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It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of mitigating the risks below has not been included in the lifecycle and financial models at this time. The adaptation plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should consider these risks during the planning and design processes. Future changes will be incorporated into future iterations of the AM Plan. Moving forward, the Climate Lens tool will assess projects based on these targets and will assist with the prioritization of climate adaptation projects. This has been identified as a continuous improvement item in **Table 28**.

Table 22: Adapting to Climate Change

ADAPTATION IMPACT STATEMENT	WHAT COULD HAPPEN	RISK ADAPTATION PLAN
Rising summer temperatures and extreme heat will increase energy demand for air conditioning, causing a financial burden for low-income households.	Additional load on power storage systems (UPS) feed to data centre and IT closet environment control equipment.	Design UPS systems with sufficient capacity. Complete regular battery maintenance. Introduce automatic condition monitoring.
Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns.	Expect an increased frequency of power outages.	

CLIMATE ADAPTATION DISCUSSION

The IT Division has a central role to play in the City of Hamilton’s response to climate change. A successful city-wide climate action plan is impossible without a robust IT system. IT will remain instrumental as an enabler of the dissemination of information for residents as well as officials making informed decisions in case of weather emergencies.

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8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budget. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated together and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options. However, at this time the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

8.1 ACQUISITION PLAN

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs. Assets can either be donated through development agreements to the city or through the construction of new assets which are mostly related to population growth.

CONSTRUCTED OR PURCHASED ACQUISITIONS

Major acquisition expenditures over the next ten years include:

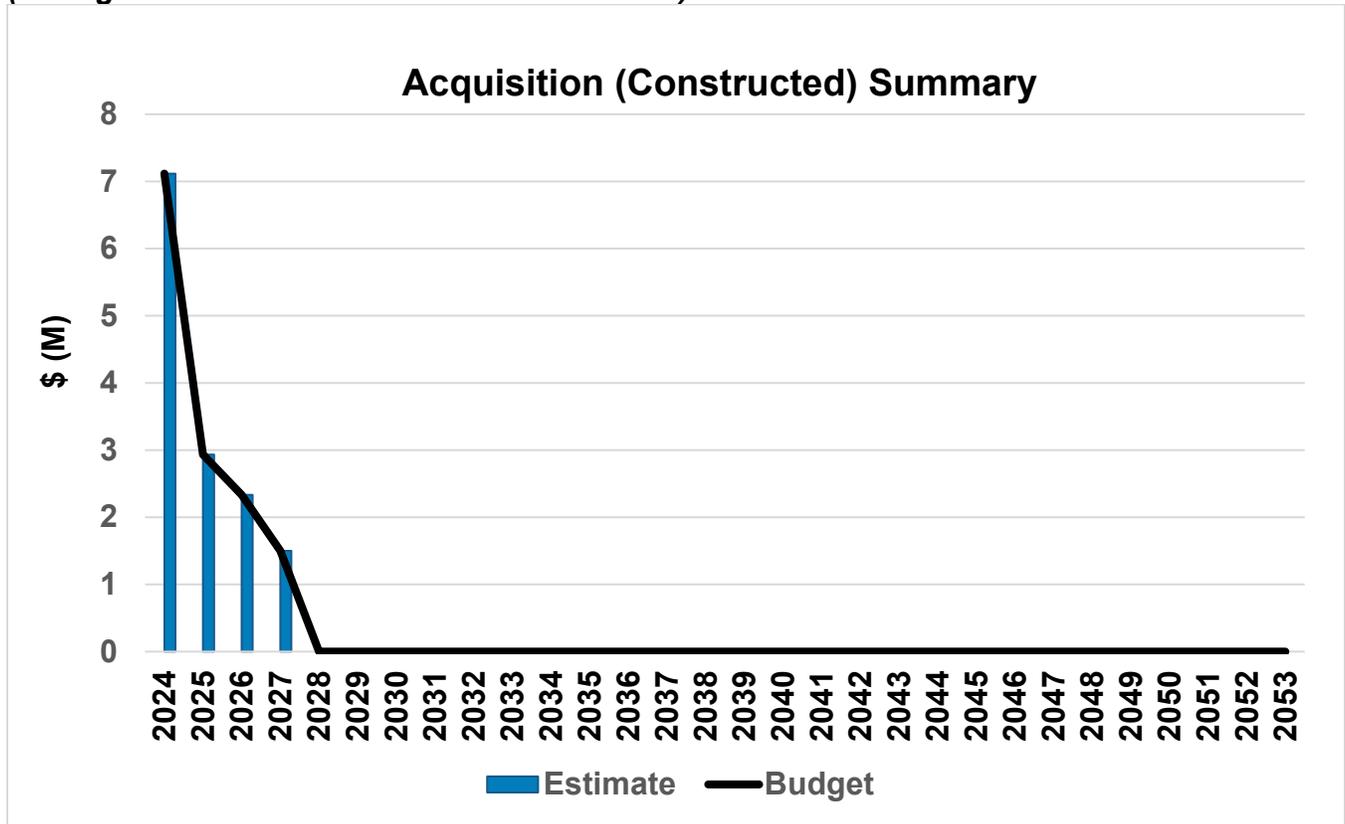
- **\$9.2 million** for Infrastructure Asset Management from 2024 to 2027 (note that numbers for this project might change as the City responds to the cybersecurity incident); and,
- **\$4.7 million** for Telephony to Cloud from 2024 to 2026

Note that the assets acquired for the project Next Generation 9-1-1 (NG 9-1-1) are also procured and maintained by IT and these operations and maintenance costs are quantified in **Section 8.2**. However, since these assets are acquired for the provision of Hamilton Police Service (HPS) and Hamilton Fire Department (HFD) services, these assets have already been included in these AM Plans.

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Figure 8 shows the IT Division’s planned constructed acquisitions over the next 10 years.

Figure 8: Acquisition (Constructed) Summary:
 (All Figure Values are Shown in 2023 Dollars)



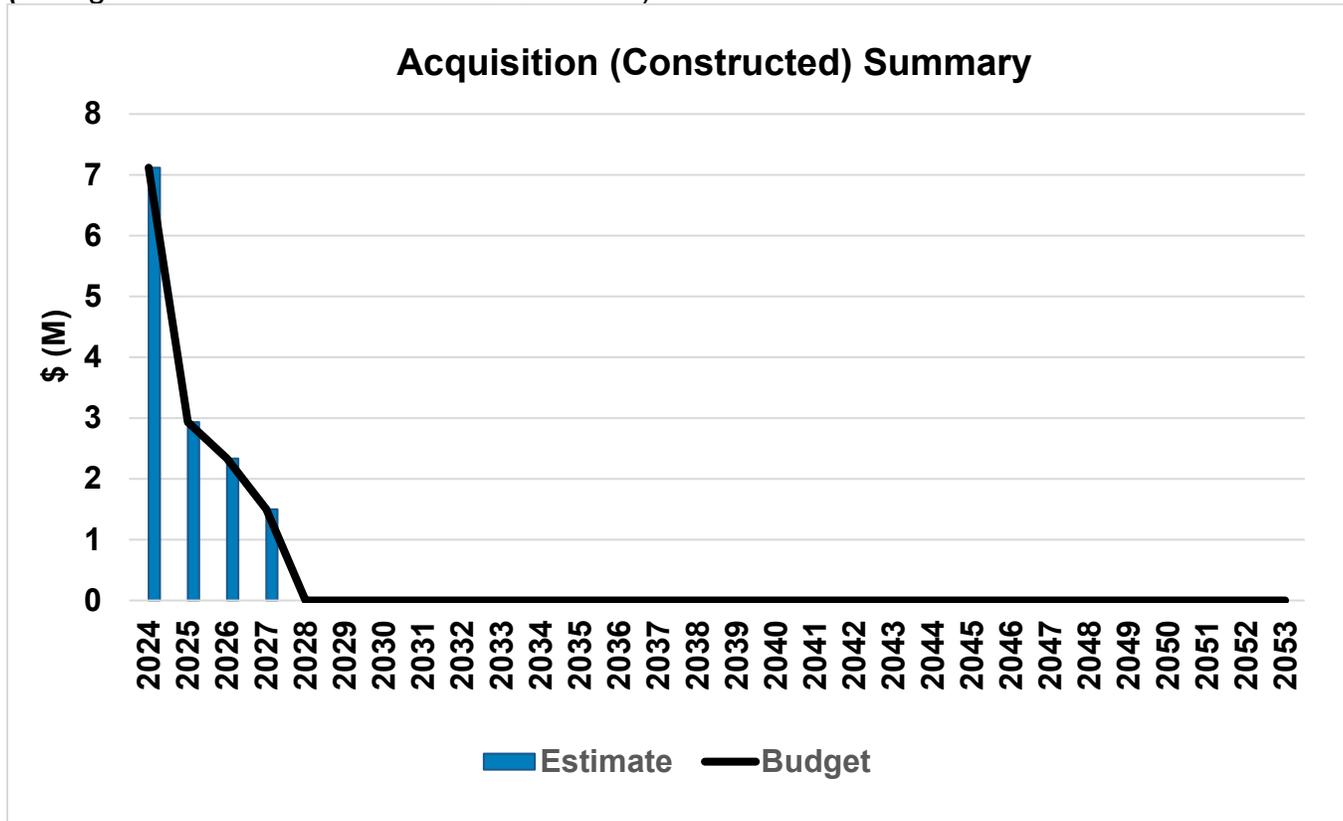
ACQUISITIONS SUMMARY

Over the next 10-year planning period Hamilton will acquire approximately **\$13.9 million** of IT Division assets. Hamilton has a sufficient budget for its planned acquisitions at this time. Note that through the construction of new assets, the City will be committing to funding the ongoing operations, maintenance, and renewal costs. These costs have been added to the forecast operating and maintenance costs in **Section 8.2**.

Forecast acquisition asset costs are summarized in **Figure 12** and show the cumulative effect of asset assumptions over the next 10-year planning period.

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Figure 9: Acquisition Summary
 (All Figure Values are Shown in 2023 Dollars)



8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons.

Over the next 10 years, the following capital projects have been identified which relate to the operations stage of the asset lifecycle:

- **\$570k** for IT Strategy Refresh from 2024 to 2025;
- **\$450k** for Information Security Program in 2024;
- **\$400k** for Technology End of Life Migrations from 2024 to 2025;
- **\$300k** for Windows 11 Upgrade for End User Computing from 2024 to 2025; and,
- **\$200k** for Enterprise Data Management Strategy in 2024.

In addition to these projects, major annual operations expenditures include:

- **\$17.9 million** for employee-related costs
- **\$8.0 million** for computer software
- **\$2.5 million** for contracts for computers and servers

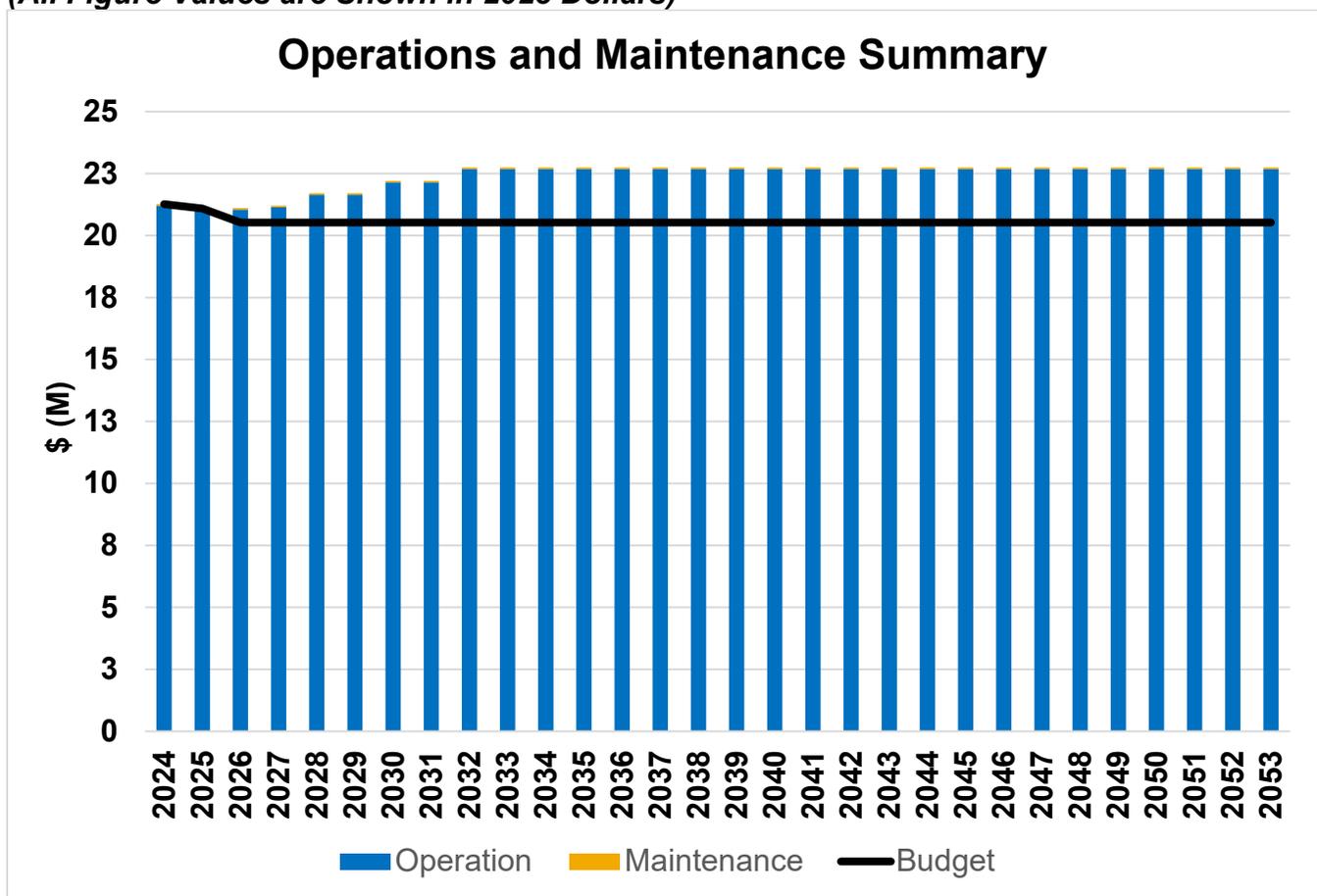
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Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure they reach their intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition. Examples of typical maintenance activities include equipment repairs and component replacements along with appropriate staffing and material resources required to perform these activities.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure that IT assets are reliable to deliver the desired level of service.

Note that although IT Division does significant maintenance work (\$1 million annually) towards the City's Corporate Trunked Radio system, for the purpose of this plan, that is considered an operations stage cost for IT Division. This is because the Corporate Trunked Radio assets are considered assets of other City service groups.

Figure 10: Operations and Maintenance
 (All Figure Values are Shown in 2023 Dollars)



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Figure 10 shows IT’s Operations and Maintenance (O & M) budget compared to its O & M needs. The gap is attributed to the anticipated additional annual operating costs associated with the various operational requirements mentioned above as well as the acquisitions mentioned in **Section 8.1**. The operating impacts of these projects are based on numbers provided by Corporate Finance and have been added to the above lifecycle management plan using an assumed phased-in approach.

8.3 RENEWAL PLAN

Renewal is major works which do not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs

Asset renewals are typically undertaken to either ensure the assets reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by consequence of failure, usage, operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 25** and are based on the estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2023 however they will be reviewed annually until their accuracy reflects the City’s current practices.

Table 23: Useful Lives of Assets

ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Lister Block (Facility)	150
Central Public Library	75
Van	10
SUV	8
Networking Equipment	8
Datacentre Assets	8
IP Phones	6
Computers and Laptops	4-5
Mobile Devices	2

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RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).⁹

Future methodologies may be developed to optimize and prioritize renewals by identifying assets that:

- Have a high consequence of failure;
- Have high use and the subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have the potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.¹⁰

SUMMARY OF FUTURE RENEWAL COST

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in **Figure 11**.

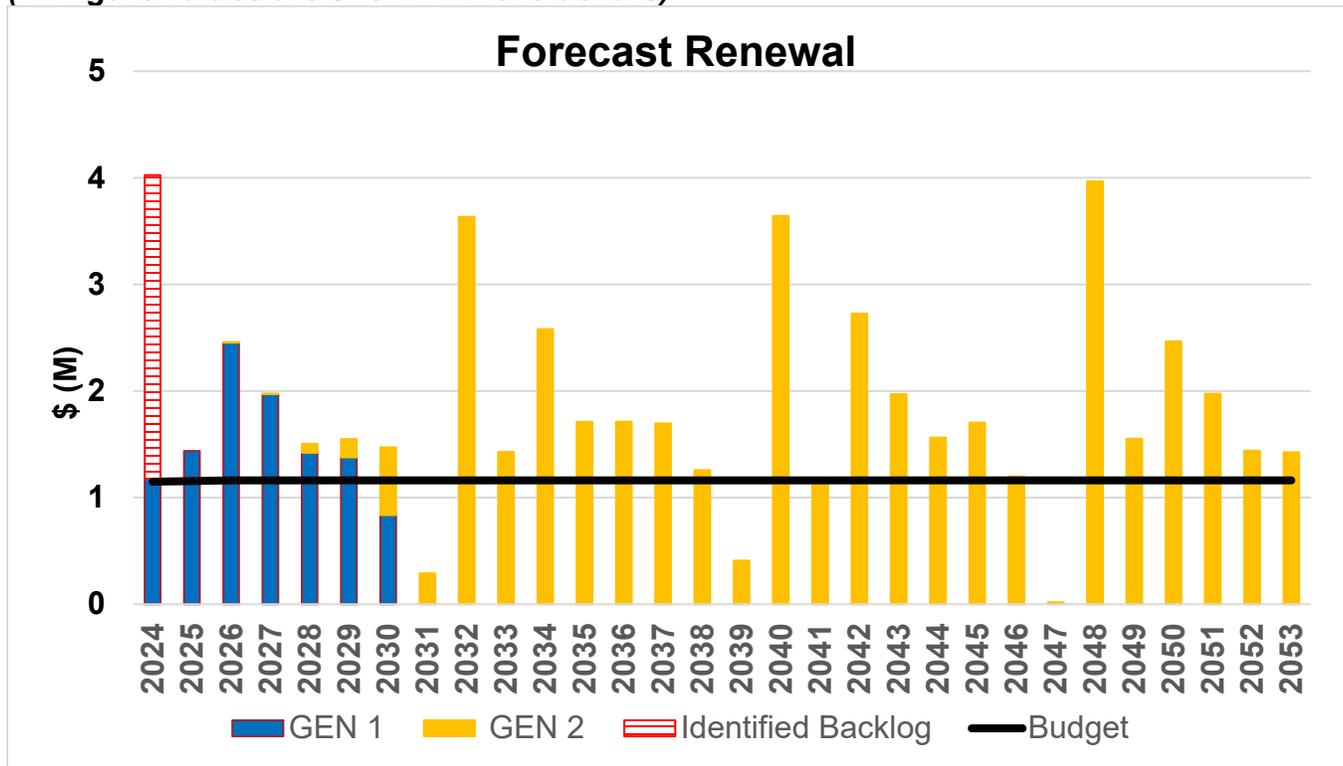
In the figure below, Generation 1 (Gen 1) costs refer to renewals that occur for the first time in the model based on the estimated service life and Generation 2+ (Gen 2+) costs refer to renewals that have occurred twice or more based on the estimated service life.

⁹ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

¹⁰ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

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Figure 11: Forecast Renewal Costs
 (All figure values are shown in 2023 dollars)



As can be seen in the figure above, due to the short service lives of IT hardware assets, the renewals repeat every 5 years in the renewal forecast. Currently, IT has an existing renewal backlog amount of approximately **\$2.9 million**. The key elements of the renewal backlog include:

- **\$1.6 million** for data centre assets; and,
- **\$840k** for networking assets.

It is evident in the figure that the renewal needs considerably exceed the budgeted provision for renewals. The planned renewal works over the 10-year planning horizon include **\$1.1 million per annum** for ongoing renewal of IT infrastructure, staff devices, and vehicles as they reach the end of their service lives. In comparison, the average renewal needs are estimated to be **\$2.0 million per annum**. This gap is encompassed in the infrastructure gap explained in **Section 9.1**. The IT Division plays a critical role in the City of Hamilton’s service delivery to its residents as well as internal staff and therefore the renewal backlog of IT infrastructure and inadequate ongoing renewal funding needs redressing.

8.4 DISPOSAL PLAN

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life

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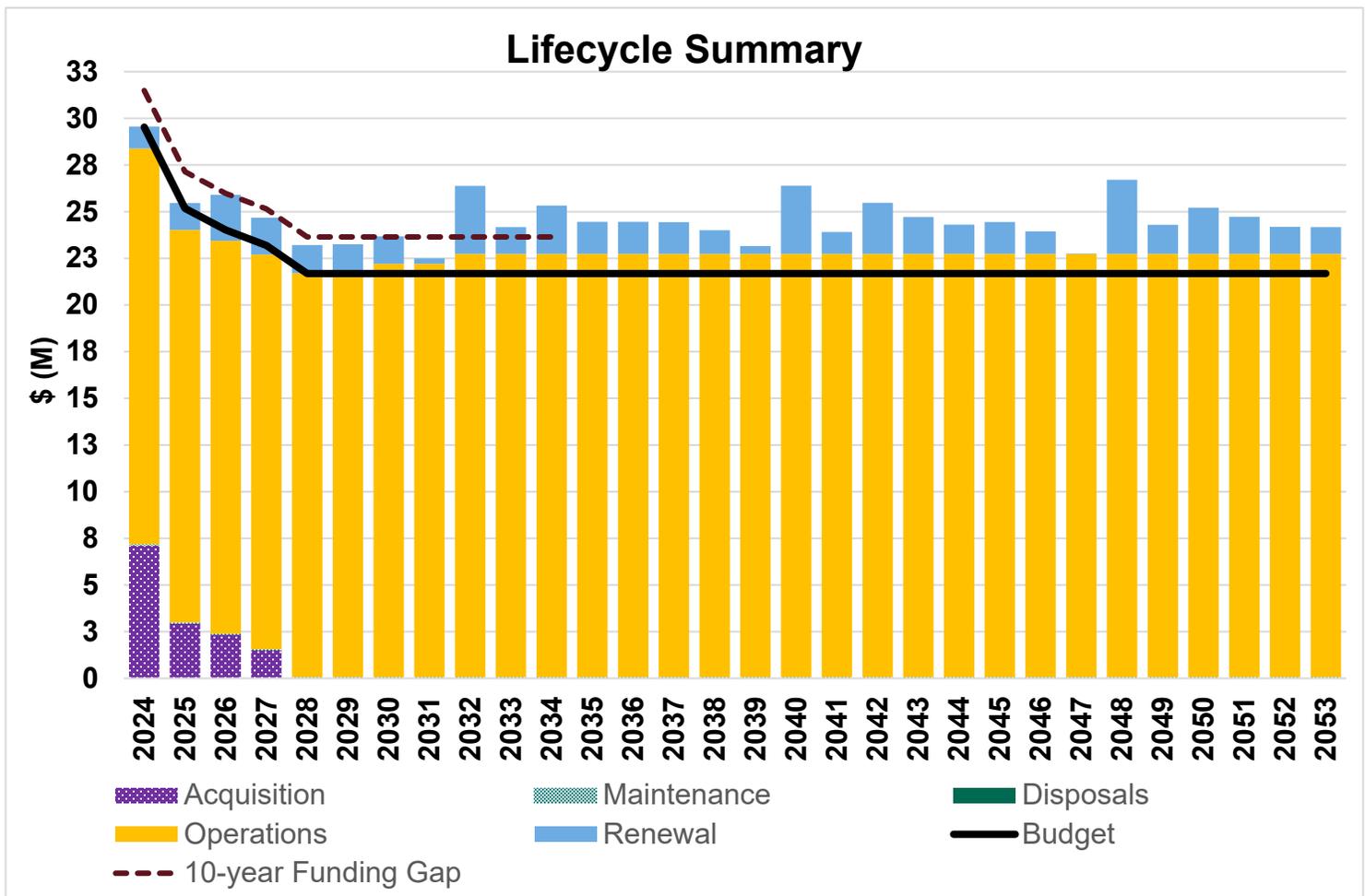
can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen.

Currently, no assets have been identified for disposal by IT.

8.5 LIFECYCLE COST SUMMARY

The financial projections from this asset plan are shown in **Figure 12**. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget. The bars in the graphs represent the forecast costs needed to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving a balance between costs, levels of service and risk to achieve the best value outcome.

Figure 12: Lifecycle Cost Summary



It is evident in **Figure 12** that the IT Division's needs are mostly composed of operational expenditures. This is due to the fact that many of the IT Division's services are either support-

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based or comprised of intangible assets such as computer software. There are also significant upcoming annual renewal expenditures related to networking equipment and datacentre assets, as well as major upcoming acquisition projects for infrastructure asset management and cloud communication systems.

Based on the current financial data, there is sufficient budget to meet short-term needs in 2024 and 2025, but beginning in 2026, there will be insufficient budget for all currently identified future needs if additional budget is not requested. Therefore, it is expected that the levels of service will decrease over time if the budget does not increase to meet anticipated needs. The identified deficit is mostly comprised of unfunded renewal needs as well as the currently unfunded operating impact for anticipated capital projects outlined in **Section 8.1** and **Section 8.2**. The lifecycle model is subject to change as the budget impact of identified demands (**Section 5**) and risks (**Section 6**) remains unquantified. Forecast reliability and confidence is further discussed in **Section 9.7**.

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9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure it provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-Term financial planning (LTFP) is critical for the City to ensure the networks lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customer while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for its; the City will have difficult choices to make in the future which will include options such as higher costs reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all of the networks needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

9.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- Medium-term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio¹¹ **59%**

The Asset Renewal Funding Ratio is used to determine if the City is accommodating asset renewals in an **optimal** and **cost-effective** manner from a timing perspective and relative to financial constraints, the risk the City is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable, however, the expenditures are below this level in some service areas predominantly

¹¹ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

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due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

Over the next 10 years IT expects to have **59%** of the funds required for the optimal renewal of assets. It is evident that the renewal needs considerably exceed the budgeted provision for renewals. Major contributors to unfunded renewals include data centre assets and networking assets.

If assets are not renewed in the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to the City's reputation and risk of fines or legal costs

The lack of renewal resources will be addressed in future AM Plans while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

MEDIUM-TERM – 10-YEAR FINANCIAL PLANNING PERIOD

10-Year Operations, Maintenance and Renewal Financial Ratio **92%**

Although this AM Plan includes forecast projections to 30 years, the higher confidence numbers are typically within the first ten (10) years of the lifecycle forecast. The 10-year Operations, Maintenance and Renewal Financial Ratio compares the Planned Budget with the Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the Asset Renewal Funding Ratio (ARFR), the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization's risk and service level commitments.

The forecast operations, maintenance and renewal costs over the 10-year planning period is **\$23.8 million** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The proposed (budget) operations, maintenance and renewal funding is **\$21.8 million** on average per year giving a 10-year funding shortfall of **\$2.0 million** per year or **\$19.6 million** over the 10-year planning period. This indicates that **92%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget, which is within the ideal 90-110% range. Therefore, it can be concluded that IT is funding its assets at an acceptable rate. Note, that these calculations exclude acquired assets. The existing shortfall is made of unfunded renewal needs as well as the yet unfunded operating impact of anticipated capital projects.

Funding an annual funding shortfall or funding 'gap' should not be addressed immediately. The overall gap in funding city-wide will require vetting, planning and resources to begin to

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

incorporate gap management into the future budgets for all City services. This gap will need to be managed over time to reduce it in a sustainable manner and limit financial shock to customers. Options for managing the gap include;

- Financing strategies – increased funding, block funding for specific lifecycle activities, long-term debt utilization;
- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets; and,
- Influence level of service expectations or demand drivers.

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of **90-110%** for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

9.2 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Table 26 shows the forecast costs (outlays) required for consideration in the 30-year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

The City will manage the 'gap' by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low-use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

Table 24: Forecast Costs (Outlays) for Long-Term Financial Plan

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2024	\$7,117,000	\$21,203,486	\$61,870	\$1,177,748	\$0
2025	\$2,933,000	\$21,028,896	\$61,870	\$1,437,714	\$0
2026	\$2,333,000	\$21,043,424	\$61,870	\$2,460,490	\$0
2027	\$1,500,000	\$21,143,424	\$61,870	\$1,971,871	\$0
2028	\$0	\$21,643,424	\$61,870	\$1,504,513	\$0
2029	\$0	\$21,643,424	\$61,870	\$1,548,806	\$0
2030	\$0	\$22,143,424	\$61,870	\$1,471,716	\$0
2031	\$0	\$22,143,424	\$61,870	\$290,025	\$0
2032	\$0	\$22,683,424	\$61,870	\$3,634,687	\$0
2033	\$0	\$22,683,424	\$61,870	\$1,428,661	\$0
2034	\$0	\$22,683,424	\$61,870	\$2,580,115	\$0
2035	\$0	\$22,683,424	\$61,870	\$1,710,997	\$0
2036	\$0	\$22,683,424	\$61,870	\$1,711,794	\$0
2037	\$0	\$22,683,424	\$61,870	\$1,695,577	\$0
2038	\$0	\$22,683,424	\$61,870	\$1,258,913	\$0
2039	\$0	\$22,683,424	\$61,870	\$409,650	\$0
2040	\$0	\$22,683,424	\$61,870	\$3,642,563	\$0
2041	\$0	\$22,683,424	\$61,870	\$1,163,442	\$0
2042	\$0	\$22,683,424	\$61,870	\$2,726,886	\$0
2043	\$0	\$22,683,424	\$61,870	\$1,970,694	\$0
2044	\$0	\$22,683,424	\$61,870	\$1,562,669	\$0
2045	\$0	\$22,683,424	\$61,870	\$1,703,453	\$0
2046	\$0	\$22,683,424	\$61,870	\$1,197,444	\$0

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2047	\$0	\$22,683,424	\$61,870	\$18,921	\$0
2048	\$0	\$22,683,424	\$61,870	\$3,967,260	\$0
2049	\$0	\$22,683,424	\$61,870	\$1,551,817	\$0
2050	\$0	\$22,683,424	\$61,870	\$2,466,012	\$0
2051	\$0	\$22,683,424	\$61,870	\$1,974,225	\$0
2052	\$0	\$22,683,424	\$61,870	\$1,440,690	\$0
2053	\$0	\$22,683,424	\$61,870	\$1,425,650	\$0

9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in the City’s operational budget and 10 year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM plan will provide service delivery options and alternatives to optimize limited financial resources.

9.4 VALUATION FORECASTS

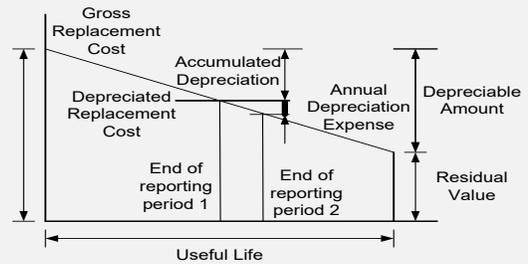
Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and remove the high costs of renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs, however, this will be improved for the next iteration of the plan.

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

9.5 ASSET VALUATION

Replacement Cost (Gross)	\$25,205,458
Depreciable Amount	\$25,146,727
Depreciated Replacement Cost¹²	\$9,268,123
Annual Depreciation	\$1,979,428



9.6 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 30-year horizon and do not address other operational needs not yet identified;
- Maintenance forecasts are based on current budget allocations and do not identify asset needs at this time. It is solely based on planned activities; and,
- Replacement costs were based on historical costing. They were also made without determining what the asset would be replaced with in the future.

9.7 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the AMP Overview.

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a **Low** to **Medium** confidence level.

¹² Also reported as Written Down Value, Carrying or Net Book Value.

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

Table 25: Confidence Assessment

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	Low	The impacts from the identified demand drivers were not quantified and added to the lifecycle model for this iteration of the AM plan.
Acquisition Forecast	Medium	Used IT's 10-Year Capital Plan for anticipated acquisitions which are subject to change especially as a result of the ongoing cybersecurity incident.
Operations Forecast	Medium	Based on IT's multiyear operating forecast.
Maintenance Forecast	Medium	Based on IT's multiyear operating forecast.
Renewal Forecast - Asset Values	Low-Medium	Renewal costs for hardware assets have come from the IT Division and for vehicles from the Corporate Fleet.
Renewal Forecast - Asset Useful Life	Low-Medium	Estimated service lives are based on IT's estimates.
Renewal Forecast - Condition Modelling	Low	The condition was not available for most assets.
Disposal Forecast	Not Applicable	No disposals were integrated into the forecast.

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PRACTICES¹³

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2023 IT 10-Year Capital Forecast;
- 2024 - 2026 Multi-Year Operating Forecast;
- Building Condition Assessment Reports;
- Asset Management Data Collection Templates;
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter Expert Opinion and Anecdotal Information; and,
- Reports from the mandatory inspections, operational and maintenance activities internal reports.

10.2 IMPROVEMENT PLAN

It is important that the City recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision-making. The tasks listed below are essential to improving the AM Plan and the City's ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning and to plans to physically improve the assets.

The Improvement Plan **Table 28** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this AM Plan will provide updates on these improvement plans.

INFORMATION TECHNOLOGY 2024 ASSET MANAGEMENT PLAN

Table 26: Improvement Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1.	Develop an asset register for all IT assets.	IT	Internal Resources	2025
2.	Determine replacement values for IT's intangible assets.	IT/Finance/CAM		2025
3.	Develop methodologies to determine asset conditions for IT's assets.	IT		2025
4.	Release a Customer Engagement Survey to develop customer values and customer levels of service.	IT/CAM		2025
5.	Improve confidence assessment of data used for financial forecast.	IT/Finance		Ongoing

10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated on a regular basis to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one to ten-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio (ARFR) achieving the Organizational target (this target is often 90 – 110%).

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Long-Term Care Asset Management Plan 2024



Long-Term Care 2024 Asset Management Plan

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SUMMARY AND QUICK FACTS

SERVICE PROFILE



The mission of the municipal Long-term Care Homes, Macassa Lodge and Wentworth Lodge is to provide person-centred long-term care that promotes well-being and creates opportunities to maximize the quality of life of the 430 residents. Starting from the perspective that the Lodges serve as the resident's home and that the goal is to assist the resident to maximize their functional abilities to be as independent as possible.

ASSET SUMMARY



Replacement Value
\$319M

GOOD CONDITION

Average Age of **24** years
 or **51%** of the average
 remaining service life



LEVEL OF SERVICE SUMMARY

- Majority of respondents felt the Lodges provide a homelike environment which is clean and inviting, with a welcoming atmosphere where residents feel safe and accepted.
- Majority of respondents are overall satisfied with the quality of care and services received.
- Most respondents were satisfied with Food Services and Laundry Services.
- 60% of Ontarians are willing to pay a 2% increase in personal tax towards improvements to the long-term care system.
- 43% of Ontarians agree to increase the minimum number of staff required to be on duty.

ASSET HIGHLIGHTS

ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION	STEWARDSHIP MEASURES
Facilities	2	\$312.7M	GOOD	Building Condition Assessments
Resident Care Equipment	1,284	\$5.8M	FAIR	Nursing Equipment - 3 rd Party Annual Inspections; All other - % Remaining Service Life (RSL)
Administrative	676	\$0.6M	POOR	% RSL

DATA CONFIDENCE



VERY HIGH

MEDIUM

VERY LOW

Long-Term Care 2024 Asset Management Plan

DEMAND DRIVERS

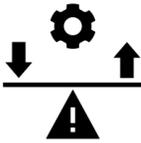


Population Change – Hamilton’s population will continue to grow including increased growth in the 55+ age demographic. The demand for long-term care facilities is also expected to grow in Hamilton resulting in a rapidly growing waitlist for long-term care placements and increased pressure on the healthcare system, seniors, and their families/caregivers.



Legislative Change – The Ministry of Long-Term Care frequently makes changes to the requirements related to the operations of long-term care homes. These changes may have budgetary implications that must be incorporated into annual operating budgets to stay compliant.

RISK



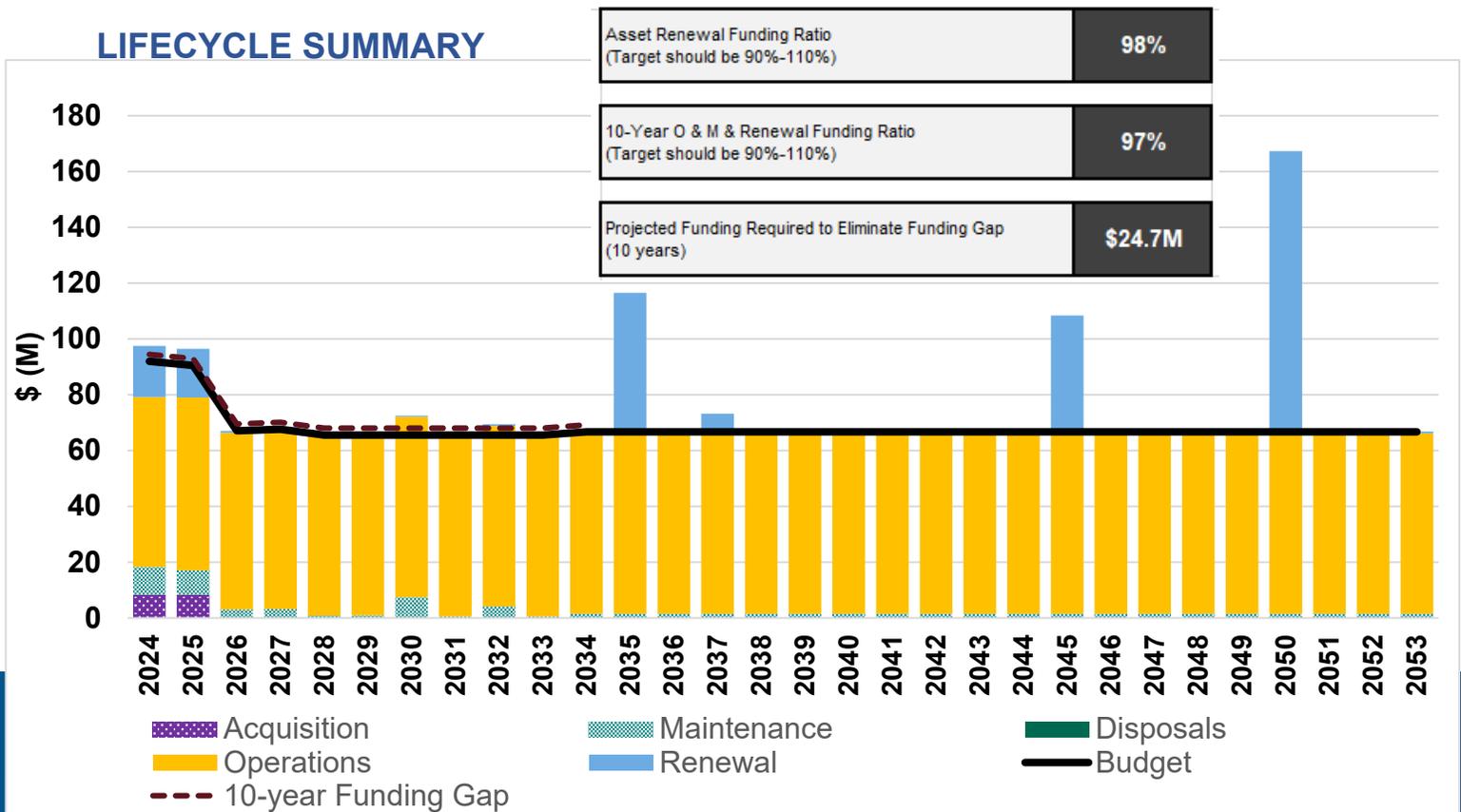
- Critical Assets are identified as the LTC Homes facilities, backup generators and staffing.

CLIMATE CHANGE MITIGATION



- 30 trees planted at Wentworth Lodge site;
- Building Automation Systems in place at both Lodges;
- All lighting fully retrofitted to LED; and,
- New “B” wing expansion includes provisions to achieve net-zero emissions.

LIFECYCLE SUMMARY



Long-Term Care 2024 Asset Management Plan

1. INTRODUCTION

The **City of Hamilton** owns and operates two municipal not-for-profit Long-Term Care (LTC) Homes, Macassa Lodge (ML) and Wentworth Lodge (WL), that provide 24-hour nursing and personal care and access to health professionals for the residents. LTC Homes has 430 beds in private, semi-private, and ward two-person rooms. The purpose of this Asset Management Plan (AM Plan) is to ensure that Long-Term Care has the required assets to provide person-centred long-term care that promotes well-being and creates opportunities to maximize the quality of life for residents.

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements (i.e. O.Reg 588/17¹) and required funding to provide the appropriate levels of service over the 2024-2053 planning period.

The **Long-Term Care** division assets include **facilities, resident care equipment and administrative assets**.

Since Sunday, February 25, 2024, the City of Hamilton experienced a cyber incident that disabled some of the IT systems. As a result, this AM Plan was created based on the data that was accessible at the time of publication.

¹ Government of Ontario, 2017

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2. BACKGROUND

The information in this section is intended to provide background on the Long-Term Care service by providing a service profile, outlining legislative requirements, and defining the asset hierarchy used throughout the report. This section will provide the necessary background for the remainder of the AM Plan.

2.1 SERVICE PROFILE

Listed below are related documents reviewed in preparation of the Asset Management Plan:

- **Asset Management Plan Overview Document**; and,
- Macassa Lodge and Wentworth Lodge Building Condition Assessments.

Additional financial-related documents are identified in **Section 10** Plan Improvement and Monitoring.

The service profile consists of four main aspects of the service:

- Service History;
- Service Function;
- Users of the Service; and,
- Unique Service Challenges.

2.1.1 SERVICE HISTORY

Macassa Lodge and Wentworth Lodge both have a rich history of providing care to some of Hamilton's most vulnerable residents.

Construction began on the first Macassa Lodge facility by the City of Hamilton in 1895. It was built overlooking Hamilton Harbour as a House of Refuge. Macassa Bay was the original name of Hamilton Harbour and means "beautiful waters." The new Macassa Lodge was opened in May 1956 on the corner of Upper Sherman Avenue and Ninth Avenue (later named Macassa Avenue). While social attitudes towards care and facility design have certainly evolved over the past century and a half, Macassa Lodge's objective has remained constant -- We are committed to our people, dedicated to building a strong and healthy community, passionate about making a difference by providing quality care, and recognized for our excellence.

Wentworth Lodge has been a part of the Dundas community for more than 100 years. The original building was built and operated by the County of Wentworth in 1912 and provided housing to the aged and low-income residents. The original building was named the House of Refuge and housed 24 residents. It was renamed Wentworth County Home for the Aged around 1938 and in 1953 the name was changed to Wentworth Lodge. Over the years, the number of residents steadily increased to the current number of 160. Although the Wentworth Lodge of the

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21st century is vastly different from its counterpart of 1912, the same philosophy of caring, community and tradition continues.

2.1.2 SERVICE FUNCTION

Macassa Lodge and Wentworth Lodge are not-for-profit municipal Long-Term Care homes. Both provide 24-hour nursing and personal care support and access to a doctor and other health professionals for its residents.

The Mission of both LTC Homes is to provide person-centred long-term care that promotes well-being and creates opportunities to maximize the quality of life of our 430 residents.

Rooms and basic services at the LTC Homes include:

- Nursing and personal care;
- Housekeeping and laundry services;
- Bedding and furniture;
- Personal hygiene supplies;
- Medical supplies and equipment;
- Meals;
- Pastoral services; and,
- Social and recreation programs.

Macassa Lodge, located in a residential area of Hamilton, is one of two long-term care facilities owned and operated by the City of Hamilton. The Lodge has 270 beds in private, semi-private, and two-person ward rooms. Macassa meets all Ministry of Long-Term Care standards and is accredited by the Commission on Accreditation of Rehabilitation Facilities (CARF)².

Macassa Lodge's Adult Day Program (ADP) is a daily community support service for residents living in the community with some degree of cognitive impairment. The program also provides information, support, and respite time for caregivers. It offers social, recreational, intellectual, and physical activities. The activities are provided in a structured, supervised group setting. A hot nutritious lunch, refreshments, medication reminders and assistance with the activities of daily living are also provided.

Over the past 40 years, Macassa's Adult Day Program has provided over 40,000 Hamilton clients with a welcoming place to come and relax, meet friends, and engage in enjoyable and meaningful activities that help them maintain their current level of independence. We welcome over 30 clients daily from the surrounding area.

² CARF International, 2024

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Programming includes:

- Intergenerational programs with local schools and daycares;
- Social and cognitive programs; and,
- Creative programs.

Wentworth Lodge, located in a residential area of Dundas, is the second long-term care facility owned and operated by the City of Hamilton. Wentworth Lodge has 160 beds in private, semi-private, and two-person rooms. Wentworth Lodge meets all Ministry of Long-Term Care standards and is accredited by CARF³.

Wentworth Lodge is part of the Dundas Meals on Wheels community services. WL provides hot, nutritious meals for people with disabilities, recuperating from surgery, or anyone not able to cook for themselves within the Dundas community. The meals are prepared at Wentworth Lodge and at lunchtime, Meals on Wheels delivers the meals to the client's own home or apartment. This supports and maintains our community relationship within Dundas.

The Fixing Long-Term Care Act and Municipal Act require that every upper or single-tier municipality in southern Ontario establishes and maintains at least one long-term care facility. The City of Hamilton is meeting and exceeding this requirement by operating two LTC Homes.

2.1.3 USERS OF THE SERVICE

Some of Hamilton's most vulnerable populations depend on Long-Term Care as residents whose care needs cannot be met in the community. Residents may require this level of support due to advancing age, disability, or declining health. Families of residents need the availability of long-term care services when the increasing health needs of their loved ones can no longer be managed at home.

The Lodges have a total of 430 beds which calculates to 11 percent of all long-term care beds available in Hamilton (total beds available as of January 2024 - approximately 3,820⁴). Yet, the Lodges (ML and WL) have 40 percent of the Hamilton Long-Term Care waitlist (681 people). During the application process for long-term care, each person can choose up to five homes in order of preference. Macassa or Wentworth Lodge has been selected as the first choice by about 20 percent of people waiting for Long-Term Care in Hamilton. The Lodges are also involved in Community Partnerships which support Meals on Wheels at WL and an Adult Day Program at ML.

Macassa Lodge and Wentworth Lodge value the individual characteristics of the residents they serve. The resident is recognized as the expert regarding their personal healthcare, choices, and risks. Starting from the perspective that the Lodges serve as the resident's home and that

³ CARF International, 2024

⁴ Reports on Long-Term Care Homes, 2024

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the goal is to assist the resident to maximize their functional abilities to be as independent as possible.

Based on the 2021 (2016) Census results⁵, Hamilton's population is 569,353 (536,917), where the population average age is 41.5 years and 32.2 percent of the population is 55 years and over. Based on the Ontario population projections, in 2046 the 55+ age group is expected to be 30.64⁶ percent of the total population while the overall population will increase by 43 percent. This will result in an approximate 1.8M increase in the 55+ age group demographic in Ontario. Based on the provincial projections, Hamilton can expect an approximate increase of 66,000 residents in the 55+ age group demographic. Currently, the municipal LTC Homes serve 0.075 percent of Hamilton's community with 430 total available beds. As the population grows this percentage is expected to decrease.

⁵ Census Profile, 2021 Census of Population, 2021

⁶ Ministry of Finance; Ontario Population Projections (2021)

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Figure 1: Map of Hamilton Long-Term Care Lodges



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2.1.4 UNIQUE SERVICE CHALLENGES

LTC has several unique service challenges including:

- The LTC Homes are unable to admit all potential residents who require high care needs due to the facilities running at full occupancy. The city is experiencing a shortage of long-term beds resulting in lengthy wait lists for placement. In Ontario, long-term care homes are regulated and funded by the government and must be licensed by the Ministry of Long-Term Care (MOLTC). The ministry determines the number and location of long-term care beds in Ontario which can be a long and complicated process. The waitlist is expected to continue to grow if new beds are not available;
- ML-D wing, which houses 44 residents, has outdated room configurations where shared rooms/wards are the only available accommodations. These smaller shared spaces can lead to an increased spread of viral outbreaks, for example, COVID-19, and prolonged days in an outbreak. Also, these smaller spaces do not meet the new standards for door openings and turning radius with resident lifts for personal care services which impacts resident care;
- The LTC provides care and services 24 hours per day, 7 days a week to the residents requiring around-the-clock staffing. The region is experiencing a shortage of available trained staff, burnout of current staff, and an increase of experienced workers exiting the healthcare industry. Despite the investments made by the province, there is an anticipated shortfall of 33,000 nurses and Personal Support Workers (PSWs) in 2027 – 2028 across hospitals, long-term care and home care across the province⁷;
- The nature of residents' needs is changing. An increase in bariatric requirements has a significant impact on how resources are used and how care is delivered. Diversity and cultural shifts are also affecting how services are now delivered. An increase in staffing and additional training are required to address these changes. Facilities may need to be retrofitted to support evolving needs; and,
- Currently, 83 percent of residents living at the two lodges have cognitive and/or mobility issues. This is an increasing trend across the region and province. Between 2019-2020 76⁸ percent of people entering long-term care in Ontario had mild to severe cognitive issues, an increase of 25 percent since 2011. Furthermore, 80 percent of people needed support with activities of daily living, an increase of 67 percent since 2011.

⁷ Financial Accountability Office of Ontario, 2023

⁸ Ontario Long Term Care Association, 2023

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2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of LTC Lodges services are outlined in **Table 1**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

Table 1: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENT
Fixing Long-Term Care Act, 2021, S.O. 2021, c. 39, Sched. 1 (includes O. Reg. 246/22: General)	Requirements related to the operations of long-term care homes including residents’ rights, care and services, quality, admission of residents, councils, operation of homes, funding, licensing, municipal homes and First Nations homes, compliance, and enforcement, transitional and administration.
Ministry of Long-Term Care, Ministry of Health, Ontario under	Oversee long-term care in Ontario to ensure that residents get the quality of care and quality of life they need and deserve both now and in the future. This includes supporting the building of new homes and upgrading outdated homes, setting the legislation, regulations, and policies that all homes must follow, developing programs to attract and retain workers and inspecting homes and ensuring standards are met. The ministry administers the following legislation: Fixing Long-Term Care Act, 2021, Ontario Regulation 246/22, Connecting Care Act, 2019, and Health Protection and Promotion Act, s.78.
O. Reg. 493/17: Food Premises under	Applies to all food premises and provides regulations related to operation and maintenance, cleaning and sanitizing, sanitary facilities, food handling and commodities.
Municipal Act, 2001, S.O. 2001, C.25	Enables the municipality to govern its affairs as it considers appropriate and to enhance the municipality’s ability to respond to municipal issues.

2.3 ALIGNMENT WITH COUNCIL PRIORITIES

As referenced in the **AM Plan Overview** in **Section 5.4**, Strategic Alignment, The City’s strategic goals and objectives are shaped by internal drivers such as Council-approved strategies and plans, as well as external forces such as citizen expectations, and legislative and regulatory requirements. The specific legislative and regulatory requirements for service areas are provided in each AM Plan.

City objectives provide asset owners with direction regarding levels of service and asset investment priorities. This AM Plan will demonstrate how the City’s objectives for non-core assets can influence levels of service and direct asset expenditures.

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2.4 ASSET HIERARCHY

In order to deliver person-centred long-term care that promotes well-being and creates opportunities to maximize the quality of life for residents, LTC Homes require assets. The LTC Homes service areas have been broken down into three asset classes for the purpose of this AM Plan:

- **Facilities:** refers to any City-owned facilities necessary to deliver LTC services;
- **Resident Care Equipment:** refers to all equipment used for service delivery including nursing equipment, dietary equipment, housekeeping and laundry equipment and furniture; and,
- **Administrative:** refers to different types of technology required to deliver the service including IT assets, audio/visual equipment as well as maintenance equipment.

The asset class hierarchy outlining assets included in this section is shown below in **Table 2**.

Table 2: Asset Class Hierarchy

SERVICE AREA	LONG-TERM CARE LODGES		
ASSET CLASS	FACILITIES	RESIDENT CARE EQUIPMENT	ADMINISTRATIVE
Asset	<ul style="list-style-type: none"> • Macassa Lodge • Wentworth Lodge 	<ul style="list-style-type: none"> • Nursing Equipment • Dietary Equipment • Housekeeping and Laundry Equipment • Furniture 	<ul style="list-style-type: none"> • IT Assets (includes cell phones, tablets, laptops, and desktops) • Audio/Visual Equipment • Maintenance Equipment

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3. SUMMARY OF ASSETS

This section provides a detailed summary and analysis of the existing inventory information as of November 2023 including age profile, condition methodology, condition profile, and asset usage and performance for each of the asset classes. **Table 3** displays the detailed summary of assets for the LTC Homes service area. The sources for this data are a combination of data included in the City's database information. It is important to note that inventory information does change often and that this is a snapshot of the time of information available.

The City owns approximately **\$319 million** in LTC assets which are on average in **GOOD** condition. Assets are a weighted average of **24 years** in age which is **51%** of the average remaining service life (RSL). The majority of the weighting for these averages comes from the facilities asset class. For most assets, this means that the City should be completing preventative, preservation and minor maintenance activities per the inspection reports as well as operating activities (e.g., inspection, cleaning) to prevent any premature failures.

Data confidence descriptions are outlined on **page 31** of the **Asset Management Plan Overview**. The overall replacement value data confidence for the registry is **Medium**. For Facilities, replacement costs are calculated using an internal Corporate Facilities and Energy Management (CFEM) tool which encompasses current market rates, building type and size and were escalated to include additional soft costs. The remaining replacement costs are generally based on Subject Matter Expertise (SME) or inflated values of original purchase/replacement cost estimates. In some of the asset classes, there is no current market data available for replacement value.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. In addition, the assets included below are assets that are assumed and in service at the time of writing.

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Table 3 : Detailed Summary of Assets
***Weighted Average by Replacement Value**

FACILITIES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
LTC Lodges	2	\$312.7M	24 years (52%)	2-GOOD
Data Confidence	Very High	Medium	High	High
SUBTOTAL		\$312.7M	24 years (52%)	2-GOOD
DATA CONFIDENCE		Medium	High	High

RESIDENT CARE EQUIPMENT				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Nursing Equipment	862	\$2.5M	3.5 years (41%)	3-FAIR
Data Confidence	Medium	High	High	High
Dietary Equipment	267	\$1M	19 years (12%)	3-FAIR
Data Confidence	Low	Medium	Medium	Low
Housekeeping and Laundry	123	\$0.3M	14 years (0%)	3-FAIR
Data Confidence	Very Low	Medium	Low	Low
Furniture	32	\$2M	20 years (0%)	4-POOR
Data Confidence	Low	Medium	Very Low	Low
SUBTOTAL		\$5.8M	13 years* (20%)*	3-FAIR*
DATA CONFIDENCE		Medium*	Medium*	Medium*

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ADMINISTRATIVE				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Audio/Visual Equipment	110	\$0.82M	16 years (0%)	5-VERY POOR
Data Confidence	Low	Low	Low	Low
IT Assets	398	\$0.4M	4.5 years (7%)	4-POOR
Data Confidence	High	High	High	Medium
Maintenance Equipment	168	\$0.96M	9 years (53%)	3-FAIR
Data Confidence	Low	Medium	Low	Low
SUBTOTAL		\$0.6M	7 years* (14%)*	4-POOR*
DATA CONFIDENCE		High*	Medium*	Medium*
TOTAL		\$319M	24 years* (51%)*	2-GOOD*
DATA CONFIDENCE		Medium*	High*	High*

3.1 ASSET CONDITION GRADING

Condition refers to the physical state of assets and is a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, **Table 4** below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in **Table 30**, is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

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Table 4: Equivalent Condition Conversion Table



EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	PERCENT OF REMAINING SERVICE LIFE (%RSL)	NURSING EQUIPMENT – 3-POINT SCALE	FACILITIES CONDITION INDEX (FCI)
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance is required only.	>79.5%	N/A	N/A
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on the asset’s usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	GOOD	< 5%
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset’s usage. Minor to significant maintenance is required.	39.5% - 69.4%	FAIR	>= 5% to < 10%
4 Poor	The asset has significant defects and deterioration. Deterioration has an impact on asset’s usage. Rehabilitation or major maintenance is required in the next year.	19.5% -39.4%	POOR	>= 10% to <30%
5 Very Poor	The asset has serious defects and deterioration. The asset is not fit for use. Urgent rehabilitation or closure is required.	<19.4%	N/A	>= 30%

The following conversion assumptions were made:

- For assets where a condition assessment was not completed, but age information was known, the condition was based on the percent of remaining service life (administrative and resident care excluding Nursing Equipment items – lifts, transfer equipment, bath and shower chairs, tubs, slings, chargers, and batteries);
- For most of the Nursing Equipment assets, condition assessments were completed using a 3-point scale ranging from Good to Poor; and,
- Facilities Condition Index was based on ranges provided by the consultant who completed the Building Condition Assessment (BCA) which corresponds to a 4-point scale.

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3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile, and Performance Issues for each of the asset classes:

- The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life (ESL) where they can be planned for replacement. Some lower-cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if an asset's condition is based on age, it is typically considered to be of a low confidence level. Although typically, age is used when projecting replacements beyond the 10-year forecast to predict degradation;
- Condition refers to the physical state of assets and is a measure of the physical integrity of assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected/assessed at different frequencies and using different methodologies to determine their condition which are noted in this section; and,
- Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

3.2.1 FACILITIES PROFILE

3.2.1.1 AGE PROFILE

The City has two Long-Term Care Facilities, Macassa Lodge and Wentworth Lodge.

The age profile for the LTC Facilities assets is shown in **Figure 2**. For Facility assets, the data confidence for age is typically Very High, because this information was recorded during the construction or significant renovations of wings within the facilities. Both Lodges have evolved and expanded over the years, including significant renovations. A weighted average method was used based on square footage and year constructed (or substantially renewed) for each wing to calculate a revised average 'built year' of each facility to get an 'effective' age for the entire facility as shown in **Table 5** below. These significant renovations were considered renewals as they essentially reset the estimated service life for significant portions of the facility.

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Table 5: Facilities Revised 'Built Year' Weighted Average

WING NAMES	YEAR CONSTRUCTED/SUBSTANTIAL RENEWAL	TOTAL AREA (SQUARE FEET)	REVISED 'BUILT YEAR' WEIGHTED AVERAGE (BASED ON SQUARE FEET)
MACASSA LODGE			
A Wing	1995	56,130	474
C Wing	2000	75,000	635
D Wing	1985	20,377	171
E Wing	2000	40,210	340
K Wing OLD	1987	9,000	76
K Wing New Kitchen	2017	9,000	77
S Wing	2000	26,469	224
TOTAL SQUARE FOOTAGE:		236,186	1998
WENTWORTH LODGE			
Beech Avenue and Trillium Court	2007	42,502	656
Rose Court and Oak Lane	1985	39,256	599
Lilac Lane and Maple Lane	2007	48,366	746
TOTAL SQUARE FOOTAGE:		130,124	2000

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Figure 2: Facilities Age Profile



3.2.1.2 CONDITION METHODOLOGY & PROFILE

Condition for LTC Facilities is determined based on the results of a Building Condition Assessment (BCA) completed by the Corporate Facilities and Energy Management (CFEM) division. The BCA identifies necessary major and minor maintenance activities in a 10-year forecast with projected costs and outputs a detailed report outlining methodology, overall findings and conditions.

BCAs are completed on LTC Facilities every five years and output a score called a Facility Condition Index (FCI) which is considered to be a High confidence level source for condition. The FCI is calculated based on a ratio of the estimated cost of maintenance/repair work required on the facility to the total estimated replacement cost of the facility. The 10-year forecast from the BCA's was incorporated into the maintenance plan shown in **Section 8.2**.

The condition conversion from FCI to the standardized 5-point scale used in this AM Plan is shown in **Table 4**. As per **Table 4**, there is no FCI value that can give a Very Good condition rating.

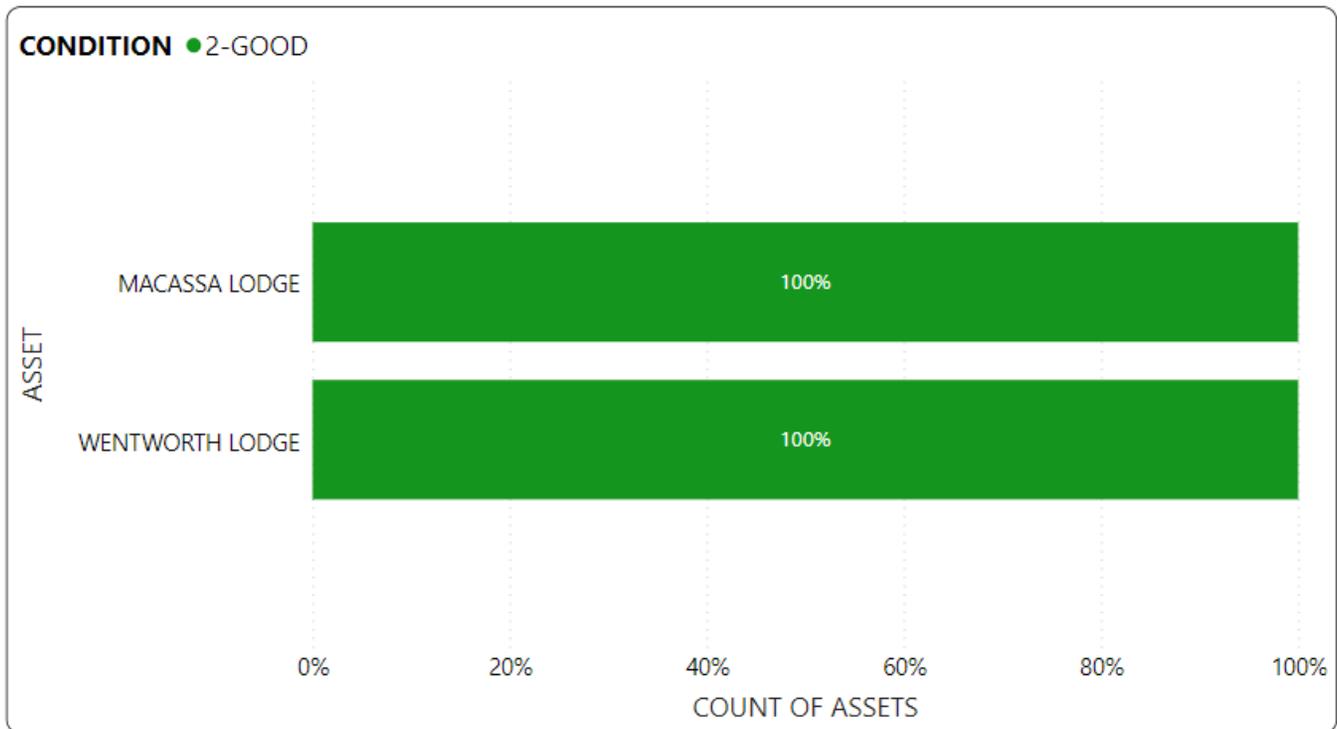
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Table 6: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Macassa Lodge	Every 5 years	2020	FCI (0%-100%)
Wentworth Lodge	Every 5 years	2020	FCI (0%-100%)

The condition profile for LTC Facilities assets is shown below in **Figure 3**. Both facilities that the Lodges occupy are in Good condition based on the results of the BCA. This shows that the renewals and investments in these facilities are being reflected in the overall condition score.

Figure 3: Facilities Condition Distribution



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3.2.1.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with LTC Facilities involve poor condition of asset components. The known service performance deficiencies in **Table 7** are identified using information from the 2020 Building Condition Assessment (BCA) and discussions with LTC staff.

Table 7: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Facilities	Macassa Lodge	Replacement – end-of-life	A-Wing Penthouses – Built-up Air Handling Units – AHU-1 and AHU-2 – unable to maintain required temperature if units fail.
		Replacement – end-of-life	Plumbing Piping (approx. five percent of the total square feet of supply piping every five years) – increased risk of losing water supply.
		Replacement – end-of-life	Primary Switchgear – Main Disconnect and Switchboard – increased risk of power outages.
		Replacement – end-of-life	D-wing Fan Coil Units (D3054) - unable to maintain the required temperature, units fail.
		Repair and resurfacing due to cracks	Parking Lots and Roadways – increased risk of personal injury.
		Outdated room configurations – D wing	Shared rooms/wards do not meet the new standards for door opening and turning radius with resident lifts.
	Wentworth Lodge	Replacement – end-of-life	Windows (Entire Building) – loss of energy efficiency and possible energy savings.

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ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
		Roof – approx. 20% remaining for replacement, end of life	Roofing – section with HVAC units makes roof replacement technically challenging as HVAC must be maintained during roofing replacement.
		Narrow room doors	Rose Court and Oak Lane – unable to fit beds through narrow doors.

3.2.2 RESIDENT CARE EQUIPMENT PROFILE

3.2.2.1 AGE PROFILE

The age profile of the LTC Resident Care Equipment assets is shown in **Figure 4**. An analysis of the age profile is provided below.

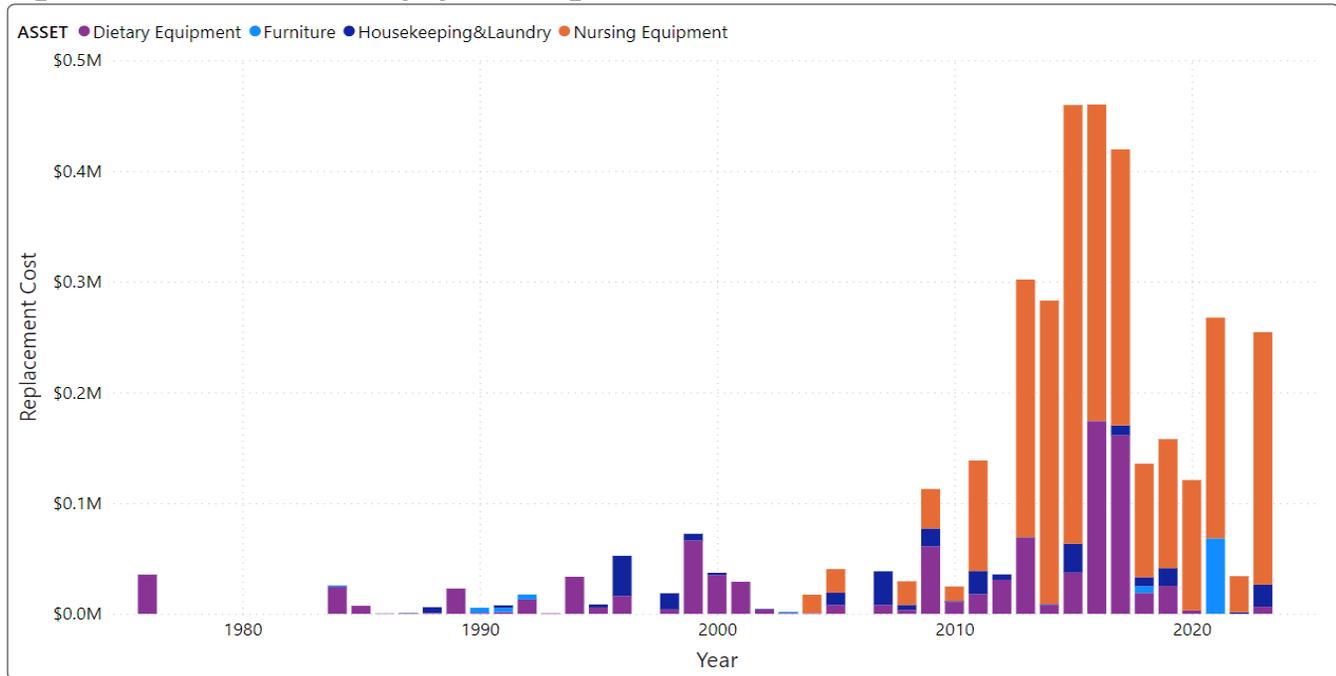
Overall, most of the Resident Care Equipment is reaching or just beyond the estimated service life. For Nursing Equipment assets, the data confidence for age is typically High because asset ages are formally tracked by a third party that performs regular testing, inspections and recommendations on the lift and transfer equipment. Lifts and transfer equipment have an estimated 10-year service life. Slings, batteries, and chargers have an estimated service life of five years. Based on ESL Nursing Equipment purchased in 2015 and prior will be coming up for renewal in the current year 2024.

Dietary Equipment age has a Medium confidence level with an overall average assets age of 19 years. Housekeeping and Laundry assets and Furniture assets age have lower confidence levels as most of the ages for these assets are unknown or assumed. The estimated service life for these asset categories ranges between one to thirty years.

The oldest equipment with a purchase date of the mid-1970s refers to an assortment of dietary equipment with an assumed purchase date of 1976 or before, it is unclear if this equipment still exists or has been replaced. A continuous improvement item has been added in **Table 30** to review the current asset registry and verify assets including their specifications, age and condition, and to track assets in a more formal and documented manner.

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Figure 4: Resident Care Equipment Age Profile



3.2.2.2 CONDITION METHODOLOGY & PROFILE

The majority of Resident Care Equipment does not have a formal condition process except for the Nursing Equipment. The Nursing Equipment is inspected annually by a third party and is given a condition score on a 3-point scale. The 3-point scale was used for the condition score for the other categories based on RSL percent where the age was known.

Table 8: Inspection and Condition Information

ASSET	LAST INSPECTION	DESCRIPTION	FREQUENCY	CONDITION SCORE OUTPUT
Nursing Equipment – (Resident Transfer Equipment: lifts, slings, bath and shower chairs, bathtubs, batteries, chargers)	July 2023	Assets are inspected by third parties/suppliers on an annual basis	Annual	Three Point Scale
Furniture	Ad Hoc	Ad Hoc	Ad Hoc	Replaced as needed

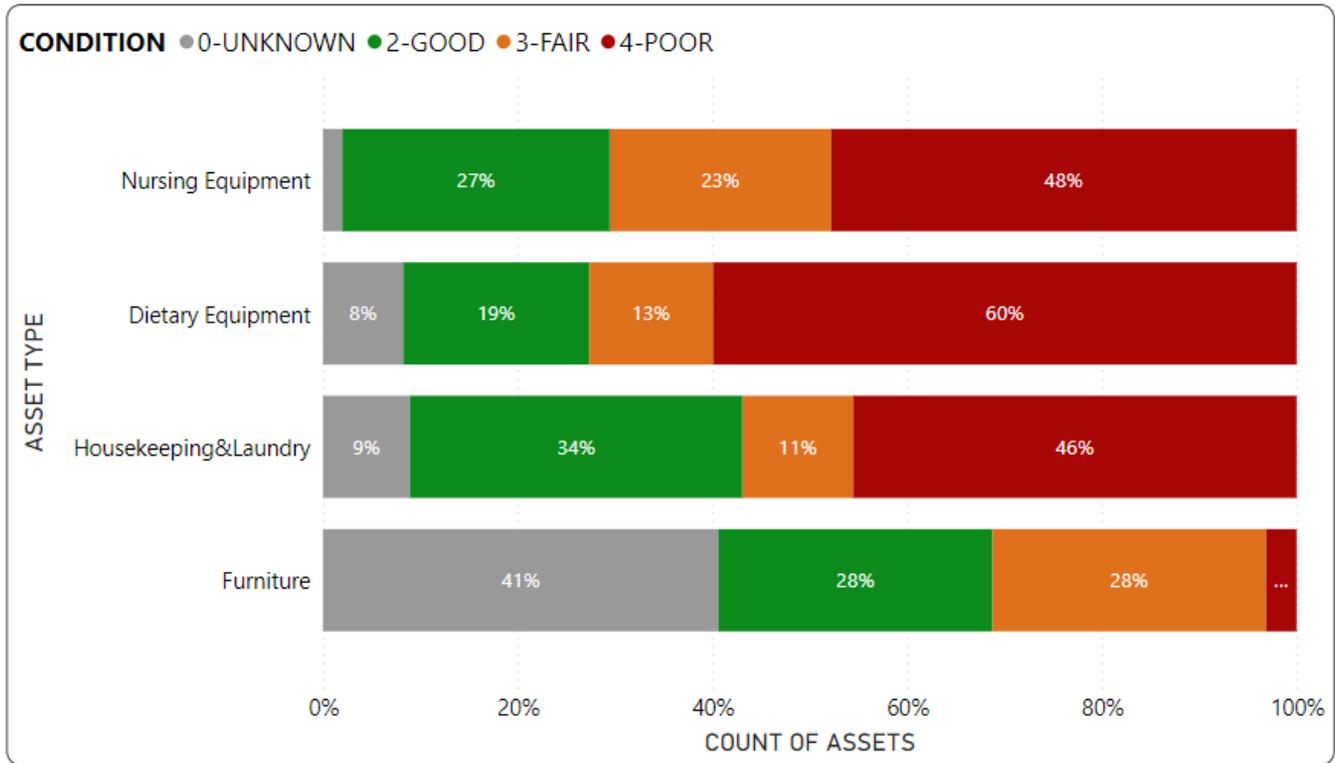
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ASSET	LAST INSPECTION	DESCRIPTION	FREQUENCY	CONDITION SCORE OUTPUT
Dietary Equipment	Ad Hoc	Ad Hoc	Ad Hoc	Replaced as needed
Housekeeping and Laundry Equipment	Ad Hoc	Ad Hoc	Ad Hoc	Replaced as needed

The condition profile for LTC Resident Care Equipment assets is shown below in **Figure 5**. As mentioned in **Section 3.1**, the original condition grades were converted to a standardized condition category for report consistency. It is evident that most assets, where age or condition is known, are in Fair to Poor condition. Where age is unknown, assets are replaced as needed and are maintained in operating condition and generally not permitted to deteriorate below Fair condition based on expert staff opinion. As mentioned above, an assortment of Dietary Equipment has an assumed purchase date of mid-1970. For this AM Plan, it was decided to use the year 1976 for this grouping as these assets are beyond the ESL and are considered in Poor condition based on age. A continuous improvement item has been added to **Table 30** to review the current asset registry and verify all listed assets are still in service.

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Figure 5: Resident Care Equipment Condition Profile



3.2.2.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with Resident Care Equipment involve assets exceeding their ESL. The known service performance deficiencies in **Table 9** were identified using staff input.

Table 9: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Call Bells	ML and WL	Wiring can fray over time. Call bells may not sound consistently. Replace at end of life.	Increased risk of injury due to delayed response. Decrease in resident satisfaction.
Bariatric equipment	ML and WL	A limited number of bariatric equipment.	Unable to accommodate increasingly complex needs of residents. Increased number of staff and staff time required to provide care.

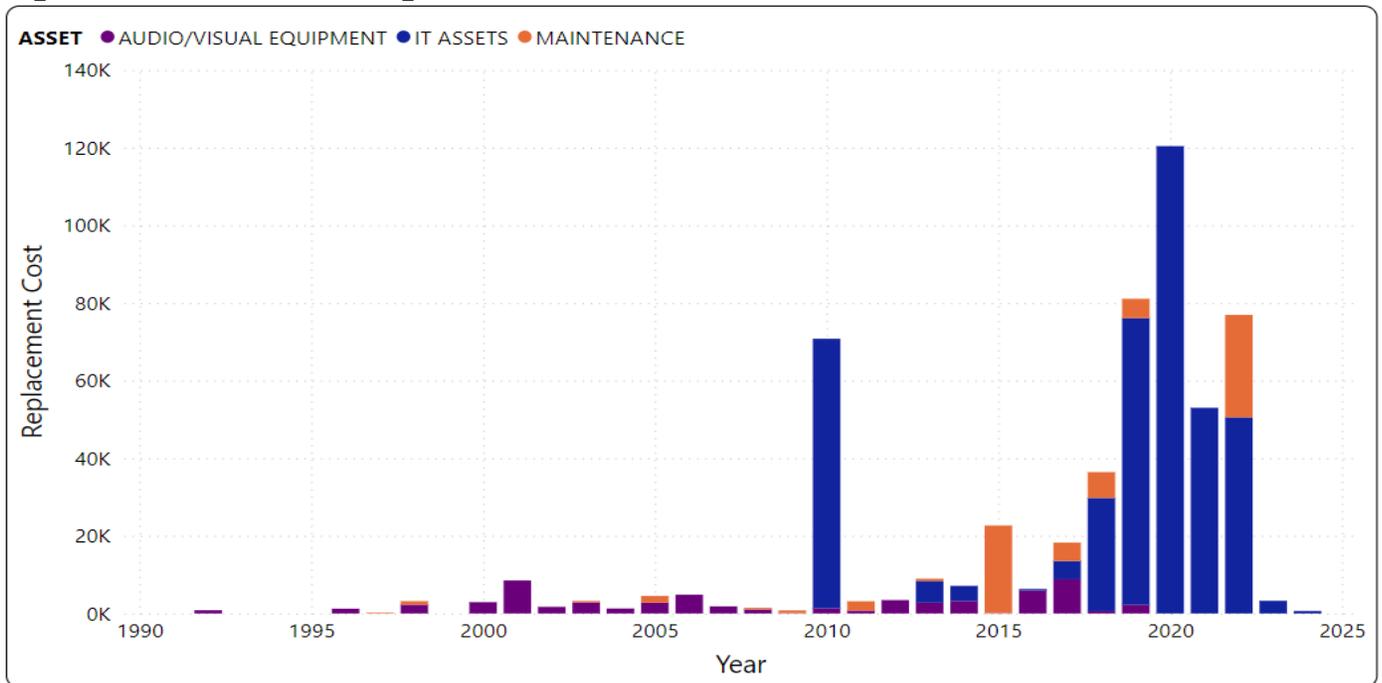
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3.2.3 ADMINISTRATIVE PROFILE

3.2.3.1 AGE PROFILE

The age profile of LTC Administrative assets is shown in **Figure 6**. On average, IT Assets have an ESL of five years, meaning any equipment purchased before 2019 is beyond its estimated service life. The large spike in 2010 indicates some IT assets have not been replaced for over 10 years and are in Very Poor condition as shown in the condition profile based on ESL. These assets are currently listed in the Corporate IT asset registry and are subject to monthly fees for LTC Homes. During the writing of this AM Plan, it was discovered these items are no longer in service. A continuous improvement item has been added to **Table 30** to have LTC Homes complete a full review and verification of current IT assets against the Corporate IT registry. For Maintenance assets, the data confidence for age is typically Low because age is not tracked and is unknown. Audio/Visual Equipment is overall in Very Poor condition. The condition has been estimated based on the age of the asset and %RSL, where known.

Figure 6: Administrative Age Profile



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3.2.3.2 CONDITION METHODOLOGY & PROFILE

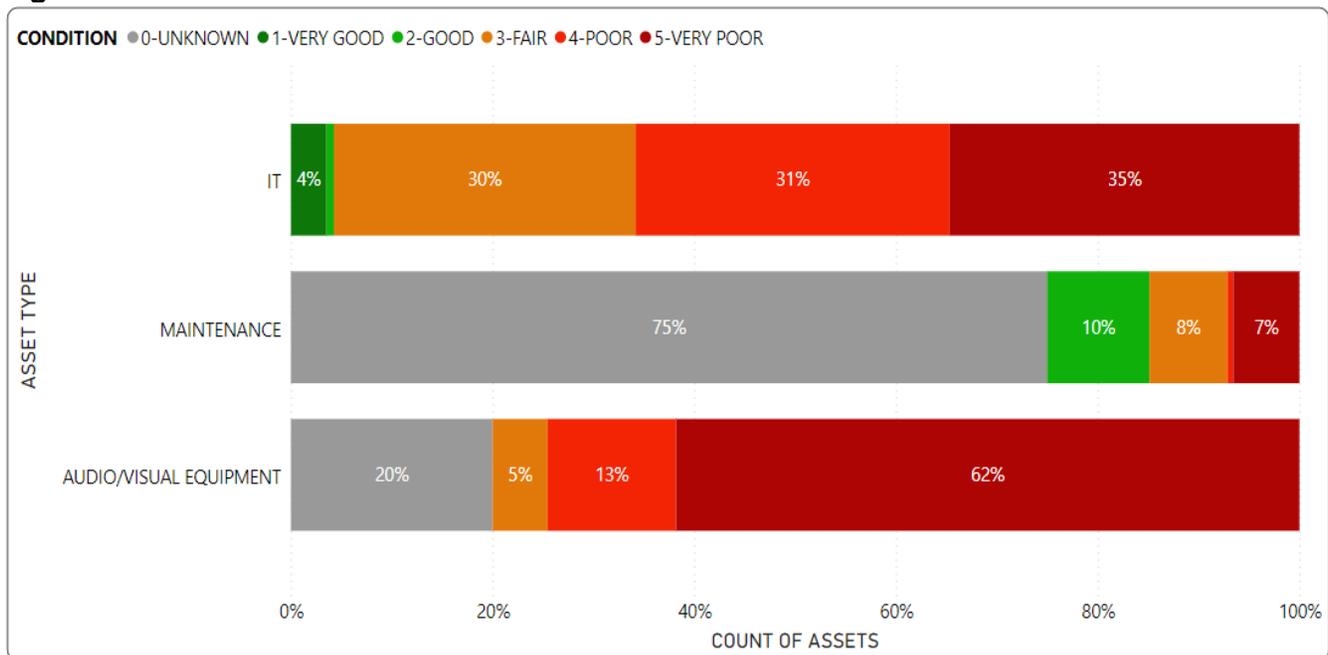
The Administrative assets profile does not have a regular inspection program and the condition has been estimated based on the age of the assets where known. Overall, the assets are in Poor to Very Poor condition based on the percent of remaining service life (%RSL).

Table 10: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
IT Assets	Ad Hoc	Ad Hoc	N/A
Maintenance Equipment	Ad Hoc	Ad Hoc	Replaced as needed
Audio/Visual Equipment	Ad Hoc	Ad Hoc	Replaced as needed

The condition profile of the Administrative assets is shown in **Figure 7**. As mentioned in **Section 3.1**, the original condition grades were converted to a standardized condition category for report consistency. IT Assets rated in Very Poor condition refer to laptops purchased in 2010 and as mentioned above, a continuous improvement item has been added to review the Corporate IT asset registry with current IT inventory at both Lodges. Maintenance assets do not have condition assessment and many assets are missing age data. Audio/Visual Equipment is generally in Poor or Very Poor condition based on %RSL. Both Maintenance and Audio/Visual Equipment assets, are replaced as needed and are maintained in operating condition. Generally, these assets are not permitted to deteriorate below Fair condition based on expert staff opinion.

Figure 7: Administrative Condition Distribution



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3.2.3.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with Administrative assets involve assets exceeding their ESL. The known service performance deficiencies in **Table 11** were identified using staff input.

Table 11: Known Service Performance Deficiencies

LOCATION	ASSET	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
ML & WL	Audio/Visual Equipment	Replacement – end-of-life	Declining satisfaction with levels of service and resident expectations with technology.
	IT	Replacement – end-of-life	Increased deficiencies are possible with aging equipment. Potential for some software to not work as planned. The risk that hardware and other upgrades are not available with aging IT equipment.
	Maintenance Equipment	Replacement – end-of-life	Preventative maintenance will have to be delayed without correct or functional equipment. Risk for added costs if a contractor is required to service equipment.

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4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what the City provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that the City provides those services.

O.Reg 588/17⁹ does not define levels of service for LTC assets and therefore the City has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in **Section 6.5** of the **AM Plan Overview**.

4.1 SURVEY METHODOLOGY

To develop customer values and customer levels of service, LTC Homes completed internal Resident and Family Satisfaction Surveys. These surveys are completed annually, and results are compared year to year. A continuous improvement item, outlined in **Table 30**, for the next AM Plan update, is to investigate an external survey to gather data from the general City of Hamilton population and potentially former family members of residents as well as current and past visitors. CAM is aware of a 2021 Nationwide Angus Reid Survey on Long-Term Care in Canada¹⁰. This survey will be used to provide some additional insight into Long-Term Care views of the general public which helped to inform some from the broader public.

As part of the FLTCA legislation, every licensee of a long-term care home is required to complete an annual survey with residents, their families, and caregivers to measure their experience with the home and the care, services, programs and goods provided at the home. LTC Homes completed their annual internal Satisfaction Survey October 1 – 31, 2023. Many residents have challenges completing the survey independently and the staff worked diligently with residents to assist in completing surveys. LTC also completes an independent food survey which also contributed to the development of Customer Values and Levels of Service. Results are also shared with the Resident and Family Councils. 2024-25 Continuous Quality Initiative Reports that speak to the 2023 overall satisfaction survey results for each lodge and can be found in **Appendix "A"**. These reports provide high level results of the internal survey questions as required under O. Reg 246/22. The analysis in this AM Plan considered all questions that were included in the surveys.

The survey received submissions from 263 respondents and contained 32 questions related to the LTC Homes service delivery. Based on the number of responses, a sample size of 263 correlates to a 95 percent confidence level with a five percent margin of error based on an

⁹ Government of Ontario, 2017

¹⁰ Angus Reid Institute, 2021

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approximate population size of 594. This was determined to be an acceptable confidence level to use to develop the customer values and customer performance measures for this AM Plan. It is important to note that respondents were allowed to opt out of questions, and so different questions may have different confidence levels depending on the opt-out rate for that question. Finally, about 80 percent of LTC Home residents are assessed to have a cognitive impairment and might need support to complete the survey. This may impact the comfort level of the respondent and may affect their answers as they are not anonymous when completing the survey.

While these surveys were used to establish customer values and customer performance measures, it is important to note that there were also limitations to the survey methodology which may reduce the confidence level in the survey data. CAM recommends that LTC Homes consider some modifications to the existing internal survey in order to improve the results by ensuring the response scales used to cover all possibilities (i.e., standardize to a 5-point Likert¹¹ Scale). This is a continuous improvement item identified in **Table 30**.

Table 12: Data Confidence Levels

GRADE	DATA CONSISTENCY (STANDARD DEVIATION)	CONFIDENCE LEVEL (MARGIN OF ERROR AT 95% CONFIDENCE IN SAMPLE SIZE)
Very High	0 to 0.5 – results are tightly grouped with little to no variance in response.	0% to 5% - minimal to no error in results, can generally be interpreted as is.
High	0.5 to 1.0 – results are tightly grouped but with slightly more variance in response.	5% to 10% - error has become noticeable, but results are still trustworthy.
Medium	1.0 to 1.5 – results are moderately grouped together, but most respondents are generally in agreement.	10% to 20% - error is a significant amount and will cause uncertainty in the final results.
Low	1.5 to 2.0 – results show a high variance with a fair amount of disparity in responses.	20% to 30% - error has reached a detrimental level and results are difficult to trust.
Very Low	2.0+ – results are highly variant with little to no grouping.	30%+ - significant error in results, hard to interpret data in a meaningful way.

¹¹ A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g., Very Good to Very Poor, Very Satisfied to Very Unsatisfied).

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4.2 CUSTOMER VALUES

Customer values are what the customer can expect from their tax dollar in “customer speak” which outlines what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

Customer Values indicate:

- What aspects of the service are important to the customer;
- Whether they see value in what is currently provided; and,
- The likely trend over time-based on the current budget provision.

As previously mentioned, the customer values below were determined using the results from the LTC Internal Resident and Family Satisfaction Survey and some consideration of the Angus Reid 2021 National Survey¹² on long-term care.

Table 13: Customer Values

SERVICE OBJECTIVE				
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	DATA CONSISTENCY GRADE (AS PER TABLE 12)	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Residents want a homelike environment, which is clean and inviting.	Internal Satisfaction Survey (2023)	% of satisfied respondents ML - 94% WL - 95%	High	Maintain
Residents want a welcoming atmosphere where they feel safe and accepted.		% of satisfied respondents ML - 96% WL - 92%	High	Maintain

¹² Angus Reid Institute, 2021

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SERVICE OBJECTIVE				
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	DATA CONSISTENCY GRADE (AS PER TABLE 12)	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Residents want an enjoyable dining experience (pleasant environment, service, quality, and variety of food).		% of satisfied respondents ML - 87% WL - 69%	High	Maintain/Increase
Residents want to communicate openly and freely to ensure their care and service needs are met and without fear of consequences.		% of satisfied respondents ML - 92% WL - 92%	High	Maintain
Residents want sufficient programs to meet their social, physical, cognitive, and spiritual needs.		% of satisfied respondents ML - 88% WL - 83%	Medium	Maintain
Residents want timely responses to call bells.		% of satisfied respondents ML - 68% WL - 64%	Low	Increase
Preferences for daily activities are respected and accommodated.		% of satisfied respondents ML - 90% WL - 79%	High	Maintain
Residents want staff to be available and helpful.		% of satisfied respondents ML - 86% WL - 85%	Medium	Maintain/Increase

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4.3 CUSTOMER LEVELS OF SERVICE

Ultimately customer performance measures are the measures that the City will use to assess whether it is delivering the level of service the customer desires. Customer level of service measurements relate to how the customer feels about the City’s LTC service in terms of their quality, reliability, accessibility, responsiveness, sustainability and, over the course, their cost. The City will continue to measure these customer levels of service to ensure a clear understanding of how the customers feel about the services and the value of their tax dollars.

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or underused? Do we need more or less of these assets?

In **Table 14** under each of the service measure types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current allocation.

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Table 14: Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
Quality/ Condition	Ensure that LTC Homes assets are maintained in good condition.	Internal Satisfaction Survey (2023)	% of survey respondents who feel the Lodges provide a homelike environment which is clean and inviting.	ML - 94% WL - 95%	Maintain
				Confidence Level	Very High
			Data Consistency	High	
	Residents and families are satisfied with the care and services provided by LTC Homes.	Internal Survey (2023)	% of survey respondents who are overall satisfied with the quality of the care and services.	ML - 95% WL - 90%	Maintain
		Confidence Level	Very High		
		Data Consistency	High		
Function	Ensure that food services meet resident needs.	Internal Satisfaction Survey (2023)	% of survey respondents who are satisfied with Food Services.	ML - 87% WL - 69%	Maintain/Increase
				Confidence Level	Very High
				Data Consistency	High
	Ensure laundry services meet resident needs.	Internal Satisfaction Survey (2023)	% of survey respondents who are satisfied with laundry services.	ML - 85% WL - 85%	Maintain
				Confidence Level	Very High
				Data Consistency	High
	Ensure that Long-Term Care residents are comfortable and feel safe.	Internal Satisfaction Survey (2023)	% of survey respondents that feel Lodges provide a welcoming atmosphere where residents feel safe and accepted.	ML - 96% WL - 92%	Maintain
				Confidence Level	Very High
				Data Consistency	High
Capacity	Ensure LTC Homes have enough reliable assets to respond to resident needs.	Internal Satisfaction Survey (2023)	% of survey respondents who agree that there are sufficient and appropriate resources within the home to address issues and concerns.	ML - 84% WL - 83%	Maintain
				Confidence Level	Very High
				Data Consistency	Medium
	Ensure LTC Homes have enough funding to improve long-term care services.	Angus Reid Survey (2021) ¹³	% of survey respondents who are willing to pay a 2% increase in personal tax towards improvements to the Ontario long-term care system.	60% (or three-in-five)	N/A
				Confidence levels	Very High
			Data Consistency	N/A	
	Ensure LTC Homes have a sufficient number of staff to provide long-term care services.	Angus Reid Survey (2021) ¹³	% of survey respondents in Ontario who agree to increase the minimum number of staff required to be on duty.	43%	N/A
		Confidence levels	Very High		
		Data Consistency	N/A		

¹³ Angus Reid Institute, 2021

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4.3.1 CUSTOMER INDICES

The indices calculated to assess how customer expectations for a service align with the perceived performance for a service are listed below in **Table 15**. These indices are explained and analyzed in detail in the sections below. The “Service Importance Versus Performance Net Differential” and “Service Rates Versus Value for Money Net Differential” were not able to be calculated for LTC based on the available data.

Table 15: Customer Indices

CUSTOMER INDICES	AVERAGE RESULT
Net Promoter Score (%) ¹⁴	67%

The information below is intended to provide context around the survey results to assist LTC Homes with areas to further investigate before proposing any new levels of service.

SERVICE IMPORTANCE VERSUS PERFORMANCE NET DIFFERENTIAL

This indices was not measured for this iteration of the Long-Term Care Asset Management Plan.

NET PROMOTER SCORE INDICE

The Net Promoter Score indices outline how likely an individual is to recommend a service to another person and measure customer loyalty. For municipal services, this score is difficult to interpret because oftentimes individuals do not have many alternatives for utilizing different services and also there may be internal biases for certain service areas, however, this score does provide valuable information if customers would recommend using the service or whether they may seek alternatives or avoid using the service altogether.

Likert¹⁵ choices less than a score of 4 are considered 'Detractors' meaning that they would not recommend the service, while scores of 5 are considered 'Promoters' who would recommend the service, and scores of 4 are considered 'Passive' which means they do not have strong feelings about the service. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (percentage of Promoters) and (percentage of Detractors). The Standard Deviation (σ) is calculated in percent, the same units as the Net Promoter Score.

¹⁴ A positive net promoter score indicates customers would recommend the service to others, a negative score indicates they would not, and a value close to 0 indicates a neutral feeling about the service.

¹⁵ A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g., Very Good to Very Poor, Very Satisfied to Very Unsatisfied).

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The LTC Homes Internal Residents and Family Satisfaction Survey (2023) did not use the Likert¹⁵ Scale for the survey questions. Instead, the following scale was used: 1 – Strongly Agree, 2 – Agree, 3 – Disagree, 4 – Strongly Disagree, 5 – Unknown, this scale is missing a “middle” choice of Neither Agree nor Disagree. Respondents were allowed to opt out by not answering questions and were removed from the sample. Scores of 1 were considered ‘Promoters’, while scores 3 and 4 were considered ‘Detractors’. Scores of 2 were considered ‘Passive’ therefore, were not included in the calculations.

The Net Promoter Score using the above methodology for calculations resulted in a positive 67 percent score. This means that an individual is 67 percent likely to recommend these services to others. The confidence level was Very High for this question and data consistency results were Medium level, as per **Table 12**. This indicates strong customer loyalty and willingness to recommend LTC Homes to others.

SERVICE RATES VERSUS VALUE FOR MONEY INDICE

The Service Rates versus Value for Money indices are used to determine if the rate an individual is paying for a service correlates with the perceived value for money.

An external survey was not completed for LTC to gather data from the general population, from families of former service users or visitors of the Lodges. As a result, the service rates versus value-for-money indices could not be calculated. This analysis was based on the existing Internal Resident and Family Satisfaction survey from October 2023 and the Nationwide Angus Reid 2021¹⁶ survey on the long-term care industry nationwide.

The internal survey results indicated overall high satisfaction with the services provided at the two municipal LTC Homes. The results of the Nationwide Angus Reid¹⁶ survey provided perspective from the public on the overall long-term care industry and included both, municipally and privately operated long-term care homes. When asked about willingness to pay two percent more in personal taxes towards improvements to the long-term care system, in Ontario 60 percent of respondents indicated willingness to pay more. These respondents were not direct users of services at Macassa Lodge or Wentworth Lodge and were responding to the current state of the LTC industry which was extremely affected by the recent COVID-19 pandemic. Based on the national Angus Reid¹⁶ Poll it seems that the overall long-term care sector in the province is not meeting the desired outcomes and 60 percent of taxpayers are willing to pay more taxes to fund improvements in this area.

4.3.2 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance, and management. The metrics should demonstrate how the City delivers its services in alignment with its customer values; and should be viewed as possible

¹⁶ Angus Reid Institute, 2021

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levers to impact and influence the Customer Levels of Service. The City will measure specific lifecycle activities to demonstrate how the City is performing in delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.¹⁷

Table 16 shows the activities expected to be provided under the current 10-year Planned Budget allocation and the Forecast activity requirements being recommended in this AM Plan.

¹⁷ IPWEA, 2015, IIMM, p2|28.

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Table 16: Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE (2023)	CURRENT TARGET PERFORMANCE (2024)	PROPOSED 10-YEAR PERFORMANCE
Acquisition	Increase Municipal LTC beds to improve response to demand.	Number of new beds acquired.	0	+20	No additional bed acquisitions are planned.
		Budget	n/a	\$16.7M	0
	Increase resident care with additional Personal Support Worker (PSW) (28 positions), Registered Nurse (RN) (1.4 FTE) and Registered Practical Nurse (RPN) (4.08 FTE) due to legislative change to increase direct care minutes per resident.	Additional FTE PSW, RN and RPN for both Lodges.	0X	+28 FTE - PSW (ML 17, WL 11) +1.4 FTE – RN +4.08 FTE - RPN	No additional FTEs are planned at this time.
		Budget	0	\$2,811,534	0
Operation	Educate all staff on Resident Rights.	% completed.		100%	100%
		Budget	Not yet quantified		
	Reduce antipsychotic medication use.	% of LTC residents without psychosis who were given antipsychotic medication in the 7 days preceding their resident assessment.	ML – 25.84% WL – 23.54%	ML – 25.50% WL – 21.50%	Not yet quantified
		Budget	Not yet quantified		
	Reduce the percentage of residents experiencing worsened pain.	% of LTC residents experiencing worsened pain.	ML – 17.90% WL – 14.3%	ML – 17% WL – 13.80%	Not yet quantified
		Budget	Not yet quantified		
	Apply a Lifecycle Approach to ensure optimum costs are achieved over the whole life of the asset.	Actual Operating Expenditures vs Planned Budget.	99%	90-100%	90-100%
		Budget	\$12,972,000 (Net budget)	Not yet quantified	
	Reduce the percentage of resident falls.	% of LTC residents who fell (2022 / 2023).	ML – 18.2% WL – 17%	ML – 14% WL – 16.6%	Not yet quantified
		Budget	Not yet quantified		
	Reduce Emergency Department (ED) visits/admissions.	Number of ED visits for modified list of ambulatory care-sensitive conditions per 100 long-term care residents.	ML – 14.55% WL – 8.38%	ML – 14.10% WL – 8%	Not yet quantified
		Budget	Not yet quantified		
Maintenance	Ensure that LTC Lodges facilities are well maintained.	% FCI	ML: 4.35% WL: 1.03%	< 5%	< 5%
		Budget	2024 Operating Budget Facilities 3.4M 2024 Capital Budget \$4.3M	Not yet quantified	
	Ensure monthly inspections for generators are completed.	% completed.	100%	100%	100%
		Budget	Performed by Contractor	Performed by Contractor	
Ensure preventative and maintenance program for Food Services and Housekeeping and Laundry Services equipment is completed.	TBD	Not currently measured	TBD	TBD	
	Budget	Not yet quantified			
Renewal	Ensure staff have enough reliable Resident Care assets to meet resident and family needs.	Overall Resident Care Equipment Condition is Fair or Better.	Fair/Poor	Fair or higher	Fair or higher
		Budget	2024 Operating Budget \$236K 2024 Capital Budget \$836K	Not yet quantified	

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4.3.3 PROPOSED LEVELS OF SERVICE DISCUSSION

CONDITION / QUALITY

Based on the Customer Levels of Service **Table 14** and Technical Levels of Service **Table 16**, it is evident that typically customer expectations match LTC Homes service levels, given the strongly agree and agree ratings given to most survey questions.

Survey respondents thought that overall LTC Homes had a very satisfactory performance. The majority of survey respondents strongly agreed that LTC Homes were clean and safe. In reference to Technical Levels of Service **Table 16**, the LTC Homes Facilities Condition Index indicated a Good condition rating, which is the highest possible. These indicators are not exactly aligned, but overall, the outcomes are consistent to conclude that there is a match between the Technical LOS and Customer LOS. The overall satisfaction with quality of care and services was very high at both lodges as well. This Customer Level of Service can be linked to the Technical Level of Service section via the targets for all operations activity measures and acquisition measures of increase of FTEs to provide increased resident care time as per new legislation. Current performance aligns with current targets set out for these activity measures indicating a match between Technical LOS and Customer LOS.

FUNCTION

Survey respondents were satisfied or very satisfied with the overall services provided by LTC Homes. One area where respondents had lower satisfaction was food services, particularly at Wentworth Lodge. A difference in satisfaction with food services between the two lodges was also noted. This correlates with the Technical LOS for renewal of equipment, dietary and housekeeping/laundry, where the majority of equipment is in Fair or Poor condition based on %RSL. The development of KPIs for preventative maintenance of resident care equipment should be considered to improve satisfaction. During the writing of this report, LTC staff started to investigate to understand the differences in customer sentiment around food services between the two lodges and as a result introduced a new menu at Wentworth Lodge. Initial feedback received through internal audits and Resident Council meetings supports an increase in resident satisfaction with the dining experience. After completion of the 2024 internal satisfaction survey consider proposing different levels of service if satisfaction results are still lower and difference in satisfaction between the two lodges still exists.

CAPACITY

Respondents generally indicated they agree that there are sufficient and appropriate resources within the home to address issues and concerns. The Angus Reid Nationwide¹⁸ survey results show that 43 percent of respondents in Ontario agree to increase the minimum number of staff required to be on duty. Recent legislation change has increased the required direct resident care hours from three hours and fifteen minutes per day per resident to four hours, an increase of 45

¹⁸ Angus Reid Institute, 2021

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minutes per resident. Incremental implementation of the increased care time started in 2022 with completion anticipated by the end of 2025. This change should improve future satisfaction once it is fully implemented, and residents begin to see the change in the level of service required by legislation.

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5. FUTURE DEMAND

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of services required.

5.1 DEMAND DRIVERS

For the LTC Homes service area, the key drivers are population growth in the 55+ age demographic, and legislative changes.

5.2 DEMAND FORECASTS

The current position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 17**. Growth projections have been shown on **Page 45** of the **AM Plan Overview** document.

Where costs are known, these additional demands as well as anticipated operations and maintenance costs have been encompassed in the Lifecycle Models in **Section 8.0**.

5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets is shown in **Table 17**. Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Opportunities identified to date for demand management are shown in **Table 17**. Climate change mitigation and adaptation is included in **Section 7.0**.

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Table 17: Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Population Growth	<ul style="list-style-type: none"> LTC waitlist for Hamilton (27 total LTC homes) at 1,851, including 411 in the crisis category (2021). 	<ul style="list-style-type: none"> 2554 beds by 2035 - based on an expected 38% increase in demand for LTC spaces in Ontario by 2035¹⁹. 	<ul style="list-style-type: none"> Longer wait times for LTC placement. Pressure to admit new residents. Pressure on the healthcare system. Pressure on families and caregivers. No available funding for additional expansions. Unable to add new beds without Ministry of Long-Term Care approval. 	<ul style="list-style-type: none"> Build new assets – ML is to build 20 new LTC beds by the end of 2026. Work with community partners to enhance aging at home. Add new FTEs. Increase operating budget. Tap into available provincial funds for LTC. <i>To Note:</i> Currently, the City of Hamilton is meeting the legislated requirement with a provision of one municipally owned and operated LTC home.
	<ul style="list-style-type: none"> 0.075% - Municipal LTC beds to the current population of the City of Hamilton (430 beds/570K population). 	<ul style="list-style-type: none"> An additional 154 beds between 2026-2054/or 5.5 beds/year would be needed to maintain the current Level of Service. 		
Demographic Change / Ageing Population 55+²⁰	<ul style="list-style-type: none"> 183K (2021) 	<ul style="list-style-type: none"> 250K (2046) 	<ul style="list-style-type: none"> Increasing waitlists and longer wait times for LTC placement. Pressure to admit new residents. Pressure on the health care system. Pressure on families and caregivers. More complex care needs resulting in higher level of care requirements. 	<ul style="list-style-type: none"> Build new assets – ML is to build 20 new LTC beds by the end of 2026. Work with community partners to enhance aging at home. Add new FTEs. Increase operating budget. Tap into available provincial funds for LTC.
Legislation / Regulatory changes to LTC personal care hours as mandated by MOHLTC	<ul style="list-style-type: none"> 3 hours 15 minutes 	<ul style="list-style-type: none"> 4 hours 	<ul style="list-style-type: none"> Human health resource challenge. Improved public perception of LTC. Reduced wait time for bell call response. Improved care for the aging population. 	<ul style="list-style-type: none"> Work with local education institutes to increase staffing pools. Add Full Time Equivalent (FTE) hours. Increase operating budget and funding to meet legislated requirements.
Legislated Requirement – Fixing Long-Term Care Act	<ul style="list-style-type: none"> As per legislation, every LTC facility staff complement to include one full-time Infection Control Practitioner (ICP) position. 	<ul style="list-style-type: none"> Starting in 2023, legislation requires one FTE ICP per facility. 	<ul style="list-style-type: none"> Currently, insufficient budget to support ICP FTEs past 2025. Increase in outbreaks and longer days in an outbreak. Negative reputation. Non-compliance with legislation. Decrease in residents' satisfaction and quality of life. 	<ul style="list-style-type: none"> Two new FTEs for ICP, one at each location, have been implemented. External funding is available until the end of 2025.
Negative LTC reputation post-pandemic	<ul style="list-style-type: none"> Average number of days in outbreak: <ul style="list-style-type: none"> ML – 159 (2022) WL - 130 (2023) 	<ul style="list-style-type: none"> Reduce outbreak occurrences and days in an outbreak. Improve reputation. 	<ul style="list-style-type: none"> Negative press and perception of the LTC sector during the pandemic resulted in an overall negative reputation. Increase in outbreaks and days in an outbreak. 	<ul style="list-style-type: none"> Two dedicated FTEs for Infection Prevention and Control (IPAC) as per new legislation (one FTE per home). Provide staff education on IPAC. Complete regular audits.

¹⁹ Ontario Long Term Care Home Association, 2023

²⁰ Ministry of Long-term Care regulations for admission to long-term care homes require meeting the following criteria: 18 years of age or older; have a valid Ontario Health Card; have health care needs that cannot be met with any combination of caregiving in the home or community; and, have health care needs that can be met in a long-term care home.

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DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
			<ul style="list-style-type: none"> • Staff shortages due to illness. • Decreased satisfaction for residents and families/caregivers. • Pressure on the healthcare system. 	<ul style="list-style-type: none"> • Completed voluntary CARF Accreditation survey in 2023. • Technology designed to track outbreaks, determine trends, and improve strategies has been implemented.
D Wing - outdated room configurations	<ul style="list-style-type: none"> • “D” Wing -100% C Class accommodations (two-person ward rooms). 	<ul style="list-style-type: none"> • Maintain legislated split of 60%/40%, preferred vs basic room accommodations. • Ministry Home Design Standards require a larger accessible turning radius size, wider doors for accessibility, smaller sub-division of total number of occupants per resident home and larger dining space per resident. 	<ul style="list-style-type: none"> • Current accommodations do not meet the new standards for door openings and accessible turning radius. • Increase in viral infections and outbreaks can be attributable to smaller shared spaces. 	<ul style="list-style-type: none"> • Planned “B” Wing renovations to convert spaces to more architecturally private and to meet the legislated requirement of 60%/40% split between preferred versus basic rooms. • Update spaces to meet the new standard for door opening and turning radius. • Access any available provincial funds for LTC. • D wing feasibility study to be completed.
Change in care needs and expectations	<ul style="list-style-type: none"> • MLTC standards 	<ul style="list-style-type: none"> • The desire for more custom options for meals, mealtimes, recreational amenities and social programs. More resident-driven care (on-demand/flexible), providing boutique-style experience versus an institutional model. • Increase in bariatric needs. 	<ul style="list-style-type: none"> • Insufficient operating budget to accommodate increasing needs. • Decreased satisfaction for residents and families/caregivers. • Challenges to accommodate unique diet types and varying allergy management. • Outdated recreation programming. • Increase in level of care for increasing care needs. • Longer wait times to accommodate increasingly complex needs. • Space design and equipment unable to meet required accommodations. 	<ul style="list-style-type: none"> • Member of AdvantAge Ontario – a community-based, not-for-profit organization dedicated to supporting the best possible aging experience. • Specialized equipment, “Obie” (interactive gaming console for seniors) has been purchased to enhance recreational programming. • If funding is available, acquire specialized equipment, integrate different bed classifications to create a more integrated community, and match-built facilities to resident needs, i.e., expansions for wider doors. • Additional training and staff to be able to provide specialized care. • Apply for funding from the Local Priorities Fund to support the purchase of bariatric beds and mattresses and wider spreader bars for lifts.
Health Equity - caring for different identities/backgrounds/ lived experiences	<ul style="list-style-type: none"> • Introducing the concepts of diversity and inclusion in workplace to staff and key stakeholders through in-house training. 	<ul style="list-style-type: none"> • More diverse populations within the community of long-term care such as Indigenous Peoples, Black, racialized, 2SLGBTQIA+ communities, Francophone and high-priority populations. 	<ul style="list-style-type: none"> • Decreased satisfaction for residents and families/caregivers if different care needs and expectations are not met. 	<ul style="list-style-type: none"> • A Cultural Competency and Diversity Plan is in place and reviewed annually. The plan comprises strategies to raise awareness and reduce disparities which include culture and language, age, gender, spiritual beliefs, socioeconomic status, and race. • Training and support for staff and specialized workshops including IDEA training for leadership staff.

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5.4 ASSET PROGRAMS TO MEET DEMAND

The new assets required to meet demand may be acquired, donated, or constructed. For LTC, assets are **typically acquired or constructed**.

At this time there are approximately **\$16.7 million** in assets acquired over the next 5 years and currently, there are no additional planned or anticipated acquisitions over the 30-year planning period as discussed in **Section 8.1**. Acquiring new assets will commit LTC to ongoing operations, maintenance, and renewal costs for the amount of time that the service is required. These future costs have been estimated at a high level in the Lifecycle Models in **Section 8.0** but should be quantified further for future iterations of the report for consideration in developing higher confidence forecasts of future operations, maintenance, and renewal costs for inclusion in the long-term financial plan

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6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk’²¹.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

6.1 CRITICAL ASSETS

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in **Table 18**. Failure modes may include physical failure, collapse, or essential service interruption.

Table 18: Critical Assets

CRITICAL ASSET	FAILURE MODE	IMPACT
Facilities	Facility unusable (fire, flood, structural)	Unable to provide resident care services. Possible relocation of residents to an emergency site.
Generator	Physical Failure	Unable to provide resident care services in case of power outages. Possible relocation of residents to an emergency site.

²¹ ISO 31000:2009, p 2

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CRITICAL ASSET	FAILURE MODE	IMPACT
Staffing	Pandemic/infection - mass numbers of staff unable to work	Unable to provide resident care services.

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

Critical risks are those assessed with ‘Very High’ (requiring immediate corrective action), and ‘High’ (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan are shown in **Table 19**. It is essential that these critical risks and costs are reported to management. Additional risks will be developed in future iterations of the plan and are identified in **Table 30** in the continuous improvement section of the plan.

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Table 19: Risks and Treatment Plans

SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
Resident Services interruption	Emergency event (loss of power, loss of network, water, staff shortages).	High	Review the Emergency and Business Continuity plans annually. Have contingency materials on hand. Scenario exercises with staff and community partners for possible emergency events. Complete monthly generator inspections.	Low	Internal resources and contractor cost for monthly generator inspections.

6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to withstand a given level of stress or demand and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery, and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapt to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment, and crisis leadership.

6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective of achieving the optimum benefits from the available resources.

The following table outlines what activities LTC cannot afford to do over the next 10 years with their existing budget and provides the associated service and risk tradeoffs.

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Table 20: Service and Risk Trade-offs

WHAT WE CANNOT DO (WHAT CAN WE NOT AFFORD OVER THE NEXT 10 YEARS?)	SERVICE TRADE-OFF (HOW WILL NOT COMPLETING THIS AFFECT OUR SERVICE?)	RISK TRADE-OFF (WHAT RISK CONSEQUENCES ARE WE UNDERTAKING?)
<p>Expand capacity beyond what is currently planned and funded (20 beds). All LTC expansions require Council’s direction and Ministry of Long-term Care approval.</p>	<p>The city-wide wait list for LTC will continue to grow. The level of service to the general public will decline as the population grows the percentage of municipal LTC beds to population ratio will not be maintained.</p>	<p>Reputational risk. More pressure on the health care system and families/caregivers. A growing number of seniors will require home care.</p>
<p>Increase resident care hours beyond legislated requirements for care standards and provincially allocated funding.</p>	<p>Improve resident care beyond current minimum standards and offer additional quality of life enhancement.</p>	<p>Reputational risk. Longer times to respond to call bells. Residents needing a high level of care will experience increased waiting times to accommodate their complex needs.</p>

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7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we have already begun to experience (adaptation). At a minimum, the City must consider how to manage our existing assets given the potential climate change impacts for our region.

Changes to Hamilton's climate will impact City assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and,
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models as well as levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan. This has been identified as a continuous improvement item in **Table 30**.

7.1 CLIMATE CHANGE MITIGATION

Climate Mitigation refers to human intervention to reduce GHG emissions or enhance GHG removals (e.g. electric vehicles, net-zero buildings). The City of Hamilton's Community Energy + Emissions Plan²² (CEEP) includes five Low-carbon Transformations necessary to achieve the City's target of net-zero GHG emissions by 2050:

- Innovating our industry;
- Transforming our buildings;
- Changing how we move;
- Revolutionizing renewables; and,
- Growing Green.

²² Newbold, Skidmore, Chessman, Imhoff, & McDowell, 2022

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Mitigation Demand Analysis

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City’s modelled targets for the low carbon transformations that applied to the service/asset;
- Discussing the impact the targets would have on the service/asset; and
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050.

As previously mentioned, due to the high level of uncertainty with the demand management plans for climate change, the cost of the demand impacts below have not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AM Plan. This has been identified as a continuous improvement item in **Table 30**.

Moving forward, the Climate Lens tool discussed in the **AM Plan Overview** will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

Table 21: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Revolutionizing Renewables	By 2050, 95% of organic waste will be sent to anaerobic digestion for local energy use.	Currently, organic waste is not sorted at LTC Homes.	Investigate and develop a possible implementation strategy and plan for organic waste collection considering: <ul style="list-style-type: none"> • How to physically collect and store the waste; • Space allocation for waste bins, indoor and outdoor; • Staff and resident training; and, • Collection frequency.

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CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
	By 2050, 50% of municipal buildings will add rooftop solar PV, covering 30% of the building's electrical load.	Initial upfront capital costs for solar PV are required. Roof or structural upgrades might be required.	<ul style="list-style-type: none"> • Work with the Corporate Facilities and Energy Management division to incorporate any solar PV into LTC buildings where appropriate. • Investigate solar opportunities for new buildings.
Growing Green	Planting 50,000 trees a year through to 2050.	Increase in natural assets and shade.	<ul style="list-style-type: none"> • Working with Partnership for Environmental Action by Clinicians and Communities for Healthcare Facilities (PEACH) Healthy Ontario supported the planting and establishing of 30 trees at Wentworth Lodge. Macassa Lodge is on hold pending reconstruction. • Leading initiative to drive the program to the other 25 long-term care homes in the City. • Identify additional spaces to accommodate trees in the future.
Transforming Our Buildings	By 2050, all municipal buildings will be retrofitted to achieve 50% energy efficiency relative to 2016.	Conversion of existing building components may not be straightforward. Possible interruption to services during implementation.	<ul style="list-style-type: none"> • Existing - BAS (Building automation system) is in place at the Lodges. All lighting has been fully retrofitted to all LED. • Facilities will need to be assessed to determine the feasibility of the proposed conversion. • Funding will need to be acquired to retrofit buildings.

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CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
			Staff will need to be trained on any new systems.
	By 2050, all new municipal buildings achieve net-zero emissions.	The “B” wing project budget includes provisions to achieve net-zero emissions. Ensure that climate change strategies are incorporated in building the new “B” wing.	<ul style="list-style-type: none"> • Involve Climate Change staff leads to drive key acquisitions when construction begins for the “B” wing. • Work with CFEM to make this building as energy efficient as possible. • Future buildings would follow city policy in this area.
	Post-retrofits, switch buildings to heat pumps for space and water heating by 2050.	Conversion of existing building components may not be straightforward. Possible interruption to services during implementation.	<ul style="list-style-type: none"> • Facilities will need to be assessed to determine the feasibility of the proposed conversion. • Funding will need to be acquired to retrofit buildings. Staff will need to be trained on any new systems. • The new “B” wing will have heat pumps with gas fired back up for peak demand periods.

MITIGATION RISK ANALYSIS

The risk of not completing climate change mitigation projects was modelled in the Climate Science Report for the City of Hamilton completed by ICLEI Canada, a risk analysis has not been completed in this AM Plan for climate mitigation projects (ICLEI Canada, 2021).

CURRENT MITIGATION PROJECTS

Mitigation projects LTC is currently pursuing are outlined below in **Table 22**. The “B” Wing Expansion project is included in the budget and quantified in the lifecycle models.

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Table 22: Asset Climate Mitigation Projects

PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
"B" Wing Expansion	Transforming our Buildings	Heat Pumps with natural gas backup.	GHG emissions reduction.
		Renewal will be constructed using energy-efficient building techniques.	Reduction in energy consumption and GHG emissions.

CLIMATE MITIGATION DISCUSSION

At this time, LTC has already made progress toward some of the modelled target transformations as discussed below.

Transforming our Buildings and Growing Green

LTC has begun to move toward the *Transforming our Buildings* targets. Both lodges have installed the Building Automation System (BAS). The BAS improves the performance of heating, ventilation air conditioning and other systems while reducing energy consumption. LTC facilities had also completed LED retrofit throughout the buildings and outdoor spaces reducing electricity and subsequently GHG production.

As shown in **Table 22**, the "B" Wing Expansion project takes into consideration the Climate Lens tool and the new wing will include heat pumps with natural gas back-up as well as include other energy-efficient building techniques.

To support the *Growing Green* initiative, WL, working together with Partnerships for Environmental Action by Clinicians and Communities for Healthcare facilities (PEACH), has supported planting, and establishing 30 trees on the property and is expanding this program beyond city-owned facilities.

7.2 CLIMATE CHANGE ADAPTATION

Climate Adaptation refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads).

The impacts of climate change may have a significant impact on the assets we manage and the services we provide. Climate change impacts on assets will vary depending on the location and

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the type of services provided, as will the way in which those impacts are responded to and managed.²³

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report²⁴ guided by ICLEI's Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP) (ICLEI, 2021). The BARC Framework identified thirteen high-impact areas.

²³ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

²⁴ City of Hamilton & Local Governments for Sustainability Canada, 2021

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Adaptation Demand Analysis

Table 23: Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	BASELINE (1976-2005) ²⁵	AVERAGE PROJECTED CHANGE in 2021-2050 ²⁵ (Assuming RCP4.5 ²⁶ SCENARIO)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Increased instances of heat-related issues due to extreme heat.	16.1 average days where the temperature is 30 degrees Celsius or more.	34.4 average days where the temperature is 30 degrees Celsius or more.	<ul style="list-style-type: none"> High risk to resident health at long-term care homes causing health and safety consequences due to almost certain increased heat waves. 	<ul style="list-style-type: none"> Maintain natural assets that may provide shade. Assign summer fluid intake tasks on hot days and provide easy access to fluids. Monitor residents for signs of dehydration. Upgrade heat pumps to cool spaces more efficiently (planned to be acquired for "B" wing project). Inspection and Maintenance Program for HVAC systems (PM Program). Emergency callout provisions in the contract.
Dryer, hotter and longer summers may affect the health and safety of vulnerable local populations.	71.6 days the average length of the hot season.	102 days the average length of the hot season.	<ul style="list-style-type: none"> High risk to resident health at long-term care homes causing health and safety consequences due to longer summers. 	<ul style="list-style-type: none"> Provide air conditioning units in all areas. Ensure cooling units are maintained and working. Inspection and Maintenance Program for HVAC systems (PM Program). Emergency callout provisions in the contract.
Increased intensity and frequency of ice storms lead to increased hazardous roads, pathways, and sidewalk conditions.	187 mm average total winter precipitation.	204 mm average total winter precipitation.	<ul style="list-style-type: none"> High risk for falls/injury to residents, staff and visitors. Staff shortages. Some services might be cancelled, i.e., the Adult Day Program. 	<ul style="list-style-type: none"> Increase snow removal contract. Increase salting of pathways/parking. Increased vigilance of staff on entrances/pathways. Available salt bins for everyone's use.
Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns.	187 mm average total winter precipitation.	204 mm average total winter precipitation.	<ul style="list-style-type: none"> Lack of power to provide all services. Staff shortages. 	<ul style="list-style-type: none"> Back-up generator. Complete monthly generator inspections. Review Emergency Evacuation Plans and Business Continuity Plans annually. Work with care partners and emergency management. Drill responses with staff and residents.
Increase in average annual temperatures (especially in the summer) leading to increased food insecurity in the region (i.e., decrease in local crop yields, food cost fluctuations, etc.)	13.1 degrees Celsius average annual temperature.	15.1 degrees Celsius average annual temperature.	<ul style="list-style-type: none"> Increase operating budget. Decline in resident food service satisfaction. Increased demand for Meals on Wheels. Increased accommodation rates. 	<ul style="list-style-type: none"> Member of Golden Horseshoe Food and Farming Alliance (GHFFA) - local purchasing initiatives for food to support local agriculture. This supports the reduction in GHG by avoiding long-distance shipping and provides a more diverse supply network.

²⁵ ICLEI Canada, 2022

²⁶ RCP4.5 Scenario: Moderate projected Green House Gas concentrations, resulting from substantial climate change mitigation measures. It represents an increase of 4.5 W/m2 in radiative forcing to the climate system. RCP 4.5 is associated with 580-720ppm of CO2 and would more than likely lead to 3°C of warming by the end of the 21st century.

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ADAPTATION RISK ANALYSIS

Additionally, the City should consider the risks for the asset or service as a result of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Similarly, to the exercise above and using the risk process in **Section 6**, asset owners:

- Reviewed the likelihood scores in the Vulnerability and Risk Assessment Report for the adaptation impact occurring;
- Identified the consequence to the asset/service if the event did happen to develop a risk rating; and,
- If the risk was identified as high, the asset owner produced a preliminary risk adaptation plan shown below in **Table 24**.

It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of mitigating the risks below has not been included in the lifecycle and financial models at this time. The adaptation plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should consider these risks during the planning and design processes. Future changes will be incorporated into future iterations of the AM Plan. Moving forward, the Climate Lens tool will assess projects based on these targets and will assist with the prioritization of climate adaptation projects. This has been identified as a continuous improvement item in **Table 30**.

Table 24: Adapting to Climate Change

ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
No Adaptation Risks identified at this time				

CURRENT ADAPTATION PROJECTS

Currently, LTC does not have any current or past climate change adaptation-specific projects identified. The impact of climate change on assets and how the City will adapt is a new and complex discussion and further opportunities will be developed in future revisions of this AM Plan.

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CLIMATE ADAPTATION DISCUSSION

INCREASED TEMPERATURES

There are many projections related to increased temperature including heat waves, rising temperatures, increase in average temperatures, and longer summers. As a result, there is a higher risk to resident health at long-term care homes due to dehydration and heat. The older population is particularly vulnerable to the impacts of heat. During hot weather periods increased fluid intake and monitoring are required to keep residents safe. All air conditioning units should be maintained in working condition by continuing regular maintenance and inspection programs, and emergency contingency plans in place in the event of air conditioning failures or prolonged loss of power that could affect the ability to control temperature in facilities.

INCREASE IN ICE STORMS

An increase in ice storms can lead to increased power outages which can lead to service interruptions. Regular backup generator inspections and maintenance are required to minimize the consequences of the outages. Emergency evacuation plans as well as the Business Continuity plan are up to date and reviewed regularly for preparedness. The older population is also at greater risk of life-altering injuries from slips and falls. Increases in ice storms can lead to slippery surfaces that can increase injury risk.

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8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budgets. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated together and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options. However, at this time the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

At the time of writing the following budgets were used to develop the budget component of the lifecycle management plan:

- 2024 – 2027 Long Term Care Preliminary Operating budget and multi-year outlook which is revised annually and typically contains operations, minor maintenance and minor renewal activities;
- 2024 – 2027 CFEM – Lodges Preliminary Operating budget and multi-year outlook which is revised annually and typically contains operations, maintenance and minor renewal activities;
- The remainder of the 30-year budget was assumed based on the status quo for years 2028 – 2033 and an average of the previous 10 years was used for the remainder of the 30-year planning period;
- 2024 Approved Capital budget, including three years into the future for asset renewals, acquisitions, and major maintenance activities for facility and equipment assets. This included the **HSC 20050 Macassa Lodge – Redevelopment Project** Financing Plan for “B” wing expansion; and,
- Budgets used were **gross budgets** as the impact of revenues collected by LTC Homes will be considered as part of the Long-Term Financial plan impact, as such any funding gap identified is not necessarily attributed directly to the levy and may be recovered in part by increased government funding and/or accommodation costs.

LTC Homes do not have a 10-year Capital budget and forecast, and a continuous improvement item to create one has been noted in **Table 30**.

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8.1 ACQUISITION PLAN

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs.

CURRENT PROJECT DRIVERS – 10-YEAR PLANNING HORIZON

The City prioritizes capital projects based on various drivers to help determine ranking for project priorities and investment decisions. As part of future AM Plans, the City will continue to develop its understanding of how projects are prioritized and ensure that multiple factors are being considered to drive investment decisions in the next iteration of the AM Plan. These drivers will include legal compliance, risk mitigation, O&M impacts, growth impacts, health and safety, reputation, and others. These drivers should be reviewed during each iteration of the AM Plan to ensure they are appropriate and effective in informing decision-making.

Table 25: Priority Ranking Criteria

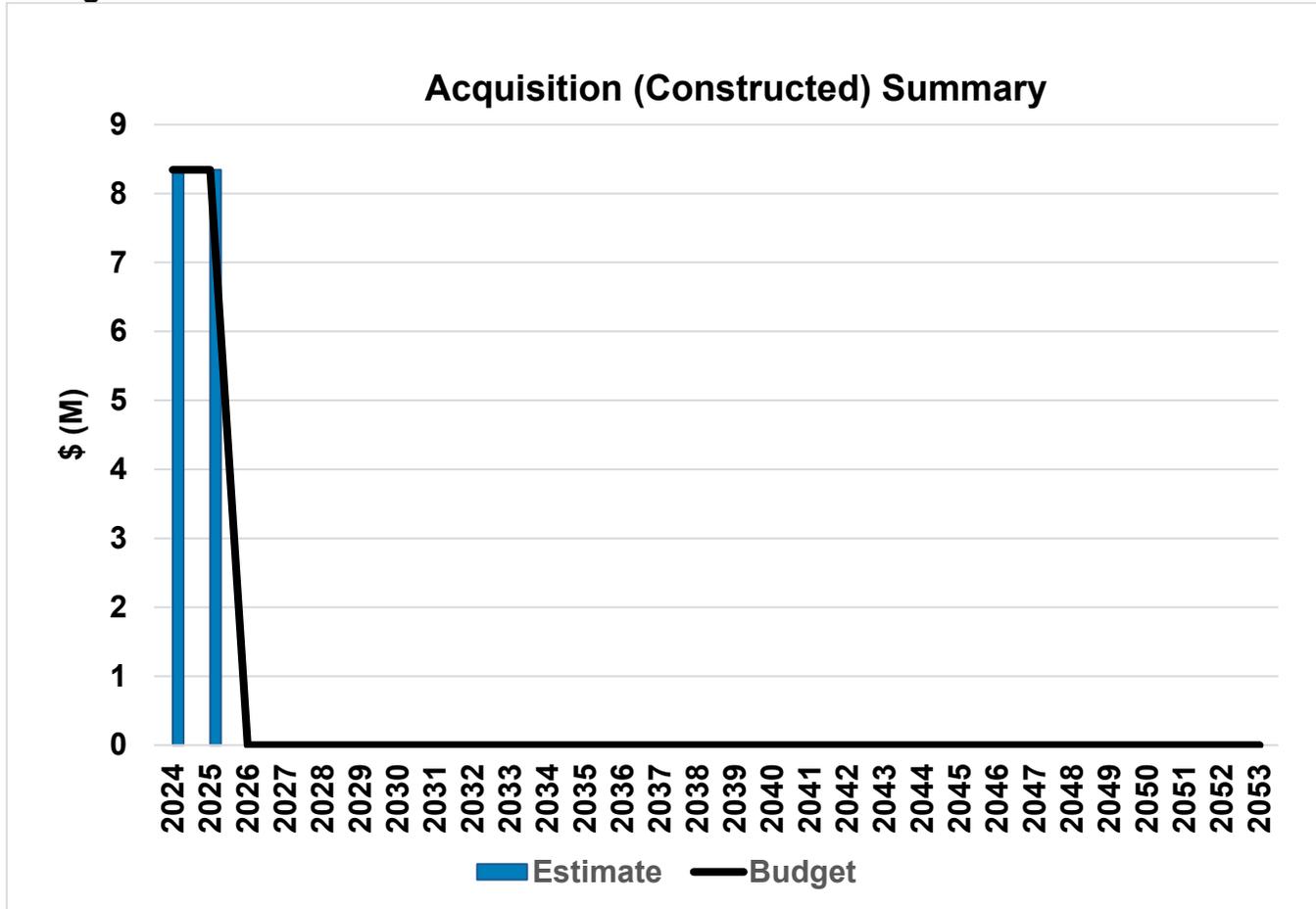
CRITERIA	WEIGHTING
A ranking criteria is not available at this time for LTC.	

CONSTRUCTED OR PURCHASED ACQUISITIONS

For LTC Homes, assets are typically acquired through the purchase or construction of new assets. Over the next 30-year planning period, LTC Homes will acquire approximately **\$16.7 million** of constructed assets which can either be new assets which did not exist before or expansion of assets when they are to be replaced.

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Figure 8: Acquisition (Constructed) Summary
 All Figure Values are shown in 2023 Dollars.



Major acquisition expenditures over the next 30 years include:

- **Approved acquisitions** - Macassa Lodge “B” Wing Expansion (\$16.7 million); and,

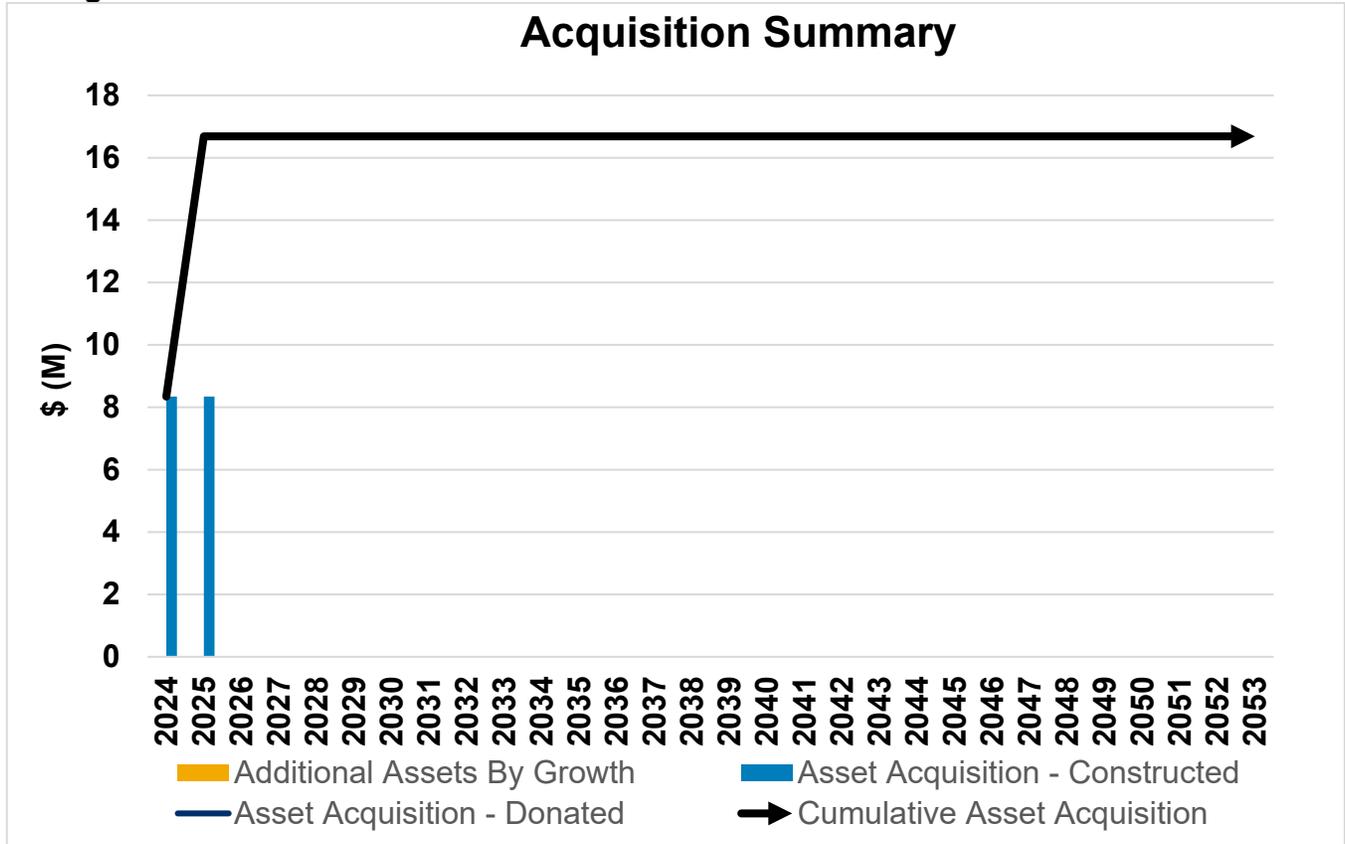
The City has sufficient budget for the approved acquisition of “B” Wing Expansion at this time. This does not address all future asset needs that may need to be constructed to ensure service levels are maintained over the long term. The current LOS of 430 municipal LTC beds accounts for approximately 0.075 percent of the current City of Hamilton’s population. To maintain this LOS and anticipated population growth, the City would need to acquire about 155 new beds over the next 30 years. With competing needs for resources across the entire city, there will be a need to investigate trade-offs and design options to further optimize asset decisions and ensure intergenerational equity can be achieved. The City of Hamilton will continue to monitor its purchased and constructed assets annually and update the AM Plan when new information becomes available. The lack of future acquisition projects is not due to a lack of demand for new assets but rather details of future acquisitions are not defined at this time.

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ACQUISITIONS SUMMARY

Forecast acquisition costs are summarized in **Figure 9** below and show the cumulative effect of asset acquisitions over the next 30-year planning period.

Figure 9: Acquisition Summary
 All Figure Values are shown in 2023 Dollars



When Hamilton commits to constructing new assets, the municipality must be prepared to fund future operations, maintenance, and renewal costs. Hamilton must also account for future depreciation when reviewing long-term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in **Figure 9** above. The City will need to address how to best fund these ongoing costs as well as the costs to construct the assets while seeking the highest level of service possible.

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8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal, and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons. Examples of typical operational activities include operating assets, utility costs, inspections, and the necessary staffing resources to perform these activities. LTC Homes is largely a people and operations-driven service and the majority of the costs required to deliver the service are employee-related costs. Some of the major operational investments over the next 10 years include:

- **\$53.5 million** allocated for employee-related costs in 2024 (i.e., salaries, wages, benefits, training, etc.).

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure they reach its intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition.

Examples of typical maintenance activities include equipment repairs and component replacements along with appropriate staffing and material resources required to perform these activities. For the purposes of this AM Plan, maintenance also includes component renewal of the facilities, i.e. kitchen renewals, HVAC replacements or roofing replacements are considered as Maintenance in the AM Plan as they contribute to the overall Asset, the Facility (entire building) reaching the estimated service life.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure the LTC assets are reliable and can achieve the desired level of service.

Major maintenance projects LTC Homes plans to complete over the next four years include:

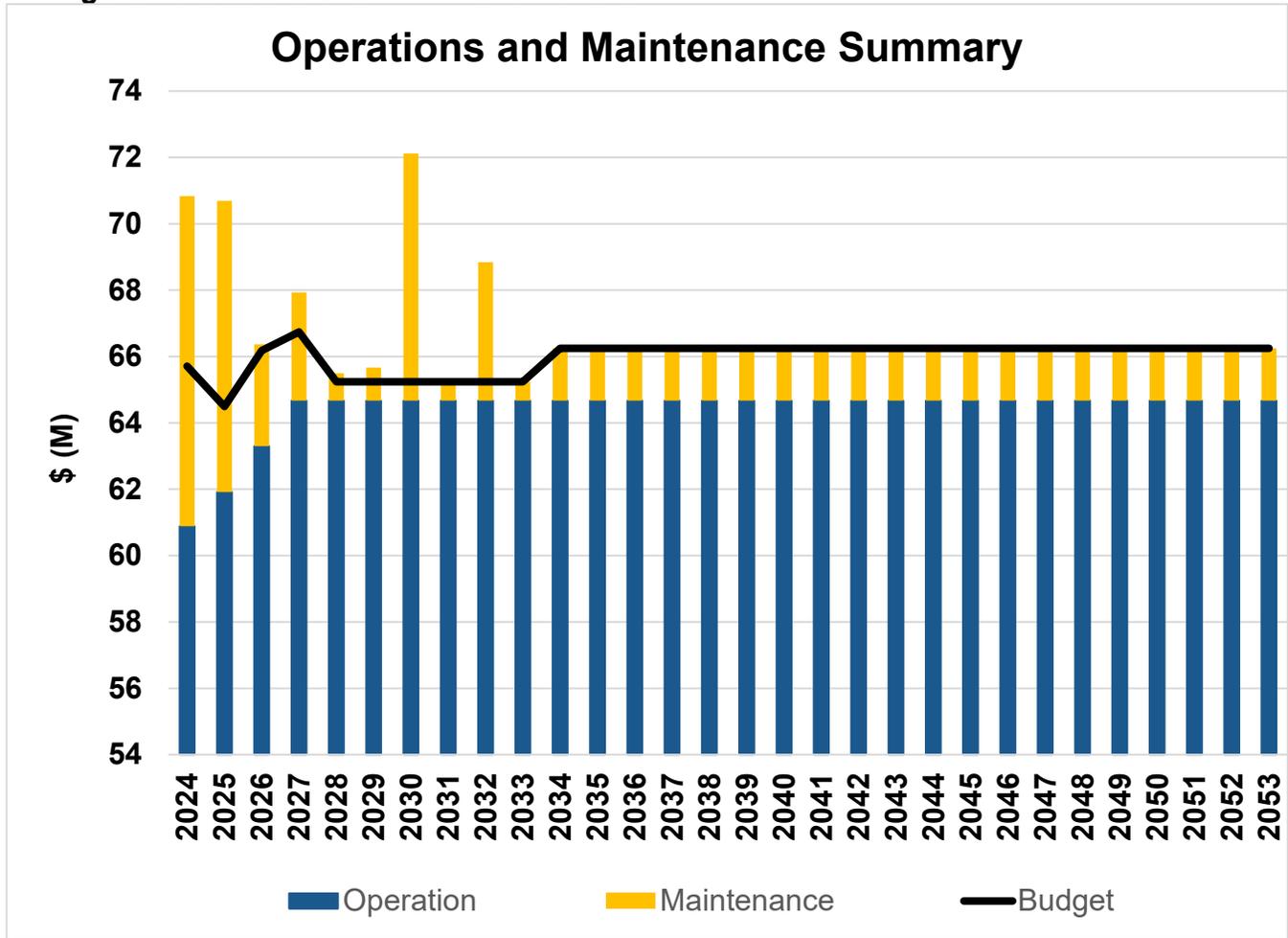
- **\$1.8 million** for ML – Refurbishment of “A” wing (2025 – 2026);
- **\$2.6 million** for ML and WL – Facilities Mechanical Infrastructure Lifecycle Renewal, (2024 – 2027);
- **\$1.5 million** for ML – Carpet Removal (2023 – 2026); and,
- **\$0.5 million** for ML – Facilities Equipment Replacement for Net Zero (2024).

These investments for maintenance are intended to allow these assets to reach their estimated service life and minimize reactive maintenance costs. It should be acknowledged that these forecasted costs do not yet fully include the recommended works that need to be undertaken to ensure the entire inventory of assets will achieve their desired service lives and level of service.

Long-Term Care 2024 Asset Management Plan

Deferred maintenance (i.e. works that are identified for maintenance activities but unable to be completed due to available resources) will be included in the infrastructure risk management plan in future iterations once those works have been identified and prioritized.

Figure 10: Operations and Maintenance Summary
 All Figure Values are shown in 2023 Dollars.



The deferred facility maintenance amounts between 2024 – 2032 are due to budget constraints within the Corporate Facilities and Energy Management division over time. It is important to note that priority and planned repairs are being completed on these facilities, and both facilities are overall in good condition.

Long-Term Care 2024 Asset Management Plan

The maintenance backlog shown in **Figure 10** includes the following major repair work based on the BCA's:

- 2024:
 - \$2.2 million - ML windows replacement, entire building;
 - \$1 million - ML "A" wing penthouses built-up air handling unit(s) replacement; and,
 - \$420 thousand - ML repair of parking lots and roadways.

- 2025:
 - \$680 thousand - ML sheet vinyl floor finishes replacement, entire building;
 - \$660 thousand - ML boilers replacement;
 - \$570 thousand - ML absorption chillers replacement;
 - \$970 thousand - ML "C" wing penthouse and "E" wing mechanical room built-up air handling unit(s) replacement; and,
 - \$450 thousand - ML washroom accessories replacement.

- 2027:
 - \$570 thousand - ML common spaces wall finishes upgrade; and,
 - \$350 thousand - WL floor finishes replacement.

- 2030:
 - \$2.4 million - ML all passenger elevators replacement;
 - \$1.1 million - ML all plumbing fixtures for washrooms and shower rooms;
 - \$570 Thousand - WL heating and cooling unit(s) replacement; and
 - \$470 Thousand - WL exterior walls repair/replacement.

- 2032:
 - \$1.3 million – WL replacement of approximately 20 percent of the total roof;
 - \$1.5 million – WL floor and wall finishes replacement; and,
 - \$660 thousand – WL ceiling finishes replacement.

This backlog should be investigated following the completion of this AM Plan to ensure accuracy as well as ensure critical components have been prioritized, which has been identified as a continuous improvement item in **Table 30**.

As the City continues to develop condition profiles and necessary works are identified based on their conditions, it is anticipated that these operation and maintenance forecasts will change. Future iterations of this plan will provide a more thorough analysis of operations and maintenance costs.

Long-Term Care 2024 Asset Management Plan

8.3 RENEWAL PLAN

Renewal is major works which does not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs

Asset renewals are typically undertaken to either ensure the assets' reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 26** and are based on the estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2023 however they will be reviewed annually until their accuracy reflects the City's current practices.

LTC does not have a detailed asset registry for all assets, the renewals for many assets were based on subject matter expertise.

Table 26: Useful Lives of Assets

ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Facilities	50
Nursing Equipment	6
Dietary Equipment	22
Furniture	16
Housekeeping and Laundry Equipment	12
Maintenance Equipment	19
Audio/Visual Equipment	14
IT Assets	5

The estimates for renewals in the AM Plan were based on the register method which utilizes the data from the City's asset registry to analyze available lifecycle information and then determine the optimal timing for renewals based on the ESL.

Long-Term Care 2024 Asset Management Plan

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).²⁷

Future methodologies may be developed to optimize and prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure;
- Have high use and the subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have the potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.²⁸

SUMMARY OF FUTURE RENEWAL COST

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in **Figure 11**.

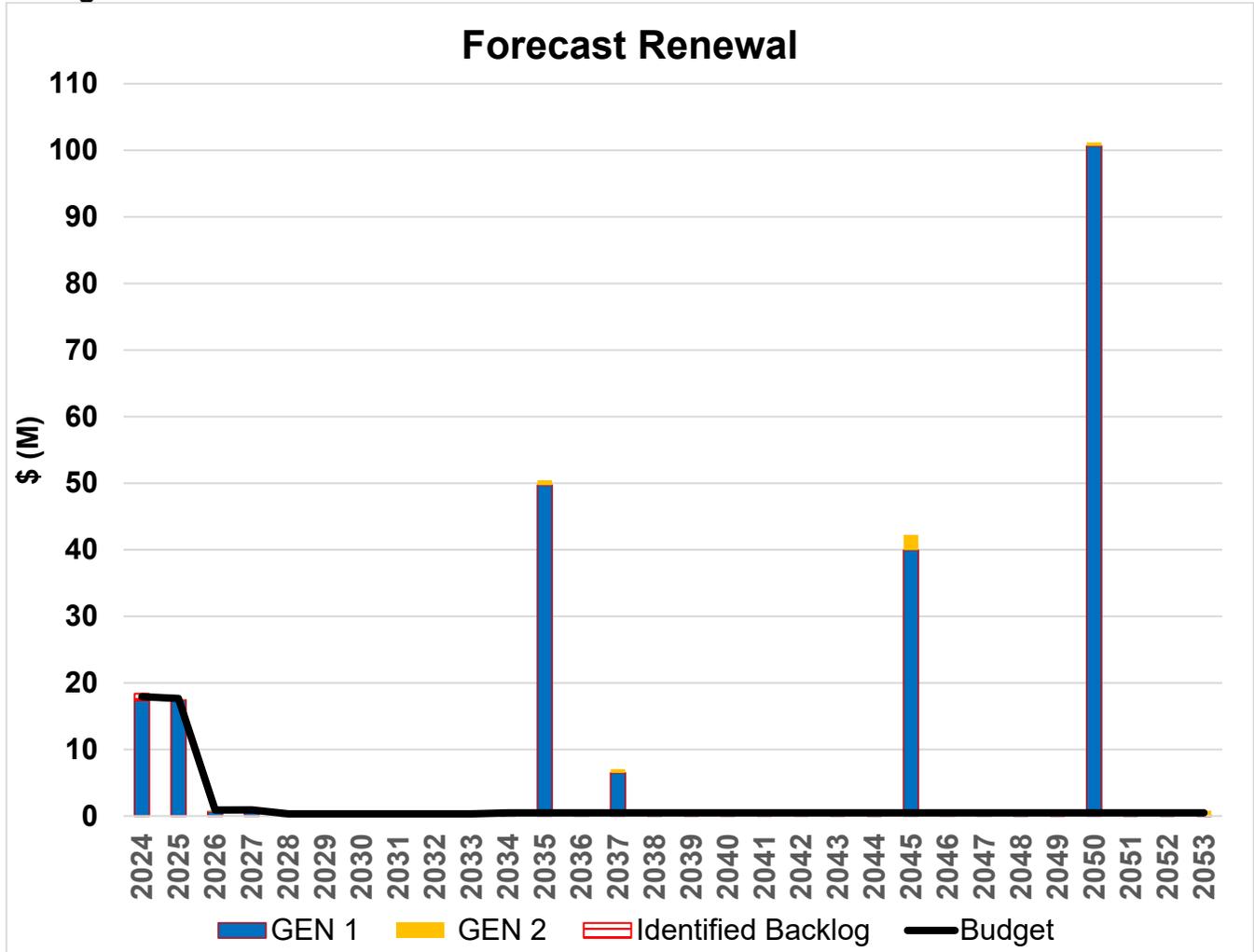
In the figure below, Generation 1 (Gen 1) costs refer to renewals that occur for the first time in the model based on the estimated service life and Generation 2+ (Gen 2+) costs refer to renewals that have occurred twice or more based on the estimated service life.

²⁷ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

²⁸ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

Long-Term Care 2024 Asset Management Plan

Figure 11: Forecast Renewal Costs
 All Figure Values are shown in 2023 Dollars.



The significant spikes in 2024/5, 2035, 2037, 2045 and 2050 are for facility renewals for different wings within the two facilities as renewal typically takes place on a wing-by-wing basis.

In addition, the amount in the model above highlighted in red in 2024 represents the cumulative backlog of deferred work needed to be completed that has been identified through its current estimated service life per **Table 26**. This backlog represents just over \$1 million of deferred works that have accumulated and have created a backlog of necessary works.

Major renewal backlog items include:

- \$449 thousand in Nursing Equipment;
- \$188 thousand in IT Assets; and,
- \$153 thousand in Dietary Equipment.

Long-Term Care 2024 Asset Management Plan

The planned renewals over the four-year horizon include:

- \$33 million - renewal portion of Macassa Lodge “B” wing (this project is split between the renewal of 44 existing beds and acquisition of 20 additional beds); and,
- \$2.6 million – ML and WL nursing equipment lifecycle renewal.

There is insufficient budget to support all the planned renewals over the 10-year horizon. This may change once a more detailed asset inventory and formalized condition assessment process is undertaken and it may be necessary to adjust the renewal backlog if some assets are found to be in worse or better condition than originally anticipated.

Since properly funded and timely renewals ensure the assets perform as expected, LTC Homes is performing satisfactorily by replacing assets at the suggested interval with an appropriate budget. Deferring renewals creates risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. It is recommended to continue to analyze asset renewals based on criticality and availability of funds for future AM Plans.

8.4 DISPOSAL PLAN

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen.

Assets identified for possible decommissioning and disposal are shown in **Table 27**. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in **Table 27**. Any costs or revenue gained from asset disposals is included in future iterations of the plan and the long-term financial plan.

Table 27: Assets Identified for Disposal

ASSET	REASON FOR DISPOSAL	TIMING	DISPOSAL COSTS	OPERATIONS & MAINTENANCE ANNUAL SAVINGS
None	None	None	None	None

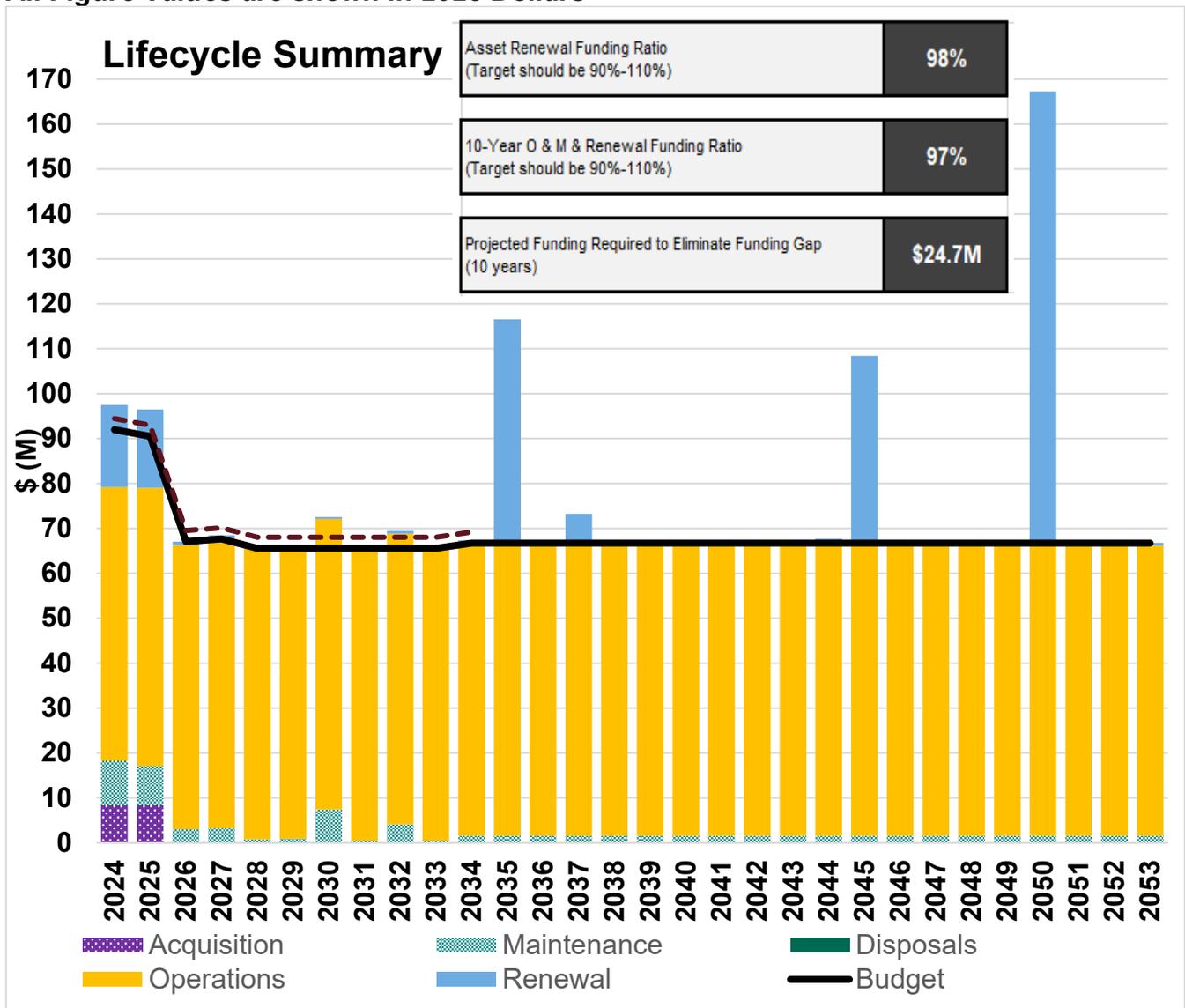
Long-Term Care 2024 Asset Management Plan

8.5 LIFECYCLE COST SUMMARY

The financial projections from this asset plan are shown in **Figure 12**. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs estimated to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving a balance between costs, levels of service and risk to achieve the best value outcome.

Figure 12: Lifecycle Summary
 All Figure Values are shown in 2023 Dollars



Long-Term Care 2024 Asset Management Plan

There is typically sufficient budget to address the planned lifecycle activities for the 2024-2027 planning period, except the unfunded facilities maintenance amounts over the next 10 years which should be addressed over time. The operating impact of the "B" wing expansion has been incorporated into the budget starting in 2024 which considers additional FTEs. LTC Homes will also need to consider allocating funding to future facility renewals to be able to maintain the current levels of service. The 10-year Operations, Maintenance and Renewal funding gap is explained in **Section 9.1**.

The City will continue to improve its lifecycle data, and this will allow for informed choices as to how best to mitigate impacts and how to address the funding gap itself. This gap in funding future plans will be refined over the next three years to improve the confidence and accuracy of the forecasts.

Long-Term Care 2024 Asset Management Plan

9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure LTC provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-term financial planning (LTFP) is critical for the City to ensure the network lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly, the City will have difficult choices to make in the future which will include options such as higher costs, reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all of the network's needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

9.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- Medium-term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio²⁹ **98%**

The Asset Renewal Funding Ratio (ARFR) is used to determine if the City is accommodating asset renewals in an **optimal** and **cost-effective** manner from a timing perspective and relative to financial constraints, the risk the City is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable, however, the expenditures are below this level in some service areas predominantly

²⁹ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

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due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

If assets are not renewed at the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to the City's reputation and risk of fines or legal costs.

The lack of renewal resources will be addressed in future AM Plans while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

MEDIUM-TERM – 10 YEAR FINANCIAL PLANNING PERIOD

10-Year Operations, Maintenance and Renewal Financial Ratio **97%**

Although this AM Plan includes forecast projections to 30 years, the higher confidence numbers are typically within the first 10 years of the lifecycle forecast. The 10-year Operations, Maintenance and Renewal Financial Ratio compares the Planned Budget with the Lifecycle Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the ARFR, the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization's risk and service level commitments.

The forecast operations, maintenance and renewal costs over the 10-year planning period is **\$71.9 million** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The proposed (budget) operations, maintenance and renewal funding is **\$69.4 million** on average per year giving a 10-year funding shortfall of **\$2.5 million** per year or **\$24.7 million** over the 10-year planning period. This 10-year funding shortfall is mostly due to facilities maintenance needs identified in the Building Condition Assessments in **Section 3.2** which are currently not fully funded and should be prioritized based on the criticality of components. This accounts for approximately \$23.9 million. The remainder of the shortfall is comprised of \$0.4 million in Nursing Equipment, \$0.2 million in IT assets and \$0.2 million in Dietary Equipment. This funding shortfall should be reviewed to prioritize replacement by criticality of these assets.

This indicates that **97%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget, which is within the 90-110% range. Therefore, it can be concluded that the LTC is funding their assets at an acceptable rate and that the service will be sustainable over time. Note, that these calculations exclude acquired assets.

Long-Term Care 2024 Asset Management Plan

Funding an annual funding shortfall or funding 'gap' should not be addressed immediately. The overall gap in funding city-wide will require vetting, planning and resources to begin to incorporate gap management into the future budgets for all City services. This gap will need to be managed over time to reduce it sustainably and limit financial shock to customers. Options for managing the gap include:

- Financing strategies – increased funding, block funding for specific lifecycle activities, long-term debt utilization, potential estimates of additional Ministry of Long-term Care funding;
- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets;
- Influence level of service expectations or demand drivers; and,
- Review revenue generated by LTC Homes.

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of **90-110%** for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

9.2 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Table 28 shows the forecast costs (outlays) required for consideration in the 30-year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

The City will manage the 'gap' by continuing to develop this AM Plan to guide future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low-use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

Table 28: Forecast Costs (Outlays) for the Long-Term Financial Plan

Long-Term Care 2024 Asset Management Plan

Forecast Costs are shown in 2023 Dollar Values

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2024	\$8,343,059	\$60,884,972	\$9,951,579	\$18,330,408	\$0
2025	\$8,343,059	\$61,915,020	\$8,778,889	\$17,446,324	\$0
2026	\$0	\$63,296,260	\$3,068,712	\$673,234	\$0
2027	\$0	\$64,671,952	\$3,262,146	\$540,618	\$0
2028	\$0	\$64,671,952	\$824,860	\$689,626	\$0
2029	\$0	\$64,671,952	\$994,415	\$495,655	\$0
2030	\$0	\$64,671,952	\$7,450,753	\$412,004	\$0
2031	\$0	\$64,671,952	\$568,160	\$495,736	\$0
2032	\$0	\$64,671,952	\$4,167,283	\$597,409	\$0
2033	\$0	\$64,671,952	\$568,160	\$526,056	\$0
2034	\$0	\$64,671,952	\$1,576,060	\$1,111,792	\$0
2035	\$0	\$64,671,952	\$1,576,060	\$50,297,960	\$0
2036	\$0	\$64,671,952	\$1,576,060	\$949,676	\$0
2037	\$0	\$64,671,952	\$1,576,060	\$6,995,995	\$0
2038	\$0	\$64,671,952	\$1,576,060	\$431,704	\$0
2039	\$0	\$64,671,952	\$1,576,060	\$435,805	\$0
2040	\$0	\$64,671,952	\$1,576,060	\$635,511	\$0
2041	\$0	\$64,671,952	\$1,576,060	\$561,496	\$0
2042	\$0	\$64,671,952	\$1,576,060	\$364,307	\$0
2043	\$0	\$64,671,952	\$1,576,060	\$467,721	\$0
2044	\$0	\$64,671,952	\$1,576,060	\$1,448,031	\$0
2045	\$0	\$64,671,952	\$1,576,060	\$42,166,340	\$0
2046	\$0	\$64,671,952	\$1,576,060	\$781,474	\$0

Long-Term Care 2024 Asset Management Plan

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2047	\$0	\$64,671,952	\$1,576,060	\$681,097	\$0
2048	\$0	\$64,671,952	\$1,576,060	\$715,620	\$0
2049	\$0	\$64,671,952	\$1,576,060	\$448,145	\$0
2050	\$0	\$64,671,952	\$1,576,060	\$101,042,352	\$0
2051	\$0	\$64,671,952	\$1,576,060	\$451,823	\$0
2052	\$0	\$64,671,952	\$1,576,060	\$600,913	\$0
2053	\$0	\$64,671,952	\$1,576,060	\$548,298	\$0

9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in the City’s operational budget and 10-year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM Plan will provide service delivery options and alternatives to optimize limited financial resources.

9.4 VALUATION FORECASTS

Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

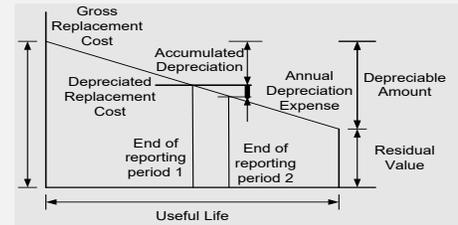
Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and remove the high costs of renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs, however, this will be improved for the next iteration of the plan.

Long-Term Care 2024 Asset Management Plan

9.5 ASSET VALUATION

The best available estimate of the value of assets included in this AM Plan is shown below. The assets are valued at estimated replacement costs:

Replacement Cost (Current/Gross)	\$319,020,519
Depreciable Amount	\$319,009,504
Depreciated Replacement Cost³⁰	\$140,734,224
Depreciation	\$ 6,916,222



The current replacement cost is the most common valuation approach for specialized infrastructure assets. The methodology includes establishing a comprehensive asset registry, assessing replacement costs (based on market pricing for the modern equivalent assets) and useful lives, determining the appropriate depreciation method, testing for impairments, and determining remaining useful life.

As the City matures its asset data, these valuations will likely fluctuate significantly over the next three years, and they should increase over time based on improved market equivalent costs as well as anticipated cost changes due to climate change mitigation and adaptation strategies.

9.6 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 30-year horizon and do not address other operational needs not yet identified;
- Maintenance forecasts are based on current budget allocations and do not identify asset needs at this time. It is solely based on planned activities;
- Replacement costs were based on historical costing. They were also made without determining what the asset would be replaced with in the future; and,
- Modelling is done at the Gross budget level and does not include offsetting revenue, grants or other funding sources that may be available.

³⁰ Also reported as Written Down Value, Carrying or Net Book Value.

Long-Term Care 2024 Asset Management Plan

9.7 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the **AM Plan Overview**.

Table 29: Data Confidence Assessment for Data Used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	Low	SME opinion of potential demand based on historical knowledge.
Growth Projections	Medium	Based on Greater Golden Horseshoe Growth Forecasts as outlined in the <u>Asset Management Plan Overview</u> .
Acquisition Forecast	Low	Acquisition forecast based on approved capital budget ("B" wing expansion). A 10-year capital budget is not available.
Operation Forecast	Low	Currently, the budget is based on four years of preliminary budget (2024 - 2027) and the remaining years are forecasted with zero growth. Category allocation based on SME opinion.
Maintenance Forecast	Low	Currently, the budget is based on four years of preliminary budget (2024 - 2027) and the remaining years are forecasted with zero growth. Category allocation based on SME opinion.
Renewal Forecast - Asset Value	Medium	Renewal forecast asset values are based on SME opinion.
Renewal Forecast - Asset Useful Life	High	With the exception of the facilities and nursing equipment assets, the useful life has been based on SME opinion.
Renewal Forecast - Condition Modelling	High	With the exception of the facilities and nursing equipment assets, no formalized condition assessment for other asset types exists.
Disposal forecast	Very Low	Current disposal information is largely rolled into renewal. Continuous improvements are required to ensure accurate data is available.

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a **Medium** confidence level.

Long-Term Care 2024 Asset Management Plan

10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PLANS

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2024 – 2027 Preliminary Operating Budgets;
- 2024 Approved Capital Budget;
- **HSC 20050 Macassa Lodge – Redevelopment Project Financing Plan**;
- Building Condition Assessment Reports;
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc.);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter expert opinion and anecdotal information; and,
- Reports from the mandatory inspections, operational and maintenance activities internal reports.

10.2 IMPROVEMENT PLAN

It is important that the City recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision-making. The tasks listed below are essential to improving the AM Plan and the City's ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning, and plans to physically improve the assets.

The Improvement Plan **Table 30** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this AM Plan will provide updates on these improvement plans.

Long-Term Care 2024 Asset Management Plan

Table 30: Improvement Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1	Review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.	LTC staff	Internal Resources	Q4 2025
2	Review the current asset registry process and make improvements for data collection to include verification of assets, asset specifications, quantity, age and condition. Implement consistency between both lodges where available and follow the newly developed City Data Standard.	LTC staff and CFEM support	Internal Resources - 250 FTE hours \$12,500	Q4 2025
3	Complete a full review and verification of current IT assets against the Corporate IT asset registry.	LTC staff	Internal Resources	Q2 2025
4	Complete an external survey to gather data from the general City of Hamilton population and potentially former family members of residents and visitors.	LTC Director and Administrators. Support from CAM	Internal Resources - 15 FTE hours \$1200	Q1 2026
5	Explore modifications to the existing internal survey in order to improve the results by ensuring the response scales used to cover all possibilities (i.e., standardize to a 5-point Likert ³¹ Scale)	Quality and Privacy Manger	Internal Resources - 15 FTE hours \$1,200	Q3 2024
6	Annual review of Demand Drivers and Risk Assessment.	LTC/CFEM	Internal Resources	Annually
7	Develop a 10-year multi-year Capital budget using asset renewal principles to identify a budget for renewal and acquisitions.	Finance/LTC/CFEM	Internal Resources	1 year (2025-2026)
8	The demand management plans discussed should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction	LTC/Climate Office/CFEM	Internal Resources	TBD

³¹ A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g., Very Good to Very Poor, Very Satisfied to Very Unsatisfied).

Long-Term Care 2024 Asset Management Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
	methods, and changes which will be incorporated into future iterations of the AM Plan.			
9	Incorporate Climate Mitigation and Climate Adaptation into future versions of the AM Plan once costs are better defined.	LTC/CFEM	Internal Resources	TBD
10	Implement or re-establish a preventative maintenance program at both LTC lodges for food service and housekeeping and laundry equipment to reduce reactive maintenance.	Food Service and Housekeeping team leads. CFEM support.	Internal Resources - 20 FTE hours \$1000	Q4 2024
12	Update the AM Plan at regular intervals.	CAM/LTC	Internal Resources	When an update is scheduled
13	Climate Lens tool to be used to assess future projects and prioritize climate adaptation projects.	LTC/CFEM	Internal Resources	TBD
14	Investigate maintenance backlog as indicated in the BCAs to ensure accuracy and to ensure critical components have been prioritized.	LTC/CFEM	Internal Resources	TBD

10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated on a regular basis to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

Long-Term Care 2024 Asset Management Plan

10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one-to-ten-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 110%).

Long-Term Care 2024 Asset Management Plan

11. REFERENCES

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Long-Term Care 2024 Asset Management Plan

12. APPENDIX "A" – MACASSA LODGE AND WENTWORTH LODGE CONTINUOUS QUALITY INITIATIVE REPORT



2024-25 Continuous Quality Initiative Report – Macassa Lodge

Date: April 2, 2024

Prepared by: Jaimie Williams, Manager of Quality Improvement & Privacy (Designated Quality Lead)

Introduction

The Mission, Vision, and Values for Macassa Lodge, Wentworth Lodge and the Adult Day Program of the City of Hamilton is outlined below and reflects our home’s commitment to continuous quality improvement because we continuously strive to optimize the quality of life of our residents by providing exceptional care and services.

Annual improvement initiatives also focus on improving one or more of the six quadrants of health quality per Ontario Health. They are: Safe, Effective, Patient-centred, Efficient, Timely, and Equitable.

Macassa Lodge, Wentworth Lodge, and the Adult Day Program: City of Hamilton

CORE PURPOSE For the benefits of adults requiring long term care and community-based services, we provide care and accommodation in a not-for-profit organization in order to maximize their quality of life.

VISION We are committed to our people, dedicated to building a strong and healthy community, passionate about making a difference by providing quality care and recognized for our excellence.

MISSION We provide person-centered, long-term care that promotes well-being and creates opportunities to maximize the quality of life of our residents.

VALUES

- (1) Engaged empowered employees
- (2) Sensational Service
- (3) Collective Ownership
- (4) Steadfast integrity
- (5) Courageous change



Strategies to improve the quality of care and services are embedded throughout Macassa Lodge’s Operational Plans such as:
 Strategic Plan
 Accessibility
 Cultural Competency
 Risk Management, and
 Information Technology

Improvement initiatives are also embedded in Macassa Lodge’s Strategic Plan, which focuses on seven Corporate Priorities for the City of Hamilton:

- 1) Community engagement and participation
- 2) Economic growth and prosperity
- 3) Healthy and safe community
- 4) Our people and performance
- 5) Clean and green
- 6) Built environment/infrastructure
- 7) Culture and diversity

Requirement Under O. Reg 246/22	Summary
<p>Continuous quality improvement initiative report</p> <p>168. (1) Every licensee of a long-term care home shall prepare a report on the continuous quality improvement initiative for the home for each fiscal year no later than three months after the end of the fiscal year and, subject to section 271, shall publish a copy of each report on its website.</p>	<p>Fiscal year ends: March 31, 2024</p> <p>Report due: June 30, 2024</p>
<p>(2) The report required under subsection (1) must contain the following information:</p>	<p>Jaimie Williams, Manager of Quality Improvement and Privacy (designated Quality Lead)</p>



<p>1. The name and position of the designated lead for the continuous quality improvement initiative</p>	
<p>2. A written description of the home's priority areas for quality improvement, objectives, policies, procedures, and protocols for the continuous quality improvement initiative for the next fiscal year.</p>	<p>For the coming fiscal year 2024-2025, Macassa Lodge's priority areas for quality improvement as outlined in the annual Quality Improvement Plan will address the four areas of focus below:</p> <ol style="list-style-type: none"> 1) Access & Flow – Reduce Avoidable Emergency Department Transfers 2) Equity – Provide a Safe and Inclusive Environment (where residents feel safe and included) 3) Experience – Improve Resident and Family Experience 4) Safe & Effective – Reduce Falls and Reduce Utilization of Antipsychotic Medication without a Diagnosis of Psychosis <p>Organizational objectives, policies, procedures, and protocols that govern the continuous quality improvement initiative are reviewed/revised at least annually as necessary, and are subject to the following legislation:</p> <ul style="list-style-type: none"> • Fixing Long term Care Homes Act, 2021 • Ontario Regulation 246/22 made under the Fixing Long Term Care Homes Act, 2021 • Excellent Care for All Act, 2010 • Long Term Care Home Service Accountability Agreement, and • (CARF) Accreditation standards
<p>3. A written description of the process used to identify the home's priority areas for quality improvement for the next fiscal year and how the home's priority areas for quality improvement for the next fiscal year are based on the recommendations of the home's continuous quality improvement committee.</p>	<p>When developing Macassa Lodge's annual Quality Improvement Plan, the steps below are used to ensure a sustainable plan is in place that includes SMART goals that are Specific, Measurable, Achievable, Relevant, and Time-based:</p> <ol style="list-style-type: none"> 1) Understand and prioritize opportunities for improvement 2) Develop improvement initiatives 3) Implement improvement initiatives 4) Monitor successes and challenges 5) Pivot if/when necessary



	<p>A number of reliable data sources are reviewed by several organizational teams and committee's including but not limited to:</p> <ul style="list-style-type: none">-Regular and Extended Quality Improvement Committee's-Resident's Council-Family Council-Program/Department specific teams-Professional Health Advisory Committee-Organizational Leadership Team <p>Reliable data sources are not only reviewed in the fall, when planning for the annual quality improvement plan begins, but throughout the year as part of the homes quality improvement program to monitor and measure successes and challenges. Data sources that are reviewed include but are not limited to:</p> <ul style="list-style-type: none">• Performance Indicator Data from Canadian Institute for Health Information (CIHI)• Ontario Health Quality Improvement Plan Indicator Matrix• Annual Resident/Family Satisfaction Survey outcomes• Trends identified from complaints received from residents, families, staff, and stakeholders• Trends identified from Critical Incidents (reportable to Ministry of Long-Term Care)• Inspection outcomes from Ministry of Long-Term Care, Ministry of Labour, and Public Health• Infection Prevention and Control audits• Any identified emergent issues internally or externally• Commission on voluntary Accreditation of Rehabilitation Facilities (CARF) survey outcome• Avoidable Emergency Department transfer rates
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<p>4. A written description of a process to monitor and measure progress, identify, and implement adjustments, and communicate outcomes for the home's priority areas for quality improvement in the next fiscal year.</p>	<p>The process to monitor and measure successes and challenges, identify, and implement adjustments, and communicate outcomes is reflected in Macassa Lodge's annual Quality Improvement Committee Schedule/Workplan. This schedule lists priority agenda items that need to be discussed each month and includes a template for committee members to document progress for each quality improvement indicator and initiative, as well as barriers, and if adjustments need to be made.</p> <p>QIP progress and outcomes are communicated by the Manager of Quality Improvement and Privacy each month at Resident and Family Council meetings, and department meetings as appropriate.</p> <p>A copy of the Quality Improvement Plan, monthly progress, and Continuous Quality Improvement committee minutes are posted publicly in an accessible location in the home on the Quality Improvement Communication board for all residents, family members, staff, and visitors to read. Paper based copies are available upon request. Further, copies of the annual Quality Improvement Workplan, Narrative, and Continuous Quality Initiative Report are posted on our home's website.</p>
<p>5. A written record of, i. the date the survey required under section 43 of the Act was taken during the fiscal year,</p>	<p>In 2023, the annual resident and family satisfaction survey was completed between October 1 and November 30.</p>
<p>ii. the results of the survey taken during the fiscal year under section 43 of the Act, and</p>	<p>2023 overall satisfaction results for Macassa Lodge are as follows:</p> <ol style="list-style-type: none"> 1) I am able to communicate openly and freely in order to ensure that my care and service needs are met without fear of consequences. 92% 2) I am involved in decisions relating to my care. 87% 3) The staff in each department take time to listen to my concerns. 88%



	<p>4) I am treated with respect and in a courteous and fair manner. 94%</p> <p>5) Overall, I am satisfied with the quality of the care and service. 95%</p> <p>6) I would recommend this home to others. 96%</p>
<p>iii. how, and the dates when, the results of the survey taken during the fiscal year under section 43 of the Act were communicated to the residents and their families, Residents' Council, Family Council, if any, and members of the staff of the home.</p>	<p>The results of the 2023 resident and family satisfaction survey were communicated verbally at the following Council/Committee meeting dates:</p> <ol style="list-style-type: none"> 1) Resident's Council – January 9th, 2024 2) Family Council – January 16th, 2024 3) Regular Quality Improvement Committee – January 18th, 2024 4) Management Team – January 29th, 2024 <p>Copies of the annual resident and family satisfaction survey results were posted in the home in January 2024.</p>
<p>6. A written record of,</p> <p>i. the actions taken to improve the long-term care home, and the care, services, programs, and goods based on the documentation of the results of the survey taken during the fiscal year under clause 43 (5) (b) of the Act, the dates the actions were implemented and the outcomes of the actions,</p>	<p>As a result of verbal communications provided to the Resident Council, Family Council, Regular Quality Improvement Committee and Management Team in January 2024, the following actions to address opportunities for improvement will be taken to improve care, services, programs, and goods for the three priority areas below:</p> <ol style="list-style-type: none"> 1) Improve Timely Response to Call Bells: <ol style="list-style-type: none"> a) Communicate about expectations around call bell response at department meetings b) Provide information/education about call bell response times and staffing levels in the home 2) Improve Volunteer Services:



	<ul style="list-style-type: none"> a) Investigate if barriers to volunteer recruitment can be removed or reduced. I.e., costs associated with mandatory TB testing and vulnerable sector screening b) Create a marketing/recruitment plan c) Implement volunteer succession plan d) Create annual volunteer report that describes # of active volunteers, # of volunteer hours given, what volunteers do at Macassa Lodge, and how volunteers improve resident quality of life e) Update website – application process <p>3) Improve Familiarity of Resident and Family Councils:</p> <ul style="list-style-type: none"> a) Hold Meet & Greet in spring to educate/inform new residents and families about the role of the Councils and how to become a member b) Provide information (handout) about Resident and Family Councils at care conferences <p>A full record of dates the actions were completed/implemented is posted in the home on the Quality Improvement Communication board for all residents, family members, staff, and volunteers to read.</p>
<p>ii. any other actions taken to improve the accommodation, care, services, programs, and goods provided to the residents in the home’s priority areas for quality improvement during the fiscal year, the dates the actions were implemented and the outcomes of the actions,</p>	<p>None</p>
<p>iii. the role of the Residents’ Council and Family Council, if any, in actions taken under subparagraphs i and ii,</p>	<p>Actions to address opportunities for improvement identified by the annual resident/family satisfaction survey were reviewed at Resident’s Council on April 9th, 2024. There were no additions or changes to proposed initiatives</p>



	<p>suggested; however, residents are able to bring suggestions forward at any time.</p> <p>The same actions were shared with members of the Family Council via email on March 21st, 2024. A request for recommendations and advice was extended to members; however, none were received.</p>
<p>iv. the role of the continuous quality improvement committee in actions taken under subparagraphs i and ii, and</p>	<p>The Continuous Quality Improvement Committee members met in January to review the outcome of the annual resident and family satisfaction survey and to discuss action items to address opportunities for improvement.</p> <p>The Committee discussed options for priority areas to focus our quality improvement initiatives in 2024. We considered the importance to Residents and Families, likelihood of success of our efforts, identified extra costs associated and the positive impact from the initiatives. The Committee has decided to focus on all three priority areas this year, based on Project Priority calculations.</p> <ol style="list-style-type: none"> 1) Improve Timely Response to Call Bells 2) Improve Volunteer Services 3) Improve Familiarity with Resident/Family Councils <p>The QI Committee utilized the PICK QI exercise to then brainstorm potential initiatives based on the three Priority Areas from the Prioritizer QI Tool. The Committee categorized potential initiatives into the PICK Tool based on low to high benefits, and low to high efforts for each initiative. Our focus areas will be driven from the “Implement” and “Challenge/Planning” quadrants, with the “Possible” and “Kybosh” sections being considered at a later time.</p>



<p>v. how, and the dates when, the actions taken under subparagraphs i and ii were communicated to residents and their families, the Residents' Council, Family Council, if any, and members of the staff of the home.</p>	<p>Progress with regards to quality improvement initiatives and actions taken to address priority areas identified by the annual resident/family satisfaction survey are provided monthly at Resident Council, Family Council and Quality Improvement Committee meetings. A documented record of actions taken, dates actions were implemented, and outcomes will be maintained at Macassa Lodge and posted on the Quality Improvement Communication board for all residents, family members, volunteers, and staff members to read.</p>
<p>(3) The licensee shall ensure that a copy of the report is provided to the Residents' Council and Family Council, if any.</p>	<p>A copy of the Resident and Family satisfaction report was offered to members of the Resident and Family Councils and provided to those who requested it. Additionally, a copy of the report, including actions to address opportunities for improvement is posted publicly in the home on the Quality Improvement Communication board with a notation that copies are available upon request to the Manager of Quality Improvement and Privacy.</p>
<p>Records of improvements</p> <p>169. Every licensee of a long-term care home shall ensure that the continuous quality improvement initiative required under section 42 of the Act includes a record maintained by the licensee setting out the names of the persons who participated in evaluations of improvements in the report required under section 168 of this Regulation.</p>	<p>All members of Macassa Lodges Regular and Extended Quality Improvement Committee's participate in developing, monitoring, and evaluating the annual quality improvement initiative/plan. Additionally, members participate in the development, application and evaluation of the annual resident/family satisfaction survey including identification of action items to address opportunities for improvement.</p> <p>Macassa Lodge's Regular Quality Improvement Committee meets on a monthly basis and is comprised of the following Leadership Team members:</p> <p>Lisa Phelps, Administrator Alecia Matteson, Director of Nursing Jaimie Williams, Manager of Quality Improvement & Privacy (Chair) Andrea Ciparis, Administrative Support Christine Gallagher, Supervisor-Housekeeping and Laundry</p>



Brian Bettencourt, Director of Food Services and Senior Project Manager
Mike Stallard, Supervisor of Administration
Vince Guetter, Superintendent Facilities Operations & Maintenance
Denise Kendall, Supervisor of Resident Services and Adult Day Program
Kory Bothen, RAI Coordinator
Lisa Sargent, Nurse Leader
Gabrielle Miguel, Nurse Leader
Victoria Vandermeulen, Nurse Leader
Camelia Burlea, Nurse Leader
Azra Gaertnei, Infection Control Practitioner

Macassa Lodge's **Extended Quality Improvement Committee** members meet quarterly. In addition to members of the Leadership team listed above, Extended Committee members also include:

Dr. Joginder Khera, Medical Director
Portia Machonisa, Nurse Practitioner
Edwina Brako, Nurse Practitioner
Personal Support Worker – TO BE DETERMINED
Alia Arif, Registered Dietitian
Sameer Kapadia, Care Rx Pharmacist Consultant
M.O., Resident's Council President
Family Council Members:
Linda Nishimura
Susan Fyfe
Diane Zanin
Brenda Folk
Tami Henderson
Wendy Kowalski
Dwight Crump
Julia Gizzarelli



2024-25 Continuous Quality Initiative Report – Wentworth Lodge

Date: April 2, 2024

Prepared by: Jaimie Williams, Manager of Quality Improvement & Privacy (Designated Quality Lead)

Introduction

The Mission, Vision, and Values for Wentworth Lodge, Macassa Lodge and the Adult Day Program of the City of Hamilton is outlined below and reflects our home’s commitment to continuous quality improvement because we continuously strive to optimize the quality of life of our residents by providing exceptional care and services.

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- (5) Courageous change



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 Cultural Competency
 Risk Management, and
 Information Technology

Improvement initiatives are also embedded in Wentworth Lodge’s Strategic Plan, which focuses on seven Corporate Priorities for the City of Hamilton:

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- 2) Economic growth and prosperity
- 3) Healthy and safe community
- 4) Our people and performance
- 5) Clean and green
- 6) Built environment/infrastructure
- 7) Culture and diversity

Requirement Under O. Reg 246/22	Summary
<p>Continuous quality improvement initiative report</p> <p>168. (1) Every licensee of a long-term care home shall prepare a report on the continuous quality improvement initiative for the home for each fiscal year no later than three months after the end of the fiscal year and, subject to section 271, shall publish a copy of each report on its website.</p>	<p>Fiscal year ends: March 31, 2024</p> <p>Report due: June 30, 2024</p>
<p>(2) The report required under subsection (1) must contain the following information:</p>	<p>Jaimie Williams, Manager of Quality Improvement and Privacy (designated Quality Lead)</p>



<p>1. The name and position of the designated lead for the continuous quality improvement initiative</p>	
<p>2. A written description of the home's priority areas for quality improvement, objectives, policies, procedures, and protocols for the continuous quality improvement initiative for the next fiscal year.</p>	<p>For the coming fiscal year 2024-2025, Wentworth Lodge's priority areas for quality improvement as outlined in the annual Quality Improvement Plan will address the four areas of focus below:</p> <ol style="list-style-type: none"> 1) Access & Flow – Reduce Avoidable Emergency Department Transfers 2) Equity – Provide a Safe and Inclusive Environment (where residents feel safe and included) 3) Experience – Improve Resident and Family Experience 4) Safe & Effective – Reduce Falls and Reduce Utilization of Antipsychotic Medication without a Diagnosis of Psychosis <p>Organizational objectives, policies, procedures, and protocols that govern the continuous quality improvement initiative are reviewed/revised at least annually as necessary, and are subject to the following legislation:</p> <ul style="list-style-type: none"> • Fixing Long term Care Homes Act, 2021 • Ontario Regulation 246/22 made under the Fixing Long Term Care Homes Act, 2021 • Excellent Care for All Act, 2010 • Long Term Care Home Service Accountability Agreement, and • (CARF) Accreditation standards
<p>3. A written description of the process used to identify the home's priority areas for quality improvement for the next fiscal year and how the home's priority areas for quality improvement for the next fiscal year are based on the recommendations of the home's continuous quality improvement committee.</p>	<p>When developing Wentworth Lodge's annual Quality Improvement Plan, the steps below are used to ensure a sustainable plan is in place that includes SMART goals that are Specific, Measurable, Achievable, Relevant, and Time-based:</p> <ol style="list-style-type: none"> 1) Understand and prioritize opportunities for improvement 2) Develop improvement initiatives 3) Implement improvement initiatives 4) Monitor successes and challenges 5) Pivot if/when necessary

A number of reliable data sources are reviewed by several organizational teams and committee's including but not limited to:

- Regular and Extended Quality Improvement Committee's
- Resident's Council
- Family Council
- Program/Department specific teams
- Health Advisory Committee
- Organizational Leadership Team

Reliable data sources are not only reviewed in the fall, when planning for the annual quality improvement plan begins, but throughout the year as part of the homes quality improvement program to monitor and measure successes and challenges. Data sources that are reviewed include but are not limited to:

- Performance Indicator Data from Canadian Institute for Health Information (CIHI)
- Ontario Health Quality Improvement Plan Indicator Matrix
- Annual Resident/Family Satisfaction Survey outcomes
- Trends identified from complaints received from residents, families, staff, and stakeholders
- Trends identified from Critical Incidents (reportable to Ministry of Long-Term Care)
- Inspection outcomes from Ministry of Long-Term Care, Ministry of Labour, and Public Health
- Infection Prevention and Control audits
- Any identified emergent issues internally or externally
- Commission on voluntary Accreditation of Rehabilitation Facilities (CARF) survey outcome
- Avoidable Emergency Department transfer rates



<p>4. A written description of a process to monitor and measure progress, identify, and implement adjustments, and communicate outcomes for the home's priority areas for quality improvement in the next fiscal year.</p>	<p>The process to monitor and measure successes and challenges, identify, and implement adjustments, and communicate outcomes is reflected in Wentworth Lodge's annual Quality Improvement Committee Schedule/Workplan. This schedule lists priority agenda items that need to be discussed each month and includes a template for committee members to document progress for each quality improvement indicator and initiative, as well as barriers, and if adjustments need to be made.</p> <p>QIP progress and outcomes are communicated by the Manager of Quality Improvement and Privacy each month at Resident and Family Council meetings, and at department meetings as appropriate.</p> <p>A copy of the Quality Improvement Plan, monthly progress, and Continuous Quality Improvement committee minutes is posted publicly in an accessible location in the home on the Quality Improvement Communication board for all residents, family members, staff, and visitors to read. Paper based copies are available upon request. Further, copies of the annual Quality Improvement Workplan, Narrative, and Continuous Quality Initiative Report is posted on our home's website.</p>
<p>5. A written record of, i. the date the survey required under section 43 of the Act was taken during the fiscal year,</p>	<p>In 2023, the annual resident and family satisfaction survey was completed between October 1 and November 30.</p>
<p>ii. the results of the survey taken during the fiscal year under section 43 of the Act, and</p>	<p>2023 overall satisfaction results for Wentworth Lodge are as follows:</p> <ol style="list-style-type: none"> 1) I am able to communicate openly and freely in order to ensure that my care and service needs are met without fear of consequences. 92% 2) I am involved in decisions relating to my care. 85% 3) The staff in each department take time to listen to my concerns. 85%



	<p>4) I am treated with respect and in a courteous and fair manner. 89%</p> <p>5) Overall, I am satisfied with the quality of the care and service. 90%</p> <p>6) I would recommend this home to others. 83%</p>
<p>iii. how, and the dates when, the results of the survey taken during the fiscal year under section 43 of the Act were communicated to the residents and their families, Residents’ Council, Family Council, if any, and members of the staff of the home.</p>	<p>The results of the 2023 resident and family satisfaction survey were communicated verbally at the following Council/Committee meeting dates:</p> <ol style="list-style-type: none"> 1) Resident’s Council – January 17th, 2024 2) Family Council – January 24th, 2024 3) Regular Quality Improvement Committee – January 18th, 2024 4) Management Team – January 29th, 2024 <p>Copies of the annual resident and family satisfaction survey results were posted in the home in January 2024.</p>
<p>6. A written record of,</p> <p>i. the actions taken to improve the long-term care home, and the care, services, programs, and goods based on the documentation of the results of the survey taken during the fiscal year under clause 43 (5) (b) of the Act, the dates the actions were implemented and the outcomes of the actions,</p>	<p>As a result of verbal communications provided to the Resident Council, Family Council, Regular Quality Improvement Committee and Management Team in January 2024, the following actions to address opportunities for improvement will be taken to improve care, services, programs, and goods for the three priority areas below:</p> <ol style="list-style-type: none"> 1) Provide Pleasurable Dining <ol style="list-style-type: none"> a) Director of Food Service to complete education on pleasurable dining b) Increase themed meals (2024-25 QIP) c) Complete annual satisfaction survey in spring instead of fall d) Ask about meal service satisfaction at care conferences e) Audit meal service satisfaction at point of service



	<p>2) Improve Timely Response to Call Bells:</p> <ul style="list-style-type: none"> a) Communicate about expectations around call bell response at department meetings b) Audit call bell response <p>3) Improve Volunteer Services:</p> <ul style="list-style-type: none"> a) Investigate if barriers to volunteer recruitment can be removed or reduced. I.e., costs associated with mandatory TB testing and vulnerable sector screening b) Create marketing/recruitment plan c) Inquire with City of Hamilton Public Health if/how we can support TB testing at the Lodge d) Update website – application process <p>A full record of dates the actions were completed/implemented is posted in the home on the Quality Improvement Communication board for all residents, family members, staff, and volunteers to read.</p>
<p>ii. any other actions taken to improve the accommodation, care, services, programs, and goods provided to the residents in the home’s priority areas for quality improvement during the fiscal year, the dates the actions were implemented and the outcomes of the actions,</p>	<p>None</p>
<p>iii. the role of the Residents’ Council and Family Council, if any, in actions taken under subparagraphs i and ii,</p>	<p>Actions to address opportunities for improvement identified by the annual resident/family satisfaction survey were reviewed at Resident’s Council on April 17th 2024. There were no additions or changes to proposed initiatives suggested; however, residents are encouraged to bring suggestions forward at any time.</p>



	<p>The same actions were shared with members of the Family Council April 24th 2024. A request for recommendations and advice was extended to members; however, none were received.</p>
<p>iv. the role of the continuous quality improvement committee in actions taken under subparagraphs i and ii, and</p>	<p>The Continuous Quality Improvement Committee members met in January to review the outcome of the annual resident and family satisfaction survey and to discuss action items to address opportunities for improvement.</p> <p>The Committee discussed options for priority areas to focus our quality improvement initiatives in 2024. We considered the importance to Residents and Families, likelihood of success of our efforts, identified extra costs associated and the positive impact from the initiatives. The Committee has decided to focus on all three priority areas this year, based on Project Priority calculations.</p> <ol style="list-style-type: none"> 1) Provide Pleasurable Dining Experience 2) Improve Timely Response to Call Bells 3) Improve Volunteer Services <p>The QI Committee utilized the PICK QI exercise to then brainstorm potential initiatives based on the three Priority Areas from the Prioritizer QI Tool. The Committee categorized potential initiatives into the PICK Tool based on low to high benefits, and low to high efforts for each initiative. Our focus areas will be driven from the “Implement” and “Challenge/Planning” quadrants, with the “Possibe” and “Kybosh” sections being considered at a later time.</p>
<p>v. how, and the dates when, the actions taken under subparagraphs i and ii were communicated to residents and their families, the Residents’ Council, Family Council, if any, and members of the staff of the home.</p>	<p>Progress with regards to quality improvement initiatives and actions taken to address priority areas identified by the annual resident/family satisfaction survey are provided monthly at Resident Council, Family Council and Quality Improvement Committee meetings. A documented record of actions taken,</p>



	<p>dates actions were implemented, and outcomes will be maintained at WentworthLodge and posted on the Quality Improvement Communication board for all residents, family members, volunteers, and staff members to read.</p>
<p>(3) The licensee shall ensure that a copy of the report is provided to the Residents’ Council and Family Council, if any.</p>	<p>A copy of the Resident and Family satisfaction report was offered to members of the Resident and Family Councils and provided to those who requested it. Additionally, a copy of the report, including actions to address opportunities for improvement is posted publicly in the home on the Quality Improvement Communication board with a notation that copies are available upon request to the Manager of Quality Improvement and Privacy.</p>
<p>Records of improvements</p> <p>169. Every licensee of a long-term care home shall ensure that the continuous quality improvement initiative required under section 42 of the Act includes a record maintained by the licensee setting out the names of the persons who participated in evaluations of improvements in the report required under section 168 of this Regulation.</p>	<p>All members of Wentworth Lodge Regular and Extended Quality Improvement Committee’s participate in developing, monitoring, and evaluating the annual quality improvement initiative/plan. Additionally, members participate in the development, application and evaluation of the annual resident/family satisfaction survey including identification of action items to address opportunities for improvement.</p> <p>Wentworth Lodge’s Regular Quality Improvement Committee meets on a monthly basis and is comprised of the following Leadership Team members:</p> <p>Karen Allcroft, Administrator Sherril Boecking, Director of Nursing Jaimie Williams, Manager of Quality Improvement & Privacy (Chair) Mary-Kay Jolin, Administrative Support Jennifer Young, Supervisor-Housekeeping and Laundry Jaimie Journeaux, Director of Food Services Kim Walker, Supervisor of Resident Services & Administration Vince Guetter, Superintendent Facilities Operations & Maintenance Deborah Lauper-Stewart, RAI Coordinator Marietta Miguel, Nurse Leader</p>



	<p>Geraldine Valesco, Nurse Leader Nilmini Amarasekera, Infection Control Practitioner</p> <p>Wentworth Lodge’s Extended Quality Improvement Committee members meet quarterly. In addition to members of the Leadership team listed above, Extended Committee members also include:</p> <p>Dr. Rittu Singh, Medical Director Anisa Guled, Nurse Practitioner Edwina Brako, Nurse Practitioner Personal Support Worker – TO BE DETERMINED Rola Shewayhat, Registered Dietitian Sameer Kapadia, Care Rx Pharmacist Consultant A.E., Resident’s Council President A.C., Resident’s Council member Family Council Members: F.A. L.P.</p>
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Natural Assets 2024 Asset Management Plan



NATURAL ASSETS 2024 ASSET MANAGEMENT PLAN

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1. INTRODUCTION

At the time of writing, the City of Hamilton is early in its recognition of natural assets in asset management plans and financial reports. This Asset Management (AM) Plan is intended to document the available information for natural assets and provide a roadmap for how the City will work toward fully achieving compliance with O.Reg 588/17¹ regulatory requirements.

Listed below are related documents reviewed in preparation of this Asset Management Plan:

- Asset Management (AM) Plan Overview Document
- CSA W218:23, Specification for natural asset inventories²
- Natural Asset Management Guidebook for Local Governments³

Since Sunday, February 25, 2024, the City of Hamilton experienced a cyber incident that disabled some of the IT systems. As a result, this AM Plan was created based on the data that was accessible at the time of publication.

1.1. DEFINITIONS

The following definitions in **Table 1** have been used throughout this document.

Table 1: Definitions

TERM	DEFINITION
Alvars	Naturally open areas of thin or no soil over essentially flat limestone, dolostone, or marble rock, supporting a sparse vegetation cover of mostly shrubs and herbs ⁴ .
Aquifer	Underground layer of water-bearing material, consisting of permeable or fractured rock, or of unconsolidated materials.
Areas of Natural and Scientific Interest (ANSI)	Represent lands and waters containing important natural landscapes or features that are important for natural heritage, protection, appreciation, scientific study, or education. ⁵
Asset Owner	Asset Owner has direct responsibility for the operation and provision of services related to an asset and is therefore responsible for the effective management of the asset over the asset’s lifecycle.
Environmentally Significant Area	Locally significant areas that meet any one of the following criteria: a) The area is a good representative of a biotic community characteristic of the natural landscapes of the City and not adequately represented in existing protected areas or the area is a good representative of pre-settlement biotic community; b) There are biotic communities that are rare in the City,

¹ (O. Reg. 588/17: Asset Management Planning for Municipal Infrastructure, 2012-24)

² (CSA W218:23, 2023)

³ (Natural Assets Initiative, 2024)

⁴ (Green Belt Plan, 2017)

⁵ (Ontario GeoHub, 2022)

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TERM	DEFINITION
	Province, or Canada; c) The area is a large natural area (20 hectares or more in size); it may be sufficiently large to provide habitat for species requiring large habitat areas; d) There is habitat for species considered significant in the City, Province, or Canada; e) The site fulfills a significant hydrological function (groundwater recharge or discharge, ground or surface water quality, or flood attenuation), f) The site contains a significant earth science feature (distinctive and unusual landform); g) There is a high diversity of native species or biotic communities; h) The area provides essential habitat for the continuation of species; for example, significant areas of species concentrations, areas essential for certain stage of the life cycle, source areas for species; i) There are significant seasonal concentrations of wildlife; j) The area acts as a link between natural areas or functions as a corridor for wildlife; k) The area is in good natural condition, with few non-native species, particularly invasive non-natives; or l) The area contains significant fish habitat. ⁶
Escarpment (i.e., Niagara Escarpment)	The Niagara Escarpment includes a variety of topographic features and land uses extending 725 kilometres from Queenston on the Niagara River to the islands off Tobermory on the Bruce Peninsula, and includes the physical and natural heritage features, cultural heritage resources, and scenic resources associated with the Escarpment landscape. ⁷
Grasslands (Open Spaces)	Areas dominated by non-woody vegetation with less than 25% tree cover, including meadows, grasslands, and tallgrass prairies.
Green Infrastructure Asset	An infrastructure asset consisting of natural or human-made elements that provide ecological and hydrological functions and processes and includes natural heritage features and systems, parklands, stormwater management systems, street trees, urban forests, natural channels, permeable surfaces, and green roofs. O. Reg 588/17, s 1. (1) ⁸
Green Infrastructure - Engineered Asset	Green infrastructure assets which have been designed to function like natural assets but are designs not found in nature (e.g., green roofs, permeable pavement, rain barrels etc.) ⁷
Green Infrastructure - Enhanced Asset	Green infrastructure assets which have been designed to act like natural assets (e.g., street trees, urban parks, stormwater management ponds etc.) ⁷
Green Infrastructure - Natural Asset	Green infrastructure assets include the stock of natural resources or ecosystems that is relied upon, managed, or could be managed by a municipality, regional district, or other forms of local government for the sustainable provision of one or more municipal services. ⁷

⁶ (City of Hamilton, 2022)

⁷ (Niagara Escarpment Commission, 2017)

⁸ (MNAI, 2019)

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TERM	DEFINITION
Infrastructure Asset	An infrastructure asset, including a green infrastructure asset, directly owned by a municipality, or included on the consolidated financial statements of a municipality, but does not include an infrastructure asset that is managed by a joint municipal water board O. Reg 588/17, s 1. (1) ⁹
Natural Beaches	An accumulation of unconsolidated sand or gravel along shorelines, formed by the reworking and deposition of sediments by waves, tides, and currents.
Traditional Asset	Human-made assets which are not green infrastructure assets and follow traditional lifecycle and asset management practices.
Waterbodies	Areas dominated by open water including lakes and ponds.
Watercourses	A visible channel where water flows, either seasonally or permanently and the surrounding floodplain riparian areas. Includes waterfalls.
Wetlands	Wetlands are areas that have been soaked with water long enough for the soil to become waterlogged. This allows water-loving or water-tolerant plants to grow. Wetlands are found where the water table is close to, or at the surface. They are usually in low-lying areas or along the edges of lakes and rivers. Many wetlands are permanently flooded, while others flood only periodically in the spring or fall. ¹⁰
Woodlands	Means treed areas that provide environmental and economic benefits to both the private landowner and the general public, such as erosion prevention, hydrological and nutrient cycling, provision of clean air and the long-term storage of carbon, provision of wildlife habitat, outdoor recreational opportunities, and the sustainable harvest of a wide range of woodland products. Woodlands include treed areas, woodlots or forested areas and vary in their level of significance at the local, regional and provincial levels ⁹ .

1.2. SCOPE

Per O. Reg 588/17, green infrastructure assets must be incorporated into a municipality’s asset management planning. **Figure 1** below includes examples of green infrastructure assets and categorizes them into natural, enhanced, and engineered assets.

The focus of this AM Plan will be on natural assets since enhanced and engineered assets are already incorporated into the City’s existing asset management program categorized by the key

⁹ (O. Reg. 588/17: Asset Management Planning for Municipal Infrastructure, 2012-24)

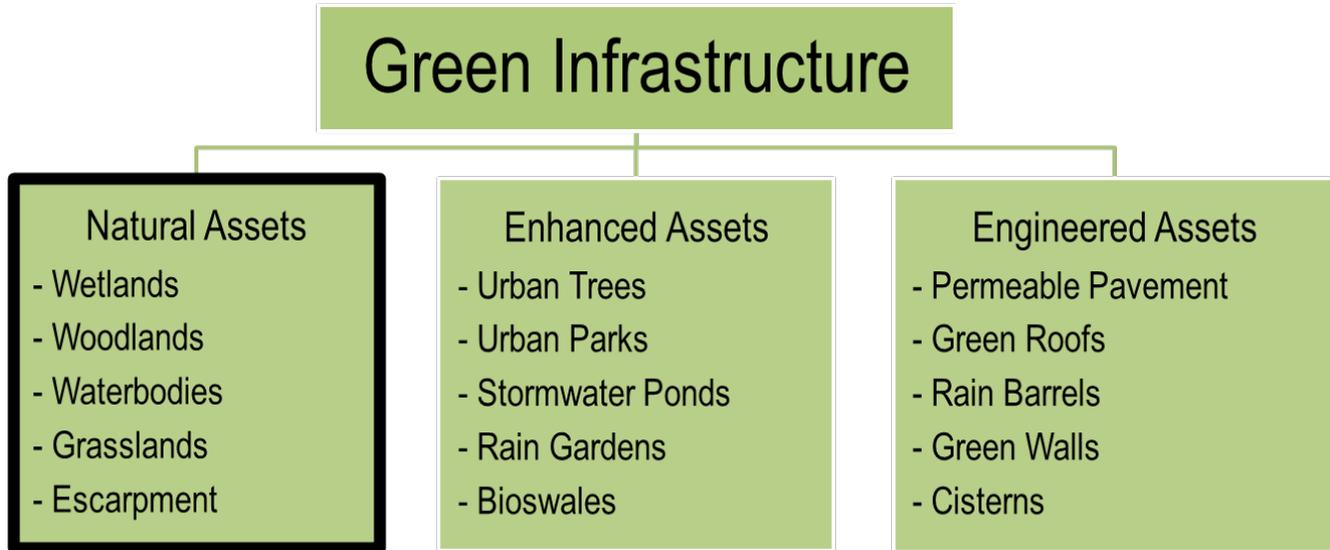
¹⁰ (Green Belt Plan, 2017)

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service they provide where inventories exist (e.g. street trees are included in the Forestry & Horticulture AM Plan, stormwater ponds are included in the Water Works AM Plan, etc).

Figure 1: Green Infrastructure Divisions



For Ontario municipalities to meet O. Reg 588/17 for natural assets, the scope must cover municipally owned natural assets. However, there are benefits to also quantifying all natural assets that the City depends on for services. The City of Hamilton will initially prioritize city-managed assets that are actively managed and provide key services. However, as part of the development of the Natural Asset Management Roadmap explained in **Section 3.2**, the City will also consider broadening the scope of the inventory to all-natural assets that the City of Hamilton relies on for services.

1.3. REPORT LIMITATIONS

Since natural assets are naturally occurring, they do not always follow traditional asset or financial management practices. As a result, the process for natural asset management is not as well-defined as it is for traditional assets. This has affected the amount of information that was able to be included within this first iteration of the AM Plan. Some key differences between traditional and natural assets are shown in **Table 2**.

Table 2: Differences between Traditional and Natural Assets

TRADITIONAL (GREY) ASSETS	NATURAL ASSETS
Typically designed to have a specified estimated service life to plan replacement.	Do not have an end-of-life or replacement schedule and are typically maintained in perpetuity unless the asset dies or is irreparably damaged.
Service capacity is immediately available upon construction and	Desired service capacity can take decades to achieve, and many natural assets increase in value over time. Therefore, replacement costs

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TRADITIONAL (GREY) ASSETS	NATURAL ASSETS
replacement costs can be gathered from market data.	cannot always be calculated based on simply acquiring a new asset.
Typically, only provides the service it is intended to perform and can be quantified.	May also provide additional ecosystem services that benefit the City but may not be able to be quantified at this time (e.g. carbon sequestration benefits, wildlife habitat etc.).
Are typically included in Generally Accepted Accounting Principles (GAAP) or Tangible Capital Assets (TCA) reports.	Are typically not included in Generally Accepted Accounting Principles (GAAP) or the Tangible Capital Assets (TCA) reports which means they are not directly included in the City's financial reporting.
Exist within the municipal boundary with clear municipal asset ownership.	This may result from a larger system of interconnected features which may span multiple jurisdictions and have multiple stewards (e.g., watershed catchment which may provide stormwater management for many municipalities).
Many available best practices and guides.	Few available best practices for natural asset management which could be used to develop this plan.

Most plans created by the City of Hamilton's Corporate Asset Management division contain a minimum number of sections to ensure compliance with O. Reg 588/17. However, due to the City's early stage in natural asset management, the following sections have not been included in this plan:

- Municipally Defined Levels of Service
- Demand Management
- Risk Management
- Lifecycle Management Plan
- Financial Management

As the City makes progress on the Natural Asset Management Roadmap described in **Section 3.2**, these sections will be incorporated into future iterations of the AM Plan.

In addition, it is important to note that a **Natural Asset Management Guidebook for Local Governments** was published by the Natural Assets Initiative in April 2024. This guidebook provides guidance on how to approach natural asset management. However, due to the date of publication and the City's lack of maturity in natural asset management, the document was not able to be fully incorporated in this AM Plan in time for the O. Reg 588/17, July 2024 deadline and will be used to develop future iterations of this report.

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2. ASSET REGISTRY

A natural asset registry refers to the database that houses the natural asset inventory which contains important attribute information required to properly manage assets. To comply with O. Reg 588/17, typically a summary of assets would include number of assets, replacement value, average age, and average condition which would typically be contained within the asset registry information for traditional assets.

2.1. SUMMARY OF ASSETS

For Ontario municipalities to meet O. Reg 588/17 for natural assets, the scope of this AM Plan must cover municipally owned natural assets. The inventory in **Table 3** below includes all known natural assets that exist within the municipal boundary as of April 2024 and are broken into city-managed and total assets within the Municipal Boundary where possible. Currently, the data confidence is Medium for both the total asset quantities as well as the portion of natural assets that the City is responsible for managing. Data confidence descriptions are outlined on **Page 31** of the [AM Plan Overview](#). It is important to note that the identification of City-managed natural assets is an ongoing process which will be addressed as part of the Natural Asset Management Roadmap explained in **Section 3.2**.

Currently, the known asset registry information the City can report with respect to natural assets is the estimated quantity which is not always delineated by asset category (e.g. Environmentally Significant Areas contain many different natural assets) which makes it difficult to fully quantify the individual natural assets. Replacement value and condition are not yet able to be quantified, and the average age would not be applicable for natural assets. Collecting this attribute information will be addressed as part of the Natural Asset Management Roadmap explained in **Section 3.2**.

In addition, it is likely that additional natural asset data exists in conservation authority, community, or other institutional databases, but due to time constraints, significant coordination with these groups to request or review their natural asset inventory data has not yet occurred. Collecting additional inventory data is a continuous improvement item which will be addressed as part of the Natural Asset Management Roadmap explained in **Section 3.2**.

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Table 3 : Quantity of Natural Assets

NATURAL ASSETS		
ASSET CATEGORY	QUANTITY (CITY-MANAGED)	QUANTITY (TOTAL WITHIN MUNICIPAL BOUNDARY)
Alvars	Undetermined	1,968 ha
Aquifers	114,882 ha ¹¹	114,882 ha
Area of Natural and Scientific Interest (ANSI) ¹²	292 ha ¹³	5,566 ha
Environmentally Significant Areas (ESA) ¹²	1,282 ha ¹³	21,294 ha
Escarpment Face	93 linear km	93 linear km
Hamilton Harbour	0 ha	2,230 ha
Lake Ontario	1770 ha ¹¹	Undetermined
Natural Beaches	8 total	12 total
Niagara Escarpment (Total Natural & Protected Areas) ¹²	830 ha ¹³	7,643 ha
Parks (including Grasslands) ¹⁴	1,869 ha ¹³	2,795 ha
Waterbodies	Included within Watercourses ¹⁵	3,792 ha
Watercourses	149 km ¹⁶	2,325 km
Wetland	166 ha ¹³	9,615 ha
Woodland	1,000 ha ¹³	21,385 ha
DATA CONFIDENCE	MEDIUM	MEDIUM

¹¹ Quantity based on Source Water Protection Plans and Polices

¹² Contains multiple different natural assets which may overlap other asset categories already included in Table 3.

¹³ Quantity based on Year Ending 2023 MPAC and City Real Estate data

¹⁴ Currently includes duplication of data with urban parks already included in the Parks AM Plan. Natural assets embedded in these parks such as grasslands were not able to be delineated at the time of writing.

¹⁵ Discussions are currently taking place to separate waterbodies from watercourses in spatial database.

¹⁶ Waterbodies included in this quantity are currently recorded as a "creek reach" in kilometers. However, waterbodies have a larger surface area which will be recorded as an area measurement when these assets are delineated.

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2.2. DATA COLLECTION FRAMEWORK

As previously stated, the City of Hamilton is early in its recognition of natural assets in asset management plans and reports. This section documents the progress to date following the guidelines outlined in both the CSA W218:23 as well as the **Natural Asset Management Guidebook for Local Governments**.

2.2.1. INVENTORY FRAMEWORK

Establishing an inventory of natural assets is an important step when completing an asset management plan. The ability to visualize data is an important consideration when completing a natural asset inventory as it will allow the assessment of infrastructure relationships, conditions, and risks. Therefore, the established inventory will include both spatial and attribute data and will follow existing City data standards and best practices.

The five key steps to establishing an inventory of natural assets per the **Natural Asset Management Guidebook for Local Governments** are included in **Table 4** below with the City progress made to date.

Table 4: Steps to Establish a Natural Asset Inventory

STEP	TASK	PROGRESS TO DATE
1	Obtain and review data	The information included in Table 3 was extracted from various sources outlined in Section 3.3 . Currently, this data is not always delineated by asset category. A more fulsome analysis of available data will be completed following this plan and consultation with conservation authorities, community and/or other institutional organizations will occur. This is a continuous improvement item which will be addressed as part of the Natural Asset Management Roadmap explained in Section 3.2 .
2	Categorize assets and establish an asset hierarchy	An asset hierarchy does not currently exist for natural assets. The natural assets reported in Table 3 are reported at the highest level which represents the data currently available. This is a continuous improvement item which will be addressed as part of the Natural Asset Management Roadmap explained in Section 3.2 .
3	Construct a natural asset registry	Currently, attribute information is largely unknown for the assets included in this AM Plan. A formal registry template has not yet been completed. These are continuous improvement items which will be addressed as part of the Natural Asset Management Roadmap explained in Section 3.2 .

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4	Identify other key attributes to incorporate into the inventory	These tasks are dependent on the completion of the above items and have not yet been initiated. These are continuous improvement items which will be addressed as part of the Natural Asset Management Roadmap explained in Section 3.2 .
5	Develop inventory metadata	

2.2.2. CONDITION METHODOLOGY

When developing a condition methodology for each natural asset, the City will follow the guidelines outlined in both the CSA W218:23 as well as *the **Natural Asset Management Guidebook for Local Governments***. The condition methodology is broken into three steps:

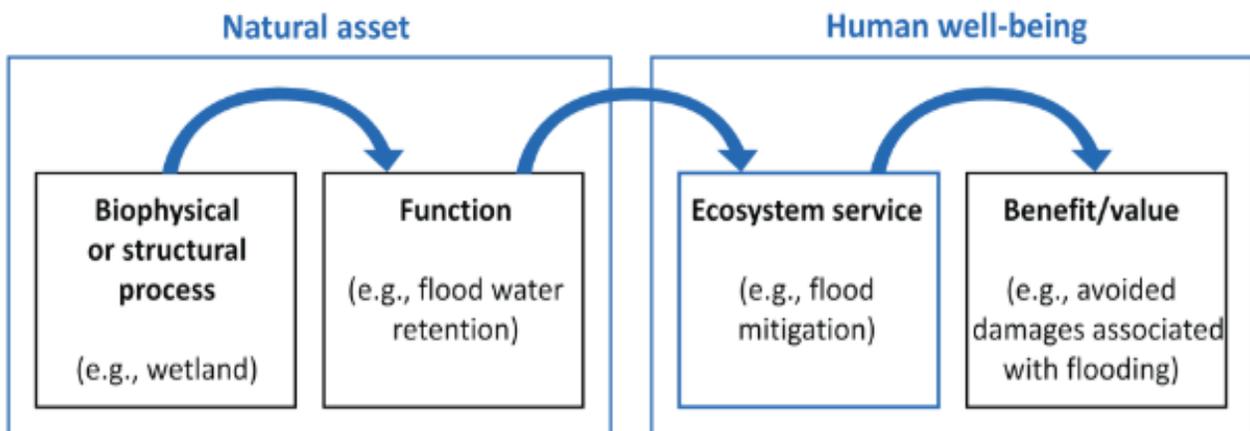
1. Service Identification
2. Desktop Condition Assessment & Scoring
3. Field Verification

2.2.2.1. SERVICE IDENTIFICATION

Natural assets often deliver core services to the public. When assessing the condition of natural assets, it is important for municipalities to identify the services these natural assets are providing in order to assess the capacity for these assets to continue to deliver these services.

The CSA W218:23 approach to linking natural assets to ecosystem services and human benefits is shown below in **Figure 2**.

Figure 2: Linkage between natural assets, ecosystem services, and human benefits¹⁷



¹⁷ (CSA W218:23, 2023)

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As part of this initial AM Plan development, the City explored the key natural assets that exist within the City and connected these assets to the ecosystem service that was being provided to the City which is shown in **Table 5**. This information will be used as the starting point for developing a more robust condition methodology as well as for outlining initial asset owner responsibility.

Table 5: Natural Asset Service Identification

NATURAL ASSET	ECOSYSTEM SERVICE	POTENTIAL BENEFIT
Alvars	Wildlife habitat	Increased biodiversity, improved crop and forage production through pollination, natural seed source, biochemical resources, medicinal goods and services for improved human health
	Soil stabilization and erosion control	Soil health and improved water quality
	Stormwater management	Reduction of flood impacts from storms, reduces pollutant load in receiving waterbody, water available for multiple uses in the watershed
	Carbon sequestration	Mitigate climate change impacts
Aquifers	Water Storage	Drinking water source
	Water Filtration	Improves drinking water quality
Escarpment	Soil quality	Ideal growing conditions for fruit and grapes
	Tree canopy	Local temperature heat mitigation, noise reduction, wind breaks.
	Carbon sequestration	Mitigate climate change impacts
	Wildlife habitat	Increased biodiversity, improved crop and forage production through pollination, natural seed source, biochemical resources, medicinal goods and services for improved human health
	Recreational	Improved human health and well-being by recreating in natural areas. Tourism for the City.
	Corridor	Transportation and wildlife migration corridor

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NATURAL ASSET	ECOSYSTEM SERVICE	POTENTIAL BENEFIT
Grasslands	Wildlife habitat	Increased biodiversity, improved crop and forage production through pollination, natural seed source, biochemical resources, medicinal goods and services for improved human health
	Stormwater management	Reduction of flood impacts from storms, reduces pollutant load in receiving waterbody, water available for multiple uses in the watershed
	Carbon sequestration	Mitigate climate change impacts
	Recreational	Improved human health and well-being by recreating in natural areas
	Soil stabilization and erosion control	Soil health and improved water quality
Natural Beaches	Recreational	Improved human health and well-being by recreating in natural areas. Tourism for the City.
	Wildlife habitat	Increased biodiversity
	Stormwater management	Reduces pollutant load in receiving waterbody through infiltration
Waterbodies	Stormwater management	Reduction of flood impacts from storms, water available for multiple uses in the watershed
	Water Storage	Drinking water source
	Recreational	Improved human health and well-being by recreating in natural areas. Tourism for the City.
	Wildlife habitat	Increased biodiversity, improved water quality
	Carbon sequestration	Mitigate climate change impacts
Watercourses	Stormwater management	Reduction of flood impacts from storms, reduces pollutant load in receiving waterbody through infiltration, water available for multiple uses in the watershed
	Recreational	Improved human health and well-being by recreating in natural areas
	Wildlife habitat	Increased biodiversity, improved crop and forage production through pollination
Wetlands	Stormwater management	Reduction of flood impacts from storms, reduces pollutant load in receiving waterbody, water available for multiple uses in the watershed
	Recreational	Improved human health and well-being by recreating in natural areas

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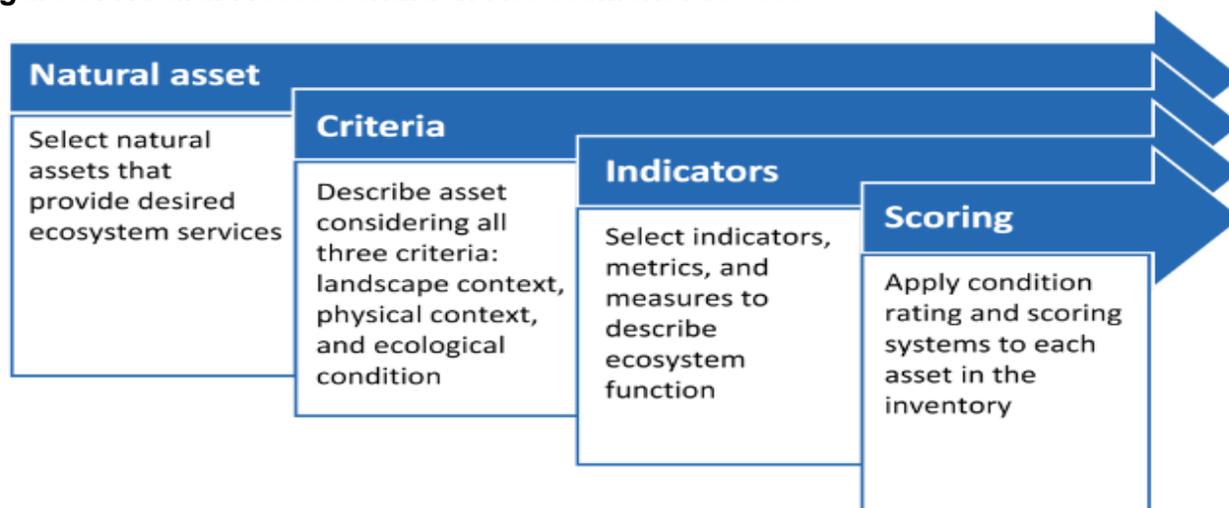
NATURAL ASSET	ECOSYSTEM SERVICE	POTENTIAL BENEFIT
	Wildlife habitat	Increased biodiversity, improved crop and forage production through pollination
	Temperature regulation	Local temperature reduction in urban settings
	Carbon sequestration	Mitigate climate change impacts
Woodlands	Tree canopy	Local temperature heat mitigation, noise reduction, wind break.
	Carbon sequestration	Mitigate climate change impacts
	Stormwater management	Reduction of flood impacts from storms, reduces pollutant load in receiving waterbody, water available for multiple uses in the watershed
	Wildlife habitat	Increased biodiversity, improved crop and forage production through pollination, natural seed source, biochemical resources, medicinal goods and services for improved human health
	Recreational	Improved human health and well-being by recreating in natural areas
	Soil stabilization and erosion control	Soil health and improved water quality

2.2.2.2. DESKTOP CONDITION ASSESSMENT & SCORING

Initially, the City is proposing to first complete a desktop condition assessment for all natural assets using condition indicators for ecosystem functioning per CSA W218:23. The CSA W218:23 process is summarized in **Figure 3**. This process will occur as part of the Natural Asset Management Roadmap explained in **Section 3.2**.

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Figure 3: Natural Asset Condition Assessment Process



For consistency across the organization, the natural assets condition scoring will follow a 5-point scale ranging from Very Good to Very Poor, however, due to natural assets not having an end-of-life, the descriptions will differ from traditional assets. The CSA W218:23 has a sample condition scale shown below, in **Table 6** which will be used as a starting point, but may continue to evolve.

Table 6: Sample Natural Asset Condition Description¹⁸

RATING	DESCRIPTION
1-Very Good	Well-maintained, good condition, no signs of deterioration in ecological conditions. Natural asset service provision is high.
2-Good	Ecological conditions appear to be sufficient; some minor localized (or isolated) impacts noticeable, which might be a warning sign of possible decline. Natural asset service provision is acceptable.
3-Fair	Clear signs of deterioration in ecological function and service-influencing factors. Natural asset service provision, while still functional, is at risk of failing.
4-Poor	Condition is below standard with large portion(s) of the system exhibiting significant deterioration in ecological function. Natural asset service provision is impacted, and some services might be non-functioning.
5-Very Poor	Widespread signs of advanced deterioration; unlikely that the natural asset is providing any functional service.

¹⁸ (CSA W218:23, 2023)

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2.2.2.3. FIELD VERIFICATION

When assessing the condition of natural assets, field verifications of ecosystem components and their functions should also occur.

Following the desktop condition exercise, the City will create a field condition assessment protocol to verify the condition of the natural asset in the field using the ecosystem function indicators established during the desktop exercise. The timing of these assessments will be prioritized based on the identified risk profile of the asset while also considering the budget and resources available. The estimated timing and required resources for these assessments have been included in the Natural Asset Management Roadmap in **Section 3.2**.

During these assessments, field staff will also collect additional inventory information for those natural assets. If possible, condition assessments will occur over a five-year cycle to align with O. Reg 588/17 reporting timelines.

2.3. REPLACEMENT COST VALUATION

In order to meet the requirements for O. Reg 588/17, a replacement cost must be developed for natural assets within the asset management plan.

Since natural assets are naturally occurring and not purchased or constructed, the recommendation within the ***Natural Asset Management Guidebook for Local Governments*** is to develop a replacement cost to restore the natural asset if it is in a degraded state or recreate the natural asset if it was lost. However, there are limitations to this methodology with respect to irreplaceable natural features, desired service capacity potentially taking decades to achieve, cultural significance to Indigenous peoples, and low data confidence.

It can also be beneficial to quantify the cost of replacing the services the natural asset is providing to illustrate the importance of monitoring, protecting and managing these assets. To quantify the cost of natural asset services, typically the replacement cost for engineering a similar solution would be established. For example, the Grindstone Creek Watershed which is a shared City of Hamilton asset is estimated to provide over \$2 billion in stormwater services. This was calculated by evaluating the value of engineered infrastructure with an equivalent stormwater management capacity. However, this watershed also provides additional services which were evaluated to have an annual service value of approximately \$34 million in co-benefits which include recreation, erosion control, habitat biodiversity, atmospheric regulation, and climate mitigation.¹⁹

A lifecycle cost analysis could also be conducted for traditional versus natural assets. This is different from a replacement cost valuation and would allow the City to directly compare the performance of natural assets to the performance of traditional assets and provide justification from a monetary perspective for preserving the condition of these assets. Creating an investment

¹⁹ (Municipal Natural Assets Initiative (MNAI), 2022)

NATURAL ASSETS 2024 ASSET MANAGEMENT PLAN

plan for natural assets will also be completed as part of the Natural Asset Management Roadmap explained in **Section 3.2**.

NATURAL ASSETS

2024 ASSET MANAGEMENT PLAN

3. PLAN IMPROVEMENT AND MONITORING

It is important that the City recognizes areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision-making. These improvements typically span from improved lifecycle activities, improved financial planning, and plans to physically improve the assets.

As previously stated, the City of Hamilton is early in its recognition of natural assets in asset management plans and reports and therefore a Natural Asset Management Roadmap has been created to develop the City's asset maturity.

3.1. ASSET MANAGEMENT DATA SOURCES

This AM Plan contains natural asset quantity data. The sources of the data are:

- City of Hamilton Open GIS Data;
- Niagara Escarpment Commission;
- Province of Ontario GeoHub;
- Year Ending 2023 MPAC and City Real Estate data;
- 2014 Hamilton Natural Areas Inventory Project 3rd Edition;
- Asset Management Data Collection Templates; and,
- Subject Matter Expert Opinion and Anecdotal Information.

3.2. NATURAL ASSET MANAGEMENT ROADMAP

In November 2023, the City of Hamilton completed a Natural Asset Management (NAM) Roadmap with the Natural Asset Initiative (NAI), formerly known as the Municipal Natural Assets Initiative (MNAI), which resulted in over 30 items which outline the tasks required to reach the goal of integrating natural assets into the City's asset management program. A summary of these items is included in **Figure 4**, on the following page, and a detailed table is included in **Table 7** in **Appendix "A"**.

The implementation of the NAM Roadmap has already begun with the development of this initial asset management plan, and at the time of writing all roadmap items are expected to be completed by early 2031. It is important to note that due to the large amount of unknown information, the earlier tasks in the timeline have higher confidence than the tasks later in the timeline. As more data is collected and more information is known, the estimated timelines, scope, and required resources will likely be adjusted.

NATURAL ASSETS 2024 ASSET MANAGEMENT PLAN

Figure 4: Natural Asset Management Roadmap Gantt Chart

Tasks	2023				2024				2025				2026				2027				2028				2029				2030				2031																																																															
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4																																																												
First Asset Management Plan & Roadmap Development	Internal & External Resources																																																																																															
Initial Data Collection																																	Internal & External Resources																																																															
Initial Financial Planning																																	Internal Resources																																																															
Additional Data Collection & Risk Assessment																																									Internal & External Resources																																																							
Lifecycle Management, Levels of Service & Long-Term Financial Planning																																																																	Internal & External Resources																															
Ongoing Training, Communication and Progress Reporting					Internal Resources																																																																																											

NATURAL ASSETS

2024 ASSET MANAGEMENT PLAN

3.3. MONITORING AND REVIEW PROCEDURES

As part of the Natural Asset Management Roadmap completion, when financial information is available for natural assets, this AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of additional data collection or budget decisions.

The AM Plan will also be reviewed and updated when more data is available through the Natural Asset Management Roadmap to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. When established, these forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

3.4. PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the Natural Asset Management Roadmap items have been completed on time.

NATURAL ASSETS

2024 ASSET MANAGEMENT PLAN

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NATURAL ASSETS 2024 ASSET MANAGEMENT PLAN

5. APPENDIX A – NATURAL ASSET MANAGEMENT ROADMAP

Table 7: Natural Asset Management Roadmap

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	COMPLETION DATE
FIRST ASSET MANAGEMENT PLAN & ROADMAP DEVELOPMENT				
1.	Present revised Strategic Asset Management Policy to Council in June 2023, which incorporates all assets including natural assets	Corporate Asset Management	Internal Resources	Complete
2.	Develop a draft natural asset management roadmap with the Natural Assets Initiative.	Corporate Asset Management	Internal Resources & \$600 External	Complete
3.	Identify natural asset classes to be included in AM Plans, potentially starting with 2 or 3 asset classes.	Corporate Asset Management	Internal Resources	Complete
4.	Include someone who is responsible for incorporating natural asset management considerations in our Corporate Asset Management Steering Committee and add natural asset management considerations as a regular agenda item.	Corporate Asset Management	Internal Resources	Complete
5.	Define initial asset owner responsibility for natural assets inventory creation.	Corporate Asset Management	Internal Resources	Complete
6.	Ensure that staff responsible for managing natural assets are connected formally to the asset management planning process.	Corporate Asset Management	Internal Resources	Ongoing

NATURAL ASSETS

2024 ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	COMPLETION DATE
7.	Present the natural asset roadmap to senior management and council to build awareness of the steps that need to be taken and estimated resources required to make progress.	Corporate Asset Management	Internal Resources	Complete
8.	Apply current AM Planning methodology to natural assets and adapt as necessary.	Corporate Asset Management	Internal Resources	Complete
9.	Complete Asset Management Plan for natural assets, which includes the final NAM Roadmap.	Corporate Asset Management	Internal Resources	Complete
INITIAL DATA COLLECTION				
10.	Include Key Performance Indicators to measure progress on the implementation of the natural asset management roadmap.	Corporate Asset Management	Internal Resources	Q4 2026
11.	Include Key Performance Indicators to measure progress on natural asset management roadmap in new or updated asset management plans.	Corporate Asset Management	Internal Resources	Q4 2024
12.	Develop or strengthen natural asset data by incorporating fields into an asset register/inventory template.	Asset Owner	Internal Resources	Q1-Q2 2025

NATURAL ASSETS

2024 ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	COMPLETION DATE
13.	Incorporate most complete natural asset datasets into Enterprise Asset Management System for Public Works owned assets.	Asset Owner	Internal Resources	Q4 2024
14.	Conduct a high-level desktop inventory & condition assessment (if possible) of natural assets to determine where additional field verification of natural assets inventory and condition may be beneficial.	Asset Owner	Internal Resources, possible request for FTE in future, \$150K Roster Assignment	Q3-Q4 2025
15.	Connect with conservation authorities and other organizations when completing natural asset inventory.	Asset Owner/ Corporate Asset Management	Internal Resources	Ongoing
INITIAL FINANCIAL PLANNING				
16.	Seek funding for priority improvements in natural asset management.	Finance	Internal Resources	Ongoing
17.	Review capital and operating budgets to establish if natural assets are embedded into existing costs and begin to separate.	Asset Owner / Finance	Internal Resources	Q4 2025
18.	Budget for capital and operating expenditure for future natural asset expenditures into financial planning and AM systems.	Asset Owner / Finance	Internal Resources	Q1 2025

NATURAL ASSETS 2024 ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	COMPLETION DATE
19.	Better consider and integrate natural asset management-related needs into the budgeting process.	Finance	Internal Resources	Q1 2025
20.	Ensure natural assets are specifically identified in capital and operating budgets.	Finance	Internal Resources	Q1 2025
ADDITIONAL DATA COLLECTION & RISK ASSESSMENT				
21.	Conduct a desktop risk identification exercise to estimate risks to natural assets and relevant services and develop a risk mitigation strategy after inventory is complete.	Corporate Asset Management / Asset Owner	Internal Resources	Q4 2027
22.	Create a detailed asset owner lifecycle responsibility matrix for natural assets after assets are inventoried.	Corporate Asset Management	Internal Resources	Q4 2026
23.	Prioritize strengthening the quality of asset data where risks have been identified.	Asset Owner	Internal Resources, possible request for FTE in future, \$350K Roster Assignment	Q2 2025
24.	Conduct a field condition assessment for natural assets that have been identified as high-risk assets to support their protection and proactive management.	Asset Owner	Internal Resources, \$80K Co-op Students, \$150K Roster Assignment	Q1-2026

NATURAL ASSETS 2024 ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	COMPLETION DATE
LIFECYCLE MANAGEMENT, LEVELS OF SERVICE & LONG-TERM FINANCIAL PLANNING				
25.	Model or study the services that one or more significant natural assets or areas provide to support the development of levels of service and subsequently lifecycle management strategies for them.	Corporate Asset Management / Asset Owner	Internal Resources	Q4 2027
26.	Develop a specific natural asset investment plan that considers multiple service areas.	Finance / Corporate Asset Management	Internal Resources	Q4 2027-Q1 2031
27.	Conduct an economic valuation of the services associated with natural assets to support financial planning and budgeting.	Planning & Economic Development / Asset Owner / Corporate Asset Management	Consultant 1st Phase-\$75K; 2nd Phase- \$250K	Q4 2027-Q1 2031
TRAINING AND COMMUNICATION				
28.	In future, after the development of this roadmap and after receiving clarification on how our proposed methodology may differ for natural assets, we may alter our training on natural assets.	Corporate Asset Management	Internal Resources	Q4 2025
29.	Communicate the benefits and offer training for natural asset management to council.	Corporate Asset Management	Internal Resources	Q1 2025
30.	Disseminate new knowledge about natural asset management internally (e.g., The natural asset management roadmap).	Corporate Asset Management	Internal Resources	Q4 2025

NATURAL ASSETS

2024 ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	COMPLETION DATE
31.	Connect with neighbouring Indigenous nations when completing natural asset inventory.	Indigenous Relations / Asset Owner	Internal Resources	Ongoing
32.	Continue relationships with neighbouring Indigenous nations while completing natural asset management strategies and plans.	Indigenous Relations / Asset Owner	Internal Resources	Ongoing
33.	Investigate opportunities to attend natural asset management-related educational events.	Corporate Asset Management	Internal Resources	Ongoing

Hamilton Parks and Recreational Trails 2024 Asset Management Plan



HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

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HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

SUMMARY AND QUICK FINDINGS

SERVICE PROFILE



The purpose of Hamilton Parks is to provide administration, maintenance and management of the parks system including recreational trails within the City of Hamilton. Hamilton Parks delivers sustainable, accessible and inclusive parks services to the residents and visitors of the City emphasizing the importance of parks for health, wellbeing, and quality of life for all Hamilton residents.

ASSET SUMMARY



Replacement Value
\$643M

FAIR CONDITION

Average Age of **28** years
 or **45%** of the average
 remaining service life

LEVEL OF SERVICE SUMMARY

- Customers felt that Hamilton Parks performance was **GOOD** in providing services in the last 24 months.
- Customers feel that Parks services **MEETS NEEDS** overall.
- Customers are **SATISFIED** and **AGREE to STRONGLY AGREE** that Parks services are accessible to the public.



ASSET HIGHLIGHTS				
ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION	STEWARDSHIP MEASURES
Park Infrastructure	6423	\$119M	Fair	Staff Inspections
Outdoor Recreation Amenities	1031	\$198.1M	Fair	Staff Inspections
Facilities	290	\$134.7M	Fair	Building Condition Assessments
Trails & Waterfront	136	\$148M	Fair	Staff and 3 rd party inspections

DATA CONFIDENCE



HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

DEMAND DRIVERS

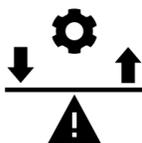


Population change – Hamilton’s population will continue to grow and Hamilton Parks will continue to see growth in demand for parkland and outdoor recreation opportunities. New developments will increase the number of Parks assets through parkland dedication.



Customer Expectations – Customers frequently ask for better than like-for-like replacement of assets or expansion of services. Recently desire has increased for year-round access to parks, trails and amenities.

RISK



- Critical Assets are identified as escarpment stairs, park bridges, shoreline protection, and premier sports facilities.

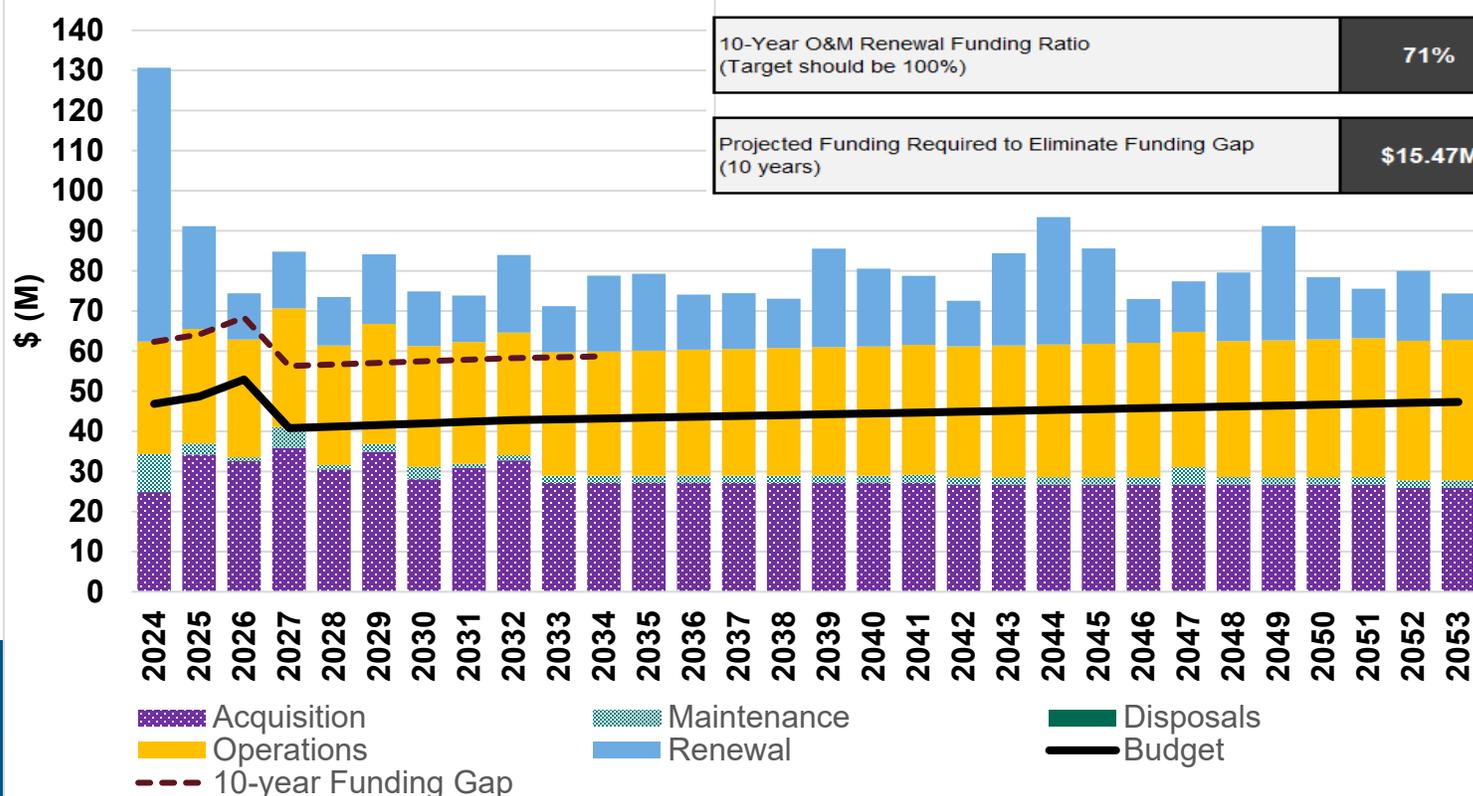
CLIMATE CHANGE MITIGATION



- Targeted reduced mowing and renaturalization projects
- Piloting electric small equipment
- Working with Landscape Architecture Services (LAS) to meet canopy targets in park designs.
- Diverting dog park waste from landfills and recycling into fertilizer and electricity

LIFECYCLE SUMMARY

Asset Renewal Funding Ratio (Target should be 90%-110%)	35%
10-Year O&M Renewal Funding Ratio (Target should be 100%)	71%
Projected Funding Required to Eliminate Funding Gap (10 years)	\$15.47M



HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

1. INTRODUCTION

Hamilton Parks provides administration, maintenance and management of the parks system including recreational trails within the City of Hamilton. The purpose of this Asset Management Plan (AM Plan) is to ensure that Parks has the required assets to deliver sustainable, accessible, and inclusive park services to the City.

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements (i.e., O. Reg 588/17¹) and required funding to provide the appropriate levels of service over the 2024-2053 planning period.

The Parks section's assets include facilities for both public use and park maintenance, outdoor recreational amenities, and infrastructure including recreational pathways, lighting, furniture, and utilities. Vehicles, machinery, and equipment are used by Parks Staff to provide maintenance and management of Parks properties. The Parks section is also responsible for the recreational trails² system including the Waterfront Trail and associated shoreline assets.

Since Sunday, February 25, 2024, the City of Hamilton experienced a cyber incident that disabled some of the IT systems. As a result, this AM Plan was created based on the data that was accessible at the time of publication.

¹ Government of Ontario, 2017

² Recreational trails referenced in this report are multipurpose trails owned and managed by the City and located outside of the road right-of-way.

HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

2. BACKGROUND

The information in this section is intended to provide background on Parks service areas by providing service profiles, outlining legislative requirements and defining the asset hierarchy used throughout the report. This section will provide the necessary background for the remainder of the AM Plan.

2.1 SERVICE PROFILE

Listed below are related documents reviewed in preparation of the Asset Management Plan:

- Asset Management Plan Overview Document;
- Hamilton Parks Master Plan, 2023³;
- City of Hamilton Recreation Master Plan, 2022⁴;
- City of Hamilton Recreational Trails Master Plan, 2016⁵;
- 2024 Development Charges Background Study⁶;
- Master Plan Study - Wild Waterworks at Confederation Beach Park, 2020;
- City of Hamilton Escarpment Stairs Assessment, 2021;
- Shoreline Inventory and Assessment of City of Hamilton Owned Assets, 2019; and,
- Sport Lighting Condition Assessment, 2021 & Sport Lighting Condition Assessment Phase 2, 2022.

Additional financial-related documents are identified in **Section 10** Plan Improvement and Monitoring.

2.1.1 SERVICE HISTORY

The City of Hamilton boasts approximately 1151 hectares of municipally-owned parkland at 373 locations and in excess of 1104 hectares of municipally-owned open space property at 125 locations, offering many opportunities for people of all ages to get outdoors and explore nature.

These properties have been acquired over the past two centuries, preserving many historical features and transforming them into the parks we know today. Hamilton's oldest parks include Gore Park, Gage Park, Dundurn Park, Hamilton Amateur Athletics Association (HAAA) Park, Battlefield Park, Confederation Beach Park, Woodlands Park, and Victoria Park.

Hamilton's many recreational trails encourage hikers, cyclists, rollerbladers, and nature lovers to enjoy the natural landscapes of the escarpment and valleys. Some of these trails are built on

³ (City of Hamilton, 2023)

⁴ (City of Hamilton, 2022)

⁵ (City of Hamilton, 2016)

⁶ (Watson & Associates Economists Ltd, 2024)

HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

former rail lines and many trails preserve important transportation routes that have been used since the early days of the city. Bayfront Park, Pier 4 Park, the Hamilton Harbour Waterfront Trail, and Hamilton Beach Recreational Trail offer panoramic views of the Hamilton Harbour and northwest shoreline.

As the city's population grows, additional parks and open spaces are required for future residents to enjoy and for the protection and enhancement of our environment and health. Parks are found across the City, in all wards. Since amalgamation, more parks have been added, both in growth areas and in existing neighbourhoods. Hamilton's increasing number of park assets across a geographically vast municipality is challenging park maintenance budgets/resources to uphold service level standards.

In 2011, the Outdoor Recreation Facilities & Sports Field Provision Plan was published covering a wide range of topics and guiding municipal decision making. This plan was updated and built upon with the Recreation Master Plan completed in 2022, guiding the city's decision-making for the provisioning of outdoor recreation facilities for the next ten years and beyond.

In 2023, the City's first Parks Master Plan was completed. This document provides a framework to assess the current state of supply, and the ability of residents to access parkland and guides decision-making around management decisions and prioritization for acquisition of new parkland. The focus of the Master Plan is on the Neighbourhood Parks class.

2.1.2 SERVICE FUNCTION

The intent of the park system is to emphasize the importance of parks for health, well-being, and quality of life for all Hamilton residents. The Planning Act requires that municipalities provide parkland to residents and sets contribution rates that must be met by developers as the city grows. The City works to ensure that parks, trails, and green spaces are properly designed and well-maintained to meet community needs.

Services include:

- Operation and maintenance of parklands, sports fields, recreational trails, playgrounds, and spray pads;
- Program support, development, and coordination;
- Ensuring the health and safety of our residents when accessing parks and parks services; and,
- Reviewing and commenting on parkland development and acquisition, and parkland design and redevelopment.

Hamilton benefits from these services in several ways, including:

- Improving the health of residents, encouraging residents' sense of pride, place and community;

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- Providing opportunities for residents and visitors to play, relax and gather;
- Providing opportunities for residents to interface with green and natural environments; and,
- Contributing to a healthy natural environment and mitigating the impacts of climate change through the provision of naturalized areas, green spaces and trees, opportunities for ecological benefits, rainfall infiltration, reduction of the heat island effect, etc.

In order to deliver sustainable, accessible and inclusive park services, Parks require assets. Some ways assets support the delivery of the service include:

- The provision of outdoor recreation opportunities;
- Site works including vehicular access/internal roads, limited stormwater management, pedestrian and sport lighting, and pathways, that allow park properties to function at the desired level of service;
- Equipment and resources to maintain parks, trails, and open spaces at the desired level of service; and
- Administrative equipment to support the delivery of services.

The City manages a variety of types of parkland identified in **Table 1** to meet the needs of residents by providing different facilities and opportunities for recreation. City-wide parks are generally larger park sites with many functions containing major facilities. They vary significantly in size and shape and are often associated with unique cultural or historical features. Community Parks are generally four to seven hectares, located near major streets, and intended to serve large areas of approximately 20,000 residents. They often provide enhanced features including sports fields, spray pads, and washrooms. Neighbourhood Parks provide smaller well-distributed park spaces to provide parks within walking distance of residents' homes. Typically, two hectares in size, these parks provide walking paths, play structures and gathering space. The smallest park class is Parkettes. These parks are typically less than one hectare, offer limited facilities and are often found in older areas where large blocks of land are more challenging to provide.

Table 1: Park Classification System Summary

CLASS	# OF PARKS	TOTAL AREA (HECTARES)	MEDIAN AREA (HECTARES)
City Wide	24	480.5	17.41
Community	72	378.6	3.98
Neighbourhood	172	298.5	1.44
Parkette	109	28.6	0.21

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2.1.3 USERS OF THE SERVICE

Residents and visitors of all ages and abilities use Parks and open spaces for active and passive recreation opportunities, scientific, sporting, and cultural events/programming, and protection and enhancement of the natural environment. Some programs that Parks offer to residents and visitors include (but are not limited to):

- Bee City – Hamilton is the 39th city in Canada to be designated as a bee city. We commit to continuing to create new pollinator habitats, provide education and community outreach opportunities, and look for innovative ways to celebrate pollinators in our city. Visit the webpage here for more information (<https://www.hamilton.ca/home-neighbourhood/environmental-stewardship/pollinators>);
- Dog park program – Hamilton offers residents and visitors two options to exercise their dogs: fenced-in dog parks and free running areas. Visit the webpage here for more information (<https://www.hamilton.ca/home-neighbourhood/animals-pets/dogs/dog-parks-and-free-running-areas>); and,
- Community ice rink program – Community ice rinks are built and operated in city parks by community volunteers, subject to location and available resources. Additionally, infrastructure for sports such as football, bocce, cricket, basketball, baseball, soccer, etc., are provided at many Hamilton Park locations. The Recreation section coordinates provisional recreational need requirements, bookings, fee collection and requests associated with sports and user groups while the Parks section manages the built infrastructure and maintenance. More details on the Recreation section can be found in the Recreation & Golf Asset Management Plan.

Based on the 2021⁷ (2016) Census results, Hamilton's population is 569,353 (536,917), and the average household size is 2.5 (2.5) people. Parkland and natural open space are increasingly constrained due to population growth and residential intensification. Increasing population density makes park assets even more critical for residents' quality of life as they seek refuge and low/no-cost recreation. Additionally, natural open spaces and parklands are necessary for mitigating the negative impacts of climate change and shifting weather patterns (for example: heat island, stormwater management, etc).

⁷ (Census Profile, 2021 Census of Population, 2021)

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2.1.4 UNIQUE SERVICE CHALLENGES

Parks have several unique service challenges including:

- Growing population/development and frequent acquisition of new parkland and assets through the planning and neighbourhood development process increase the quantity and volume of assets to manage. Growth in assets is not always matched by growth in resources to maintain newly acquired or assumed infrastructure. Provincial changes to Development Charges legislation have resulted in additional funding pressures to parkland development;
- Current planning legislation only allows for parkland dedication allowances that support the development of Neighbourhood parkland. Any Community or City-Wide class parkland needs are required to be purchased through other City funding strategies;
- Increasing population density through residential growth is occurring in areas where vacant land is sparse and land acquisition is challenging. Residents living in higher-density areas have less private outdoor space and rely on municipal parks, trails, and open spaces. Parks in these areas experience higher use and faster deterioration of assets. Land acquisition is more difficult and costly in already built-up areas and some of the land that does become available in these areas requires difficult and costly environmental remediation;
- The City of Hamilton is a geographically large municipality and Parks locations and assets are distributed throughout the municipality. Travelling between sites can be time consuming and requires work yards and equipment to be dispersed at multiple locations. If the urban boundary expands and asset distribution becomes continually more dispersed, additional work yards, equipment, staff may be needed to meet the current level of service.
- Existing assets are aging while existing funding for maintenance and renewal is limited and not sufficient to complete all desired planned maintenance activities or replace assets at the optimal time. Asset data and records are limited and stored in a variety of formats and locations. Assets are diverse and maintenance procedures are not standardized and documented for all assets. Some asset categories are particularly unique and present unique challenges including the escarpment stairs and Wild Waterworks;
- As some assets including sports fields and diamonds deteriorate to poor condition due to limited maintenance and renewal funding, residents gravitate towards the remaining assets in better condition. This leads to higher-than-ideal utilization in some fields with limited recovery time, causing premature deterioration and increasing maintenance costs.
- User expectations are continually rising with the desire for a large and diverse range of services. There is a desire for higher quantity and quality of assets, more variety of assets, and replacement with better than like-for-like assets. Changing demands and the desire for higher service levels have led to requests for outdoor park use and recreation

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opportunities during winter. Expanded projects and increased services often require more significant front-end staffing to deliver projects, and necessitate higher acquisition, maintenance and renewal costs that can be challenging to fund;

- The outdoor nature of parks assets and recreational trails as well as their locations within and close to bodies of water, slopes and other hazard lands make them vulnerable to many of the impacts of climate change. Staff have already begun to observe climate change impacting the management of many assets through all stages of the lifecycle.

2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of Parks services are outlined in **Table 2**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

Table 2: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENT
The Planning Act	This legislation enables municipalities to require the allocation of public parkland within a development or redevelopment as a condition of development approval. The Planning Act sets the following parkland contributions: Standard rate: 5% of developable land for residential developments and 2% of developable land for non-residential developments (commercial, retail, institutional or industrial). Alternative rate: One hectare per 300 proposed residential units for higher-density developments (contingent on an approved parks plan identifying the park need).
The Development Charges Act	The Act enables municipalities in the province to enact by-laws to impose development charges against lands to be developed to pay for growth-related capital costs for municipal services such as roads, water, wastewater, public works, recreation, police and fire protection.
Development Charges By-law	City of Hamilton by-law that details development charges requirements.
Parkland Dedication By-law	This by-law implements cash-in-lieu or land dedication (or conveyance) requirements for parks in land development, redevelopment, or subdivision. It sets dedication rates for different types of development (rural, urban, downtown) and cash-in-lieu unit rates and caps.

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LEGISLATION OR REGULATION	REQUIREMENT
Niagara Escarpment Planning and Development Act (NEPDA) and the Niagara Escarpment Plan	This legislation and plan direct how and what development activities can occur within the Niagara Escarpment to maintain a continuous natural landscape. Includes provisions for the Bruce Trail which traverses Hamilton through the escarpment area.
Growth Plan for the Greater Golden Horseshoe	This plan identifies locations to concentrate growth and development. These locations impact park planning in two ways: <ul style="list-style-type: none"> • Existing parks, in growth areas, may face increased pressure; and, • New parks may be required to meet increasing demand.
Urban and Rural Hamilton Official Plans and Secondary Plans	These plans identify where and how land can be developed or used and guide the built, social, economic, and open space components of Hamilton’s urban and rural areas. These plans include policies that guide Hamilton’s Park types, standards, access, and dedication. Secondary plans are a component of the Urban Hamilton Official Plan and provide specific land use designations and policies for neighbourhoods across the City. They determine park locations, sizes, proximity to schools and natural open spaces, as well as other park characteristics.

2.3 ASSET HIERARCHY

In order to deliver services, Parks requires assets. The Parks Service Area has been broken down into five asset classes for the purpose of this AM Plan:

- **Park Infrastructure:** refers to physical assets located at park locations such as pathways, parking lots, bridges, retaining walls, fencing, furniture, gardens, fountains, and signs. This also includes utilities such as water, wastewater, and stormwater facilities, lighting and electrical systems, and non-sport irrigation;
- **Outdoor Recreation Amenities:** refers to outdoor sporting facilities such as; diamonds, courts, fields, skate parks, outdoor exercise stations and natural community ice rinks. Also includes supporting components that are part of these assets such as; sport fencing, bleachers, nets, posts, and irrigation. Other outdoor recreational facilities located in parks include play structures, spray pads, dog parks and Wild Waterworks;

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- **Facilities:** refers to any City-owned facilities necessary to deliver Parks services as well as public use Park facilities including washrooms, and pavilions;
- **Trails and Waterfront:** refers to recreational trails as well as the escarpment stairs and viewing platforms. It also includes the Waterfront Trail composed of the Lake Ontario Waterfront Trail and the Hamilton Harbour Waterfront Trail, the waterfront shoreline protection, and other waterfront assets including breakwaters, docks, and boat launches; and,
- **Fleet and Equipment:** refers to all fleet and equipment that support the delivery of Parks services.

Parks trees are included in the Forestry & Horticulture Asset Management Plan. Other Parks Natural Assets will be addressed in a separate Asset Management Plan focused on Natural Assets.

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Table 3: Asset Class Hierarchy

SERVICE AREA	PARKS AND TRAILS				
ASSET CLASS	PARK INFRASTRUCTURE	OUTDOOR RECREATION AMENITIES	FACILITIES	TRAILS & WATERFRONT	FLEET & EQUIPMENT
	<ul style="list-style-type: none"> • Park Pathways • Fencing • Bridges and Boardwalks • Parkland Stormwater Assets • Roads, Parking Lots and Retaining Walls • Signs • Furniture and Other • Lighting and Electrical Infrastructure 	<ul style="list-style-type: none"> • Ball Diamonds • Sports Courts • Sports Fields • Play Structures • Spray Pads • Dog Parks • Community Ice Rinks • Skate Parks • Running Tracks and Exercise Stations • Wild Waterworks 	<ul style="list-style-type: none"> • Pavilions and Sun Shelters • Washrooms, Concessions, and Clubhouses • Maintenance and Storage • Ice Huts • Shared Work Yards 	<ul style="list-style-type: none"> • Recreational Trails • Escarpment Stairs • Viewing Platforms • Waterfront Trail • Waterfront Shoreline Protection • Other Waterfront Assets 	<ul style="list-style-type: none"> • Trucks and Passenger Vehicles • Utility and Turf Maintenance Vehicles • Small Equipment • IT Equipment

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3. SUMMARY OF ASSETS

This section provides a detailed summary and analysis of the existing inventory information as of October 2023 including age profile, condition methodology, condition profile, asset usage, and performance for each of the asset classes. **Table 4** displays the detailed summary of assets for the Parks service area. The sources for this data are a combination of data included in the City's database information. It is important to note that inventory information does change often and that this is a snapshot in time of information.

The City owns approximately **\$643.2 million** in Parks assets. To calculate the average age and condition, a weighted average calculation has been completed based on replacement cost and excludes assets where information is currently unavailable.

Assets are a weighted average of **28 years** in age which is **45%** of the average remaining service life (RSL); however, age data is largely only available for fleet and facilities assets with a few exceptions. Based on the limited age data available the overall data confidence for age and remaining service life is **Low**.

The assets are on average in **Fair** condition however there are a number of categories for many assets in the Park Infrastructure class, where condition data is not available. For many assets condition data is five or more years out of date and based on non-standard procedures. Based on the limitations of the data the overall data confidence for the condition is **Low**. Based on the data available for most assets this means that the City should be completing preventative, preservation and maintenance activities as well as operating activities (e.g., inspection, cleaning) to prevent any premature failures.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. In addition, the assets included below are assets that are assumed and in service at the time of writing.

Data confidence associated with asset information is also presented in **Table 4**. Data confidence descriptions are outlined on **page 31**, in the [AM Plan Overview](#). The replacement costs for many assets below are from the 2024 Development Charges Background Study⁸. For most Facilities assets, these replacement costs are calculated using an internal tool which encompasses current market rates, building type and size. Fleet and Equipment assets replacement costs were gathered from the most recent purchase price for similar assets. Replacement values for other items are generally based on inflated values of original purchase, recent purchase price for similar assets, or replacement cost estimates based on staff expert opinion.

⁸ For Parks assets there can be significant variability in asset features within the same category that result in highly variable replacement values. Tender prices for similar assets can also change significantly year to year. Based on these limitations the data is considered Medium confidence for this Asset Management Plan.

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A continuous improvement item identified in **Table 35** is to implement an asset registry for all Parks assets which includes key database fields and follows the newly developed City Data Standard.

Table 4: Detailed Summary of Assets

PARK INFRASTRUCTURE				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Park Pathways	195.3 km	\$39.6M	No Data	3-FAIR
Data Confidence	High	Medium		Medium
Fencing	20.9 km	\$2.1M	No Data	3-FAIR
Data Confidence	Low	Low		Medium
Bridges and Boardwalks	24 Bridges No Data Boardwalks	\$3.6M	No Data	No Data
Data Confidence	Medium	Low		
Parkland Stormwater Assets	443	\$5.8M	No Data	3-FAIR
Data Confidence	Low	Low		Low
Roads, Parking Lots and Retaining Walls	149 Parking Lots No Data – Roads & Retaining Walls	\$12.8M	No Data	No Data
Data Confidence	Low	Low		
Signs	254	\$2.7M	No Data	2-GOOD
Data Confidence	Low	Low		Low
Furniture and Other	1600	\$5.3M	No Data	No Data
Data Confidence	Low	Low		
Lighting and Electrical Infrastructure	2350 Pedestrian Lights 820 Sports Lights 557 Pedestals 9.4km Wiring	\$47.1M	No Data	3-FAIR (Sport Lighting Only)
Data Confidence	Medium	Medium		High (Sport Lighting Only)
SUBTOTAL	\$119.0M		No Data	3-FAIR*
Data Confidence	Medium*			Low**

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OUTDOOR RECREATION AMENITIES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Ball Diamonds	188	\$23.8M	No Data	2-GOOD
Data Confidence	High	Medium		Medium
Sports Courts	209	\$16.6M	No Data	3-FAIR
Data Confidence	High	Medium		Medium
Sports Fields	188	\$37.0M	No Data	3-FAIR
Data Confidence	High	Medium		Medium
Play Structures	267	\$48.3M	13 (72%)	3-FAIR
Data Confidence	High	Medium	High	Medium
Spray Pads	71	\$48.2M	No Data	No Data
Data Confidence	High	Medium		No Data
Dog Parks	14	\$1.2M	No Data	No Data
Data Confidence	High	Medium		No Data
Community Ice Rinks	71	\$9.7M	No Data	No Data
Data Confidence	High	Medium		No Data
Skate Parks	7	\$8.6M	No Data	No Data
Data Confidence	High	Medium		No Data
Running Tracks and Exercise Stations	17	\$1.0M	No Data	No Data
Data Confidence	High	Medium		No Data
Wild Waterworks	1	\$24.9M	40 (20%)	4-POOR
Data Confidence	Very High	Medium	Medium	High
SUBTOTAL		\$219.3M	22* (54%)*	3-FAIR*
Data Confidence		Medium*	Low**	Low**

FACILITIES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Pavilions and Sun Shelters	92	\$16.1M	30 (45%)	3-FAIR
Data Confidence	Medium	Medium	Medium	Medium
Washrooms, Concessions and Clubhouses	92	\$56.1M	38 (32%)	3-FAIR

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FACILITIES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Data Confidence	High	Medium	High	High
Maintenance and Storage	62	\$37.7M	36 (32%)	3-FAIR
Data Confidence	Medium	Medium	High	Medium
Ice Huts	39	\$2.3M	No Data	No Data
Data Confidence	High	Medium	No Data	No Data
Shared Work Yards	5	\$22.5M	53 (30%)	3-FAIR
Data Confidence	Very High	Medium	High	High
SUBTOTAL		\$134.7M	39* (33%)*	3-FAIR*
Data Confidence		Medium*	High*	High*

TRAILS & WATERFRONT				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Recreational Trails	92 km	\$17.0M	No Data	3-FAIR
Data Confidence	High	Low	No Data	Low
Escarpment Stairs	13	\$32.7M	No Data	3-FAIR
Data Confidence	Very High	Low	No Data	High
Viewing Platforms	N2	\$4.0M	No Data	No Data
Data Confidence	High	Low	No Data	No Data
Waterfront Trail	17.7 km	\$10.6M	No Data	3-FAIR
Data Confidence	High	Medium	No Data	Medium
Waterfront Shoreline Protection	13 km	\$87.8M	No Data	3-FAIR
Data Confidence	Medium	Low	No Data	High
Other Waterfront Assets	No Data	No Data	No Data	No Data
Data Confidence	No Data	No Data	No Data	No Data
SUBTOTAL		\$148.0M	No Data	4-FAIR*
Data Confidence		Low*	No Data	High*

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FLEET & EQUIPMENT				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Trucks and Passenger Vehicles	83	\$5.5M	8 (24%)	4-POOR
Data Confidence	High	Medium	High	Low
Utility and Turf Maintenance Vehicles	230	\$11.6M	8 (34%)	4-POOR
Data Confidence	High	Medium	High	Low
IT Equipment	62	\$0.1M	3 (27%)	4-POOR
Data Confidence	High	High	High	Low
Small Equipment	462	\$1.0M	5 (47%)	3-FAIR
Data Confidence	Medium	Low	Low	Low
SUBTOTAL		\$18.2M	8 (32%)*	4-POOR*
Data Confidence		Medium	High*	Low*

TOTAL	\$643.2M	28* (45%)*	3-FAIR
Data Confidence	Medium*	Low**	Low**

*Weighted average by replacement value

**Overall data confidence for Average Age (%RSL) and Average Equivalent Condition is based on subject matter expert opinion rather than weighted average by replacement value due to the overall lack of data and number of categories with no data available

3.1 ASSET CONDITION GRADING

Condition refers to the physical state assets are in, a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life.

Since condition scores are reported using different scales and ranges depending on the asset, **Table 5** below shows how each rating was converted to a standardized five-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in **Table 35**, is to review existing internal condition assessments and ensure they are revised to report on the same five-point scale with equivalent descriptions.

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Table 5: Equivalent Condition Conversion Table

EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	FACILITIES CONDITION INDEX (FCI)	SPORT LIGHTING, SPORTS FIELDS, COURTS AND DIAMONDS, FENCING	PLAY STRUCTURES, PARK SIGNS, PARK PATHWAYS, STORMWATER ASSETS	WILD WATERWORKS	ESCARPMENT STAIRS	SHORELINE PROTECTION
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance is required only.	>79.5%	N/A	N/A	EXCELLENT	N/A	N/A	VERY GOOD
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on the asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	< 5%	GOOD	GOOD	Minor to moderate maintenance only	GOOD – 10+ remaining service years without intervention	GOOD
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset usage. Minor to significant maintenance is required.	39.5% - 69.4%	>= 5% to < 10%	FAIR	FAIR	Significant maintenance in the medium-term	FAIR – 5-10 remaining service years without intervention	FAIR
4 Poor	The asset has significant defects and deterioration. Deterioration has an impact on asset usage. Rehabilitation or major maintenance is required in the next year.	19.5% - 39.4%	>= 10% to <30%	POOR	POOR	Major maintenance in the short-term	POOR – 2-5 remaining service years without intervention	POOR
5 Very Poor	The asset has serious defects and deterioration. The asset is not fit for use. Urgent rehabilitation or closure is required.	<19.4%	>= 30%	N/A	N/A	Replace	CRITICAL – 1-2 remaining service years without intervention	VERY POOR

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The following conversion assumptions were made:

- For assets where a condition assessment was not completed, but age information was known, the condition was based on the percent of remaining service life;
- Facilities Condition Index was based on ranges provided by a consultant who has completed Building Condition Assessments (BCA) for the City which corresponds to a four-point scale; therefore, facilities will not be able to attain a score of 1–Very Good;
- Sports Field's condition is primarily based on the condition of the grading. For the small number of fields that have fencing, the condition was based on an average of grading and sport fencing conditions. Both grading and fence conditions were produced by staff visual inspection;
- Ball Diamonds condition was based on an average of the condition of the grading and sport fencing condition however, if grading was in poor condition the overall field condition was rated poor. Both grading and fence condition was produced by staff visual inspection;
- Hard Surface Court condition was based on an average of fencing condition, surface condition, and furnishings (nets, posts, and lines) condition however, if the surface was in poor condition the overall court condition was rated poor. All conditions were produced by staff visual inspection;
- For Play Structures, Park Signs, and Park Pathways conditions were based on overall condition ratings produced by visual inspections by Parks Staff;
- Sport Lighting, Wild Waterworks, Escarpment Stairs, and Shoreline Protection condition ratings were based on engineering consultant reports; and,
- For Fleet and Equipment assets, the condition was based on the percent of remaining service life.

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3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile and Performance Issues for each of the asset classes.

- The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life (ESL) where they can be planned for replacement. Some lower-cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if an asset's condition is based on age, it is typically considered to be of a low confidence level. Although typically, age is used when projecting replacements beyond the 10-year forecast to predict degradation;
- Condition refers to the physical state of assets and is a measure of the physical integrity of assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected/assessed at different frequencies and using different methodologies to determine their condition which are noted in this section; and,
- Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

3.2.1 PARK INFRASTRUCTURE PROFILE

The asset profile information for Park Infrastructure asset classes is included in each section below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

This asset class contains physical assets at park locations that facilitate use of the park such as pathways, parking lots, bridges, retaining walls, fencing, furniture, gardens, fountains and signs. This also includes utilities such as water, wastewater, and stormwater facilities, lighting and electrical systems, and non-sport irrigation.

3.2.1.1 AGE PROFILE

At this time age data is not known for Park Infrastructure assets.

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3.2.1.2 CONDITION METHODOLOGY & PROFILE

Asphalt Park Pathways, Park Feature Signs and General (non-sport) Fencing were inspected by seasonal staff in 2018 and 2019. This data generally Medium confidence level.

For asphalt Park Pathways, seven types of distress were evaluated on a four-point scale. A standardized pictorial guide was used to improve the consistency of ratings. Based on staff subject matter expert opinion, ratings were adjusted down by one grade to represent deterioration that has occurred since the inspection was completed five years ago.

Sign condition and footing condition were each rated on a four-point scale. An average of the two was used to create an overall condition.

Park general (non-sport) Fencing inspections rated five components of each fence segment on a three-point scale. An overall condition was produced for each segment based on the number and severity of issues reported.

An overall condition for Parkland Stormwater assets of fair was assigned based on staff subject matter expert opinion.

Sports Lighting was inspected by R.V. Anderson Associates Limited in two phases in 2021 and 2022. Lighting at all diamonds, sports fields, and courts has been inspected. There is one remaining phase of inspections yet to be completed on smaller lighting systems including ice rinks and private sports clubs. A four-point condition scale was used. Pedestrian lighting and lighting on recreational trails have not been inspected.

Condition data is not available for many Park Infrastructure assets. A comprehensive asset inspection program for all assets should be developed identifying the frequency of inspections and developing five-point scales for use during inspection so a condition can be determined. Condition assessment frequency should also be determined for asset categories, so condition is being reviewed and updated on a regular basis to better identify asset service lives. This has been added as a Continuous Improvement item in **Table 35**.

Visual safety inspections are performed by park maintenance crews on a regular basis. These inspections generally occur when crews are in the park, once per seven working days in the summer and once monthly during the winter.

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Table 6: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST FORMAL INSPECTION	CONDITION SCORE OUTPUT
Park Pathways	Annual inspections for safety concerns Formal condition inspections Ad Hoc as funding allows with a 5-year target cycle	2018/19	4-Point Scale
Fencing	Annual inspections for safety concerns Formal condition inspections Ad Hoc as funding allows with a 5-year target cycle	2018/19	3-Point Scale
Bridges and Boardwalks	Annual inspections for safety concerns Formal condition inspections Ad Hoc	2012	Condition Score not reported
Parkland Stormwater Assets	Annual inspections for safety concerns	N/A	N/A
Roads, Parking Lots and Retaining Walls	Annual inspections for safety concerns	N/A	N/A
Park Feature Signs	Annual inspections for safety concerns Formal condition inspections Ad Hoc as funding allows with a 5-year target cycle	2018/19	4-Point Scale
Furniture and Other	Annual inspections for safety concerns Garbage Bins are emptied 2-3x weekly and replaced as necessary	N/A	N/A
Lighting and Electrical Infrastructure	Annual inspections for safety concerns Formal condition inspections Ad Hoc as funding allows	Sport Lighting Inspections completed in 2021 and 2022	3-Point Scale

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Condition Profile

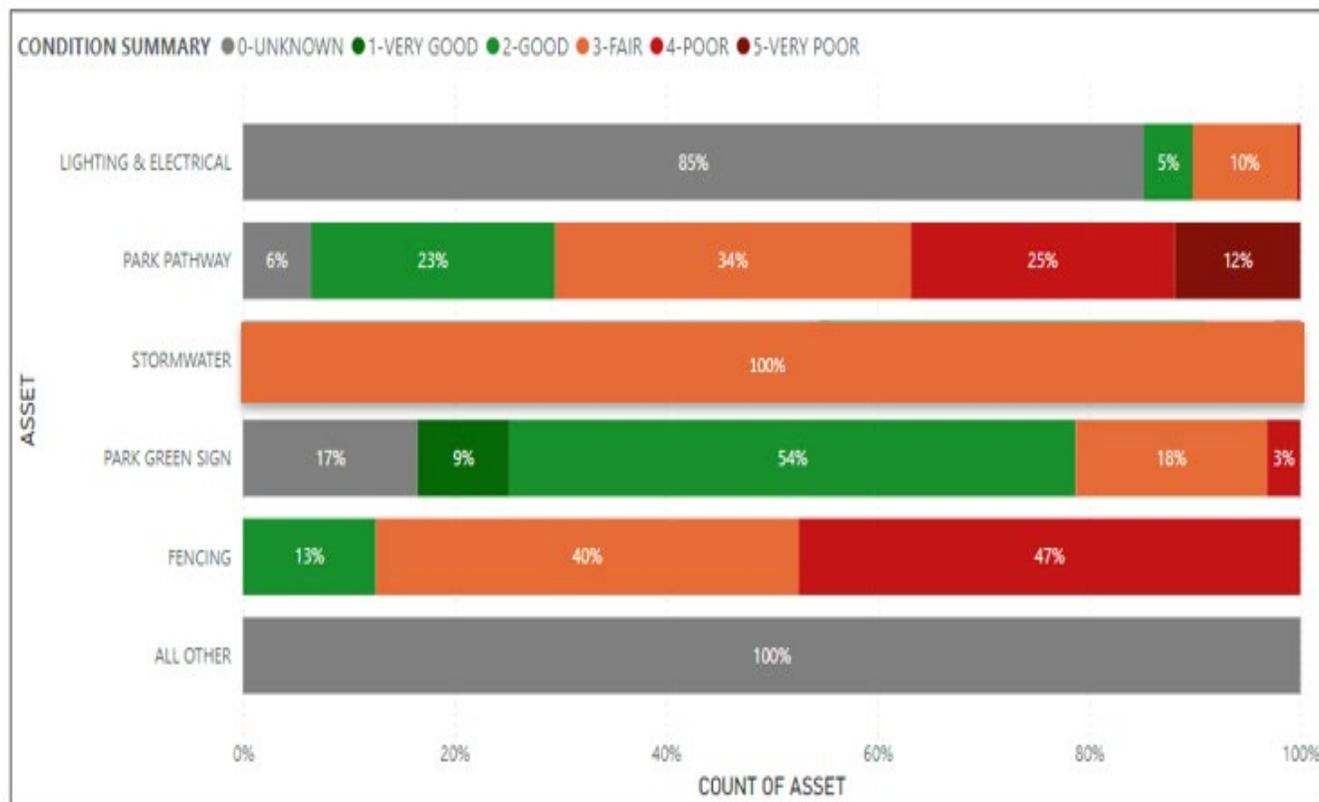
The condition profile of the Park Infrastructure assets is shown in **Figure 2**. As mentioned in **Section 3.1**, the original condition grades were converted to a standardized condition category for report consistency.

Park Feature Signs are generally in good condition and show a fairly even distribution of conditions across all categories, illustrating a potentially healthy asset management approach. Asphalt Park Pathways are generally in fair condition with a significant portion in poor and very poor condition.

More than half of non-sport Fencing is in fair or better condition. The remaining 47 percent of non-sport Fencing is in poor condition.

The condition of Lighting and Electrical assets is generally unknown other than Sport Lighting which is generally in fair condition. There is a small percentage that is in poor condition identified by a consultant. These assets are being regularly monitored and will be evaluated for action if safety concerns are identified.

Figure 2: Park Infrastructure Condition Distribution



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3.2.1.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with Park Infrastructure involve assets in poor condition due to deterioration and age. The known service performance deficiencies in **Table 7** were identified using staff input, BCA data and consultant report findings for Sport Lighting.

Table 7: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Park Feature Signs	Various	Signs are important to wayfinding and emergency services response.	Signs can be missing, in poor condition or duplicate park names in different parts of the City.
Sport Lighting	Various	Many poles and fixtures are at the end of life.	Deficiencies noted requiring short-term action to maintain or address near end-of-life assets. Medium and long-term recommendations made by consultants to maintain assets.
Parking Lots and Roads	Various	Deteriorating asphalt.	Parking Lot and Roadway repairs are identified in the Corporate Facilities and Energy Management (CFEM) 10-year plan.
Stormwater	Various	Insufficient stormwater management and poor drainage.	Many areas with insufficient stormwater management and poor drainage leading to flooding and over-saturation issues. Climate and changing weather patterns will increase the impacts of this deficiency.

3.2.2 OUTDOOR RECREATION AMENITIES PROFILE

The asset profile information for the Outdoor Recreation Amenities asset class is included in each section below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

This asset class contains outdoor sporting facilities such as; diamonds, courts, fields, skate parks, outdoor exercise stations, and natural community ice rinks. Also included are supporting components that are part of these assets such as; sport fencing, bleachers, nets, posts and irrigation. Other outdoor non-sporting recreational facilities located in parks including play structures, spray pads, dog parks and Wild Waterworks.

HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

3.2.2.1 AGE PROFILE

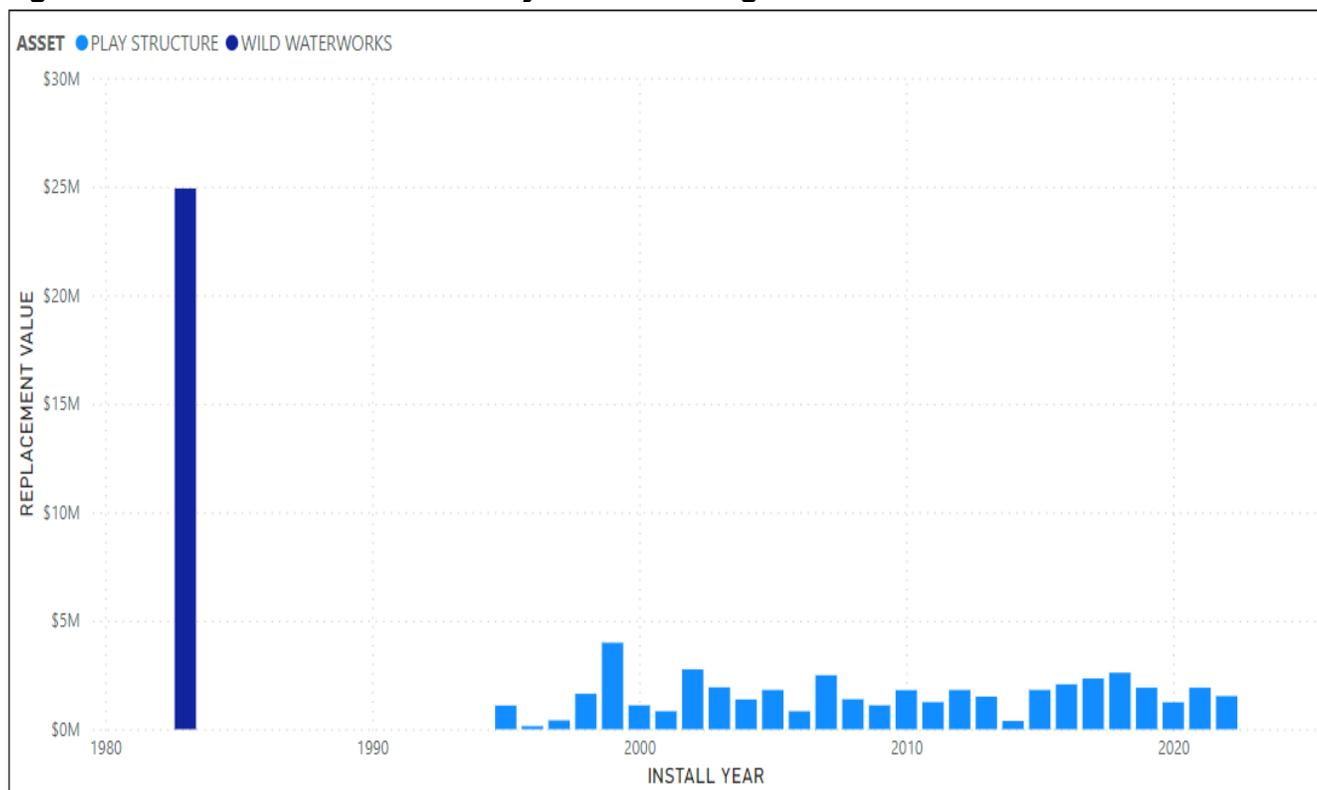
The age profile of the outdoor recreation amenities assets is shown in **Figure 3**. An analysis of the age profile is provided below.

Wild Waterworks was constructed in 1983 and is approaching the end of service life as was identified in the recently completed master plan study. The 2020 study estimates that a like-for-like replacement of the facility would cost \$24.92 million.

Play Structures have an estimated service life of 20 years. Thirty percent of Play Structures installed prior to 2004 are therefore beyond their service life and likely require replacement. It can be seen in **Figure 3** that the age profile of Play Structures is relatively evenly distributed, and it can be expected multiple play structures will require renewal every year.

Age data is not available for any of the other assets in this class and they have been omitted from **Figure 3**.

Figure 3: Wild Waterworks and Play Structures Age Profile



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3.2.2.2 CONDITION METHODOLOGY & PROFILE

Hard Surface Courts, Sports Fields, and Ball Diamonds including the associated sport fencing were inspected by seasonal staff in 2018 and 2019. This data is generally Medium confidence level.

For Sports fencing, five components of each fence segment were rated on a 3-point scale. This data was incorporated with the other condition data for Hard Surface Courts, Sports Fields, and Ball Diamonds to create overall condition ratings.

An overall condition for Hard Surface Courts has been created by averaging the condition of fencing, surface and finishings however, if the surface was in poor condition the overall condition was rated as poor.

Fields condition is primarily based on grading condition. An overall condition was produced for each segment based on the number and severity of issues reported. For the small number of fields that have fencing, the condition was based on an average of grading and sport fencing conditions.

Ball Diamond condition was based on an average of grading condition and sport fencing condition however if grading was in poor condition the overall field condition was rated poor.

Play Structures are visually inspected on a monthly basis by certified inspectors in accordance with CAN/CSA-Z614-98. Detected deficiencies are to be dealt with prior to the next monthly inspection and any major deficiencies posing safety risk are dealt with immediately.

For Wild Waterworks, an Aquatic Engineering Facility Review was completed by Forrec and ClowardH2O in October 2018 as part of the Wild Waterwork Master Plan Study. Evaluation and recommendations were reported on for five main areas: Wave pool, East Slides, East Kids Pool, West Slides, and West River.

Condition data is either not available or not consistently documented for many Outdoor Recreation Amenities. A comprehensive asset inspection program for all assets should be developed identifying the frequency of inspection and developing five-point scales for use during inspection so a condition can be determined. Condition assessment frequency should also be determined for asset categories, so condition is being reviewed and updated on a regular basis to better identify asset service lives. This has been identified as a Continuous Improvement item in **Table 35**.

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Table 8: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST FORMAL INSPECTION	CONDITION SCORE OUTPUT
Ball Diamonds	Annual inspections for safety concerns Formal condition inspections Ad Hoc as funding allows with a 5-year target cycle	2018/19	3-point scale
Sports Courts	Annual inspections for safety concerns Formal condition inspections Ad Hoc as funding allows with a 5-year target cycle	2018/19	3-point scale
Sports Fields	Annual inspections for safety concerns Formal condition inspections Ad Hoc as funding allows with a 5-year target cycle	2018/19	3-point scale
Play Structures	Monthly in accordance with CAN/CSA-Z614-98	Frequent	4-point scale
Spray Pads	Monthly during operating season May-October	Frequent	No Condition Score is produced
Dog Parks	Ad Hoc	N/A	N/A
Community Ice Rinks	Responsibility of local volunteer committees	N/A	N/A
Skate Parks & Exercise Stations	Weekly	Frequent	No Condition Score is produced
Wild Waterworks	Operated by Conservation Authority 1. Annual inspections performed by the Technical Standards and Safety Authority (TSSA) and Hamilton Public Health to ensure safety. 2. Condition Inspection Report	TSSA and Public Health Inspections Annually 2018 Engineering inspection performed by consultant	TSSA Approval to operate, Pass from Public Health Oiiii0pl

HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

Condition Profile

The condition profile of the Parks Outdoor Recreation Amenities assets is shown in **Figure 4**. As mentioned in **Section 3.1**, the original condition grades were converted to a standardized condition category for report consistency.

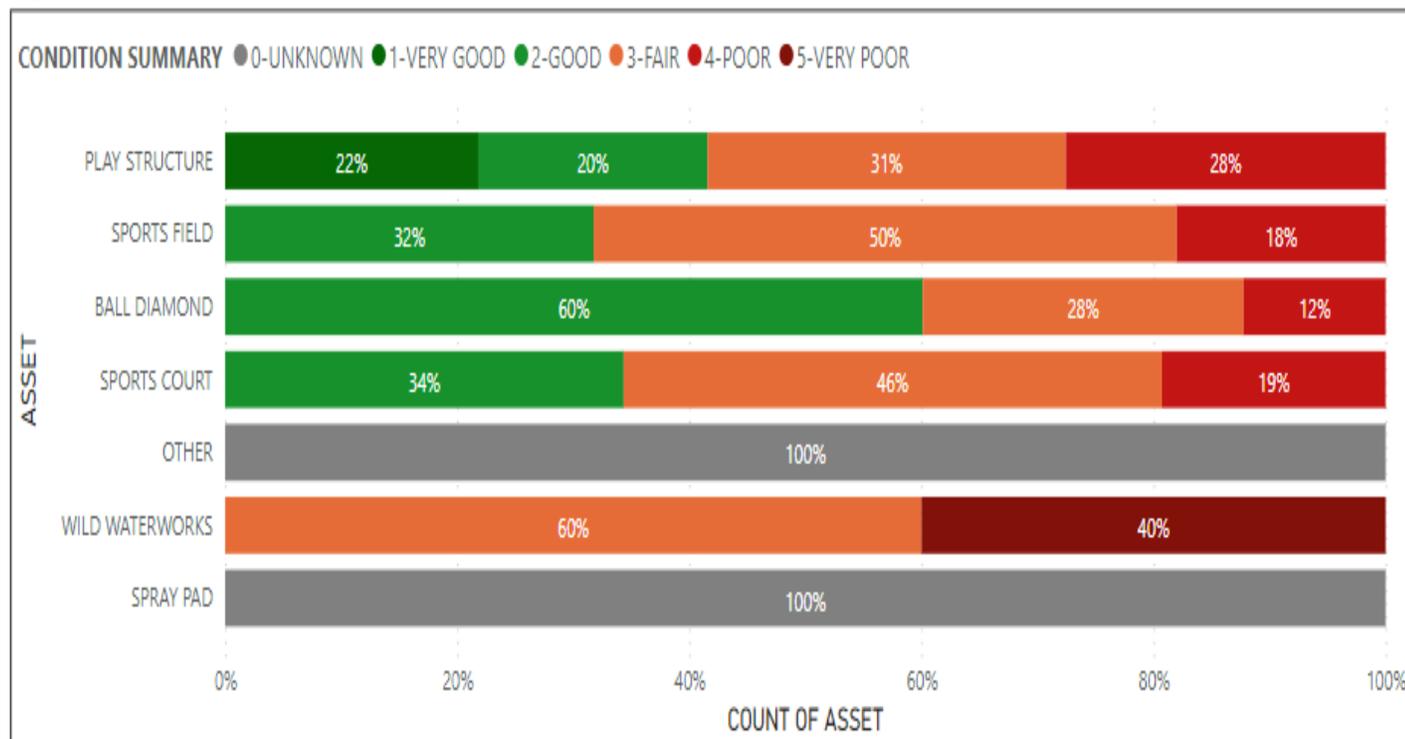
Based on inspection data, play Structures show nearly 75% in Fair or better condition. Of note is the 28% of Play Structures in Poor condition.

Sports Fields, Ball Diamonds and Sports Courts are generally in Fair or better condition with over 80 percent of all assets in Fair or better condition. These condition profiles show a wide distribution of assets in each category.

As is noted in the Aquatic Engineering Facility Review completed as part of the Wild Water Works Master Plan Study, many structures and components that make up the water park are reaching the end of life. Report HSC20048 Status and Strategy for Wild Waterworks presented on November 5, 2020, and Report PW23067 Wild Waterworks and Confederation Beach Park presented to the Public Works Committee on October 30, 2023, outlined the condition and options for the waterpark.

There is no condition data available for the other assets in the Outdoor Recreation Amenity class.

Figure 4: Outdoor Recreation Amenities Condition Profile



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3.2.2.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with Outdoor Recreation Amenities involve assets in poor condition due to deterioration and age. The known service performance deficiencies in **Table 9** were identified using staff input.

Table 9: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
OUTDOOR RECREATION AMENITIES	Wild Waterworks	Reaching end of life.	The facility is reaching the end of its service life. Significant renewal is required as components are not only outdated but also inadequate for the projected number of guests.
	Play Structures	Poor condition structures and structures beyond the end of expected life.	69 of the 267 play structures are in poor condition with installation dates from 1995-2005.
	Various Assets	Poor drainage is exacerbated by changing climate and increased rainfall.	Assets including sports fields, diamonds, and courts were not designed for the intensity of rainfall experiences leading to drainage issues, deterioration of assets, and interruptions in service.
	Bernie Arbour Stadium and Field	Various assets including sport lighting, building, and parking lot	The amenity is aging and experiencing significant deterioration. The building is deficient in multiple code-related areas and non-compliant with AODA
	Various Assets	Various	Changing expectations and legislation leading to needed upgrades (i.e., unpaved parking lots and pathways, accessibility requirements, washrooms, lighting)
	Sports Fields and Ball Diamonds	Higher quality/class Fields & Diamonds	Higher than recommended use of higher quality fields/diamonds in some areas leads to over-use, more compaction, and less recovery time

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3.2.3 TRAILS AND WATERFRONT PROFILE

The asset profile information for Trails and Waterfront asset classes is included in each section below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

This asset class includes Recreational Trails as well as other assets often located outside of Parks properties but managed by the Parks section including the Escarpment Stairs and Viewing Platforms. It also includes the Waterfront Trail composed of the Lake Ontario Waterfront Trail and the Hamilton Harbour Waterfront Trail, the waterfront Shoreline Protection, and other waterfront assets including breakwaters, docks and boat launches.

3.2.3.1 AGE PROFILE

At this time age data is not known for any trails and waterfront assets.

3.2.3.2 CONDITION METHODOLOGY AND PROFILE

An Engineering Assessment of the escarpment staircases was completed by R.V. Anderson Associated (RVA) in 2021. Visual inspections of 13 staircases were performed and the condition was rated on a four-point scale. Recommended works with cost estimates and rehabilitation timelines were also recommended for each of the staircases and their related structural and lighting components.

The waterfront trail was inspected with all other asphalt park pathways. The condition is based on an inspection performed by seasonal staff in 2018 and 2019. Seven types of distress were evaluated on a four-point scale. A pictorial guide was used to improve the consistency of ratings. Based on staff subject matter expert opinion, ratings were adjusted down by one grade to represent deterioration that has occurred since the inspection was completed five years ago.

An Engineering Assessment of shoreline protection was completed by SNC Lavalin in 2019. This inspection was generally limited to the above-water portion of assets which were visually inspected at site visits. The inspection was completed in segments or "sites" of the trail that had similar construction. Unmanned Aerial Vehicle (UAV) based aerial photogrammetry was also used to map and survey the sites. Each site was rated on a five-point scale to establish the condition. The report also provided recommendations related to remediation work on a site-by-site basis.

The condition of recreational trails and viewing platforms is not formally recorded at this time.

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Table 10: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST FORMAL INSPECTION	CONDITION SCORE OUTPUT
Trails	Annual inspections for safety concerns	N/A	Deficiencies are identified and scheduled for repair.
Waterfront Trail	Annual inspections for safety concerns Formal condition inspections Ad Hoc as funding allows with a 5-year target cycle	2018/19	4-Point Scale
Shoreline Protection	Ad Hoc	2019, SNC Lavalin	5-Point Scale
Escarpment Stairs	Formal condition inspections Ad Hoc as funding allows with a 5-year target cycle	2021, RVA	4-Point Scale
Viewing Platforms	Formal condition inspections Ad Hoc as funding allows with a 5-year target cycle	N/A	Deficiencies are identified and scheduled for repair.

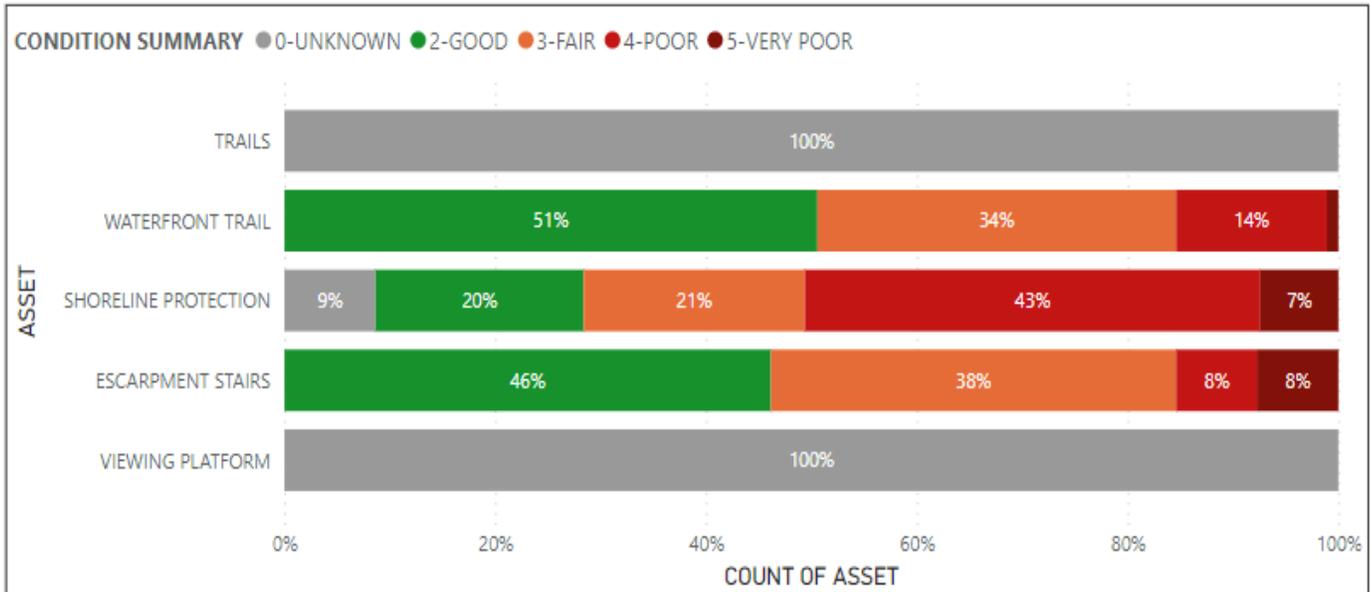
The visual surface asphalt condition of the Waterfront Trail is mainly in Fair or better condition. Lake Ontario has experienced historically high-water levels throughout the past decade and combined with age-related deterioration, severe weather events, and wave action the Waterfront Trail and Shoreline Protection have been damaged and degraded. The City has received significant federal funding through the Disaster Mitigation and Adaptation Fund (DMAF) to undertake repairs and renewal of Shoreline Protection and associated trails along the waterfront (Report FCS 19038⁹).

The Escarpment Stairs are in generally Good to Fair condition. The stairs provide a vital transportation connection between the upper and lower city and are used by many for daily commuting and exercise. The Escarpment Stairs are a unique asset presenting challenges for maintenance as they can be difficult to access with equipment but are an important part of the city’s transportation network and should be maintained to provide a safe and accessible route for pedestrians while encouraging active transportation.

⁹ (City of Hamilton, 2019)

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Figure 5: Trails and Waterfront Condition Distribution



3.2.3.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with Trails & Waterfront involve assets in poor condition due to deterioration and age. The known service performance deficiencies in **Table 11** were identified using staff input and consultant report recommendations for Escarpment Stairs.

Table 11: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
TRAILS AND WATERFRONT	Shoreline Protection	A significant number of sites are in poor condition	Significant repairs and replacement are required. Many sites are being deteriorated by wave action and overtopping.
	Escarpment Stairs	Some deficiencies noted that require action to extend service life.	Medium Term recommendations for all staircases.
	Recreational Trails	Deterioration of rail trail from Corktown to Mohawk Sports Park. Radial Trail.	Study underway of rail trail from Corktown to Mohawk Sports Park to identify deficiencies and restoration options.

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3.2.4 FACILITIES PROFILE

The asset profile information for Facilities asset classes is included in each section below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

This class contains any City-owned facilities necessary to deliver Parks services as well as public use Park facilities including Washrooms and Pavilions.

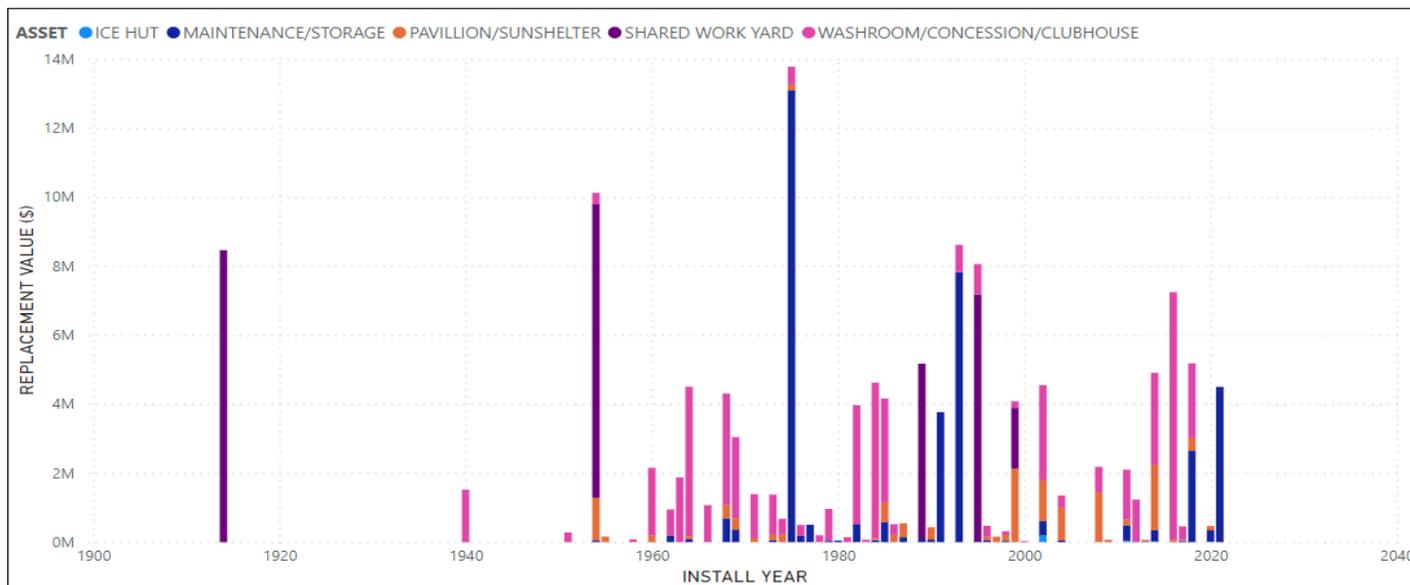
3.2.4.1 AGE PROFILE

The age profile of the facility assets is shown in **Figure 6**. An analysis of the age profile is provided below.

For Parks Facility assets, the data confidence for age is typically High because this information was recorded during the construction of the facilities. For Ice Huts, small storage sheds, and sun shelters, age data was not available. Most of the Parks Facilities have an estimated service life of 50 years and therefore most facilities built before 1974 would be beyond estimated service life. If a facility was more than 50 years old but the facility’s condition was reported as good based on a Facility Condition Assessment, the estimated service was extended to 75 years.

The two highest-value facilities beyond estimated service life are both shared work yards. For shared work yards, a percentage of the total replacement value has been allocated that matches the percentage of total space occupied by Parks. The City’s work yards, including those occupied by Parks, are currently being evaluated as part of an ongoing study by the Corporate Facilities and Energy Management Division (CFEM).

Figure 6: Facilities Age Profile



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3.2.4.2 CONDITION METHODOLOGY AND PROFILE

Condition for Parks Facilities is generally determined based on the results of a Building Condition Assessment (BCA) coordinated by the Corporate Facilities and Energy Management Division (CFEM). The BCA identifies necessary major and minor maintenance activities in a 10-year forecast with projected costs and outputs a detailed report outlining methodology, overall findings, and conditions.

BCAs are completed on park facilities every five years and output a score called a Facility Condition Index (FCI) which is considered to be a high confidence level source for condition. The FCI is a ratio of the total cost for required repairs, renewal, or upgrades to the replacement value of building components. The 10-year forecast from the BCAs was incorporated into the maintenance plan shown in **Section 8.2**.

A summary of the Facilities' condition methodology including conversion from FCI to a standardized five-point scale is provided in **Section 3.1**.

BCAs are generally only completed on enclosed buildings, not on open shade structures, and are not completed on very small structures including ice huts and small storage sheds. Some of these structures have age data stored by CFEM and condition was estimated based on age and an estimated service life of 50 years. These structures typically have relatively low replacement values and risk and would be allowed to degrade until replacement is required. Many ice huts are not included in the data kept by CFEM. No estimated conditions could be produced for these structures.

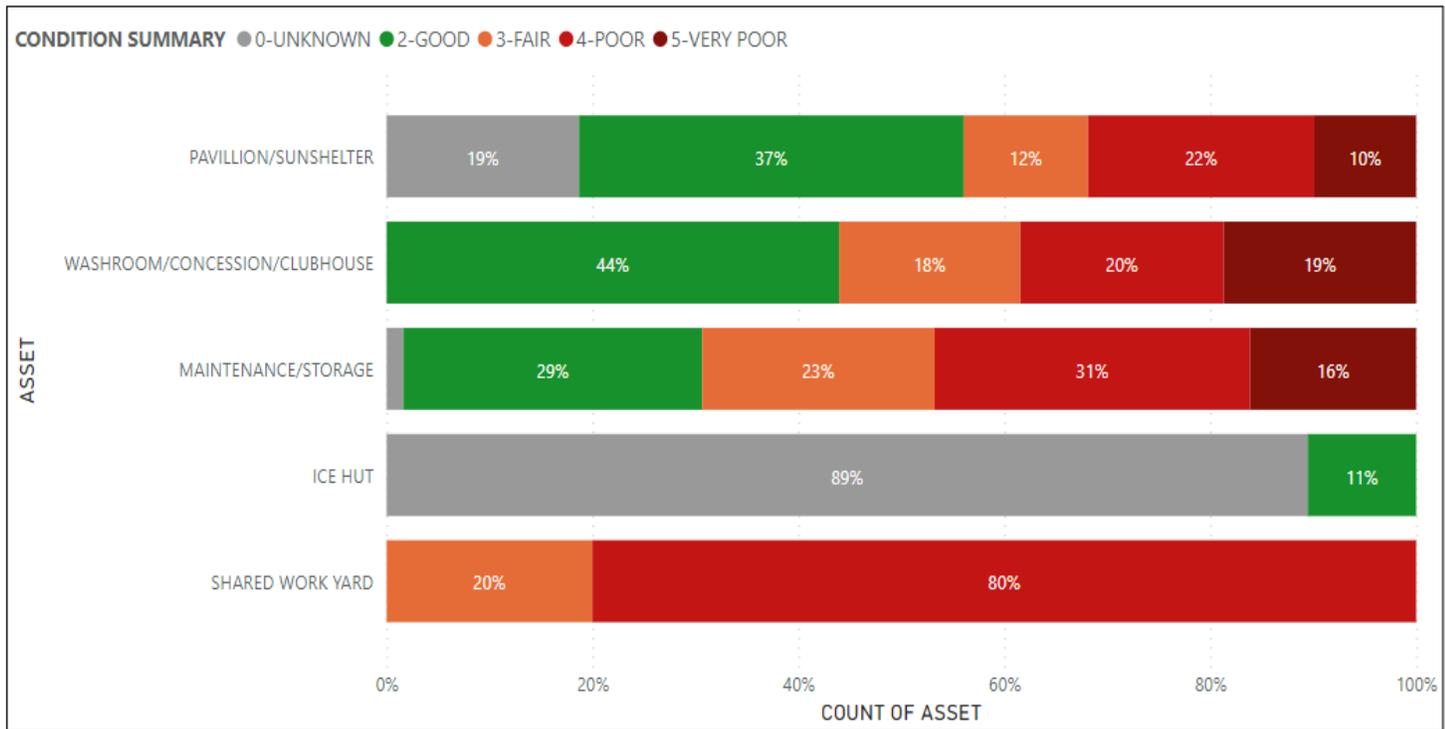
Table 12: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Facilities	5 years	Various	%FCI
Small Buildings (non-occupied)	Ad Hoc	Ad Hoc	None

Facilities are generally in Fair condition with the exception of the shared work yards which are in generally Poor condition. As previously mentioned, the City's work yards, including those occupied by Parks, are currently being evaluated as part of an ongoing study by CFEM.

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Figure 7: Facilities Asset Condition Distribution



3.2.4.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with Parks Facilities involve assets in poor condition due to deterioration and age. The known service performance deficiencies in **Table 13** were identified using BCA data.

Table 13: Known Service Performance Deficiencies

ASSET	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
PARKS FACILITIES	Roofing Replacements	Roofing replacement at various structures in the backlog.
	Superstructure Repairs	Superstructure repairs at various structures in the backlog.
	Plumbing Fixture Replacements and Repairs	Plumbing replacement and repairs at various structures in the backlog.
	Electrical Service and Distribution	Electrical refurbishments at various structures are in backlog.
SHARED USE YARDS	Asphalt Replacements and Repairs	Significant needs are at all five shared use yards.

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3.2.5 FLEET AND EQUIPMENT PROFILE

The asset profile information for Fleet and Equipment asset classes is included in each section below and includes an age profile, the condition methodology used, the condition profile, and asset usage and performance.

3.2.5.1 AGE PROFILE

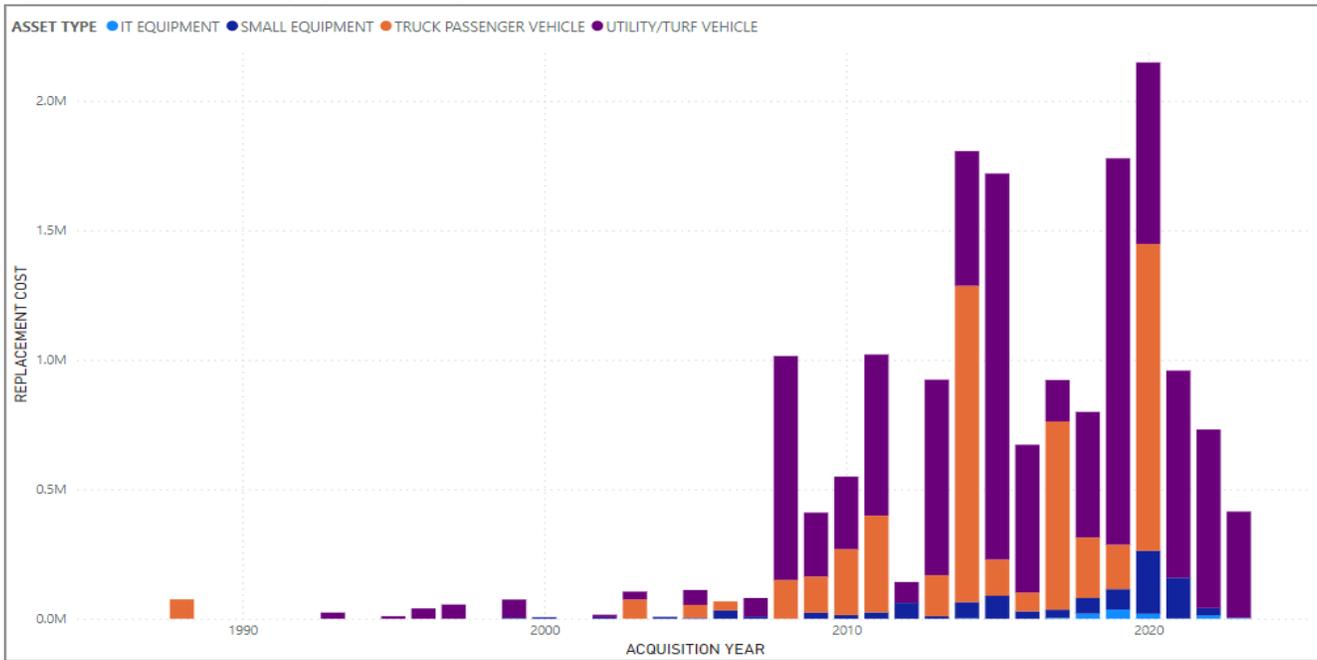
The age profile of the Fleet and Equipment assets is shown in **Figure 8**. The age of these assets is considered to be high data confidence because they are recorded at the time of purchase. An analysis of the age profile is provided below.

The Estimated Service Life (ESL) for a vehicle is an average of 10 years therefore, any vehicles purchased before 2014 are beyond their service life. Forty-eight out of 83 trucks and passenger vehicles are past the end of service life or at the end of service life in 2024, of which 12 are extended use. Ninety-six of the 230 turf and utility vehicles are past the end of service life or at the end of service life in 2024 of which only three are extended-use vehicles.

Extended-use vehicles are vehicles that have already had replacements put into service, but the area is maintaining the replaced vehicle for a period of time beyond the arrival of the replacement vehicle. The extended-use vehicles have been included in the condition details in **Figure 8** below and contribute to the increased percentage of Very Poor vehicles. Extended-use vehicles are not included in the replacement value calculations as they are still in use but upon disposal are not intended to be replaced. A significant number of vehicles are past the end of service life and not extended use and require replacement in the near term to adequately deliver Parks services. In the Parks service area, the vehicles are generally being used to mitigate pandemic-related purchasing delays as old vehicles are kept while awaiting the acquisition of additional vehicles required due to growth. A continuous improvement item is to review the extended-use vehicles and develop a long-term strategy for the fleet and their usage, see the continuous improvement **Table 35** for more information.

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Figure 8: Fleet & Equipment Age Profile



3.2.5.2 CONDITION METHODOLOGY AND PROFILE

As shown in **Table 14** below, the condition for Fleet and Equipment assets is based on age as there are no regular condition assessments completed on these assets which reflects a data confidence of low. Vehicles are inspected and maintenance activities are conducted at specific intervals throughout the asset’s lifecycle however no formal condition rating is assigned to each vehicle. Parks relies on the Fleet Services section in the Corporate Asset Management (CAM) division to assist with the inspection, maintenance and procurement of vehicles on their behalf. Age has been used to estimate the condition of these assets where age is known which is considered to be low data confidence. This has been identified as a continuous improvement item in **Table 35**.

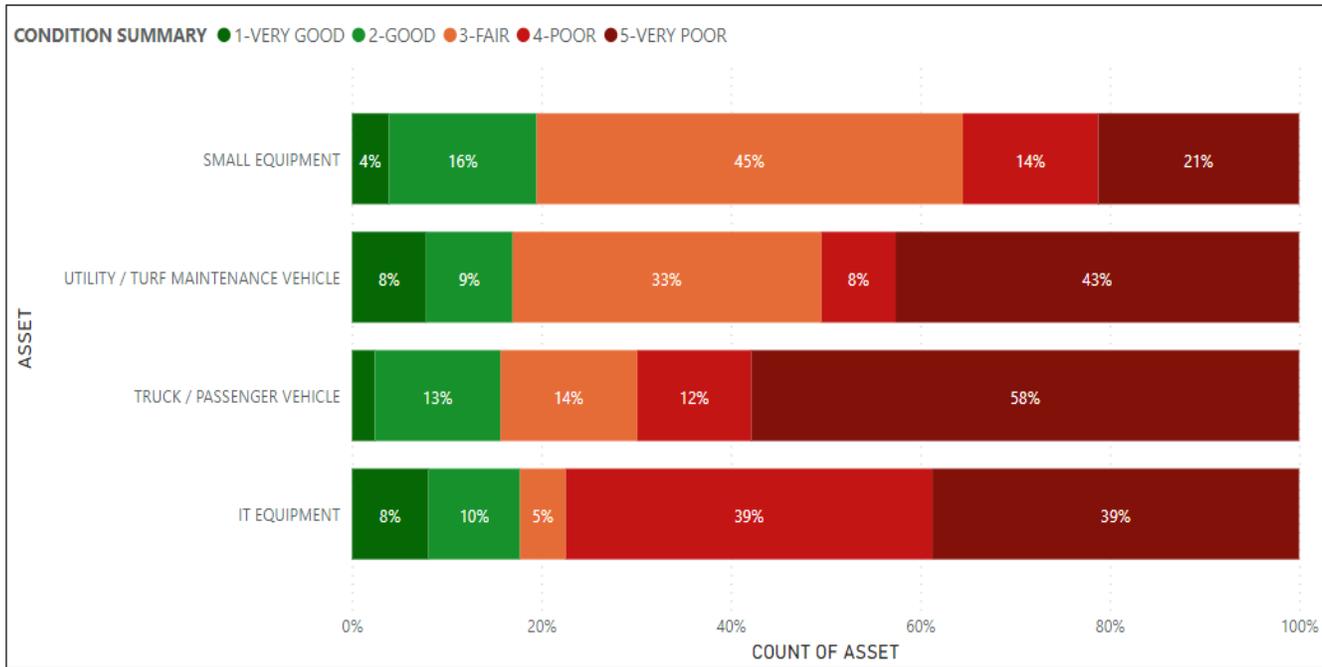
Table 14: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Trucks & Passenger Vehicles	Twice per year	Various	N/A
Utility & Turf Maintenance Vehicles	Twice per year	Various	N/A
IT Equipment	None	N/A	N/A
Small Equipment	Ad Hoc	N/A	N/A

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Since there is no formal condition rating based on inspection, the conditions for assets in this class are based on age and estimated service life. The profile in **Figure 9** includes extended-use vehicles. More than 50% of Utility/Turf Maintenance Vehicles and Truck/Passenger Vehicles are in Poor or Very Poor Condition. Many of these extended-use vehicles are expected to be disposed of when pandemic-related purchasing delays are addressed and will be replaced with new acquisitions.

Figure 9: Fleet & Equipment Condition Distribution



3.2.5.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with Fleet and Equipment involve assets used beyond their Estimated Service Life. The known service performance deficiencies in **Table 15** were identified using staff input.

Table 15: Known Service Performance Deficiencies

ASSET	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Trucks, Passenger, Turf and Utility Vehicles	Vehicles continue to be used beyond estimated service life.	Extended-use vehicles in use due to pandemic-related purchasing delays. Results in increases in maintenance costs, potential safety concerns, potentially interrupted service, and more staff downtime

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4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what the City provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that the City provides those services.

O. Reg 588/17 does not define levels of service for Parks assets and therefore the City has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in Section 7.5 of the AM Plan Overview.

4.1 SURVEY METHODOLOGY

To develop customer values and customer levels of service, a Customer Engagement Survey entitled *Let's Connect, Hamilton – City Services & Assets Review: Parks & Cemeteries* was released on November 8, 2023, on the Engage Hamilton platform and closed on December 13, 2023. The survey results can be found in **Appendix "A."**

The survey received submissions from 70 respondents and contained 15 questions related to *Parks* service delivery. Additional questions in the survey were related to *Cemeteries* service delivery and were considered in the *Cemeteries* Asset Management Plan. For the purposes of this report, data has been evaluated from a confidence level perspective (margin of error at 95% confidence in sample size) and a data consistency (standard deviation) perspective per **Table 16**.

The Parks section also conducts a variety of public engagement surveys related to their projects, services, and assets. Recently, the Parks Master Plan completed substantial public engagement between January and September 2022. The Public Engagement Survey received feedback from 4730 participants representing a diverse range of Hamiltonians and focussing on current use of parks, potential park needs and a vision for the future of Parks in Hamilton.

Another wide-reaching Public Engagement Survey was completed in August and September 2021 as part of the recently completed Recreation Master Plan. The survey gathered information on the recreational needs of residents of the city for both indoor and outdoor recreation opportunities, including recreation provided through the many outdoor assets managed by the Parks section. This survey received 2095 unique responses representing a total of 6,000 to 7,000 total residents.

The specific data confidence level and grade for each of these surveys are detailed in **Table 16**. Though the medium confidence level of the City Services and Assets Review: Parks & Cemeteries Survey is significant and leads to uncertainty in the results; this was determined to be an acceptable confidence level to use to develop the customer values and customer performance measures for this AM Plan. The two recent Master Plan surveys received significant response rates correlating to very high confidence levels and were used to validate

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and contribute to the customer values and performance measures in this AM Plan. It is important to note that survey respondents were allowed to opt out of questions, and so different questions may have varying confidence levels depending on the opt-out rate for that question.

Table 16: Data Confidence Levels

Grade	Data Consistency (Standard Deviation)	Confidence Level (Margin of Error at 95% Confidence in Sample Size)
Very High	0 to 0.5 – results are tightly grouped with little to no variance in response	0% to 5% - minimal to no error in results, can generally be interpreted as is
High	0.5 to 1.0 – results are tightly grouped but with slightly more variance in response	5% to 10% - error has become noticeable, but results are still trustworthy
Medium	1.0 to 1.5 – results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - error is a significant amount and will cause uncertainty in the final results
Low	1.5 to 2.0 – results show a high variance with a fair amount of disparity in responses	20% to 30% - error has reached a detrimental level and results are difficult to trust
Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - significant error in results, hard to interpret data in a meaningful way

Table 17: Survey Results – Confidence Level, Margin of Error

Survey	Survey Response Rate	Estimated Population	Confidence Level (Margin of Error at 95% Confidence in Sample Size)	Grade
2023 Let’s Connect, Hamilton – City Services & Assets Review: Parks & Cemeteries	70	570,000	12%	Medium - error is a significant amount and will cause uncertainty in the final results.
2022 Hamilton Parks Master Plan Public Engagement Survey	4730	570,000	1%	Very High - minimal to no error in results, can generally be interpreted as is.
2021 Hamilton Recreation Master Plan Public Engagement Survey	2095	570,000	2%	Very High - minimal to no error in results, can generally be interpreted as is.

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A high data consistency means that respondents came to the same conclusion more often for a question, whereas a low data consistency means that there is a split in respondent's opinions. Therefore, while Corporate Asset Management may be able to improve survey confidence levels over time by increasing the survey sample size, it may not be possible to improve data consistency over time as this depends on the opinions of the respondents and may require additional insight on why respondent's opinions are split. A low consistency of data does not mean the data is wrong, but it does mean that it is difficult to make decisions using that information. Overall, *City Services and Assets Review: Parks & Cemeteries* survey data consistency was typically medium across all questions indicating most respondents are generally in agreement. Data consistency was not evaluated for either of the Master Plan surveys as the data was not available at this time.

While the *City Services and Assets Review: Parks & Cemeteries Survey* was used to establish customer values and customer performance measures, it is important to note that there were also limitations to the survey methodology which may further reduce the confidence level in the survey data. The survey was only released using an online platform and did not include telephone surveys and consequently, there is no way to confirm the identity information provided in the survey. In addition, the survey did not control for IP addresses, and therefore it is possible that respondents could complete the survey more than once and skew the survey results.

An error in the deployment of Question 4 of the *City Services and Assets Review: Parks & Cemeteries Survey*, which asked respondents to identify which Parks sites and services they have visited in the last 24 months and identify who they went with resulted in the inability of respondents to select all that apply. Due to the error in this survey question, the results of the question were not considered in the survey analysis. This question had no direct relation to any other questions in the survey that would impact the results of subsequent questions.

Although there are limitations to the survey methodology and the number of responses to the *City Services and Assets Review: Parks & Cemeteries Survey* was not at a high confidence level for the most recent survey, these results can be used to provide some context about the feelings customers have on the services that the Parks section provides. The additional Master Plan surveys also provide very high confidence level data that can be used to validate findings. However, decisions should not be made based on these surveys alone and further investigation is required prior to proposing new levels of service. These survey results might point to trends or areas to consider further.

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4.2 CUSTOMER VALUES

Customer values are what the customer can expect from their tax dollar in “customer speak” which outlines what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

Customer Values indicate:

- What aspects of the service are important to the customer;
- Whether they see value in what is currently provided; and,
- The likely trend over time, based on the current budget provision.

The customer values below were determined using the results from the *Let’s Connect, Hamilton – City Services & Assets Review: Parks & Cemeteries, the Hamilton Parks Master Plan Public Engagement Survey and the Hamilton Recreation Master Plan Public Engagement Survey*.

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Table 18: Customer Values

CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	DATA CONSISTENCY	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Parks spaces, trails and escarpment stairs, and maintenance of parks are very important services.	2023 City Services & Assets Review: Parks & Cemeteries	Based on the average survey response it is very important for Parks to be responsible for providing these services: park spaces, trails and escarpment stairs, and maintenance of parks.	Medium	Maintain
	2022 Hamilton Parks Master Plan Public Engagement Survey	Most survey respondents strongly agree that parks are important to their quality of life and are important to support our community at large.	Not Available	
Playground Equipment, Sports Fields, Diamonds and Courts, Spray Pads, and Other Park Amenities are important services.	2023 City Services & Assets Review: Parks & Cemeteries	Based on average survey responses it is important for Parks to be responsible for providing the following services: Playground Equipment, Sports Fields, Diamonds and Courts, Spray Pads, and Other Park Amenities (Signage, Lighting, Shade Structures, etc.)	Medium	Maintain
	2021 Hamilton Recreation Master Plan Public Engagement Survey	93% of survey respondents agree that recreation and Parks facilities are important to their quality of life.	Not Available	
Customers are willing to increase tax rates to improve services related to parkland, recreational trails, escarpment stairs, and Parks maintenance.	2023 City Services & Assets Review: Parks & Cemeteries	The average survey respondent would probably prefer to see tax rates increase to improve services.	Medium-High	Maintain
Customers prefer to maintain rates and service levels for park facilities including playground equipment, sports fields, spray pads and other amenities and prefer upgrading existing facilities before building new ones.	2023 City Services & Assets Review: Parks & Cemeteries	The average survey respondent would prefer to minimize tax rate increase and maintain services.	Medium	Maintain
	2021 Hamilton Recreation Master Plan Public Engagement Survey	85% of survey respondents felt that upgrades to existing facilities should be a priority for City Council while 77% indicated that the development of new facilities should be a priority for City Council.	Not Available	
It is very important that Parks spaces and buildings be: clean and in good repair, accessible meeting AODA standards, and inviting, appealing and attractive.	2023 City Services & Assets Review: Parks & Cemeteries	Average survey respondent strongly agrees that Parks outdoor spaces and buildings should be clean and in good repair, accessible meeting Accessibility for Ontarians with Disabilities Act (AODA) standards, and inviting, appealing and attractive.	High	Maintain
It is important that Parks spaces and buildings be: safe and inclusive, comfortable, easy to locate, accessible by public transit, and energy efficient.	2023 City Services & Assets Review: Parks & Cemeteries	Average survey respondent agrees that Parks outdoor spaces and buildings should be safe and inclusive, comfortable, easy to locate, accessible by public transit, and energy efficient.	Medium-High	Maintain

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4.3 CUSTOMER LEVELS OF SERVICE

Ultimately customer performance measures are the measures that the City will use to assess whether it is delivering the level of service the customer desires. Customer level of service measurements relate to how the customer feels about the City’s Parks service in terms of their quality, reliability, accessibility, responsiveness, sustainability and, over the course, their cost. The City will continue to measure these customer levels of service to ensure a clear understanding of how the customers feel about the services and the value of their tax dollars.

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or underused? Do we need more or less of these assets?

In Table 19 under each of the service measure types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current allocation.

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Table 19: Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET	
Quality/ Condition	Provide adequate Parks services.	2023 Parks & Cemeteries City Service & Assets Review	Average survey respondent opinion on how Parks has performed overall in the last 24 months in all service areas	Good Performance	Maintain	
				Confidence Level	Medium	
				Data Consistency	Medium	
	Ensure Parks assets are maintained in good condition	2021 Hamilton Recreation Master Plan Public Engagement Survey	Average survey respondent opinion on whether recreation and parks facilities are clean and well maintained.	Agree	Maintain	
					Confidence Level	Very High
					Data Consistency	Not Available
		2023 Parks & Cemeteries City Service & Assets Review	Average survey respondent opinion on if users felt Parks outdoor spaces and buildings are clean and in good repair.	Agree	Maintain	
					Confidence Level	Medium
					Data Consistency	Medium
	Be fiscally responsible when delivering services	2023 Parks & Cemeteries City Service & Assets Review	Average survey respondent opinion on whether Parks is providing good value for money when providing infrastructure and services.	Average	Maintain	
					Confidence Level	Medium
					Data Consistency	Medium
2021 Hamilton Recreation Master Plan Public Engagement Survey		Average survey respondent opinion on whether recreation and parks facilities provide good value for money.	Agree	Maintain		
				Confidence Level	Very High	
				Data Consistency	Not Available	
Function	Provide appropriate Parks services that meet the needs	2023 Parks & Cemeteries City Service & Assets Review	Average survey respondent opinion on whether Parks services meet their service needs overall	Meet Needs	Maintain	
				Confidence Level	Medium	
				Data Consistency	Medium	
		2022 Hamilton Parks Master Plan Public Engagement Survey	Average survey respondent's opinion on whether their local park(s) meet their needs.	Agree	Maintain	
				Confidence Level	Very High	
				Data Consistency	Not Available	
Capacity/Use	Provide services that are accessible to the public	2023 Parks & Cemeteries City Service & Assets Review	Average survey respondent's satisfaction with the ability to access Parks sites and services.	Satisfied	Maintain	
				Confidence Level	Medium	
				Data Consistency	Medium	
		2023 Parks & Cemeteries City Service & Assets Review	Average survey respondent's opinion whether a 500m walking distance to a local park meets needs.	Agree	Maintain	
				Confidence Level	Medium	
				Data Consistency	Medium	
	Provide adequate supply of Parks spaces.	2022 Hamilton Parks Master Plan Public Engagement Survey	Average respondent opinion on whether they can easily get to a local park(s).	Strongly Agree	Maintain	
					Confidence Level	Very High
					Data Consistency	Not Available
		2022 Hamilton Parks Master Plan Public Engagement Survey	Average respondent opinion on whether there are enough local parks and if local parks are not crowded.	Agree	Maintain	
					Confidence Level	Very High
					Data Consistency	Not Available

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4.3.1 CUSTOMER INDICES

The three indices calculated to assess how customer expectations for a service are aligning with the perceived performance for a service are listed below in **Table 20**. These indices are explained and analyzed in detail in the sections below.

Table 20: Customer Indices

CUSTOMER INDICES	AVERAGE RESULT
Service Importance Versus Performance Net Differential ¹⁰	-14
Net Promoter Score (%) ¹¹	-23%
Service Rates Versus Value for Money Net Differential	-2

The information below is intended to provide context around the survey results to assist Parks with areas to further investigate before proposing any new levels of service.

SERVICE IMPORTANCE VERSUS PERFORMANCE INDICE

The Service Importance versus Performance indices are used to determine if a service’s importance correlates with the perceived performance. Service areas where the average importance rating exceeds the average performance rating by 20 points are indicative of a mismatch between expectations and service levels, equal to one point on the Likert¹² scale.

The average net differential is less than 20 indicating that in general across the service areas explored in the survey, there is a match between customer expectations (performance) and perceptions (importance) of Parks services.

Per **Figure 10**, the net differential exceeds 20 points for the areas of parks maintenance, parklands, and other amenities including shade structures, lighting, and signage. Customers generally consider these services to be Important to Very Important but perceive the performance as Average to Good. This indicates a mismatch between how respondents feel about the importance of the service versus how they perceive the service is performing. Data consistency for the importance of these services was high indicating that respondents generally came to the same conclusion while data consistency for the performance of these services was

¹⁰ For these indices, a value close to 0 is considered a match, and a value exceeding 20 points indicates a mismatch between customer expectations, and perception or service levels.

¹¹ A positive net promoter score indicates customers would recommend the service to others, a negative score indicates they would not, and a value close to 0 indicates a neutral feeling about the service.

¹² A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g., Very Good to Very Poor, Very Satisfied to Very Unsatisfied).

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medium indicating that there were more mixed opinions about how Parks is performing in these areas. This indicates that further investigation may be required to fully understand the results.

To reduce the net differential in these service areas, Parks would have to increase their performance to between Good and Very Good, which could be achieved by altering their Technical Levels of Service (**Section 4.3.2**). If Parks were looking for service areas to improve, these would be the key service areas to investigate further. However, despite the perceived performance, whether the customer is willing to pay for this increase in service is determined by the Service Rates Versus Value for Money Net Differential which is explained in detail in the section below.

Figure 10: Importance versus Performance Index Score

Service Area	Performance (index score)	Importance (index score)	Net Differential	Opt Out %
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	67	94	-28	2%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	72	94	-21	1%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	63	84	-21	23%
Recreational Trails and Escarpment Stairs	77	93	-17	4%
Playground Equipment	71	79	-8	20%
Sport Fields, Diamonds and Courts	72	75	-3	25%
Spray Pads	72	73	-1	24%

NET PROMOTER SCORE INDICE

The Net Promoter Score indices outline how likely an individual is to recommend a service to another person and measure customer loyalty. For municipal services, this score is difficult to interpret because oftentimes individuals do not have many alternatives for utilizing different services and also there may be internal biases for certain service areas, however, this score does provide valuable information for if customers would recommend using the service or whether they may seek alternatives or avoid using the service altogether.

Likert¹³ choices less than a score of four, where respondents answered that they would definitely not, probably not, or possibly recommend the service to others, are considered 'Detractors' meaning that they would generally not recommend the service. Scores of five, where respondents answered that they definitely would recommend the service to others, are considered 'Promoters' who would recommend the service. Scores of four, where respondents answered that they probably would recommend the service to others, are considered 'Passive' which means they generally do not have strong feelings about the service. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter

¹³ A Likert scale is a rating scale used to measure opinions, attitudes, or behaviors. It consists of a series of five answer statements which are consistently written the same way (e.g. Very Good to Very Poor, Very Satisfied to Very Unsatisfied).

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score is calculated by subtracting (percentage of Promoters) and (percentage of Detractors). The Standard Deviation (σ) is calculated in percent, the same units as the Net Promoter Score.

Based on the results in **Figure 11**, the average customer would not recommend Parks services to others. Recreational trails and escarpment stairs received a slightly positive score while service areas received more negative scores. It is important to note that the lower-scoring service area questions also had lower data consistency (σ) indicating that opinions were more split as well as an opt-out rate of up to 40% for the lower-scoring service areas resulting in a lower confidence level to the data. Therefore, it is difficult to make any conclusive decisions based on this survey alone.

In both the Parks Master Plan Survey and the City Services & Assets Review Survey, respondents agreed that Parks meet their needs. Respondents also indicated in the City Services & Assets Review Survey that Parks performance is Good overall. To understand why respondents would not recommend the service if the service meets needs and has good perceived performance, changes to future survey question design should be considered to explore whether there are perceived deficiencies in the condition, function, or capacity of each service area that may lead respondents to feel that they would not recommend the service.

Figure 11: Net Promoter Score

Service Area	σ	NPS	Detractors	Passives	Promoter
All Service Areas	1.18	-23.45	164	109	81
Recreational Trails and Escarpment Stairs	0.97	6.56	17	23	21
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.18	-15.15	28	20	18
Playground Equipment	1.17	-23.26	19	15	9
Spray Pads	1.09	-25.00	19	12	9
Sport Fields, Diamonds and Courts	1.10	-30.00	20	12	8
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.27	-42.11	33	15	9
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.21	-44.68	28	12	7

SERVICE RATES VERSUS VALUE FOR MONEY INDICE

The Service Rates versus Value for Money indices is used to determine if the rate an individual is paying for a service correlates with the perceived value for money. Service areas where rate level ratings exceed the value for money ratings by 20 points are indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale. Positive Net Differential values indicate that 'Value for Money' was greater than willingness for 'Rates'. Low index scores in 'Rates' indicate that respondents are not willing to pay increased rates for the service area. All values were calculated and then rounded to the nearest whole number.

Per **Figure 12** below, survey respondents generally perceived they were getting Average value for money with parklands, recreational trails and escarpment stairs providing Good value for money. Residents also thought that overall, Parks should minimize service cuts and maintain rates across all services as well. In the 2021 Recreation Master Plan survey, which received

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significantly more engagement and therefore a higher data confidence rating, respondents agreed that Parks facilities provide good value for money.

For the services of parklands, recreational trails and escarpment stairs, and parks maintenance, respondents indicated that they would probably prefer tax rate increases to improve services. Given that the service areas of parklands and parks maintenance were found to have a mismatch between importance and performance, these may be areas to further investigate to understand performance expectations and associated willingness to pay.

Figure 12: Rates versus Value for Money Index Score

Service Area	Value for Money (index score)	Rates (index score)	Net Differential	Opt Out %
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	63	71	-8	17%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	71	76	-5	9%
Recreational Trails and Escarpment Stairs	73	76	-3	13%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	65	66	-2	23%
Playground Equipment	67	69	-2	34%
Sport Fields, Diamonds and Courts	65	63	2	31%
Spray Pads	67	63	4	37%

4.3.2 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how the City delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. The City will measure specific lifecycle activities to demonstrate how the City is performing in delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.¹⁴

Table 21 shows the activities expected to be provided under the current 10-year planned budget allocation and the forecast activity requirements being recommended in this AM Plan.

¹⁴ IPWEA, 2015, IIMM, p 2|28

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Table 21 : Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE (2023)	CURRENT TARGET PERFORMANCE (2023)	PROPOSED 10-YEAR PERFORMANCE	
Acquisition	Ensure appropriate capacity to meet service needs and meet Official Plan provisioning requirements.	Supply of municipal parkland (ha/resident).	1.98ha / 1000 residents	2.1ha / 1000 residents	2.1ha / 1000 residents	
		Supply of Neighbourhood Type Parkland.	0.51ha / 1000 residents	0.7ha / 1000 residents	0.7ha / 1000 residents	
		Budget	\$0		\$8.6M for land acquisition	
	Ensure appropriate capacity to meet service needs.	Provision targets for outdoor recreational amenities in parks.	Various	Various, see <u>Recreation Master Plan</u>		Various, see <u>Recreation Master Plan</u>
		Budget	\$0		\$1.5M	
Operation	Ensure assets are maintained in an acceptable state.	Grass cutting – number of cuts performed at Neighbourhood parks and general grass cutting at Parks sites.	1x per 9 working days	1x per 7 working days	1x per 7 working days	
	Ensure assets are maintained in an acceptable state.	% of playground sites inspected monthly.	100%	100%	100%	
	Ensure assets are maintained in an acceptable state.	% of spray pads inspected monthly during the operating season.	100%	100%	100%	
	Compliant with by-law.	Clear snow from maintained pathways within 24 hours.	TBD	100%	100%	
	Ensure assets are maintained in an acceptable state.	Garbage can collection – number of collections performed weekly.	3x per week in summer	3x per week in summer	3x per week in summer	
			2x per week in winter	2x per week in winter	2x per week in winter	
		Washroom cleaning -number of cleanings performed daily.	1x daily	1x daily	1x daily	
		% of assets inspected and condition recorded annually (excludes Facilities and Fleet)	TBD (CI Item to develop the program)			
		Percentage of Inspections completed for bridges	TBD (CI Item to investigate requirements)			
		Budget	\$28M (2023)	Not yet quantified		
Maintenance	Ensure assets are kept in safe and acceptable repair.	% of reported safety concerns addressed within 24 hours.	100%	100%	100%	
Renewal	Ensure assets are kept in safe and acceptable repair.	% of Fleet vehicles beyond ESL.	35%	TBD CI Item to develop Fleet Strategy	TBD CI Item to develop Fleet Strategy	
			Budget	Not yet quantified		
	Ensure assets are kept in safe and acceptable repair.	% of play structures beyond ESL.	30%	0%	0%	
			Budget	\$0.46M	\$15.6M	\$31.7M
		Km of asphalt park pathways with condition rated as fair or above in condition assessments.	57%	TBD	TBD	
	Budget	Not yet quantified				

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4.3.3 PROPOSED LEVELS OF SERVICE DISCUSSION

Per the Technical Levels of Service **Table 21**, it can be concluded that Parks is often meeting technical standards with some exceptions. However, customer preferences and expectations do not always align with internal technical targets. The purpose of this section is to link the customer and technical levels of service to determine areas where different levels of service could be proposed. As previously mentioned, since the 2023 survey results have only a medium level of data confidence, it is difficult to make any conclusive decisions based on this initial survey. The discussion below is intended to provide context to direct Parks to areas for further investigation based on these initial results before proposing any new levels of service. The Parks Master Plan and Recreation Master Plan provide strategic direction as it relates to the provisioning and guidance for decision-making that should be referred to when considering any change in the level of service.

CONDITION / QUALITY

Based on **Table 19**, survey respondents rated the overall service as good and agreed that facilities and spaces are clean and in good repair. Parks should consider that in general customers are not identifying a need for changes related to the condition or quality of the services provided.

Despite survey respondents identifying that they find facilities and spaces to be clean and in good repair, they found the performance of the park's maintenance service area to be average and identified that they would probably prefer tax rate increases to improve services. Parks is currently meeting their technical levels of service in this area including frequency of mowing, washroom cleaning, and waste pickup. Given that customers also find this to be a high-importance service area, if Parks were to propose a change in service level this should be an area further investigated.

FUNCTION

Based on **Table 19**, survey respondents felt that Parks services generally meet their needs. Parks should consider that customers are not identifying a need for changes related to the function of their services and any proposed changes would be done at their own discretion in terms of operational needs. At this time, it appears that function should be maintained requiring routine maintenance of assets and renewals in the appropriate timeframes to prevent degradation of assets. Acquisitions should be driven by growth to maintain current levels of service.

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CAPACITY

Based on **Table 19**, survey respondents were generally satisfied with their ability to access Parks sites and services. Customers find that Parks locations and proximity to their homes meet their needs such that they can easily get to local parks and do not feel that they are crowded. Parks should consider that customers are satisfied with the capacity of Parks services and should maintain focus on maintaining the level of service and per capita provisioning by increasing services and assets to manage population growth in line with the Parks and Recreation Master Plans.

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5. FUTURE DEMAND

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of services required.

5.1 DEMAND DRIVERS

For the Parks service area, the key drivers are population growth, intensification of development, and consumer preferences.

5.2 DEMAND FORECASTS

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 22**. Growth projections have been shown on Page 45 of the AM Plan Overview document.

Where costs are known, these additional demands as well as anticipated operations and maintenance costs have been encompassed in the Lifecycle Models in **Section 8**.

5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets are shown in **Table 22**. Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Opportunities identified to date for demand management are shown in **Table 22**. Climate change adaptation is included in **Table 28**.

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Table 22: Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Population Growth and Development	570,000 (2021)	820,000 (2051)	<p>Population growth will increase demand for parkland and outdoor recreation opportunities.</p> <p>New developments will increase the number of Parks assets through parkland dedication requiring additional funding for the operation, maintenance and renewal of these new assets.</p>	<p>Follow recommendations of the <u>Parks Master Plan</u> for parkland acquisition.</p> <p>Follow recommendations of the <u>Recreation Master Plan</u> for outdoor recreation facilities in parks.</p>
Population Demographics - Aging Population	18.3% of population 65 years and older (2021) ¹⁵	20.4% of population 65 years and older (2031) ¹⁶	<p>Increased demand for spaces that support leisure activities for seniors.</p> <p>Increased demand for washrooms, shade structures, and seating.</p> <p>Increased demand for accessible and barrier-free amenities.</p>	<p>Follow recommendations of the <u>Recreation Master Plan</u> for provision recommendations for outdoor recreation facilities in parks.</p> <p>Continue to design new and renewed park facilities to be as accessible and barrier-free as possible.</p>
Population Demographics - Young Population	Hamilton's population is slightly younger than the provincial average (Hamilton's median age is 40.8 years,	Hamilton will continue to be a desirable home for young families.	Increased demand for play spaces, spray pads, and recreation amenities that appeal to youth.	The <u>Parks Master Plan</u> prioritization of parkland acquisition has included a focus factor for areas with High Child and Youth Populations.

¹⁵ (Census Profile, 2021 Census of Population, 2021)

¹⁶ (Government of Ontario, 2023)

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DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Population Demographics - Young Population	Ontario's median age is 41.6 years ¹⁷)			Follow recommendations of the <u>Recreation Master Plan</u> for provision recommendations for outdoor recreation facilities in parks.
Population Demographics - Increasing Diversity	Hamilton is a desirable destination for new immigrants and diverse residents. As of 2021, 29% of residents were born outside of Canada ¹⁶ .	Hamilton to continue to be a destination for new immigrants.	Demand for a diverse variety of sports and leisure activities.	Have recently installed more cricket facilities. Follow recommendations of the <u>Recreation Master Plan</u> for provision recommendations for outdoor recreation facilities in parks.
Council Led Motions	Ad-Hoc	Ad-Hoc	Motions by Council can lead to the acquisition or upgrades of assets and with them increased operations, maintenance, and renewal needs.	Request Operating and Maintenance budget increase for the full lifecycle cost of the asset when council-led motions lead to new acquisitions.
Community and User Groups	Ad-Hoc	Ad-Hoc	Community and user groups sometimes provide funding or partnerships to acquire or upgrade assets. These assets then require ongoing operations, maintenance, cost, and renewal expectations.	Request Operating and Maintenance budget increase for the full lifecycle cost of the asset when community and/or user group partnerships lead to new acquisitions.
Consumer Preferences –	The desire for year-round access to parks and trails began	Expected to continue, climate change and milder	Customer interest in washroom access and cleared walking paths throughout the winter.	The winter washroom pilot completed, and the permanent

¹⁷ (Census Profile, 2021 Census of Population, 2021)

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DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
<p>Year-Round Access</p> <p>Consumer Preferences – Year-Round Access</p>	prior to the pandemic but was intensified by pandemic restrictions and has continued.	winters will continue to make outdoor activities more desirable throughout the winter.	<p>Longer seasons have been requested for some outdoor recreation amenities.</p> <p>Longer outdoor recreation season and fewer winter days with snow on the ground allow residents to use assets for more days per year potentially increasing wear and degradation.</p>	program has been introduced.
Changing Customer Expectations	Customers are frequently asking for better than like-for-like replacement of assets.	Trend expected to continue.	Increased demand for larger and more complex assets. These assets require more initial investment than like-for-like replacement and may have significantly higher lifecycle costs with more extensive operations and maintenance requirements. At times these requests are driven by AODA.	Consider the full lifecycle costs when renewing assets. Consult with customers through the Master Plan process and AM Plan surveys to determine the provisioning and level of service that residents want and are willing to pay for. Ensure that the level of service is equitable across the City when making decisions.
Regulatory and Compliance Changes	Ad-Hoc	Ad-Hoc	City-initiated or external changes to regulatory or compliance requirements with impacts on the budget.	Comply with Regulations to ensure compliance, this may increase lifecycle costs or require new assets to comply.

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5.4 ASSET PROGRAMS TO MEET DEMAND

The new assets required to meet demand may be acquired, donated or constructed. For Parks, typically assets are donated, acquired, or constructed.

At this time there are approximately **\$134 million** in required assets acquired over the next 5 years to meet demand, and an anticipated **\$813 million** over the 30-year planning period. These acquisitions include land required to meet the provisioning targets set by the Parks Master Plan, the cost to develop this land into parks, and the cost of building the outdoor recreational amenities recommended to meet the provisioning targets of the Recreation Master Plan. Acquiring new assets will commit Parks to ongoing operations, maintenance and renewal costs for the amount of time that the service is required. These future costs have been estimated at a high level in the Lifecycle Models in **Section 8** but should be quantified further for future iterations of the AM Plan for consideration in developing higher confidence forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan.

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6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk’¹⁸.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

6.1 CRITICAL ASSETS

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in **Table 23**. Failure modes may include physical failure, collapse or essential service interruption.

Table 23: Critical Assets

CRITICAL ASSET	FAILURE MODE	IMPACT
Escarpment Stairs	Structural deterioration and failure.	Service interruption Severe injury Financial Reputational
Bridges	Structural deterioration and failure.	Service interruption Injury Financial Reputational

¹⁸ ISO 31000:2009, p 2

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CRITICAL ASSET	FAILURE MODE	IMPACT
Shoreline Protection	Structural deterioration and failure.	Service interruption Injury Financial Reputational
Premier Sports Facilities and Artificial Turf Fields	Deterioration of components.	Service interruption Reputational

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

Critical risks are those assessed with ‘Very High’ (requiring immediate corrective action) and ‘High’ (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan are shown in **Table 24**. It is essential that these critical risks and costs are reported to management. Additional risks will be developed in future iterations of the plan and are identified in **Table 35** in the Continuous Improvement Section of the plan.

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Table 24: Risks and Treatment Plans

SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
All Assets	Operations and maintenance liability for all assets. Uncoordinated or non-standard protocols and/or uncomprehensive inspection programs.	High	Currently, follow operations and maintenance procedures designed to meet the duty of care. Develop Overall Asset Management Strategy (Asset inventory, standardized inspection criteria, standardized condition rating and prioritization) Maintenance Strategy.	Low	Staff time
Sport Lighting	Failure of lighting or of electrical and mechanical components including poles.	High	Develop Overall Asset Management Strategy (Asset inventory, standardized inspection criteria, standardized condition rating and prioritization) Maintenance Strategy. Currently completing a phased assessment with a consultant to compile an inventory, visually inspect, standard condition ratings, and recommend maintenance and renewal strategy.	Low	Assessment Phase 3/3 to be completed Approximately \$6M Capital Investment recommended in 2023-2025, \$15M total, based on the first two phases. Cost to renew assessment at regular intervals TBD
Pedestrian Lighting	Failure of lighting or of electrical and mechanical components including poles.	High	Develop Overall Asset Management Strategy (Asset inventory, standardized inspection criteria, standardized condition rating and prioritization) Maintenance Strategy.	Low	Inspection cost TBD (See Table 35 Continuous Improvement) Capital Investment TBD once assessments are completed.
Bridges (Vehicular and Pedestrian)	Structural deterioration and failure.	High	Investigate requirements for engineered inspections. Investigate coordination with the Transportation division to include Parks bridges in the engineering inspection program with other City bridges.	Medium	TBD (See Table 35 Continuous Improvement)
Viewing Platforms	Structural deterioration and failure.	High	Develop Overall Asset Management Strategy (Asset inventory, standardized inspection criteria, standardized condition rating and prioritization) Maintenance Strategy. Investigate requirements for engineered inspections.	Medium	TBD (See Table 35 Continuous Improvement)
Utilities in Parks and on Trails	Structural deterioration and failure. Unclear delineation of utilities and responsibilities, orphaned assets.	High	Develop Overall Asset Management Strategy (Asset inventory, standardized inspection criteria, standardized condition rating and prioritization) Maintenance Strategy. Identify asset owners and demarcation points. Some utilities may need to be separated. i.e., Streetlighting vs. Parks shared power supplies.	Low	TBD (See Table 35 Continuous Improvement)
Security, Safety, and Control Measures (signs, gates, bollards, etc.)	Damaged, deteriorated, missing, or outdated control measures. Liability from missing or incorrect signage. Injury due to damaged or missing safety and control devices.	High	A complete audit of parks and trails signs, develop sign inventory and records strategy. Inventory of safety and control measures and regular inspections.	Medium	TBD (See Table 35 Continuous Improvement)
Large Equipment	Higher level of breakdowns due to delayed replacements. Possible injuries to staff. Increased reactive maintenance costs.	High	Replace End of Life vehicles.	Low	\$5.2 million in 2023 for the replacement of 110 fleet vehicles that have exceeded the estimated service life.
Escarpment Stairs	Structural deterioration and failure.	High	Engineering inspection at standardized intervals. Regular inspections completed by staff. Develop Overall Asset Management Strategy (Asset inventory, standardized inspection criteria, standardized condition rating and prioritization) Maintenance Strategy.	Medium	5-10 year interval for engineering inspections, cost TBD. \$2.6M Capital Investment over the next 10 years recommended by the 2021 Condition Assessment Report.

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6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to ‘withstand a given level of stress or demand’, and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment and crisis leadership.

6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective of achieving the optimum benefits from the available resources.

The following table outlines what activities Parks cannot afford to do over the next 10 years with their existing budget and provides the associated service and risk tradeoffs.

Table 25: Service and Risk Tradeoffs

WHAT WE CAN NOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
Renew Sports Field Lighting	Removal of sports field lighting where safety is at risk and replacement not funded. Reduction in field availability through reduced playing hours. Higher demand for remaining lit fields leading to overuse and deteriorating conditions.	Reputational risk and reduced level of service.
Renew Play Structures and Spray Pads Within Estimated Service Life	Play structures and spray pads remain in service beyond the estimated service life. Increased maintenance costs, longer service interruptions, and lower satisfaction. Spray pad provisioning per capita is currently higher than	Reputational risk and reduced level of service.

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WHAT WE CAN NOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
<p>Renew Play Structures and Spray Pads Within Estimated Service Life</p>	<p>all other municipalities in Ontario. There may be an opportunity to better align with customer desires by disposing of older assets and investing in fewer higher-quality spray pads.</p>	
<p>Build Out the Recommended Parks and Outdoor Recreational Facilities to Meet the Provision Targets Set by the <u>Parks Master Plan</u> and <u>Recreation Master Plan</u></p>	<p>The level of service will be reduced as the population increases and Parks assets and services are not increased proportionately.</p>	<p>Reputational risk and reduced level of service. The increased demand on existing facilities will lead to premature deterioration, increased maintenance costs and reduced service lives.</p>

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7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we have already begun to experience (adaptation). At a minimum, the City must consider how to manage our existing assets given the potential climate change impacts for our region.

Changes to Hamilton's climate will impact City assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models as well as levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan. This has been identified as a Continuous Improvement item in **Table 35**.

7.1 CLIMATE CHANGE MITIGATION

Climate Mitigation refers to human intervention to reduce GHG emissions or enhance GHG removals (e.g. building transportation infrastructure that can support cycling and public transit and reduce the need for car travel). The City of Hamilton's Community Energy + Emissions Plan¹⁹ (CEEP) includes five Low-carbon Transformations necessary to achieve the City's target of net-zero GHG emissions by 2050:

- Innovating our industry;
- Transforming our buildings;
- Changing how we move;
- Revolutionizing renewables; and
- Growing Green.

¹⁹ Newbold, Skidmore, Chessman , Imhoff, & McDowell, 2022

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Mitigation Demand Analysis

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City’s modelled targets for the low carbon transformations that applied to the service/asset;
- Discussing the impact the targets would have on the service/asset; and
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050 as shown in **Table 26** below.

As previously mentioned, due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below have not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AM Plan.

Moving forward, the Climate Lens tool discussed in the AM Plan Overview will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

Mitigation Demand Analysis

Table 26: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Changing How We Move	100% of new municipal small and light-duty vehicles are electric by 2040. 100% of new municipal heavy-duty vehicles switch to clean hydrogen by 2040.	Electric vehicle (EV) chargers will need to be installed at all Yards. Initial upfront capital costs for electric vehicles. Removal of fuel infrastructure.	Coordination with Fleet division on Green Fleet Strategy. Coordination with the Corporate Facilities and Energy Management (CFEM) division.
Transforming Our Buildings	By 2050, all new municipal buildings achieve net-zero emissions.	Net zero buildings may have higher upfront costs to construct but lower operational expenses.	Coordination with CFEM division to achieve net-zero emission in new buildings.

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CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Transforming Our Buildings	By 2050, all municipal buildings will be retrofitted to achieve 50% energy efficiency relative to 2016.	The initial upfront cost of retrofit potentially lowers operational expenses.	Coordinate with the CFEM division to identify feasibility.
Transforming Our Buildings	Post-retrofits, switch buildings to heat pumps for space and water heating by 2050.	The initial upfront cost of switching potentially lowers operational expenses.	Coordinate with the CFEM division to identify feasibility.
Revolutionizing Renewables	By 2050, 50% of municipal buildings will add rooftop solar PV, covering 30% of the building's electrical load.	Initial upfront cost, potential energy cost savings.	Coordinate with the CFEM division to identify feasibility.
Growing Green	Planting 50,000 trees a year through to 2050	Considerations made in the parks design process.	Continue working with Landscape Architecture Services (LAS) to meet canopy targets in parks designs.

MITIGATION RISK ANALYSIS

Additionally, since the risk of not completing climate change mitigation projects is that the City continues to contribute to climate change in varying degrees which were modelled in the Climate Science Report for the City of Hamilton completed by ICLEI Canada, a risk analysis has not been completed in this AM Plan for not completing climate mitigation projects (ICLEI Canada, 2021).

CURRENT MITIGATION PROJECTS

Mitigation projects Parks is currently pursuing are outlined below in **Table 27**. These projects may already be included in the budget and may be quantified in the lifecycle models.

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Table 27: Asset Climate Mitigation Projects

PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
Park Canopy Coverage	Growing Green	New parks and park redevelopments are designed by LAS to meet 40% canopy coverage.	Increased capture of CO ² .
Electric Equipment Pilot	Revolutionizing Renewables	Currently piloting electric equipment for park maintenance activities.	Reduced emissions associated with maintenance equipment.
Diverting Dog Waste	Revolutionizing Renewables	Diverting dog waste from landfills and converting it to fertilizer and electricity.	Reduced emissions and increased green energy production.
Re-naturalization Projects	Growing Green	Converted an underutilized sports field to a designed wetland.	Increased capture of CO ² .
Lighting Updates	Revolutionizing Renewables	Updating lighting to energy-efficient LED, incorporating solar in specific areas.	Reduced emissions through reduced electricity requirements.
Mowing Reductions	Growing Green	Reducing mowing in targeted areas to re-naturalize.	Increased capture of CO ²
Environmental Design for Heat Reduction	Growing Green	Some amenities contribute to heat islands (artificial fields) when designing. Parks is considering ways to reduce the heat island effect by increasing space between amenities to add more tree cover throughout sports fields in particular.	Reduced contributions to temperature.

CLIMATE MITIGATION DISCUSSION

At this time, the Parks has already made progress toward some of the modelled target transformations in the areas of Revolutionizing Renewables and Growing Green.

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Revolutionizing Renewables

In 2019 Parks launched a program to divert organic dog waste from the City's dog parks from landfill. Residents are encouraged to deposit dog waste into receptacles with underground storage, installed at various dog park locations. Waste is then removed and trucked to a facility where it is converted to fertilizer and electricity, diverting the waste from landfills while also producing renewable energy.

The Parks Section has also begun piloting small electric equipment (trimmers, chain saws etc.) to investigate the products available and their ability to meet Parks operational needs. While reducing emissions, there may be challenges with meeting operational needs with electric equipment due to the high volume of use per day for this equipment and available batteries. The equipment may require multiple batteries to be changed throughout the day or require a method of recharging (solar and batteries on board vehicles, etc.) and staff downtime to wait for recharging midday.

As pedestrian lighting is renewed Parks is updating lighting to energy efficient LED, reducing electricity requirements. In some more remote areas, solar lighting has been installed.

Growing Green

Parks has made progress on multiple initiatives aimed at renaturalization and increasing vegetation. New park and park redevelopments are designed by LAS to meet a 40% canopy coverage target. These trees are then managed by Forestry. Opportunities to renaturalize areas are regularly considered. Mowed areas have been reviewed and targeted areas were identified to either reduce or eliminate mowing to allow more vegetation growth and CO² capture as well as reduce emissions from mowing equipment. Alternative uses of park areas are considered which has resulted in the conversion of an underutilized sports field to a designed wetland, increasing CO² capture while providing many other ecological services. It is recognized that some Parks amenities contribute to heat island effects (artificial fields, sports courts, etc.) when designing amenities these effects are considered and efforts are made to reduce them by increasing space between amenities and adding more tree cover throughout sports fields in particular.

7.2 CLIMATE CHANGE ADAPTATION

Climate Adaptation refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads).

The impacts of climate change may have a significant impact on the assets we manage and the services we provide. Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.²⁰

²⁰ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

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In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report²¹ guided by ICLEI's Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP) (ICLEI, 2021). The BARC Framework identified thirteen high-impact areas.

²¹ City of Hamilton & Local Governments for Sustainability Canada, 2021

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Adaptation Demand Analysis

Table 28: Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	BASELINE (1976-2005) ²²	AVERAGE PROJECTED CHANGE IN 2021-2050 ¹² (ASSUMING RCP4.5* SCENARIO) ²³	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.	6.7 heavy precipitation days (20 mm)	7.7 heavy precipitation days (20 mm)	<ul style="list-style-type: none"> ▪ Flooding in parks impacting assets and facilities, washouts of trails and bridges. ▪ High lake levels result in shoreline flooding and damage. ▪ Following events, debris cleanup requirements, drainage issues, and high soil saturation impacting the usability of parkland features. 	<ul style="list-style-type: none"> ▪ Identify flood-prone areas, and locations of drainage /stormwater issues and follow city stormwater design standards. ▪ Increased low-impact development feature incorporation for the management of stormwater. ▪ Investigate the potential for elevated pathways/boardwalks in problematic areas.
Reduced capacity of flood protection measures and water storage caused by an increase in rainfall intensity leading to flooding.				
Increased intensity of rainfall leading to increasing runoff into rivers and lakes, and washing of sediment, nutrients, pollutants, and other materials.	25.8 heavy precipitation days (10 mm)	27.6 heavy precipitation days (10 mm)	<ul style="list-style-type: none"> ▪ Erosion and destabilization of slopes, exacerbated by increased invasive species destroying understory vegetation. ▪ Following flood events, shorter periods of acceptable weather for remediation projects, including difficulty scheduling, and waiting longer to repair for ground conditions to dry. 	<ul style="list-style-type: none"> ▪ Improvements to slope stabilization including invasive management and planting of native stabilizing species. ▪ Continue with planned improvements to shoreline protection. ▪ Education of council and the public about practices and impacts on assets. ▪ Continue to follow guidance for beach closures based on monitoring through Public Health.
Changes in precipitation resulting in resulting in erosion of natural systems (i.e., water banks, escarpment erosion) leading to washouts of bridges and roadways.	844 mm average annual total precipitation	886 mm average annual total precipitation		
Increased instances of heat-related issues due to extreme heat.	16.1 average days where the temperature is 30 degrees Celsius or more	34.4 average days where the temperature is 30 degrees Celsius or more	<ul style="list-style-type: none"> ▪ Extreme heat leading to increased demand for splashpads, shade structures, water fountains, etc. Requests for misting and cooling stations. ▪ Staff will require longer cooling breaks on hot days potentially delaying schedules. ▪ Negative impacts to vegetation. 	<ul style="list-style-type: none"> ▪ Increase tree cover in parks and continue working with LAS on new designs to meet canopy targets. ▪ Follow Parks design standards including shade structures. Implementation of the <u>Recreation Master Plan</u> future splash pad needs. ▪ Make consideration in Parks design process for types of vegetation resistant to drought. ▪ Consider possible changes to mowing cycles. ▪ Continue to reduce phosphorus fertilizer use by following the current educated application system,
Dryer, hotter and longer summers may affect the health and safety of local vulnerable populations.	71.6 days average length of the hot season	102 days average length of the hot season		
More frequent and intense heatwaves will increase instances of heat-related health and safety issues, particularly for households without	2.1 Average Annual Heat Waves	4.7 average annual heat waves		

²² ICLEI Canada, 2022

²³ RCP4.5 Scenario: Moderate projected Green House Gas concentrations, resulting from substantial climate change mitigation measures. It represents an increase of 4.5 W/m2 in radiative forcing to the climate system. RCP 4.5 is associated with 580-720ppm of CO2 and would more than likely lead to 3°C of warming by the end of the 21st century.

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ADAPTATION IMPACT STATEMENT	BASELINE (1976-2005) ²²	AVERAGE PROJECTED CHANGE IN 2021-2050 ¹² (ASSUMING RCP4.5* SCENARIO) ²³	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
access to reliable air-conditioning and the homeless			<ul style="list-style-type: none"> ▪ Impacts on mowing cycles due to cycles of drought and high rainfall. ▪ Increased encampments, populations vulnerable to heat, drinking water and cooling needs. ▪ Faster growing vegetation requiring more maintenance at trails, parks, etc. 	<p>only applying when nutrient deficiency is shown through soil testing, rather than scheduled applications.</p> <ul style="list-style-type: none"> ▪ Continue to make irrigation schedule decisions based on conditions rather than a set schedule including education of staff.
Increased temperatures and changes in precipitation increase incidences of infectious diseases and vector-borne diseases as a result of longer transmission periods or changes in the geographic distribution of disease vectors.	52.2 number of ice days (temperature below 0 degrees Celsius)	35.7 number of ice days (temperature below 0 degrees Celsius) extending the breeding season of mosquitos/ticks.	<ul style="list-style-type: none"> ▪ Increased risk of staff exposure to vector-borne diseases. ▪ Increased requirements for invasive species management. 	<ul style="list-style-type: none"> ▪ Continue with invasive management programs (poison ivy, phragmites) and education programs. ▪ Continue tick and mosquito education protocols for staff. ▪ Consider controls on the movement of species, boot cleaners, etc.
Increased intensity and frequency of ice storms lead to increased hazardous roads, pathways and sidewalk conditions.	187 mm average total winter precipitation	204 mm average total winter precipitation	<ul style="list-style-type: none"> ▪ Increased winter maintenance for pathways, parking lots and access roads. ▪ Accelerated deterioration of infrastructure including freeze-thaw impacts on asphalt for paths and courts. 	<ul style="list-style-type: none"> ▪ Stay up to date on the best materials for freeze-thaw resistance and best maintenance practices. ▪ Maintain accurate signage to identify pathways that are maintained in winter and pathways that may be hazardous. ▪ Continue to meet winter path maintenance standards and evaluate standards at regular intervals.

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ADAPTATION RISK ANALYSIS

Additionally, the City should consider the risks for the asset or service as a result of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Similarly, to the exercise above and using the risk process in **Section 6**, asset owners:

- Reviewed the likelihood scores in the Vulnerability and Risk Assessment Report for the adaptation impact occurring;
- Identified the consequence to the asset/service if the event did happen to develop a risk rating; and,
- If the risk was identified as high, the asset owner produced a preliminary risk adaptation plan shown below in **Table 29**.

It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of mitigating the risks below has not been included in the lifecycle and financial models at this time. The adaptation plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should consider these risks during the planning and design processes. Future changes which will be incorporated into future iterations of the AM Plan. Moving forward, the Climate Lens tool will assess projects based on these targets and will assist with the prioritization of climate adaptation projects.

Table 29: Adapting to Climate Change

ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
Reduced capacity of flood protection measures and water storage caused by an increase in rainfall intensity leading to flooding.	Shoreline Protection	Failure, risk to property and life protected by assets	High	Engineering inspection of assets was completed. Continue with recommended repairs and replacements partially funded through the Federal Disaster Mitigation and Adaptation Fund Project. Develop and implement staff training to inspect shoreline structures and natural areas for damage.

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ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
<p>Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.</p> <p>Increased intensity and frequency of ice storms leading to increased hazardous roads, pathways and sidewalk conditions.</p>	<p>All Assets</p>	<p>Deterioration of assets due to an increase in extreme weather events and changing climate including freeze-thaw cycles, extreme heat, and flooding.</p> <p>Increased inspection and maintenance requirements and reduced service lives accelerating program needs.</p>	<p>High</p>	<p>Develop Overall Asset Management Strategy (Asset inventory, standardized inspection criteria, standardized condition rating and prioritization) Maintenance Strategy.</p> <p>Monitor changes to maintenance and renewal needs.</p> <p>Investigate resilient materials in renewal designs.</p>
<p>Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.</p>	<p>Outdoor Sports Amenities</p>	<p>Flooding and oversaturation of sports fields leading to service disruptions, and reduced play opportunities.</p>	<p>High</p>	<p>Identify fields with poor drainage and evaluate the feasibility of mitigation and remediation opportunities.</p>

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CURRENT ADAPTATION PROJECTS

Adaptation projects Parks is currently pursuing are outlined below in **Table 30**. These projects may already be included in the budget and may be quantified in the lifecycle models.

Table 30: Asset Climate Adaptation Projects

PROJECT	PROJECT DESCRIPTION
Shoreline Protection Measures Project	Implement protection measures to increase City-wide shoreline resiliency across 33 locations with construction to occur from 2020 to 2027.
Changes to fertilizer and irrigation practices	Changed from the scheduled application of fertilizer and use of irrigation systems to informed decision-making. Irrigation is based on the real moisture conditions of fields and diamonds. Fertilizer is only used when needed based on soil testing.
Low Impact Development (LID) Features	New Park designs are incorporating LID features for the management of stormwater where feasible.
Sport Court Design Changes	Changes to sports court design to increase the resilience to wind impacts due to higher intensity storms.

CLIMATE ADAPTATION DISCUSSION

The outdoor nature of Parks assets as well as their locations within and close to bodies of water, slopes and other hazard lands will make them vulnerable to many of the impacts of climate change. A robust asset management strategy including a thorough asset inventory, standardized inspection and condition ratings, and standardized maintenance procedures will be instrumental in monitoring impacts on assets and subsequently planning for and prioritizing maintenance and renewal needs. Climate change will impact Parks assets as well as operations as staff manage operations through storms, increased rainfall, increased summer heat and drought.

The overall increased stormwater management needs of the City may impact the Parks service area in areas of the city with limited available land and shared use of parkland for stormwater facilities may need to be considered, potentially reducing parkland in some areas.

Parks is making progress toward mitigating the impacts of climate change on their assets in various ways. Following high water levels and storms that resulted in damage to shoreline protection assets, an engineering assessment was performed, and restoration resiliency and measures were recommended. Projects have begun to implement the measures at 33 shoreline locations. Design changes have been implemented in Parks projects where climate change impacts have been noted including the addition of LID features to manage stormwater and changes to sports court design to increase resiliency to wind impacts from storms.

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Parks has implemented changes to fertilizer and irrigation practices to change from scheduled application of fertilizer and use of irrigation systems to informed decision-making. The real moisture condition of fields and diamonds is considered when timing the use of irrigation systems. Soil testing is completed to determine fertilizer needs to reduce unnecessary fertilizer application.

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8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budget. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated together and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options. However, at this time the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

8.1 ACQUISITION PLAN

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs. Assets are often donated through development agreements with the City or through the construction of new assets which are mostly related to population growth.

CURRENT PROJECT DRIVERS – 10 YEAR PLANNING HORIZON

The City prioritizes capital projects based on various drivers to help determine ranking for project priorities and investment decisions. As part of future AM Plans, the City will continue to develop its understanding of how projects are prioritized and ensure that multiple factors are being considered to drive investment decisions in the next iteration of the AM Plan. These drivers will include legal compliance, risk mitigation, O&M impacts, growth impacts, health and safety, reputation, and others. These drivers should be reviewed during each iteration of the AM Plan to ensure they are appropriate and effective in informing decision-making.

The [Parks Master Plan](#) and [Recreation Master Plan](#) are detailed strategic documents designed to guide decision-making related to many of the assets covered in this AM Plan. These documents have been used to inform this iteration of the plan and as the plans consider a 30-year planning horizon, should continue to be reviewed including any updates and revisions with each iteration of the AM Plan.

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DONATED (DEDICATED) ACQUISITIONS

During the development process, the Planning Act requires developers to dedicate (donate) a prescribed amount of land within the development area for public parkland use. The developer has the option to complete the first stage of development only, meeting minimum requirements and leaving the City to finish the space with all necessary amenities and recreational features. Alternatively, the developer can build a finished park, meeting prescribed standards, and the City repays the developer with the development-related charges collected by the City for park development.

For the purpose of the lifecycle model in this iteration of the AM Plan, it has been assumed that all developers will choose the first option, dedicating land that requires further park development by the City. Based on the analysis completed in the Parks Master Plan²⁴ it is anticipated that by 2051, 205 hectares of Neighbourhood parkland (approximately 7.3 hectares per year) will be acquired through the parkland dedication process. Land value has not been included in this iteration of the AM Plan but may be considered in future iterations.

The City is reviewing its donated asset assumption process to ensure that it proactively understands what assets are being donated annually and they are appropriately planned for. This will allow multiple departments across the City to plan for the assets properly such as:

- AM to forecast the long-term needs and obligations of the assets;
- Operations and maintenance can include the assets in their planned activities (inspections, legislative compliance activities); and,
- Finance can ensure that assets are properly captured and recognized appropriately (Audited Financial Statements, TCA process, Provincial reporting such as the FIR).

The City will need to ensure the required data is updated frequently and to a single source to ensure that all departments have access to the data they require in a timely manner.

Once the assets are assumed, Parks then becomes the steward of these assets and is responsible for all ongoing costs for the asset's operation, continued maintenance, inevitable disposal and their likely renewal.

The City has internal design standards, inspection practices as well as assessments which are intended to ensure the assets that are being donated to the City are in excellent condition before assumption. The City should continue to review its assumption process to ensure that the City is receiving high-quality and appropriately sized donated assets to defer lifecycle activities as much as possible.

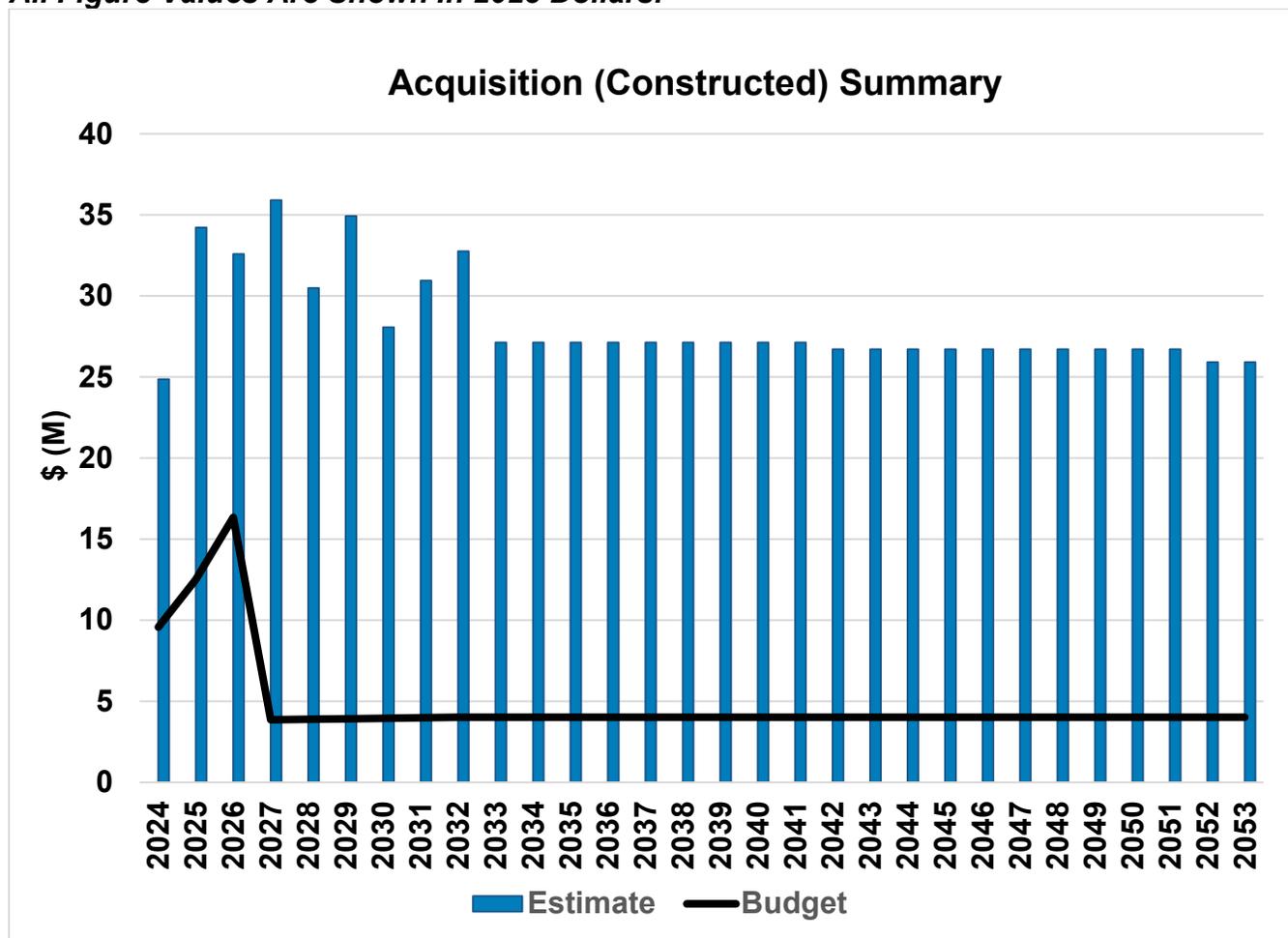
²⁴ Many assumptions were made in the analysis completed in the Parks Master Plan. Refer to the Parks Master Plan document for further details on assumptions and limitations.

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CONSTRUCTED OR PURCHASED ACQUISITIONS

Over the next 10-year planning period from 2024 to 2033, the City forecasts the need to acquire approximately **\$311.9M** of new Parks assets as shown in **Figure 13** below. Included in this forecast are planned Parks development projects identified until 2032, additional Neighbourhood Park needs identified by the Parks Master Plan, and additional Outdoor Recreational Amenities identified by the Recreation Master Plan.

Figure 13: Acquisition (Constructed) Summary
 All Figure Values Are Shown In 2023 Dollars.



This forecast includes the following assumptions related to acquisitions to meet the deficiencies in Neighbourhood Parkland noted in the Parks Master Plan:

- In addition to the land acquired through dedication described above, in order to meet needs, the City will need to acquire an additional 3.5 hectares of land per year at an estimated cost of approximately \$8.6M per year to meet Neighbourhood Parkland deficiencies in target areas based on the analysis of the Parks Master Plan. Many of these

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target areas are in older areas of the city including Lower Hamilton presenting unique challenges in acquiring and developing appropriate land.

- The cost to develop both the dedicated and acquired land described above into Neighbourhood Parks with typical features has been estimated at \$1.6M per hectare. This is the cost to develop typical features to minimum standards²⁵.

The forecast also includes acquisitions required to meet the provisioning requirements for Outdoor Recreational Amenities as projected in the Recreation Master Plan. These needs will require the City to acquire an estimated \$9.5M of new assets over the 10-year Horizon and \$27.2M of new assets by 2051. This is only the cost to build the individual assets identified in the Master Plan based on the replacement values from the Development Charges Study. It is likely an underestimate as the projects may also require land acquisition, site remediation, site works, and additional Parks infrastructure assets to support them.

In addition to the above anticipated acquisitions related to Master Plans, over the next 10-year planning period the City forecasts approximately \$72M of constructed assets for new and ongoing Parks projects.

Major forecast acquisition expenditures over the next ten years include:

- **\$21.2 million** for Brightside Park (Stadium Precinct Park) including Facilities.
- **\$8.2 million** for William Connell Park Phase 3 including Facilities.
- **\$3.9 million** for Beasley Park Phase 3.
- **\$3.6 million** for Mountain Brow Path.
- **\$3.3 million** for Gage Park Redevelopment.
- **\$2.3 million** for Hamilton Amateur Athletic Association Park Redevelopment.
- **\$2.2 million** for Growth Related Equipment Acquisitions.

The City has **insufficient** budget for its planned constructed acquisitions at this time. Over the 10-year planning period, to meet the provisioning outlined in the Parks and Recreation Master Plans as well as complete other planned Parks projects, Parks will need to acquire approximately **\$311.9M** of assets with a planned budget for acquisitions of **\$66.1M**.

There will likely also be other asset acquisitions within the 30-year horizon for additional amenities, additional parks beyond the Neighbourhood Parks class, additional trails and more. With competing needs for resources across the entire city, there will be a need to investigate trade-offs and design options to further optimize asset decisions and ensure intergenerational equity can be achieved. Hamilton will continue to monitor its constructed assets annually and update the AM Plan when new information becomes available.

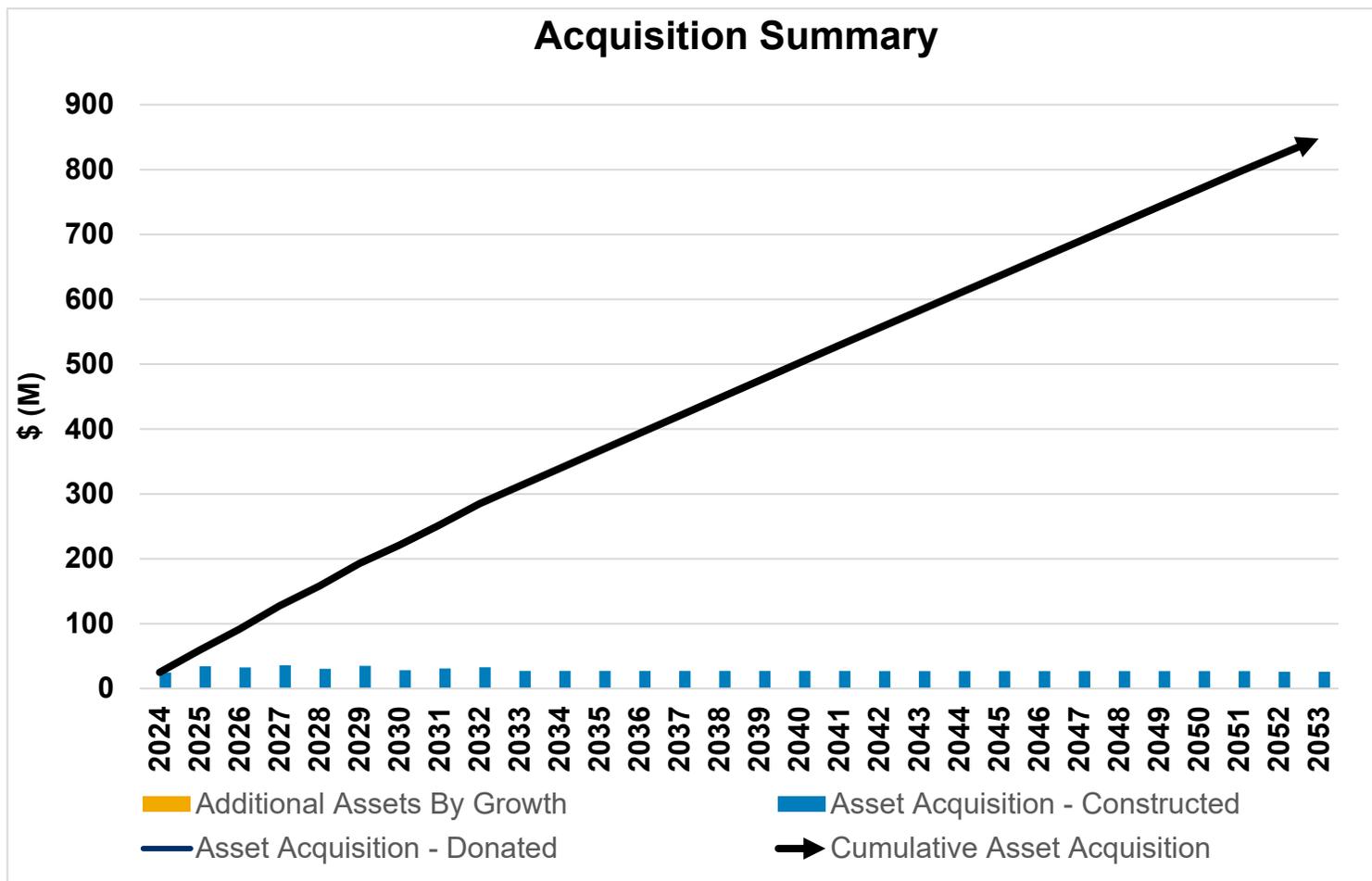
²⁵ Many of the parks built on acquired land will need to be developed in older areas on parcels of various sizes and on sites requiring alterations or remediation. Assigning a per hectare value for development is challenging and this estimate is considered low confidence.

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ACQUISITIONS SUMMARY

Forecast acquisition asset costs are summarized in **Figure 14** and show the cumulative effect of asset assumptions over the next 10-year planning period.

Figure 14: Acquisition Summary
 All Figure Values Are Shown In 2023 Dollars.



When Hamilton commits to constructing or purchasing new assets, the municipality must be prepared to fund future operations, maintenance, and renewal costs. Hamilton must also account for future depreciation when reviewing long-term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by Hamilton. The cumulative value of all acquisition work, including assets that are constructed and contributed are shown in **Figure 14** above. Hamilton will need to address how to best fund these ongoing costs as well as the costs to construct the assets while seeking the highest level of service possible.

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8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal, and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons. Examples of typical operational activities include operating assets, utility costs, inspections, and the necessary staffing resources to perform these activities.

Some of the major operational investments over the next 10 years include:

- **\$15 million** allocated for employee-related costs in 2024 (i.e., salaries, wages, benefits, etc.);
- **\$2.8 million** in contractual services in 2024;
- **\$2.2 million** in building and ground costs in 2024 (i.e., water, sewer, hydro, etc.); and
- **\$1.3 million** in material and supplies in 2024.

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure they reach their intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition. Examples of typical maintenance activities include equipment repairs and component replacements along with appropriate staffing and material resources required to perform these activities.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure Parks assets are reliable and can achieve the desired level of service.

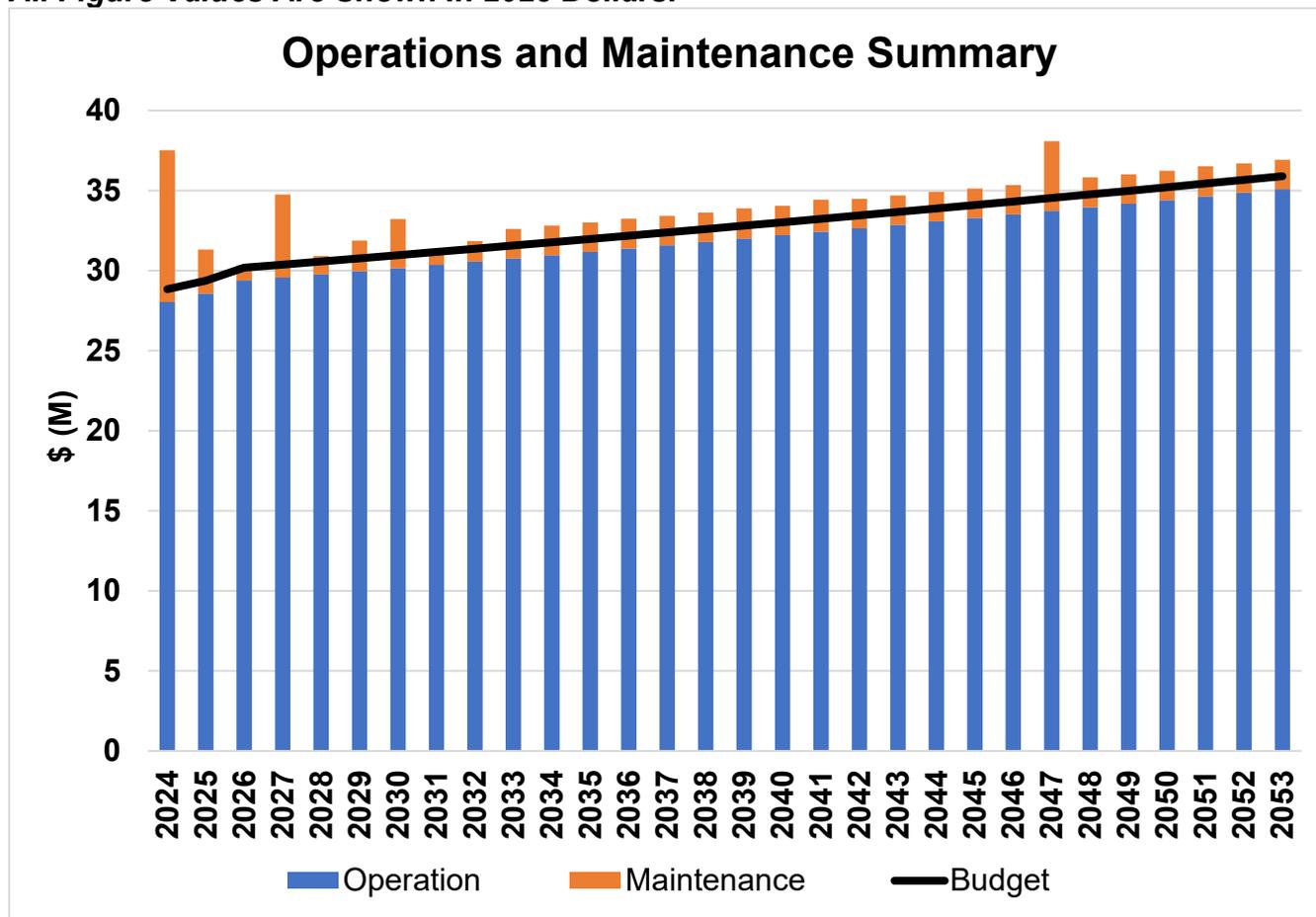
Major maintenance projects the City plans to complete over the next 10 years include:

- **\$600 thousand** annually for facilities maintenance
- **\$175 thousand** annually for Confederation Beach Park Capital Maintenance Program
- **\$130 thousand** annually for CSA-approved playground material replacements

Forecast operations and maintenance costs vary in relation to the total value of the asset registry. When additional assets are acquired, future operations and maintenance costs are forecast to increase. When assets are disposed of the forecast operation and maintenance costs are reduced.

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Figure 15: Operations and Maintenance Summary
 All Figure Values Are Shown In 2023 Dollars.



Per **Figure 15** above, it is evident that operations needs are expected to grow for the Parks section over the next 30 years due to the increased number of parks and assets. O&M costs to support the funded acquisitions were based on an estimated 5% of the Capital Cost of the new assets. If currently unfunded acquisitions become funded and acquired, the operations and maintenance needs will grow further. It is important to note that this forecast does not include additional anticipated O&M requirements for other demands, risks, climate change demands/risks, or proposed levels of services identified in **Sections 4 through 7** which will be quantified in future AM Plans.

The funding for operations is currently generally sufficient and some maintenance needs are being met. Maintenance needs for many assets in this plan are not well quantified. Continuous Improvement items have been added to **Table 35** to develop standardized condition assessments as well as to finish documenting operations and maintenance standards for all Parks assets. As the required activities and needs become better quantified it is anticipated that the funding gap for maintenance will increase.

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The maintenance forecast included for facilities assets is based on the 10-year facility's needs. If a facility is due for renewal or expected to require renewal in the next 5 years based on ESL, the maintenance forecast has not been included. An average of the 10-year needs, excluding backlog, has been used to estimate facilities maintenance needs beyond the 10-year horizon. Facilities maintenance amounts beyond the existing budget are assumed to be unfunded. The maintenance spike in 2024 is considered a maintenance backlog because it includes deferred maintenance due to budget constraints over time. This backlog should be investigated following the completion of this Asset Management Plan to ensure critical components have been prioritized in the Corporate Facilities and Energy Management and the Parks budget forecasts.

Maintenance needs identified by the consultant assessment of the escarpment stairs have been included in the maintenance forecast. These needs are generally unfunded at this time. These needs have primarily been modelled in 2027 and 2047 based on the time horizons recommended in the assessment report.

At this time the asset inventory is incomplete and optimal maintenance activities for many assets are not well defined for all assets. Future iterations of this plan will provide a more thorough analysis of operations and maintenance costs including types of expenditures for training, mandatory certifications, insurance, staffing costs and requirements, equipment, and maintenance activities.

8.3 RENEWAL PLAN

Renewal is major works which does not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs

Asset renewals are typically undertaken to either ensure the assets' reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 31** and are based on the estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2024 however they will be reviewed annually until their accuracy reflects the City's current practices.

Table 31: Useful Lives of Assets

ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Asphalt Pathways	25
Fencing	25

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ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Vehicular Bridges	50
Pedestrian Bridges	35
Catch basins	100
Parking Lots	40
Signs	25
Decorative Fountains	Historical, Irreplaceable
Drinking Fountains	25
Irrigation Systems	25
Furniture	25
Garbage Cans	3
Sport Lighting	30
Pedestrian Lighting	50
Electrical Infrastructure	50
Ball Diamonds	25
Hard Surface Courts	25
Soft Surface Courts	25
Sports Fields	25
Play Structures	20
Spray Pads	25
Dog Parks	25
Community Ice Rinks	25
Skate Parks	25
Exercise Stations	25
Wild Waterworks	50
Escarpment Stairs	50
Viewing Platforms	20

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ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Waterfront Shoreline Protection	50
Trucks & Passenger Vehicles	8-10
Utility & Turf Maintenance Vehicles	8-15
Small Equipment	10
IT Equipment	4-5
Facilities	50-75*

* Facilities were assumed to have an ESL of 50 years; however, if a facility is approaching or exceeding 50 years of age and was evaluated as good condition based on BCA data, the ESL was extended to 75 years.

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).²⁶

Future methodologies may be developed to optimize and prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure;
- Have high use and the subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have the potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.²⁷

SUMMARY OF FUTURE RENEWAL COST

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in **Figure 16**.

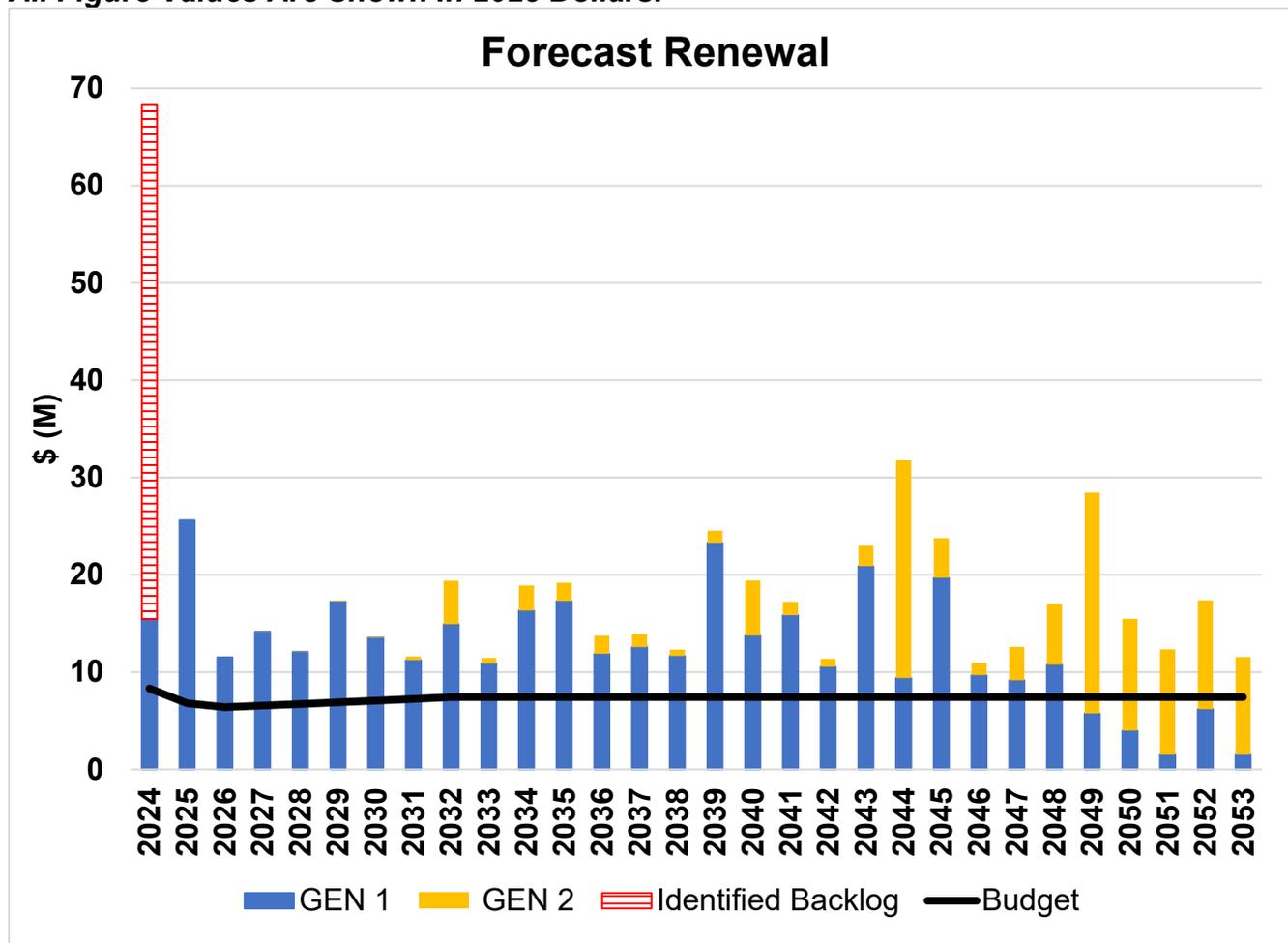
²⁶ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

²⁷ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

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In **Figure 16** below, Generation 1 (Gen 1) costs refer to renewals that occur for the first time in the model based on the estimated service life and Generation 2+ (Gen 2+) costs refer to renewals that have occurred twice or more based on the estimated service life.

Figure 16: Forecast Renewal Costs
 All Figure Values Are Shown In 2023 Dollars.



The significant amount highlighted as unfunded in 2024 represents the cumulative backlog of deferred work needed to be completed that has been either identified through its current condition or age. Currently, there is insufficient funding to accomplish all the renewals that are planned over the next ten years. Based on the number of funded replacements each year described above, this percentage is expected to continue to grow as assets deteriorate faster than they can be renewed and exceed their estimated service life.

Major backlog items include:

- \$15.7 million for Play Structures;
- \$11.8 million for Facilities;
- \$5.3 million for Sport Lighting;
- \$5.2 million for Fleet;

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- \$3.3 million for Asphalt Pathways;
- \$3.1 million for Sports Fields;
- \$2.9 million for Ball Diamonds; and,
- \$3.0 million for Sports Courts.

The model assumes that assets in the backlog are renewed in 2024 and predicts their second generation of renewal needs based on ESL. This drives second-generation renewal spikes in 2044 and 2049. Other significant spikes in renewal are generally driven by high-value facility renewals. There is no age or condition data for a number of assets. These assets have generally not been included in the backlog and an even distribution of renewals has been assumed across the asset's ESL.

Wild Waterworks has not been included in the renewal model. A review of the facility is currently being undertaken within the Confederation Beach Park Master Plan. Given that the facility is nearing end of service life and significant investment is required for renewal, a fulsome review of the area is being undertaken to evaluate all options that would meet the highest and best use of the land in alignment with current council priorities. Renewal with a similar facility has been estimated to cost \$24.9 million and an expanded facility would cost \$40.1 million. If an alternative option is pursued there will be a disposal cost of approximately \$5 million plus additional cost to develop and construct new assets.

Shoreline protection has not been included in the renewal model. Assets identified as requiring renewal are being renewed under a program jointly funded by the Federal Government (Disaster Mitigation and Adaptation Fund) and running until 2027. It was assumed that this would extend the life of the assets beyond the model period.

Properly funded and timely renewals ensure the assets perform as expected. Deferring renewals create risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. It is recommended to continue to analyze asset renewals based on criticality and availability of funds in future AM Plans.

8.4 DISPOSAL PLAN

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen.

Assets identified for possible decommissioning and disposal are shown in **Table 32**. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in **Table 32**. Any costs or revenue gained from asset disposals is included in future iterations of the plan and the long-term financial plan.

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Table 32: Assets Identified for Disposal

ASSET	REASON FOR DISPOSAL	TIMING	DISPOSAL COSTS	OPERATIONS & MAINTENANCE ANNUAL SAVINGS
Sport Lighting	Poor condition	2024	\$90k	Not quantified

Sport lighting at Freelon Community Park, Victoria Park tennis courts and Glanbrook Sports Park was identified as poor condition by the consultant assessment performed in 2021. Due to budget constraints this lighting will be removed at a cost of approximately \$90k without plans for replacement, reducing the level of service at these sports facilities as lighting allows 1.5 times more playing hours at each facility.

As discussed above, the future state of the Wild Waterworks property is currently being studied. One possible outcome may be disposal of the facility and development of the property for an alternative Parks purpose.

The Recreation Master Plan provides strategic direction on provisioning and decision making for many outdoor recreational amenities. No amenities have been identified for disposal based on the Master Plan at this time. The plan recommends that Bocce Courts and Lawn bowling Greens continue to be monitored for participation rates. Should participation decline and clubs fold, options to assume operational management, repurpose or remove would be considered on a site-specific basis. Provisioning for playgrounds and spray pads is provided on the basis of geographic distribution and decisions should continue to be made on the basis of achieving equitable distribution.

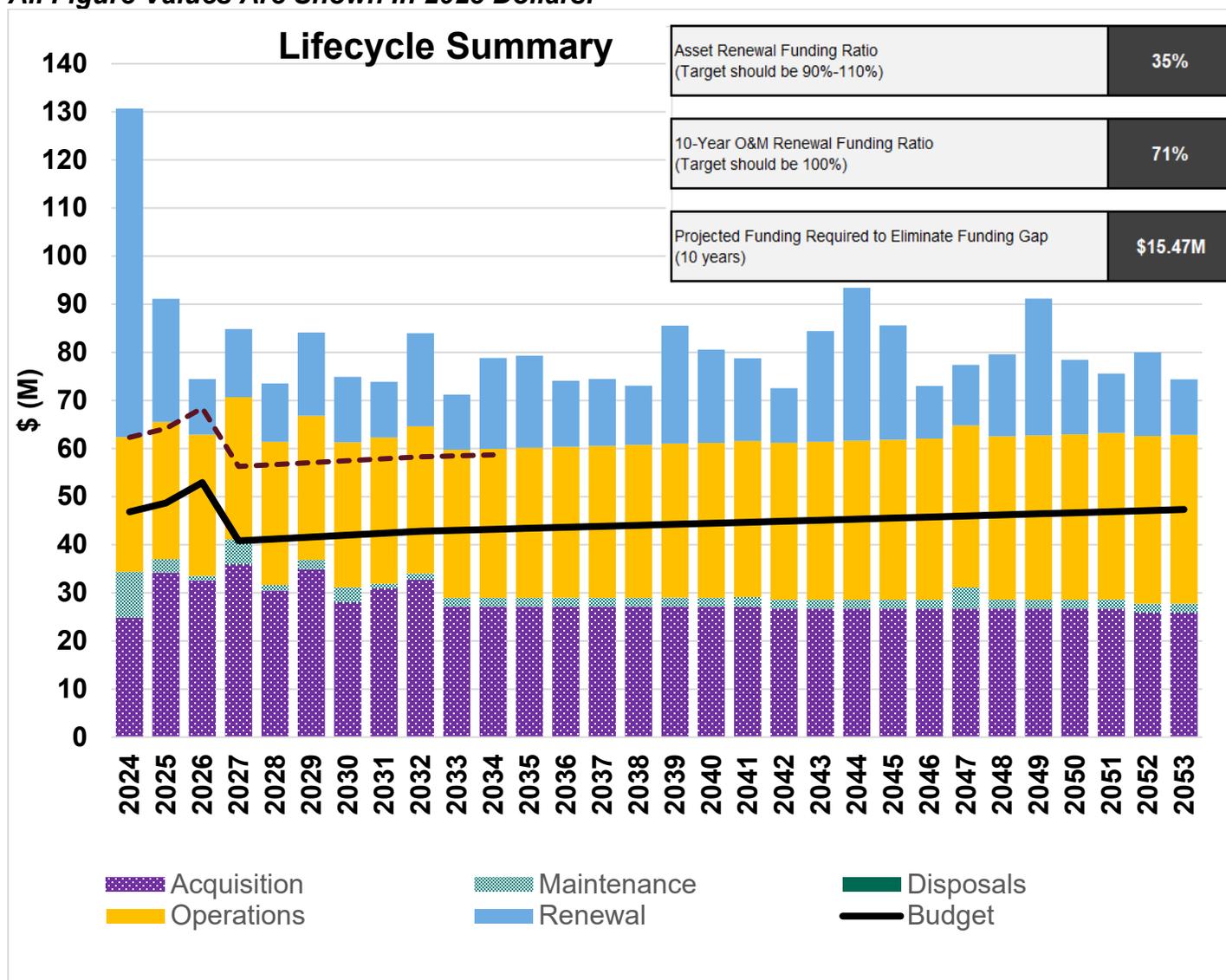
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8.5 LIFECYCLE COST SUMMARY

The financial projections from this asset plan are shown in **Figure 17**. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

Figure 17: Lifecycle Summary
 All Figure Values Are Shown In 2023 Dollars.



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There is currently insufficient funding over the 10-year period to address lifecycle needs which will result in an eventual reduction in level of service if not addressed. The underfunded activities include acquisitions, operations and maintenance, and renewals.

The annual acquisition of new parks assets will commit the City to additional operations and maintenance costs throughout the lifecycle of the assets. The City will need to continue increasing operating and maintenance budgets annually to support these assets.

As the City continues to develop condition profiles, identify necessary works, and implement an idealized maintenance strategy, identified maintenance needs may increase and if unfunded may impact the delivery of service. Unfunded maintenance needs for facilities and escarpment stairs contribute to the funding gap with the most significant contributor being deferred facilities maintenance.

The largest contributor to the funding gap is unfunded renewals and the renewal backlog. In particular. The backlog is expected to continue to grow as assets deteriorate faster than they can be renewed and exceed their estimated service life. As additional assets are acquired, future renewal needs will continue to increase. Deferring renewals (assets identified for renewal and not funded) creates risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance potentially leading to increased usage and decreased service life of newer assets.

Due to the lack of data confidence in the current levels of service information, Parks will need to collect more data before proposing any new levels of service. It has been assumed in the interim that the current levels of service will be the proposed levels of service continuing forward past 2025 in accordance with O. Reg 588/17.

The City will continue to improve its lifecycle data, and this will allow for informed choices as to how best to mitigate impacts and how to address the funding gap itself. This gap in funding future plans will be refined to improve the confidence and accuracy of the forecasts as future versions of Asset Management Plans are updated.

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9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure Parks provide the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-Term financial planning (LTFP) is critical for the City to ensure the networks lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly, the City will have difficult choices to make in the future which will include options such as higher costs, reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all of the network's needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

9.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- Medium term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio²⁸ **35%**

The Asset Renewal Funding Ratio (ARFR) is used to determine if the City is accommodating asset renewals in an **optimal** and **cost effective** manner from a timing perspective and relative to financial constraints, the risk the City is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable, however the expenditures are below this level in some service areas predominantly

²⁸ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

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due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

If assets are not renewed in the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to the City's reputation and risk of fines or legal costs.

The lack of renewal resources will be addressed in future AM Plans while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

MEDIUM-TERM – 10 YEAR FINANCIAL PLANNING PERIOD

10-Year Operations, Maintenance & Renewal Financial Ratio 71%

Although this AM Plan includes forecast projections to 30-years, the higher confidence numbers are typically within the first 10 years of the lifecycle forecast. The 10-year Operations, Maintenance & Renewal Financial Ratio compares the Planned Budget with the Lifecycle Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the ARFR, the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization's risk and service level commitments.

The forecast operations, maintenance and renewal costs over the 10-year planning period is **\$53.1M** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The proposed (budget) operations, maintenance and renewal funding is **\$37.6M** on average per year giving a 10-year funding shortfall of **\$15.5M** per year or **\$155M** over the 10-year planning period. This indicates that **71%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget, which is not within the 90-110% range. Therefore, it can be concluded that Parks is not funding their assets at an acceptable rate. Note, these calculations exclude acquired assets.

Funding an annual funding shortfall or funding 'gap' should not be addressed immediately. The overall gap in funding city-wide will require vetting, planning and resources to begin to incorporate gap management into the future budgets for all City services. This gap will need to be managed over time to reduce it in a sustainable manner and limit financial shock to customers. Options for managing the gap include:

- Financing strategies – increased funding, block funding for specific lifecycle activities, long term debt utilization;

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- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets; and,
- Influence level of service expectations or demand drivers.

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of **90-110%** for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

9.2 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Table 33 shows the forecast costs (outlays) required for consideration in the 30 year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

The City will manage the ‘gap’ by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

Table 33: Forecast Costs for the Long-Term Financial Plan
 *Forecast Costs are shown in 2023 Dollar values.

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2024	\$19,064,934	\$28,038,050	\$9,487,956	\$68,289,472	\$90,000
2025	\$22,661,804	\$28,563,736	\$2,757,074	\$25,605,548	\$-
2026	\$21,026,776	\$29,381,034	\$939,805	\$11,530,656	\$-

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YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2027	\$21,473,600	\$29,574,314	\$5,181,308	\$14,164,991	\$-
2028	\$13,173,600	\$29,769,024	\$1,140,773	\$12,109,542	\$-
2029	\$17,617,600	\$29,965,204	\$1,911,327	\$17,313,718	\$-
2030	\$10,753,600	\$30,162,884	\$3,056,878	\$13,606,732	\$-
2031	\$16,506,100	\$30,362,114	\$970,245	\$11,602,027	\$-
2032	\$15,439,080	\$30,562,924	\$1,284,551	\$19,389,892	\$-
2033	\$9,814,080	\$30,764,638	\$1,834,208	\$11,459,215	\$-
2034	\$9,814,080	\$30,967,686	\$1,840,708	\$18,889,932	\$-
2035	\$9,814,080	\$31,172,072	\$1,834,208	\$19,179,832	\$-
2036	\$9,814,080	\$31,377,808	\$1,864,808	\$13,735,288	\$-
2037	\$9,814,080	\$31,584,902	\$1,834,208	\$13,914,007	\$-
2038	\$9,814,080	\$31,793,362	\$1,834,208	\$12,311,905	\$-
2039	\$9,814,080	\$32,003,198	\$1,883,608	\$24,532,748	\$-
2040	\$9,814,080	\$32,214,418	\$1,834,208	\$19,394,068	\$-
2041	\$9,814,080	\$32,427,034	\$2,007,508	\$17,211,756	\$-
2042	\$9,399,670	\$32,641,052	\$1,834,208	\$11,364,579	\$-
2043	\$9,399,670	\$32,856,484	\$1,834,208	\$22,998,484	\$-
2044	\$9,399,670	\$33,073,336	\$1,844,009	\$31,775,878	\$-
2045	\$9,399,670	\$33,291,620	\$1,834,208	\$23,770,148	\$-
2046	\$9,399,670	\$33,511,344	\$1,834,208	\$10,942,809	\$-
2047	\$9,399,670	\$33,732,520	\$4,349,808	\$12,579,092	\$-
2048	\$9,399,670	\$33,955,156	\$1,864,808	\$17,066,856	\$-
2049	\$9,399,670	\$34,179,260	\$1,834,208	\$28,455,348	\$-
2050	\$9,399,670	\$34,404,840	\$1,834,208	\$15,482,276	\$-

HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2051	\$9,399,670	\$34,631,912	\$1,886,408	\$12,342,837	\$-
2052	\$8,600,000	\$34,860,484	\$1,834,208	\$17,382,972	\$-
2053	\$8,600,000	\$35,090,564	\$1,834,208	\$11,550,691	\$-

9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in the City’s operational budget and 10-year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM plan will provide service delivery options and alternatives to optimize limited financial resources.

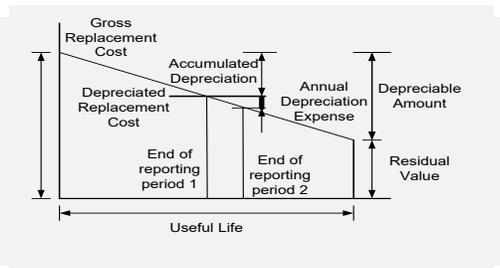
9.4 VALUATION FORECASTS

Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and removes the high costs renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs, however this will be improved for the next iteration of the plan.

9.5 ASSET VALUATION

Replacement Cost (Current/Gross)	\$643,213,986
Depreciable Amount	\$508,580,936
Depreciated Replacement Cost²⁹	\$287,520,800
Depreciation	\$ 19,166,724



²⁹ Also reported as Written Down Value, Carrying or Net Book Value.

HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

The current replacement cost is the most common valuation approach for specialized infrastructure assets. The methodology includes establishing a comprehensive asset registry, assessing replacement costs (based on market pricing for the modern equivalent assets) and useful lives, determining the appropriate depreciation method, testing for impairments, and determining remaining useful life. As previously mentioned, Public Trees were not included in the depreciation as enhanced natural assets do not depreciate.

As the City matures its asset data, it is highly likely that these valuations will fluctuate significantly over the next three years, and they should increase over time based on improved market equivalent costs as well as anticipated cost changes due to climate change mitigation and adaptation strategies.

9.6 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 30-year horizon and do not address other operational needs not yet identified;
- Maintenance forecasts are based on current budget allocations and do not identify asset needs at this time. It is solely based on planned activities; and,
- Replacement costs were based on historical costing. They were also made without determining what the asset would be replaced with in the future.

9.7 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the [AM Plan Overview](#).

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a **Low** confidence level using the information in **Table 34**.

HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

Table 34: Data Confidence Assessment

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	Medium	Demand drivers were determined using recently completed <u>Parks Master Plan</u> , <u>Recreation Master Plan</u> and subject matter expert opinion.
Growth Projections	Medium	Based on Greater Golden Horseshoe Growth Forecasts as outlined in the <u>Asset Management Overview Plan</u> .
Acquisition Forecast	Low	Anticipated acquisitions required to support service were included from the Capital Budget. Additional acquisitions were included from the <u>Parks Master Plan</u> and <u>Recreation Master Plan</u> with estimated costs. Acquisition budgets beyond 2024 were estimated based on anticipated block and development charges funding.
Operation Forecast	Low	Currently budget based and requires future improvement to ensure allocation is accurate and all operational needs accounted for. Operations costs for master plan related new park and outdoor recreational amenities were estimated as described using subject matter expert opinion.
Maintenance Forecast	Low	Currently budget based and requires future improvement to ensure allocation is accurate and all maintenance needs accounted for. Maintenance needs for facilities are from BCA. Maintenance costs for new park and outdoor recreational amenities were estimated as described using subject matter expert opinion.
Renewal Forecast – Asset Value	Low	Market pricing was used for renewal replacement costs for facilities, vehicles, small equipment and IT equipment which have generally medium confidence. Previous purchase costs and subject matter opinion including <u>2024 Development Charges Study</u> was used for renewal replacement costs of most other assets with generally medium confidence. No data is available for a number of assets in the Parks Infrastructure category reducing the overall confidence.

HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

DATA	CONFIDENCE ASSESSMENT	COMMENT
Renewal Forecast - Asset Useful Life	Low	<p>There is a high confidence in age data for facilities, fleet and IT assets.</p> <p>Age data was not available for most other assets. Useful lives were based on subject matter expert opinion.</p>
Renewal Forecast - Condition Modelling	Low	<p>Condition data was known for facilities, shoreline protection, sport lighting, Wild Waterworks, and escarpment stairs based on inspections performed by external consultants with a generally high confidence level.</p> <p>The condition of vehicles, small equipment, and IT assets was based on age and estimated service life with generally low confidence level.</p> <p>Condition of most other Parks Infrastructure and Outdoor Recreational amenities with known condition were determined based on staff visual inspections. Some of these inspections are multiple years out of date and not all assets in these categories have known condition data. The confidence level is generally medium.</p> <p>There are some assets with no condition data available, reducing overall confidence.</p>
Disposal forecast	Low	<p>Current disposal information is rolled into renewal. Continuous improvements are required to ensure accurate data is available.</p>

HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PRACTICES

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2023 Approved Operating Budget;
- 2024-2025 Multi-Year Operating Forecast;
- 2023 Approved Capital Budget;
- 2023-2032 Multi-Year Capital Forecast;
- Building Condition Assessment Reports;
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc.);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter Expert Opinion and Anecdotal Information; and,
- Reports from the mandatory inspections, operational & maintenance activities internal reports.

10.2 IMPROVEMENT PLAN

It is important that the City recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision making. The tasks listed below are essential to improving the AM Plan and the City's ability to make evidence based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning and to plans to physically improve the assets.

The Improvement plan **Table 35** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current workplans. Future iterations of this AM Plan will provide updates on these improvement plans.

³⁰ ISO 55000 Refers to this as the Asset Management System

HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

Table 35: Improvement Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1	<p>Develop a complete asset registry for all parks assets including inventory and condition assessment program.</p> <p>Inventory all assets in GIS, include key database fields and follow the newly developed City Data Standard. Develop condition inspection protocol based on a five-point scale, create inspection templates, and implement a routine inspection program. Develop associated SOPs. Investigate digital solutions including integration with EAM to streamline the program and analyse data collected.</p>	<p>Parks with CAM assistance for framework and methodology</p>	<p>Possible PM/Coordinator</p>	<p>Investigate needs: Q4- 2024</p> <p>Implementation: pending EAM</p>
2	<p>Complete V1 of Parks operations and maintenance standards document for Parks assets. Align with corporate and departmental SOPs, develop additional SOPs where necessary.</p>	<p>Parks</p> <p>CAM assists with a framework</p>	<p>PM/Coordinator</p>	<p>Q4 - 2024</p>
3	<p>Work with other City departments to identify asset owners and demarcation points. Some utilities may need to be separated. Ensure all assets have clear ownership and responsibility for maintenance, inspection, and repair. Develop a protocol to address assets when identified.</p>	<p>Parks</p> <p>CAM to assist with the coordination.</p>	<p>Internal Resources for identification and discussions</p> <p>Potential funds required to separate utilities</p>	<p>Q2-2025 Identify known assets impacted</p>

HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
4	<p>Investigate requirements and frequencies for engineered inspections and estimate costs. Include assets identified in risk treatment plans (Lighting, bridges, lookout platforms, escarpment stairs)</p> <p>Investigate cross-departmental contracts for maintenance and construction.</p>	Parks to execute with the support of others	<p>Internal Resources to investigate needs.</p> <p>Budget TBD</p>	<p>Investigate by Q2-2025</p> <p>Request budget in 2025 (2026 budget)</p> <p>Execute in 2026</p>
5	Update and document agreements (school boards, Bruce trail, etc.) identify associated risks, design standards etc.	Parks	Internal Resources	Ongoing, expected completion beyond 2026
6	Develop a fleet strategy – identify the purpose of extended-use vehicles, replacement needs, and additional fleet needs to fill gaps or meet future demand	Parks	Internal Resources	Q2 - 2025
7	Conduct an annual review of unit costs for assets.	Parks coordinate with LAS through Development Charges updates	Internal Resources	Ongoing
8	Develop asset renewal priority ranking criteria. Identify long-term strategy and funding plan for each asset category.	Parks	Internal Resources	Following the implementation of Improvement Task #1
9	Review facilities data including building condition assessments and 10-yr needs. Review estimated service lives and renewal needs.	Parks with Facilities input	Staff time	Q2-2025

HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated on a regular basis to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one-to-ten-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 110%).

HAMILTON PARKS AND RECREATIONAL TRAILS 2024 ASSET MANAGEMENT PLAN

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12. APPENDIX "A" – SURVEY FINDINGS



Parks and Cemeteries

Survey Period: November 8th - December 13, 2023

May 2024

70 Respondents	115 Survey Questions	10 Demographic Questions	7376 Survey Responses	658 Demographic Responses
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Age	% Pop. by Age	% of Respondents	Respondents
65+	19.5%	20.0%	14
35 to 64	41.7%	52.9%	37
18 to 34	22.1%	22.9%	16

Region	% Pop. by Region	Population	% of Respondents	Respondents
Lower	45.6%	432,375	52.9%	37
Upper	37.3%	353,485	22.9%	16
Rural	17.1%	161,840	7.1%	5

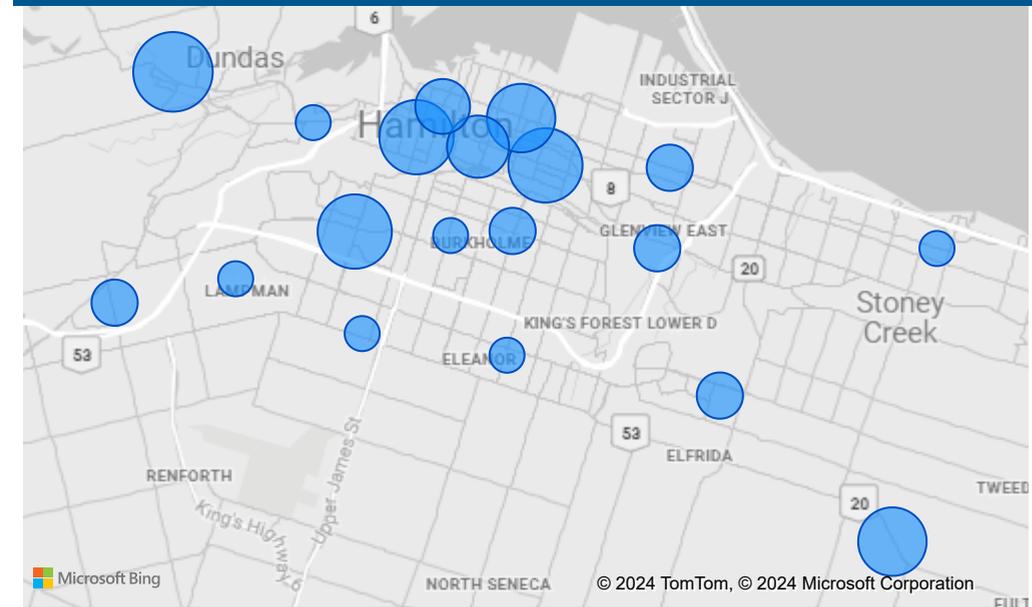
Outdoor Space	% of Respondents	Responses
Private Yard/Greenspace	75.7%	53
Private Balcony/Deck	21.4%	15
Shared Yard/Greenspace	14.3%	10
Other	5.7%	4

Living Situation	% of Respondents	Responses
Live in Hamilton	94.3%	66
Work in Hamilton	57.1%	40
Retired in Hamilton	15.7%	11
Other	10.0%	9

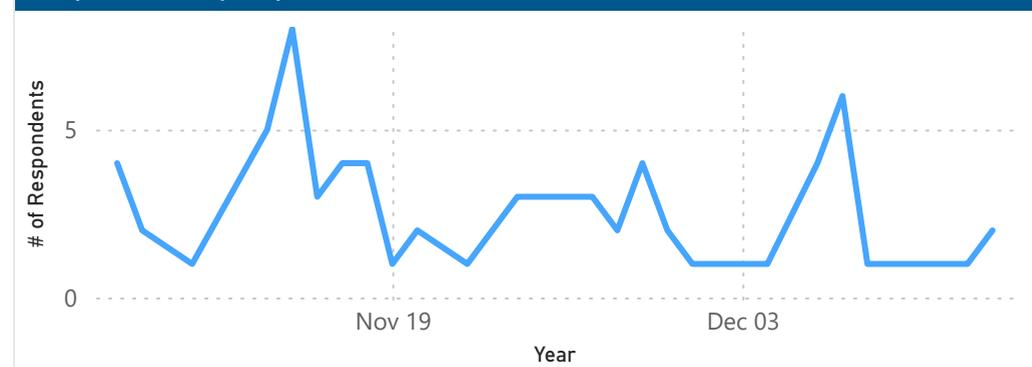
Identity	% of Respondents	Responses
Do not identify with any of the groups	55.7%	39
Marginalized	22.9%	23
Prefer not to answer	20.0%	14

These tables may not sum to 100% because the survey allowed respondents to choose multiple options or opt out of the question

Respondent Density Map

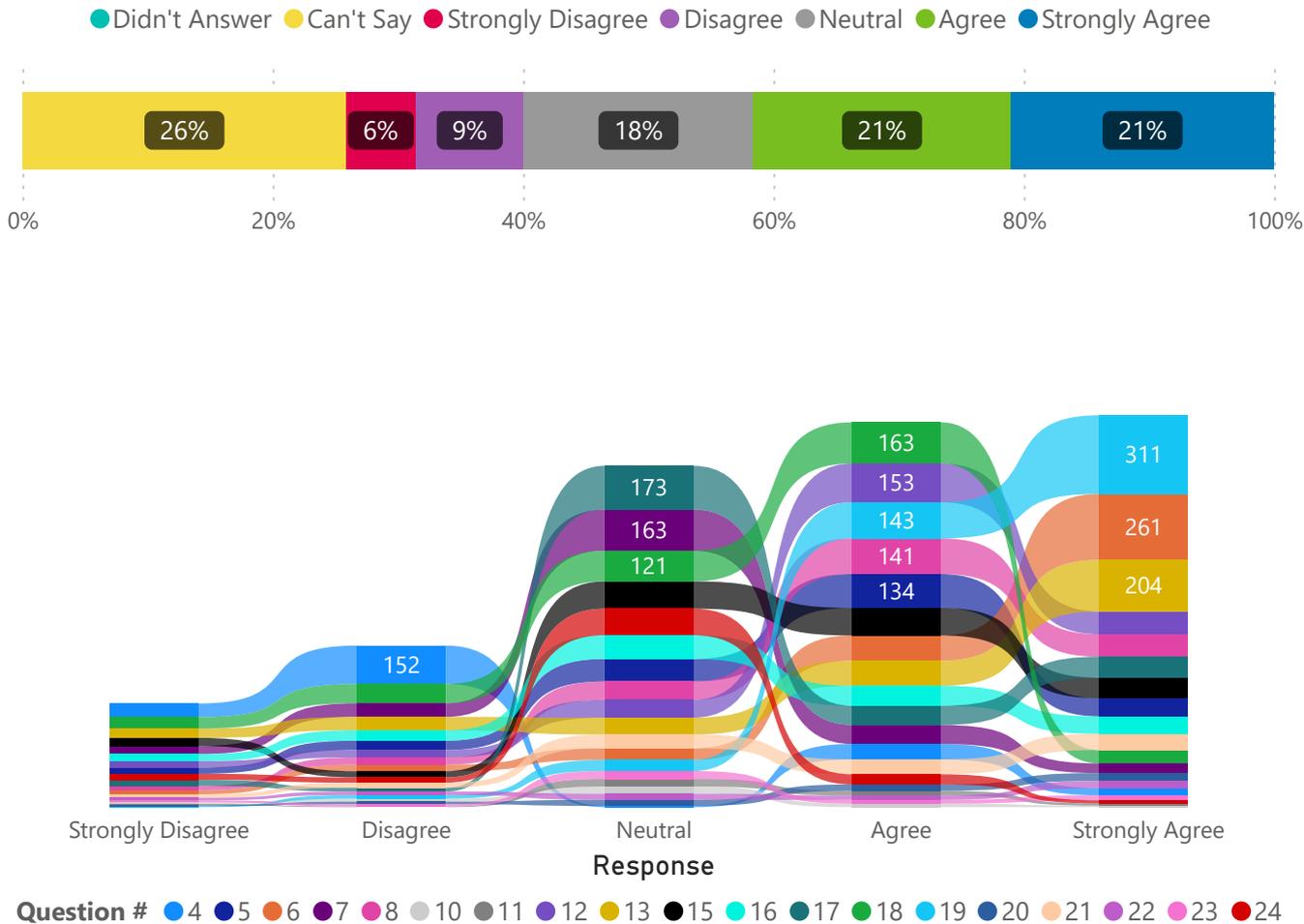


Respondents By Day



Total Responses: 5471
 Respondents: 70

Summary of Survey Results



Questions	σ	Avg.	Opt Out	Opt Out %
All Questions	1.22	3.58	1908	25.9%
Q19 Hamilton Parks ideal condition	0.82	4.44	12	2.3%
Q6 Importance of Parks services	1.08	4.26	26	5.5%
Q13 Importance of potential Parks services	1.32	3.83	12	2.5%
Q20 Performance of Cemetery services	1.15	3.73	225	70.5%
Q8 Comfort accessing Parks sites and services	1.08	3.73	113	24.5%
Q12 Ability to access services	1.13	3.69	101	21.6%
Q21 Importance of Cemetery services	1.19	3.66	114	35.1%
Q5 Overall performance of Parks services	1.13	3.54	105	22.7%
Q15 Recommend Parks services	1.18	3.52	119	25.2%
Q17 Tax rate increases	1.08	3.48	75	16.8%
Q22 Recommend Cemetery services	1.34	3.44	225	70.5%
Q23 Cemeteries value for money	1.21	3.39	237	74.3%
Q16 Hamilton Parks value for money	1.22	3.39	133	30.0%
Q11 500-metre proximity	1.02	3.36	3	4.3%
Q18 Hamilton parks current condition	1.15	3.22	78	14.6%
Q7 Parks sites and services meeting needs	1.06	3.09	101	21.8%
Q10 800-metre proximity	1.07	3.00	1	1.4%
Q24 Service level cuts	1.01	2.98	123	37.8%
Q4 Sites and services in the last 24 months	1.26	2.52	105	25.9%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Total Responses **5471** Respondents **70**

Survey Question Summary

Question #	Survey Question	n (Sample Size)	σ (Consistency)	Margin of Error (Confidence Level ±)
4	In the last 24 months, which of these sites or services have you visited, and who did you go with?	43	1.26	15%
5	How do you feel Hamilton Parks have performed overall with the following services?	51	1.13	14%
6	How important to you are the Hamilton Parks sites and services listed below?	64	1.08	12%
7	Do the following Hamilton Park sites and services meet your needs?	52	1.06	14%
8	Do you feel comfortable accessing these Hamilton Parks sites and services?	50	1.08	14%
10	Does the target of having a park within 800-metre walking distance meet your needs?	68	1.07	12%
11	Would the target of having a park within a 500-metre walking distance meet your needs?	66	1.02	12%
12	How satisfied were you with your ability to access these Hamilton Parks sites and services?	52	1.13	14%
13	Please rate the following potential Hamilton Parks Services, based on their importance to you.	66	1.32	12%
15	How likely would you be to recommend the following Hamilton Parks services to others?	51	1.18	14%
16	How would you rate Hamilton Parks for providing good value for money for the following sites and services?	44	1.22	18%
17	If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	53	1.08	16%
18	Do you agree with the following statements? Hamilton Parks' outdoor spaces and buildings are	65	1.15	12%
19	Do you agree with the following statements? Hamilton Parks' outdoor spaces and buildings should be	65	0.82	11%
20	How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?	12	1.15	10%
21	How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?	42	1.19	18%
22	How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?	19	1.34	10%
23	How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?	16	1.21	11%
24	Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?	40	1.01	18%



Question

Sites and services in the last 24 months

4
 In the last 24 months, which of these sites or services have you visited, and who did you go with?

Responses

300

Respondents

68

● Can't Say ● Friends ● Family ● Co-Workers ● Visited On My Own ● Others



Service Area	Friends	Family	Co-Workers	Visited On My Own	Others
Total	54	152	5	61	28
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	13	35	2	14	4
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	6	16	2	8	4
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	7	16	1	13	8
Playground Equipment	2	24		4	3
Recreational Trails and Escarpment Stairs	13	29		11	4
Sport Fields, Diamonds and Courts	10	16		5	3
Spray Pads	3	16		6	2

Service Area	Opt Out	Opt Out %
Total	105	25.9%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1	1.4%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	20	35.7%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	14	23.7%
Playground Equipment	22	40.0%
Recreational Trails and Escarpment Stairs	4	6.6%
Sport Fields, Diamonds and Courts	18	34.6%
Spray Pads	26	49.1%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

5

Overall performance of Parks services

How do you feel Hamilton Parks have performed overall with the following services?

Responses

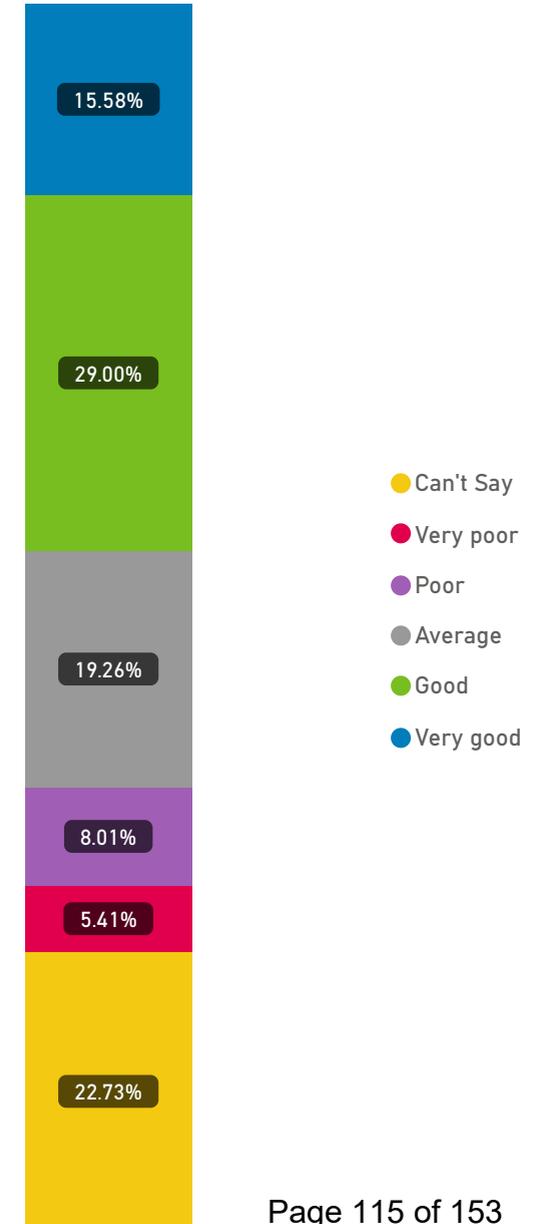
357

Respondents

70

Service Area	Very poor	Poor	Average	Good	Very good
Total	25	37	89	134	72
Spray Pads	2	3	11	12	9
Sport Fields, Diamonds and Courts	1	6	7	17	7
Recreational Trails and Escarpment Stairs	3	6	5	34	15
Playground Equipment	3	3	14	13	10
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	9	6	15	28	9
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	4	7	16	6	7
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	3	6	21	24	15

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.13	3.54	105	22.7%
Recreational Trails and Escarpment Stairs	1.05	3.83	5	7.4%
Spray Pads	1.10	3.62	26	41.3%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.05	3.61	1	1.4%
Sport Fields, Diamonds and Courts	1.04	3.61	27	41.5%
Playground Equipment	1.13	3.56	20	31.7%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.21	3.33	2	2.9%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.19	3.13	24	37.5%



- Can't Say
- Very poor
- Poor
- Average
- Good
- Very good



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Question

6

Importance of Parks services

How important to you are the Hamilton Parks sites and services listed below?

Responses

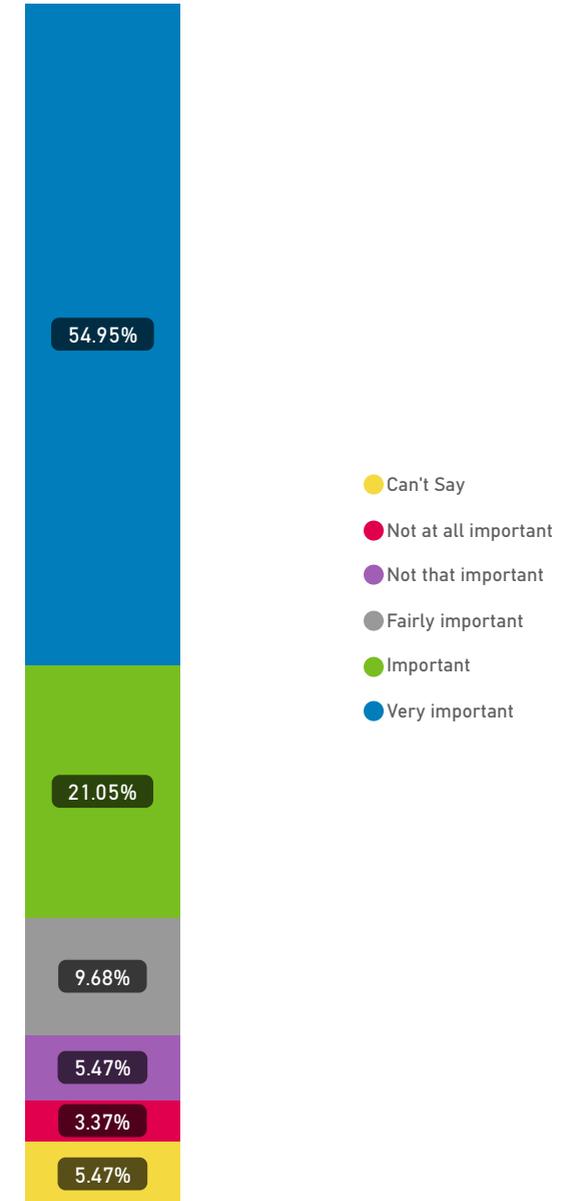
449

Respondents

69

Service Area	Not at all important	Not that important	Fairly important	Important	Very important
Total	16	26	46	100	261
Spray Pads	6	9	8	13	24
Sport Fields, Diamonds and Courts	3	6	16	15	21
Recreational Trails and Escarpment Stairs		1	3	14	51
Playground Equipment	4	8	4	15	29
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms			2	15	52
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	2	2	10	16	31
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1		3	12	53

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.08	4.26	26	5.5%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	0.51	4.72	1	1.4%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	0.69	4.68	1	1.4%
Recreational Trails and Escarpment Stairs	0.63	4.67	1	1.4%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.03	4.18	6	9.0%
Playground Equipment	1.30	3.95	6	9.1%
Sport Fields, Diamonds and Courts	1.17	3.74	6	9.0%
Spray Pads	1.39	3.67	5	7.7%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Differential of Importance and Performance

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

806

Respondents

57

Service Area	Performance (index score)	Importance (index score)	Net Differential	Opt Out %
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	67	94	-28	2%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	72	94	-21	1%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	63	84	-21	23%
Recreational Trails and Escarpment Stairs	77	93	-17	4%
Playground Equipment	71	79	-8	20%
Sport Fields, Diamonds and Courts	72	75	-3	25%
Spray Pads	72	73	-1	24%

Performance

Q5 How do you feel Hamilton Parks have performed overall with the following services?

Importance

Q6 How important to you are the Hamilton Parks sites and services listed below?

The Net Differential is calculated here by taking the average Likert score for each service area and multiplied by 20, the difference between performance and importance is then calculated as our final product. Negative differential indicates a higher perceived level of importance vs performance and positive is the opposite.



Question

7

Parks sites and services meeting needs

Do the following Hamilton Park sites and services meet your needs?

Responses

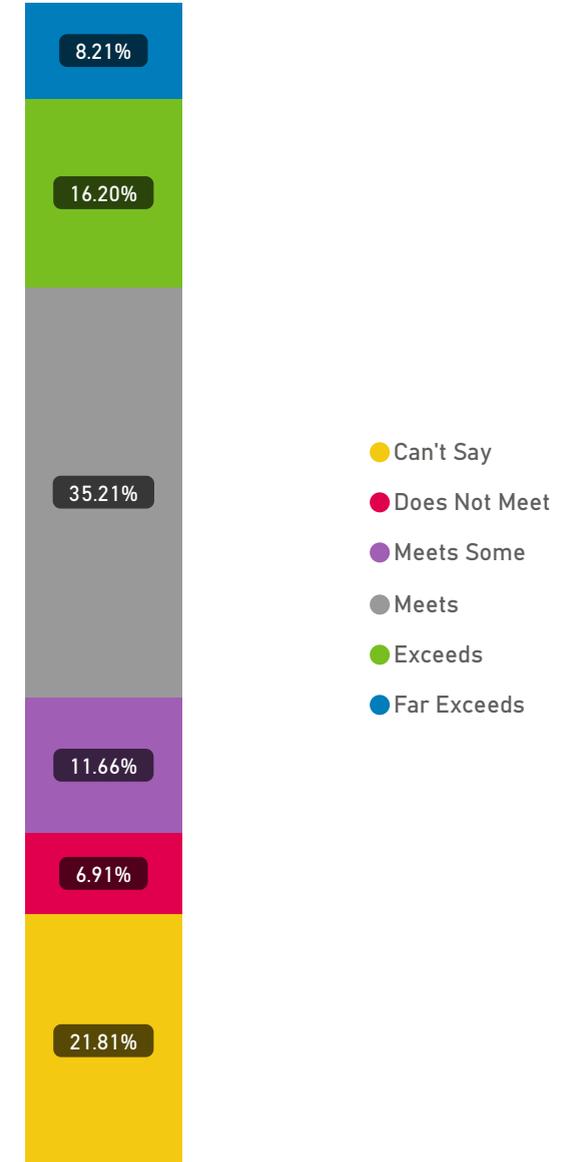
362

Respondents

68

Service Area	Does Not Meet	Meets Some	Meets	Exceeds	Far Exceeds
Total	32	54	163	75	38
Spray Pads	3	3	18	8	4
Sport Fields, Diamonds and Courts	3	4	20	9	4
Recreational Trails and Escarpment Stairs	3	7	29	17	7
Playground Equipment	4	5	13	11	5
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	9	15	27	9	7
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	3	9	25	8	5
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	7	11	31	13	6

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.06	3.09	101	21.8%
Recreational Trails and Escarpment Stairs	0.97	3.29	5	7.4%
Playground Equipment	1.15	3.21	26	40.6%
Spray Pads	1.02	3.19	28	43.8%
Sport Fields, Diamonds and Courts	1.00	3.18	24	37.5%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	0.99	3.06	15	23.1%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.06	3.00	1	1.4%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.14	2.85	2	2.9%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

Comfort accessing Parks sites and services

8

Do you feel comfortable accessing these Hamilton Parks sites and services?

Responses

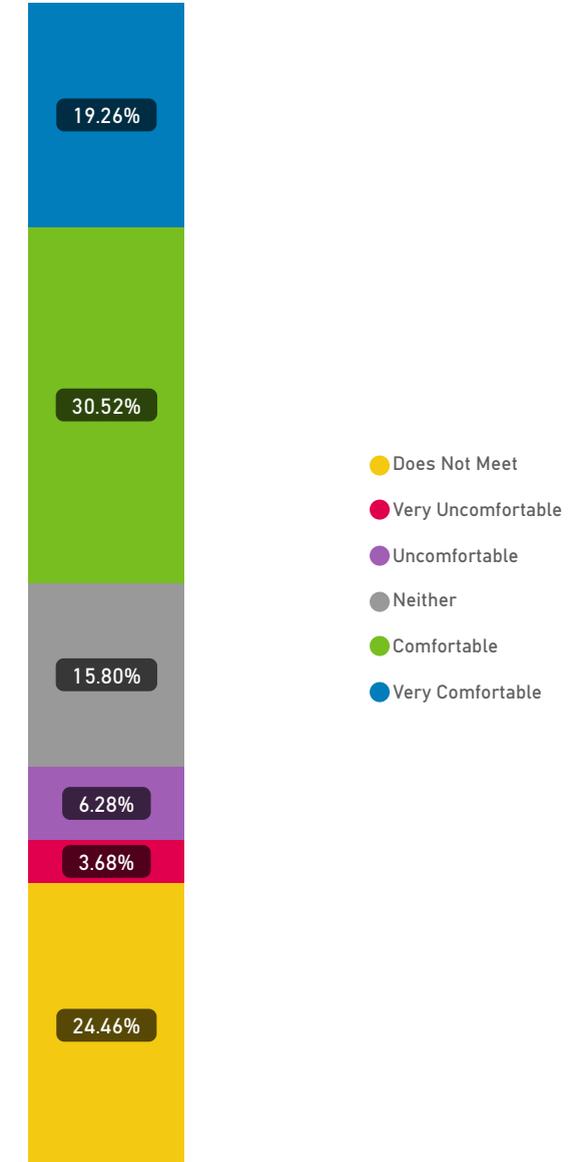
349

Respondents

68

Service Area	Does Not Meet	Very Uncomfortable	Uncomfortable	Neither	Comfortable	Very Comfortable
Total	113	17	29	73	141	89
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	2	6	4	12	24	20
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	18	2	6	9	18	12
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	7	4	10	16	20	12
Playground Equipment	25		2	6	19	11
Recreational Trails and Escarpment Stairs	5	5	5	14	26	13
Sport Fields, Diamonds and Courts	25		1	9	19	11
Spray Pads	31		1	7	15	10

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.08	3.73	113	24.5%
Spray Pads	0.80	4.03	31	48.4%
Playground Equipment	0.81	4.03	25	39.7%
Sport Fields, Diamonds and Courts	0.77	4.00	25	38.5%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.21	3.73	2	2.9%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.11	3.68	18	27.7%
Recreational Trails and Escarpment Stairs	1.14	3.59	5	7.4%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.16	3.42	7	10.1%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

800-metre proximity

10

Does the target of having a park within 800-metre walking distance meet your needs?

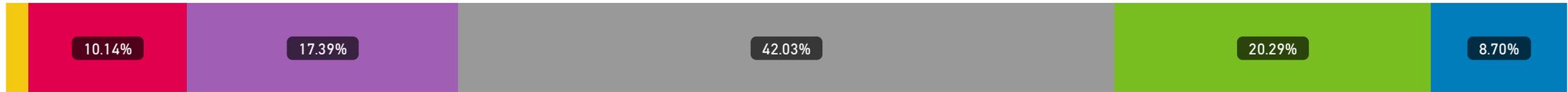
Responses

68

Respondents

68

● Can't Say ● Does Not Meet ● Meets Some ● Meets ● Exceeds ● Far Exceeds



ServiceArea	Does Not Meet	Meets Some	Meets	Exceeds	Far Exceeds
Currently, the City of Hamilton commits to providing a park within an 800-metre walking distance to all residents. 800-metres is roughly a 5 to 10-minute walk, 2-minute cycle or 1-minute drive. Does the target of having a park within 800-metre wal	7	12	29	14	6

ServiceArea	σ	Avg.	Opt Out	Opt Out %
Currently, the City of Hamilton commits to providing a park within an 800-metre walking distance to all residents. 800-metres is roughly a 5 to 10-minute walk, 2-minute cycle or 1-minute drive. Does the target of having a park within 800-metre wal	1.07	3.00	1	1.4%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

500-metre proximity

11

Would the target of having a park within a 500-metre walking distance meet your needs?

Responses

66

Respondents

66

● Did not answer ● Does Not Meet ● Meets Some ● Meets ● Exceeds ● Far Exceeds



ServiceArea	Does Not Meet	Meets Some	Meets	Exceeds	Far Exceeds
Some municipalities are shifting to a smaller radius for park provision. Would the target of having a park within a 500-metre walking distance meet your needs? 500-metres is roughly a 6-minute walk, 1-minute cycle or 1-minute drive.	5	3	30	19	9

ServiceArea	σ	Avg.	Opt Out	Opt Out %
Some municipalities are shifting to a smaller radius for park provision. Would the target of having a park within a 500-metre walking distance meet your needs? 500-metres is roughly a 6-minute walk, 1-minute cycle or 1-minute drive.	1.02	3.36	3	4.3%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

Ability to access services

12

How satisfied were you with your ability to access these Hamilton Parks sites and services?

Responses

367

Respondents

68

Service Area	Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
Total	25	29	70	153	90
Spray Pads	2	2	10	13	11
Sport Fields, Diamonds and Courts	2	6	9	18	10
Recreational Trails and Escarpment Stairs	3	6	11	29	15
Playground Equipment	3	1	9	16	11
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	6	6	16	24	11
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	4	7	9	21	9
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	5	1	6	32	23

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.13	3.69	101	21.6%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.08	4.00	1	1.5%
Playground Equipment	1.11	3.78	26	39.4%
Spray Pads	1.09	3.76	28	42.4%
Recreational Trails and Escarpment Stairs	1.06	3.73	4	5.9%
Sport Fields, Diamonds and Courts	1.10	3.62	21	31.8%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.17	3.48	16	24.2%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.17	3.44	5	7.4%



- Can't Say
- Very Dissatisfied
- Dissatisfied
- Neither
- Satisfied
- Very Satisfied

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

Importance of potential Parks services

Please rate the following potential Hamilton Parks Services, based on their importance to you.

Responses

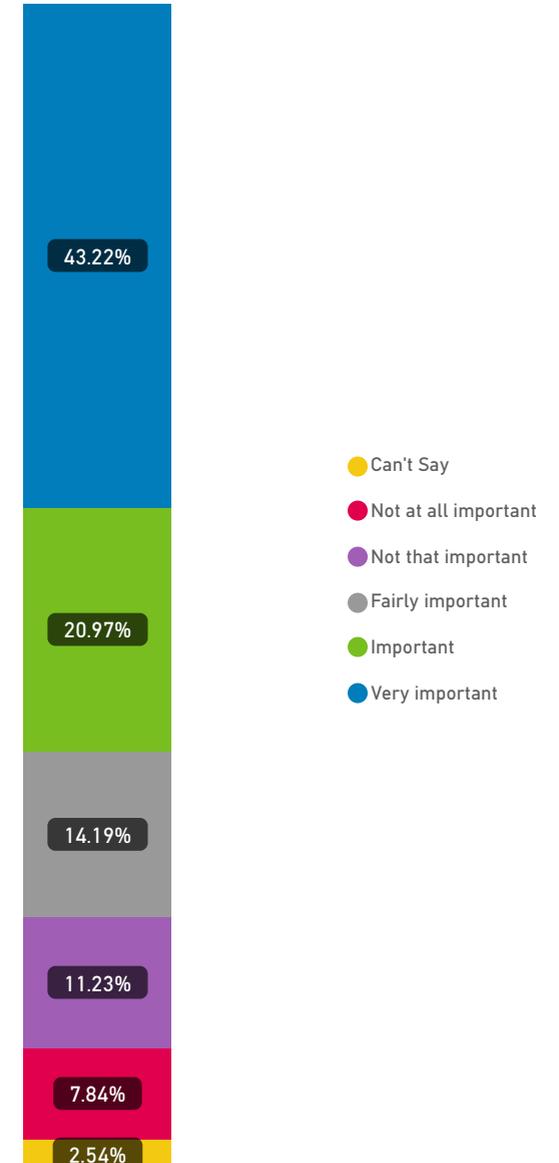
460

Respondents

68

Service Area	Not at all important	Not that important	Fairly important	Important	Very important
Total	37	53	67	99	204
Additional Parking	15	18	13	11	7
Additional Sport Lighting and Extended Playing Hours.1	5	14	14	10	17
All-Season Use: Winter Maintenance, Washrooms Open During the Winter	3	6	7	14	37
Barrier-Free Amenities: Ramps, Accessible Trails and Beach Routes	6	5	14	20	21
Improved Park Connectivity: Extended Pathways and Cycling Networks	4	4	2	14	43
Increased Pathway Lighting for Better Visibility at Night	2	2	11	14	39
Reducing Impact on Climate Change: Planting Native Plant Species or Pollinator Gardens, Solar-Powered Lighting, Water-Smart Facilities	2	4	6	16	40

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.32	3.83	12	2.5%
Improved Park Connectivity: Extended Pathways and Cycling Networks	1.16	4.31		
Reducing Impact on Climate Change: Planting Native Plant Species or Pollinator Gardens, Solar-Powered Lighting, Water-Smart Facilities	1.04	4.29		
Increased Pathway Lighting for Better Visibility at Night	1.02	4.26		
All-Season Use: Winter Maintenance, Washrooms Open During the Winter	1.18	4.13		
Barrier-Free Amenities: Ramps, Accessible Trails and Beach Routes	1.25	3.68	1	1.5%
Additional Sport Lighting and Extended Playing Hours.1	1.32	3.33	7	10.4%
Additional Parking	1.30	2.64	4	5.9%



Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

Recommend Parks services

15

How likely would you be to recommend the following Hamilton Parks services to others?

Responses

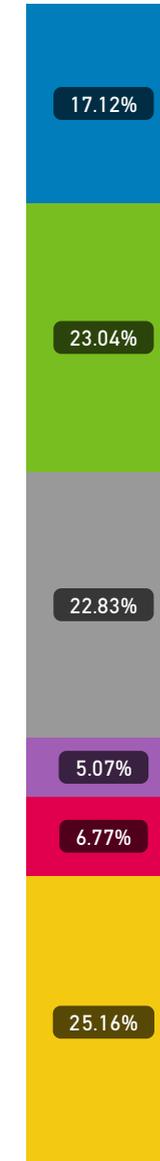
354

Respondents

66

Service Area	Definitely not	Probably not	Possibly	Probably	Definitely
Total	32	24	108	109	81
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	6	2	20	20	18
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	6	6	16	12	7
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	10	3	20	15	9
Playground Equipment	3	6	10	15	9
Recreational Trails and Escarpment Stairs	2	1	14	23	21
Sport Fields, Diamonds and Courts	3	2	15	12	8
Spray Pads	2	4	13	12	9

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.18	3.52	119	25.2%
Recreational Trails and Escarpment Stairs	0.97	3.98	7	10.3%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.18	3.64	2	2.9%
Spray Pads	1.09	3.55	27	40.3%
Sport Fields, Diamonds and Courts	1.10	3.50	27	40.3%
Playground Equipment	1.17	3.49	24	35.8%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.27	3.18	11	16.2%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.21	3.17	21	30.9%



- Can't Say
- Definitely not
- Probably not
- Possibly
- Probably
- Definitely

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

Parks Net Promoter Score

How likely would you be to recommend the following Hamilton Parks services to others?

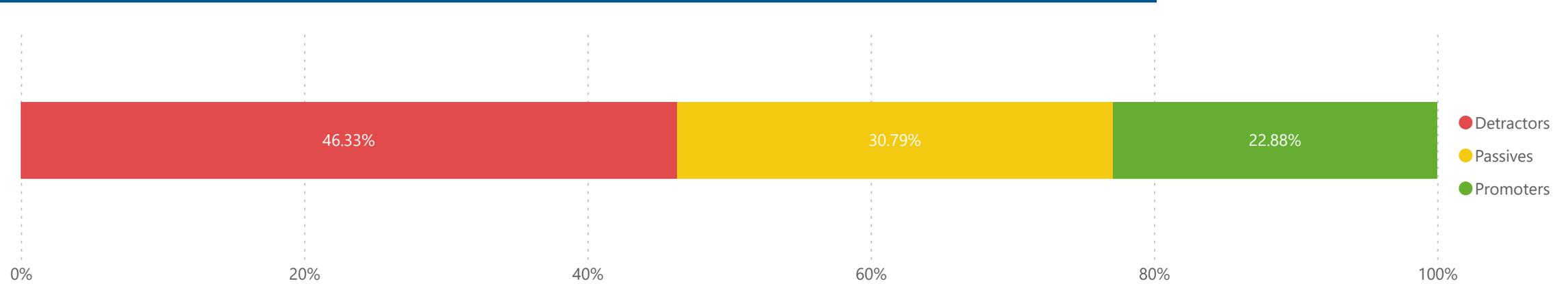
15

Responses

354

Respondents

66



Service Area	σ	NPS	Detractors	Passives	Promoter
All Service Areas	1.18	-23.45	164	109	81
Recreational Trails and Escarpment Stairs	0.97	6.56	17	23	21
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.18	-15.15	28	20	18
Playground Equipment	1.17	-23.26	19	15	9
Spray Pads	1.09	-25.00	19	12	9
Sport Fields, Diamonds and Courts	1.10	-30.00	20	12	8
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.27	-42.11	33	15	9
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.21	-44.68	28	12	7

Typically the Net Promoter Score is used to measure customer loyalty.

Likert choices less than or equal to 3 are considered 'Detractors', 4s are 'Passive' and 5s are considered 'Promoters'. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Detractors) from (% Promoters).



Question

Hamilton Parks value for money

16

How would you rate Hamilton Parks for providing good value for money for the following sites and services?

Responses

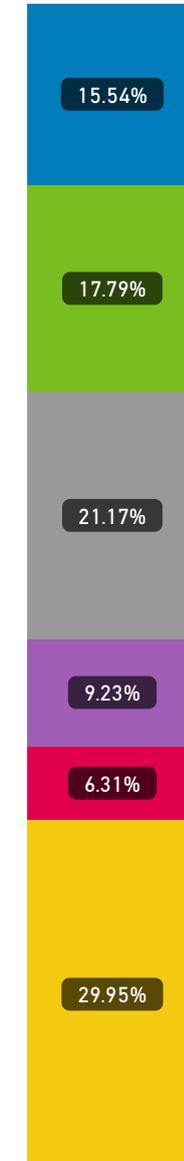
311

Respondents

57

Service Area	Very poor	Poor	Average	Good	Very good
Total	28	41	94	79	69
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	4	6	16	17	14
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	5	4	16	12	6
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	6	8	16	10	9
Playground Equipment	5	5	9	9	10
Recreational Trails and Escarpment Stairs	3	6	12	16	15
Sport Fields, Diamonds and Courts	3	6	13	8	7
Spray Pads	2	6	12	7	8

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.22	3.39	133	30.0%
Recreational Trails and Escarpment Stairs	1.17	3.65	12	18.8%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.17	3.54	7	10.9%
Spray Pads	1.17	3.37	28	44.4%
Playground Equipment	1.35	3.37	25	39.7%
Sport Fields, Diamonds and Courts	1.18	3.27	26	41.3%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.16	3.23	20	31.7%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	1.25	3.16	15	23.4%



- Can't Say
- Very poor
- Poor
- Average
- Good
- Very good

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

Tax rate increases

17

If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?

Responses

371

Respondents

60



Service Area	Definitely Prefer Cuts to Service	Probably Prefer Cuts to Service	Minimize Rate Increase; Maintain Service	Probably Prefer Rate Increase; Improve Services	Definitely Prefer Rate Increase; Increase Services
Total	24	15	173	76	83
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	2	2	22	14	20
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	4	2	33	5	11
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	2	1	28	15	11
Playground Equipment	4	2	19	10	10
Recreational Trails and Escarpment Stairs	2		24	17	17
Sport Fields, Diamonds and Courts	4	4	28	6	7
Spray Pads	6	4	19	9	7

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.08	3.48	75	16.8%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	1.05	3.80	5	7.7%
Recreational Trails and Escarpment Stairs	0.97	3.78	5	7.7%
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	0.94	3.56	7	10.9%
Playground Equipment	1.15	3.44	18	28.6%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	1.06	3.31	9	14.1%
Sport Fields, Diamonds and Courts	1.04	3.16	13	21.0%
Spray Pads	1.19	3.16	18	28.6%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Parks Differential of Rates vs. Value for Money

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

682

Respondents

55

Service Area	Value for Money (index score)	Rates (index score)	Net Differential	Opt Out %
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms	63	71	-8	17%
City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces	71	76	-5	9%
Recreational Trails and Escarpment Stairs	73	76	-3	13%
Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures	65	66	-2	23%
Playground Equipment	67	69	-2	34%
Sport Fields, Diamonds and Courts	65	63	2	31%
Spray Pads	67	63	4	37%

Value for Money

Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?

Rates

Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?

The Net Differential is calculated by getting the average score for Rates and Value for Money. Then, the average score for Rates and Value for Money is multiplied by 20. Finally, the Rates score is subtracted from the Value for Money score. A negative differential indicates higher perceived Rates than Value for Money. A positive differential indicates a higher perceived Value for Money than Rates.

Question

Hamilton parks current condition

18

Do you agree with the following statements? Hamilton Parks' outdoor spaces and buildings are

Responses

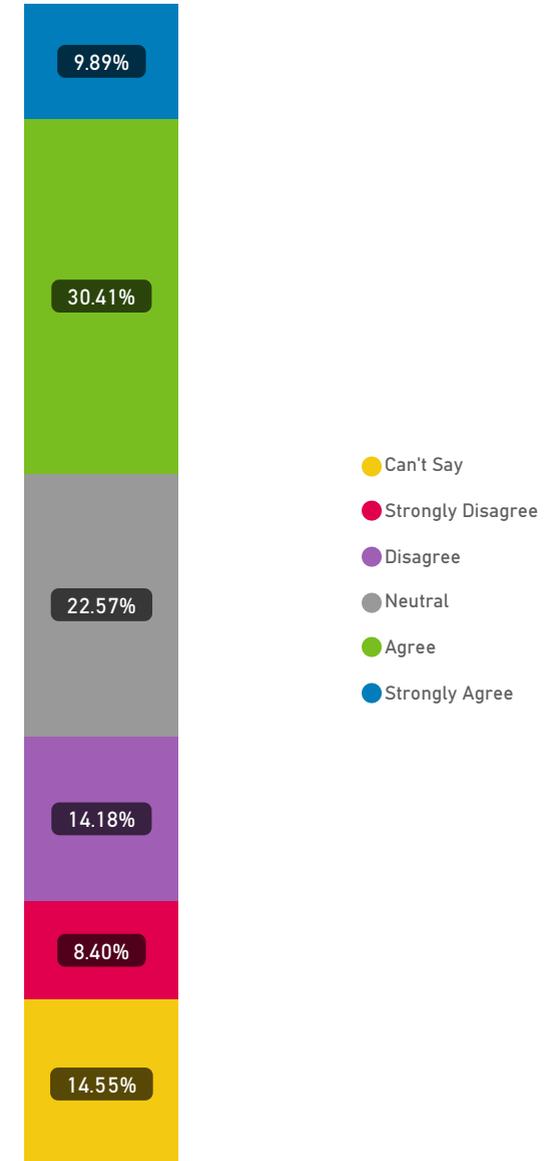
458

Respondents

67

Service Area	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Total	45	76	121	163	53
Accessible by public transportation	7	13	9	22	5
Accessible, meeting provincial minimum standards per AODA, 2005	5	8	10	11	5
Clean and in good repair	8	12	16	26	4
Comfortable with appropriate levels of lighting and noise	7	13	16	22	7
Easy to locate, with clearly marked public entrances	3	5	15	31	12
Energy efficient, helping the city meet energy targets and reduce utility usage	4	5	16	10	3
Inviting, appealing and attractive	4	7	23	22	10
Safe, equitable and inclusive spaces for all	7	13	16	19	7

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.15	3.22	78	14.6%
Easy to locate, with clearly marked public entrances	1.01	3.67	1	1.5%
Inviting, appealing and attractive	1.06	3.41	1	1.5%
Comfortable with appropriate levels of lighting and noise	1.18	3.14	2	3.0%
Safe, equitable and inclusive spaces for all	1.19	3.10	5	7.5%
Clean and in good repair	1.14	3.09	1	1.5%
Accessible by public transportation	1.21	3.09	11	16.4%
Energy efficient, helping the city meet energy targets and reduce utility usage	1.06	3.08	29	43.3%
Accessible, meeting provincial minimum standards per AODA, 2005	1.23	3.08	28	41.8%



Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

Hamilton Parks ideal condition

19

Do you agree with the following statements? Hamilton Parks' outdoor spaces and buildings should be

Responses

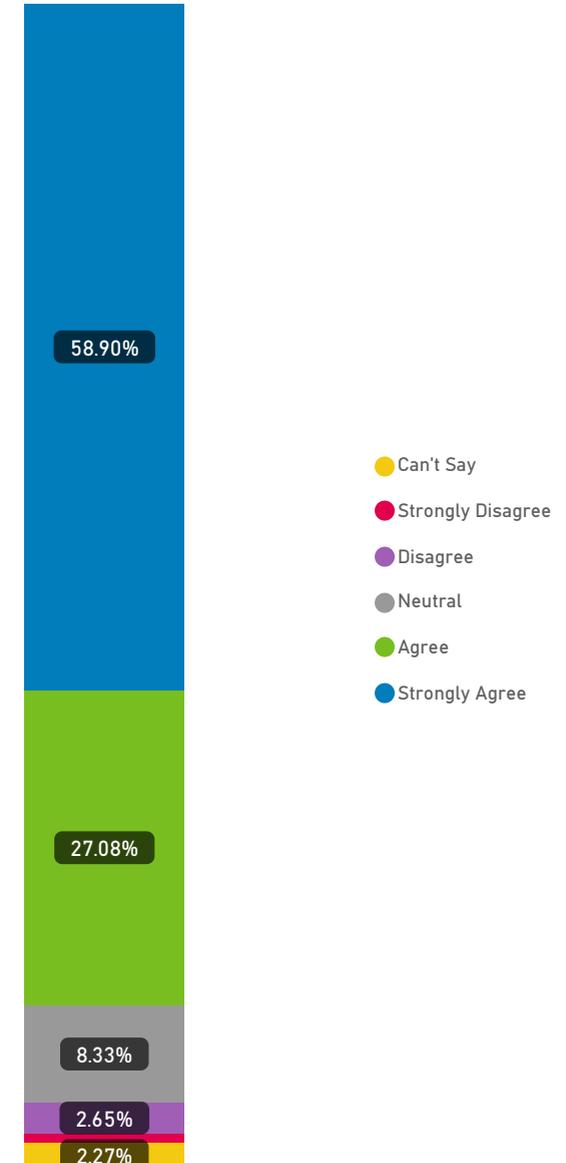
516

Respondents

66

Service Area	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Total	4	14	44	143	311
Accessible by public transportation	2	2	7	17	37
Accessible, meeting provincial minimum standards per AODA, 2005			7	14	38
Clean and in good repair		1	2	13	50
Comfortable with appropriate levels of lighting and noise		3	4	22	37
Easy to locate, with clearly marked public entrances		2	9	20	35
Energy efficient, helping the city meet energy targets and reduce utility usage	1	4	8	16	35
Inviting, appealing and attractive			2	27	36
Safe, equitable and inclusive spaces for all	1	2	5	14	43

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	0.82	4.44	12	2.3%
Clean and in good repair	0.60	4.70		
Accessible, meeting provincial minimum standards per AODA, 2005	0.70	4.53	7	10.6%
Inviting, appealing and attractive	0.56	4.52	1	1.5%
Safe, equitable and inclusive spaces for all	0.88	4.48	1	1.5%
Comfortable with appropriate levels of lighting and noise	0.80	4.41		
Easy to locate, with clearly marked public entrances	0.82	4.33		
Accessible by public transportation	0.99	4.31	1	1.5%
Energy efficient, helping the city meet energy targets and reduce utility usage	1.00	4.25	2	3.0%



Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

Performance of Cemetery services

How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?

Responses

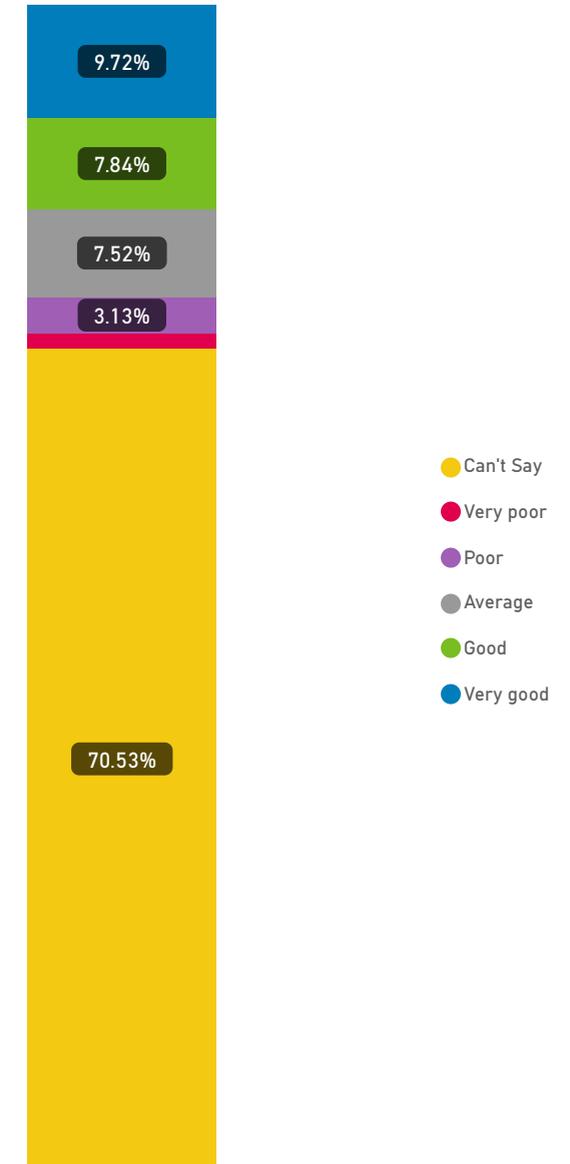
94

Respondents

35

Service Area	Very poor	Poor	Average	Good	Very good
Total	4	10	24	25	31
End of life planning services	1	2	5	2	4
Graveside services, burials and interment		1	5	3	5
Historical family searches and walking tours	1	2	3	4	10
Maintenance and management of active and inactive cemeteries	1	2	8	13	9
Sales of interment rights, cemetery services and supporting products	1	3	3	3	3

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.15	3.73	225	70.5%
Historical family searches and walking tours	1.22	4.00	43	68.3%
Graveside services, burials and interment	0.99	3.86	50	78.1%
Maintenance and management of active and inactive cemeteries	1.00	3.82	31	48.4%
End of life planning services	1.24	3.43	50	78.1%
Sales of interment rights, cemetery services and supporting products	1.26	3.31	51	79.7%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Importance of Cemetery services

Question

21

How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?

Responses

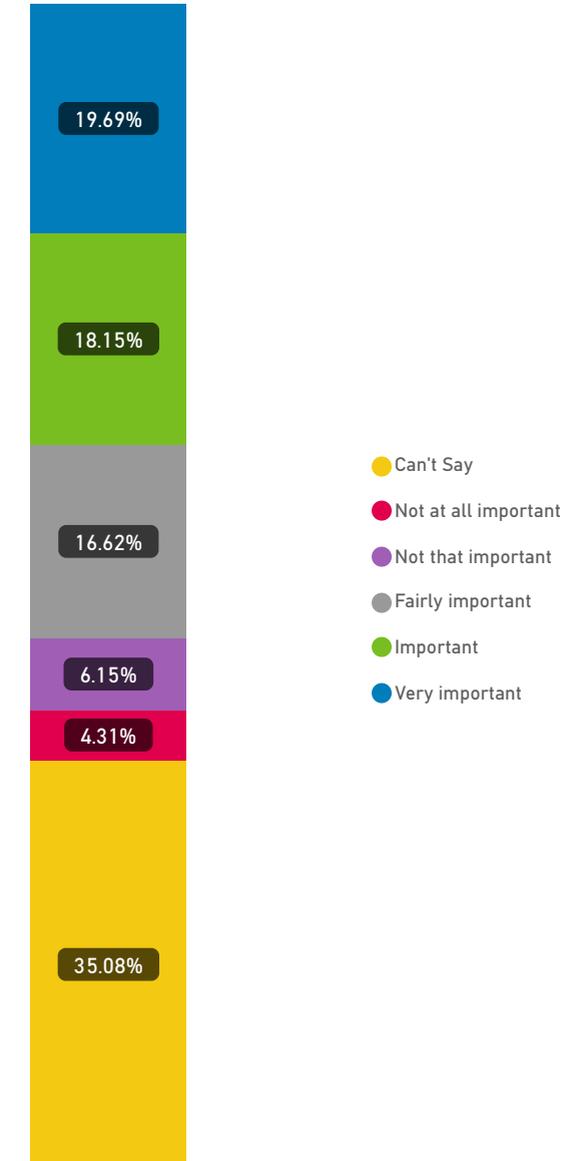
211

Respondents

48

Service Area	Not at all important	Not that important	Fairly important	Important	Very important
Total	14	20	54	59	64
End of life planning services	3	4	11	12	10
Graveside services, burials and interment	2	4	7	14	13
Historical family searches and walking tours	3	8	13	10	10
Maintenance and management of active and inactive cemeteries	2		10	15	20
Sales of interment rights, cemetery services and supporting products	4	4	13	8	11

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.19	3.66	114	35.1%
Maintenance and management of active and inactive cemeteries	1.01	4.09	18	27.7%
Graveside services, burials and interment	1.14	3.80	25	38.5%
End of life planning services	1.18	3.55	25	38.5%
Sales of interment rights, cemetery services and supporting products	1.26	3.45	25	38.5%
Historical family searches and walking tours	1.21	3.36	21	32.3%



Respondents who did not answer or selected 'Can't Say' are included in opt out.



Differential of Importance and Performance

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

305

Respondents

52

Service Area	Performance (index score)	Importance (index score)	Net Differential	Opt Out %
Maintenance and management of active and inactive cemeteries	76	82	-5	38%
Sales of interment rights, cemetery services and supporting products	66	69	-3	59%
End of life planning services	69	71	-2	58%
Graveside services, burials and interment	77	76	1	58%
Historical family searches and walking tours	80	67	13	50%

Performance

Q20 How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?

Importance

Q21 How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?

The Net Differential is calculated by getting the average score for Performance and Importance. Then, the average score for Performance and Importance is multiplied by 20. Finally, the Importance score is subtracted from the Performance score. A negative differential indicates a higher perceived importance than performance. A positive differential indicates a higher perceived performance than importance.



Question

Recommend Cemetery services

How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?

Responses

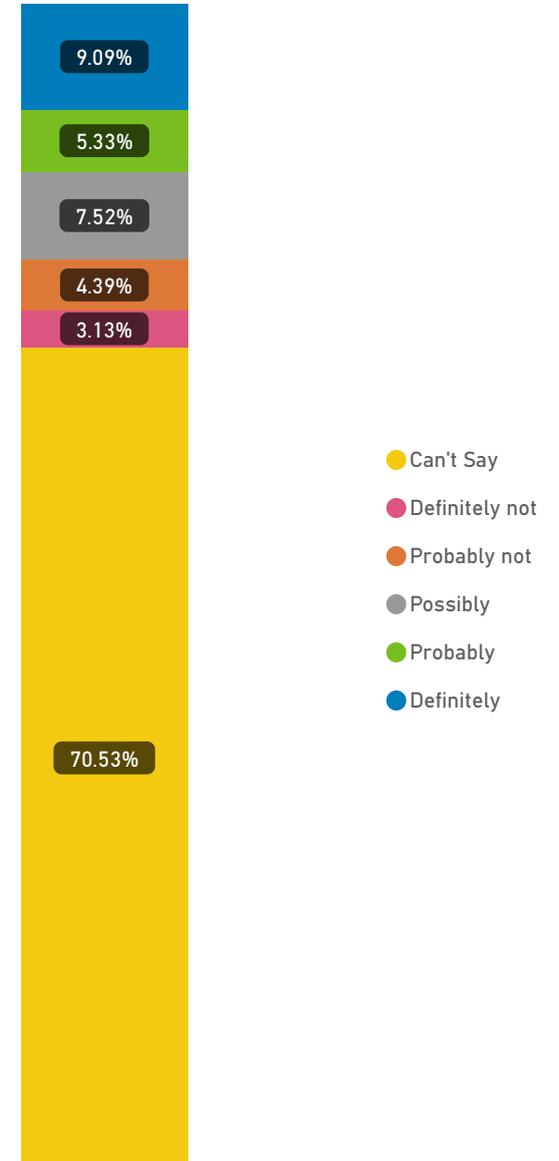
94

Respondents

26

Service Area	Definitely not	Probably not	Possibly	Probably	Definitely
Total	10	14	24	17	29
Sales of interment rights, cemetery services and supporting products	2	3	7	2	4
Maintenance and management of active and inactive cemeteries	3	4	3	4	10
Historical family searches and walking tours	2	3	4	5	7
Graveside services, burials and interment	1	2	4	4	4
End of life planning services	2	2	6	2	4

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.34	3.44	225	70.5%
Maintenance and management of active and inactive cemeteries	1.47	3.58	40	62.5%
Historical family searches and walking tours	1.33	3.57	43	67.2%
Graveside services, burials and interment	1.20	3.53	48	76.2%
End of life planning services	1.30	3.25	48	75.0%
Sales of interment rights, cemetery services and supporting products	1.26	3.17	46	71.9%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

Cemeteries Net Promoter Score

22

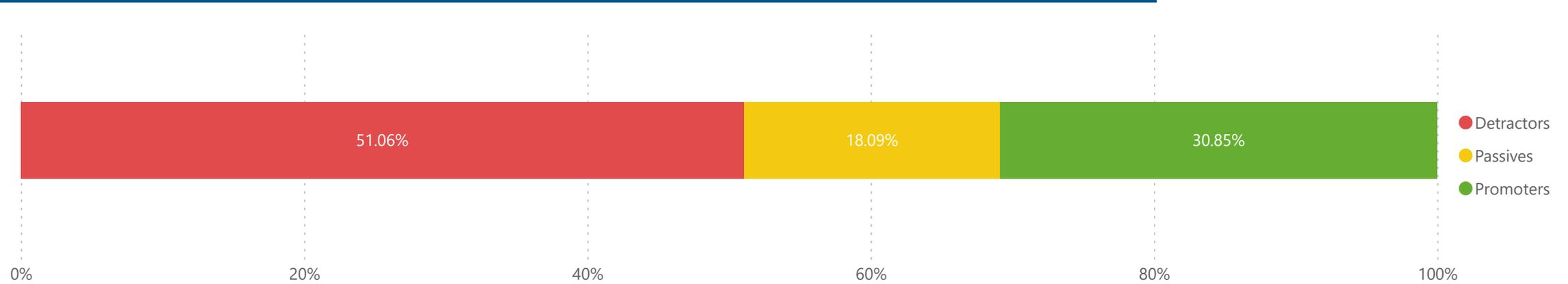
How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?

Responses

94

Respondents

26



Service Area	σ	NPS	Detractors	Passives	Promoter
All Service Areas	1.34	-20.21	48	17	29
Sales of interment rights, cemetery services and supporting products	1.26	-44.44	12	2	4
End of life planning services	1.30	-37.50	10	2	4
Graveside services, burials and interment	1.20	-20.00	7	4	4
Historical family searches and walking tours	1.33	-9.52	9	5	7
Maintenance and management of active and inactive cemeteries	1.47	0.00	10	4	10

Typically the Net Promoter Score is used to measure customer loyalty.

Likert choices less than or equal to 3 are considered 'Detractors', 4s are 'Passive' and 5s are considered 'Promoters'. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Detractors) from (% Promoters).



Question

Cemeteries value for money

23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?

Responses

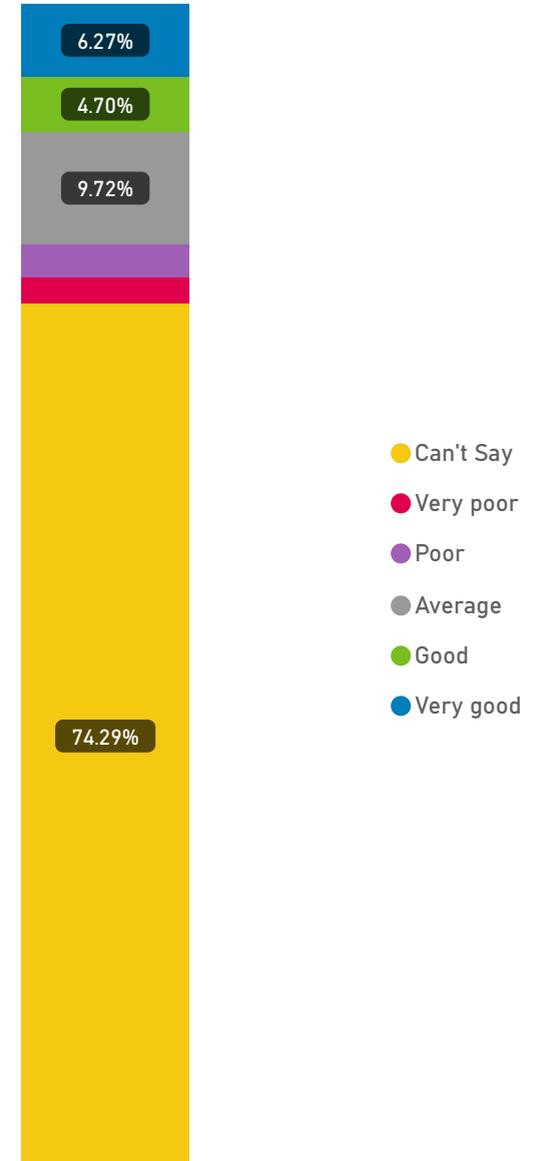
82

Respondents

24

Service Area	Very poor	Poor	Average	Good	Very good
Total	7	9	31	15	20
Sales of interment rights, cemetery services and supporting products	1	2	5	3	2
Maintenance and management of active and inactive cemeteries	3	2	8	5	6
Historical family searches and walking tours	1	1	6	4	4
Graveside services, burials and interment	1	2	8	1	4
End of life planning services	1	2	4	2	4

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.21	3.39	237	74.3%
Historical family searches and walking tours	1.12	3.56	48	75.0%
End of life planning services	1.28	3.46	50	79.4%
Maintenance and management of active and inactive cemeteries	1.28	3.38	40	62.5%
Graveside services, burials and interment	1.16	3.31	48	75.0%
Sales of interment rights, cemetery services and supporting products	1.12	3.23	51	79.7%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Question

Service level cuts

24

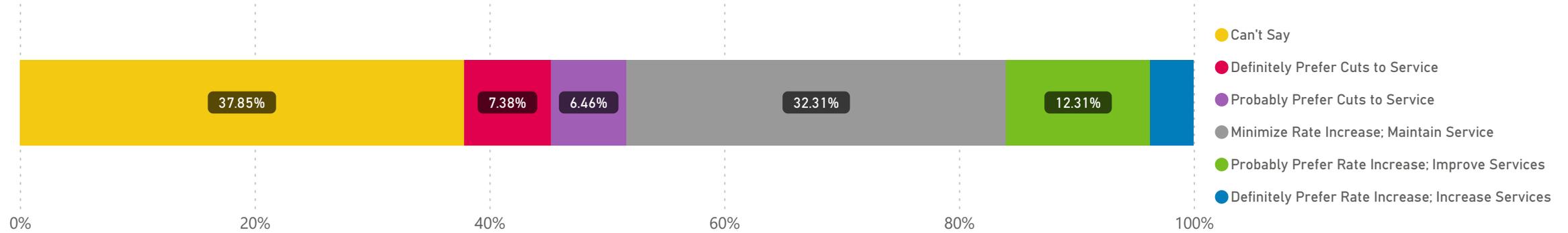
Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?

Responses

202

Respondents

46



Service Area	Definitely Prefer Cuts to Service	Probably Prefer Cuts to Service	Minimize Rate Increase; Maintain Service	Probably Prefer Rate Increase; Improve Services	Definitely Prefer Rate Increase; Increase Services
Total	24	21	105	40	12
Sales of interment rights, cemetery services and supporting products	4	5	21	8	
Maintenance and management of active and inactive cemeteries	5	2	23	11	3
Historical family searches and walking tours	5	6	21	6	4
Graveside services, burials and interment	4	4	22	6	3
End of life planning services	6	4	18	9	2

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.01	2.98	123	37.8%
Maintenance and management of active and inactive cemeteries	1.00	3.11	21	32.3%
Graveside services, burials and interment	0.99	3.00	26	40.0%
Historical family searches and walking tours	1.07	2.95	23	35.4%
End of life planning services	1.07	2.92	26	40.0%
Sales of interment rights, cemetery services and supporting products	0.86	2.87	27	41.5%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Cemeteries Differential of Rates vs. Value for Money

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

284

Respondents

52

Service Area	Value for Money (index score)	Rates (index score)	Net Differential	Opt Out %
Maintenance and management of active and inactive cemeteries	68	62	5	47%
Graveside services, burials and interment	66	60	6	57%
Sales of interment rights, cemetery services and supporting products	65	57	7	60%
End of life planning services	69	58	11	59%
Historical family searches and walking tours	71	59	12	55%

Value for Money *Q23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?*

Rates *Q24 Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?*

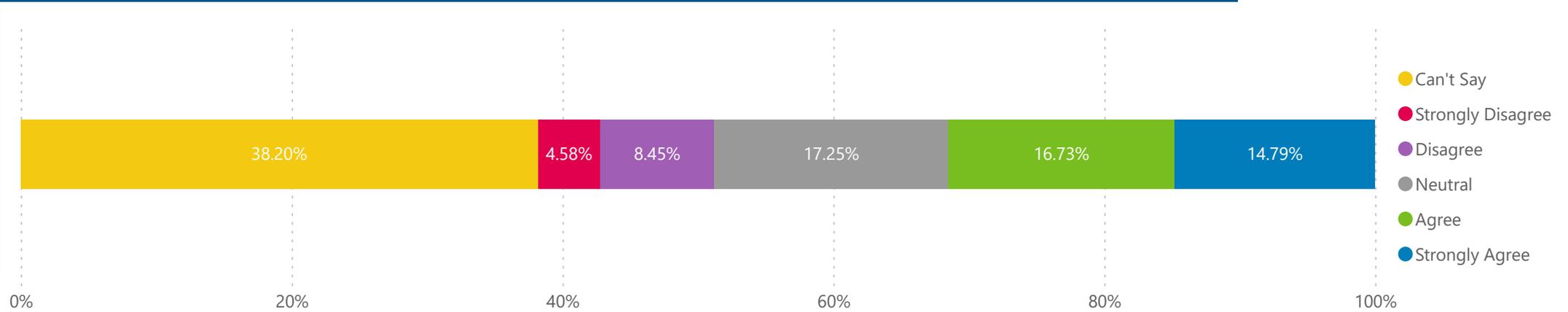
The Net Differential is calculated by getting the average score for Rates and Value for Money. Then, the average score for Rates and Value for Money is multiplied by 20. Finally, the Rates score is subtracted from the Value for Money score. A negative differential indicates higher perceived Rates than Value for Money. A positive differential indicates a higher perceived Value for Money than Rates.



Summary of Specific Service Areas over Several Questions

Spray Pads

Responses
325
 Respondents
64



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.20	3.46	69.29	217	38.2%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	0.80	4.03	80.61	31	48.4%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.09	3.76	75.26	28	42.4%
Q6 How important to you are the Hamilton Parks sites and services listed below?	1.39	3.67	73.33	5	7.7%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.10	3.62	72.43	26	41.3%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	1.09	3.55	71.00	27	40.3%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.17	3.37	67.43	28	44.4%
Q7 Do the following Hamilton Park sites and services meet your needs?	1.02	3.19	63.89	28	43.8%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	1.19	3.16	63.11	18	28.6%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.17	2.56	51.11	26	49.1%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

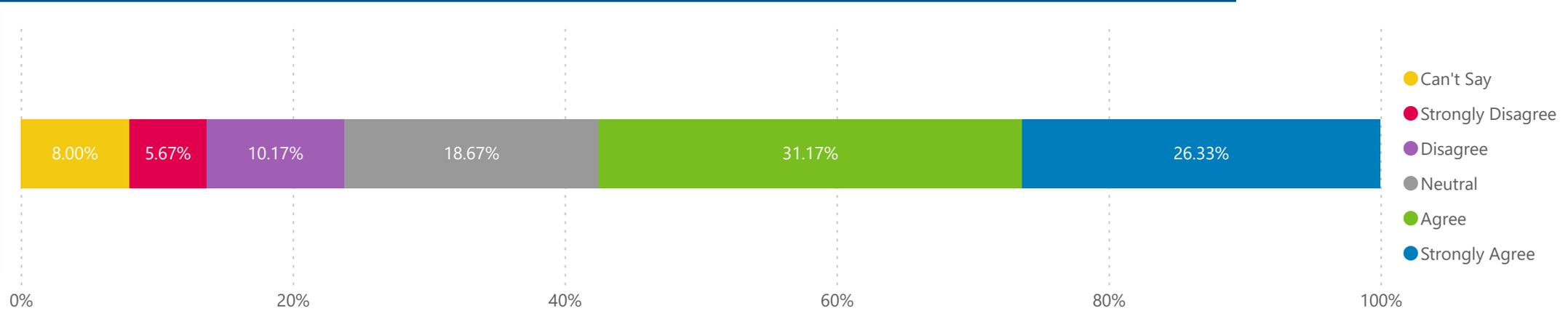
Recreational Trails and Escarpment Stairs

Responses

518

Respondents

70



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.18	3.68	73.55	48	8.0%
Q6 How important to you are the Hamilton Parks sites and services listed below?	0.63	4.67	93.33	1	1.4%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	0.97	3.98	79.67	7	10.3%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.05	3.83	76.51	5	7.4%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	0.97	3.78	75.67	5	7.7%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.06	3.73	74.69	4	5.9%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.17	3.65	73.08	12	18.8%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	1.14	3.59	71.75	5	7.4%
Q7 Do the following Hamilton Park sites and services meet your needs?	0.97	3.29	65.71	5	7.4%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.22	2.37	47.37	4	6.6%

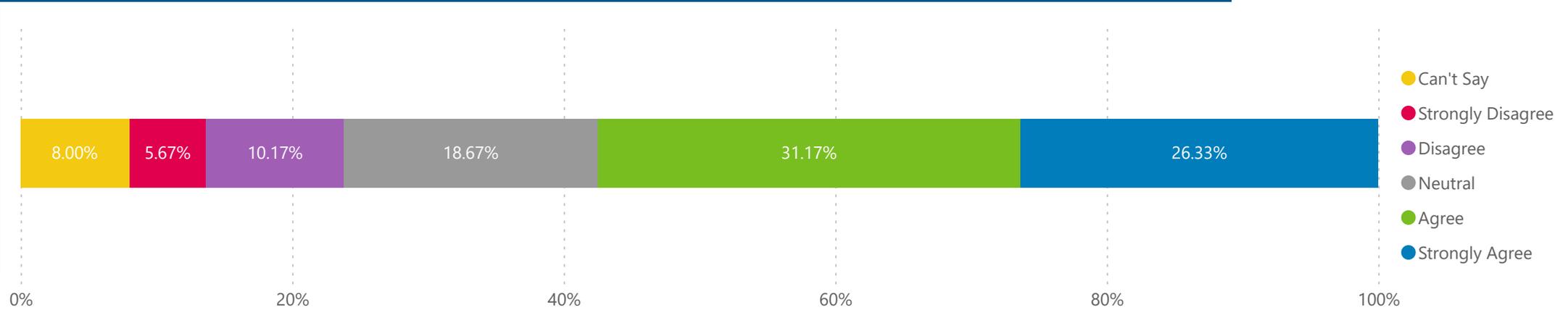
Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

Recreational Trails and Escarpment Stairs

Responses
518
 Respondents
70



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.18	3.68	73.55	48	8.0%
Q6 How important to you are the Hamilton Parks sites and services listed below?	0.63	4.67	93.33	1	1.4%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	0.97	3.98	79.67	7	10.3%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.05	3.83	76.51	5	7.4%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	0.97	3.78	75.67	5	7.7%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.06	3.73	74.69	4	5.9%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.17	3.65	73.08	12	18.8%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	1.14	3.59	71.75	5	7.4%
Q7 Do the following Hamilton Park sites and services meet your needs?	0.97	3.29	65.71	5	7.4%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.22	2.37	47.37	4	6.6%

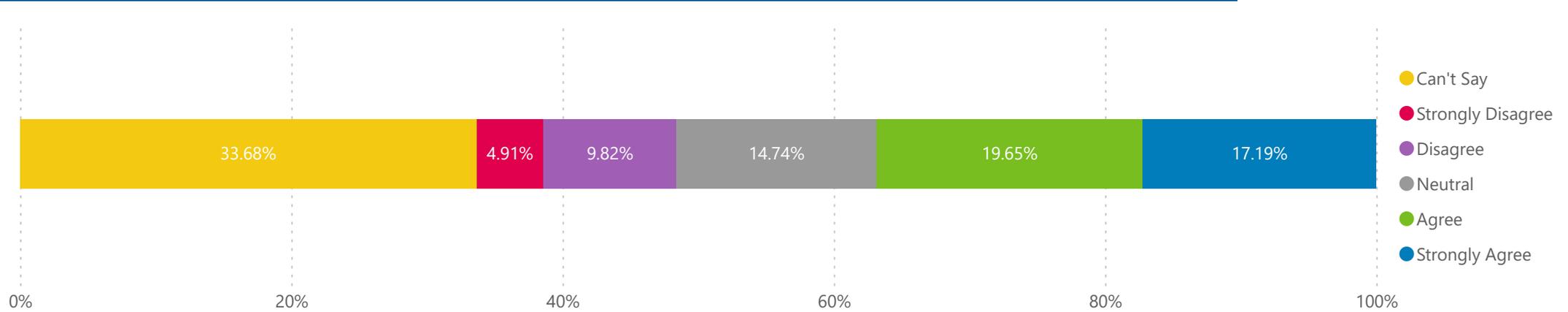
Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

Playground Equipment

Responses
350
 Respondents
65



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.23	3.52	70.37	192	33.7%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	0.81	4.03	80.53	25	39.7%
Q6 How important to you are the Hamilton Parks sites and services listed below?	1.30	3.95	79.00	6	9.1%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.11	3.78	75.50	26	39.4%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.13	3.56	71.16	20	31.7%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	1.17	3.49	69.77	24	35.8%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	1.15	3.44	68.89	18	28.6%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.35	3.37	67.37	25	39.7%
Q7 Do the following Hamilton Park sites and services meet your needs?	1.15	3.21	64.21	26	40.6%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.08	2.45	49.09	22	40.0%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

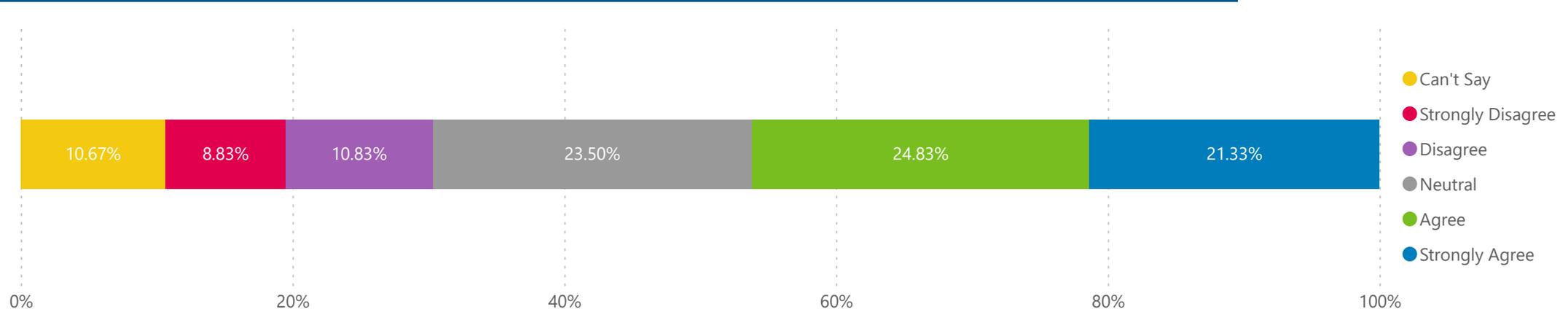
Park Maintenance: Grass-Cutting, Snow Clearing, Park Lighting, Washrooms

Responses

483

Respondents

70



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.25	3.44	68.73	64	10.7%
Q6 How important to you are the Hamilton Parks sites and services listed below?	0.51	4.72	94.49	1	1.4%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	0.94	3.56	71.23	7	10.9%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.17	3.44	68.89	5	7.4%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	1.16	3.42	68.39	7	10.1%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.21	3.33	66.57	2	2.9%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	1.27	3.18	63.51	11	16.2%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.25	3.16	63.27	15	23.4%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.41	2.98	59.56	14	23.7%
Q7 Do the following Hamilton Park sites and services meet your needs?	1.14	2.85	57.01	2	2.9%

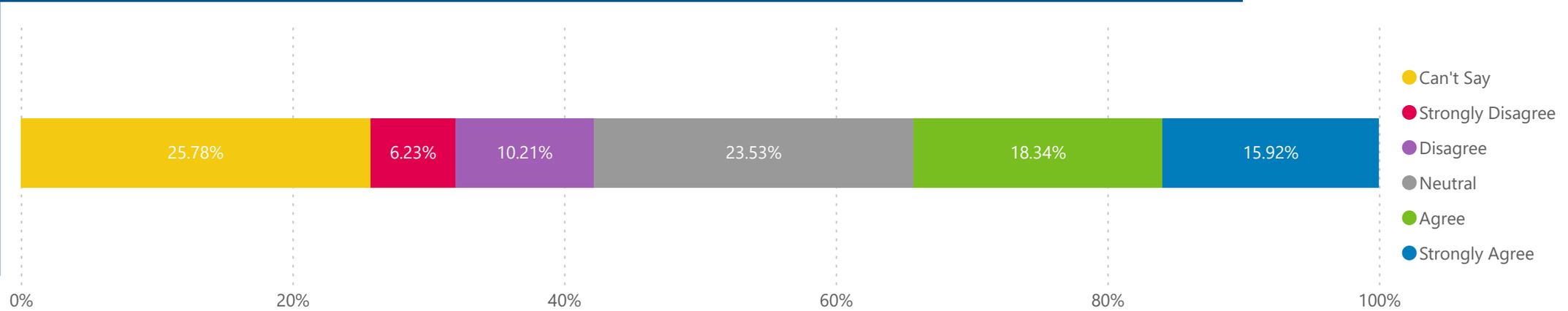
Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

Other Park Amenities: Signage, Sport Lighting, Bleachers, Shade Structures

Responses
393
 Respondents
66



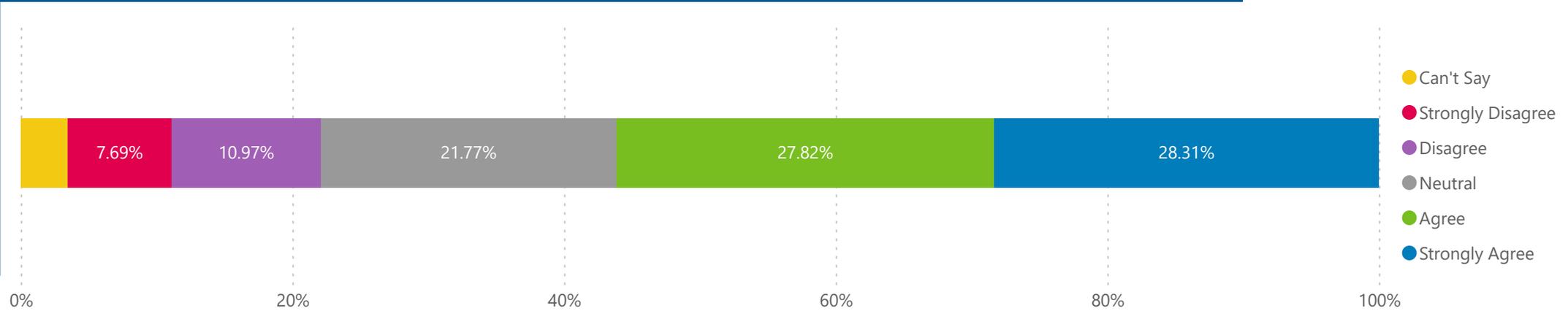
Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.20		3.37	67.41	149 25.8%
Q6 How important to you are the Hamilton Parks sites and services listed below?	1.03		4.18	83.61	6 9.0%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	1.11		3.68	73.62	18 27.7%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.17		3.48	69.60	16 24.2%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	1.06		3.31	66.18	9 14.1%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.16		3.23	64.65	20 31.7%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	1.21		3.17	63.40	21 30.9%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.19		3.13	62.50	24 37.5%
Q7 Do the following Hamilton Park sites and services meet your needs?	0.99		3.06	61.20	15 23.1%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.29		2.67	53.33	20 35.7%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions City, Community, and Neighbourhood Parks and Parkettes, Natural Open Spaces

Responses
543
 Respondents
70



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.24	3.60	72.03	21	3.4%
Q6 How important to you are the Hamilton Parks sites and services listed below?	0.69	4.68	93.62	1	1.4%
Q12 How satisfied were you with your ability to access these Hamilton Parks sites and services?	1.08	4.00	80.00	1	1.5%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	1.05	3.80	76.00	5	7.7%
Q8 Do you feel comfortable accessing these Hamilton Parks sites and services?	1.21	3.73	74.55	2	2.9%
Q15 How likely would you be to recommend the following Hamilton Parks services to others?	1.18	3.64	72.73	2	2.9%
Q5 How do you feel Hamilton Parks have performed overall with the following services?	1.05	3.61	72.17	1	1.4%
Q16 How would you rate Hamilton Parks for providing good value for money for the following sites and services?	1.17	3.54	70.88	7	10.9%
Q7 Do the following Hamilton Park sites and services meet your needs?	1.06	3.00	60.00	1	1.4%
Q4 In the last 24 months, which of these sites or services have you visited, and who did you go with?	1.18	2.43	48.53	1	1.4%

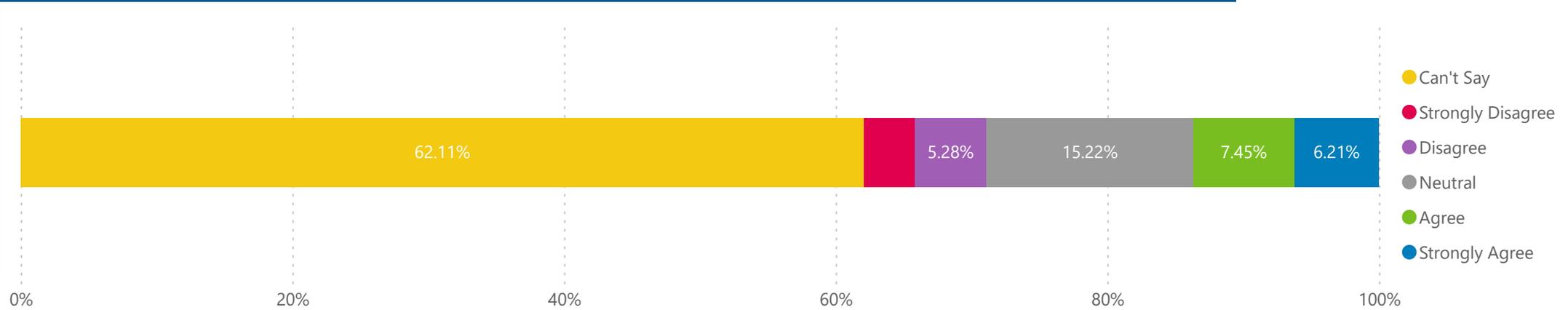
Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

Sales of interment rights, cemetery services and supporting products

Responses
110
 Respondents
45



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.16	3.19	63.77	200	62.1%
Q21 How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?	1.26	3.45	69.00	25	38.5%
Q20 How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?	1.26	3.31	66.15	51	79.7%
Q23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?	1.12	3.23	64.62	51	79.7%
Q22 How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?	1.26	3.17	63.33	46	71.9%
Q24 Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?	0.86	2.87	57.37	27	41.5%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

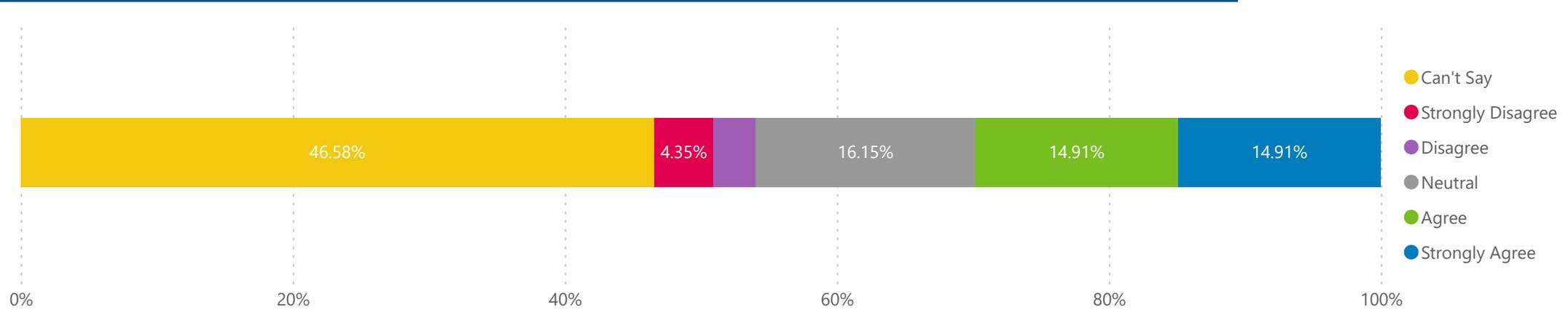
Maintenance and management of active and inactive cemeteries

Responses

158

Respondents

52



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.18	3.62	72.33	150	46.6%
Q21 How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?	1.01	4.09	81.70	18	27.7%
Q20 How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?	1.00	3.82	76.36	31	48.4%
Q22 How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?	1.47	3.58	71.67	40	62.5%
Q23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?	1.28	3.38	67.50	40	62.5%
Q24 Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?	1.00	3.11	62.27	21	32.3%

Respondents who did not answer or selected 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

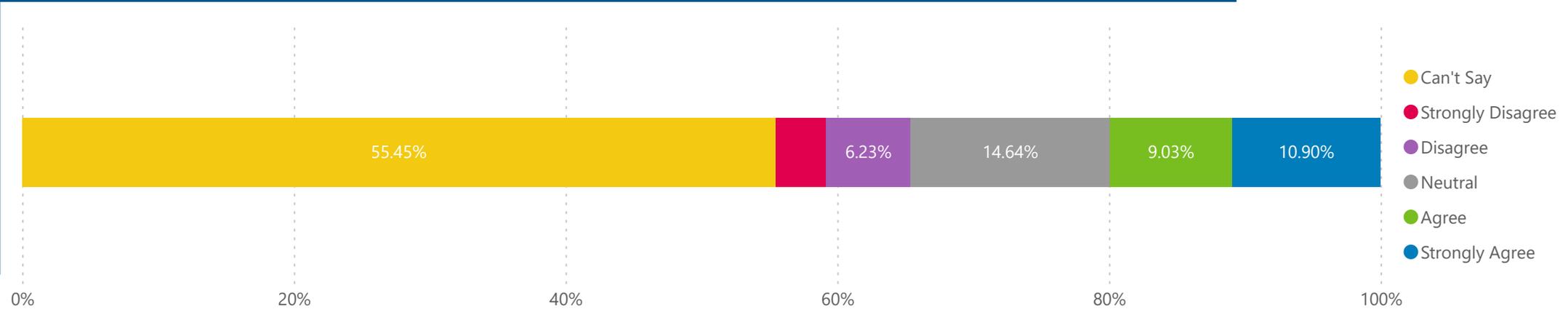
Historical family searches and walking tours

Responses

131

Respondents

50



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.23	3.38	67.69	178	55.5%
Q20 How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?	1.22	4.00	80.00	43	68.3%
Q22 How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?	1.33	3.57	71.43	43	67.2%
Q23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?	1.12	3.56	71.25	48	75.0%
Q21 How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?	1.21	3.36	67.27	21	32.3%
Q24 Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?	1.07	2.95	59.05	23	35.4%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

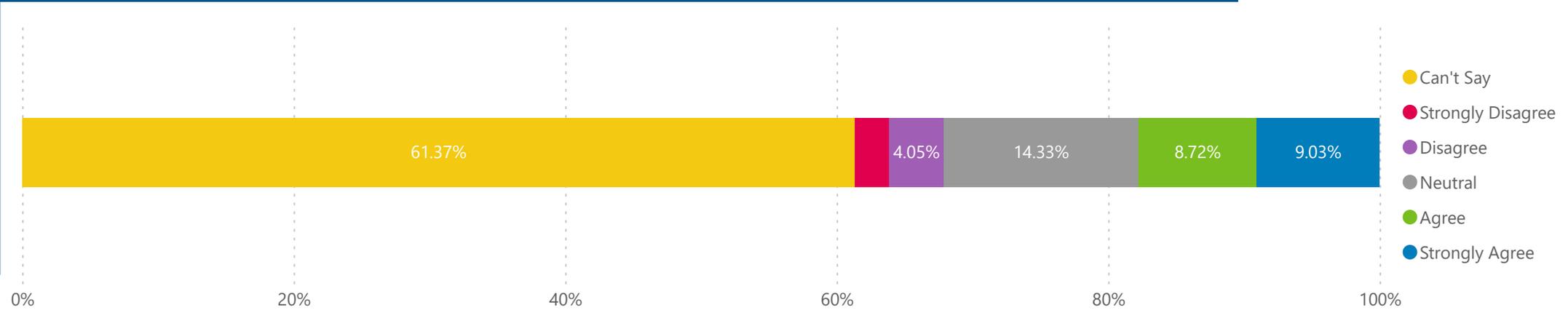
Graveside services, burials and interment

Responses

116

Respondents

45



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.15	3.46	69.19	197	61.4%
Q20 How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?	0.99	3.86	77.14	50	78.1%
Q21 How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?	1.14	3.80	76.00	25	38.5%
Q22 How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?	1.20	3.53	70.67	48	76.2%
Q23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?	1.16	3.31	66.25	48	75.0%
Q24 Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?	0.99	3.00	60.00	26	40.0%

Respondents who did not answer or selected 'Can't Say' are included in opt out.



Summary of Specific Service Areas over Several Questions

End of life planning services

Responses

109

Respondents

45



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.21	3.29	65.74	199	62.0%
Q21 How important should the following services be as a responsibility for Hamilton Municipal Cemeteries?	1.18	3.55	71.00	25	38.5%
Q23 How would you rate Hamilton Municipal Cemeteries for providing good value for money in the infrastructure and services provided to your community?	1.28	3.46	69.23	50	79.4%
Q20 How do you feel Hamilton Municipal Cemeteries has performed overall in the following services?	1.24	3.43	68.57	50	78.1%
Q22 How likely would you be to recommend these Hamilton Municipal Cemeteries services to others?	1.30	3.25	65.00	48	75.0%
Q24 Would you prefer to see funding rates increase to improve local services OR would you prefer to see service level cuts to minimize rate increases?	1.07	2.92	58.46	26	40.0%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Data Grading Scales

Definition and Ranking of Consistency and Confidence

Grade	Data Consistency Standard Deviation (σ , Consistency of Responses)	Confidence Level Margin of Error (at 95% Confidence in Sample Size)
A Very High	0 to 0.5 - results are tightly grouped with little to no variance in response	0% to 5% - Minimal to no error in results, can generally be interpreted as is
B High	0.5 to 1.0 - results are fairly tightly grouped but with slightly more variance in response	5% to 10% - Error has become noticeable, but results are still trustworthy
C Medium	1.0 to 1.5 - results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - Error is a significant amount and will cause uncertainty in final results
D Low	1.5 to 2.0 - results show a high variance with a fair amount of disparity in responses	20% to 30% - Error has reached a detrimental level and results are difficult to trust
E Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - Significant error in results, hard to interpret data in much of a meaningful way

$$\text{Margin of Error} = \frac{0.98}{\sqrt{n}}$$

Assigning a lower consistency value (Standard Deviation) to a higher grade doesn't imply that the data is "better" or "worse". Instead, it helps in understanding how divided or similar people are in their responses. When high consistency is observed, it indicates that most respondents agree on a question. But when the consistency is low, opinions are split, with some rating higher and others lower. The key is to understand why the split occurs which provides valuable insights into the data.

The margin of error is calculated using a standard factor of 0.98 and the sample size (n). The margin of error helps assess if the sample size of the survey is suitable. The margin of error, expressed as a percentage, indicates the range around the calculated sample average where the true population average is likely to be. A smaller margin of error suggests a more accurate estimate, while a larger one implies less precision.



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Hamilton

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SUMMARY AND QUICK FACTS

SERVICE PROFILE



Hamilton Public Health Services (PHS) is responsible for the assessment, planning, delivery, management, and evaluation of a range of public health programs and services that address the growing and changing health needs of Hamilton residents.

These PHS responsibilities are carried out by a diverse multidisciplinary workforce which are its most prized resource. PHS operates in compliance with ever-changing provincial mandates and guidelines. How PHS assets are sourced, managed, and disposed of is closely aligned with current ministry policies.

ASSET SUMMARY



Replacement Value:
\$3.4M

Average Age:
5 years or 36%
of estimated life remaining



LEVEL OF SERVICE SUMMARY

Customer Values

- Public spaces should be free of needles.
- School-aged children should be vaccinated in school.
- Health outcomes should be equitable across Hamilton.

Customer Levels of Service

- Ensure the provision of mandatory health programs and services.
- Ensure public health services are accessible to the public.

Technical Levels of Service (2022)

- 3,486 dental clients seen.
- 259 radon kits distributed.
- 10,798 naloxone kits distributed.

MAJOR ASSET HIGHLIGHTS

ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION
Vehicles	4	\$1.2M	Fair
Information Technology	1,443	\$1.2M	Poor

DATA CONFIDENCE



VERY HIGH

MEDIUM

VERY LOW



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DEMAND DRIVERS

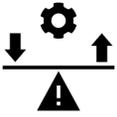
Legislative Requirements- Public Health Services is required to provide services mandated by various regulations.



Population Growth- Public Health Service aims to provide services to meet client needs based on population size.

RISK

Critical Assets are identified as, essential data and software, Senior Dental Bus and Equipment, Vaccine Fridges, and Needle Return Vans and Kiosks.



Major Risks include overall service delivery risk, cyber security risk and information risk.

CLIMATE CHANGE

Mitigation

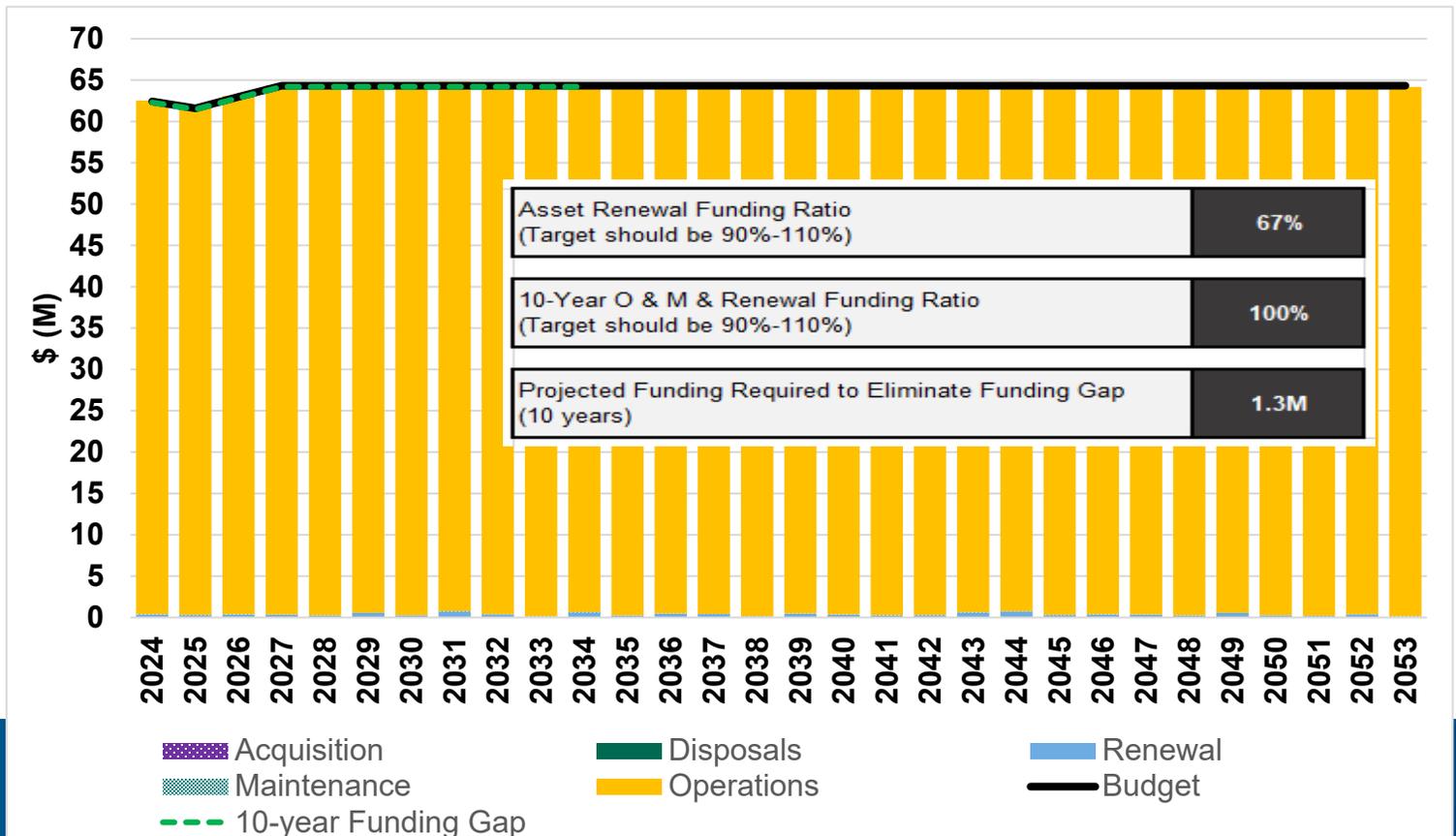
- Changing how we move: Meet the City of Hamilton’s modelled targets by switching to electric or clean energy vehicles by 2040.



Adaptation

- Heat-related issues: Developing a Heat Response Strategy. Implemented a Heat Response Plan in collaboration with other City divisions and external partners. Coordinating efforts to issue heat and cold alerts.

LIFECYCLE SUMMARY



HAMILTON PUBLIC HEALTH SERVICES 2024 ASSET MANAGEMENT PLAN

1. INTRODUCTION

Hamilton Public Health Services (PHS) is responsible for the assessment, planning, delivery, management, and evaluation of a range of public health programs and services that address the growing and changing needs of Hamilton. The purpose of this Asset Management (AM) Plan is to ensure that PHS has fulfilled the Asset Management Planning requirements outlined in O. Reg 588/17 for current and proposed levels of service as well as to ensure PHS has the required assets to deliver effective and equitable public health services in accordance with the *Health Protection and Promotion Act*.¹

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements and required funding to provide the appropriate levels of service over the 2024-2053 planning period.

Since Sunday, February 25, 2024, the City of Hamilton experienced a cyber incident that disabled some of the IT systems. As a result, this AM Plan was created based on the data that was accessible at the time of publication.

¹ (Government of Ontario, Health Protection and Promotion Act, 1990)

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2. BACKGROUND

The information in this section is intended to provide background on services provided by PHS, by providing a service profile, outlining legislative requirements, and defining the asset hierarchy used throughout the report. This section will provide the necessary background for the remainder of the AM Plan.

2.1 SERVICE PROFILE

The service profile consists of four main aspects of the service:

- Service History;
- Service Function;
- Users of the Service; and,
- Unique Service Challenges.

Listed below are related documents reviewed in preparation of the Asset Management Plan:

- **Asset Management Plan Overview Document;**
- **2024 Annual Service Plan and Budget and Public Health Priorities;**
- 2024 PHS Risk Management Framework; and,
- **2022 Public Health Services Annual Performance & Financial Report.**

Additional financial-related documents are identified in **Section 10** Plan Improvement and Monitoring.

2.1.1 SERVICE HISTORY

The Hamilton Board of Health was established in 1873. Prior to this date, public health matters were dealt with by the City's Board of Works. A civic health department was established sometime after the passing of Ontario's Public Health Act in 1884. Between 1908 and 1910, many expansions took place including a public health lab for water and medical sampling; public health nurses in schools; and food and dairy inspections and dental clinics within schools. After the 1918 Influenza pandemic, services were reorganized and expanded, and additional Public Health Nurse (PHN) positions were created. In 1921, a Superintendent of Nurses was appointed and PHNs were running immunization clinics, examining school children and teaching child hygiene. In 1924, the City's first outpatient Mental Health Clinic was opened employing Social Workers to examine cases recommended by PHNs, physicians and other local agencies. Hamilton Public Health Services continues to be one of the only Public Health Units in Ontario with this service for residents under 18 years of age.

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In 1967, the Ontario Ministry of Health passed regulations that more closely affiliated local health departments to the Provincial Health Department. The Ministry also proposed that the City, and what was then known as Wentworth County, amalgamate their respective health departments to form a new district health unit serving the populations of both Wentworth County and the City of Hamilton, completed in 1968. The Regional Municipality of Hamilton-Wentworth, as well as the former regional municipalities of Stoney Creek, Ancaster, Flamborough, Dundas and the township of Glanbrook, were dissolved on January 1, 2001.

2.1.2 SERVICE FUNCTION

As with all public health boards in Ontario, PHS is governed by the **Health Protection and Promotion Act**. The Act defines which services and programs Hamilton Public Health Services must offer to the community. The following are the mandatory areas in which Hamilton Public Health Services is to provide programming:

- Community sanitation;
- Provision of safe drinking water;
- Control of infectious diseases;
- Health promotion, health protection and disease and injury prevention;
- Family health;
- Collection and analysis of epidemiological data; and,
- Additional programs and services, as directed by the regulations.

Public health is defined as promoting health and preventing disease for a population, both for the province of Ontario as a whole, and for individual communities, such as the City of Hamilton. This is what is known as a “population health” approach. Public health works to promote health and prevent disease by acting in anticipation of a future outcome. Public health develops services that aim to tackle health concerns that are projected to affect communities, such as health conditions related to aging and the spread of infection and disease.

Pursuant to the Health Promotion and Protection Act are the Ontario Public Health Standards (OPHS).² The Public Health Standards are a set of requirements for provisioning the mandatory public health programs and services outlined in the Health Promotion and Protection Act. The program standards defined by the OPHS are categorized by the following Foundational and Program Standards to address factors attributed to good health and broadly target population-based goals and program outcomes.

² (Government of Ontario, Ontario Public Health Standards, 2021)

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Foundational Standards

- Population Health Assessment;
- Health Equity;
- Effective Public Health Practice; and,
- Emergency Management.

Program Standards

- Chronic Disease Prevention and Well-Being;
- Food Safety;
- Healthy Environments;
- Healthy Growth and Development;
- Immunization;
- Infectious and Communicable Disease Prevention and Control;
- Safe Water;
- School Health; and,
- Substance Use and Injury Prevention.

Moreover, the OPHS uses The **Public Health Accountability Framework** to 'outline the parameters and requirements to hold boards of health accountable for the work they do, how they do it, and the results achieved'.³

The OPHS also sets out a number of requirements, such as:

- Organizational Requirements where reporting and/or monitoring are required to demonstrate accountability to the ministry;
- Fiduciary Requirements for using ministry funding efficiently for its intended purpose. Including but not limited to maintaining an inventory of all tangible capital assets developed or acquired with a value exceeding \$5,000 or a value determined locally that is appropriate under the circumstances;
- Good Governance and Management Practices to ensure effective functioning of health and management of public health units; and,
- Public Health Practice Requirements for achieving a high standard and quality of practice in the delivery of public health programs and services.

³ (Government of Ontario, Ontario Public Health Standards, 2021)

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To ensure boards of health are transparent and demonstrate impact, the OPHS requires the following:

- Public Health Indicator Framework for Program Outcomes;
- Contributions to Population Health Outcomes; and,
- Transparency Framework: Disclosure and Reporting Requirements.

Some of the areas identified as priorities in the community are:

- Needle-free public spaces;
- Reliable access to harm reduction supplies;
- Up-to-date vaccinations for children at school;
- Prenatal and breastfeeding support that suits individual needs;
- Accessible dental services;
- Mental health supports;
- Climate change; and,
- Air quality.

In order to deliver effective and equitable public health services, PHS requires assets. Some assets that support the delivery of the service include:

- Reliable vehicles including dental buses to make services more accessible and utility vehicles to manage operations;
- Secure and reliable technology to support staff to perform their work as well as safeguarding the privacy, records and information management of both personal information and personal health information;
- Adequate furnishings to provide comfortable spaces; and,
- Well-maintained equipment to deliver various public health services.

2.1.3 USERS OF THE SERVICE

As such, the table shown in this section is not an exhaustive representation of the service provided by PHSs but rather is a snapshot of the scope and diversity of service delivery. Public health services are available to almost 606,000 Hamilton residents, as well as visitors to Hamilton, serving age groups ranging from infants to seniors. **Table 1** shows, for each mandatory programming area, a metric related to users of the service.

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Table 1: Public Health Service Provision

PUBLIC HEALTH PROGRAMMING	USER METRIC (2022)
Chronic Disease Prevention and Well-being	3,486 dental clients seen
Food Safety	3,007 food safety inspections
Healthy Environments	259 radon kits distributed
Healthy Growth and Development	1,537 pregnant individuals accessed prenatal support
Immunization	5,790 catch-up immunizations administered
Infectious and Communicable Disease Prevention and Control	11,611 reportable disease cases investigated
Safe Water	198 safe water inspections
School Health	63 schools completed the Healthy Schools certification
Substance Use and Injury Prevention	3,989 needle exchange van service requests responded to
	10,798 naloxone kits distributed

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2.1.4 UNIQUE SERVICE CHALLENGES

PHS has some unique service challenges which will be discussed throughout this report. Some of these challenges are summarized below:

- Unlike most City of Hamilton services, PHS is mostly (around 70%) funded by Ontario's Ministry of Health while the rest is funded largely by the City. This creates a unique dynamic where PHS is required to provide programming mandated by the province as well as accommodate requests from the City of Hamilton to meet local community needs. This results in PHS needing to balance competing priorities while utilizing limited financial and human resources.
- The Ontario Public Health Standards (OPHS) determine the scope and quality of services that PHS needs to provide. As part of the unfolding Strengthening Public Health Strategy from the Ministry of Health, potentially major changes are anticipated for these standards (applicable from Jan 1, 2025) that may result in PHS requiring to quickly adjust its programs and services to meet the new requirements.
- Hamilton is moving toward adopting a new board of health model. Implementing the new governance structure may also require additional resources which may strain Public Health Service's capacity to manage the change effectively.
- Growth in provincial funding levels remains less than increases in wages, benefits, and inflation, alongside rising costs associated with population growth and increased service demand, resulting in budget pressures. The Ministry of Health also discontinued provincial COVID-19 funding at the end of December 2023 while requiring boards of health to integrate ongoing COVID-related outbreak management, infection prevention and control and immunization work into base budgets through adjustments in programming. As a result of these imbalances, City Levy as a percent of total expenditure is expected to increase from 32.5% in 2024 to 37.0% in 2027.
- Health inequity remains a reality for Hamilton as various health risk factors and outcomes are disproportionately experienced by Hamiltonians. Among health outcomes, substance poisoning, assault, sexually transmitted and blood-borne infections, diabetes, and self-harm have the greatest inequities in Hamilton.
- Hamilton's opioid-related death rate was 63% greater than the provincial average in 2022 and is the 9th highest among the 34 provincial public health units. In 2023, the City of Hamilton declared an emergency in the areas of opioids, mental health, and homelessness. PHS has a key role to play in the City's various strategies to combat these challenges.

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- Climate change poses many challenges for PHS due to associated risks to population health. These include but are not limited to expected increases in the incidence and type of vector-borne diseases of public health significance, as well as an expected increase in extreme heat, flooding, and wildfire events that can adversely impact human health. PHS is working with other City of Hamilton departments and community groups to support public-facing risk communications related to the health impacts of climate change and actions that can be taken to reduce the impact of those risks.
- The Community Dental Health Bus which is used by PHS to facilitate easy access to its dental services, is currently immobile due to poor structural integrity. The demand for this service remains high so a solution to replace the service provided on the bus is required. PHS is bringing a recommendation report forward to the Public Health Committee on June 3rd, 2024.
- The percentage of students with a vaccine record continues to be lower after the 2022-2023 school year compared to pre-pandemic school years. Following the 2022-2023 school year, over 1 in 3 students born in 2015 do not have an up-to-date vaccination record with Hamilton Public Health for most diseases listed under Ontario's Immunization of School Pupils Act.
- The COVID-19 pandemic greatly impacted service delivery for PHS. Some of the services that were routinely provided were reduced or temporarily discontinued to respond to the emergency efforts. Now as the City of Hamilton enters the post-pandemic phase of the response, a number of these services continue to experience backlogs. Clients who would otherwise access these services have been impacted by worsening health status (e.g., opioid use), while services such as vaccination clinics face the same challenges along with skepticism post-pandemic. For example, almost half of school-aged children in Hamilton do not have up-to-date vaccination records.
- The recovery phase from COVID-19 also includes the re-establishment of internal administrative, business and quality improvement processes. Therefore, routine program evaluation activities were not completed in recent years that may otherwise have been available to inform this report.

2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of PHS services are outlined in **Table 2**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements. There are approximately 20 additional Acts/Legislation that place duties on the Board of Health (BOH), Medical Officer of Health (MOH) and public health staff.

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Table 2: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENT
Health Protection and Promotion Act, R.S.O. 1990, c. H.7	The purpose of this Act is to provide for the organization and delivery of public health programs and services, the prevention of the spread of disease and the promotion and protection of the health of the people of Ontario. R.S.O. 1990, c. H.7, s. 2.
Ontario Public Health Standards: Effective June/2021	Requirements for Programs, Services, and Accountability are published as the public health standards for the provision of mandatory health programs and services by the Minister of Health, pursuant to Section 7 of the Health Protection and Promotion Act
Personal Health Information Protection Act, 2004, S.O. 2004, c. 3, Sched. A⁴	This act establishes rules for the collection, use and disclosure of personal health information about individuals that protect the confidentiality of that information and the privacy of individuals with respect to that information while facilitating the effective provision of health care.
Immunization of School Pupils Act, R.S.O. 1990, c.I.1⁵	This Act is in place to increase the protection of the health of children against the diseases that are designated diseases under this Act

2.3 ASSET HIERARCHY

In order to deliver effective and equitable services, PHS requires assets. The PHS Service Area has been broken down into four asset classes (**Table 3**) for the purpose of this AM Plan:

1. Vehicles: describes different types of vehicles which are used to provide public health services;
2. Information Technology: describes the different types of technology required to deliver the service including hardware and software assets owned by PHS;
3. Furnishings: refers to any PHS-owned furnishings and fixtures utilized to deliver public health services; and,
4. Equipment: refers to all equipment used by the different sections of PHS to deliver their respective services.

⁴ (Government of Ontario, Personal Health Information Protection Act, 2004)

⁵ (Government of Ontario, Immunization of School Pupils Act, 1990)

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Table 3: Asset Class Hierarchy

VEHICLES	INFORMATION TECHNOLOGY	FURNISHINGS	EQUIPMENT (RELATED TO EACH SERVICE AREA)
Dental Buses	Staff Devices	Furnishings & Fixtures	Communicable Disease Control e.g., vaccine fridges,
Utility Vehicles	Intangible Assets		Epidemiology & Wellness e.g., needle return kiosks
			Healthy Environment e.g., air samplers & infrared thermometers
			Healthy Families e.g., dental equipment

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3. SUMMARY OF ASSETS

This section provides a detailed summary and analysis of the existing inventory information as of June 2023 including age profile, condition methodology, condition profile, asset usage, and performance for each of the asset classes.

Table 4 displays the detailed summary of assets for the PHS service area. The information used for this report was sourced from various City databases discussed in **Section 10.1**. It is important to note that inventory information does change often and that this is a snapshot in time of information.

The City owns approximately **\$3.4 Million** in PHS assets which are on average in **FAIR** condition. Assets are a weighted average of **5 years** in age which is **36%** of the average remaining service life (RSL). The majority of the weighting for these averages comes from Vehicles and Information Technology (IT) asset classes.

A continuous improvement item identified in **Table 24** is to develop an asset registry for PHS assets since at the time of writing PHS did not have an inventory of Equipment assets, and this data was collected specifically for this report.

Data confidence descriptions are outlined on **page 31** of the AM Plan Overview. The replacement costs below are typically at a **LOW** data confidence level overall. For Vehicles, replacement costs are based on the amounts specified in PHS's 10-Year Capital Plan and estimates from Corporate Fleet Services. Replacement costs for staff devices within the IT asset class are based on estimates provided by Corporate IT Services whereas the valuation of intangible assets has been identified as a continuous improvement item in **Table 24**.

Data confidence for average age is **HIGH** overall as most of the assets have their ages formally tracked. On the other hand, the average equivalent condition has a **MEDIUM** data confidence as most assets do not have a formal condition scoring methodology and the condition is based on SME opinion and/or estimated remaining service life. Continuous improvement items identified in **Table 24** include developing methodologies to determine asset conditions for PHS's assets.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. In addition, the assets included below are assets that are assumed in service at the time of writing, and leased assets (e.g., leased office space) are not included as assets, but the cost to lease assets would be incorporated under operations costs in **Section 8.2**.

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**Table 4: Detailed Summary of Assets
 (Weighted Average based on Replacement Cost)**

VEHICLES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Community Dental Health Bus	1	\$569k	11 Years (8%)	4-POOR
DATA CONFIDENCE	Very High	Very Low	High	Medium
Senior Dental Health Bus	1	\$569k	4 Years (67%)	2-GOOD
DATA CONFIDENCE	Very High	Very Low	High	Medium
Van for Needle Exchange	1	\$55k	4 Years (60%)	3-FAIR
DATA CONFIDENCE	Very High	High	High	Medium
Vaccine Transport Vehicle	1	\$33k	5 Years (50%)	3-FAIR
DATA CONFIDENCE	Very High	High	High	Medium
SUBTOTAL		\$1.2M	7 Years (39%)	3-FAIR
DATA CONFIDENCE		Low	High	Medium

INFORMATION TECHNOLOGY				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Computers	709	\$892k	3 Years (22%)	4-POOR
DATA CONFIDENCE	High	High	High	Medium
Mobile Devices	734	\$327k	3 Years (37%)	4-POOR
DATA CONFIDENCE	High	High	High	Medium
Intangible Assets	No Data	No Data	N/A	N/A
DATA CONFIDENCE				
SUBTOTAL		\$1.2M	3 Years (26%)	4-POOR
DATA CONFIDENCE		High	High	Medium

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FURNISHINGS				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Furnishings & Fixtures	2,128	\$596k	7 Years (29%)	2 - GOOD
DATA CONFIDENCE	High	Medium	High	Medium
SUBTOTAL	\$0.6M		7 Years (29%)	2 - GOOD
DATA CONFIDENCE	Medium		High	Medium

EQUIPMENT				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Healthy Environment	45	\$19k	7 Years (29%)	2-GOOD
DATA CONFIDENCE	High	Medium	Medium	Medium
Healthy Families	1,495	\$154k	5 Years (50%)	2-GOOD
DATA CONFIDENCE	Medium	Medium	Medium	Medium
Communicable Disease Control	21	\$192k	2 Years (82%)	1-VERY GOOD
DATA CONFIDENCE	High	Very Low	Medium	Medium
Epidemiology & Wellness	18	\$43k	3 Years (72%)	2-GOOD
DATA CONFIDENCE	High	Medium	Medium	Medium
SUBTOTAL	\$0.4M		4 Years (66%)	2-GOOD
DATA CONFIDENCE	Low		Medium	Medium

TOTAL	\$3.4M	5 Years (36%)	3-FAIR
DATA CONFIDENCE	Low	High	Medium

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3.1 ASSET CONDITION GRADING

Condition refers to the physical state of the PHS assets and is a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, **Table 5** below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in **Table 24** is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

Table 5: Equivalent Condition Conversion Table

EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance is required only.	>79.5%
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on the asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset usage. Minor to significant maintenance is required.	39.5% - 69.4%
4 Poor	The asset has significant defects and deterioration. Deterioration has an impact on asset usage. Rehabilitation or major maintenance is required in the next year.	19.5% -39.4%
5 Very Poor	The asset has serious defects and deterioration. The asset is not fit for use. Urgent rehabilitation or closure is required.	<19.4%

The following conversion assumptions were made:

- For assets where a condition rating was provided by the asset owner, the same was converted to a five-point condition scale (i.e., Vehicles, Equipment and Furnishings); and,
- For assets where a condition assessment was not completed, but age information was known, the condition was based on the % of remaining service life (i.e., Information Technology assets).

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3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile, and Performance Issues for each of the asset classes.

- The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life (ESL) where they can be planned for replacement. Some lower-cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if an asset's condition is based on age, it is typically considered to be of a low confidence level. Although typically, age is used when projecting replacements beyond the 10-year forecast to predict degradation.
- Condition refers to the physical state of assets and is a measure of the physical integrity of assets or their components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected/assessed at different frequencies and using different methodologies to determine their condition, which is noted in this section.
- Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

3.2.1 VEHICLES PROFILE

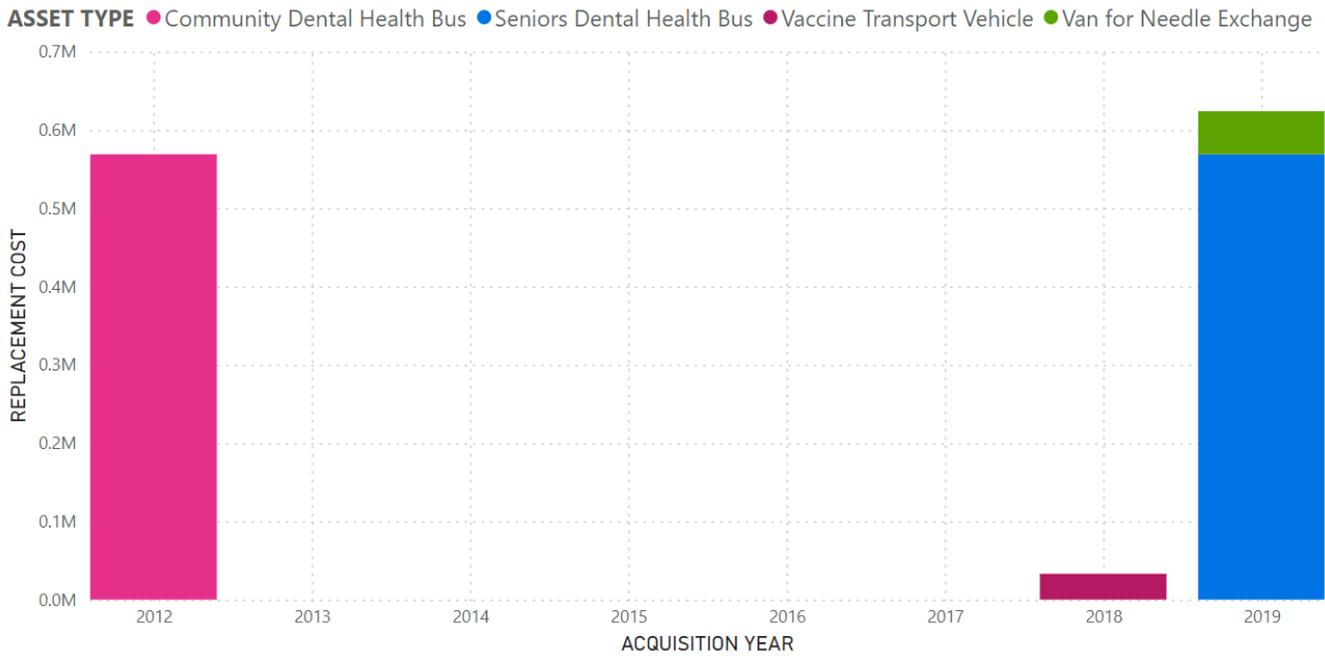
Vehicles are PHS's most valuable asset class in terms of replacement cost. PHS owns four vehicles. These include two dental buses, a van to service needle exchange requests, and a vehicle for vaccine transport.

3.2.1.1 AGE PROFILE

The age profile of the PHS vehicle assets is shown in **Figure 1**. For Vehicle assets, the data confidence for the age is typically High because assets' ages are formally tracked.

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Figure 1: PHS Vehicles Age Profile



The spikes in 2012 and 2019 correspond to the acquisition of the two dental buses. The dental buses have an Estimated Service Life (ESL) of 20 years while the two utility vehicles have an ESL of 10 years. All vehicles are currently within their ESL.

3.2.1.2 CONDITION METHODOLOGY & PROFILE

Vehicles are inspected and maintenance activities are conducted at specific intervals throughout the asset’s lifecycle however no formal condition rating is assigned to each vehicle. Public Health Services relies on the Fleet section in the Corporate Asset Management (CAM) division to assist with the inspection, maintenance, and procurement of vehicles on their behalf. In the absence of a formal condition methodology, the condition has been assigned based on the asset owner's opinion. Developing a condition methodology has been identified as a continuous improvement item in **Table 24**.

Table 6: PHS Vehicles Inspection and Condition Information

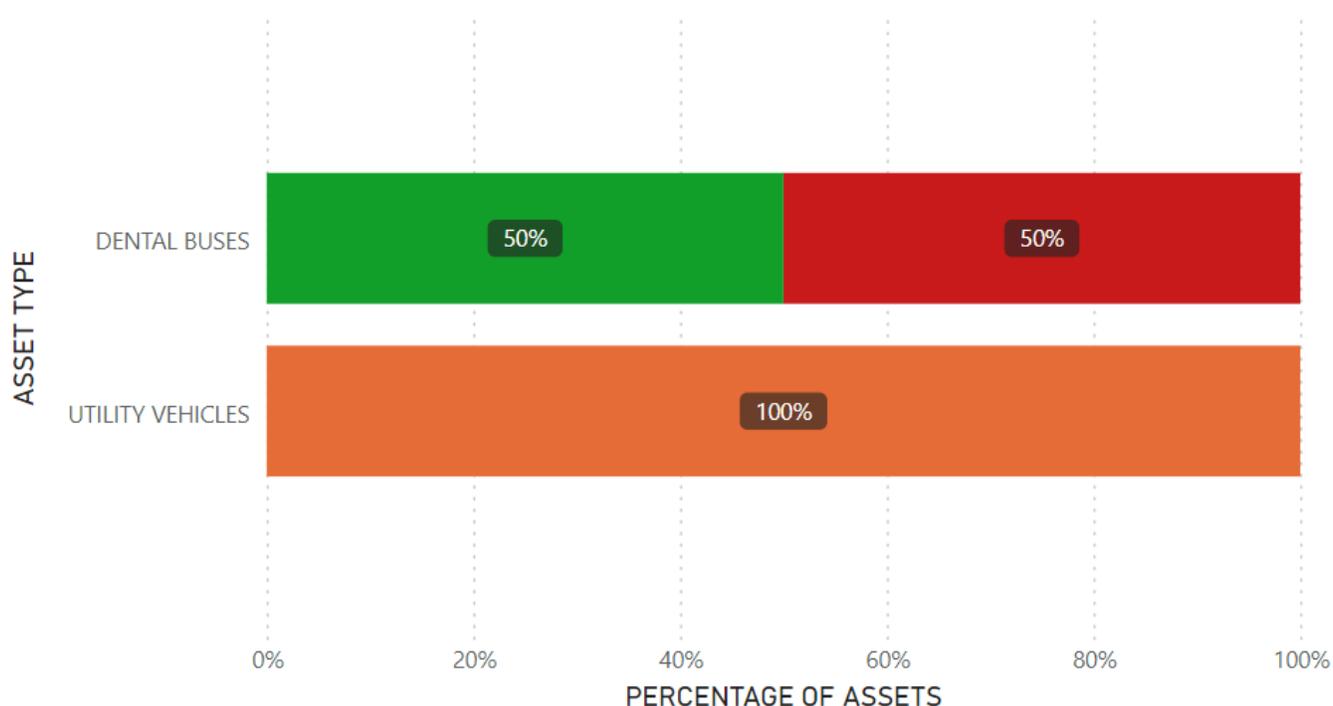
ASSET	INSPECTION TYPE	DESCRIPTION	FREQUENCY	CONDITION SCORE OUTPUT
Vehicles	Inspection	Regular Maintenance Inspection	Scheduled twice per year	N/A

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The condition profile of PHS’s Vehicle assets is shown in **Figure 2**. At this time, the average condition of vehicle assets is considered to be Fair based on asset owner judgment and weighed by replacement cost. As shown, the Community Dental Health Bus is in Poor condition while the other vehicles are in Fair or Good condition. The Community Dental Bus is currently immobile but providing service and is discussed throughout the report in **Section 3.2.1.3**, **Section 4.5**, and **Section 6.4** as this is considered a reduction in level of service that should be investigated further. From the onset, there was no capital replacement cost set aside to replace the Community Dental Health Bus. After extensive investigation of different alternatives, service delivery options are being brought forward to PHC on June 3, 2024.

Figure 2: PHS Vehicles Condition Distribution

CONDITION DESCRIPTION ● 2-GOOD ● 3-FAIR ● 4-POOR



3.2.1.3 ASSET USAGE AND PERFORMANCE

The most significant service performance deficiency associated with PHS’s vehicle assets relates to the Community Dental Health Bus. The Community Dental Health Bus stopped operating in the community in August 2023 and has been parked because of the poor structural integrity of the vehicle. It can no longer be driven and is not roadworthy.

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Table 7: PHS Vehicles Known Service Performance Deficiencies

ASSET	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Community Dental Bus	Mechanically Out of Service	Emergency dental services are currently being provided at a fixed site at the downtown Robert Thompson Building (RTB) dental clinic. The program was unable to secure a temporary location to provide service at one parked location due to safety concerns, costs, and site barriers.

3.2.2 INFORMATION TECHNOLOGY PROFILE

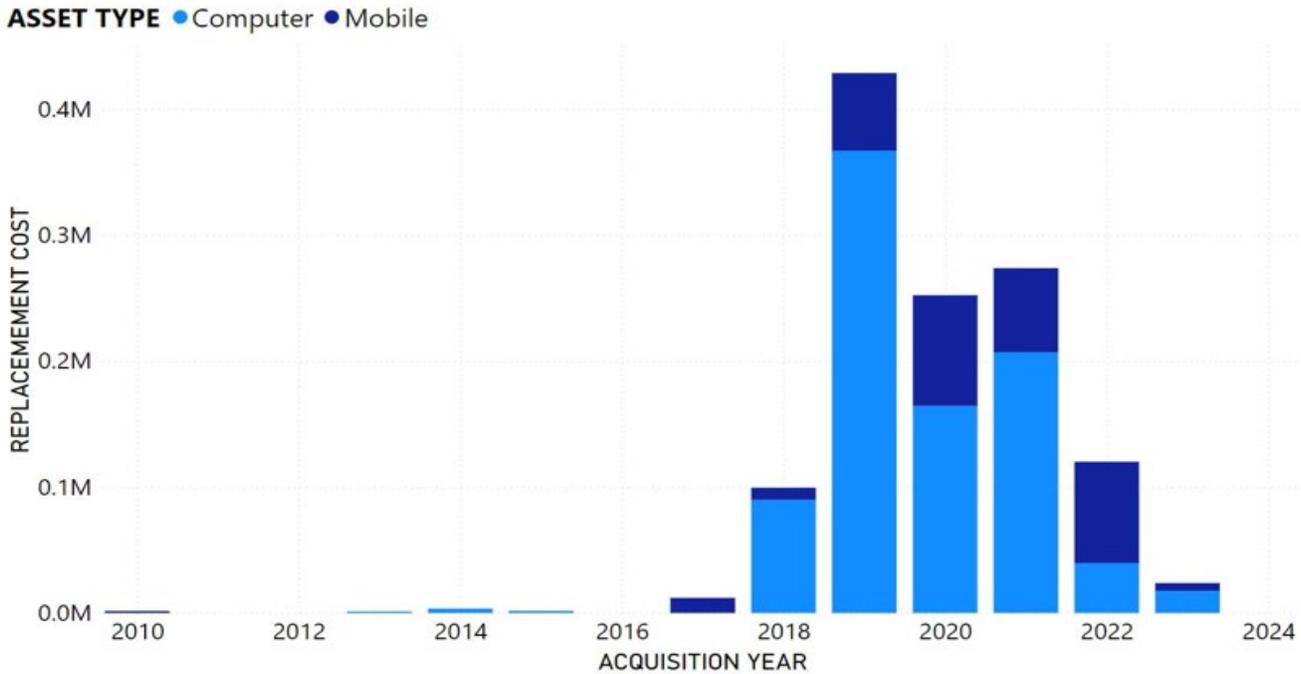
Information Technology (IT) is the second most valuable asset class for PHS in terms of replacement cost. IT assets have been divided into two broad categories: staff devices and intangible assets. Replacement values and estimated service for staff devices have been provided by Corporate IT while replacement values have not yet been assigned to the intangible assets. Developing replacement value estimates for the intangible assets has been identified as a continuous improvement item in **Table 24**.

3.2.2.1 STAFF DEVICES AGE PROFILE

The age profile for PHS Information Technology (IT) assets is shown in **Figure 3**. For IT assets, the data confidence for the age is High because assets' ages are formally tracked, and many assets are replaced based on age. The estimated service life (ESL) is between four to five years for staff devices, and therefore it is evident that many devices are approaching or beyond their ESL.

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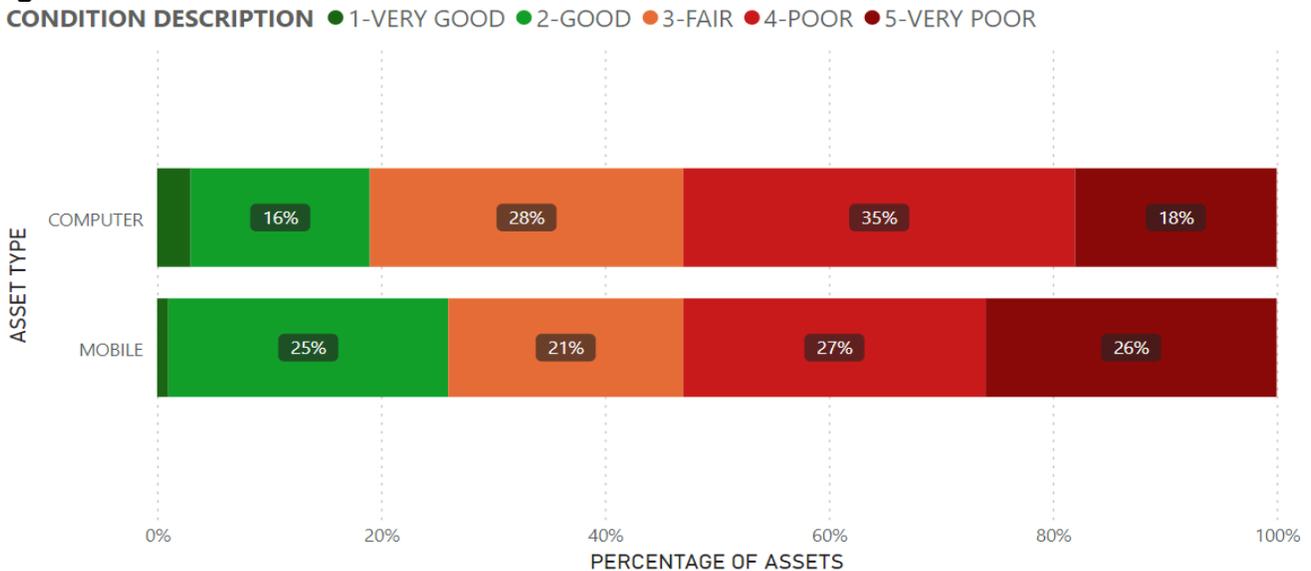
Figure 3: PHS Staff Devices Age Profile



3.2.2.2 CONDITION METHODOLOGY & PROFILE

There is no formal methodology to assess the condition of IT assets. The condition is based on the estimated service life (ESL), which as previously mentioned, is between four to five years for staff devices. **Figure 4** shows the condition profile of PHS’s staff devices. As shown in **Figure 4**, over half of the devices are shown to be in Poor or Very Poor condition based on ESL.

Figure 4: PHS Staff Devices Condition Distribution



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3.2.2.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. Known service performance issues for technology assets involve assets being beyond their Estimated Service Life and computer monitors not meeting asset owner requirements.

Table 8: PHS Staff Devices Known Service Performance Deficiencies

ASSET	DESCRIPTION OF DEFICIENCY
Staff Devices	Most staff devices are nearing or beyond the end of service life.
Computer Monitors	Computer Monitors are not aligned with current standards within the City of Hamilton.

3.2.2.4 INTANGIBLE ASSETS

Intangible assets are not physical assets but exist in the digital domain. These may be websites, critical datasets, enterprise software or any other such digital asset. PHS’s intangible assets include:

- Youth Tobacco Use Prevention Program Website & Domain
- Central West TCAN SharePoint site
- ABELDent software (dental services software)
- SRFax (a secure e-faxing solution)
- OSCAR (electronic medical record)
- FrontDesk (online appointment booking system)
- Hedgehog (inspection database)
- Eschedule (scheduling software for clinics)
- ClinicalConnect (secure access to integrated patient data by authorized healthcare professionals)

For the current iteration of the plan, an exhaustive list of PHS-owned intangible assets has not been created. Nor have replacement values been assigned to these assets. Age and condition data have also been deemed to be not applicable to this asset class. As a result, age and condition profiles are not presented for intangible assets. However, determining the value of intangible assets has been identified as a continuous improvement item in **Table 24** of this plan.

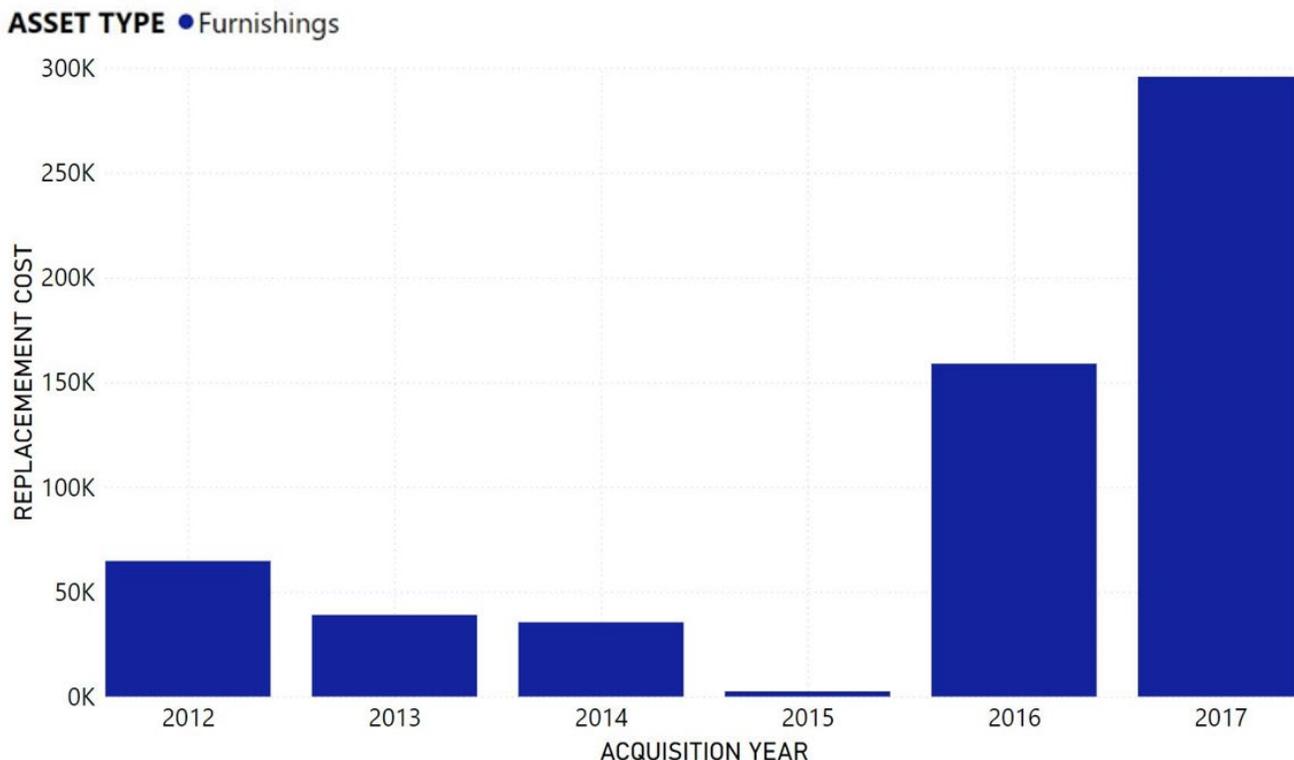
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3.2.3 FURNISHINGS PROFILE

3.2.3.1 AGE PROFILE

The age profile for PHS's Furnishings assets is shown in **Figure 5**. For Furnishings assets, the data confidence for the age is High because the assets' ages have been recorded at the time of purchase. This asset class has an estimated service life (ESL) of 10 years. As shown in the figure below, most of the Furnishing's assets purchased within the last 10 years are not immediately due for replacement based on age.

Figure 5: PHS Furnishings Age Profile

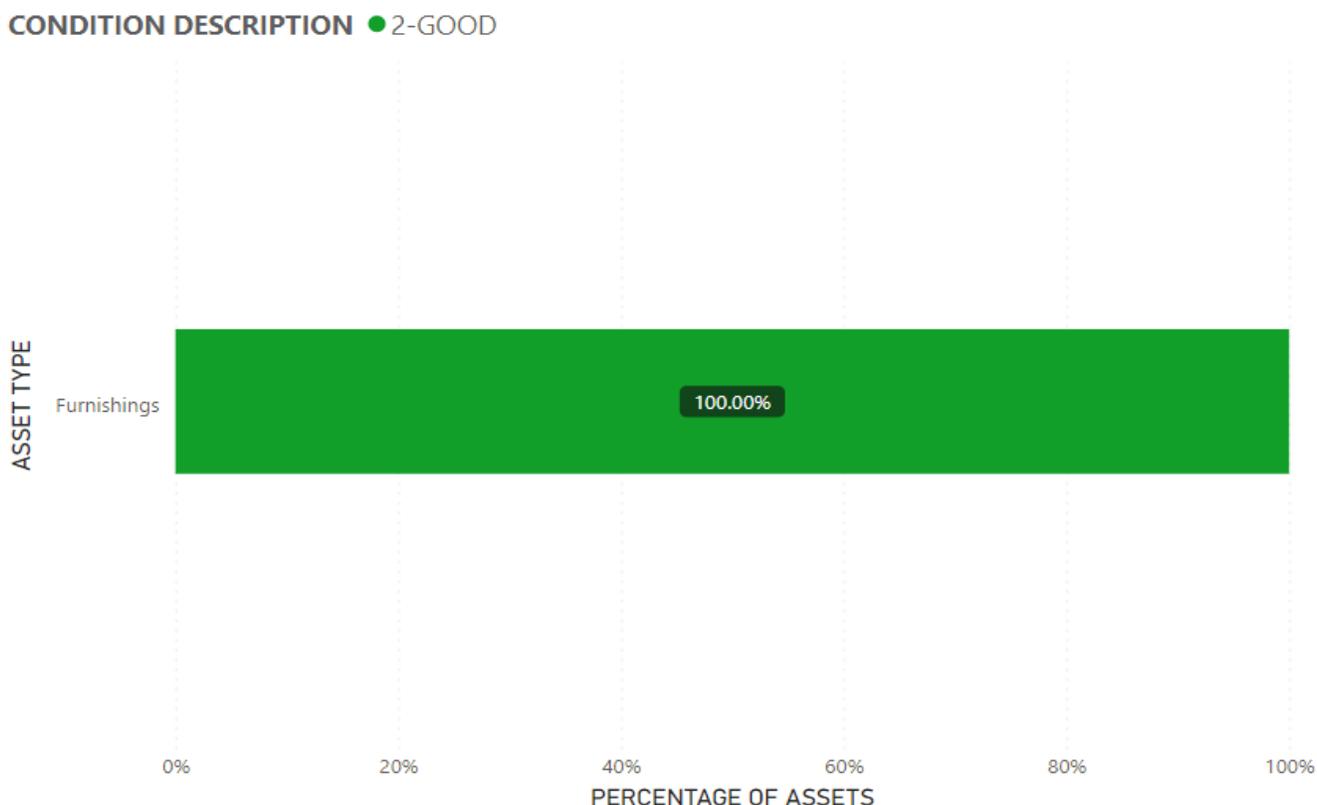


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3.2.3.2 CONDITION METHODOLOGY & PROFILE

The condition of furnishings is not formally tracked, and no inspection methodology exists to determine the condition. 100% of furnishing assets are determined to be in **GOOD** condition based on the asset owner's opinion.

Figure 6: PHS Furnishings Condition Distribution



3.2.3.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. There are no known service performance deficiencies related to furnishings assets.

3.2.4 EQUIPMENT PROFILE

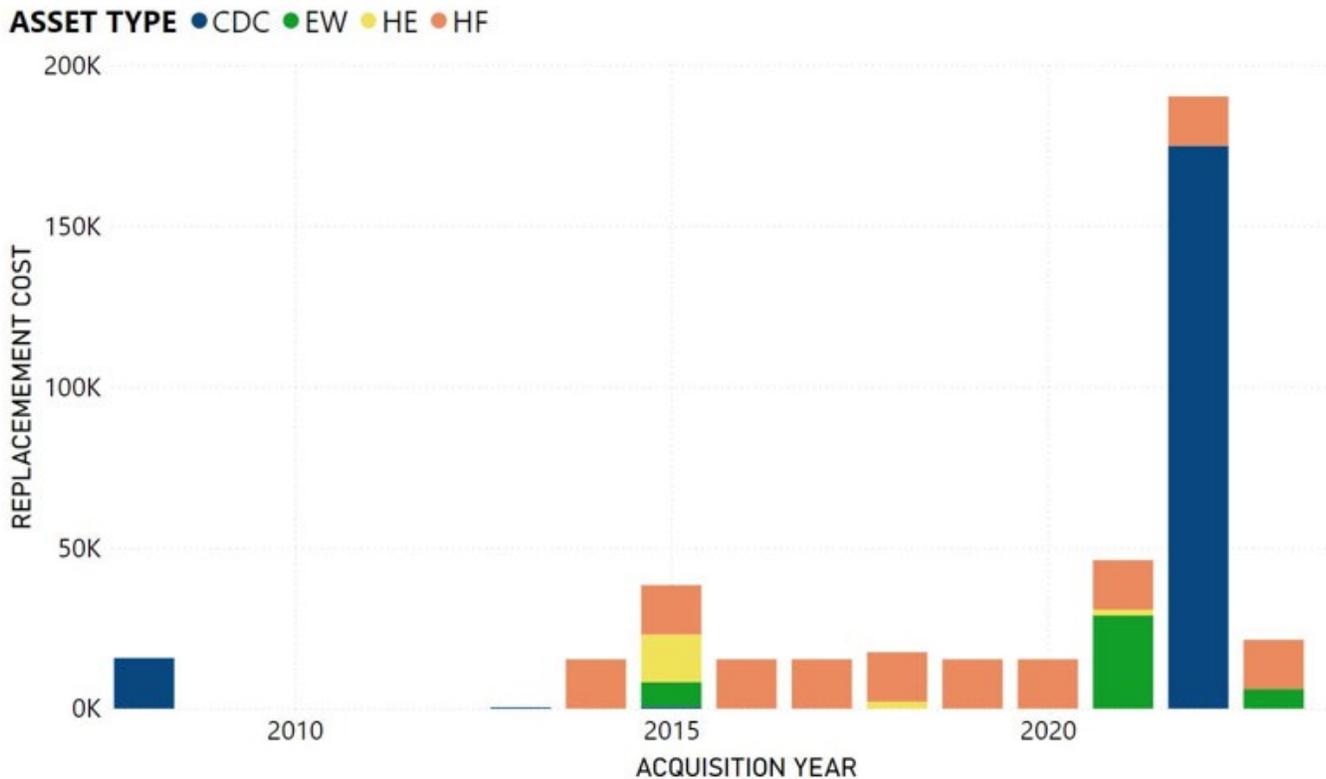
3.2.4.1 AGE PROFILE

PHS's equipment assets are divided into four broad categories corresponding to the service they relate to. These include Communicable Disease Control (CDC) e.g., vaccine fridges, Epidemiology and Wellness (EW) e.g., needle return kiosks, Healthy Environment (HE) e.g., air samplers, and Healthy Families (HF) e.g., dental equipment. The age profile for PHS's Equipment assets is shown in **Figure 7**. Age is not formally tracked for Equipment, however,

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age data for a number of assets in this asset class is available from purchasing records. The estimated service life (ESL) for Equipment is 10 years. As can be seen in the figure, most of the equipment has been procured within the last 10 years and is within its estimated service life.

Figure 7: PHS Equipment Age Profile



3.2.4.2 CONDITION METHODOLOGY & PROFILE

For the majority of Equipment assets, the condition is not formally tracked. However, vaccine fridges belonging to the Communicable Disease Control (CDC) service area, are inspected annually as shown in **Table 9**.

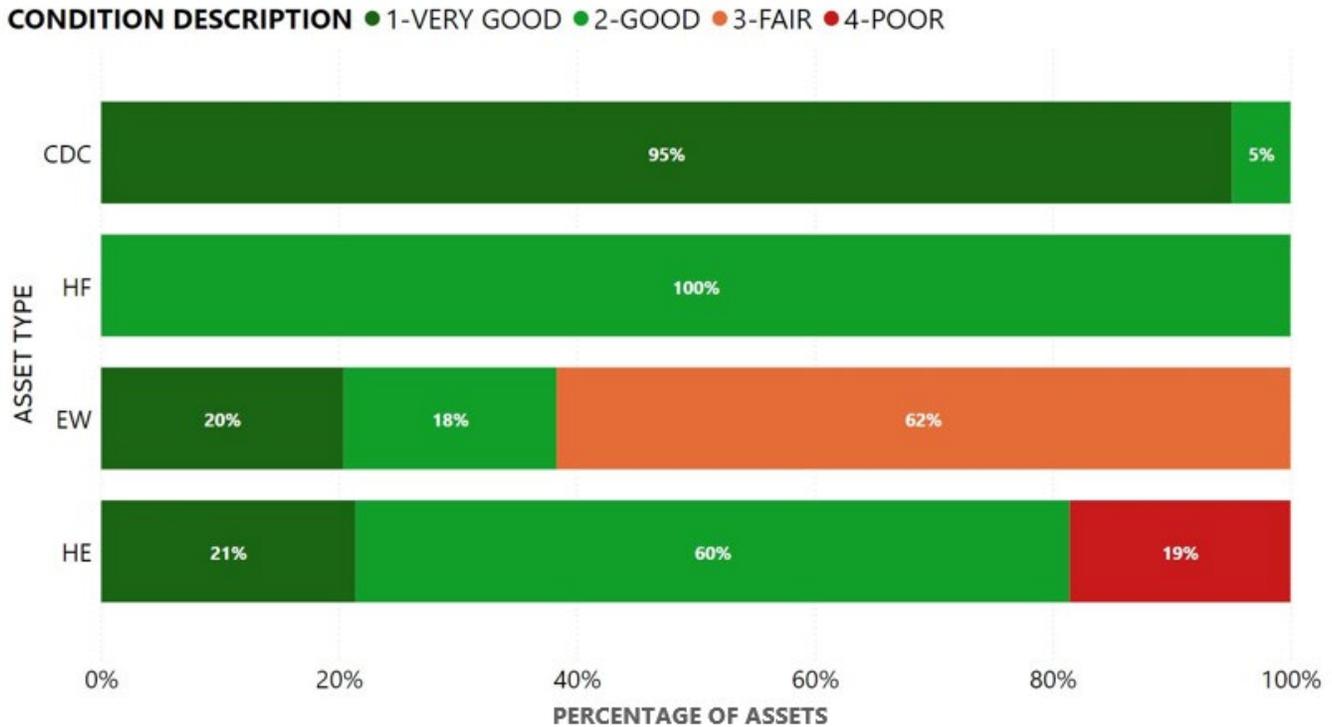
Table 9: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Vaccine Fridges	Annual	2023	Pass/Fail

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The condition profile of Equipment assets is shown in **Figure 8**. At this time, the average condition of equipment assets is considered to be Good based on a condition estimated based on asset owner judgment and weighted by replacement cost.

Figure 8: PHS Equipment Condition Distribution



3.2.4.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. Known service performance issues for equipment assets include an insufficient number of needle return kiosks.

Table 10: Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Needle Return Kiosks	Parks or Parkette in Hamilton Downtown Core	More of these kiosks are needed	The demand for these kiosks is high at locations across the city.
		Susceptible to damage and/or vandalism.	They are exposed to public environments and can be graffitied or used inappropriately (i.e., litter or non-sharps placed in kiosks)

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4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what the City provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that the City provides those services.

O.Reg 588/17 does not define levels of service for Public Health Services' assets and therefore the City has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these are typically developed is provided in Section 7.5 of the [AM Plan Overview](#).

4.1 LEVEL OF SERVICE METHODOLOGY

In the absence of a customer survey, the customer values and customer LOS presented in this plan are based on key performance indicators (KPIs)⁶ submitted by PHS. It is important to note that PHS does conduct operational surveys related to its services but the results from those surveys do not provide the full spectrum of information required to develop the Customer Values and Customer LOS sections of an asset management plan.

For future iterations of the plan, PHS will continue to look at opportunities for community engagement and customer feedback across all program areas. This has been identified as a continuous improvement item in **Table 24**.

4.2 CUSTOMER VALUES

Customer values are what the customer can expect from their tax dollar in "customer speak" which outlines what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

Customer Values indicate:

- What aspects of the service are important to the customer;
- Whether they see value in what is currently provided; and,
- The likely trend over time, based on the current budget provision.

As previously mentioned, for this iteration of the AM Plan, the Customer Values below were developed using key performance indicators, and not customer feedback.

⁶ (Board of Health, 2023)

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Table 11: Customer Values

CUSTOMER VALUES	SOURCE
Public spaces should be free of needles.	Key Performance Indicators
Requests for harm reduction supplies should be met in a timely manner.	
Wait times to access dental services should be shorter.	
Public Health Inspections should be effective to ensure food safety and safe drinking water.	
The public should be protected against vector-borne diseases.	
Breastfeeding and prenatal support programs should meet individual needs.	
School-aged children should be vaccinated in school.	
Vulnerable populations should be able to get treated for sexually transmitted infections and diseases through effective care.	
Health outcomes should be equitable across Hamilton.	

4.3 CUSTOMER LEVELS OF SERVICE

All Public Health Units are required to follow the service guidelines as outlined in the Ontario Public Health Standards (OPHS) while taking into account local needs. Requirements for programs, services, and accountability are established by the Ontario Minister of Health for the provision of mandatory public health programs and services, pursuant to Section 7 of the Health Protection and Promotion Act, R.S.O. 1990, c. H. 7. As such, customer surveys have not been fully utilized to date.

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or underused? Do we need more or less of these assets?

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In **Table 12** under each of the service measure types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

For this iteration of the AM Plan, the Customer Levels of Service were derived from key performance indicators (KPIs⁷) that related to the customer experience of the service and not customer feedback. These levels of service are not exhaustive for every aspect of Public Health’s programs and services.

Table 12: Summary of Expected Customer Performance Measures

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	PERFORMANCE MEASURE	CURRENT PERFORMANCE
Quality/Condition	Ensure the provision of mandatory health programs and services	Not yet measured.	Not yet measured.
Function	Ensure the provision of mandatory health programs and services	27.5% of pregnant individuals in Hamilton accessed Public Health Services prenatal support	The Target of 25% was met which indicates that the service is suitable for its intended purpose as pregnant individuals chose to access this service.
Capacity	Ensure public health services are accessible to the public	66.3% of eligible clients enrolled in Senior Dental Services accessed the clinic service	The target of 80% was not met. There are many eligible seniors for this program with high demand and limited capacity.
		95.3% of Needle Exchange Van service requests that were responded to	The target of 100% was not met.

⁷ Board of Health, 2023

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4.4 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how the City delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. The City will measure specific lifecycle activities to demonstrate how the City is performing in delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.⁸ The technical levels of service presented in this plan are based on key performance indicators (KPIs).

Table 13 shows the activities expected to be provided under the current planned budget allocation and compares the current actual performance to target performance levels. Each of the activities listed in the table below is part of the operations lifecycle stage.

Table 13: Technical Levels of Service

PUBLIC HEALTH SERVICE	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE (2022)	CURRENT TARGET PERFORMANCE (2022)
Chronic Disease Prevention and Well-being	Ensure eligible seniors have access to dental care	Number of eligible clients enrolled in Senior Dental Services who accessed the clinic service	3,486	5,257
Food Safety	Ensure food-borne illnesses and their associated risk factors are detected, identified, and responded to	Percent of special events inspected as a result of a completed risk assessment of high	100%	100%
Healthy Environments	Increase awareness of radon as a health hazard	Number of radon kits distributed to the public	259	300

⁸ IPWEA, 2015, IIMM, p 2|28.

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PUBLIC HEALTH SERVICE	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE (2022)	CURRENT TARGET PERFORMANCE (2022)
Healthy Growth and Development	Ensure pregnant individuals at risk are screened and referred for further assessment and support	Percent of the annual total number of individuals who reside and give birth in Hamilton screened during pregnancy by the Healthy Babies Healthy Children program	18.6%	18%
Immunization	Improve vaccine management practices	Percent of publicly funded vaccine doses wasted	4.6%	<5%
Infectious and Communicable Disease Prevention and Control	Increase compliance with infectious and communicable diseases prevention and control (IPAC) standards	Percent of high-risk childcare inspections completed (Food Safety and Infection Prevention and Control)	66.7%	50%**
Safe Water	Ensure adverse water quality incidents are responded to in a timely manner	Percent of adverse water quality incidents (AWQIs) that had an initial response by PHS within 24 hours	100%	100%
School Health	Ensure school-going children have up-to-date vaccination records	Percent of i) 7-year-olds and ii) 17-year-olds whose vaccinations are up to date for all Immunization of School Pupils Act (ISPA) designated diseases	i) 44.5% ii) 58.4%	100%
Substance Use and Injury Prevention	Increase access to harm-reduction supplies and services	Number of naloxone kits distributed	10,798	9,909

** The 50% Current Target Performance was established for use only in 2022 as it was related to the Covid-19 Emergency Response. Since then, the Target Performance rate has returned to its normal value of 100%

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4.5 PROPOSED LEVELS OF SERVICE DISCUSSION

The level of service that PHS ought to deliver is determined largely by Ontario Public Health Standards. Revised standards are anticipated later this year and will need to be implemented starting next year. At present, performance metrics to determine the quality of PHS services have not been specified and nor has a survey been completed to provide insights on how the customers perceive the quality of services. As a result of these limitations, it is not possible to present a comprehensive analysis of proposed levels of service at this time. However, the following are some areas of service that could be explored further to develop proposed service levels:

The Community Dental Health Bus, which made stops at various locations around the city is currently immobile. The asset is still delivering service, but due to this immobility, the level of service has been reduced since accessibility to the service for many customers has also been reduced. This service is not mandated but was utilized widely by the community. There was no cost recovery in place for the Community Dental Health Bus. PHS has a few options to consider while also listening to the community on their preference. Service delivery options are being brought forward to PHC on June 3, 2024, which will review options and provide recommendations.

The target (80%) for eligible clients enrolled in Senior Dental Services accessing the service was not met (66.3%) and this was found to be due to technology issues and limited capacity. To address these issues, PHS has improved booking processes, monitored appointments, and provided service at satellite clinic locations. It is anticipated that these improvements will improve service performance and will continue to be monitored. The technical limitations on the Senior Dental Bus were the result of a number of factors including unstable internet connectivity challenges and a software solution having reached the end of life. Recruitment for dental staff continues to be challenging.

Only 44.5% of 7-year-olds and 58.4% of 17-year-olds have up-to-date vaccination records for all Immunization of School Pupils Act (ISPA) designated diseases. These numbers are below target levels due to COVID-19 response impacting primary care as well as public health services staff having to be redeployed to COVID-19 response and screening and enforcement of ISPA were paused during the pandemic. A customer expectation is to have up-to-date vaccinations and records for children who are attending school. PHS has been addressing this by delivering catch-up clinics both in the community and school settings.

Finally, health equity is one of the foundational standards of public health. PHS recognizes that there is an inequitable distribution of the social and economic resources that people need to be healthy in Hamilton. All Hamiltonians should be able to attain their full health potential without disadvantage due to social position or other socially determined circumstances. PHS will continue to reduce health inequities and prioritize efforts to ensure that everyone has equal opportunities for optimal health. PHS is currently developing key performance indicators to monitor progress towards health equity which will be included in future AM Plans.

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5. FUTURE DEMAND

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

The ability for the City to be able to predict future demand for services enables the City to plan and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of services required. Demand for PHS programs and services is primarily influenced by the OPHS standards and requirements of the provincial government. PHS will continue to assess the needs of Hamilton residents to inform its programs and services.

5.1 DEMAND DRIVERS

For the PHS service area, the key drivers are legislative requirements, population growth and funding changes.

5.2 DEMAND FORECASTS

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 14**. Unlike other municipal city departments, PHS programming is dictated by Ministry of Health requirements and as such is limited in its ability to forecast demand.

5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets is shown in **Table 14**. Demand for new services will be managed through a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

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Table 14: Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
<p>Legislative Requirements</p>	<p>PHS is required to provide services as mandated by various regulations outlined in Section 2.2</p>	<p>Ontario Public Health Standards (OPHS) which determine the standards for mandated health programs and services are expected to be updated in 2025.</p>	<p>New standards for the provision of mandated health programs and services will be applicable.</p>	<p>Should changes to OPHS come into place that impact PHS services, adjustments will need to be made to meet new requirements.</p>
<p>Population Growth</p>	<p>PHS provides services to meet client needs based on population size.</p>	<p>Population growth is expected across all age groups</p>	<p>Increase in demand for all PHS programs and services including:</p> <ul style="list-style-type: none"> • immunization and screening for communicable diseases, • education programs, • family, child, and youth health services, • population health assessment, • sexual health services, • air quality monitoring, • school services, • dental services, • food and water safety, • injury prevention, and, • public health inspections. 	<p>Additional resources will be required to maintain current levels of service.</p>

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DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Funding Changes	PHS is funded through the ministry with a municipal contribution	COVID-19 funding is no longer being provided.	Reduction in services based on funding allocations.	Based on funding allocations PHS sets program plans in place and implements changes to meet funding constraints and requirements.
Health Equity	Various health risk factors are disproportionately experienced by Hamiltonians	Health inequities will continue to be driven by factors such as education, racialization, income, and housing.	Continued need to prioritize provision of services to the most vulnerable sections of the community.	<p>Enhance staff competency.</p> <p>Enhance collection and use of data to inform policy and measure outcomes.</p> <p>Increase engagement with priority populations.</p>
Mental Health and Substance Use	<p>Intentional self-harm emergency department visits are higher in Hamilton than in Ontario.</p> <p>Hamilton's opioid-related death rate was 63% greater than the provincial average in 2022.</p>	Mental health and substance use-related challenges are not showing any signs of abating.	Higher demand for mental health resources and harm-reduction supplies.	<p>The City of Hamilton has declared an emergency in the areas of opioids, mental health, and homelessness.</p> <p>PHS will continue to update and implement the various municipal policies on mental health and substance use.</p>

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DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Lapsed Immunization of School Pupils Act vaccination records	The current level of up-to-date vaccination records for school-going children is close to merely 50%.	Unless vaccination rates pick up, there will be an increased burden of disease and absence from school.	There remains the potential for an outbreak of various diseases such as measles that can be effectively controlled through vaccinations.	Additional catch-up clinics to ensure school-aged students receive any missed vaccines and stay up to date with their immunizations as well as full implementation of ISPA by 2027.

5.4 ASSET PROGRAMS TO MEET DEMAND

The new assets required to meet demand may be acquired, acquired through a donation or constructed. For PHS, typically assets are acquired. At this time there are no asset acquisitions planned in the 10-year capital plan to meet demands. However, PHS may require additional operations costs for human resources during this time to support the demands identified above.

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6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk⁹.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

6.1 CRITICAL ASSETS

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in **Table 15**. Failure modes may include physical failure, collapse or essential service interruption.

Table 15: Critical Assets

CRITICAL ASSET	FAILURE MODE	IMPACT
Critical Data and Software	Cyber Attack Obsolete/Unsupported Software	<ul style="list-style-type: none"> • Potential loss of various public health services • Potential permanent loss of data • Potential for breach of patient privacy

⁹ ISO 31000:2009, p 2

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CRITICAL ASSET	FAILURE MODE	IMPACT
Seniors Dental Bus and Equipment	Mechanical Failure	<ul style="list-style-type: none"> • Some clients will not have access to mandated dental programming. • Loss of service. • Less available dental chair time for all programming.
Vaccine Fridges	Physical Failure	<ul style="list-style-type: none"> • Delay or interruption of service • Loss of vaccine inventory • Not being able to fill physician orders. • Nurses not being able to go into schools to immunize students. • Impact on access to medications for other programs.
Needle Return Van and Kiosks	Physical Failure	<ul style="list-style-type: none"> • Delay or interruption of service. • Lack of access to clean needles for harm reduction clients. • Increased needle debris in the community.

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

Critical risks are those assessed with ‘Very High’ (requiring immediate corrective action), and ‘High’ (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan.

The risks below were derived from the **2024 PHS Risk Management Framework** and do not yet include residual risks and treatment costs associated with each of the treatment plans. These will be developed in future iterations of the plan and are identified as a continuous improvement item in **Table 24** in **Section 10.1** of this AM Plan.

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Table 16: Risks and Treatment Plans

SERVICE RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN
<p>Overall Service Delivery Risk</p>	<p>Newly announced provincial funding levels may be inadequate to meet service demands.</p> <p>The Ministry of Health also discontinued provincial COVID-19 funding at the end of December 2023 and directed that this work be integrated into existing programs, services, and business processes and funded by the existing cost-shared base budget.</p>	<p>Very High</p>	<p>Identify and communicate Public Health Services' priorities and action areas to adapt and improve existing programs and services to address population health needs.</p> <p>Regularly review program and financial performance data to ensure effective delivery of services in an efficient and fiscally responsible manner.</p> <p>Continue to identify Public Health Services' priorities and related action areas by balancing core public health functions and mandates, local population health needs, Council priorities, and provincial direction.</p>
<p>Cyber Security Risk</p>	<p>The Board of Health may be at risk of privacy breaches, unauthorized external access to Public Health Services' information (i.e., cyber-attack and ransomware attack), and non-compliance with privacy legislation.</p>	<p>Very High</p>	<p>Build awareness of and competence in the application of privacy policies with updated e-modules and tailored staff training across Public Health Services, including relevant Corporate IT staff.</p> <p>Continue to educate, prohibit, and restrict Public Health Services staff's use of any corporate enterprise software solutions that have not undergone a full privacy impact assessment by Public Health Services.</p>
<p>Information Risk</p>	<p>Varying information management practices and the absence of a formalized record management platform could lead to loss of information, privacy breaches or non-compliance with record management obligations, which include privacy and security requirements.</p>	<p>Very High</p>	<p>Identify and respond to any records and information management policy and governance gaps.</p>

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SERVICE RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN
Updated Health Standards	<p>Changes in Ontario Public Health Standards may require adjustments in the skill sets and training of public health professionals, and the allocation of resources within public health.</p> <p>If the revised Ontario Public Health Standards do not adequately consider the diverse needs of local communities, there is a risk of misalignment between the standards and the specific health challenges faced by local communities. This may impede the effectiveness of public health initiatives.</p>	High	<p>Engage in consultation with the Ministry of Health where possible.</p> <p>Advocate for continued and increased funding, resources, and support for public health units.</p> <p>Engagement and participation in various strategic provincial-level forums.</p>
Governance Risk	<p>Recently approved recommendations to change the Board of Health governance structure, slated for implementation in 2024-2025, may also impact the Public Health Service's capability to make prompt decisions and respond effectively to ensuing changes. Implementing the new governance structure may also require additional resources which may strain Public Health Service's capacity to manage the change effectively.</p>	High	<p>Continue to share relevant information with decision-makers to support changes in the Board of Health Governance structure.</p> <p>Develop and implement change management strategies to support the departments through change.</p>
Staffing Challenges	<p>PHS may be at risk of precarious staffing due to challenges with recruitment and retention. This pertains to the dual challenge of attracting suitable candidates and maintaining their engagement over the long term.</p>	High	<p>Regular assessment of current vacancies.</p> <p>Complete succession planning.</p> <p>Advocate for provincial funding to build capacity in the public health system to ensure dedicated staff are available to respond to emergencies without impacting core public health programs and services.</p>

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SERVICE RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN
<p>Technology Risk</p>	<p>The Board of Health may be at risk due to the use of dated software/technology or ones reaching the end of life.</p> <p>Technology is not being updated or replaced quickly enough, resulting in the use of outdated and/or unsupported applications and systems.</p> <p>Potential for data loss, privacy and security breaches, business disruption, impact on service delivery, and inefficient business processes.</p>	<p>High</p>	<p>Prioritizing the replacement and/or version upgrade of existing software systems and technology.</p>

6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to ‘withstand a given level of stress or demand’, and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment and crisis leadership.

6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective of achieving the optimum benefits from the available resources.

Table 17 outlines what activities PHS cannot afford to do over the next 10 years with their existing budget and provides the associated service and risk tradeoffs.

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Table 17: Service and Risk Trade-offs

WHAT WE CANNOT DO	SERVICE TRADE-OFF	RISK TRADE-OFF
<p>The Community Dental Health Bus was deemed not mobile due to poor structural integrity. There was no capital replacement set aside to purchase a new bus.</p>	<p>Decrease in the level of accessibility to dental care for the community.</p>	<p>Health equity risk due to reduced access to dental services for vulnerable members of the community. Potential reputation loss for PHS.</p>

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7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we have already begun to experience (adaptation). At a minimum, the City must consider how to manage our existing assets given the potential climate change impacts for our region.

Changes to Hamilton's climate will impact City assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models as well as levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan. This has been identified as a Continuous Improvement item in **Table 24**.

7.1 CLIMATE CHANGE MITIGATION (

Climate Mitigation refers to human intervention to reduce Greenhouse Gas (GHG) emissions or enhance GHG removals (e.g. building transportation infrastructure that can support cycling and public transit and reduce the need for car travel). The City of Hamilton's Community Energy + Emissions Plan (CEEP) includes five Low-carbon Transformations necessary to achieve the City's target of net-zero GHG emissions by 2050:

- Innovating our industry;
- Transforming our buildings;
- Changing how we move;
- Revolutionizing renewables; and
- Growing Green.

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Mitigation Demand Analysis

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City’s modelled targets for the low carbon transformations that applied to the service/asset;
- Discussing the impact, the targets would have on the service/asset; and
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050 as shown in **Table 18** below.

As previously mentioned, due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below have not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AM Plan. This has been identified as a continuous improvement item in **Table 24**.

Moving forward, the Climate Lens tool discussed in the AMP Overview will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

Mitigation Demand Analysis

Table 18: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Changing How We Move	<p>100% of new municipal small and light-duty vehicles will be electric by 2040.</p> <p>100% of new municipal heavy-duty vehicles switch to clean hydrogen by 2040.</p>	<p>Electric Vehicle Chargers will need to be installed.</p> <p>Compensation for staff who charge City vehicles at home will need to be considered.</p> <p>Initial upfront capital costs for electric vehicles.</p>	<p>The vehicle conversion schedule for the existing fleet will be developed in partnership with Fleet to convert where feasible and as the market allows. Limitations may exist for heavy-duty vehicles due to availability within the market. Capital budgets will reflect increased costs related to conversions and additions to the existing fleet. Capital budgets will also be developed and submitted for charging stations on facilities.</p>

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MITIGATION RISK ANALYSIS

Failure to complete climate change mitigation projects will cause the City to continue contributing to climate change, to varying degrees. These mitigation projections were completed by the International Council for Local Environmental Initiatives (ICLEI) and were modelled in the Climate Science Report for the City of Hamilton. A risk analysis, for not completing climate mitigation projects (ICLEI Canada, 2021), has not been completed in this AMP.

CURRENT MITIGATION PROJECTS

PHS is currently not pursuing any climate mitigation projects.

7.2 CLIMATE CHANGE ADAPTATION

Climate Adaptation refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads i.e., more extreme temperatures and weather events).

The impacts of climate change may have a significant impact on the assets we manage and the services we provide. Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.¹⁰

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report guided by ICLEI's Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP) (ICLEI, 2021). The BARC Framework identified thirteen high-impact areas. Of these, the most applicable to PHS assets are included in **Table 19** below.

¹⁰ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

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Adaptation Demand Analysis

Table 19: Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	BASELINE	AVERAGE PROJECTED CHANGE	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Dryer, hotter and longer summers may affect the health and safety of local vulnerable populations.	71.6 Days Average Length of The Hot Season	102 Days Average Length of The Hot Season		Development of a Heat Response Strategy that will help identify actions to be taken to reduce the impacts of extreme heat on the health of the community.
More frequent and intense heatwaves will increase instances of heat-related health and safety issues, particularly for households without access to reliable air-conditioning and the homeless	2.1 Average Annual Heat Waves	4.7 Average Annual Heat Waves	PHS will need to continue to lead activities that protect the health of the public from heat-related health issues.	Community Heat Response Plan implemented jointly between various City divisions and community agency stakeholders (e.g., Hamilton Public Library, Salvation Army, Shelter networks, etc.).
Increased temperatures and changes in precipitation increase incidences of infectious diseases and vector-borne diseases as a result of longer transmission periods or changes in the geographic distribution of disease vectors.	52.2 Number of Ice Days (Temperature Below 0 Degrees Celsius)	35.7 Number of Ice Days (Temperature Below 0 Degrees Celsius) Extending The Breeding Season Of Mosquitos/Ticks.	Additional staffing and funding resources may potentially be required.	Various facilities in the city function as warming and cooling centres for the community as a result. Increase surveillance, public awareness, and detection of climate-sensitive vector-borne diseases to reduce the incidence of vector-borne diseases.

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ADAPTATION RISK ANALYSIS

Additionally, the City should consider the risks for the asset or service as a result of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Similarly, to the exercise above and using the risk process in **Section 6**, asset owners:

- Reviewed the likelihood scores in the Vulnerability and Risk Assessment Report for the adaptation impact occurring;
- Identified the consequence to the asset/service if the event did happen to develop a risk rating; and,
- If the risk was identified as high, the asset owner produced a preliminary risk adaptation plan shown below in **Table 20**.

It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of adapting to the risks below has not been included in the lifecycle and financial models at this time. The adaptation plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should consider these risks during the planning and design processes. Future changes will be incorporated into future iterations of the AM Plan. Moving forward, the Climate Lens tool will assess projects based on these targets and will assist with the prioritization of climate adaptation projects. This has been identified as a continuous improvement item in **Table 24**.

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Table 20: Adapting to Climate Change

ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
Drier, hotter and longer summers may affect the health and safety of local vulnerable populations.	Overall service delivery	A climate emergency could lead to risk exposure in terms of loss or reallocation of resources leading to potential legislative non-compliance and/or negative public image.	High	Implement Emergency Response Plans, Business Continuity Planning, and Hazard-Specific Plans. Participate in Corporate Climate Change Task Force and Building Adaptive & Resilient Communities Work.
More frequent and intense heatwaves will increase instances of heat-related health and safety issues, particularly for households without access to reliable air-conditioning and the homeless				
Increased temperatures and changes in precipitation increase incidences of infectious diseases and vector-borne diseases as a result of longer transmission periods or changes in the geographic distribution of disease vectors.				

CLIMATE ADAPTATION DISCUSSION

As a response to more extreme weather conditions, and to protect its most vulnerable populations, the City has designated a number of its facilities as warming and cooling centres. PHS is the voice stating that these centres are needed and leads the City’s overall response to protect the health of its residents. In addition, PHS is also responsible for issuing heat and cold alerts in case of adverse weather events. PHS is leading the development of the City’s Heat Response and Winter Response Strategies. An environmental emergency caused by climate change could lead to increased risk for PHS in terms of a shortage of staff and resources, as well as a negative public image.

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8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budgets. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated together and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of whole-life costs and funding options. However, at this time the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan, but only to the extent that there is available funding.

8.1 ACQUISITION PLAN

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs. Assets can either be donated or constructed.

DONATED ACQUISITIONS

Over the next 10 years, no donated asset acquisitions are anticipated and hence none are included in the lifecycle model.

The City is reviewing its donated asset assumption process to ensure that it proactively understands what assets are being donated annually to ensure they are appropriately planned for. This will allow multiple departments across the City to plan for the assets properly such as:

- AM to forecast the long-term needs and obligations of the assets;
- Operations and maintenance can include the assets in their planned activities (inspections, legislative compliance activities); and,
- Finance can ensure that assets are properly captured and recognized appropriately (Audited Financial Statements, TCA process, Provincial reporting such as the FIR).

CONSTRUCTED OR PURCHASED ACQUISITIONS

Constructed assets can either be new assets which did not exist before or an expansion of assets when they are to be replaced. Over the next 10-year planning period PHS is not acquiring any constructed assets.

Future acquisitions to ensure service levels are maintained over the long term are not included. With competing needs for resources across the entire city, there will be a need to investigate trade-offs and design options to further optimize asset decisions and ensure intergenerational

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equity can be achieved. Hamilton will continue to monitor its constructed assets annually and update the AM Plan when new information becomes available.

8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal, and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons.

For Public Health Services, almost 100% of the annual budget is spent on costs corresponding to the operations lifecycle stage.

- The most significant operating costs are employee-related which add to upwards of \$50 Million annually.
- Other important annual operating expenditures include \$2.2 Million for contractual services, \$2.1 Million for rent of offices and buildings and \$534k for external debt repayments.

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure they reach their intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition. Examples of typical maintenance activities include equipment repairs and component replacements along with appropriate staffing and material resources required to perform these activities. Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure that PHS assets are reliable to deliver the desired level of service.

As PHS is not an asset-intensive service, the annual maintenance budget is roughly only \$30k. This amount is allocated for general repair to equipment and electrical maintenance. It should be acknowledged that these forecasted costs do not yet fully include the recommended works that need to be undertaken to ensure the entire inventory of assets will achieve their desired service lives and level of service.

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All figure values are shown in 2023 dollars.
Figure 9: Operations and Maintenance Summary

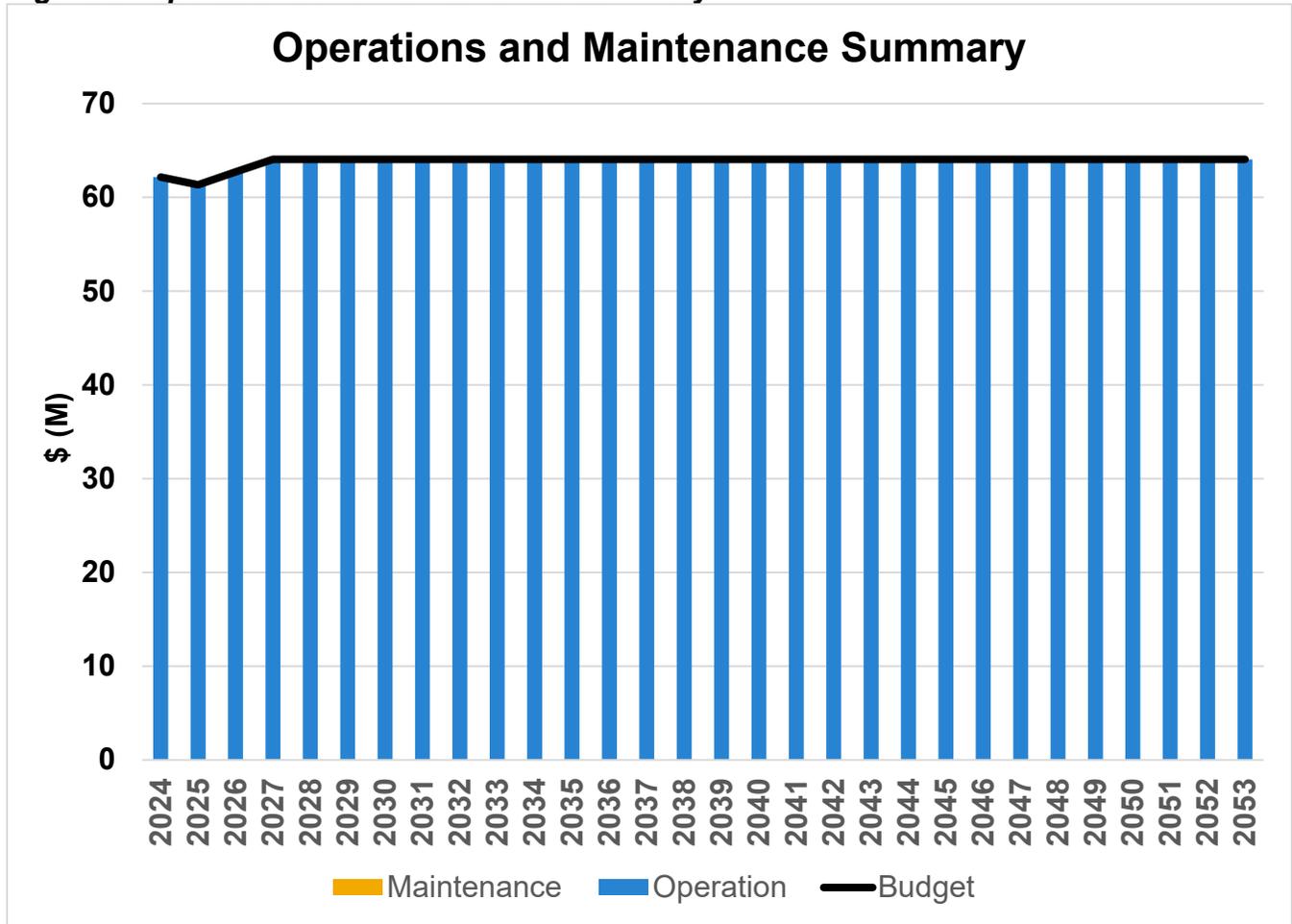


Figure 9 makes it clear that maintenance costs are negligible compared to operations costs for PHS. This is primarily due to PHS being service-intensive while only owning minimal assets. As previously mentioned, the majority of the operations costs are employee-related.

8.3 RENEWAL PLAN

Renewal is major works which does not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs

Asset renewals are typically undertaken to either ensure the asset's reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

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The typical useful lives of assets used to develop projected asset renewal forecasts are presented in **Table 21**. Asset useful lives were last reviewed in 2023 however they will be reviewed annually until their accuracy reflects the City’s current practices.

Table 21: Useful Lives of Assets

ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Dental Buses	12
Utility Vehicles	10
Laptops, Desktops	5
Enhanced Laptops, Enhanced Desktops, Tablets	4
Mobile Devices	2
Furnishings	10
Equipment – Communicable Disease Control	10
Equipment – Epidemiology & Wellness	10
Equipment – Healthy Environment	10
Equipment – Healthy Families	10

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).¹¹

Future methodologies may be developed to optimize and prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure;
- Have high use and the subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have the potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.¹²

¹¹ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

¹² Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

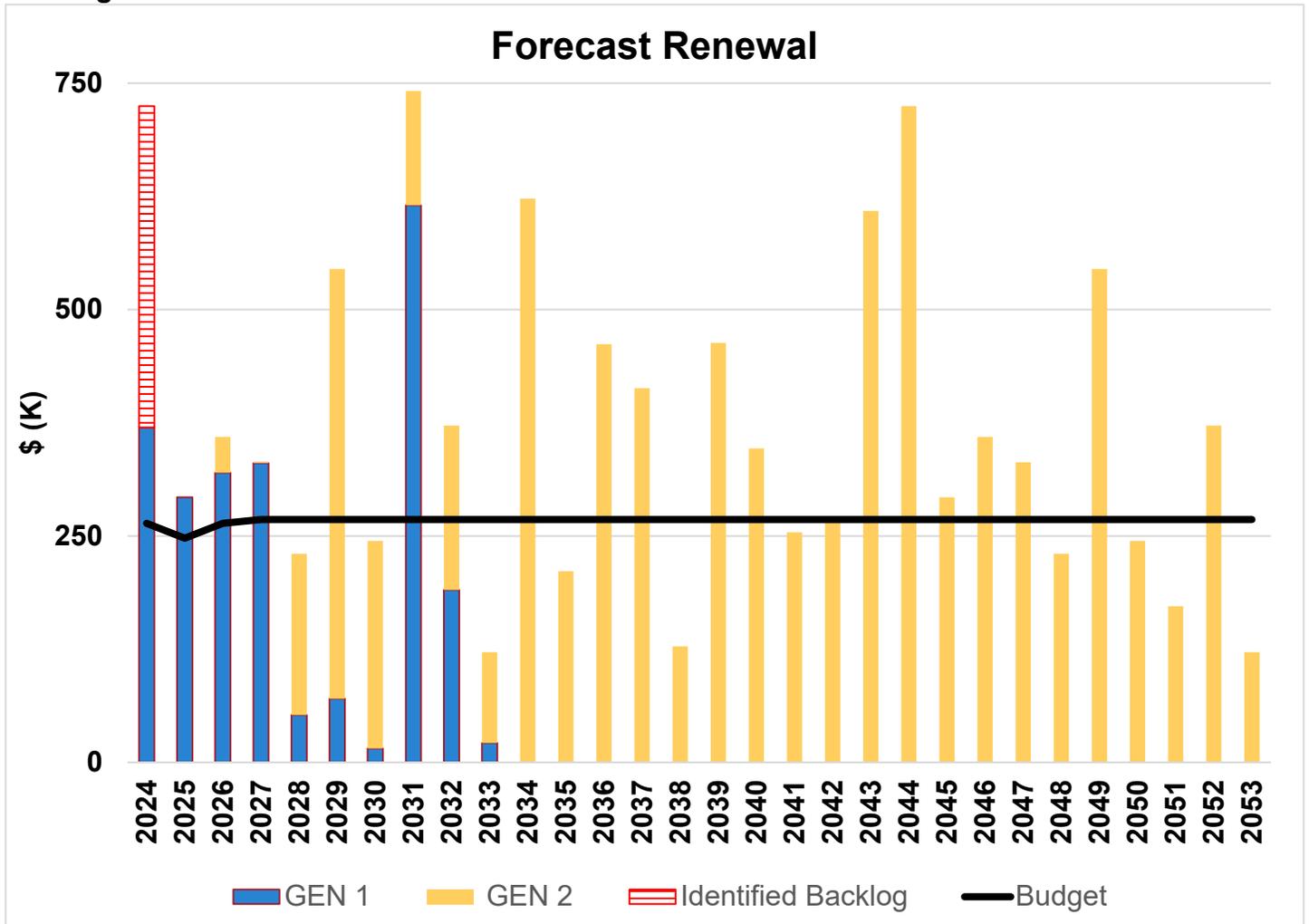
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SUMMARY OF FUTURE RENEWAL COST

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in **Figure 10**.

In the figure below, Generation 1 (Gen 1) costs refer to renewals that occur for the first time in the model based on the estimated service life and Generation 2+ (Gen 2+) costs refer to renewals that have occurred twice or more based on the estimated service life.

Figure 10: Forecast Renewal Costs
 All figure values are shown in 2023 dollars.



Currently, PHS has a renewal backlog amount of approximately \$355k. The major backlog items include:

- \$235k for Information Technology assets (staff devices); and,
- \$104k for Furnishings assets.

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The planned renewal works over the 10-year planning horizon include:

- From the multiyear operating forecast: \$265k per annum for ongoing renewal of vehicles, IT assets, equipment, and furnishings as they reach the end of service life.

8.4 DISPOSAL PLAN

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen.

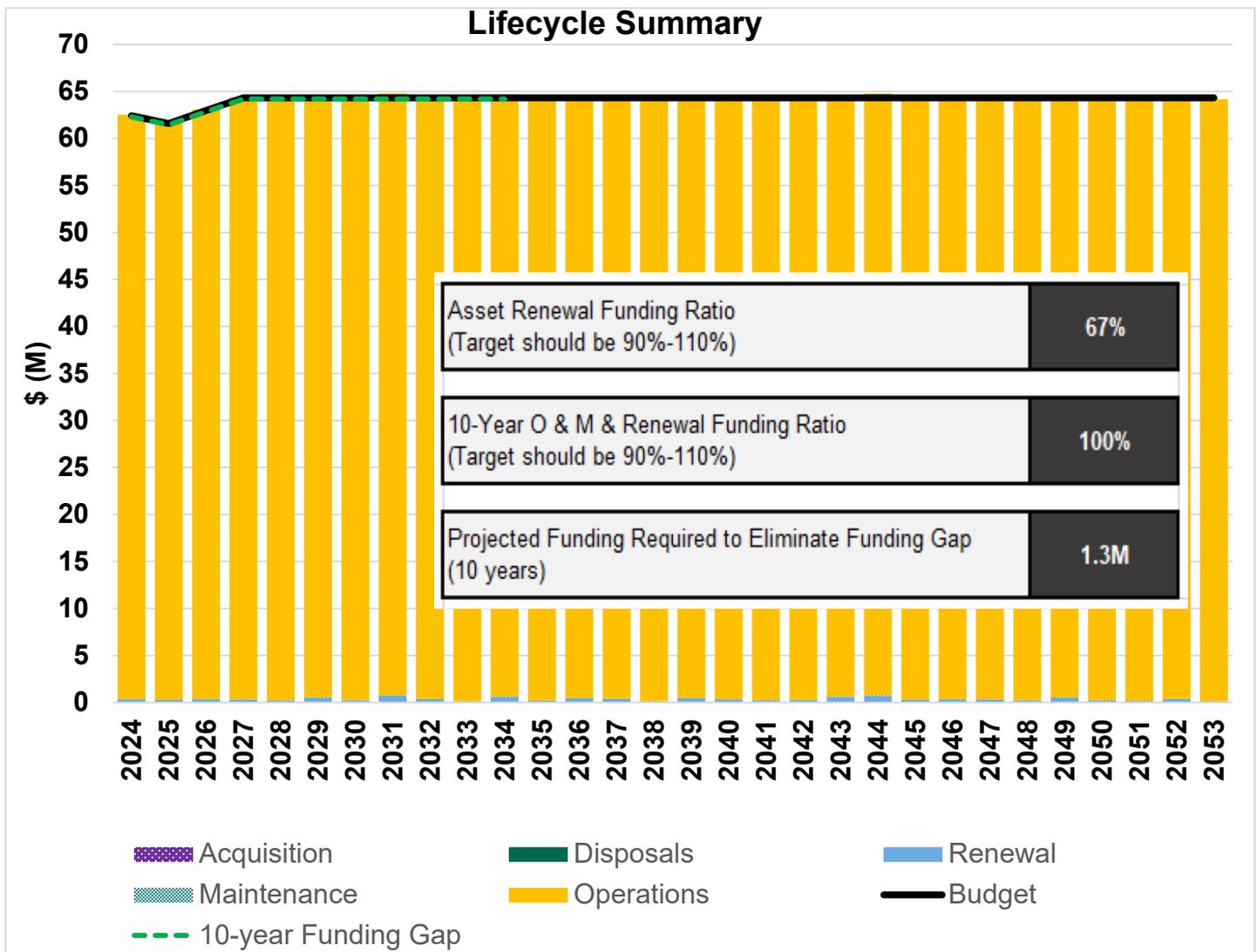
Currently, no assets have been identified for disposal by PHS.

8.5 LIFECYCLE COST SUMMARY

The financial projections from this asset plan are shown in **Figure 11**. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget. The bars in the graphs represent the forecast costs needed to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving a balance between costs, levels of service and risk to achieve the best value outcome.

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Figure 11: Lifecycle Summary
All figure values are shown in 2023 dollars.



As **Figure 11** shows, PHS’s budget is almost completely composed of operations expenditures. Based on the current financial data, there is mostly sufficient budget to meet currently identified needs other than some minor unfunded asset renewals mentioned in Section 8.3.

However, with the increase in funding not keeping pace with inflation and population growth, and the discontinuation of certain provincial funding, as well as the unquantified demands, risks, and climate change impacts identified in the report, PHS may still require additional funds to maintain current levels of service in future years.

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9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure PHS provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-term financial planning (LTFP) is critical for the City to ensure that network lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without properly funding asset activities for PHS; the City will have difficult choices to make, in the future which will include options such as higher costs, reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all of the network's needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

9.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- Medium-term forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio¹³ **67%**

The Asset Renewal Funding Ratio (ARFR) is used to determine if the City is accommodating asset renewals in an **optimal** and **cost-effective** manner from a timing perspective and relative to financial constraints, the risk the City is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable, however, the expenditures are below this level in some service areas predominantly due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

¹³ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

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Over the next 10 years, PHS expects to have 67% of the funds required for asset renewals. This is not in the optimal range of 90-110%, but as previously mentioned, the operational cost is the largest cost for PHS and therefore the ARFR is not the best indicator for the service performance of PHS. However, asset renewal is the largest contributor to the minor shortfall discussed below. Major contributors to unfunded renewals include the Seniors Dental Bus and technology assets (i.e., staff devices).

If assets are not renewed at the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to the City's reputation and risk of fines or legal costs

The lack of renewal resources will be addressed in future AM Plans while aligning the plan to the LTFFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

MEDIUM-TERM – 10 YEAR FINANCIAL PLANNING PERIOD

10-Year Operations, Maintenance and Renewal Financial Ratio 100%

Although this AM Plan includes forecast projections to 30 years, the higher confidence numbers are typically within the first ten years of the lifecycle forecast. The 10-year Operations, Maintenance and Renewal Financial Ratio compares the Planned Budget with the Lifecycle Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the ARFR, the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization's risk and service level commitments.

The forecast operations, maintenance and renewal costs over the 10-year planning period is **\$63.9 Million** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The proposed (budget) operations, maintenance and renewal funding is **\$63.8 Million** on average per year giving a minor 10-year funding shortfall of **\$131k** per year or **\$1.3 Million** over the 10-year planning period. Since this shortfall is minor in comparison to their budget, PHS has almost **100%** of the forecast costs needed to provide the services documented in this AM Plan accommodated in the proposed budget, which is within the 90-110% range. As discussed above, the minor shortfall amount is related to unfunded asset renewals mostly attributed to technology assets. Therefore, it can be concluded that PHS is funding their service at an acceptable rate.

It must be noted, however, that PHS faced funding cuts from the provincial government at the end of 2023 and is anticipating changes in the Ontario Public Health Standards. Together, these changes can significantly impact what level of service PHS is mandated to provide and the

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amount of funds available to deliver those service levels. Hence, the 10-year O&M and Renewal ratio of 100% is likely to decline in the coming years.

Funding an annual funding shortfall or funding 'gap' should not be addressed immediately. The overall gap in funding city-wide will require vetting, planning and resources to begin to incorporate gap management into the future budgets for all City services. This gap will need to be managed over time to reduce it in a sustainable manner and limit financial shock to customers. Options for managing the gap include;

- Financing strategies – increased funding, block funding for specific lifecycle activities, long-term debt utilization;
- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets; and,
- Influence level of service expectations or demand drivers.

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of **90-110%** for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

9.2 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Table 22 shows the forecast costs (outlays) required for consideration in the 30-year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

The City will manage the 'gap' by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low-use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

HAMILTON PUBLIC HEALTH SERVICES 2024 ASSET MANAGEMENT PLAN

****Forecast costs are Shown in 2023 Dollar Values**

Table 22: Forecast Costs for the Long-Term Financial Plan

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2024	\$ -	\$ 62,126,896	\$ 29,545	\$ 369,833	\$ -
2025	\$ -	\$ 61,307,972	\$ 29,615	\$ 292,821	\$ -
2026	\$ -	\$ 62,685,848	\$ 29,780	\$ 359,439	\$ -
2027	\$ -	\$ 64,023,868	\$ 30,070	\$ 331,489	\$ -
2028	\$ -	\$ 64,023,868	\$ 30,070	\$ 230,341	\$ -
2029	\$ -	\$ 64,023,868	\$ 30,070	\$ 544,856	\$ -
2030	\$ -	\$ 64,023,868	\$ 30,070	\$ 244,495	\$ -
2031	\$ -	\$ 64,023,868	\$ 30,070	\$ 741,378	\$ -
2032	\$ -	\$ 64,023,868	\$ 30,070	\$ 371,846	\$ -
2033	\$ -	\$ 64,023,868	\$ 30,070	\$ 121,738	\$ -
2034	\$ -	\$ 64,023,868	\$ 30,070	\$ 622,475	\$ -
2035	\$ -	\$ 64,023,868	\$ 30,070	\$ 211,089	\$ -
2036	\$ -	\$ 64,023,868	\$ 30,070	\$ 461,676	\$ -
2037	\$ -	\$ 64,023,868	\$ 30,070	\$ 413,221	\$ -
2038	\$ -	\$ 64,023,868	\$ 30,070	\$ 128,104	\$ -
2039	\$ -	\$ 64,023,868	\$ 30,070	\$ 463,124	\$ -
2040	\$ -	\$ 64,023,868	\$ 30,070	\$ 346,732	\$ -
2041	\$ -	\$ 64,023,868	\$ 30,070	\$ 254,110	\$ -
2042	\$ -	\$ 64,023,868	\$ 30,070	\$ 269,609	\$ -
2043	\$ -	\$ 64,023,868	\$ 30,070	\$ 609,006	\$ -
2044	\$ -	\$ 64,023,868	\$ 30,070	\$ 724,712	\$ -
2045	\$ -	\$ 64,023,868	\$ 30,070	\$ 292,821	\$ -
2046	\$ -	\$ 64,023,868	\$ 30,070	\$ 359,439	\$ -

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YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2047	\$ -	\$ 64,023,868	\$ 30,070	\$ 331,489	\$ -
2048	\$ -	\$ 64,023,868	\$ 30,070	\$ 230,341	\$ -
2049	\$ -	\$ 64,023,868	\$ 30,070	\$ 544,856	\$ -
2050	\$ -	\$ 64,023,868	\$ 30,070	\$ 244,495	\$ -
2051	\$ -	\$ 64,023,868	\$ 30,070	\$ 172,378	\$ -
2052	\$ -	\$ 64,023,868	\$ 30,070	\$ 371,846	\$ -
2053	\$ -	\$ 64,023,868	\$ 30,070	\$ 121,738	\$ -

9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in the City’s operational budget and 10-year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM plan will provide service delivery options and alternatives to optimize limited financial resources.

9.4 VALUATION FORECASTS

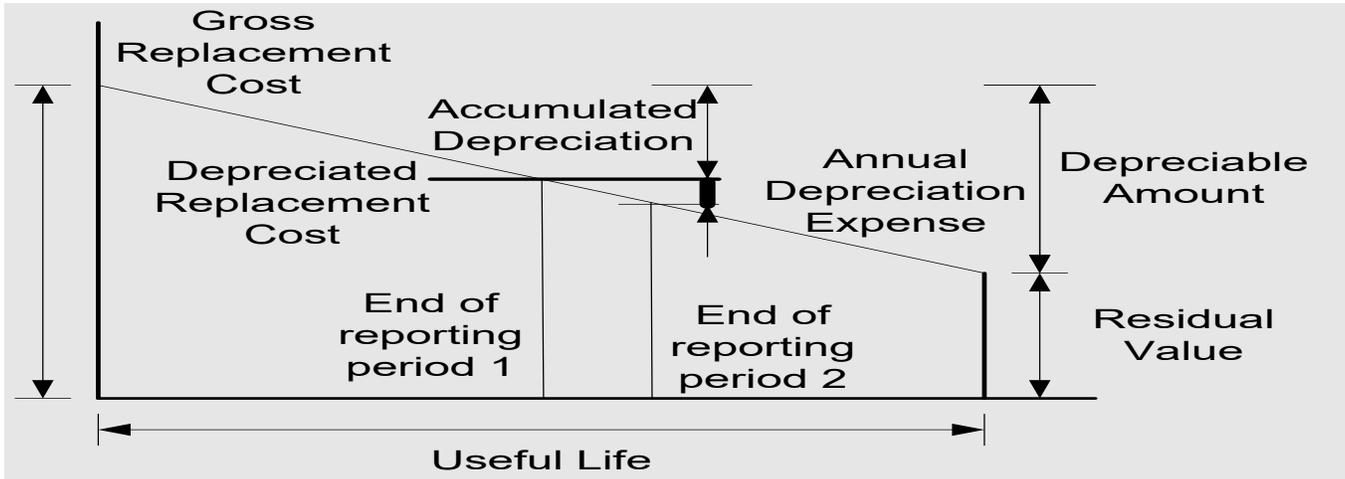
Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and remove the high costs of renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs. However, this will be improved for the next iteration of the plan.

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9.5 ASSET VALUATION

Replacement Cost (Current/Gross)	\$3,447,786
Depreciable Amount	\$2,632,807
Depreciated Replacement Cost¹⁴	\$868,058
Depreciation	\$548,035



9.6 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 30-year horizon and do not address other operational needs not yet identified;
- Maintenance forecasts are based on current budget allocations and do not identify asset needs at this time. It is solely based on planned activities; and,
- Replacement costs were based on historical costing. They were also made without determining what the asset would be replaced with in the future.

¹⁴ Also reported as Written Down Value, Carrying or Net Book Value.

HAMILTON PUBLIC HEALTH SERVICES 2024 ASSET MANAGEMENT PLAN

9.7 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the [AMP Overview](#).

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a **Low to Medium** confidence level. Improving the confidence assessment of the data has been identified as a continuous improvement item in **Table 24**.

Table 23: Data Confidence Assessment for Data Used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	Low	The impacts from the identified demand drivers were not added to the lifecycle model for this iteration of the AM plan.
Acquisition Forecast	Low	Used PHS's 10-Year Capital Plan for anticipated acquisitions which are subject to change.
Operations Forecast	Medium	Based on PHS's multiyear operating forecast. Subject to change with changes in funding levels and Ontario Public Health Standards.
Maintenance Forecast	Medium	Based on PHS's multiyear operating forecast.
Renewal Forecast - Asset Values	Low	Renewal costs for vehicles have come from the Corporate Fleet and for Information Technology assets from Corporate IT. A combination of market and historical costs was used for renewal costs of furnishings and equipment.
Renewal Forecast - Asset Useful Life	Medium	Estimated service lives are based on the subject matter expert's opinion for all asset classes.
Renewal Forecast – Condition Modelling	Medium	The condition of vehicles, furnishings and equipment assets was based on the subject matter expert's opinion. Condition of IT assets was based on estimated remaining service life.
Disposal forecast	Not Applicable	No disposals were integrated into the forecast.

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10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PRACTICES

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2023 Approved Operating Budget;
- 2024-2027 Multi-Year Operating Forecast;
- 2024-2033 Multi-Year Capital Forecast;
- Asset Management Data Collection Templates;
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter Expert Opinion and Anecdotal Information; and,
- Reports from the mandatory inspections, operational & maintenance activities internal reports.

10.2 IMPROVEMENT PLAN

It is important that the City recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision-making. The tasks listed below are essential to improving the AM Plan and the City's ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning and plans to physically improve the assets.

The Improvement Plan **Table 24** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this AM Plan will provide updates on these improvement plans.

HAMILTON PUBLIC HEALTH SERVICES 2024 ASSET MANAGEMENT PLAN

Table 24: Improvement Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1.	Develop an asset register for all PHS assets.	PHS	Internal Resources	Q4 2025
2.	Assign replacement value to PHS’s intangible assets	PHS/CAM		2026
3.	Develop methodologies to determine asset conditions for PHS’s assets.	PHS		Q4 2025
4.	PHS will continue to look at opportunities for community engagement and customer feedback across all program areas.	PHS		Ongoing
5.	Determine residual risk and treatment costs of implementing the selected treatment plans	PHS		Ongoing
6.	Determine costs related to climate change mitigation and adaptation demands and risks.	PHS		Ongoing
7.	Improve confidence assessment of data used for financial forecast.	PHS		Q4 2025

10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated on a regular basis to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

HAMILTON PUBLIC HEALTH SERVICES 2024 ASSET MANAGEMENT PLAN

10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one-to-ten-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 110%).

HAMILTON PUBLIC HEALTH SERVICES 2024 ASSET MANAGEMENT PLAN

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Recreation Asset Management Plan 2024



RECREATION 2024 ASSET MANAGEMENT PLAN

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RECREATION 2024 ASSET MANAGEMENT PLAN

SUMMARY AND QUICK FACTS

SERVICE PROFILE



The City of Hamilton's Recreation Division caters to the diverse needs of the community by offering a wide variety of recreation programs suitable for all ages and abilities. Facilities in their portfolio which support these programs include ice arenas, community halls, indoor and outdoor pools, senior centres, recreation centres, and golf courses.

ASSET SUMMARY



Replacement Value

\$1.57B

FAIR CONDITION

Average Age of **39** years or
49% of the average remaining
service life



LEVEL OF SERVICE SUMMARY

- Customers feel Recreation has **GOOD** performance overall in the last 24 months in all service areas.
- Customers feel that Recreation **MEETS NEEDS** overall.
- Customers are **SATISFIED** with their ability to access Recreation sites and services.

ASSET HIGHLIGHTS

ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION	STEWARDSHIP MEASURES
Recreation Facilities	113	\$1.536B	Fair	Building condition assessments completed every 5 years
Golf Facilities	18	\$17M	Poor	

DATA CONFIDENCE



RECREATION 2024 ASSET MANAGEMENT PLAN

DEMAND DRIVERS

Population Growth - Hamilton's population is projected to increase to approximately 636,080 by 2031. This forecasted increase in population will significantly increase the demand for the volume of services provided by Recreation over the next ten years and beyond.

Facility Conditions - A backlog of maintenance work has accumulated on recreation facilities, requiring remediation. These unresolved projects pose a risk to the reputation of the Recreation Division as facilities continue to deteriorate over time, potentially causing a decline in service levels.

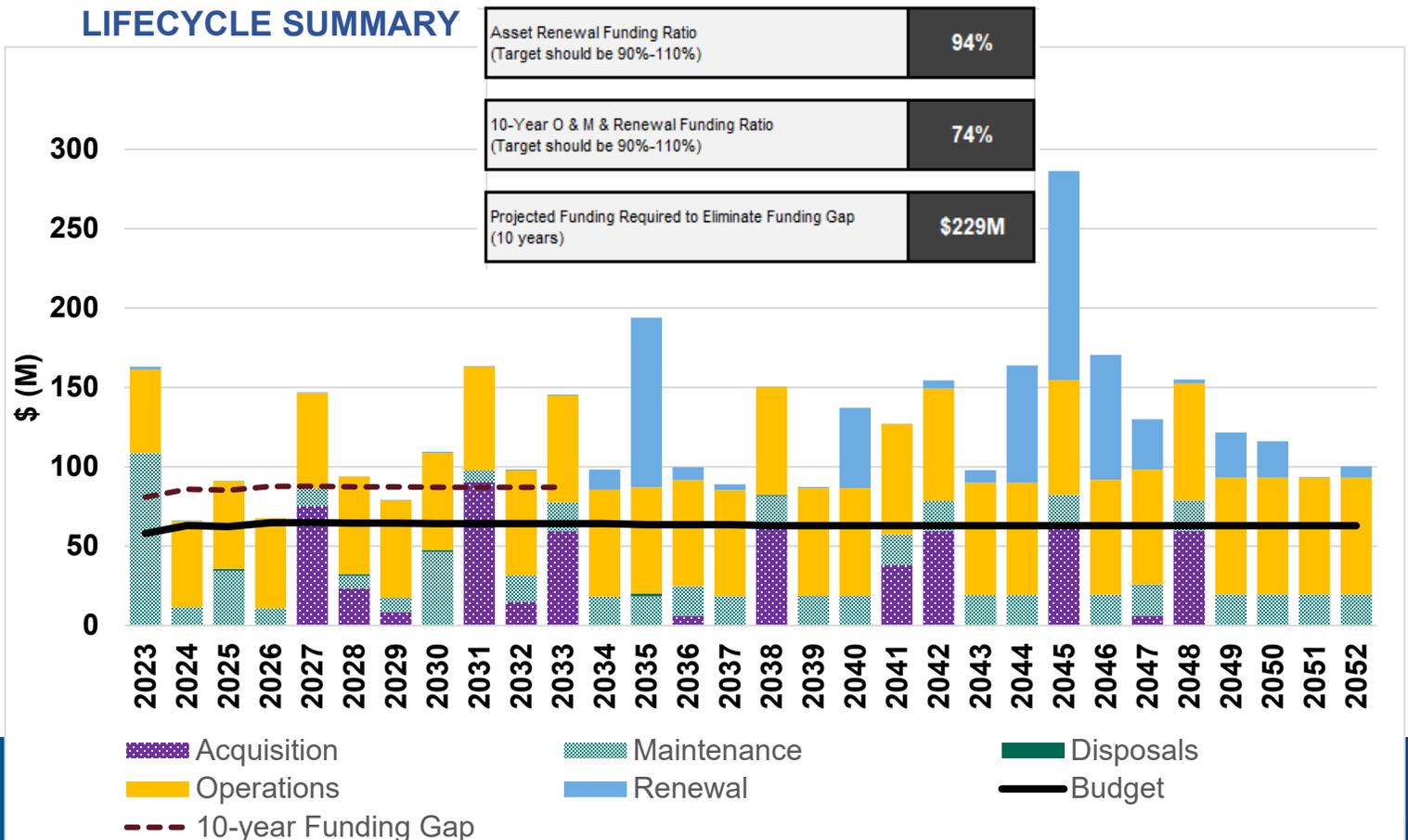
RISK

The primary Critical Assets identified by the division are the emergency use recreation centres, refrigeration plant safety devices, and the emergency phone system.

CLIMATE CHANGE MITIGATION

Among strategies being implemented, Recreation is working towards updating showerheads in public showers to low-flow models, implementing heat recovery from drains to reduce natural gas consumption and the electrification of ice resurfacers.

LIFECYCLE SUMMARY



RECREATION 2024 ASSET MANAGEMENT PLAN

1. INTRODUCTION

The Recreation Division offers a varied array of activities encompassing sports and arts, catering to individuals of all ages and abilities, fostering engagement among both residents and visitors. These programs and services play a crucial role in enhancing the physical and social well-being of residents, while also contributing to the economic and environmental health of the city. The Purpose of this Asset Management Plan (AM Plan) is to ensure that the Recreation Division has the required assets to deliver the necessary services to the City.

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements, as stated in the Ontario Regulation 588/17¹ and required funding to provide the appropriate levels of service over the 2023-2052 planning period.

Since Sunday, February 25, 2024, the City of Hamilton experienced a cyber incident that disabled some of the IT systems. As a result, this AM Plan was created based on the data that was accessible at the time of publication.

¹ (Government of Ontario, 2017)

RECREATION 2024 ASSET MANAGEMENT PLAN

2. BACKGROUND

The information in this section is intended to provide background on the Recreation services by providing a service profile, outlining legislative requirements, and defining the asset hierarchy used throughout the report. Also under the purview of the Recreation division are two public golf courses, which are included as part of their assets and services provided.

2.1 SERVICE PROFILE

Listed below are related documents reviewed in preparation of the Asset Management Plan:

- City of Hamilton Recreation Master Plan – July 21st, 2022
- Asset Management Plan Overview Document

Additional financial-related documents are identified in **Section 10** Plan Improvement and Monitoring.

2.1.1 SERVICE HISTORY

The City of Hamilton has a rich history of providing recreational facilities for public use, overseeing a diverse portfolio of facilities, which caters to the various needs and interests of the community. This includes ice arenas, community halls, indoor and outdoor pools, senior centres, and recreation centres. Moreover, the division manages three 18-hole public golf courses. Among these is the Chedoke Civic Golf Course, which has been a hub for golfing enthusiasts since 1896, featuring two public 18-hole courses: Beddoe and Martin. Additionally, the division operates the King's Forest Golf Course, a 7,150-yard, 18-hole course that opened in the fall of 1973.

2.1.2 SERVICE FUNCTION

Recreation services aim to provide facilities and programming for residents and visitors of Hamilton. Wide-ranging program offerings include swimming, skating, sport, fitness, music and arts. These programs and services are provided through "direct" and "indirect" methods of delivery. Direct services are programs provided by municipal staff through every aspect from development to evaluation and include registered classes such as swimming lessons and day camps; and casual/drop-in opportunities, including open gym and family skating. Indirect provision of services requires staff involvement to ensure sustainability and maintenance of service levels. These services are delivered through collaboration with community groups, affiliated organizations, and service clubs, often by formal agreement, who rent spaces or facilities, manage the associated programs and deliver services at an affordable rate to the community. Examples of indirect services include lawn bowling, bocce, and tennis club

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operations as well as adult day programs and EarlyOn Child and Family centres. Arenas, outdoor rinks, community recreation centres, indoor pools, community halls, wading and outdoor pools, senior centres, and golf courses are among the various facilities available. Additionally, this service function offers accessible and inclusive opportunities for residents achieved through the implementation of policies and proactive strategies.

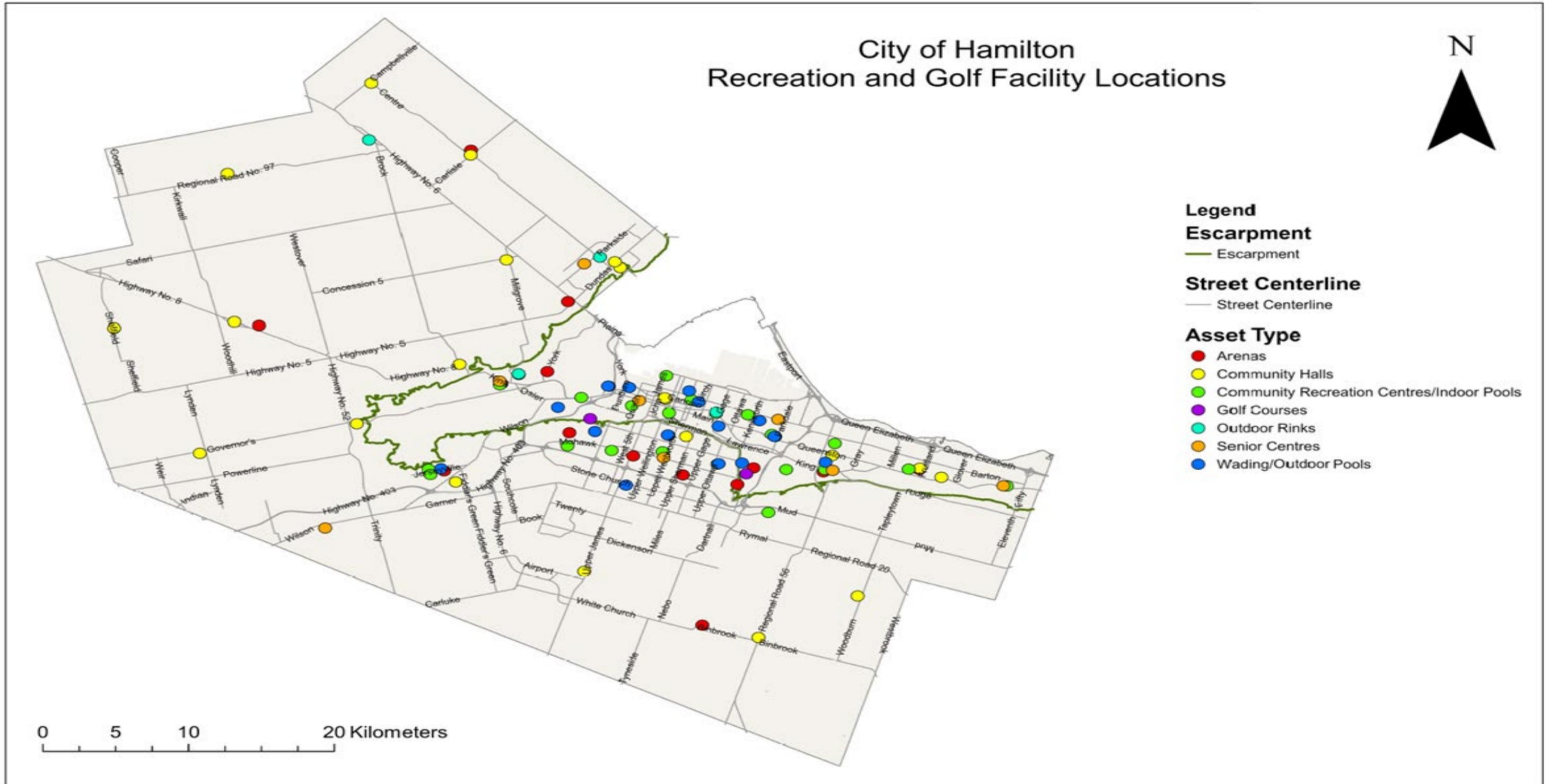
2.1.3 USERS OF THE SERVICE

The City of Hamilton is comprised of a diverse population. Based on the 2021 Census² results, Hamilton's population was 584,000 people, with an average age of 41.5 years old, and an average household size of 2.5 people. Users of the services provided by Recreation include both residents and visitors of Hamilton, with program offerings provided for all age groups spanning from infants to older adults. A map of the recreation facilities is included in **Figure 1**. Past recreation planning studies have divided Hamilton into nine sub-areas to allow for more detailed analysis, as shown in **Figure 2**. The ***Recreation Master Plan*** has utilized these nine sub-areas as "Recreation Planning Areas" to determine geographic gaps, growth-related needs (to 2051), and opportunities to improve and optimize existing facilities.

² (Census Profile, 2021 Census of Population, 2021)

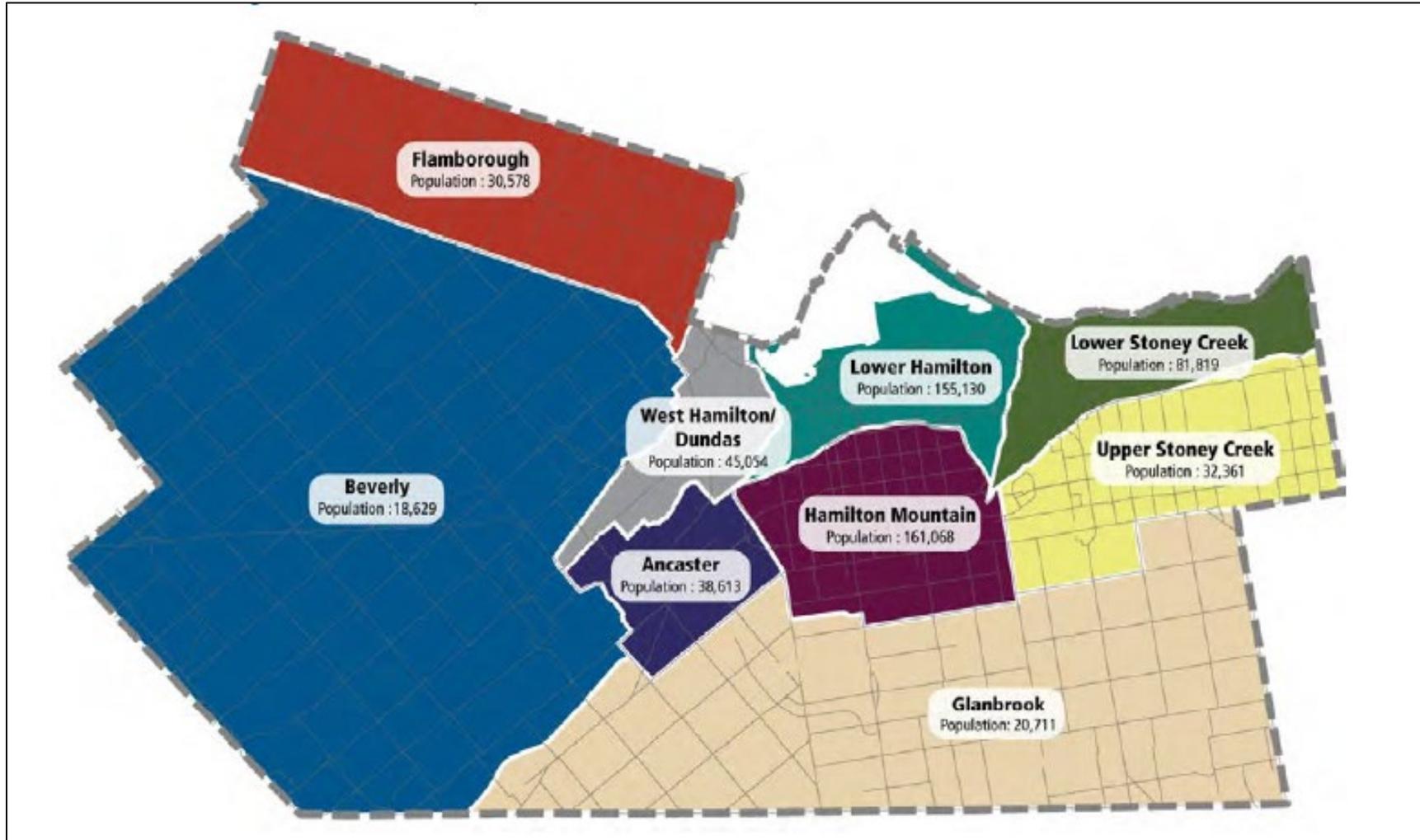
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Figure 1: Facility Asset Map



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Figure 2: Recreation Planning Areas and 2021 Population Estimates



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2.1.4 UNIQUE SERVICE CHALLENGES

The primary challenge faced by Recreation is insufficient funding to maintain its current stock of physical assets. This challenge is twofold, as the division possesses a large volume of high-cost facility assets, many of which require expensive and complex mechanical equipment to control specific interior environments (e.g., high humidity, large temperature gradients), imposing elevated levels of deterioration on building components and exacerbating operational and maintenance costs. This scenario has led to an increasingly large backlog of non-growth-related projects which require addressing and contribute to a greater number of unforeseen facility shutdowns.

Additionally, with a portfolio of facilities with substantial electrical and mechanical demands, significant financial and technological hurdles are anticipated in addressing the array of climate change targets set for the future. Given the large size and specific nature of the mechanical systems involved, retrofitting these facilities will necessitate a substantial amount of capital funding. Moreover, specific challenges exist regarding the feasibility of the electrical grid's ability to provide the capacity to meet the demand of electrified mechanical systems when updating equipment to reach Net-Zero targets.

Furthermore, it has been expressed that there is a desire for greater accessibility and barrier-free spaces in Recreation's portfolio of facilities. While the existing stock of buildings is code-compliant, there is an increased desire for modern design standards, such as barrier free accessibility and universal change rooms. Incorporating these updates into existing facilities is a challenge both in terms of design for implementation and the overall capital costs required.

Finally, there exist challenges in the implementation of these projects with respect to project management scheduling. The Recreation division faces the challenge of maintaining continuity of service, coordinating provisional programming, and ensuring equitable geographic access to services throughout these projects while implementing the aforementioned updates to the existing building portfolio.

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2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of Recreation are outlined in **Table 1**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

Table 1: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENTS
Technical Standards and Safety Authority	Inspection and operation of ice plants, waterslides, elevators, boilers, and pressure vessels.
Health Protection and Promotion Act, Operation of Public Pool Regulation (O. Reg. 494/17)	Regulations related to the operation of public pools and all buildings, appurtenances and equipment used in the operation of public pools.
Pesticides Act	Grounds keeping requirements as they relate to the maintenance of the golf courses.
Child Care and Early Years Act, 2014 (CCEYA)	Standards for the operation of camp and early childhood programs.
O. Reg. 219/01: Operating Engineers	Outlines the requirements and certifications necessary to operate mechanical equipment included in Mountain Arena.

2.3 ASSET HIERARCHY

In order to deliver their services, Recreation requires assets for their operation. For the purpose of this AM Plan the assets included have been broken down into the following classes respective to each group.

- **Facilities:** refers to any City-owned facilities necessary to deliver Recreation services.
- **Fleet and Maintenance Vehicles/Equipment** refers to all vehicles and maintenance equipment used for Recreation services.
- **Facility Amenities:** refers to indoor facility amenities used for Recreation services.
- **Technology:** describes the different type of technology required to deliver the service including communications, IT, desktop, and mobile equipment.

The asset class hierarchy outlining assets included in this report is shown below in **Table 2**.

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Table 2 : Recreation Asset Class Hierarchy

AM PLAN	RECREATION			
ASSET CLASS	FACILITIES	FLEET & MAINTENANCE VEHICLES/EQUIP.	FACILITY AMENITIES	TECHNOLOGY
	<ul style="list-style-type: none"> • Arenas • Outdoor (Artificial) Ice • Sport Clubhouses • Community Recreation Centres/Indoor Pools • Outdoor Pools • Wading Pools • Seniors Centres • Community Halls • Golf Clubhouses • Golf Support Buildings • 18 Hole Golf Courses 	<ul style="list-style-type: none"> • Road Vehicles • Ice Resurfacers • Maintenance Vehicles/Equip. • Golf Carts 	<ul style="list-style-type: none"> • Actars • Assistive Devices • Diving Boards • Guard Chair • Pool Vacuums • Powered Change Tables • Slides • Spine Boards • Sport Posts • Tot Docs 	<ul style="list-style-type: none"> • Laptops • Desktops • Mobile Phones

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3. SUMMARY OF ASSETS

This section provides a detailed summary and analysis of the existing inventory information as of December 2023 including age profile, condition methodology, condition profile, asset usage, and performance for each of the asset classes.

Table 3 displays the detailed summary of assets for Recreation. The sources for this data are a combination of data included in the City's database information and from the Recreation internal inventories. It is important to note that inventory information does change often, and that this is a snapshot of information available as of December 2023.

The City owns approximately **\$1.57B** in **Recreation** assets which are on average in **Fair** condition. Assets are a weighted average of **39** years which is **49%** of the average remaining service life (RSL), with the majority of the weighting derived from the **Facilities** asset class. For most assets, this means that the City should continue completing preventative maintenance activities and any necessary operating activities (e.g., inspection, cleaning) to prevent premature failures.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. In addition, the assets included below are assets that are assumed and in service at the time of writing.

The overall replacement value data confidence for the registry is Medium. For facilities, these replacement costs are calculated using an internal tool which encompasses current market rates, building type and size. Equipment and technology asset replacement costs were gathered from the most recent purchase price for similar assets. Transitioning the existing asset inventory data into an Enterprise Asset Management system has been identified as a continuous improvement item in **Section 10.2**.

Please refer to **page 31** of the **AM Plan Overview** for a detailed description of data confidence.

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Table 3 : Detailed Summary of Assets

FACILITIES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE	AVERAGE EQUIVALENT CONDITION
Arenas	20	\$729M	41	3-FAIR
Data Confidence	Very High	Medium	Very High	High
Community Halls	22	\$114M	75	2-GOOD
Data Confidence	Very High	Medium	Very High	High
Recreation Centres + Indoor Pools	25	\$590M	43	2-GOOD
Data Confidence	Very High	Medium	Very High	High
Outdoor Pools	10	\$49M	31	3-FAIR
Data Confidence	Very High	Medium	Very High	High
Seniors Centres	6	\$30M	42	4-POOR
Data Confidence	Very High	Medium	Very High	High
Wading Pools	7	\$1.5M	26	3-FAIR
Data Confidence	Very High	High	Low	Medium
Outdoor Artificial Ice	4	\$4.8M	8	2-GOOD
Data Confidence	Very High	High	Low	Medium
Sport Clubhouses	19	\$18M	42	2-GOOD
Data Confidence	Very High	Medium	Very High	High
Golf Clubhouses	2	\$10.6M	49	4-POOR
Data Confidence	Very High	Medium	Very High	High
Golf Support Buildings	16	\$6.4M	48	4-POOR
Data Confidence	Very High	Medium	Very High	High
18 Hole Golf Courses	3	\$6.9M ³	49	No Data
Data Confidence	Very High	Low	Very High	No Data
SUBTOTAL		\$1.56B	45	3-FAIR
DATA CONFIDENCE		Medium	Very High	High

³ (City of Edmonton, 2021)

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TECHNOLOGY

ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE	AVERAGE EQUIVALENT CONDITION
Mobile Devices	131	\$0.05M	3	4-POOR
Data Confidence	High	Medium	High	Low
Desktops, Laptops, Tablets	265	\$0.4M	4	4-POOR
Data Confidence	High	Medium	High	Low
SUBTOTAL	\$0.5M		4	4-POOR
DATA CONFIDENCE	Medium		High	Low

FLEET AND MAINTENANCE VEHICLES/EQUIPMENT

ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE	AVERAGE EQUIVALENT CONDITION
Golf Carts	5	\$0.05M	5	3-FAIR
Data Confidence	Very High	Medium	Very High	Low
Ice Resurfacers	29	\$3.4M	10	4-POOR
Data Confidence	Very High	Medium	Very High	Low
Maintenance Vehicles/Equipment	50	\$1.9M	9	4-POOR
Data Confidence	Very High	Medium	Very High	Low
Road Vehicles	11	\$0.5M	9	4-POOR
Data Confidence	Very High	Medium	Very High	Low
SUBTOTAL	\$5.6M		8	4-POOR
DATA CONFIDENCE	Medium		Very High	Low

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FACILITY AMENITIES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE	AVERAGE EQUIVALENT CONDITION
Actars	291	\$0.2M	Unknown	3-FAIR
Data Confidence	Very High	Medium	Very Low	Low
Assistive Devices	17	\$0.2M	Unknown	1-VERY GOOD
Data Confidence	Very High	Medium	Very Low	Low
Diving Boards	4	\$0.2M	Unknown	3-FAIR
Data Confidence	Very High	Medium	Very Low	Medium
Guard Chairs	52	\$0.2M	17	2-GOOD
Data Confidence	Very High	Medium	Low	Medium
Pool Vacuums	30	\$0.1M	6	2-GOOD
Data Confidence	Very High	Medium	Low	Medium
Powered Change Tables	10	\$0.1M	7	2-GOOD
Data Confidence	Very High	Medium	High	Low
Slides	8	\$0.2M	10	3-FAIR
Data Confidence	Very High	Very Low	Low	Medium
Spine Boards	41	\$0.06	11	2-GOOD
Data Confidence	Very High	High	Very Low	Medium
Sport Posts	61	\$0.2M	7	3-FAIR
Data Confidence	Very High	Low	Low	Medium
Tot Docs	28	\$0.06M	17	2-GOOD
Data Confidence	Very High	High	Low	Medium
SUBTOTAL		\$1.5M	9	2-GOOD
DATA CONFIDENCE		Medium	Low	Medium

TOTAL ASSETS				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
TOTAL	1,168	\$1.57B	39 (46%)	3-FAIR
DATA CONFIDENCE	Medium	Medium	Medium	Medium

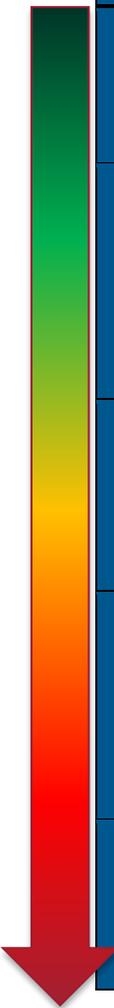
RECREATION

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3.1 ASSET CONDITION GRADING

Condition refers to the physical state of the Recreation assets and is a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, **Table 4** below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in **Section 10.2**, is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

Table 4: Equivalent Condition Conversion Table



EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	FACILITIES CONDITION INDEX (FCI)
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance required only.	>79.5%	N/A
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	< 5%
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset's usage. Minor to significant maintenance is required.	39.5% - 69.4%	>= 5% to < 10%
4 Poor	Asset has significant defects and deterioration. Deterioration has an impact on asset's usage. Rehabilitation or major maintenance required in the next year.	19.5% -39.4%	>= 10% to <30%
5 Very Poor	Asset has serious defects and deterioration. Asset is not fit for use. Urgent rehabilitation or closure required.	<19.4%	>= 30%

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The following conversion assumptions were made:

- For assets where a condition assessment was not completed, but age information was known (fleet and maintenance vehicles/equipment, technology assets), the condition was based on the % of remaining service life; and
- Facilities Condition Index was based on ranges provided by the consultant who completed the Building Condition Assessment (BCA).

3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile, and Performance Issues for each of the asset classes.

- The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life (ESL) where they can be planned for replacement. Some lower-cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if an asset's condition is based on age, it is typically considered to be of a low confidence level. Although typically, age is used when projecting replacements beyond the 10-year forecast to predict degradation.
- Condition refers to the physical state of assets and is a measure of the physical integrity of assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected/assessed at different frequencies and using different methodologies to determine their condition which is noted in this section.
- Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

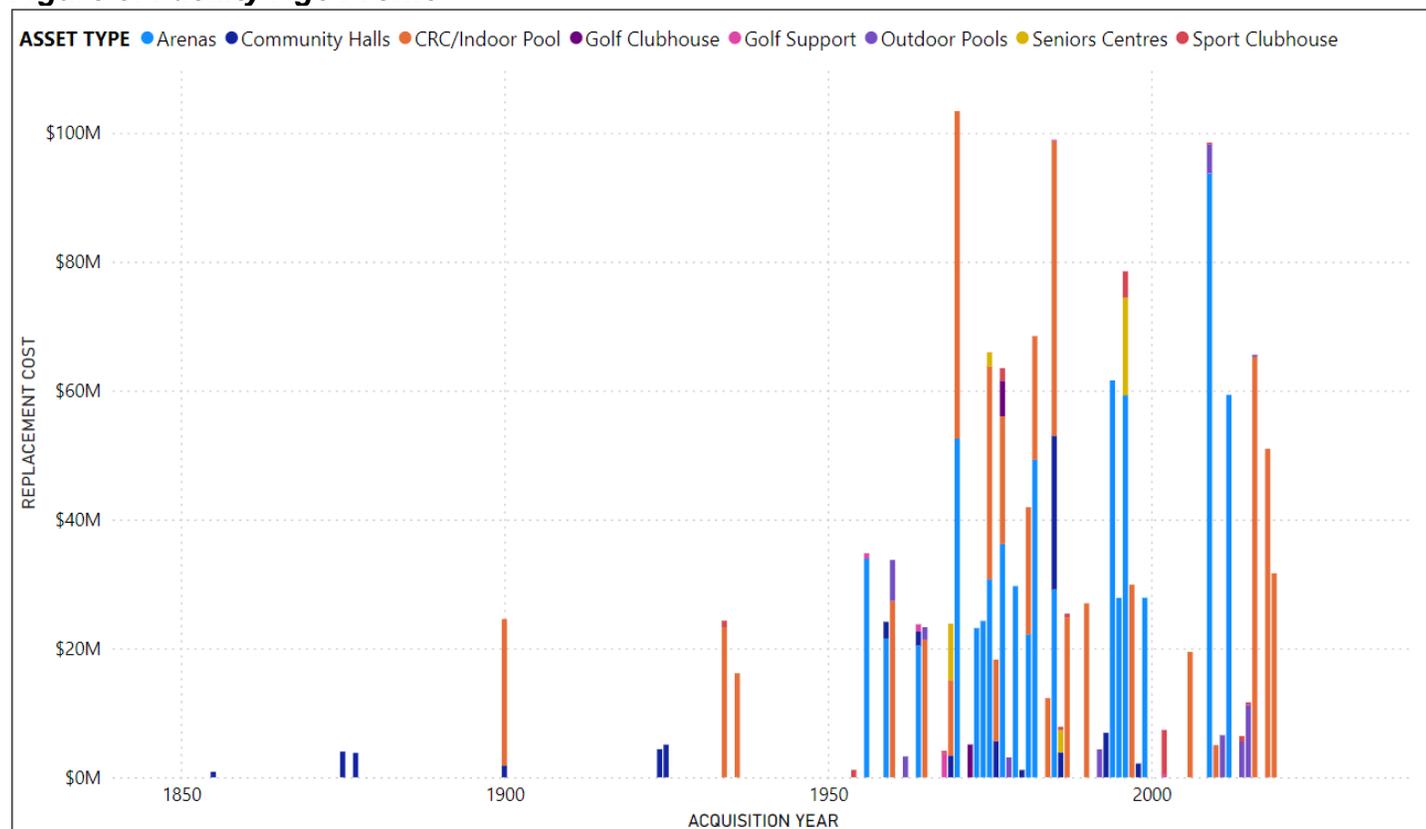
RECREATION 2024 ASSET MANAGEMENT PLAN

3.2.1 FACILITIES PROFILE

3.2.1.1. AGE PROFILE

The age profile of the Recreation Facilities assets is shown in **Figure 3**. For Facilities assets, the data confidence for age is typically high as this data was formally recorded at the time of construction.

Figure 3: Facility Age Profile



Most Recreation facilities have an Estimated Service Life (ESL) of 50-75 years except for heritage facilities which have had their service life increased indefinitely and are generally not considered for replacement. Significant investment was made to build arenas and community recreation centres including indoor pools between the early 1970s and the mid-1980s. Community hall facilities are the oldest asset class, with an average age of over 70 years, with many identified as facilities of heritage interest.

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3.2.1.2. CONDITION METHODOLOGY AND PROFILE

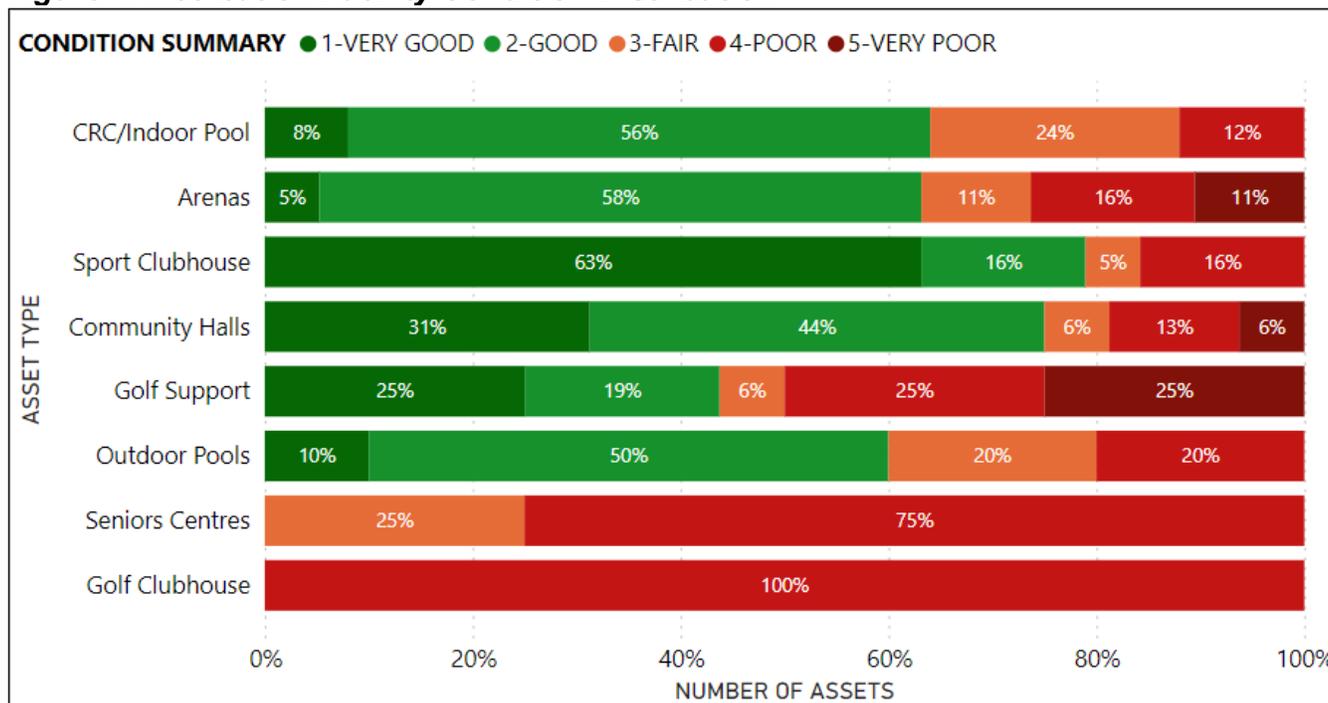
Condition for facilities is determined based on the results of a Building Condition Assessment (BCA). BCAs are typically completed on facilities every five years and output a score called a Facility Condition Index (FCI) which is considered to be a high confidence level source. The FCI is a financial indicator calculated based on a ratio of the cost of work currently required on the facility to the total replacement cost of the facility. The condition conversion from FCI to the standardized 5-point scale used in Asset Management is shown in **Table 5**. The BCA is a visual, surface-level inspection which is typically a high confidence indicator of condition but does not involve detailed analysis such as cutting into walls or removing mechanical panels.

Table 5: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Facilities	Every Five Years	Varied	Facility Condition Index (0% - 100%)

The condition profiles for the facilities assets are shown below. Based on the results of the BCA reporting data, Recreation facilities have an average FCI of 7.9%, which equates to a “Fair” condition rating. Poorer condition ratings were observed to be concentrated in the Seniors Centre and Golf Clubhouse facilities. Currently, there are not any concrete plans to renew or dispose of these poor-condition assets, which will continue to be a financial burden on annual operations and maintenance spending. More discussion is included on this in **Section 8**.

Figure 4: Recreation Facility Condition Distribution



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3.2.1.3. ASSET USAGE AND PERFORMANCE

Due to the large volume of facilities assets, a selection of the most common high-cost deficiencies across the portfolio are summarized in **Table 6**. Generally, specific building typologies (e.g., ice rinks) tend to share similar high-value capital works projects. These deficiencies are identified using information from the Building Condition Assessment (BCA) reports.

Table 6: Common Deficiencies

ASSET	LOCATION	COMPONENT	DESCRIPTION OF DEFICIENCY
Facilities	Arenas	Ice Rink Cooling and Heating Piping Systems	Replacements are recommended based on estimated system lifespan or reports of dysfunction.
	Arenas and Indoor Pools	Building Envelope	Elevated wear is commonly observed in these high-humidity environments.
	Indoor Pools	Mechanical Pool Equipment	Replacements are recommended based on estimated system lifespan or reports of dysfunction.
	All	Mechanical HVAC Equipment	Replacements are recommended based on estimated system lifespan or reports of dysfunction.
	All	Roof Coverings	Replacements are recommended based on estimated system lifespan or reports of leaking.
	All	Parking Lot Surfaces	Replacements are recommended based on estimated system lifespan or evidence degradation.

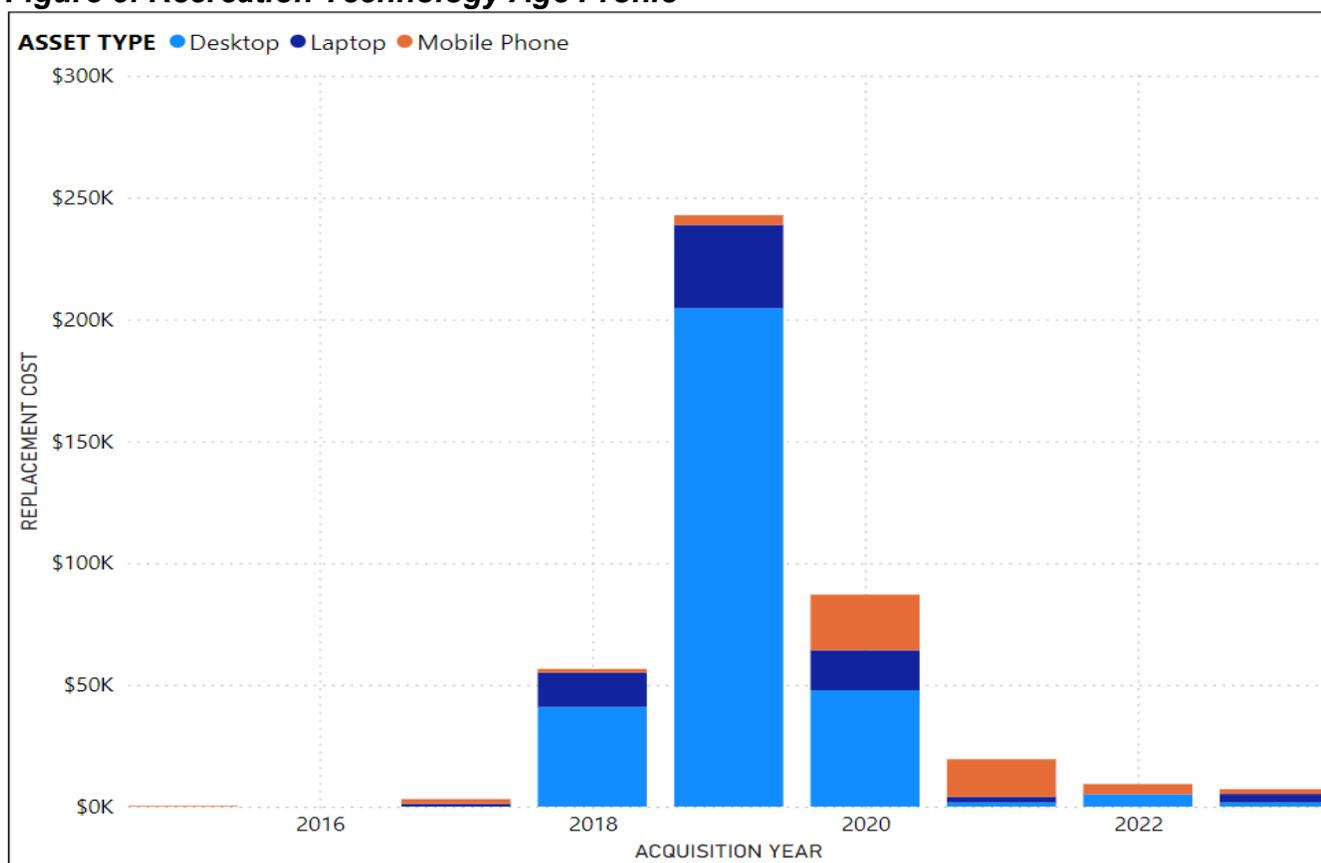
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3.2.2 TECHNOLOGY PROFILE

3.2.2.1. AGE PROFILE

The age profile of the Technology assets is shown in **Figure 5** below. The age of these assets is considered to be high data confidence because they are recorded at the time of purchase and is provided through the City’s IT Division. Replacement costs are estimated based on market pricing for the modern equivalent assets. Estimated service lives are five years for laptops and desktop computers, and four years for all other IT equipment. Notably, a bulk purchase of desktop computers was completed in the year 2019 and is nearing the end of their ESLs.

Figure 5: Recreation Technology Age Profile

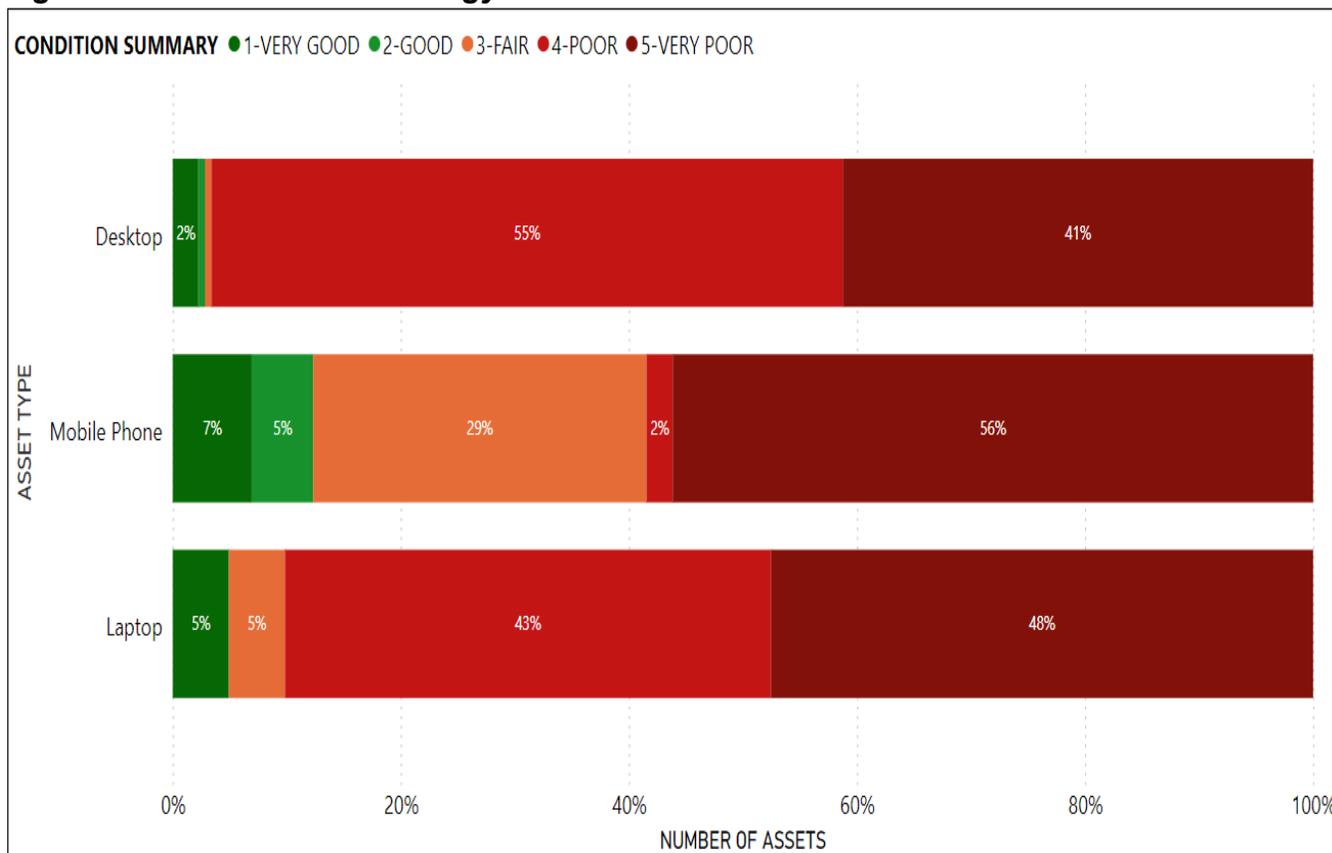


3.2.2.2. CONDITION METHODOLOGY AND PROFILE

The majority of technology assets do not have a formal inspection program which has been identified as a continuous improvement item in **Section 10.2**. As condition valuations are derived from a remaining service life calculation using the estimated service life, and the majority of the IT assets have been purchased prior to 2021, the predominant condition rating for these assets is Poor – Very Poor, as can be seen in **Figure 6** on the next page.

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Figure 6: Recreation Technology Asset Condition Profile



3.2.3 FLEET AND MAINTENANCE VEHICLES/EQUIPMENT PROFILE

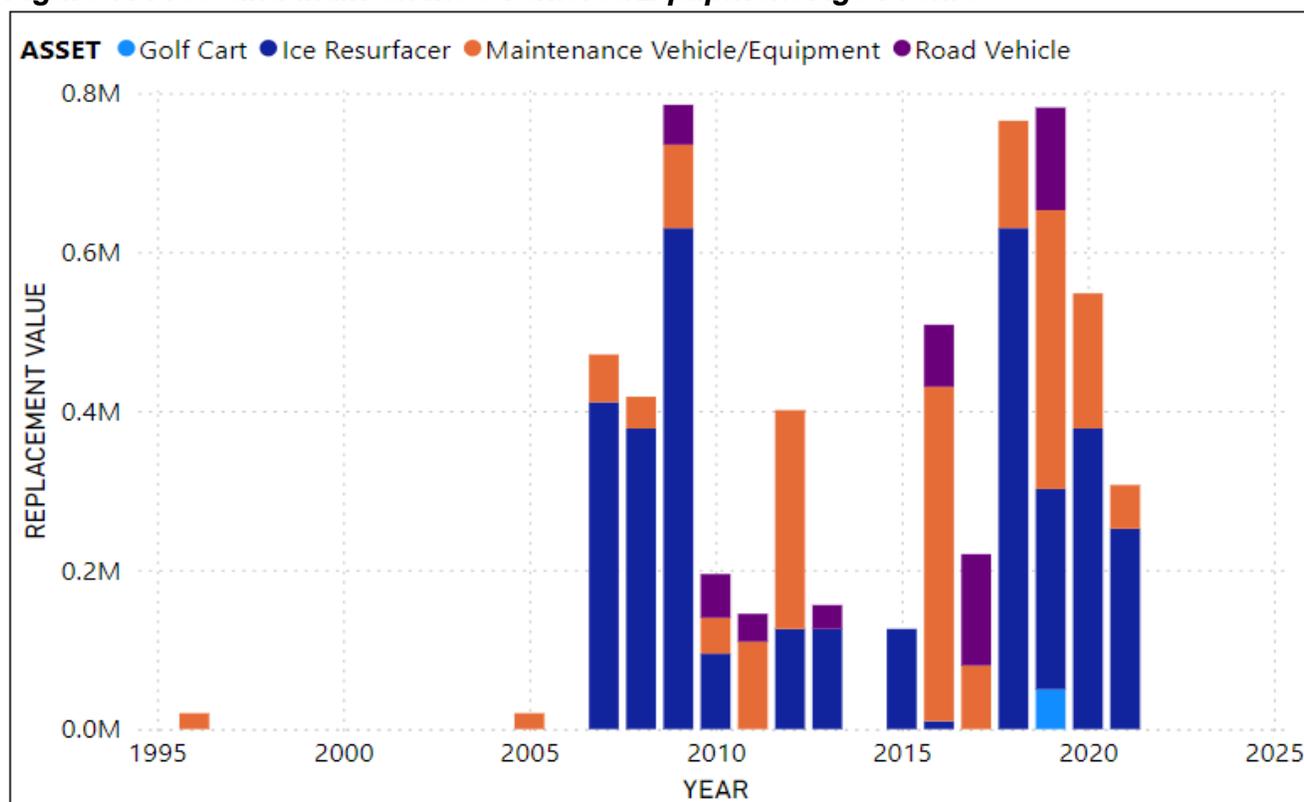
3.2.3.1. AGE PROFILE

The age profiles of the fleet and maintenance vehicles/equipment assets are shown in **Figure 7** below. The age of these assets is considered to be high data confidence because they are recorded at the time of purchase.

Most of the vehicles and fleet equipment were acquired from 2005 to 2021. Since the Estimated Service Life (ESL) for vehicles is an average of 10 years, most vehicles purchased before 2014 are beyond their service life and will appear in the Renewal backlog in **Section 8.3**.

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Figure 7: Fleet and Maintenance Vehicles/Equipment Age Profile



3.2.3.2. CONDITION METHODOLOGY AND PROFILE

Road vehicles and ice resurfacers are inspected, and maintenance activities are conducted at specific intervals throughout the asset’s lifecycle, however, no formal condition rating is assigned to each vehicle. No formal inspection program exists for the specialty equipment assets, as conditions are monitored with use. Equivalent condition ratings are derived from the documented age of the asset in relation to its Estimated Service Life (ESL), providing a remaining service life (RSL) percentage as outlined in **Table 7**. This data source is considered to be low confidence. Developing a more formal condition grading methodology for major equipment and technology has been noted as a continuous improvement item in **Section 10.2**.

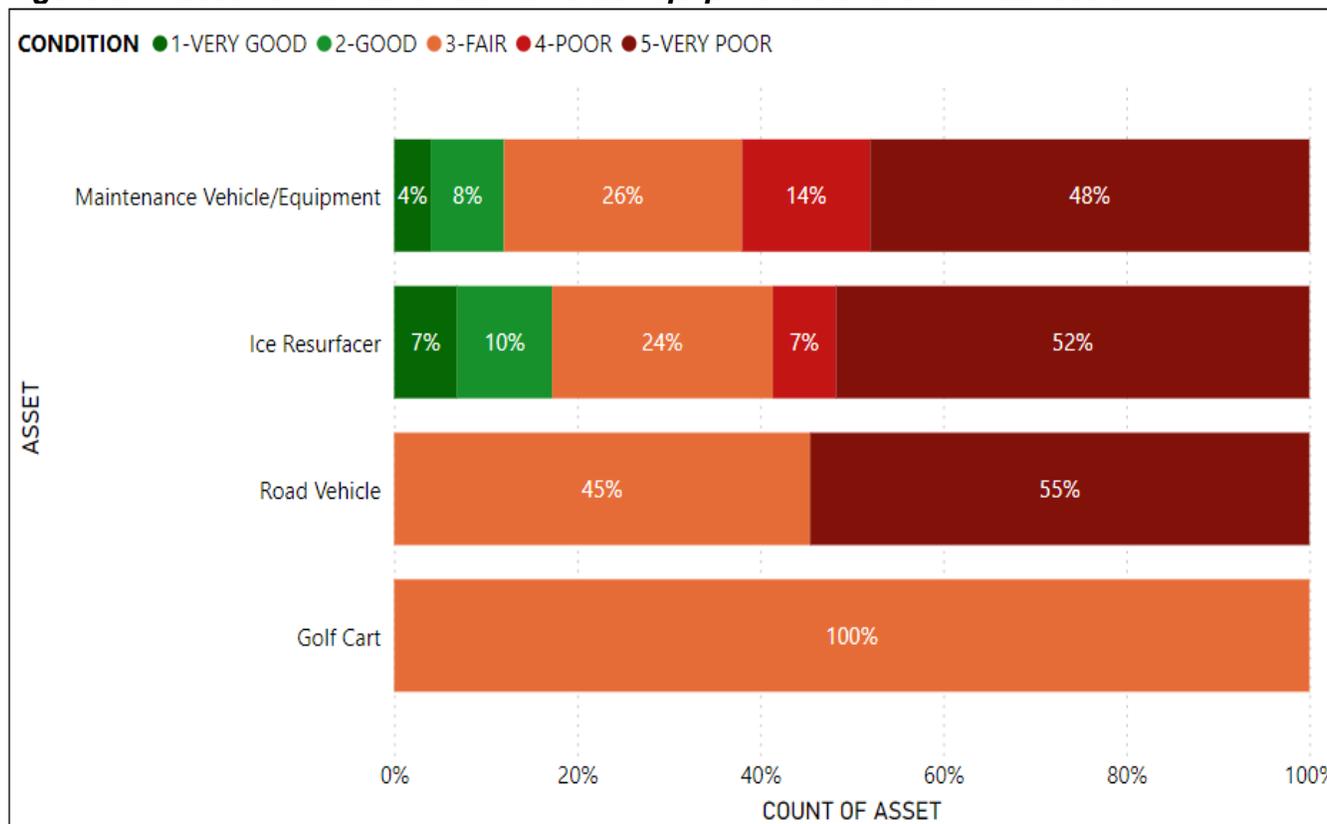
Table 7: Inspection and Condition Information

ASSET	INSPECTION TYPE	DESCRIPTION	FREQUENCY	CONDITION SCORE OUTPUT
Vehicles	Inspection and Servicing	Various maintenance checks	Scheduled twice per year	N/A

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As can be seen in **Figure 8** below, a significant number of Maintenance Vehicles/Equipment are in Poor and Very Poor condition. Additionally, 52% of Ice Resurfacers and 55% of Road Vehicles are in in Very Poor condition. The condition of these assets is based only on age and estimated service life and is consistent with many vehicles being beyond their ESLs.

Figure 8: Fleet and Maintenance Vehicles/Equipment Condition Distribution



3.2.4 FACILITY AMENITIES

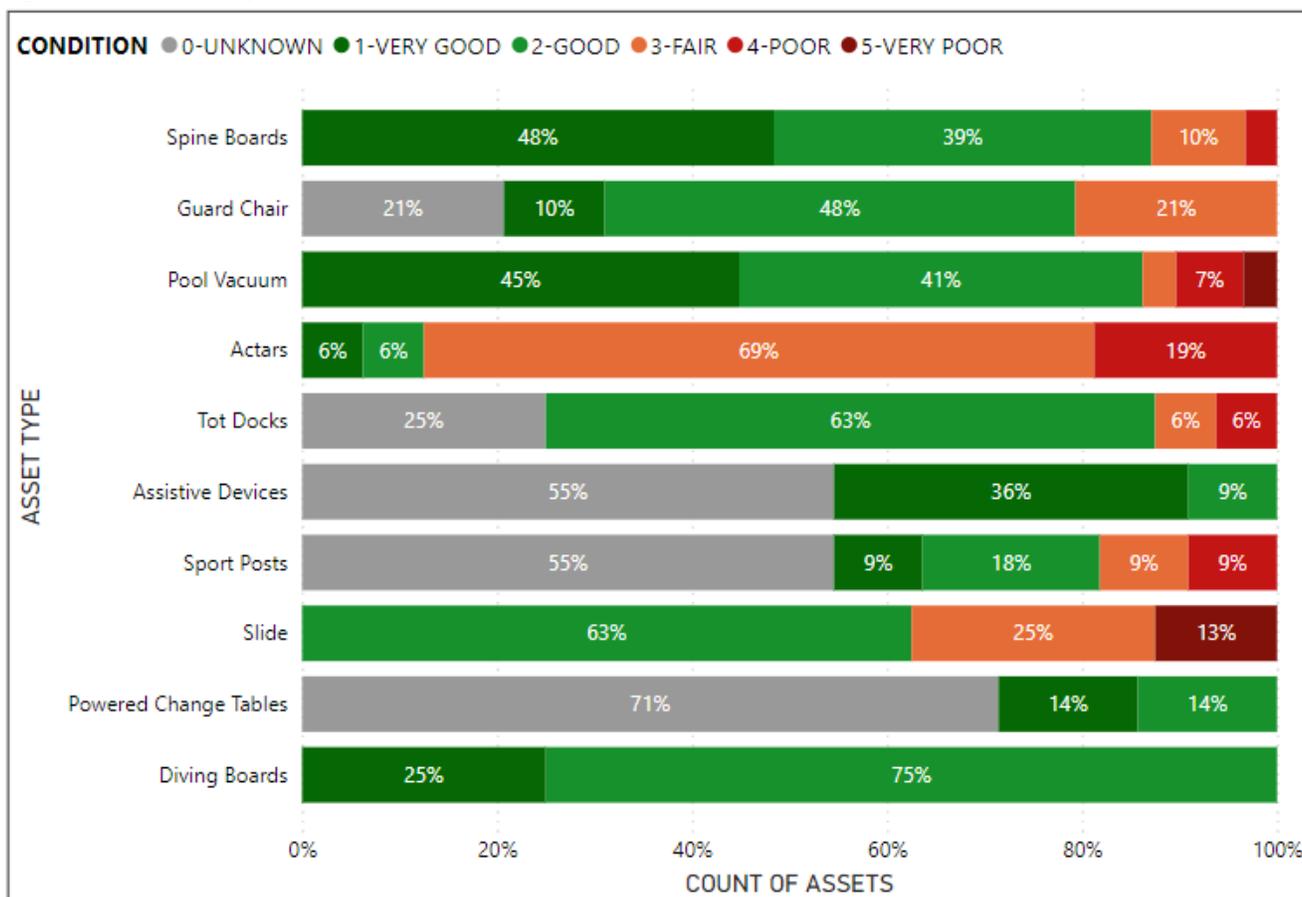
3.2.4.1. AGE PROFILE

The age profiles of the Recreation equipment assets are shown in **Figure 9** below. The age of these assets is considered to be low data confidence as the ages of these assets are not formally tracked and the purchase date is unknown for many assets. A Continuous Improvement item has been added in **Section 10.2** to review the current asset registry and verify assets including their specifications, age and condition, and to track assets in a more formal and documented manner.

The oldest equipment refers to guard chairs that were purchased in the 1960s and 1970s. The overall guard chair's age is considered low data confidence. This equipment has an estimated service life of 25 years however, based on subject matter expert (SME) opinion appears to be in good to fair condition.

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Figure 10: Facility Amenities Condition Distribution



3.2.4.3. ASSET USAGE AND PERFORMANCE

The largest performance issues with Recreation Equipment involve assets exceeding their ESL. The known service performance deficiencies in **Table 8** were identified using staff input.

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Table 8: Known Service Performance Deficiencies

ASSET	LOCATION	INSTALLED	DESCRIPTION OF DEFICIENCY
Slides	Huntington Park Recreation Centre	1993	Slides are currently closed as they are beyond the ESL and require full replacement. Funding is secured for the replacement of these assets and work is ongoing.
	Valley Park Aquatic Centre	1992	

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4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what the City provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that the City provides those services.

O.Reg. 588/17 does not define levels of service therefore the City has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in Section 7.5 of the **AM Plan Overview**.

4.1 SURVEY METHODOLOGY

To develop customer values and customer levels of service, a Customer Engagement Survey entitled *Let's Connect, Hamilton – City Services and Assets Review: Recreation and Golf Courses* was released on the Engage Hamilton platform on November 8th, 2023, and closed on Dec. 13th, 2023. The survey results can be found in **Appendix “A”**.

The survey received submissions from 134 respondents and contained 20 questions related to the Recreation and Golf service delivery. For the purposes of this report, data has been evaluated from a confidence level perspective (margin of error at 95% confidence in sample size) and a data consistency (standard deviation) perspective per **Table 9**.

Table 9: Data Confidence Levels

GRADE	DATA CONSISTENCY (STANDARD DEVIATION)	CONFIDENCE LEVEL (MARGIN OF ERROR AT 95% CONFIDENCE IN SAMPLE SIZE)
Very High	0 to 0.5 – results are tightly grouped with little to no variance in response	0% to 5% - minimal to no error in results, can generally be interpreted as is
High	0.5 to 1.0 – results are tightly grouped but with slightly more variance in response	5% to 10% - error has become noticeable, but results are still trustworthy
Medium	1.0 to 1.5 – results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - error is a significant amount and will cause uncertainty in the final results
Low	1.5 to 2.0 – results show a high variance with a fair amount of disparity in responses	20% to 30% - error has reached a detrimental level and results are difficult to trust
Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - significant error in results, hard to interpret data in a meaningful way

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Based on the number of responses, a sample size of 134 correlates to a HIGH confidence level with an 8% margin of error based on an approximate population size of 570,000. This was determined to be an acceptable confidence level to use to develop the customer values and customer performance measures for this AM Plan. It is important to note that respondents were allowed to opt out of questions, so different questions may have different confidence levels depending on the opt-out rate for that question.

Although the sample size correlates to a maximum high confidence level, the data consistency also differed between questions. A high data consistency means that respondents came to the same conclusion more often for a question, whereas a low data consistency means that there is a split in respondent's opinions. Therefore, while Corporate Asset Management may be able to improve survey confidence levels over time by increasing the survey sample size, it may not be possible to improve data consistency over time as this depends on the opinions of the respondents and may require additional insight on why respondent's opinions are split. A low consistency of data does not mean the data is wrong, but it does mean that it is difficult to make decisions using that information. Overall, Recreation and Golf's survey data consistency was typically medium across all questions indicating most respondents are generally in agreeance.

While these surveys were used to establish customer values and customer performance measures, it is important to note that there were also limitations to the survey methodology which may reduce the confidence level in the survey data. The survey was only released using an online platform and did not include telephone surveys and consequently, there is no way to confirm the identity information provided in the survey. In addition, the survey did not control for IP addresses, and therefore it is possible that respondents could complete the survey more than once and skew the survey results.

An error occurred in the deployment of Question 3 of the survey. The question asked for the ages of the people who visited Recreation and Golf facilities with the respondent; however, the survey did not allow respondents to select multiple ages. Due to the error in this survey question, the results of the question were not considered in the survey analysis. This question had no direct relation to any other questions in the survey that would impact the results of subsequent questions.

Despite the limitations of the survey methodology these results can be used to provide some context about the feelings customers have about the services that Recreation and Golf provides. However, decisions should not be made based on this survey alone and further investigation is required prior to proposing new levels of service.

4.2 CUSTOMER VALUES

Customer values are what the customer can expect from their tax dollar in "customer speak" which outlines what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

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Customer Values indicate:

- What aspects of the service are important to the customer;
- Whether they see value in what is currently provided; and,
- The likely trend over time-based on the current budget provision.

As previously mentioned, the customer values below were determined using the results from the *Let's Connect, Hamilton – City Services and Assets Review: Recreation and Golf*, and are shown in **Table 10** below.

Table 10: Customer Values

CUSTOMER VALUES	CURRENT FEEDBACK	DATA CONSISTENCY	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Drop-in and registered swimming programs are an important service area	The average respondent rated both drop-in and registered swimming programs as very important.	Medium	Maintain
Drop-in and registered gym and club programs are an important service area	The average respondent rated both drop-in and registered gym and club programs as very important.	Medium	Maintain
Opinions are divided on the importance of golf courses.	The majority (57%) of respondents feel golf courses are very important. However, opinions on golf courses were more split and 26% of respondents feel golf courses are not at all important.	Low	Maintain
Customers prefer to minimize tax rate increases for services	The average survey respondent would prefer to minimize tax rate increases and maintain current Recreation and Golf service levels.	Medium	Maintain
Potential service upgrades to Community Recreation Centres (CRC) and indoor pools are more important than potential upgrades to outdoor pools, arenas, and community halls.	Potential service upgrades to CRCs and Indoor Pools facilities were listed as important. Potential upgrades to outdoor pools, arenas, and community halls were listed as fairly important.	Medium	Maintain

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CUSTOMER VALUES	CURRENT FEEDBACK	DATA CONSISTENCY	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Customers agree that the Recreation and Golf buildings should be accessible by public transport, AODA compliant, clean, comfortable, easy to enter, energy efficient, safe, and inclusive spaces.	The average respondent agreed that buildings should meet these requirements.	High	Maintain

4.3 CUSTOMER LEVELS OF SERVICE

Ultimately customer performance measures are the measures that the City will use to assess whether it is delivering the level of service the customers desire. Customer level of service measurements relate to how the customer feels about the City’s Recreation and Golf service in terms of their quality, reliability, accessibility, responsiveness, sustainability and over the course, their cost. The City will continue to measure these customer levels of service to ensure a clear understanding of how the customers feel about the services and the value of their tax dollars.

The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or underused? Do we need more or less of these assets?

In **Table 11** under each of the service measure types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current allocation.

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Table 11: Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
Quality/ Condition	Ensure that Recreation assets are maintained in good condition	2023 Recreation and Golf Services and Assets Survey Review	Average survey respondent opinion on if Recreation and Golf buildings are clean and in good repair	Neutral	Decline
				Confidence Level	High
				Data Consistency	Medium
	Provide high-quality services and programs to the public.	2023 Recreation and Golf Services and Assets Review Survey	Average survey respondent opinion on how Recreation and Golf programs have performed overall in the last 24 months in all service areas	Average	Maintain
				Confidence Level	High
				Data Consistency	Medium
	Ensure that Recreation and Golf sites and services are accessible to the public.	2023 Recreation and Golf Services and Assets Review Survey	Average survey respondent opinion on if customers were comfortable accessing sites and services.	Comfortable	Maintain
				Confidence Level	High
				Data Consistency	Medium
	Be fiscally responsible when delivering services.	2023 Recreation and Golf Services and Assets Review Survey	Average survey respondent opinion on if Recreation and Golf is providing good value for money for sites and services.	Average	Maintain
				Confidence Level	High
				Data Consistency	Medium
Function	Provide Recreation and Golf services that meet needs	2023 Recreation and Golf Services and Assets Review Survey	Average survey respondent opinion on if Recreation and Golf is meeting service needs overall	Neutral	Maintain
				Confidence Level	High
				Data Consistency	Medium
Capacity	Ensure Recreation and Golf services are accessible to the public when required.	2023 Recreation and Golf City Services and Assets Review Survey	Average survey respondent satisfaction with program hours offered by Recreation and Golf services.	Neutral	Maintain
				Confidence Level	High
				Data Consistency	Medium
		2023 Recreation and Golf City Services and Assets Review Survey	Average survey respondent opinion on if they are satisfied with their ability to access Recreation and Golf sites and services.	Satisfied	Maintain
				Confidence Level	High
				Data Consistency	Medium-Low
		2023 Recreation and Golf City Services and Assets Review Survey	Average survey respondent opinion on if Recreation and Golf buildings are accessible per the Accessibility for Ontarians with Disabilities Act (AODA).	Neutral	Maintain
				Confidence Level	High
				Data Consistency	Medium
		2023 Recreation and Golf City Services and Assets Review Survey	Average survey respondent opinion on if Recreation and Golf buildings are accessible by public transportation.	Neutral	Maintain
				Confidence Level	High
				Data Consistency	Medium

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4.3.1 CUSTOMER INDICES

The three indices calculated to assess how customer expectations for a service are aligning with the perceived performance for a service are listed below in **Table 12**. These indices are explained and analyzed in detail in the sections below. Based on the results of the table, since the net differential indices do not exceed 20 points overall for the Recreation and Golf service, there is generally a match between customer expectations and perceptions. These indices are explained and analyzed in more detail in the sections below with areas to investigate further.

Table 12: Customer Indices

CUSTOMER INDICES	AVERAGE RESULT
Service Importance Versus Performance Net Differential ⁴	-9
Net Promoter Score (%) ⁵	-6%
Service Rates Versus Value for Money Net Differential ⁷	7

The information below is intended to provide context around the survey results to assist Recreation and Golf with areas to further investigate before proposing any new levels of service.

SERVICE IMPORTANCE VERSUS PERFORMANCE INDICE

The Service Importance versus Performance Indices is used to determine if a service’s importance correlates with the perceived performance. Service areas where the average importance rating exceeds the average performance rating by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert Scale⁶.

Per **Figure 11**, as the net differential indices do not exceed 20 points for the Recreation and Golf service, there is generally a match between customer expectations (performance) and perceptions (importance). This is true for each individual service surveyed as well as the average of these service areas. The net differential for each service area is slightly negative, indicating that the perceived importance of these services slightly exceeds the performance expectations though the difference is small. The lowest scoring service areas were Drop-in Swimming and Drop-In Gym and Club Programs. Respondents identified these areas as important services for the City with performance identified as slightly lower at Average-Good. Although the differential

⁴ For these indices, a value close to 0 is considered a match, and a value exceeding 20 points indicates a mismatch between customer expectations, and perception or service levels.

⁵ A positive net promoter score indicates customers would recommend the service to others, a negative score indicates they would not, and a value close to 0 indicates a neutral feeling about the service.

⁶ A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g., Very Good to Very Poor, Very Satisfied to Very Unsatisfied).

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for these services is less than 20 points, it may be noteworthy for future investigation of service levels and customer expectations for drop-in programs.

Figure 11: Importance versus Performance Index Score

Service Area	Performance Index	Importance Index	Net Differential
Total	69.65	78.38	-9
Drop-in Swimming	71.11	84.89	-14
Registered Swimming Programs	74.47	79.52	-5
Drop-In Gym and Club Programs	66.88	78.18	-11
Registered Gym and Club Programs	71.25	78.13	-7
Golf Courses	66.27	72.88	-7

NET PROMOTER SCORE INDICES

The Net Promoter Score indices outline how likely an individual is to recommend a service to another person and measure customer loyalty. For municipal services, this score is difficult to interpret because often individuals do not have many alternatives for utilizing different services and there may be internal biases for certain service areas; however, this score does provide valuable information for if customers would recommend using the service or whether they may seek alternatives or avoid using the service altogether.

Likert choices less than a score of 4 are considered 'Detractors' meaning that they would not recommend the service, while scores of 5 are considered 'Promoters' who would recommend the service, and scores of 4 are considered 'Passive' which means they do not have strong feelings about the service. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Promoters) and (% Detractors). The Standard Deviation (σ) is calculated in percent, the same units as the Net Promoter Score.

Based on the results in **Figure 12**, Recreation and Golf has a slightly negative overall Net Promoter Score indicating that on average customers are neutral about recommending Recreation and Golf services to others. The highest-scoring service areas are Drop-In Swimming and Registered Swimming Programs which both received slightly positive net promoter scores, and the lowest-scoring service areas are Registered Gym and Club Programs and Drop-In Gym and Club Programs which received scores close to or exceeding -20 indicating that generally customers do not recommend the service. It should be noted that although these areas received negative net promoter scores, Service Importance versus Performance indices were generally well matched.

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Figure 12: Net Promoter Score

Service Area	σ	NPS
All Service Areas	1.34	-6.11
Drop-in Swimming	1.27	7.04
Registered Swimming Programs	1.23	7.02
Golf Courses	1.45	-10.00
Drop-In Gym and Club Programs	1.31	-18.75
Registered Gym and Club Programs	1.29	-22.22

SERVICE RATES VERSUS VALUE FOR MONEY INDICE

The Service Rates versus Value for Money indices is used to determine if the rate an individual is paying for a service correlates with the perceived value for money. Service areas where rate level ratings exceed value-for-money ratings by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale. Positive Net Differential values indicate that 'Value for Money' was greater than willingness for 'Rates'. Low index scores in 'Rates' indicate that respondents are not willing to pay increased rates for the service area. All values were calculated and then rounded to the nearest whole number.

Overall, the net differential indices do not exceed 20 points for the Recreation and Golf service, there is generally a match between customer expectations (value for money) and service levels (tax rates). Per **Figure 13**, survey respondents generally perceived they were getting Average value for money across all services and thought that Recreation and Golf should maintain service levels and minimize rate increases. Therefore, if Recreation and Golf is proposing to change levels of service for these service areas, they would want to ensure they are educating and seeking agreement from the public.

Figure 13: Rates versus Value for Money Index Score

Service Area	Rates (index score)	Value for Money (index score)	Net Differential
Total	62	69	-7
Golf Courses	56	64	-8
Registered Swimming Programs	65	73	-7
Drop-In Gym and Club Programs	62	69	-7
Registered Gym and Club Programs	63	69	-6
Drop-in Swimming	67	73	-5

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4.3.2 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how the City delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. The City will measure specific lifecycle activities to demonstrate how the City is performing on delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.⁷

Table 13 shows the activities expected to be provided under the current 10-year Planned Budget allocation and the Forecast activity requirements being recommended in this AM Plan.

⁷ IPWEA, 2015, IIMM, p 2|28.

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Table 13: Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE (2023)	CURRENT TARGET PERFORMANCE (2023)	PROPOSED 10-YEAR PERFORMANCE	
Acquisition	Ensure an adequate number of Community Recreation Centres	Ratio of facilities per resident	1 facility per 25,400 residents ⁸		1 facility per 27,500 residents ⁹	
		Budget	\$0 ¹⁰		\$110M	
	Ensure an adequate number of indoor pools	Ratio of facilities per resident	1 facility per 25,400 residents ⁸		1 facility per 30,000 residents ⁹	
		Budget	\$0 ¹⁰		As part of CRC acquisitions budget	
	Ensure an adequate number of outdoor pools	Ratio of facilities per resident	1 facility per 9,500 children and youth aged 5-19 years ⁸		1 facility per 10,000 children and youth aged 5-19 years ⁹	
		Budget	\$0 ¹⁰		\$12.6M ¹¹	
	Ensure an adequate number of arenas	Ratio of facilities per resident	1 ice pad per 23,360 residents ⁸		1 ice pad per 28,750 residents ⁹	
		Budget	\$0 ¹⁰		\$59M	
	Maintenance	Ensure that Recreation and Golf assets are maintained in good condition.	Facility Condition Index	7.6%	<5%	<5%
			Budget	\$7.6M	\$120M	\$256M
Renewal	Ensure that Recreation and Golf assets are maintained in good condition.	% of vehicles and technology assets past their service lives	23%	0%	0%	
		Budget	\$0.6M	\$1.7M	\$4.3M	

⁸ As there were no acquisitions or disposals proposed for 2023, the current actual and current target performance are equivalent.

⁹ 2051 target ratio, per Recreation Master Plan recommendations. See the proposed level of service discussion for more information.

¹⁰ As there were no acquisitions or disposals proposed for 2023, current actual and current target performance budgets are set to \$0.

¹¹ Values are provided for outdoor pool acquisitions that are recommended to occur outside the 10-year horizon, in line with reaching 2051 target ratios.

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4.3.3 PROPOSED LEVELS OF SERVICE DISCUSSION

Per the Technical Levels of Service **Table 13**, it can be concluded that Recreation and Golf is often meeting technical standards with some exceptions. However, customer preferences and expectations do not always align with internal technical targets. The purpose of this section is to link the customer and technical levels of service to determine areas where different levels of service could be proposed. The discussion below is intended to provide context to direct Recreation and Golf to areas for further investigation based on these initial results before proposing any new levels of service. As a continuous improvement item noted in **Section 10.2**, future iterations of this survey seek to confirm these initial results, better define the proposed levels of service, and improve the overall level of engagement.

CONDITION / QUALITY

Based on the results of the survey, customers think that Recreation and Golf have Average to Good Performance overall in the service areas. As shown in **Figure 13** there is generally a match between customer expectations (value for money) and service levels (tax rates). Customers feel they are getting Average value for money across all services and thought that Recreation and Golf should maintain service levels and minimize rate increases. Therefore, if Recreation and Golf is proposing to change levels of service for these service areas, they would want to ensure they are educating and seeking agreement from the public.

Survey respondents said they felt comfortable accessing the Recreation and Golf sites and services; however, customers felt neutral when asked if the facilities were clean and in good repair. Per **Table 13**, the City is not currently meeting the Facility Condition Index technical target overall and this should be investigated further. Additionally, As noted in **Table 11**, with current underfunding to maintenance budgets and a large existing backlog of projects to manage, this level of service is expected to decline over time.

FUNCTION

Per Customer Levels of Service **Table 11** Recreation and Golf is meeting some customer needs in all surveyed service areas. The lowest-scoring service areas were Drop-In Gym and Club Programs and Registered Gym and Club Programs. These areas also had the lowest data consistency indicating that there were more split opinions from respondents. This may be a notable area for future investigation of customer needs.

Per **Section 4.3.1** and **Figure 11**, there is generally a match between customer expectations (performance) and perceptions (importance). Customers identified Drop-in Swimming and Drop-In Gym and Club Programs as important services with slightly lower performance of Average-Good. Although the match was close, an investigation of service levels and customer expectations for drop-in programs may be worthy of further investigation.

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CAPACITY

Results from the survey indicated customers were satisfied with their ability to access sites and services. There are multiple technical levels of service measures related to capacity in **Table 13**, all related to the acquisition and driven by the provisioning targets detailed in the Recreation Master Plan. The City is exceeding these targets in 2023. Therefore, with the information available, it appears that there is a match between customer expectations and technical performance in this area.

The average survey respondent indicated that they are neither satisfied nor dissatisfied (neutral) with the program hours offered. The only service area where respondents felt satisfied with program hours was Golf Courses. Survey respondents also felt neutral about whether sites and services were compliant with the Accessibility for Ontarians with Disabilities Act (AODA) and were accessible by public transportation.

While all Recreation and Golf facilities adhere to AODA compliance standards, feedback from the community survey within the Recreation Master Plan highlighted the necessity for safe active transportation pathways to facilities and parks, along with accessible spaces and amenities for individuals with disabilities. This demand for more accessible facilities has been identified by the Recreation asset owners and is discussed further in **Section 5**. Based on this feedback, there is more investigation required to determine the proposed level of service for accessibility within facilities and when navigating transportation to facilities. This has been noted as a continuous improvement item in **Section 10.2**.

Provided by recommendations from the Recreation Master Plan, the proposed capacity adjustment for community recreation centres is to alter their ratio of centres to residents from 1:24,500 at the current, to 1:27,500 by 2051, a target which aims for fewer, but larger facilities. This proposed level of service is driven by trends in facility design that favour larger, multi-functional CRCs. These centers offer improved convenience for users, operational efficiency, integrated service delivery, and cross-programming opportunities for all age groups. This model is noted to be particularly suitable for areas with lower population density, where land is more widely available, though may risk a reduced level of service with regard to accessibility in location.

As pointed out in **Table 13**, the existing budget for both the current actual and target facility ratios are set a \$0, as there are no plans in this current year to adjust these ratios. However, Recreation has identified these levels to be achieved over the long-term leading towards the ratios provided for 2051. Budgets included consist of the costs to acquire facilities within the 10-year horizon, contributing to goals for 2051. Summarized by the findings in the Recreation Master Plan, these targeted facility ratios have been derived from third-party consultant research, comparing facility ratios to a number of residents for comparable municipalities in Ontario.

Looking ahead, respondents identified modernization or development of new community recreation centres and indoor pools as important potential service areas but also indicated that they prefer to maintain services and minimize tax rate increases. Measurements related

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to proposed facility acquisitions and renewals should be included in future drafts, guided by the implementation strategies currently in development.

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5. FUTURE DEMAND

Demand is defined as the desire customers have for assets or services and that they are willing to pay for. These desires are for either new assets/services or current assets.

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of services required.

5.1 DEMAND DRIVERS

For the Recreation division service area, the key drivers are:

- Population Growth
 - Hamilton's population is projected to increase to approximately 636,080 by 2031. This forecasted increase in population will significantly increase the demand for the volume of services provided by Recreation over the next ten years and beyond.
- Reputation – Facility Conditions
 - A backlog of maintenance work has accumulated on Recreation Facilities, requiring remediation. These unresolved projects pose a risk to the reputation of the Recreation Division as facilities continue to deteriorate over time and service levels decline.

5.2 DEMAND FORECASTS

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 14**. Growth projections have been shown on Page 45 of the AM Plan Overview document. These additional demands as well as anticipated operations and maintenance costs have not been encompassed in the Lifecycle Models in **Section 8**.

5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets are shown in **Table 14**. Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet

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demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Opportunities identified to date for demand management are shown in **Table 14**. Demands related to climate change adaptation are included in **Table 21**. A continuous improvement item identified in **Section 10.2** is to investigate the costs of implementing the demand management plans identified but currently unquantified in this AM Plan. Presently, the only demand management plan cost that is considered in the lifecycle model is population growth, through the integration of facility acquisitions.

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Table 14: Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Population	560,000	636,080	<ul style="list-style-type: none"> ▪ Increase to number of assets required. ▪ Pressure for access to spaces in growth areas non-serviced. ▪ Limited access to prime-time activities in existing spaces. ▪ Insufficient operating budget and FTEs to run new facilities. ▪ Reduced demand for lower amenity facilities. 	<ul style="list-style-type: none"> ▪ Request a budget increase to maintain a level of service. ▪ Recreation Implementation Strategy – to fund the plan and increase demand for Capital funding to build/retrofit facilities. ▪ Revenue opportunities and increases to offset the cost of operation. ▪ Advance and fund feasibility and detail design where applicable to leverage grant opportunities. ▪ Review associated operating costs of new builds to ensure inclusion in capital detail sheets. ▪ Review and decommission under-utilized/not required facilities.
Social/Cultural Shifts	2016 - 25% of residents born outside of Canada ¹²	Anticipated to increase	<ul style="list-style-type: none"> ▪ Increased interest in non-traditional recreational opportunities. ▪ Changing sports trends impacting utilization and asset demand. 	<ul style="list-style-type: none"> ▪ Complete and implement a Community Sport Plan. ▪ Decommissioning and repurposing of sports fields. ▪ Decommissioning three aging arenas.
Aging Demographic	Median Age 40.8 ¹³	Residents over the age of 75 expected to increase by 114% by 2046 ¹⁴	<ul style="list-style-type: none"> ▪ Favour more passive recreational activities as aging occurs. ▪ Physical limitations to participation. ▪ Changing program needs. ▪ Accessible space considerations. ▪ User fee changes impact ability to access. ▪ Transportation barriers/limitations. 	<ul style="list-style-type: none"> ▪ Recreation Fee Assistance Funding Increases. ▪ Affordable Emergency Use Recreation Centres Access to Recreation Policy. ▪ Pricing Policy review and implementation. ▪ Expand Seniors Recreation Centres (ASAC, Sackville). ▪ Enhance seniors programming spaces in existing facilities.
Reputation Facility Condition	Avg facility age 39 yrs. Maintenance backlog of \$108M identified across portfolio.	Increased backlog under current funding model	<ul style="list-style-type: none"> ▪ Increased facility closures both planned and unplanned for emergency maintenance. ▪ Underutilized spaces due to limited accessibility and amenity features in older facilities. ▪ Increase in maintenance related operating costs. ▪ Increase in FTE to manage maintenance related work. ▪ Reduced program revenue generation due to closures. ▪ Public perception regarding spaces and access when closures occur, and maintenance needs become visible to users. 	<ul style="list-style-type: none"> ▪ Investment in renewal strategies for impacted facilities. ▪ Recreation Implementation Strategy - funding the plan. ▪ Increased maintenance budgets for impacted facilities. ▪ Potential FTE impacts to maintain facilities. ▪ Strategic planning to reduce the number and length of closures and maximize budgets.

¹² (City of Hamilton, Recreation Master Plan, 2022)

¹³ (City of Hamilton, Recreation Master Plan, 2022)

¹⁴ (City of Hamilton, Recreation Master Plan, 2022)

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DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Technology Self Service Online	Online Program Registration Drop-In viewing	Online Program Registration Drop in Admissions Rentals Membership	<ul style="list-style-type: none"> Limited self-help leads to pressure on customer service staffing and FTE to process requests. Loss of revenue potential to online providers with ease of use for self-service. Public perception not advancing technologically/dated services. Potential reduction in FTE opportunity to move to technology. Budget pressure to operate for licensing, support, and implementation. 	<ul style="list-style-type: none"> Advance software upgrade to enhanced platform. Review and prioritize self-service as a best practice. Align initiatives with Corporate Digital Strategy.
Increased Accessibility in Facilities	All facilities are code compliant, and not all barrier-free to access programmed spaces	Increased demand for more accessible and barrier-free spaces.	<ul style="list-style-type: none"> Pressure to adapt current facilities to the level of accessibility needed/requested. Budget pressure to allocate funding for these projects 	<ul style="list-style-type: none"> Requesting increased maintenance/capital budgets to facilities for these updates.
Community Halls	Underutilized assets	Reduced demand, increased deterioration.	<ul style="list-style-type: none"> High operation and maintenance costs in relation to utilization. Drain on overall budget use. Indirect model of service delivery, lack of volunteers/third parties to operate. 	<ul style="list-style-type: none"> Divest in facilities when possible. Develop an adaptation strategy to manage demands in nearby facilities.
Facilities attached to Schools	Underutilized assets	Demand for these assets is decreasing.	<ul style="list-style-type: none"> Assets are not barrier-free, with poor viewing areas and support spaces. Limited g gymnasium access. Pools tied to schools difficult to withdraw from ownership 	<ul style="list-style-type: none"> Review facilities to determine the feasibility of retrofits. If not possible, divest and reinvest elsewhere.

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5.4 ASSET PROGRAMS TO MEET DEMAND

The new assets required to meet demand may be acquired, donated or constructed. For Recreation, typically assets are acquired or constructed.

At this time there are approximately **\$99M** in assets acquired over the next 5 years and an anticipated **\$567M** over the 30-year planning period. Acquiring new assets will commit Recreation to ongoing operations, maintenance and renewal costs for the amount of time that the service is required. These future costs have been estimated at a high level in the Lifecycle Models in **Section 8** but should be quantified further for future iterations of the report for consideration in developing higher confidence forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan.

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6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as “coordinated activities to direct and control with regard to risk”¹⁵.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

6.1 CRITICAL ASSETS

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in **Table 15**. Failure modes may include physical failure, collapse or essential service interruption.

Table 15: Critical Assets

CRITICAL ASSET	FAILURE MODE	IMPACT
Emergency Use Recreation Centres	Physical Failure/Essential Service Interruption	Lack of shelter in response to emergency situations.
Emergency Phone System	Essential Service Interruption	Aquatic facilities closed. Accessibility assets (elevators) may require closure. Facilities with ULC-certified fire systems may require closure if unable to satisfy the requirements of performing manual fire watch.

¹⁵ ISO 31000:2009, p 2

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CRITICAL ASSET	FAILURE MODE	IMPACT
Refrigeration Plant Safety Devices	Physical Failure/Essential Service Interruption	Ice arena facility closures

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

Table 16 below outlines the Emergency Use Recreation Centres which are critical assets with strategies in place to respond to various emergency scenarios.

Table 16: Emergency Use Recreation Centres

EMERGENCY USE	DESCRIPTION	LOCATION
Heat and Cold Weather Response Strategies	Operate as a cool place/warm place during extreme hot and cold weather periods in coordination with the City's community alert process during posted customer service hours.	Ancaster Rotary Centre
		Bennetto Recreation Centre
		Bernie Morelli Recreation Centre
		Central Memorial Community Centre
		Dominic Agostino Riverdale Community Centre
		Dundas Lions Memorial Community Centre
		Huntington Park Recreation Centre
		Norman Pinky Lewis Recreation Centre
		Ryerson Recreation Centre
		Sackville Hill Seniors Centre
		Sir Allan MacNab Recreation Centre
		Valley Park Community and Aquatic Centre
Westmount Recreation Centre		
Winter Response Strategy: Warming Location	Operate as a warming location to better address the needs of those experiencing homelessness during the winter months	Norman Pinky Lewis Recreation Centre
		Valley Park Community and Aquatic Centre
		Westmount Recreation Centre

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EMERGENCY USE	DESCRIPTION	LOCATION
Emergency Evacuation Centres	An Evacuation Centre is a one-stop service site or facility where, in a disaster or emergency, people evacuate to, and their immediate basic needs are met. These basic needs are considered the Emergency Social Services (ESS) needs and include food, clothing, lodging, registration and inquiry and personal services	Bernie Morelli Recreation Centre
		Valley Park Community and Aquatic Centre
		Westmount Recreation Centre

6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

Critical risks are those assessed with ‘Very High’ (requiring immediate corrective action) and ‘High’ (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in **Table 17**. It is essential that these critical risks and costs are reported to management. Risk treatment costs will be quantified and included in future iterations of the plan and is identified in **Section 10.2** in the continuous improvement section of the plan.

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Table 17: Risks and Treatment Plans

SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
Mechanical Systems at Various Recreation Facilities	Unexpected breakdown of mechanical systems (e.g., pool filtration/ventilation, ice rink refrigeration/HVAC)	High	Continue to perform routine inspections and preventative maintenance programs. Develop renewal plan for replacement of systems at the end of service life.	Medium	Unquantified. Part of a \$108M backlog of maintenance works.
Golf Course Pedestrian Bridges	Structural deterioration and failure	High	Investigate requirements for engineered inspections. Investigate in coordination with the Transportation division to include Golf Course bridges in the engineering inspection program with other City bridges.	Medium	TBD (See Section 10.2 Continuous Improvement)

6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to ‘withstand a given level of stress or demand’, and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment and crisis leadership.

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6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective of achieving the optimum benefits from the available resources.

Table 18 outlines what activities Recreation cannot afford to do over the next 10 years with their existing budget and provides the associated service and risk tradeoffs. Due to unknown costs, updates to facilities to reach climate action goals have not been included in the Lifecycle Management Plan in **Section 8** and should be investigated in future AM Plans.

Table 18: Service and Risk Trade-offs

WHAT WE CAN NOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
Manage the facility maintenance backlog	Scheduling/program interruptions. Reduced comfort for customers. Increased numbers of service disruptions.	Increased chances of asset failure and reactive maintenance costs.
Integrate updates into buildings to reach climate action goals	Continued contribution to climate change.	Reputational Risks.
Calibrate supply (disposals) of underutilized facilities (e.g., pools attached to schools and community halls)	Overall service standard reduction due to drained funding.	Increased chances of asset failure and reactive maintenance costs.
Investment in growth-related projects (acquisitions)	Reduced levels of service over time. Potential overuse of existing facilities. Increased numbers of service disruptions.	Increased chances of asset failure and reactive maintenance costs.

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7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we have already begun to experience (adaptation). At a minimum the City must consider how to manage our existing assets given potential climate change impacts for our region.

Changes to Hamilton's climate will impact City assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models as well as levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan. This has been identified as a Continuous Improvement item in **Section 10.2**.

7.1 CLIMATE CHANGE MITIGATION

Climate Mitigation refers to human intervention to reduce GHG emissions or enhance GHG removals (e.g. building transportation infrastructure that can support cycling and public transit and reduce the need for car travel). The City of Hamilton's Community Energy + Emissions Plan (CEEP) includes five (5) Low-carbon Transformations necessary to achieve the City's target of net-zero GHG emissions by 2050:

- Innovating our industry;
- Transforming our buildings;
- Changing how we move;
- Revolutionizing renewables; and
- Growing Green.

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Mitigation Demand Analysis

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City’s modelled targets for the low carbon transformations that applied to the service/asset;
- Discussing the impact the targets would have on the service/asset; and
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050 as shown in **Table 19** below.

As previously mentioned, due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below have not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AMP. This has been identified as a continuous improvement item in **Section 10.2**.

Moving forward, the Climate Lens tool discussed in the **AM Plan Overview** will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

Mitigation Demand Analysis

Table 19: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Transforming Our Buildings	By 2050, all new municipal buildings achieve net zero emissions.	Any new builds must be designed to Net Zero standards which is an increased cost.	Gather estimates to quantify the cost to present to the council
	By 2050, all municipal buildings will be retrofitted to achieve 50% energy efficiency relative to 2016.	Any renewals of HVAC material will be with energy-efficient equipment. Lighting renewals will be to LED lighting.	Use Building Condition Assessments to plan for renewals and budget accordingly. Investigate grants for energy-efficient conversions. Gather Class D estimates and savings for these conversions to present to Council.

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CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Changing How We Move	100% of new municipal small and light-duty vehicles are electric by 2040.	Electric Vehicle Chargers will need to be installed where necessary	Prepare for conversion to electric vehicles for light-duty vehicles by investigating grant funding and performing feasibility studies for electrical updates.
Growing Green	Planting 50,000 trees a year through 2020	Trees will be incorporated in new build landscapes, without comprising security.	Analysis of facility risk will be required to ensure the safety of staff and the public.
Revolutionizing Renewables	By 2050, 50% of municipal buildings will add rooftop solar PV, covering 30% of the building's electrical load	Initial upfront capital costs for solar PV are required. Roof or structural upgrades might be required. Facilities may need to be closed for a period to perform the work.	Work with the Corporate Facilities and Energy Management division to incorporate any solar PV into Recreation buildings where applicable. Investigate solar opportunities for new buildings.

It is important to note that there may be difficulties in implementing the mitigation projects noted in **Table 19** above, specific to the Transforming our buildings demand management plans. As new builds and retrofitted buildings will require the installation of electrified HVAC systems in place of gas-burning equivalents, these facilities will impose greater demands on the existing electrical grid. More investigation is needed to determine the feasibility of implementation on a case-by-case basis, with respect to both the capacity of the station that serves the intended building and the existing electrical systems within the building in the case of a retrofit. Where retrofits occur, these projects may require upgrades to the existing electrical systems within the facility to accept incoming power (e.g., main disconnects, transformers, switchgear, etc.) and to support distribution to these HVAC systems.

Local distribution companies (LDC) Alectra and Hydro One tasked with distributing power from transmission lines to facilities within the City of Hamilton, have highlighted that upgrading infrastructure specifically in the downtown core buildings poses a challenge. This arises from the

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limited space available for the utility company to install necessary underground wiring, attributed to the area's high density and minimal setbacks.

This should be taken into consideration when determining the implementation strategy of new recreation centres in the core of the City, as these large multi-use facilities will require high peak electrical demands, which will require a request to the LDC for additional capacity. It is suggested to plan service requests several years ahead and consolidate projects within the same area as this approach enables addressing local infrastructure improvements simultaneously¹⁶.

Furthermore, when completing retrofits of HVAC systems responsible for maintaining unique indoor environments (e.g., indoor pools, indoor ice rinks), more careful judgement needs to be taken into equipment selection and design considerations of these projects. Improper implementation and commissioning of these systems has the potential to cause premature deterioration to existing building components and/or lead to unforeseen shutdowns impacting the consistency of service delivery. Moreover, the installation of these more complex systems may require additional training for staff on-site operating the facilities to ensure their efficient functioning.

MITIGATION RISK ANALYSIS

Additionally, since the risk of not completing climate change mitigation projects is that the City continues to contribute to climate change in varying degrees which were modelled in the Climate Science Report for the City of Hamilton completed by ICLEI Canada, a risk analysis has not been completed in this AMP for not completing climate mitigation projects (ICLEI Canada, 2021).

CURRENT MITIGATION PROJECTS

Mitigation projects Recreation is currently pursuing are outlined below in **Table 20**. These projects are not all confirmed or included in the budget and therefore have not been quantified in the lifecycle models. Additionally, the resulting greenhouse gas (GHG) reductions are not yet quantified.

Table 20: Climate Change Mitigation Projects

PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
Low Flow Showerheads and Drain Heat Recovery	Transforming Our Buildings	Conversion of showerheads to lower flow equivalents and recapture of heat in water drainage piping.	Reduced hot water heating demands. GHG emissions reduction.
Variable Frequency Drive	Transforming Our Buildings	Installation of VFD systems on existing equipment to allow for more efficient operation.	GHG emissions reduction.

¹⁶ (City of Hamilton, Pathway to Net Zero for Corporate Buildings, 2023)

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PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
(VFD) Installations			
Planting Trees (Golf Courses)	Growing Green	Planting of trees to provide shade and increase carbon sequestration.	GHG emissions reductions.
Incorporating NetZero Updates Into Feasibility	Transforming Our Buildings	General investigations into the feasibility and implementation strategy of facilities reaching NetZero status.	GHG emissions reduction.
Transitioning Fleet To Evs	Changing How We Move	Converting Zambonis from propane to electric. Purchase of equivalent electric vehicles in place of those with internal combustion engines.	GHG emissions reduction.

CLIMATE MITIGATION DISCUSSION

At this time, Recreation has already made progress toward some of the modelled target transformations as discussed below.

Transforming our Buildings

Recreation has begun to move toward the Transforming our Buildings targets. Harry Howell Twin Pad arena was accredited as a LEED Silver facility with 40% more energy efficiency than the national energy model for typical arenas. The facility includes geothermal heating/cooling, daylighting and natural ventilation and the utilization of recovered waste heat to warm change rooms, spectator seating and the ice melting pit.

Additionally, a number of the recreation facilities have had comprehensive Energy Audits performed that catalogued the existing energy and water consuming systems, any deficiencies of these systems, recommendations on how to improve the energy and water efficiency of these systems and a path forward to implement the recommended energy and water conservation measures.

7.2 CLIMATE CHANGE ADAPTATION

Climate Adaptation refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads).

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The impacts of climate change may have a significant impact on the assets we manage and the services they provide. Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.¹⁷

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report guided by ICLEI’s Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP) (ICLEI, 2021). The BARC Framework identified thirteen high-impact areas.

Adaptation Demand Analysis

Climate adaptation demands for Recreation are shown below in **Table 21**.

Table 21: Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	BASELINE	AVERAGE PROJECTED CHANGE	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Rising summer temperatures and extreme heat will increase energy demand for air conditioning.	25.9 ° Celsius average summer seasonal temperature	27 ° Celsius average summer seasonal temperature	<p>Increase demands on HVAC systems and costs.</p> <p>Increased use of recreation facilities as cooling centres.</p> <p>Recreation facilities become overburdened, and programs are interrupted.</p>	<p>Continue healthy preventative maintenance programs to ensure systems are prepared for extra load. Plan for equipment replacements at end of service life to ensure good condition.</p> <p>Conversion of HVAC systems to heat pumps</p>
More frequent and severe weather events will increase impacts on physical infrastructure.	187mm average total winter precipitation	204mm average total winter precipitation	<p>Increased wear on exterior materials and equipment.</p>	<p>Continue healthy preventative maintenance programs to ensure systems remain in adequate condition.</p>

¹⁷ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

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ADAPTATION RISK ANALYSIS

Additionally, the City should consider the risks for the asset or service as a result of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Similarly, to the exercise above and using the risk process in **Section 6**, asset owners:

- Reviewed the likelihood scores in the Vulnerability and Risk Assessment Report for the adaptation impact occurring;
- Identified the consequence to the asset/service if the event did happen to develop a risk rating; and,
- If the risk was identified as high, the asset owner produced a preliminary risk adaptation plan shown below in **Table 22**.

It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of mitigating the risks below has not been included in the lifecycle and financial models at this time. The adaptation plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should consider these risks during the planning and design processes. Future changes will be incorporated into future iterations of the AM Plan. Moving forward, the Climate Lens tool will assess projects based on these targets and will assist with the prioritization of climate adaptation projects. This has been identified as a continuous improvement item in **Section 10.2**.

Table 22: Adapting to Climate Change

ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
Rising summer temperatures and extreme heat events require that Recreation facilities be utilized as cooling centres	Service Disruptions	Recreation facility equipment failure due to becoming overburdened as emergency cooling centres.	Medium	Develop emergency protocols on how to best organize/adapt to these situations.

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ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns.	Facilities	Prolonged power outages due to an increase in ice storms.	High	Identify backup power requirements and review condition/capacity of existing back-up power solutions and/or install low to no carbon back-up power solutions to meet the needs identified.
Reduced capacity of flood protection measures and water storage caused by an increase in rainfall intensity leading to flooding.	Facilities	An increase in rainfall intensity leading to flooding.	High	Facilities requirements for new buildings to include stricter stormwater management.

CURRENT ADAPTATION PROJECTS

The following climate change adaptation projects in progress are included in **Table 23** below.

Table 23: Asset Climate Adaptation Projects

PROJECT	ADAPTATION IMPACT STATEMENT	PROJECT DESCRIPTION
Reinvestment into outdoor pools to provide cooling spaces.	Rising summer temperatures and extreme heat will increase the need for cooling spaces.	Continue to reinvest in outdoor pools and enhance operating hours to provide these locations as cooling spaces. ¹⁸
Conversion of wading pools to splash pads.		Converting wading pools to splash pads can extend operating hours as splash pads can remain operational to the public without staff present.

¹⁸ (City of Hamilton, Recreation Master Plan, 2022)

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CLIMATE ADAPTATION DISCUSSION

As the demand for cooling spaces rises during summer months and extreme temperature events become more frequent, ongoing initiatives aim to optimize the accessibility of recreation facilities. Through reinvestment and conversion of existing spaces, efforts are underway to extend operating hours for public use.

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8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budgets. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated together and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of Whole-Life-Costs and funding options. However, at this time the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

8.1 ACQUISITION PLAN

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs. Assets can either be donated through development agreements to the City or through the construction of new assets which are mostly related to population growth.

CURRENT PROJECT DRIVERS – 10-YEAR PLANNING HORIZON

The City prioritizes capital projects based on various drivers to help determine ranking for project priorities and investment decisions. As part of future AM Plans, the City will continue to develop its understanding of how projects are prioritized and ensure that multiple factors are being considered to drive investment decisions in the next iteration of the AM Plan. These drivers will include legal compliance, risk mitigation, O&M impacts, growth impacts, health and safety, reputation and others. These drivers should be reviewed during each iteration of the AM Plan to ensure they are appropriate and effective in informing decision-making.

Listed below are the criteria used in determining a priority strategy for the acquisition of new facilities. Development of this implementation strategy is currently underway to provide the next steps and tools to plan for investment/reinvestment strategies with funding considerations.

- Current supplies and levels of provision;
- Facility size, capacity, condition, accessibility, level of amenity, utilization;
- Public and stakeholder input (facility demand, willingness to travel, etc.);
- Geographic distribution;
- Areas and timing of future growth;
- Recreation participation trends;
- Socio-demographic trends and under-served populations;
- Availability of other notable facility and service providers;
- Targets and recommendations from previous facility studies;

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- Benchmarking against large urban communities in Ontario;
- Alignment with complementary strategies and initiatives; and,
- Financial viability and partnership potential.

CONSTRUCTED OR PURCHASED ACQUISITIONS

Over the next 10-year planning period the City will acquire approximately \$272M of constructed assets which can either be new assets which did not exist before or expansion of assets when they are to be replaced. It is important to note that these facility construction costs are presented in current (2023) dollars and exclude land value expenses. Additionally, these values are based on average replacement costs for facility construction using current construction standards, which may not entirely incorporate the requirements necessary for achieving NetZero status. It is anticipated that there will be increased expenses associated with designing and acquiring higher-efficiency building systems, along with any unquantified cost barriers related to the implementation strategy of the electrical grid.

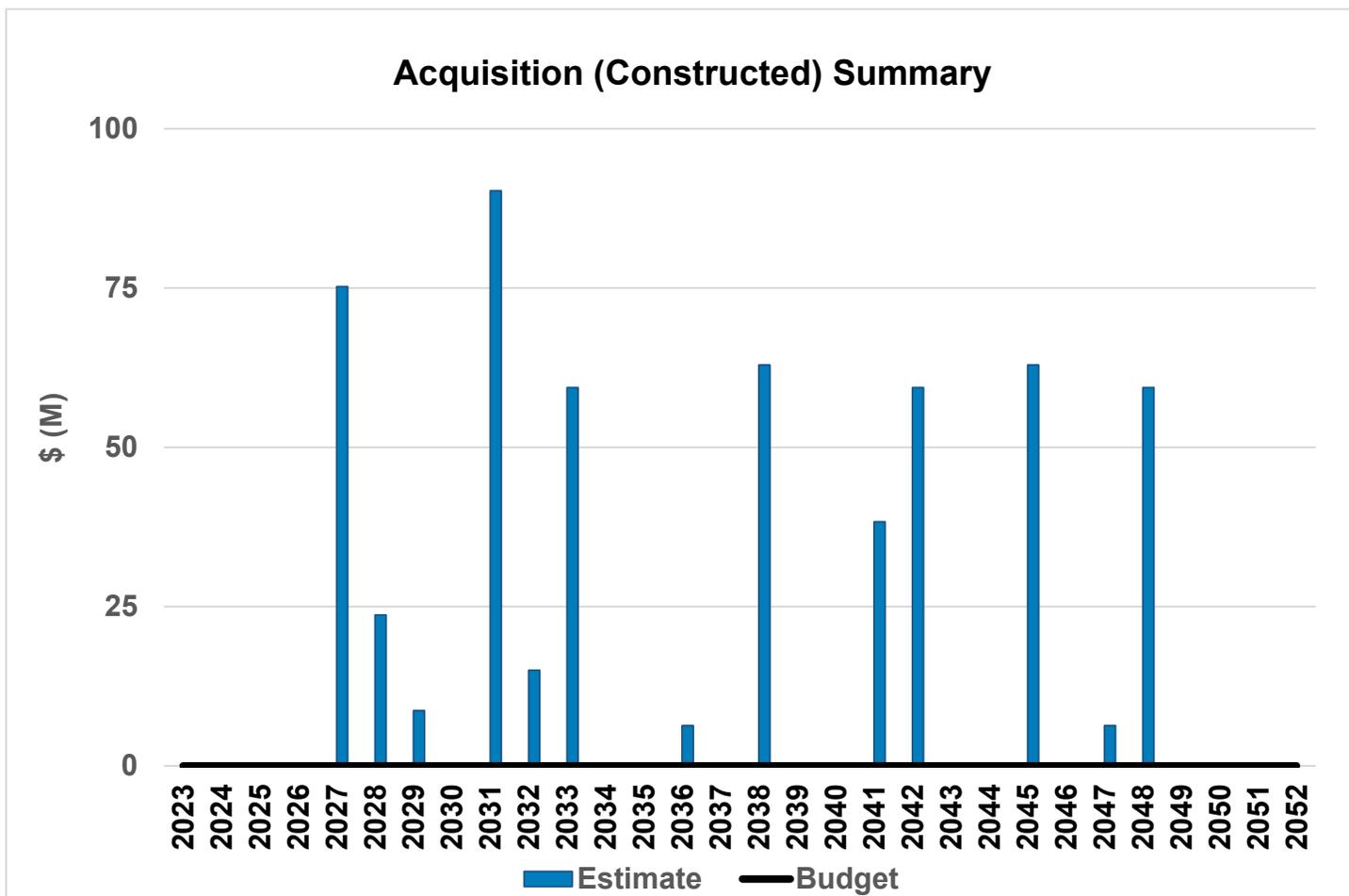
Informed by recommendations established by the **Recreation Master Plan**, major acquisition expenditures over the next ten years include:

- (2) New Outdoor Artificial Ice Facility Spaces;
- (4) Community Recreation Centres Expansions;
- (4) New Community Recreation Centres; and,
- (2) Senior Centre Expansions.

At this time, the City has not currently identified budgets for these acquisitions to ensure service levels are maintained over the long term. With competing needs for resources across the entire city there will be a need to investigate trade-offs and design options to further optimize asset decisions and ensure intergenerational equity can be achieved. Hamilton will continue to monitor its constructed assets annually and update the AM Plan when new information becomes available.

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Figure 14: Acquisition (Constructed) Summary



It is important to note that, per standard asset management practice, the values displayed in **Figure 14** are not adjusted for inflation and are presented in 2023 dollar values. Costing and time frames for acquisitions within the next 10 years are derived from the 2024 Development Charges Background Study, while estimates for the years following are approximated using average equivalent replacement costs for equivalent assets with current design standards. In the future, it can be expected that design standards, particularly concerning energy efficiency, will endorse higher benchmarks, incurring additional costs that are not presently quantified.

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ACQUISITIONS SUMMARY

Over the next 10-year planning period Hamilton will acquire approximately \$272M of Recreation assets. At present, the facility acquisitions included in **Figure 15** below are not funded, therefore sufficient budget has not been identified for its planned constructed acquisitions at this time. In addition, over the next 30-year planning period the City will acquire approximately \$567M of constructed assets which can either be new assets which did not exist before or expansion of assets when they are to be replaced. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in **Figure 15** below.

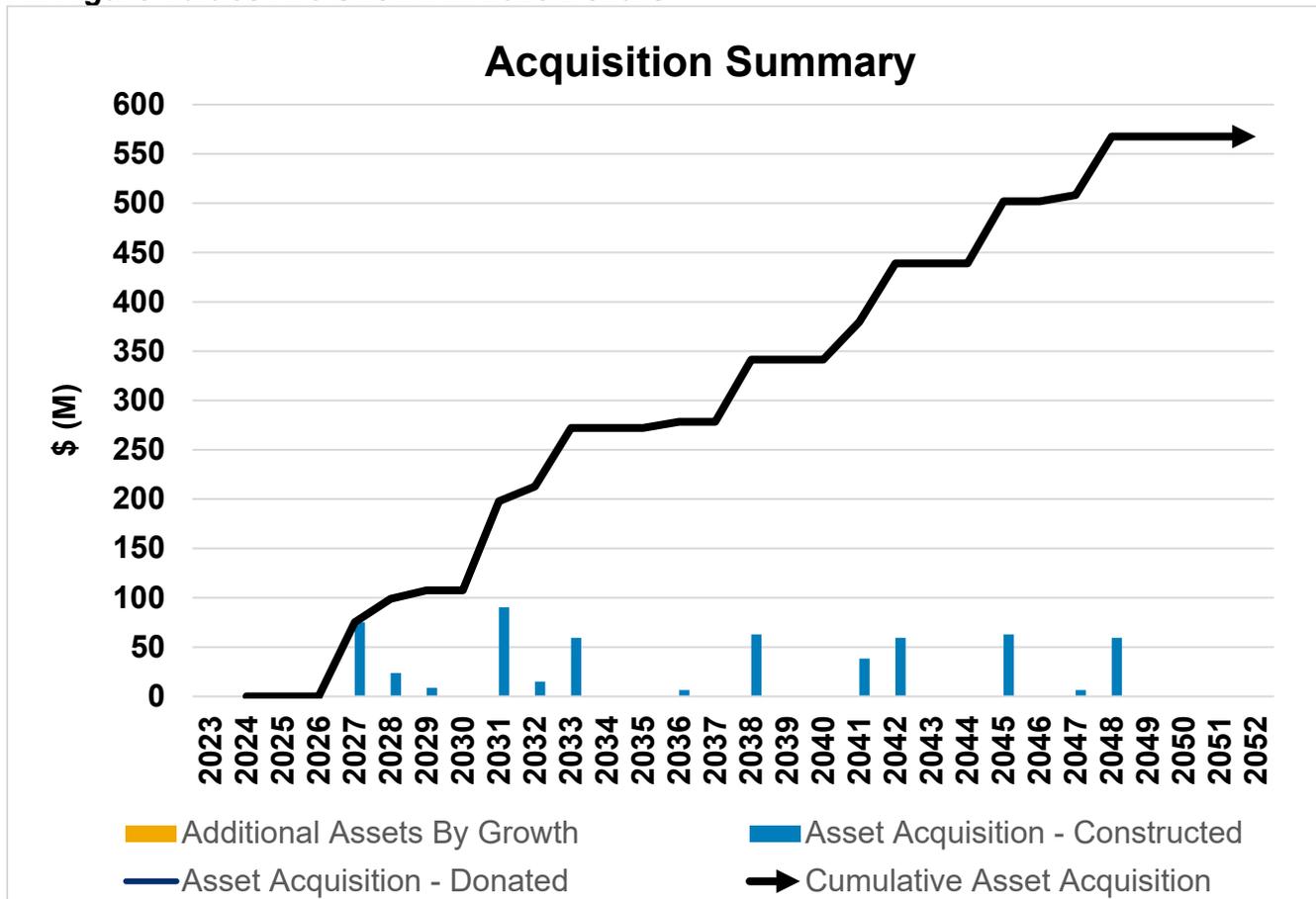
When Hamilton commits to constructing new assets, the municipality must be prepared to fund future operations, maintenance, and renewal costs. Hamilton must also account for future depreciation when reviewing long-term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken.

It will become critical to understand that through the construction or assumption of new assets, the City will be committing to funding the ongoing operations, maintenance and renewal costs which are very significant. Hamilton will need to address how to best fund these ongoing costs as well as the costs to construct the assets while seeking the highest level of service possible. Future AM Plans will focus on improving the understanding of Whole-Life-Costs and funding options, which has been identified as a continuous improvement item in **Section 10.2**.

The estimated annual operation and maintenance costs are incorporated into the lifecycle modelling for newly acquired facilities using averaged values for equivalent assets. At this time the additional costs required to purchase, maintain, and renew equipment assets for these facilities has not been incorporated into the forecasted costs. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

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Figure 15: Cumulative Asset Acquisition Costs
 All Figure Values Are Shown In 2023 Dollars



8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons.

- **\$17.5 Million** in wage costs in 2023;
- **\$4.4 Million** in facility hydro costs in 2023; and
- **\$0.9 Million** in vehicle expenses.

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure it reaches its intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition.

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Examples of typical maintenance activities include equipment repairs and component replacements along with appropriate staffing and material resources required to perform these activities.

Budgets for specific major maintenance works the City has allocated capital for include:

- **\$1.8 Million** allocated in Recreation Centre Retrofits;
- **\$400 Thousand** allocated in 2024 for Arena Retrofits; and,
- **\$150 Thousand** allocated in 2024 for Community Halls Retrofits.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure the recreation assets can achieve the desired level of service.

From **2023-2032** the City will need to invest an estimated **\$258M** for various projects across the City, as identified by BCA inspections. Examples of high-cost projects include:

- **\$1.5 Million** for a full parking lot replacement;
- **\$2.2 Million** for a full parking lot replacement; and,
- **\$1.3 Million** for a full flat roof replacement.

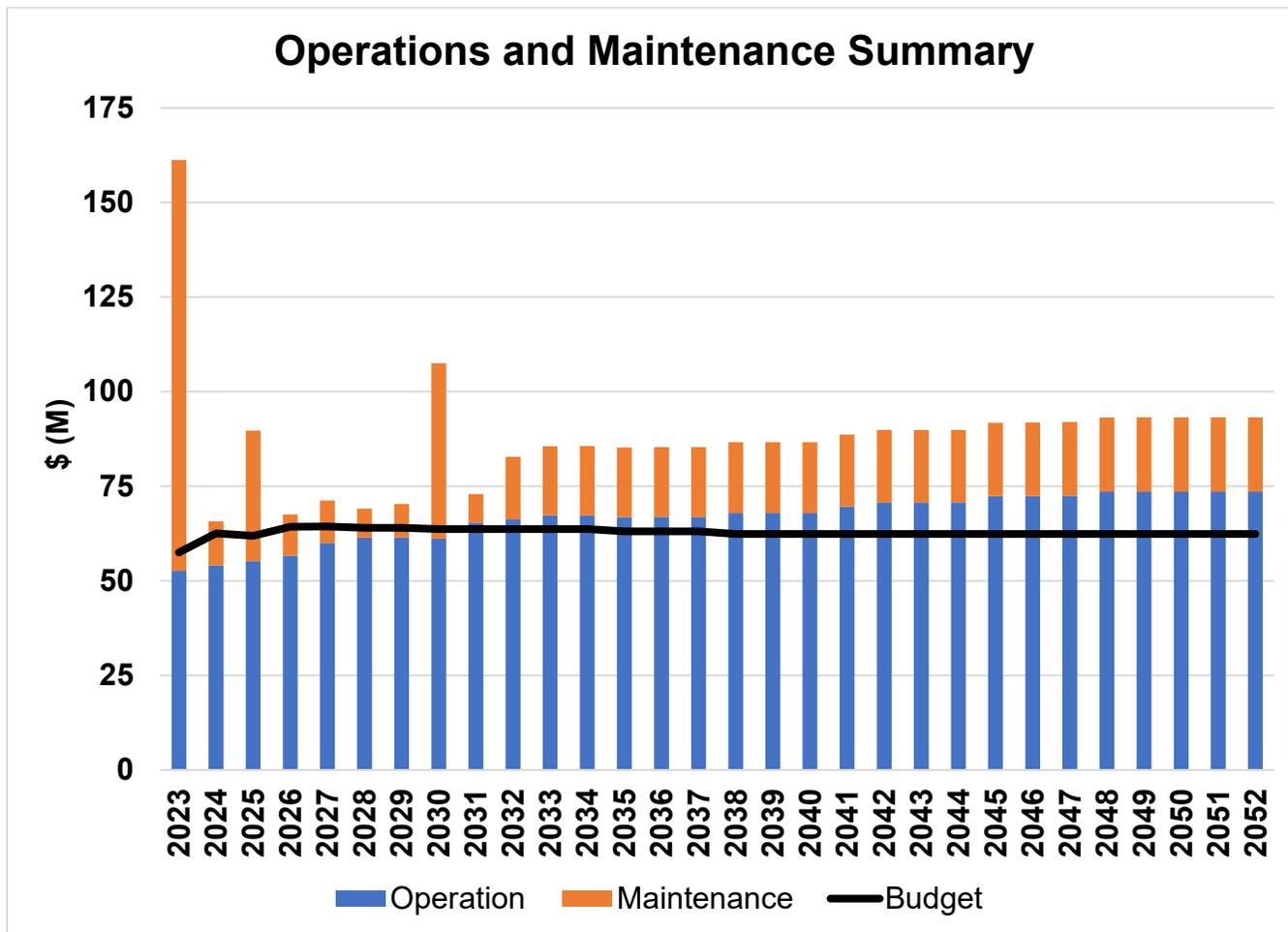
These investments for maintenance are intended to allow these assets to reach their estimated service life and minimize reactive maintenance costs. As outlined in **Section 5**, an increased demand is anticipated for improved barrier-free accessibility in recreation facilities, which require additional funding to execute. Additionally, provided future energy efficiency goals established for facilities in the Pathway to Net Zero for Corporate Buildings report¹⁹, further costs are anticipated for updates to increase energy efficiency and electrification of building systems.

Deferred maintenance (i.e. works that are identified for maintenance activities but unable to be completed due to available resources) will be included in the infrastructure risk management plan in future iterations once those works have been identified and prioritized.

¹⁹ (City of Hamilton, Pathway to Net Zero for Corporate Buildings, 2023)

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Figure 16: Operations and Maintenance Summary
 All Figure Values Are Shown In 2023 Dollars



As seen in **Figure 16** above, there is a significant backlog of maintenance work identified in year 2023, totaling approximately \$108M dollars. Over the planning term it is evident that both the operations and maintenance costs will increase with the construction of new facilities to meet demand, compounded by the increased costs required to maintain an aging number of facilities in their existing portfolio. This maintenance funding deficit is more closely analyzed in **Section 9.1**. If underfunding of these facilities continues, the Recreation division is at risk of service levels declining over time. This is in part due to the ownership of a number of underutilized facilities which are in disrepair, which have become financial liabilities due to reactive maintenance costs. Continued utilization of funds for these underused facilities imposes strain on the budgets available to the group and is discussed with more detail in **Section 8.4**. Incorporating more of these whole life costs into the lifecycle model has been noted as a continuous improvement item in **Section 10.2**.

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8.3 RENEWAL PLAN

Renewal is major works which does not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs

Asset renewals are typically undertaken to either ensure the asset's reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 24** and are based on the estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2022 however they will be reviewed annually until their accuracy reflects the City's current practices.

Table 24: Useful Lives of Assets

ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Facilities	50-75
Heritage Facilities	150
Vehicles	10
IT Hardware	4-5
Equipment	5-30

Regarding facility assets, it's crucial to highlight that ESLs indicate the projected lifespan, signaling when assets should be reassessed for the most cost-effective solution moving forward. A thorough evaluation of each facility's current usage, maintenance backlog, and upcoming capital requirements is essential in determining the financial impact of either renewing a facility completely or extending its lifespan. As ongoing costs in annual operations and maintenance are potentially elevated in facilities beyond their ESL, these sustained costs of ownership may become financially inefficient over time. More financial analysis on determining the cost optimal "break-even" point for these facilities is necessary to establish a fiscally advantageous outcome.

Additionally, it's important to highlight that Recreation's asset portfolio comprises numerous facilities with significant foot traffic and those which include indoor pools and ice rinks with high humidity environments. These characteristics can accelerate wear and tear on building components, potentially shortening the expected lifespan of the facilities.

RECREATION 2024 ASSET MANAGEMENT PLAN

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).²⁰

Future methodologies may be developed to optimize and prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure;
- Have high use and the subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have the potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.²¹

SUMMARY OF FUTURE RENEWAL COST

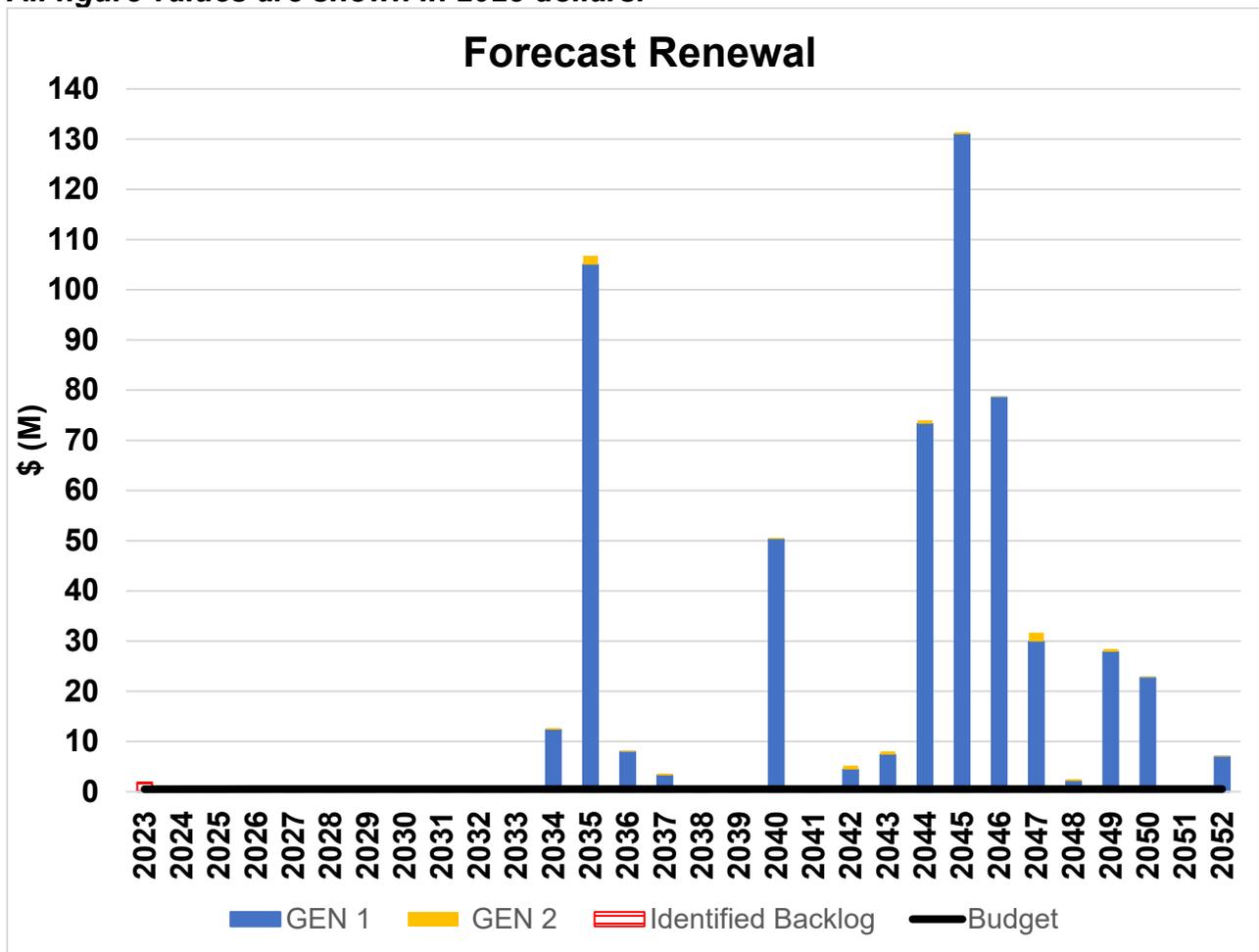
Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in **Figure 17**.

²⁰ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

²¹ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

RECREATION 2024 ASSET MANAGEMENT PLAN

Figure 17: Forecast Renewal
 All figure values are shown in 2023 dollars.



Currently, there is mostly sufficient funding to accomplish all the renewals that are planned over the next 10 years, which primarily consists of IT hardware, equipment, and vehicles. However, it is important to note that over the next ten years, the Recreation division has not identified any facilities for renewal. Instead, they are proposing to maintain their current building portfolio and manage the backlog of maintenance projects. It is important to note that there are currently many recreational facilities that are approaching or beyond their ESLs which were not included in this forecast. They were not included because Recreation does not plan to renew them due to their current underuse, which would not be financially efficient, but opting to continue to operate these buildings may result in increased reactive maintenance costs as mentioned in **Section 8.2**. Some of these facilities have been identified for disposal, but barriers to their closure persist, as highlighted in **Section 8.4**.

Also included in these assets which have had their renewal year extended beyond their ESL, are a number of golf facilities, which require remediation to continue operating as useful assets. These facilities are currently under review to determine a strategic plan, but at this time have not

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been included as either renewals or disposals within the lifecycle models since a concrete plan of action has not yet been established.

Furthermore, it should be noted that the development of a more accurate and site-specific BCA has been identified as a continuous improvement item in **Section 10.2**. This improvement item is pertinent to the decision-making process for these golf course assets as the current BCA data lacks comprehensiveness in quantifying costs associated with significant site-specific systems such as irrigation and site services and therefore these costs were not able to be encompassed in this analysis. Since these in-ground systems are currently approaching the end of their ESL, these systems may require significant investment and will require a more robust assessment following this plan. Ensuring that costs such as these are incorporated into BCA data outputs are crucial to making informed decisions and achieving more financially sound outcomes.

8.4 DISPOSAL PLAN

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen.

Assets identified for possible decommissioning and disposal are shown in **Table 25**. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposal of the assets are also outlined in **Table 25**. Costs related to the disposal of these facilities are integrated into the lifecycle models using costs to demolish per square foot of building area for a similar building typology, provided internally by the facilities management division. These costs are considered low-medium data confidence as they do not consider any potential unique site conditions (e.g., environmental remediation). Savings in annual operations and maintenance costs projected for these facilities have been incorporated into the lifecycle models.

Table 25: Assets Identified for Disposal

ASSET	REASON FOR DISPOSAL	TIMING	DISPOSAL COSTS	OPERATIONS and MAINTENANCE ANNUAL SAVINGS (BUDGETED)
Stoney Creek Arena	Align supply with demand and realize cost efficiencies	Short-term and Ongoing	\$1,272,510	\$348,787
Eastwood Arena	Align supply with demand and realize cost efficiencies	Short-term and Ongoing	\$1,184,535	\$288,764
Saltfleet Arena	Align supply with demand and realize cost efficiencies	Short-term and Ongoing	\$1,124,100	\$341,595

RECREATION 2024 ASSET MANAGEMENT PLAN

ASSET	REASON FOR DISPOSAL	TIMING	DISPOSAL COSTS	OPERATIONS and MAINTENANCE ANNUAL SAVINGS (BUDGETED)
Glanbrook Arena and Auditorium	Site services are at the end of life.	Short-term and Ongoing	\$1,852,335	\$581,372
Hill Park Recreation Centre	Realize cost efficiencies.	Short-term and Ongoing	\$750,825	\$697,162

The Stoney Creek Arena, Eastwood Arena, and Saltfleet Arena facilities have all been noted within the ***Recreation Master Plan*** as assets which have the opportunity to be disposed in order to calibrate the supply more closely with demand for the area, in line with the identified acquisitions. Asset owners have noted that the utility services supplying Glanbrook Arena and Auditorium are at the end of their lifespan and require replacement, therefore the building has been identified for consideration to dispose of. Hill Park Recreation Centre is noted to be in poor condition and has been identified as an underutilized facility. If disposed of, it is expected to have minimal service impacts. Being one of several assets connected to school facilities, further review is needed for this, and all joint Hamilton Wentworth District School Board sites included in the recreation portfolio.

Table 26: Heritage Facilities

HERITAGE FACILITY	ORIGINAL YEAR OF CONSTRUCTION
Greensville Community Hall	1875
Woodburn / Centennial Hall	1898
Binbrook Memorial Hall	1920
Waterdown Memorial Hall	1922
Jimmy Thompson Memorial Pool	1930
Dundas Lions Memorial Community Centre	1874
Beverly Township Hall (Rockton Hall)	1854

Facilities recognized with heritage status within the Recreation portfolio are listed in **Table 26** above. Consequently, these facilities, even if they surpass their ESL, are not factored into disposal costs within the lifecycle model. Instead, they will continue to be maintained on an ongoing basis until further notice.

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As previously mentioned in **Section 8.2**, a number of facilities beyond their ESL have been identified (See **Table 27** below), which are not currently included as part of the renewal or disposal forecasts. Consequently, their maintenance and operations will continue as usual through the 30-year planning term. Although not quantified at this time, it is expected that the ongoing maintenance and operations for these buildings which are beyond their ESL will result in increased reactive costs that may strain the overall budgets allocated for the recreation facilities portfolio.

Table 27: Facilities Beyond ESL

ASSET TYPE	FACILITY NAME
Recreation Facility	Sealy Park Scout Hall
	Sheffield Community Hall
	Central Memorial Recreation Centre ²²
	Lynden Lions Club
	Carlisle Memorial Hall
	Rosedale Lawn Bowling - Clubhouse
	Mountsberg Hall
	Dundas Driving Park - Lawn Bowling Clubhouse
	Dundas Driving Park - Tennis Clubhouse
	Powell Park Wading Pool
	Ancaster Seniors Achievement Centre ²²
	Optimist Youth Centre
	Valens Community Hall
	Winona Community Centre
	Eastmount Community Centre ²²
	Fruitland Community Centre
	Mount Hope Community Youth Centre
The Optimist Club of Stoney Creek	

²²While in active use and have seen updates, these facilities still require review for a long-term strategy.

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Of these buildings, the most common are noted to be community halls and sports clubhouses, which are generally reported as underutilized facilities. Generally, these assets are in declining repair and will require reinvestment to remain as functional assets for use over the long term. Additionally, while these facilities all remain building code compliant, there are anticipated demands to adapt these buildings to achieve greater barrier-free accessibility. It has been noted as a continuous improvement item in **Section 10.2** to incorporate more robust accessibility criteria into the building condition assessment methodology, to better quantify these costs.

Looking ahead, the possibility of disposing of underutilized halls exists, especially if substantial capital upgrades are needed and their functions can be absorbed by nearby facilities. Challenges do exist regarding their closure, as many of these facilities lack properly documented real estate contracts, complicating their exit strategy. It should be made clear that the facilities listed in **Table 27** above are not necessarily slated for disposal. Instead, they have been flagged here to ensure they receive a more detailed evaluation. Further review into the most cost-effective management of these facilities has been noted by a continuous improvement item in **Section 10.2**.

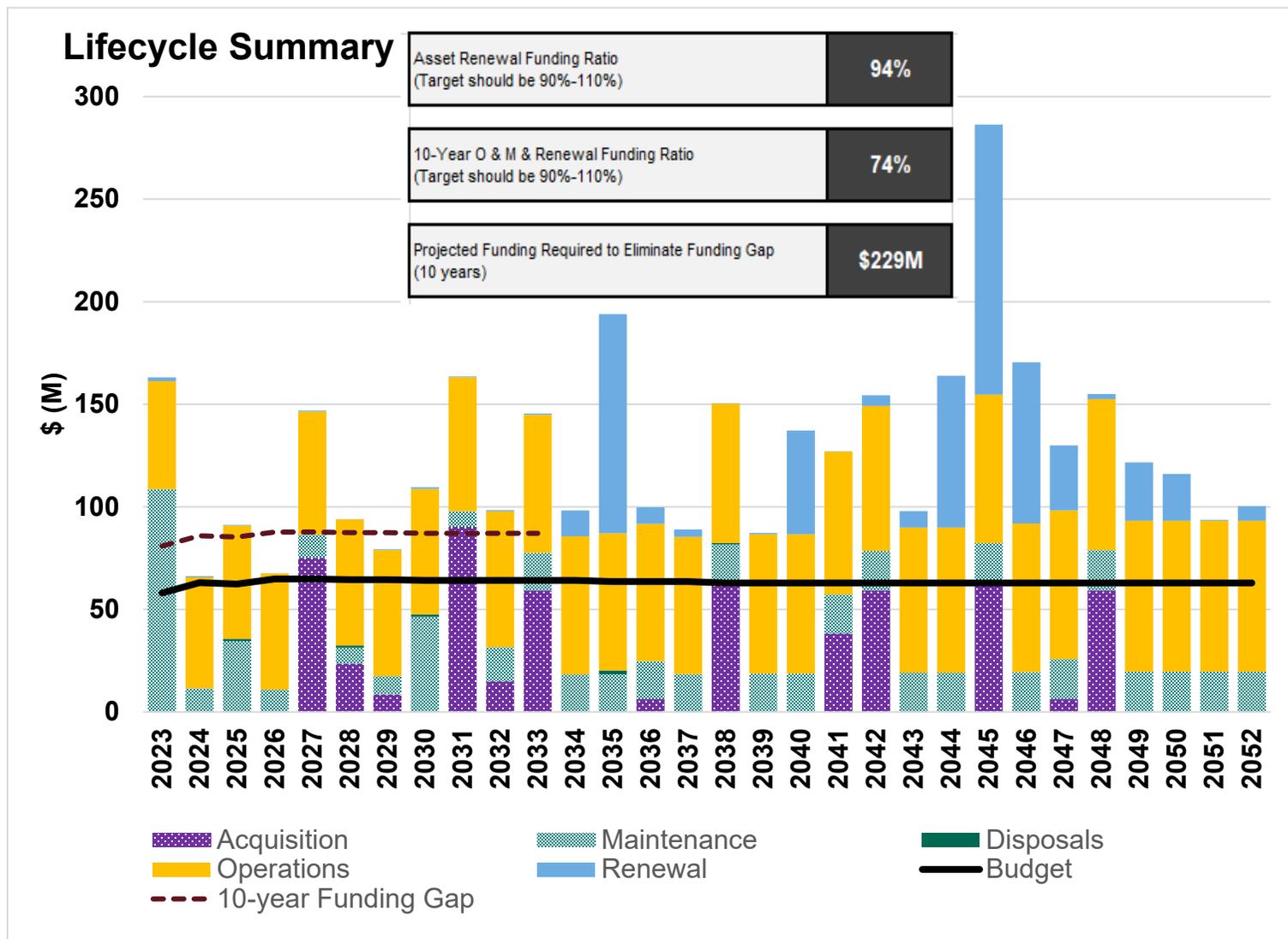
8.5 LIFECYCLE COST SUMMARY

The financial projections from this asset management plan are shown in **Figure 18**. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving a balance between costs, levels of service and risk to achieve the best value outcome.

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Figure 18: Recreation Lifecycle Cost Summary



The figure above indicates that there is underfunding over the 10-year planning period to address lifecycle needs. A large gap has been identified in the maintenance backlog, totaling over \$108M in needs that require addressing. These include major projects such as roof and parking lot replacements. As previously mentioned, there is also an inventory of facility assets which have had their ESLs extended which are consequently not captured within the renewals costs within this figure, which primarily consist of sport clubhouses, golf, and community hall facilities. More investigation into the outcome of these facilities is required to determine a cost-optimal solution. In general, there appears to be mostly sufficient funding provided for operations, though these needs will increase over time as facilities are acquired.

It is important to note that this forecast does not include additional anticipated lifecycle activities for other demands or risks discussed in **Section 5** and **Section 6** which will be quantified in future AM Plans.

RECREATION 2024 ASSET MANAGEMENT PLAN

9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure its Recreation network provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-term financial planning (LTFP) is critical for the City to ensure the network lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for its Recreation network; the City will have difficult choices to make in the future which will include options such as higher costs reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all of the network's needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

9.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- Medium-term forecast costs/proposed budget (over 10 years of the planning period).

An additional financial indicator has been included to highlight funding concerns specific to maintenance requirements over the first 10 years of the planning period:

- 10-Year Maintenance Financial Ratio (proposed maintenance budget for the next 10 years/backlog and forecasted maintenance costs for the next 10 years).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio²³ **94%**

²³ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

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The Asset Renewal Funding Ratio (ARFR) is used to determine if the City is accommodating asset renewals in an **optimal** and **cost-effective** manner from a timing perspective and relative to financial constraints, the risk the City is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable, however, the expenditures are below this level in some service areas predominantly due to underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

For the recreation division, the assets captured within this calculation are comprised of IT hardware, vehicles, and equipment. It is important to highlight that there is also an inventory of facility assets which have had their ESLs extended outside of the 10-year planning term, which are consequently not captured within the Asset Renewal Funding Ratio (ARFR). The inclusion of these facilities would significantly impact the ARFR value and therefore require more investigation to determine the best course of action.

If assets are not renewed at the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to the City's reputation and risk of fines or legal costs

The lack of renewal resources will be addressed in future AM Plans while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

MEDIUM-TERM – 10 YEAR FINANCIAL PLANNING PERIOD

10-Year O&M and Renewal Ratio 74%

Although this AM Plan includes forecast projections to 30 years, the higher confidence numbers are typically within the first ten years of the lifecycle forecast. The 10-year O&M and Renewal Ratio compares the Planned Budget with the Lifecycle Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the ARFR, the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization' risk and service level commitments.

The forecast operations, maintenance and renewal costs over the 10-year planning period is **\$86.4M** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The proposed (budget) operations, maintenance and renewal funding is **\$63.5M** on average per year giving a 10-year funding shortfall of **\$22.9M** per year or **\$229M** over the 10-year planning period. This funding shortfall is largely driven by

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maintenance works required, which is expressed in the 10-Year Maintenance Financial Ratio. This indicates that **74%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget, which is outside of the 90-110% range. Therefore, it can be concluded that Recreation is able to fund its assets, albeit at a level below optimal.

Funding an annual funding shortfall or funding 'gap' should not be addressed immediately. The overall gap in funding city-wide will require vetting, planning and resources to begin to incorporate gap management into the future budgets for all City services. This gap will need to be managed over time to reduce it in a sustainable manner and limit financial shock to customers. Options for managing the gap include;

- Financing strategies – increased funding, block funding for specific lifecycle activities, long-term debt utilization;
- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets; and,
- Influence level of service expectations or demand drivers.

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of **90-110%** for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

10-Year Maintenance Financial Ratio 29%

As the Recreation division is responsible for a large number of facilities with complex building systems that require high annual maintenance costs, an additional financial metric was included to give visibility to the current financial stressors imposed on the group. This 10-year Maintenance Financial Ratio focuses specifically on budgets allocated for facility maintenance projects compared against the existing backlog and future needs identified for Recreation facilities through the BCA inspections completed by third-party consultants.

It was found that the total forecasted maintenance costs over the 10-year planning period is **\$258M**, which includes an outstanding backlog of work of approximately **\$108M**. The proposed (budget) maintenance funding is currently **\$7.6M** on average per year. This comprises both capital "block" funding established, in addition to the cumulative maintenance budgets allocated for each facility within the Recreation portfolio. The averaged maintenance forecast of **\$26M** per year gives a 10-year funding shortfall of **\$18.4M** per year or **\$184M** over the 10-year planning period. It should be noted that this annual funding shortfall is not separate from the shortfall identified in the 10-Year O&M and Renewal Ratio value but instead comprises a large component of it. This indicates that **29%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget, which is outside of the 90-110% range. Therefore, it can be concluded that Recreation is unable to fund maintenance work on their assets at an acceptable rate provided the current budget.

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In conclusion, while the Asset Renewal Funding Ratio and the 10-year O&M and Renewal Ratio (94% and 74%, respectively) may suggest that the Recreation division is in a financially stable position, it is apparent from the 10-year Maintenance Financial Ratio that there are funding concerns with the potential to affect future service levels. Given the existing backlog of maintenance works that need addressing, coupled with the increasing number of facilities being constructed which will impose additional financial strain, there is a need for further investigation into how best to balance funding for these assets while meeting the needs of the communities they serve.

9.2 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Table 28 shows the forecast costs (outlays) required for consideration in the 30 year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

The City will manage the ‘gap’ by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low-use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

Table 28: Forecast Costs (Outlays) For the Long-Term Financial Plan

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2023	\$-	\$52,650,776	\$108,603,120	\$1,847,120	\$-
2024	\$-	\$54,109,532	\$11,581,964	\$538,017	\$-
2025	\$-	\$55,185,832	\$34,524,324	\$292,432	\$1,184,535
2026	\$-	\$56,626,932	\$10,921,171	\$99,343	\$-
2027	\$75,205,504	\$60,000,772	\$11,224,513	\$502,329	\$-

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YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2028	\$23,675,000	\$61,418,292	\$7,650,709	\$156,741	\$1,124,100
2029	\$8,650,000	\$61,418,292	\$8,844,395	\$420,947	\$-
2030	\$-	\$61,141,812	\$46,345,820	\$789,502	\$1,272,510
2031	\$90,256,200	\$65,359,116	\$7,578,405	\$400,773	\$-
2032	\$15,000,000	\$66,202,584	\$16,590,348	\$596,399	\$-
2033	\$59,354,108	\$67,291,664	\$18,266,300	\$560,671	\$-
2034	\$-	\$67,291,664	\$18,328,112	\$12,645,209	\$-
2035	\$-	\$66,812,752	\$18,419,270	\$106,874,840	\$1,852,335
2036	\$6,310,851	\$66,903,056	\$18,439,386	\$8,122,295	\$-
2037	\$-	\$66,903,060	\$18,442,800	\$3,605,454	\$-
2038	\$62,917,132	\$67,934,344	\$18,730,680	\$189,241	\$750,825
2039	\$-	\$67,934,352	\$18,730,680	\$659,447	\$-
2040	\$-	\$67,934,352	\$18,730,680	\$50,535,960	\$-
2041	\$38,300,000	\$69,621,272	\$19,018,558	\$146,273	\$-
2042	\$59,354,108	\$70,710,360	\$19,175,568	\$5,193,181	\$-
2043	\$-	\$70,710,360	\$19,175,568	\$8,043,749	\$-
2044	\$-	\$70,710,360	\$19,175,568	\$74,003,664	\$-
2045	\$62,917,132	\$72,397,288	\$19,372,290	\$131,673,232	\$-
2046	\$-	\$72,397,288	\$19,463,448	\$78,635,432	\$-
2047	\$6,310,851	\$72,487,592	\$19,483,564	\$31,685,248	\$-
2048	\$59,354,108	\$73,576,672	\$19,582,176	\$2,498,681	\$-
2049	\$-	\$73,576,672	\$19,643,988	\$28,413,368	\$-
2050	\$-	\$73,576,672	\$19,643,988	\$22,880,330	\$-
2051	\$-	\$73,576,672	\$19,643,988	\$428,773	\$-

RECREATION 2024 ASSET MANAGEMENT PLAN

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2052	\$-	\$73,576,672	\$19,643,988	\$7,127,053	\$-

9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in the City’s operational budget and 10 year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM plan will provide service delivery options and alternatives to optimize limited financial resources.

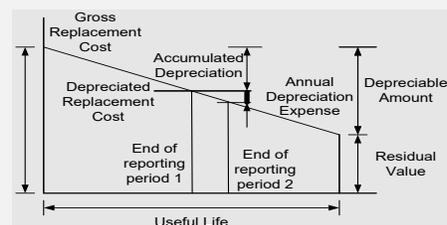
9.4 VALUATION FORECASTS

Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and removes the high costs renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs, however this will be improved for the next iteration of the plan.

9.5 ASSET VALUATION

Replacement Cost (Current/Gross)	\$1,524,756,543
Depreciable Amount	\$1,393,593,048
Depreciated Replacement Cost²⁴	\$800,739,904
Depreciation	\$22,959,911



²⁴ Also reported as Written Down Value, Carrying or Net Book Value.

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9.6 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 30-year horizon and do not address other operational needs not yet identified;
- Maintenance forecasts are based on current budget allocations and do not identify asset needs at this time. It is solely based on planned activities; and,
- Replacement costs were based on historical costing. They were also made without determining what the asset would be replaced with in the future.

9.7 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the **AM Plan Overview**.

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a **Low-Medium** confidence level.

Table 29: Data Confidence Assessment for Data Used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	Low	Facility acquisition costs are based on the estimates from the Recreation Master Plan and 2024 Development Charges Background Study. Additional demand costs are not encompassed.
Growth Projections	Medium	Facility acquisition costs are based on estimates from the Recreation Master Plan and 2024 Development Charges Background Study. Additional growth costs are not encompassed.
Acquisition Forecast	Medium	Facility costs and recommendations were based on the estimates from the Recreation Master Plan and 2024 Development Charges Background Study. Additional acquisition costs are not encompassed.

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DATA	CONFIDENCE ASSESSMENT	COMMENT
Operation Forecast	Medium	Anticipated operations budgets were provided internally for 2023-2026. Years following are assumed to flatline. Additional operations for constructed facilities were derived from equivalent existing facility operation spendings.
Maintenance Forecast	Low	Maintenance forecasts in this AM Plan are typically based on the results of the Building Condition Assessment which has been updated by the Corporate Facilities and Energy Management division, and are assumed to be a medium confidence. Maintenance needs for constructed facilities were derived from equivalent existing facility maintenance spending.
Renewal Forecast -Asset Value	Low	Renewal market pricing was used which has high confidence, and estimated service lives are typically adhered to for vehicle assets. Many facility renewal costs are currently unconfirmed and unquantified, which has lowered this confidence.
Asset Useful Life	Medium	Estimated service lives are typically adhered to for vehicle, equipment, and technology assets, but facilities ESLs were less confident.
Condition Modelling	Medium	Equipment condition was included based on internal condition scoring, which was incomplete. Technology and fleet assets are based on RSL, which is considered low confidence. Facility condition scores (FCI) are generally considered to be high.
Disposal forecast	Low	Timelines for facility disposal were provided by the Recreation Master Plan, but costs are general square footage estimates provided internally.

RECREATION 2024 ASSET MANAGEMENT PLAN

10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PRACTICES

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2023 Approved Operating Budget;
- 2023-2026 Multi-Year Operating Forecast;
- 2023 Approved Capital Budget;
- 2024-2032 Multi-Year Capital Forecast;
- 2024 Development Charges Background Study;
- Building Condition Assessment Reports;
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA, etc.);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter Expert Opinion and Anecdotal Information; and,
- Reports from the mandatory inspections, operational and maintenance activities internal reports.

10.2 IMPROVEMENT PLAN

It is important that the City recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision making. The tasks listed in **Table 30** below are essential to improving the AM Plan and the City's ability to make evidence based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning and to plans to physically improve the assets.

The Improvement plan below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current workplans. Future iterations of this AM Plan will provide updates on these improvement plans.

RECREATION 2024 ASSET MANAGEMENT PLAN

Table 30: Improvement Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1	Quantify costs of demand management and risk adaptation plans.	CAM	Internal Resources	Ongoing
2	Investigate asset costs for future climate change mitigation and adaptation targets	CAM/CFEM/Recreation	Internal Resources/ Consultants	Ongoing
3	Survey rework/improve the volume of engagement	CAM/Recreation	Internal Resources	Ongoing
4	Incorporate more equipment whole-life costs into the LC Model	CAM/CFEM/Recreation	Internal Resources	Ongoing
5	Formally track age and create condition methodologies for equipment and technology assets using an AM 5-point scale	CAM/Recreation/IT	Internal Resources	Ongoing
6	Creating a systemized evaluation criteria to prioritize for investments on asset updates/renewals/etc.	CAM/CFEM/Recreation	Internal Resources/Consultant	2025
7	Transitioning from Asset Planner/ARCHIBUS into Enterprise Asset Management system	CAM/CFEM	Internal Resources	Ongoing
8	Incorporating more robust accessibility criteria into BCAs.	CAM/CFEM	Internal Resources	Ongoing
9	Develop more accurate and site-specific (e.g., ice arena refrigeration systems, golf course irrigation systems, etc.) BCA studies	CAM/Recreation/CFEM	Internal Resources	Ongoing
10	Improved asset inventory tracking and data reporting.	CAM/CFEM/Recreation	Internal Resources	Ongoing

RECREATION 2024 ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
11	Investigate requirements for engineered inspections and estimating costs for golf course bridges	CFEM/Recreation	Internal Resources/Consultant	2025
12	Investigate proposed levels of service discussed in Section 4.3.3.	Recreation/CAM	Internal Resources	2025
13	Determine a cost-effective strategy for facilities beyond their ESL	Recreation/CFEM/CAM	Internal Resources/Consultant	Ongoing

10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated on a regular basis to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one to ten year detailed works programs, budgets, business plans and corporate structures consider the ‘global’ works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 110%).

RECREATION 2024 ASSET MANAGEMENT PLAN

11. REFERENCES

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RECREATION

2024 ASSET MANAGEMENT PLAN

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RECREATION 2024 ASSET MANAGEMENT PLAN

12. APPENDIX "A- SURVEY ANALYSIS



Hamilton
Corporate Asset Management

Recreation & Golf

Survey Period: November 8th 2023 - December 13, 2023

March 2024

134 Respondents	100 Survey Questions	6 Demographic Questions	9068 Survey Responses	804 Demographic Responses
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Age	% Pop. by Age	% of Respondents	Respondents
18 to 34	22.1%	14.17%	18
35 to 64	41.7%	59.06%	75
65+	19.5%	26.77%	34

Identity	% of Respondents	Respondents
No	69.40%	93
I would prefer not to answer	13.43%	18
Yes	13.43%	18
Other	3.73%	5

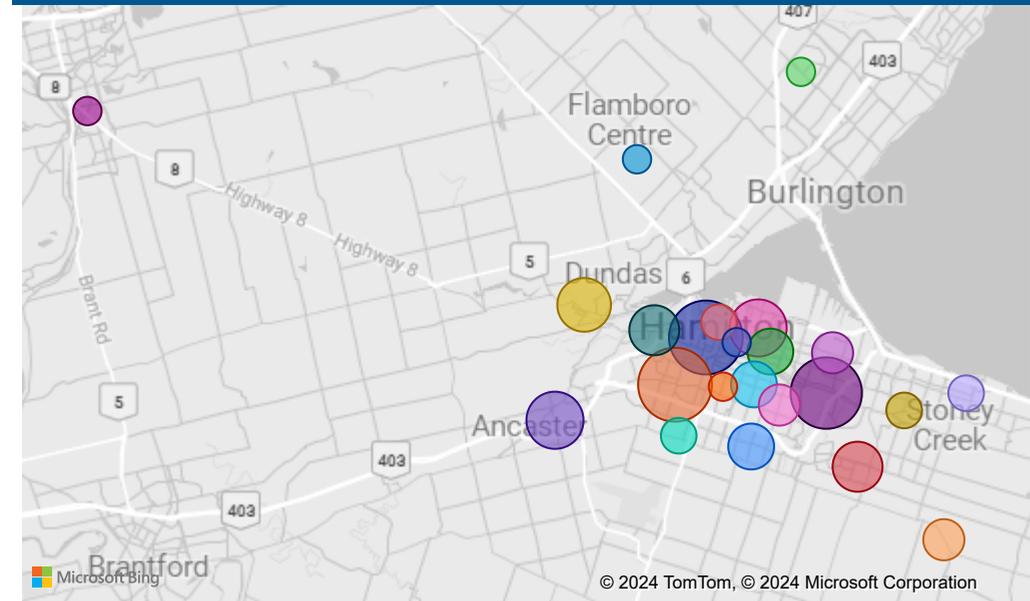
Region	% Pop. by Region	Population	% of Respondents	Respondents
Lower	45.6%	432,375	42.54%	57
Upper	37.3%	353,485	29.10%	39
Rural	17.1%	161,840	2.99%	4

Resident/Working in Hamilton	% of Respondents	Respondents
I live in Hamilton	89.55%	120
I work in Hamilton	50.75%	68
I am retired in Hamilton	25.37%	34
I run a Hamilton-based business	8.21%	11
Other	3.73%	5

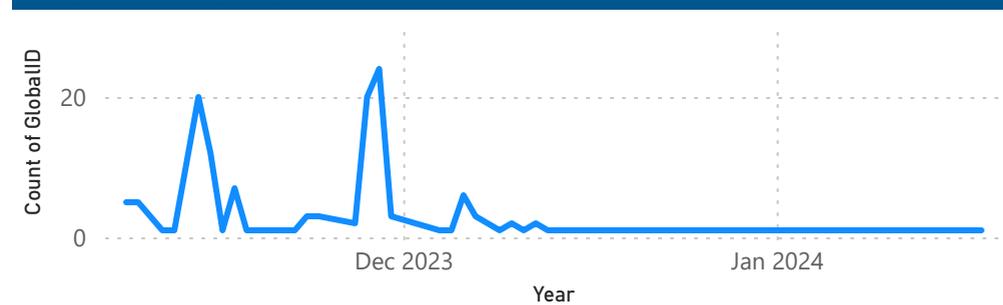
These tables may not sum to 100% because the survey allowed respondents to choose multiple options or opt out of the question



Respondent Density Map

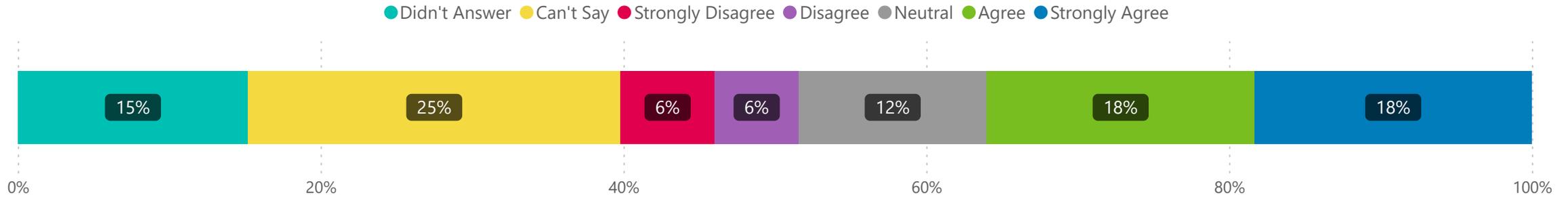


Respondents by Day

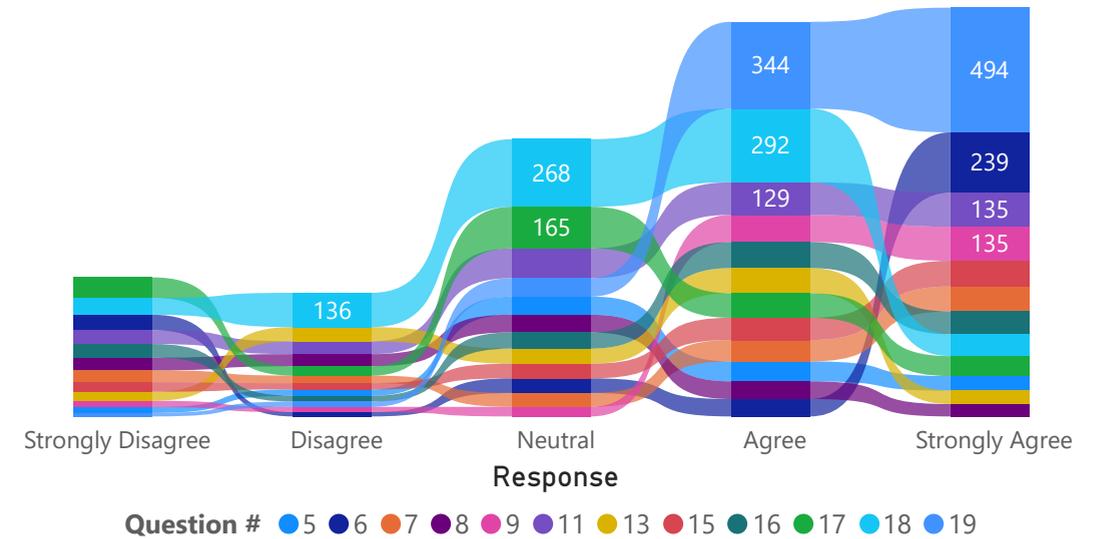


Total Responses **7499** Respondents **134**

Summary of Survey Results



Questions	σ	Avg.	Opt Out	Opt Out %
All Questions	1.29	3.60	3520	39.80%
Q5 Performance of Services	1.20	3.48	413	61.64%
Q6 Importance of Services	1.43	3.92	226	33.73%
Q7 Satisfaction with Services	1.40	3.50	354	52.84%
Q8 Needs are Being Met	1.34	3.07	383	57.16%
Q9 Comfortability Accessing Services	1.21	3.94	343	51.19%
Q11 Potential Services	1.30	3.49	182	27.16%
Q13 Satisfaction with Program Hours	1.27	3.26	365	54.48%
Q15 Recommendation to Others	1.34	3.61	359	53.58%
Q16 Value for Money	1.38	3.46	336	50.15%
Q17 Tax Rates	1.29	3.12	211	31.49%
Q18 Services Level Rating	1.08	3.23	222	20.71%
Q19 Services Level Expectations	0.83	4.36	126	11.75%



Respondents who did not answer or selected 'Can't Say' are included in optout.

Total Responses
5324

Respondents
134

Survey Question Summary

Question #	Survey Question	n (Sample Size)	σ (Consistency)	Margin of Error (Confidence Level \pm)
5	How do you feel Recreation & Golf have performed overall in the following services?	51	1.20	14%
6	How important to you are the Recreation and Golf sites and services?	89	1.43	10%
7	How satisfied are you with your ability to access these Recreation and Golf sites and services?	63	1.40	12%
8	Do the following Recreation and Golf sites and services meet your needs?	57	1.34	13%
9	Do you feel comfortable accessing these services provided by Recreation & Golf?	65	1.21	12%
11	Please rate the following potential Recreation and Golf services based on their importance to you:	98	1.30	10%
13	How satisfied are you with the program hours offered for the following services?	61	1.27	13%
15	How likely would you be to recommend the following Recreation and Golf services to others?	62	1.34	12%
16	How would you rate Recreation & Golf in providing good value for money in the infrastructure and services provided to your community?	67	1.38	12%
17	If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	92	1.29	10%
18	Do you agree with the following statements? Recreation & Golf buildings are:	170	1.08	8%
19	Do you agree with the following statements? Recreation & Golf buildings should be:	189	0.83	7%

Question

3

Ages of people visting Facilities

When visiting the following Recreation & Golf facilities, what are the ages of the people who visited with you?

Responses

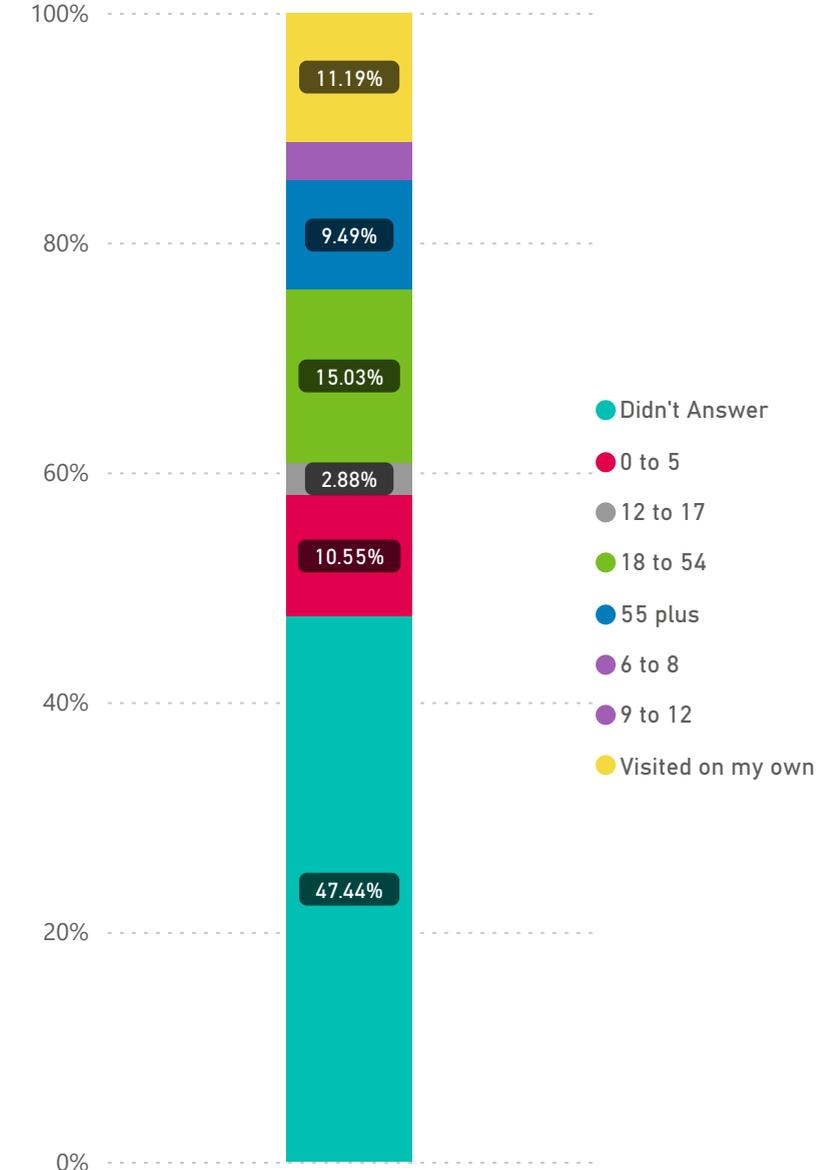
493

Respondents

128

Service Area	0 to 5	12 to 17	18 to 54	55 plus	6 to 8	9 to 12	Visited on my own
Total	99	27	141	89	26	6	105
Arenas	12	8	32	15	3		15
Community Halls	8	1	19	9	2		16
Community Recreation Centres (CRCs)	21	7	20	11	5	1	19
Golf Courses (Chedoke/King's Forest)	4		39	33		1	14
Indoor Pools	20	6	19	5	6	3	22
Outdoor/Wading Pools	25	5	10	3	9	1	7
Senior's Centres	9		2	13	1		12

Service Area	Opt Out	Opt Out %
Total	938	47.4%
Arenas	134	36.6%
Community Halls	134	59.0%
Community Recreation Centres (CRCs)	134	37.3%
Golf Courses (Chedoke/King's Forest)	134	32.1%
Indoor Pools	134	39.6%
Outdoor/Wading Pools	134	55.2%
Senior's Centres	134	72.4%



Respondents who did not answer or selected 'Can't Say' are included in optout.



Question

4

Use of Rec & Golf

In the last 24 months, how many times have you used the following Recreation & Golf services?

Responses

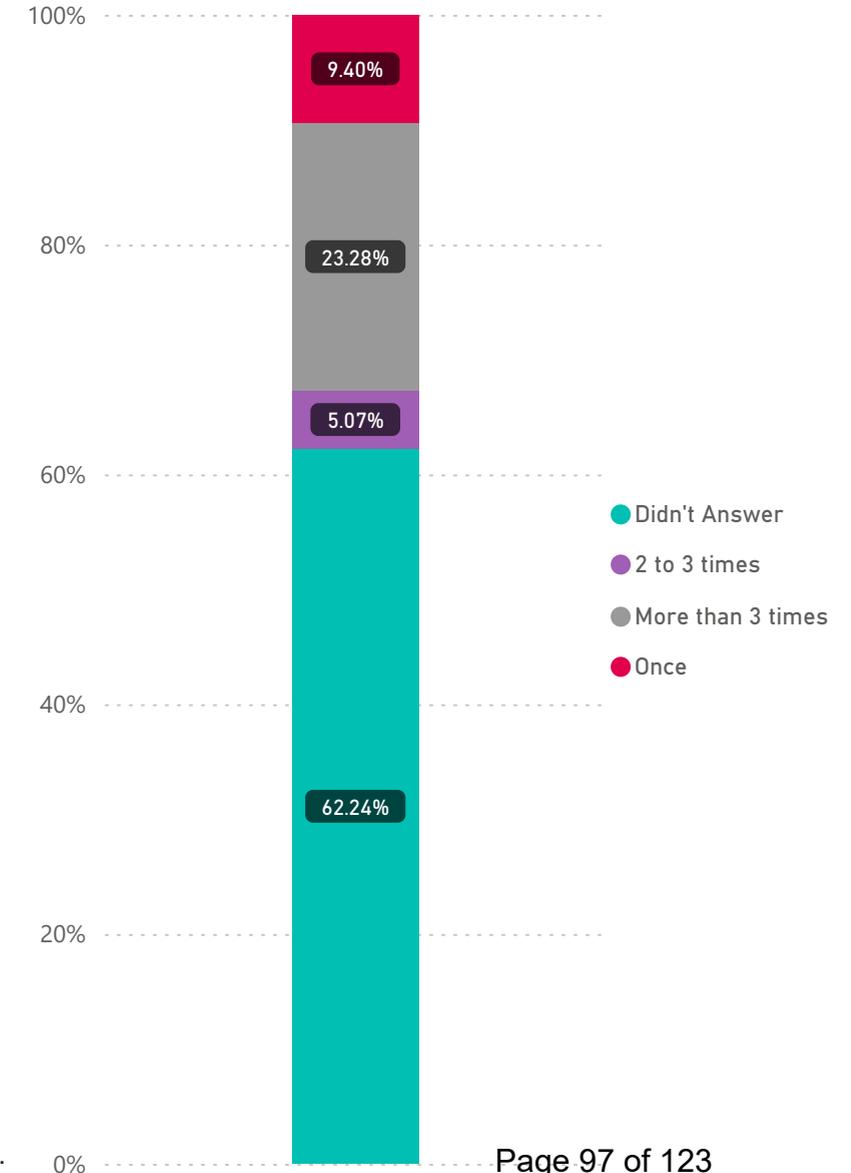
253

Respondents

128

Service Area	2 to 3 times	More than 3 times	Once
Total	34	156	63
Drop-In Gym and Club Programs	5	15	10
Drop-in Swimming	9	41	12
Golf Courses	6	67	16
Registered Gym and Club Programs	5	15	10
Registered Swimming Programs	9	18	15

Service Area	Opt Out	Opt Out %
Total	670	62.2%
Drop-In Gym and Club Programs	134	77.6%
Drop-in Swimming	134	53.7%
Golf Courses	134	33.6%
Registered Gym and Club Programs	134	77.6%
Registered Swimming Programs	134	68.7%



Respondents who did not answer or selected 'Can't Say' are included in optout.



Question

5

Performance of Services

How do you feel Recreation & Golf have performed overall in the following services?

Responses

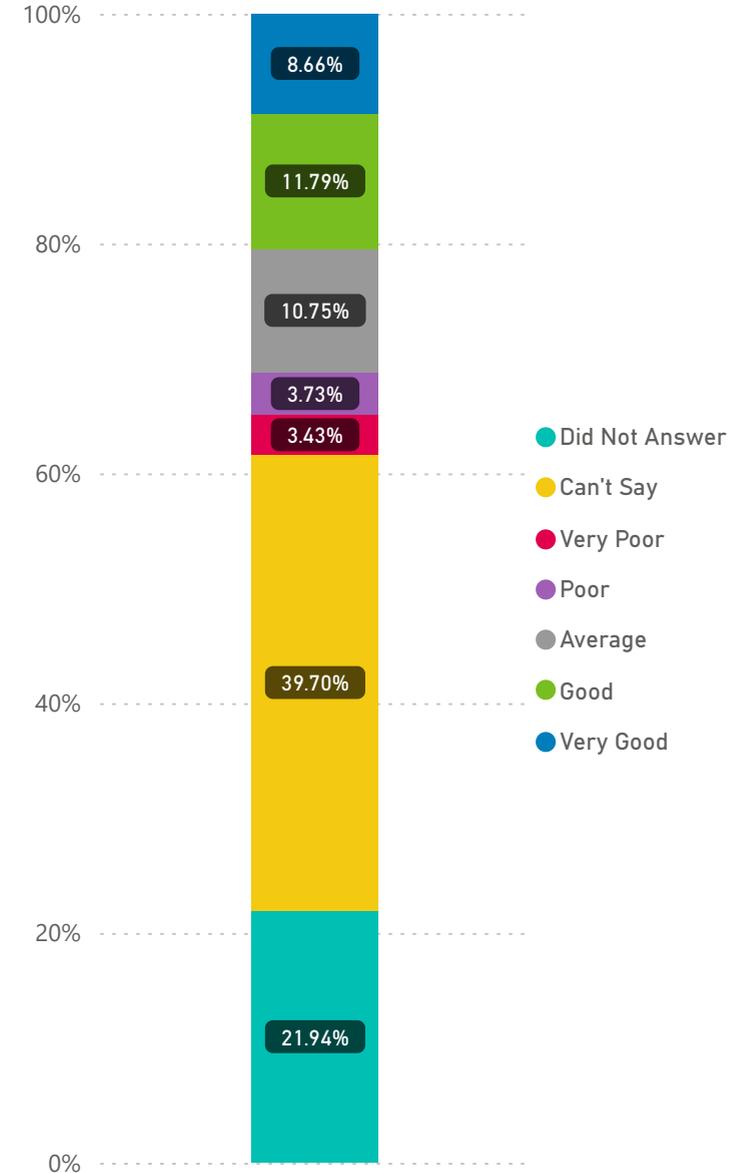
257

Respondents

127

Service Area	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Total	23	25	72	79	58
Drop-In Gym and Club Programs	2	6	11	5	8
Drop-in Swimming	6	2	21	19	15
Golf Courses	9	12	18	32	12
Registered Gym and Club Programs	3	3	10	5	11
Registered Swimming Programs	3	2	12	18	12

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.20	3.48	413	61.6%
Drop-In Gym and Club Programs	1.21	3.34	102	76.1%
Drop-in Swimming	1.17	3.56	71	53.0%
Golf Courses	1.20	3.31	51	38.1%
Registered Gym and Club Programs	1.30	3.56	102	76.1%
Registered Swimming Programs	1.09	3.72	87	64.9%



Respondents who did not answer or selected 'Can't Say' are included in optout.



Question

6

Importance of Services

How important to you are the Recreation and Golf sites and services?

Responses

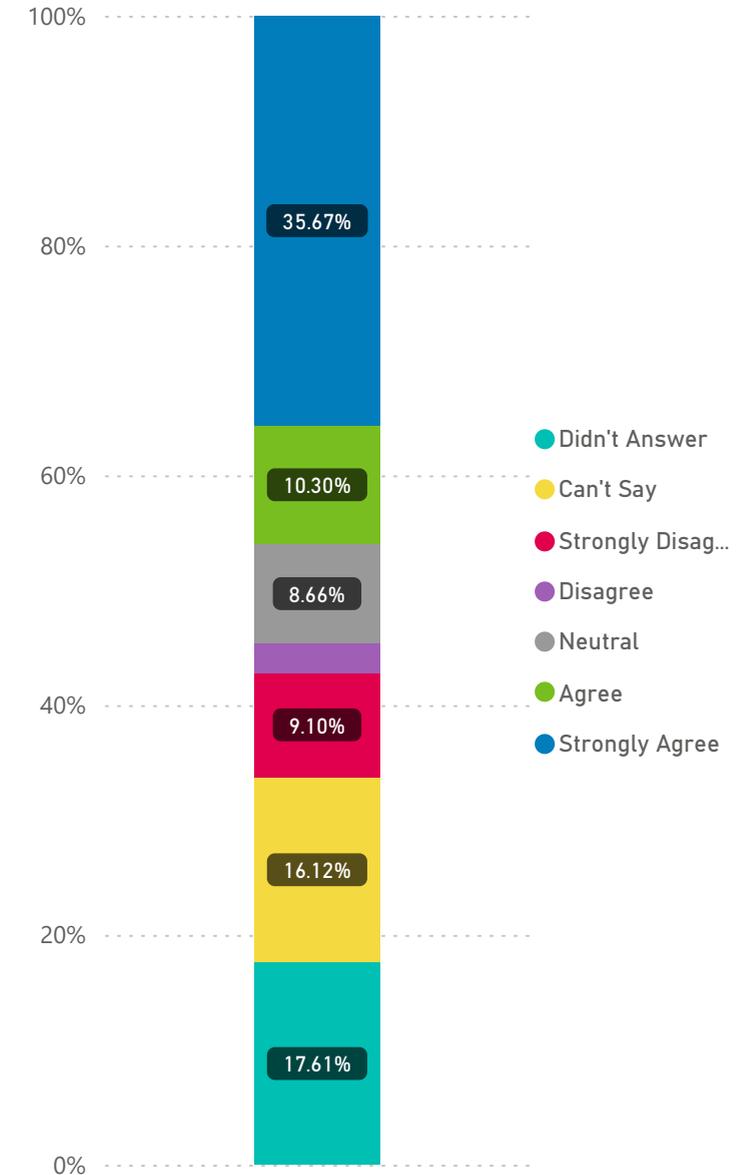
444

Respondents

132

Service Area	Not At All Important	Not That Important	Fairly Important	Important	Very Important
Total	61	17	58	69	239
Drop-In Gym and Club Programs	6	4	16	16	35
Drop-in Swimming	7	4	6	16	57
Golf Courses	31	4	8	8	67
Registered Gym and Club Programs	5	3	17	19	31
Registered Swimming Programs	12	2	11	10	49

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.43	3.92	226	33.7%
Drop-in Swimming	1.23	4.24	44	32.8%
Registered Swimming Programs	1.45	3.98	50	37.3%
Drop-In Gym and Club Programs	1.25	3.91	57	42.5%
Registered Gym and Club Programs	1.18	3.91	59	44.0%
Golf Courses	1.73	3.64	16	11.9%



Respondents who did not answer or selected 'Can't Say' are included in optout.

Differential of Importance and Performance

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

701

Respondents

134

Service Area	Importance (index score)	Performance (index score)	Net Differential	ValueOptOutAvg
Total	78	70	-9	48%
Drop-in Swimming	85	71	-14	43%
Drop-In Gym and Club Programs	78	67	-11	59%
Registered Gym and Club Programs	78	71	-7	60%
Golf Courses	73	66	-7	25%
Registered Swimming Programs	80	74	-5	51%

Performance

Q5 How do you feel Recreation & Golf have performed overall in the following services?

Importance

Q6 How important to you are the Recreation and Golf sites and services?



The Net Differential is calculated by getting the average score for Performance and Importance. Then, the Performance and Importance is multiplied by 20. Finally, the Importance is subtracted from the Performance. A negative differential indicates a higher perceived importance than performance. A positive differential indicates a higher perceived performance than importance.

Question

7

Satisfaction with Services

How satisfied are you with your ability to access these Recreation and Golf sites and services?

Responses

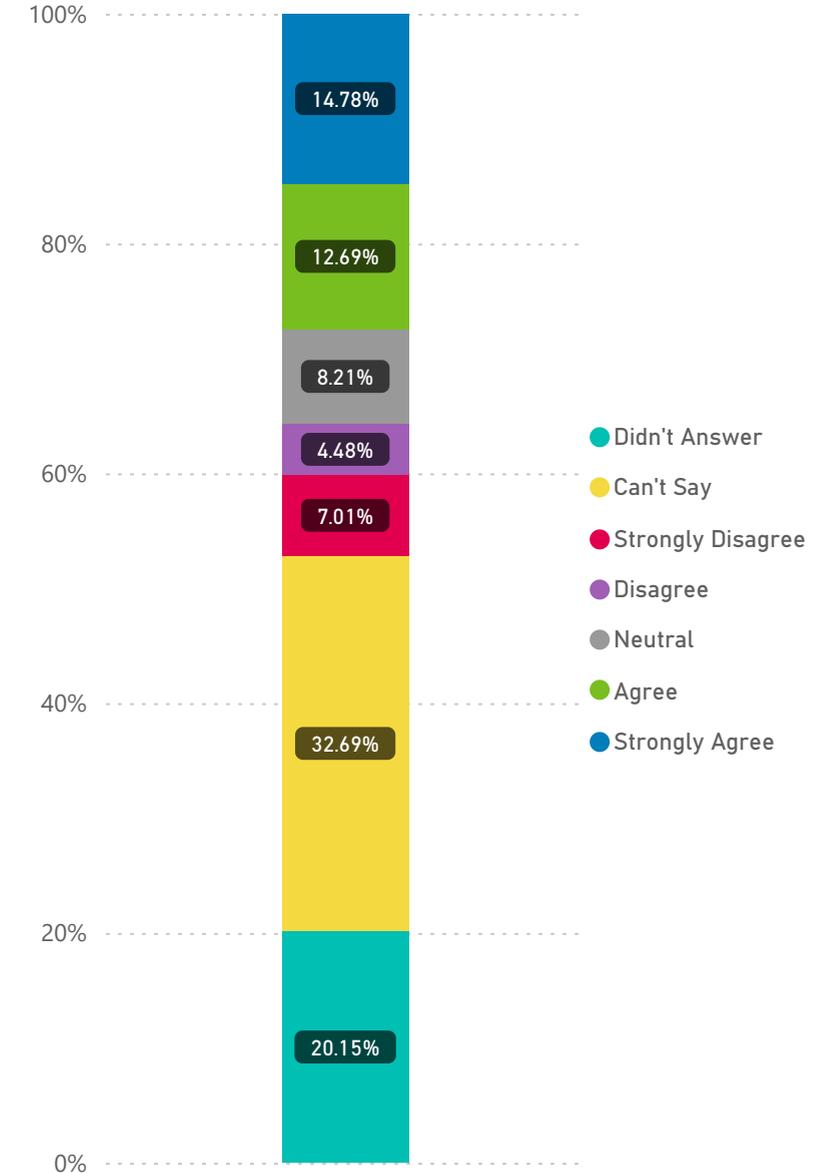
316

Respondents

130

Service Area	Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
Total	47	30	55	85	99
Drop-In Gym and Club Programs	9	5	11	6	15
Drop-in Swimming	11	6	19	19	22
Golf Courses	9	10	6	34	33
Registered Gym and Club Programs	8	5	6	11	11
Registered Swimming Programs	10	4	13	15	18

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.40	3.50	354	52.8%
Drop-In Gym and Club Programs	1.50	3.28	88	65.7%
Drop-in Swimming	1.35	3.45	57	42.5%
Golf Courses	1.30	3.78	42	31.3%
Registered Gym and Club Programs	1.47	3.29	93	69.4%
Registered Swimming Programs	1.41	3.45	74	55.2%



Respondents who did not answer or selected 'Can't Say' are included in optout.

Question

8

Needs are Being Met

Do the following Recreation and Golf sites and services meet your needs?

Responses

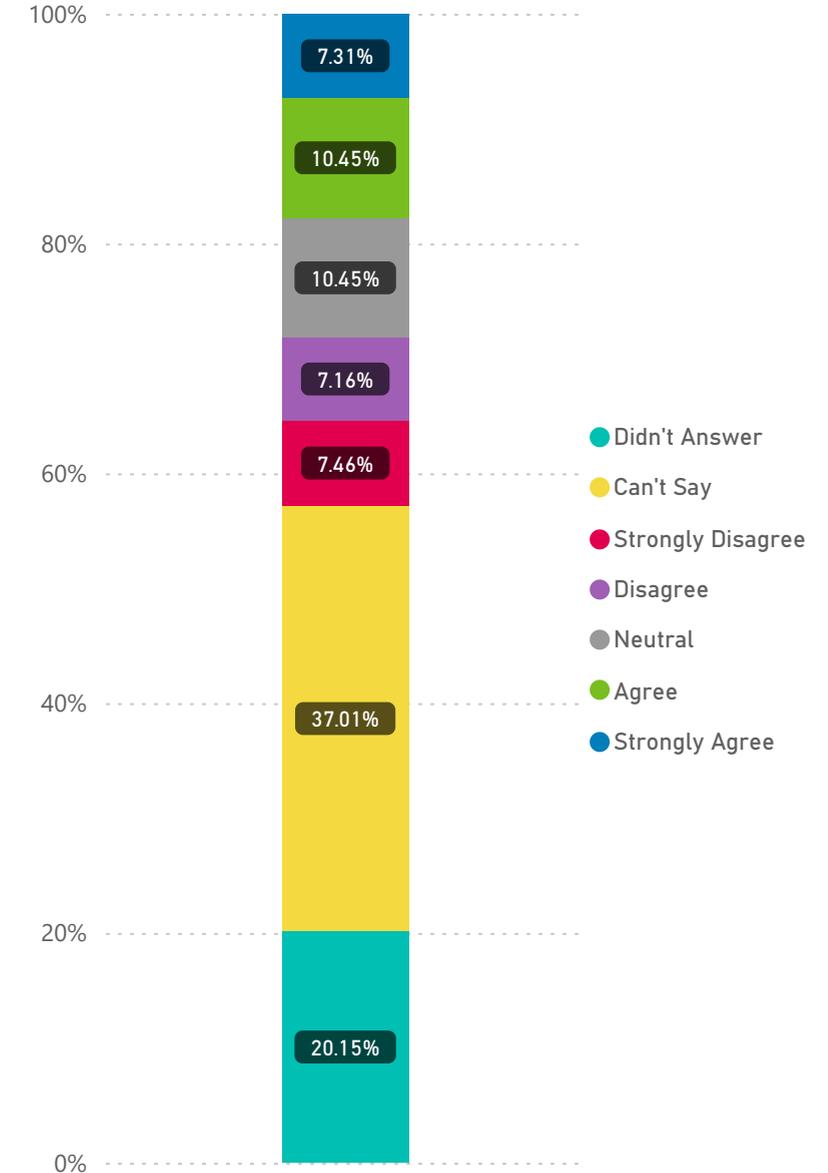
287

Respondents

129

Service Area	Does Not Meet	Meets Some	Meets Some	Exceeds	Far Exceeds
Total	50	48	70	70	49
Drop-In Gym and Club Programs	10	5	10	8	6
Drop-in Swimming	9	11	18	18	13
Golf Courses	13	18	25	24	14
Registered Gym and Club Programs	10	6	7	8	5
Registered Swimming Programs	8	8	10	12	11

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.34	3.07	383	57.2%
Drop-In Gym and Club Programs	1.40	2.87	95	70.9%
Drop-in Swimming	1.28	3.22	65	48.5%
Golf Courses	1.26	3.09	40	29.9%
Registered Gym and Club Programs	1.42	2.78	98	73.1%
Registered Swimming Programs	1.38	3.20	85	63.4%



Respondents who did not answer or selected 'Can't Say' are included in optout.

Question

9

Comfortability Accessing Services

Do you feel comfortable accessing these services provided by Recreation & Golf?

Responses

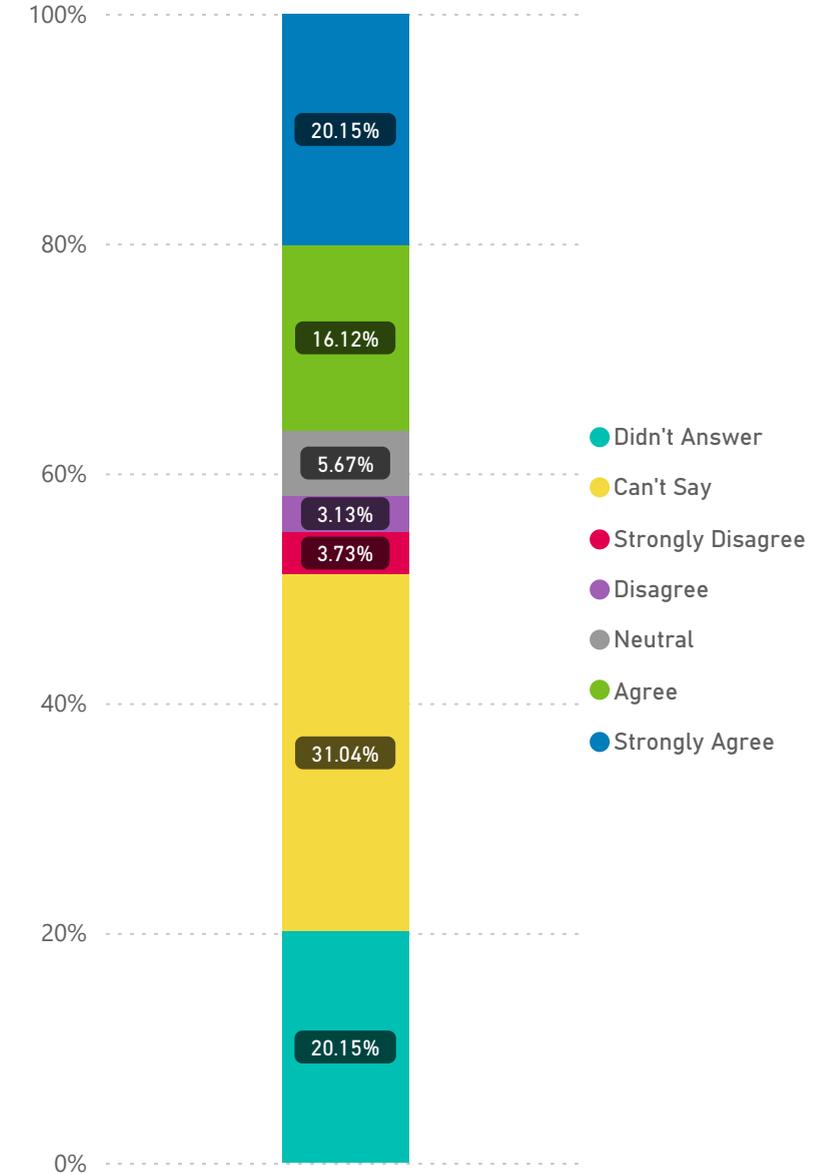
327

Respondents

130

Service Area	Very Uncomfortable	Uncomfortable	Neither	Comfortable	Very Comfortable
Total	25	21	38	108	135
Drop-In Gym and Club Programs	4	5	8	16	17
Drop-in Swimming	3	3	10	27	33
Golf Courses	11	3	6	33	41
Registered Gym and Club Programs	3	3	8	16	18
Registered Swimming Programs	4	7	6	16	26

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.21	3.94	343	51.2%
Drop-In Gym and Club Programs	1.25	3.74	84	62.7%
Drop-in Swimming	1.03	4.11	58	43.3%
Golf Courses	1.30	3.96	40	29.9%
Registered Gym and Club Programs	1.16	3.90	86	64.2%
Registered Swimming Programs	1.27	3.90	75	56.0%



Respondents who did not answer or selected 'Can't Say' are included in optout.



Question

11

Potential Services

Please rate the following potential Recreation and Golf services based on their importance to you:

Responses

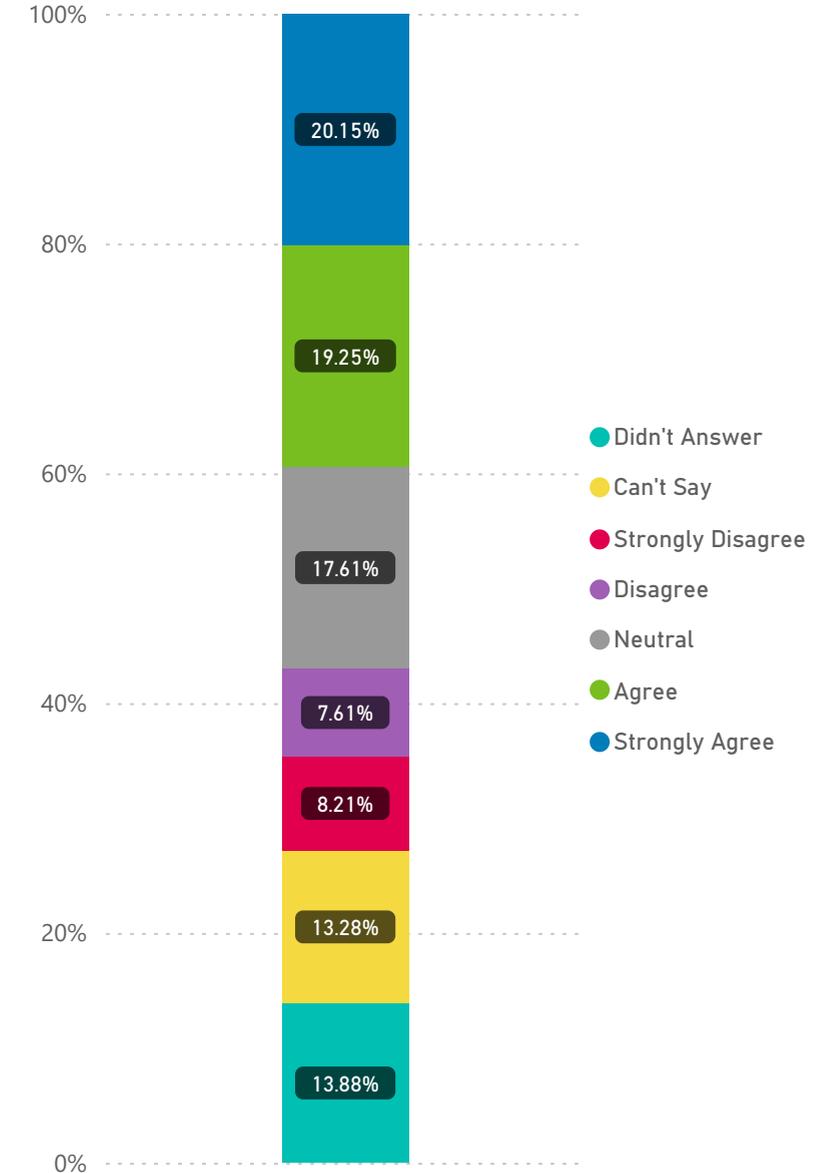
488

Respondents

109

Service Area	Not At All Important	Not That Important	Fairly Important	Important	Very Important
Total	55	51	118	129	135
Modernize existing / develop new arenas	18	12	22	24	24
Modernize existing / develop new community halls	17	13	25	24	16
Modernize existing / develop new Community Recreation Centres (CRC's)	5	6	24	31	36
Modernize existing / develop new indoor pools	6	6	22	30	33
Modernize existing / develop new outdoor pools	9	14	25	20	26

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.30	3.49	182	27.2%
Modernize existing / develop new arenas	1.41	3.24	34	25.4%
Modernize existing / develop new community halls	1.33	3.09	39	29.1%
Modernize existing / develop new Community Recreation Centres (CRC's)	1.11	3.85	32	23.9%
Modernize existing / develop new indoor pools	1.15	3.80	37	27.6%
Modernize existing / develop new outdoor pools	1.29	3.43	40	29.9%



Respondents who did not answer or selected 'Can't Say' are included in optout.



Question

12

Recommendation of Services

Do the following service targets established in the Recreation Master Plan meet your needs?

Responses

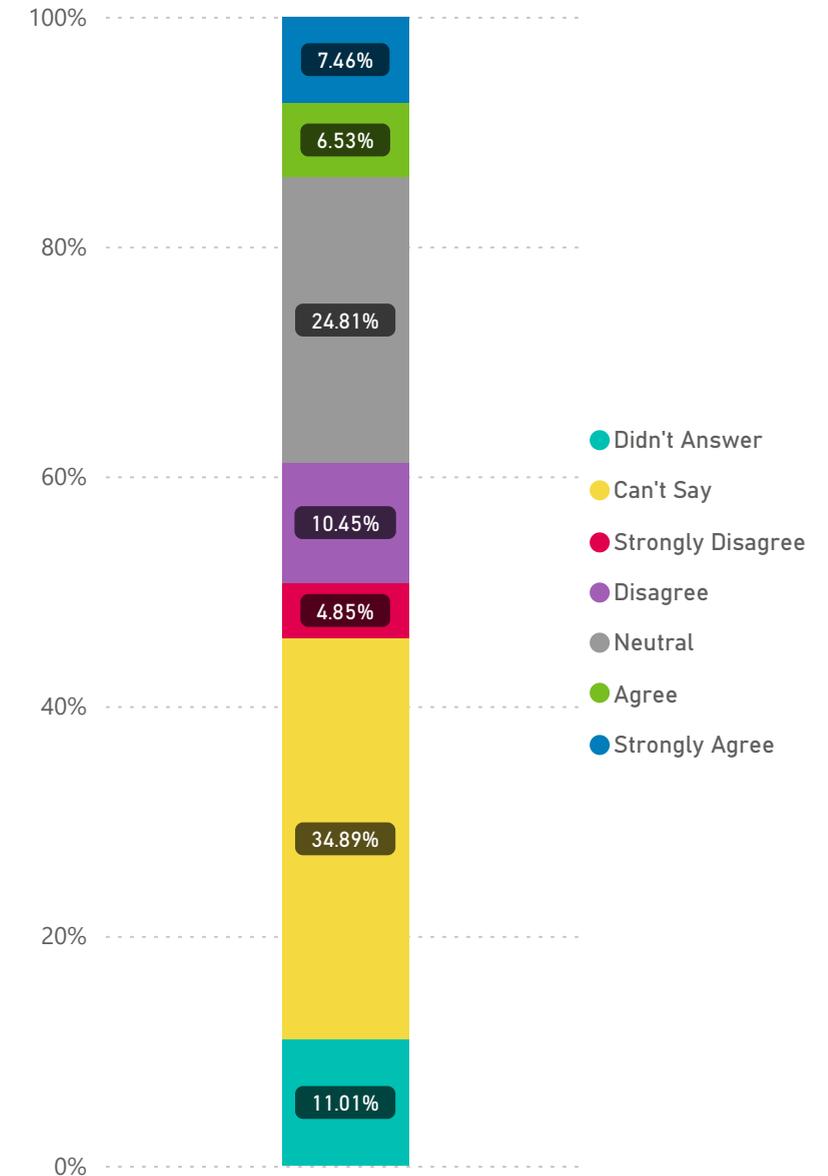
290

Respondents

85

Service Area	Does Not Meet	Meets Some	Meets Some	Exceeds	Far Exceeds
Total	26	56	133	35	40
Having a Community Recreation Centre (CRC) ratio of 1 facility per 27,500 residents	6	14	35	14	4
Having an arena ratio of 1 facility per 23,360 residents	7	11	33	4	13
Having an indoor pool ratio of 1 facility per 30,000 residents	8	17	35	7	8
Having an outdoor pool ratio of 1 facility per 10,000 residents	5	14	30	10	15

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.11	3.02	246	45.9%
Having a Community Recreation Centre (CRC) ratio of 1 facility per 27,500 residents	0.96	2.95	61	45.5%
Having an arena ratio of 1 facility per 23,360 residents	1.18	3.07	66	49.3%
Having an indoor pool ratio of 1 facility per 30,000 residents	1.07	2.87	59	44.0%
Having an outdoor pool ratio of 1 facility per 10,000 residents	1.17	3.22	60	44.8%



NOTE: There was an error which duplicated question service areas. Users inputted similar results for the same question as shown above. Respondents who did not answer or selected 'Can't Say' are included in optout.

Question

13

Satisfaction with Program Hours

How satisfied are you with the program hours offered for the following services?

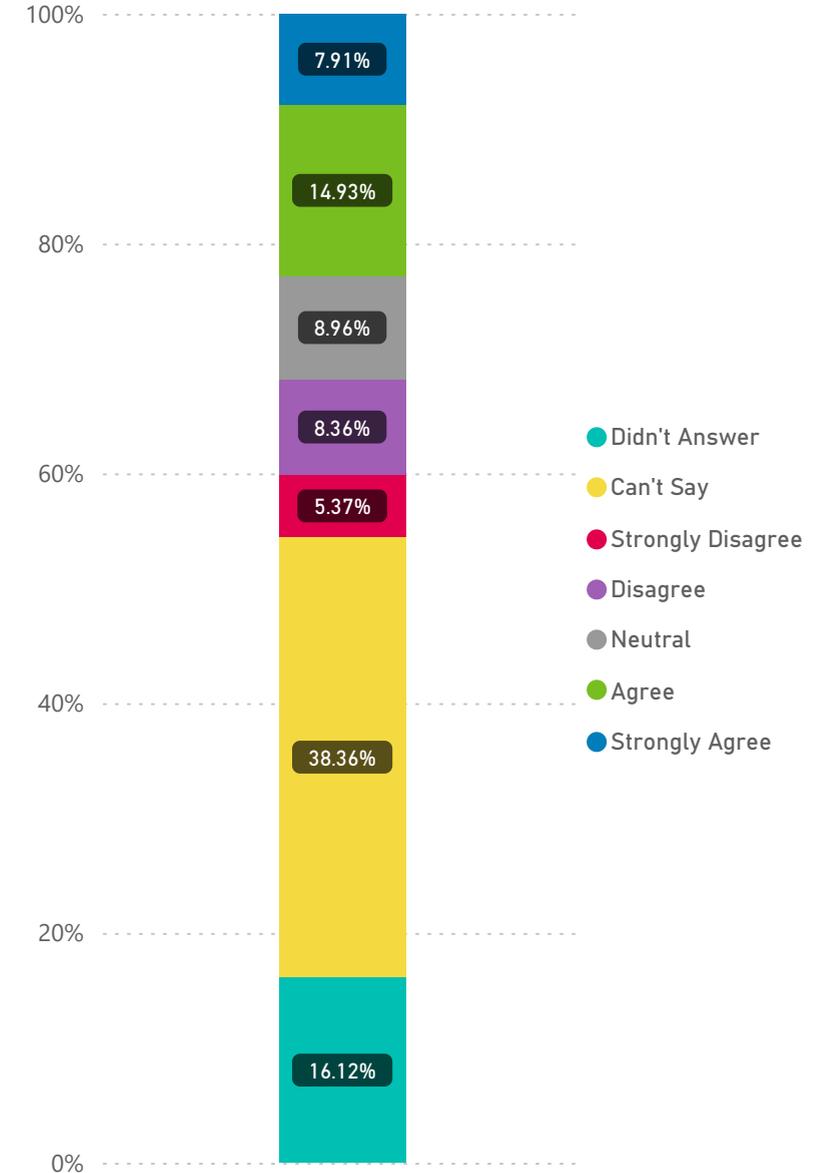
Responses

305

Respondents

127

Service Area	Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
Total	36	56	60	100	53
Drop-In Gym and Club Programs	7	10	12	13	7
Drop-in Swimming	11	15	15	22	10
Golf Courses	8	9	12	34	24
Registered Gym and Club Programs	6	11	12	11	5
Registered Swimming Programs	4	11	9	20	7



Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.27	3.26	365	54.5%
Drop-In Gym and Club Programs	1.27	3.06	85	63.4%
Drop-in Swimming	1.29	3.07	61	45.5%
Golf Courses	1.24	3.66	47	35.1%
Registered Gym and Club Programs	1.21	2.96	89	66.4%
Registered Swimming Programs	1.18	3.29	83	61.9%

Respondents who did not answer or selected 'Can't Say' are included in optout.



Question

Recommendation to Others

How likely would you be to recommend the following Recreation and Golf services to others?

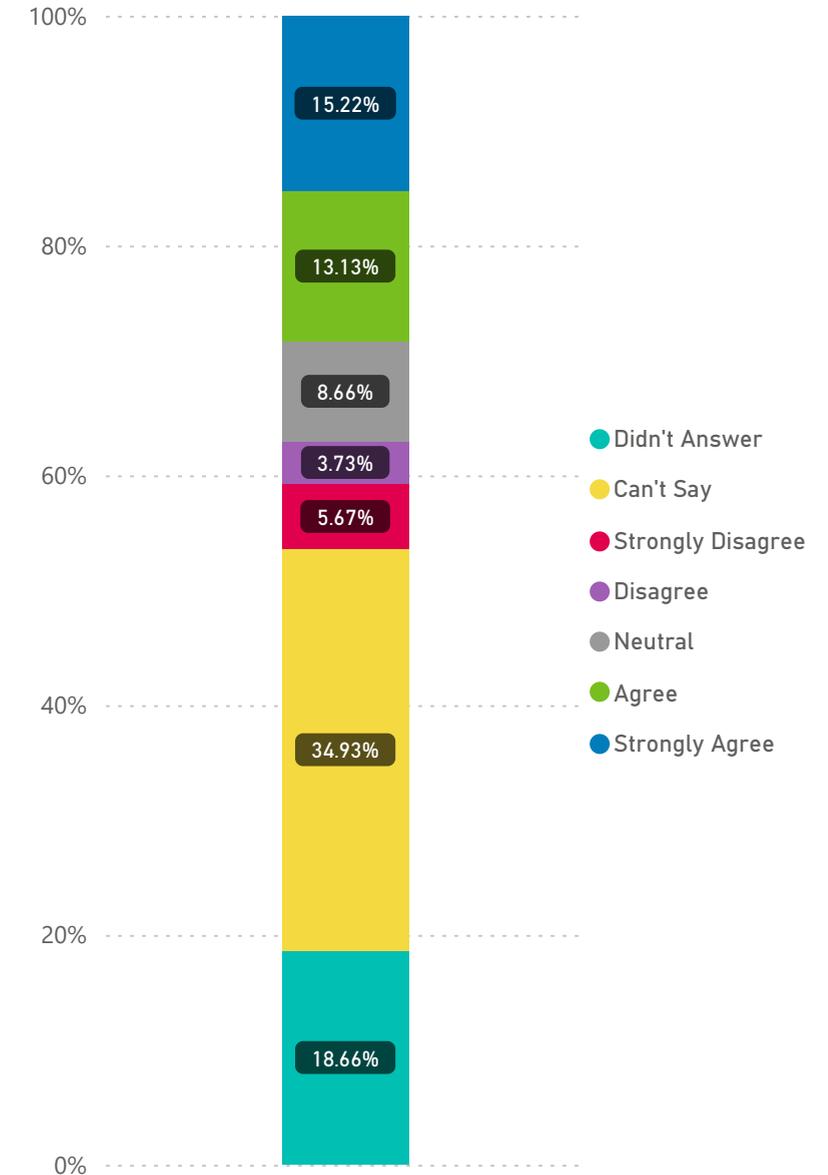
Responses

311

Respondents

123

Service Area	Definitely Not	Probably Not	Probably	Possibly	Definitely
Total	38	25	58	88	102
Drop-In Gym and Club Programs	6	3	14	11	14
Drop-in Swimming	7	4	11	22	27
Golf Courses	15	10	12	25	28
Registered Gym and Club Programs	5	5	12	11	12
Registered Swimming Programs	5	3	9	19	21



Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.34	3.61	359	53.6%
Drop-In Gym and Club Programs	1.31	3.50	86	64.2%
Drop-in Swimming	1.27	3.82	63	47.0%
Golf Courses	1.45	3.46	44	32.8%
Registered Gym and Club Programs	1.29	3.44	89	66.4%
Registered Swimming Programs	1.23	3.84	77	57.5%

Respondents who did not answer or selected 'Can't Say' are included in optout.

Question

Net Promoter Score

15

Typically the Net Promoter Score is used to measure customer loyalty.

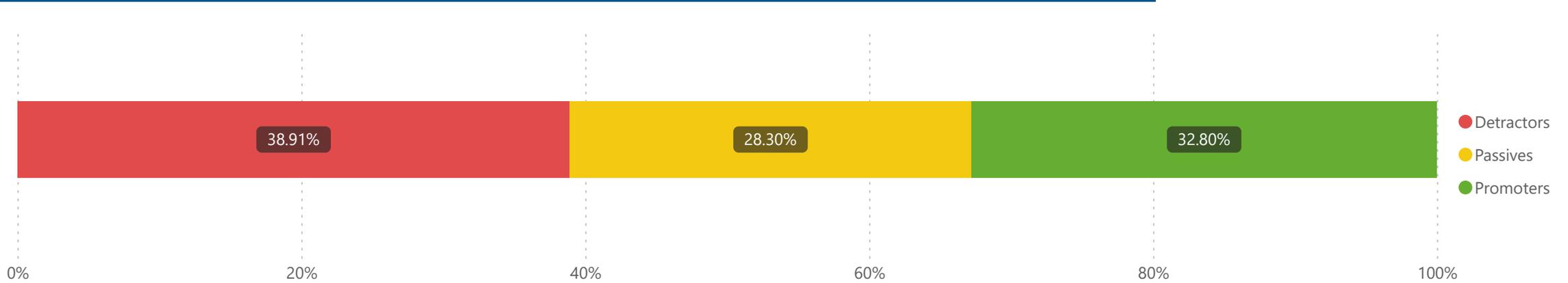
How likely would you be to recommend the following Recreation and Golf services to others?

Responses

311

Respondents

123



Service Area	σ	NPS	Detractors	Passives	Promoter
All Service Areas	1.34	-6	121	88	102
Drop-in Swimming	1.27	7	22	22	27
Registered Swimming Programs	1.23	7	17	19	21
Golf Courses	1.45	-10	37	25	28
Drop-In Gym and Club Programs	1.31	-19	23	11	14
Registered Gym and Club Programs	1.29	-22	22	11	12



Likert choices less than or equal to 3 are considered 'Detractors', 4s are 'Passive', and 5s are considered 'Promoters'. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Detractors) from (% Promoters).

Question

16

Value for Money

How would you rate Recreation & Golf in providing good value for money in the infrastructure and services provided to your community?

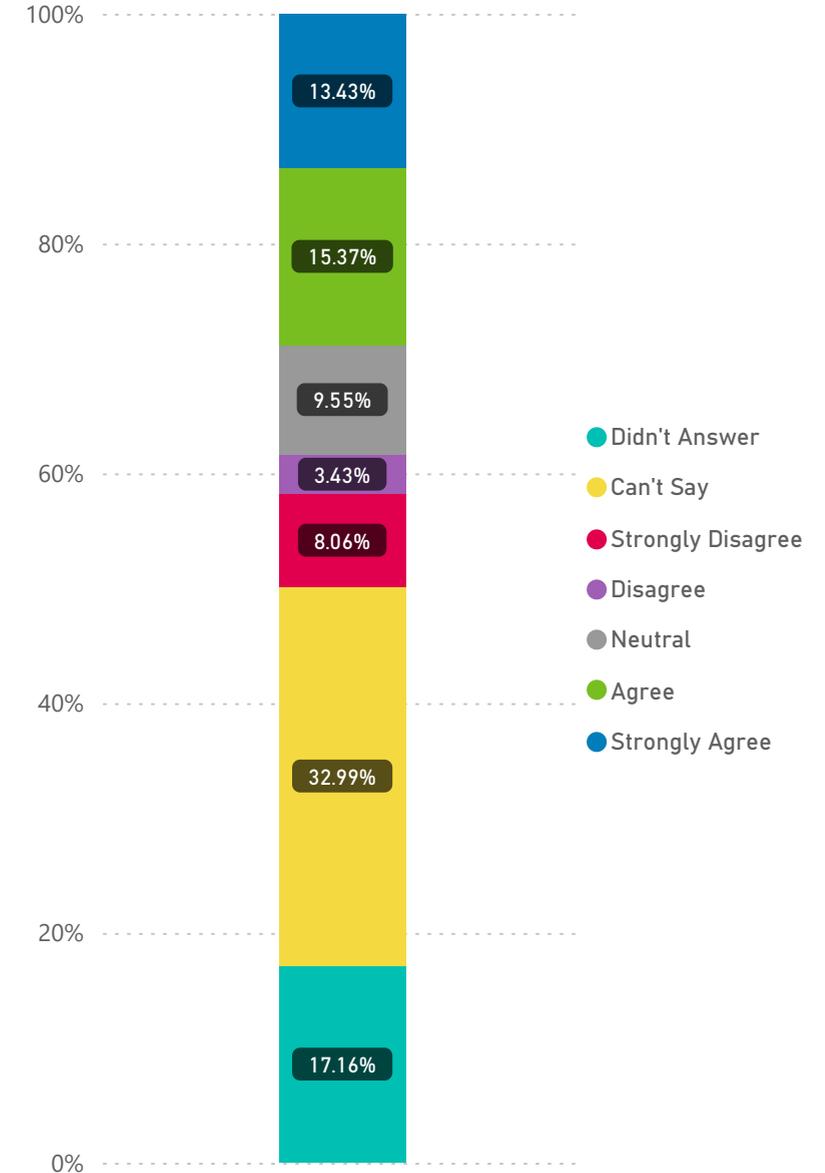
Responses

334

Respondents

123

Service Area	Very Poor	Poor	Average	Good	Very Good
Total	54	23	64	103	90
Drop-In Gym and Club Programs	9	4	7	17	14
Drop-in Swimming	9	5	14	22	24
Golf Courses	21	8	19	27	21
Registered Gym and Club Programs	8	3	9	16	13
Registered Swimming Programs	7	3	15	21	18



Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.38	3.46	336	50.1%
Drop-In Gym and Club Programs	1.42	3.45	83	61.9%
Drop-in Swimming	1.32	3.64	60	44.8%
Golf Courses	1.44	3.20	38	28.4%
Registered Gym and Club Programs	1.37	3.47	85	63.4%
Registered Swimming Programs	1.24	3.63	70	52.2%

Respondents who did not answer or selected 'Can't Say' are included in optout.



Service Areas Rates vs. Value for Money

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

793

Respondents

134

Service Area	Rates (index score)	Value for Money (index score)	Net Differential	Opt Out %
Total	62	69	-7	41%
Golf Courses	56	64	-8	22%
Registered Swimming Programs	65	73	-7	43%
Drop-In Gym and Club Programs	62	69	-7	51%
Registered Gym and Club Programs	63	69	-6	51%
Drop-in Swimming	67	73	-5	37%

Value *Q16 How would you rate Recreation & Golf in providing good value for money in the infrastructure and services provided to your community?*

Tax *Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?*



The Net Differential is calculated by getting the average score for Rates and Value for Money. Then, the average score for Rates and Value for Money is multiplied by 20. Finally, the Rates score is subtracted from the Value for Money score. A negative differential indicates higher perceived Rates than Value for Money. A positive differential indicates a higher perceived Value for Money than Rates.

Question

17

Tax Rates

If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?

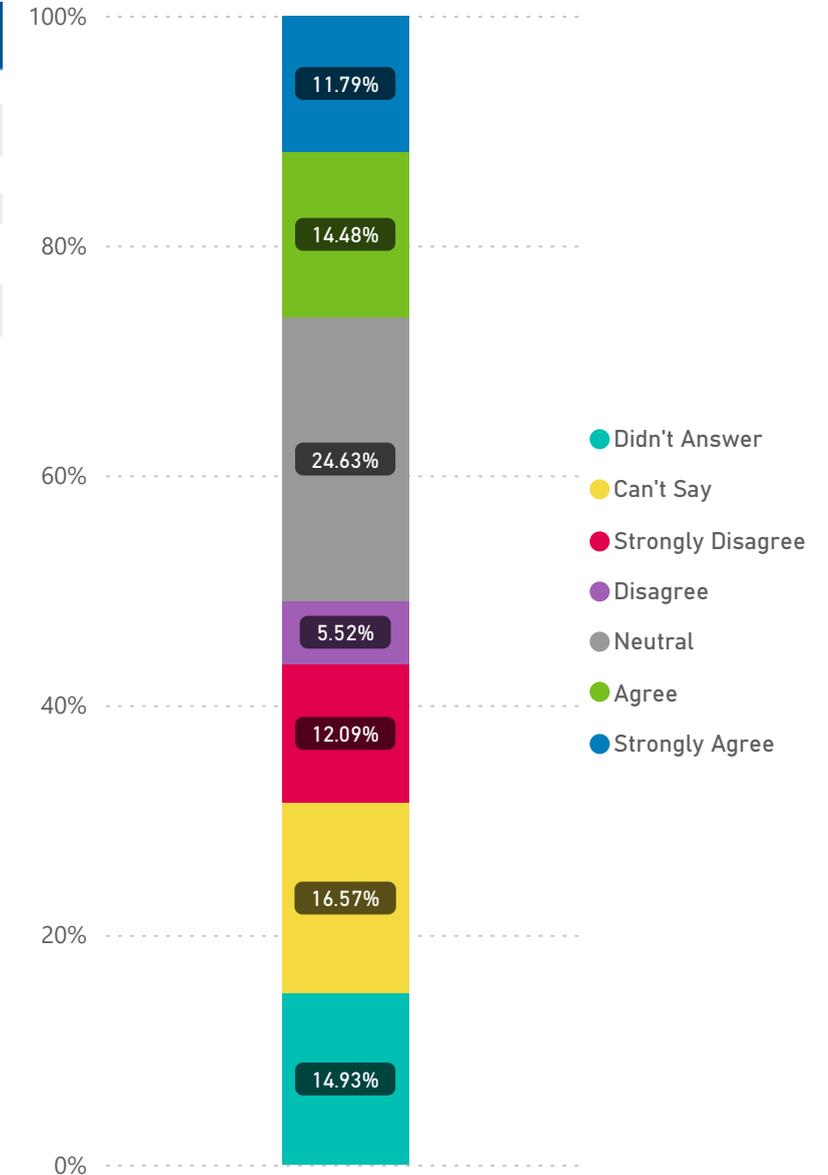
Responses

459

Respondents

125

Service Area	Definitely Prefer Cuts To Service	Probably Prefer Cuts To Service	Minimize Rate Increase: Maintain Service	Probably Prefer Rate Increase: Improve Services	Definitely Prefer Rate Increase: Improve Services
Total	81	37	165	97	79
Drop-In Gym and Club Programs	11	9	30	18	11
Drop-in Swimming	9	11	33	20	22
Golf Courses	39	3	34	18	19
Registered Gym and Club Programs	10	9	31	21	11
Registered Swimming Programs	12	5	37	20	16



Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.29	3.12	211	31.5%
Drop-In Gym and Club Programs	1.20	3.11	55	41.0%
Drop-in Swimming	1.22	3.37	39	29.1%
Golf Courses	1.48	2.78	21	15.7%
Registered Gym and Club Programs	1.17	3.17	52	38.8%
Registered Swimming Programs	1.21	3.26	44	32.8%

Respondents who did not answer or selected 'Can't Say' are included in optout.

Question

18

Responses

850

Respondents

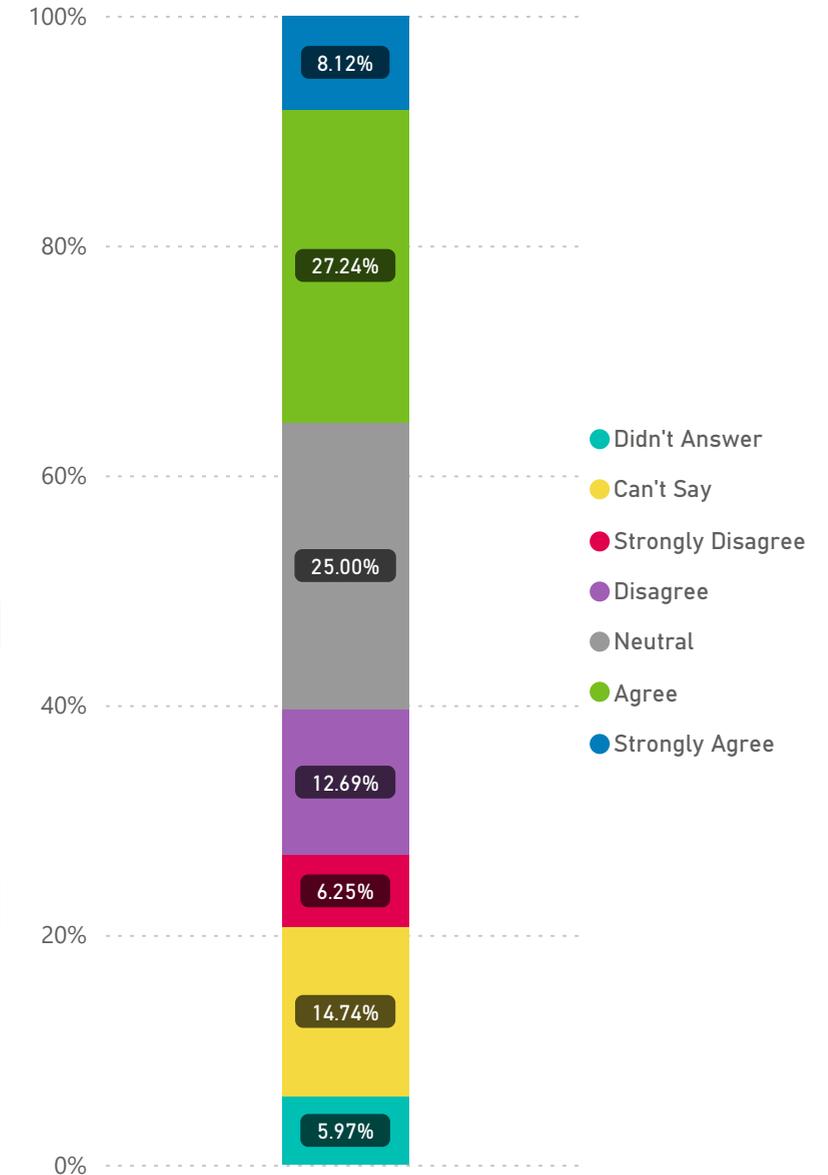
126

Services Level Rating

Do you agree with the following statements? Recreation & Golf buildings are:

Service Area	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Total	67	136	268	292	87
Accessible by public transportation	9	14	23	37	10
Accessible, meeting provincial minimum standards per AODA, 2005	9	10	36	31	11
Clean and in good repair	11	22	48	35	5
Comfortable, with appropriate levels of lighting and noise	7	14	36	48	11
Easy to enter, with clearly marked public entrances	4	15	27	47	23
Energy efficient, helping the city meet energy targets and reduce utility usage	5	14	34	19	4
Inviting, appealing and attractive	14	34	34	31	7
Safe, equitable and inclusive spaces for all	8	13	30	44	16

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.08	3.23	222	20.7%
Accessible by public transportation	1.14	3.27	41	30.6%
Accessible, meeting provincial minimum standards per AODA, 2005	1.09	3.26	37	27.6%
Clean and in good repair	1.00	3.01	13	9.7%
Comfortable, with appropriate levels of lighting and noise	1.01	3.36	18	13.4%
Easy to enter, with clearly marked public entrances	1.05	3.60	18	13.4%
Energy efficient, helping the city meet energy targets and reduce utility usage	0.95	3.04	58	43.3%
Inviting, appealing and attractive	1.11	2.86	14	10.4%
Safe, equitable and inclusive spaces for all	1.10	3.42	23	17.2%



Respondents who did not answer or selected 'Can't Say' are included in optout.



Differential of Current and Ideal Conditions

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

1796

Respondents

134

Service Area	Current Condition	Ideal Condition	Net Differential	Opt Out %
Total	65	87	-23	16%
Clean and in good repair	60	90	-30	9%
Inviting, appealing and attractive	57	86	-29	9%
Accessible, meeting provincial minimum standards per AODA, 2005	65	89	-24	21%
Energy efficient, helping the city meet energy targets and reduce utility usage	61	85	-24	30%
Accessible by public transportation	65	85	-20	23%
Safe, equitable and inclusive spaces for all	68	88	-20	14%
Comfortable, with appropriate levels of lighting and noise	67	86	-19	12%
Easy to enter, with clearly marked public entrances	72	88	-16	12%

Condition

Q18 Do you agree with the following statements? Recreation & Golf buildings are:

Ideal

Q19 Do you agree with the following statements? Recreation & Golf buildings should be:



The Net Differential is calculated by getting the average score for Ideal and Current Condition. Then, the Ideal and Current Condition is multiplied by 20. Finally, the Ideal is subtracted from the Current Condition. A negative differential indicates a higher perceived Ideal than Current Condition. A positive differential indicates a higher perceived Current Condition than Ideal.

Question

19

Responses

946

Respondents

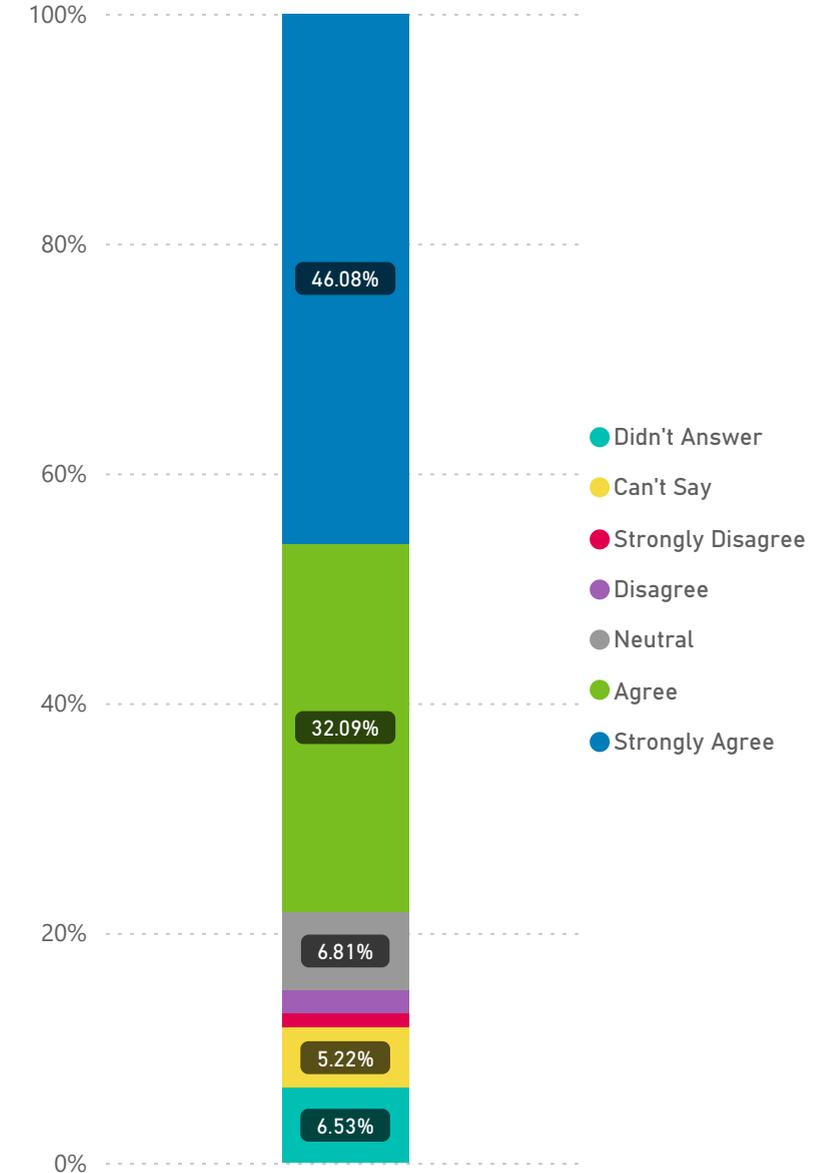
127

Services Level Expectations

Do you agree with the following statements? Recreation & Golf buildings should be:

Service Area	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Total	14	21	73	344	494
Accessible by public transportation	2	3	12	42	54
Accessible, meeting provincial minimum standards per AODA, 2005	1	4	5	35	70
Clean and in good repair	1	2	6	42	73
Comfortable, with appropriate levels of lighting and noise	3	1	11	49	57
Easy to enter, with clearly marked public entrances	1	3	9	41	66
Energy efficient, helping the city meet energy targets and reduce utility usage	3	4	10	42	52
Inviting, appealing and attractive	1	2	11	55	54
Safe, equitable and inclusive spaces for all	2	2	9	38	68

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	0.83	4.36	126	11.8%
Accessible by public transportation	0.88	4.27	21	15.7%
Accessible, meeting provincial minimum standards per AODA, 2005	0.81	4.47	19	14.2%
Clean and in good repair	0.73	4.48	10	7.5%
Comfortable, with appropriate levels of lighting and noise	0.86	4.29	13	9.7%
Easy to enter, with clearly marked public entrances	0.80	4.40	14	10.4%
Energy efficient, helping the city meet energy targets and reduce utility usage	0.95	4.23	23	17.2%
Inviting, appealing and attractive	0.76	4.29	11	8.2%
Safe, equitable and inclusive spaces for all	0.83	4.41	15	11.2%

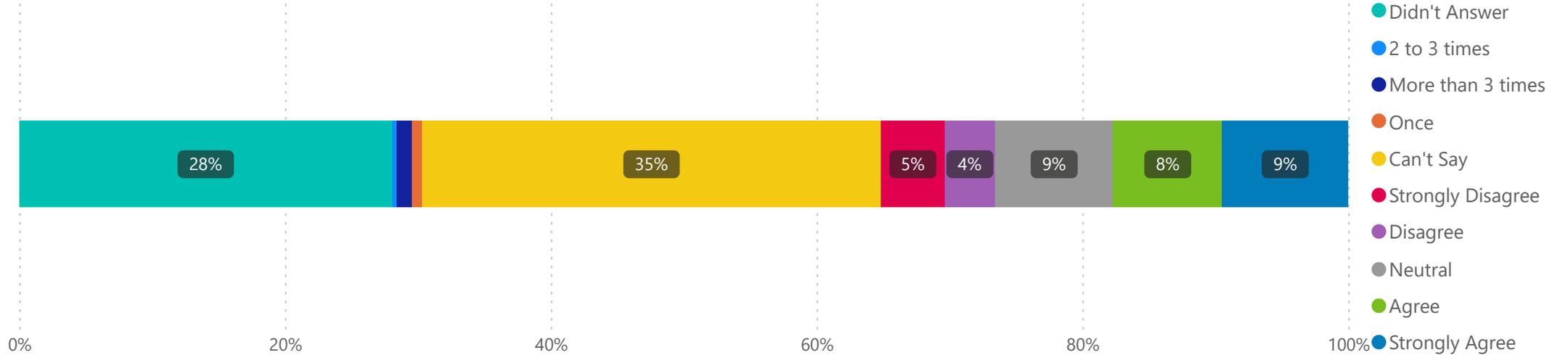


Respondents who did not answer or selected 'Can't Say' are included in optout.

Summary of Specific Service Areas over Several Questions

Drop-In Gym and Club Programs

Responses
437
 Respondents
104



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.35	3.39	67.86	735	60.95%
Q5 How do you feel Recreation & Golf have performed overall in the following services?	1.21	3.34	66.88	102	76.12%
Q6 How important to you are the Recreation and Golf sites and services?	1.25	3.91	78.18	57	42.54%
Q7 How satisfied are you with your ability to access these Recreation and Golf sites and services?	1.50	3.28	65.65	88	65.67%
Q8 Do the following Recreation and Golf sites and services meet your needs?	1.40	2.87	57.44	95	70.90%
Q9 Do you feel comfortable accessing these services provided by Recreation & Golf?	1.25	3.74	74.80	84	62.69%
Q13 How satisfied are you with the program hours offered for the following services?	1.27	3.06	61.22	85	63.43%
Q15 How likely would you be to recommend the following Recreation and Golf services to others?	1.31	3.50	70.00	86	64.18%
Q16 How would you rate Recreation & Golf in providing good value for money in the infrastructure and services provided to your community?	1.42	3.45	69.02	83	61.94%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	1.20	3.11	62.28	55	41.04%



Summary of Specific Service Areas over Several Questions

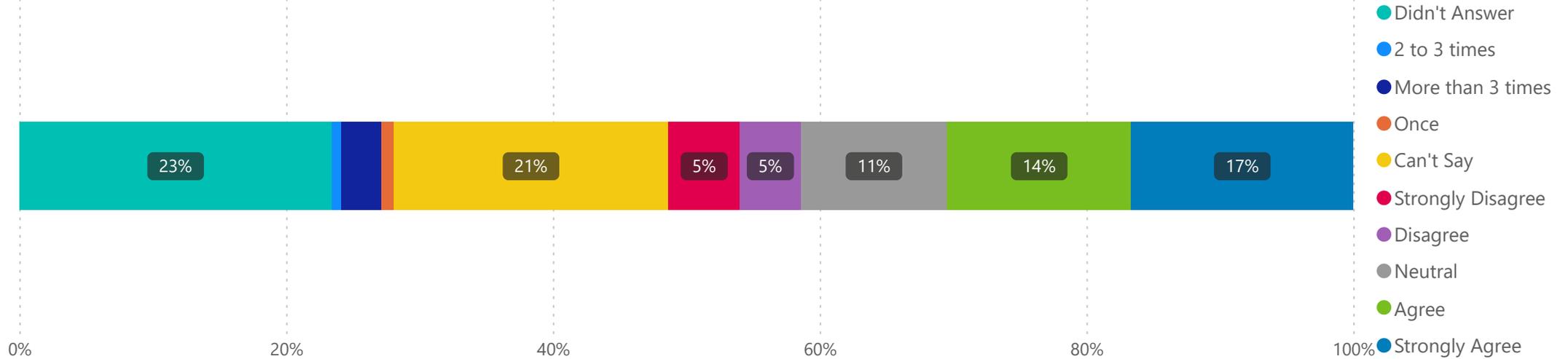
Drop-in Swimming

Responses

678

Respondents

109



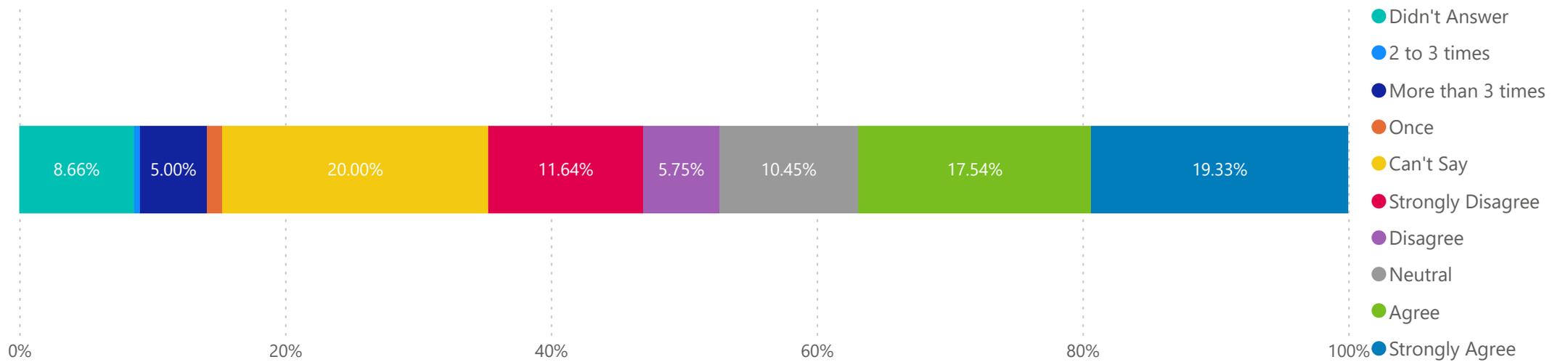
Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.30	3.62	72.38	518	42.95%
Q5 How do you feel Recreation & Golf have performed overall in the following services?	1.17	3.56	71.11	71	52.99%
Q6 How important to you are the Recreation and Golf sites and services?	1.23	4.24	84.89	44	32.84%
Q7 How satisfied are you with your ability to access these Recreation and Golf sites and services?	1.35	3.45	69.09	57	42.54%
Q8 Do the following Recreation and Golf sites and services meet your needs?	1.28	3.22	64.35	65	48.51%
Q9 Do you feel comfortable accessing these services provided by Recreation & Golf?	1.03	4.11	82.11	58	43.28%
Q13 How satisfied are you with the program hours offered for the following services?	1.29	3.07	61.37	61	45.52%
Q15 How likely would you be to recommend the following Recreation and Golf services to others?	1.27	3.82	76.34	63	47.01%
Q16 How would you rate Recreation & Golf in providing good value for money in the infrastructure and services provided to your community?	1.32	3.64	72.70	60	44.78%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	1.22	3.37	67.37	39	29.10%



Summary of Specific Service Areas over Several Questions

Golf Courses

Responses
800
 Respondents
127



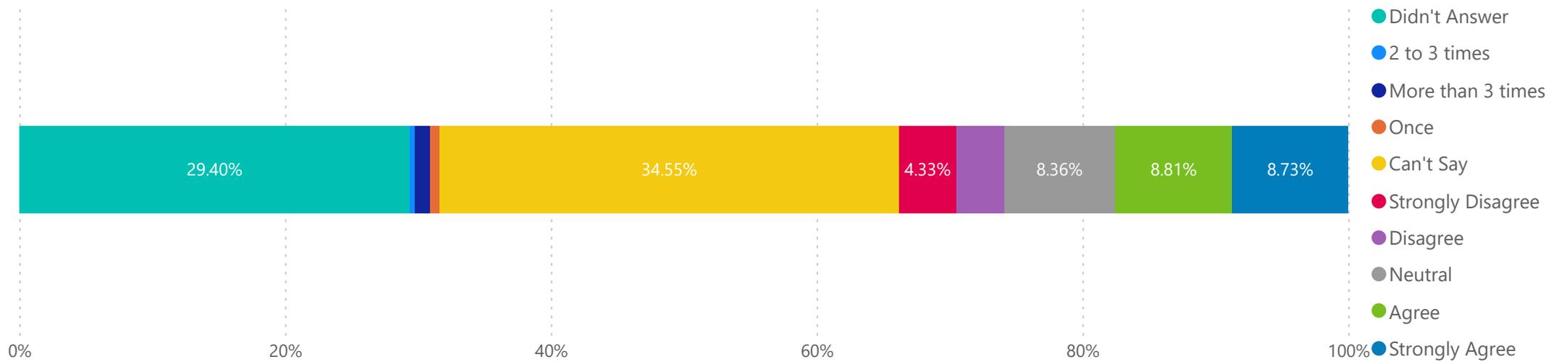
Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.45	3.42	68.40	339	28.11%
Q5 How do you feel Recreation & Golf have performed overall in the following services?	1.20	3.31	66.27	51	38.06%
Q6 How important to you are the Recreation and Golf sites and services?	1.73	3.64	72.88	16	11.94%
Q7 How satisfied are you with your ability to access these Recreation and Golf sites and services?	1.30	3.78	75.65	42	31.34%
Q8 Do the following Recreation and Golf sites and services meet your needs?	1.26	3.09	61.70	40	29.85%
Q9 Do you feel comfortable accessing these services provided by Recreation & Golf?	1.30	3.96	79.15	40	29.85%
Q13 How satisfied are you with the program hours offered for the following services?	1.24	3.66	73.10	47	35.07%
Q15 How likely would you be to recommend the following Recreation and Golf services to others?	1.45	3.46	69.11	44	32.84%
Q16 How would you rate Recreation & Golf in providing good value for money in the infrastructure and services provided to your community?	1.44	3.20	63.96	38	28.36%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	1.48	2.78	55.58	21	15.67%



Summary of Specific Service Areas over Several Questions

Registered Gym and Club Programs

Responses
425
 Respondents
104



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.32	3.42	68.30	753	62.44%
Q5 How do you feel Recreation & Golf have performed overall in the following services?	1.30	3.56	71.25	102	76.12%
Q6 How important to you are the Recreation and Golf sites and services?	1.18	3.91	78.13	59	44.03%
Q7 How satisfied are you with your ability to access these Recreation and Golf sites and services?	1.47	3.29	65.85	93	69.40%
Q8 Do the following Recreation and Golf sites and services meet your needs?	1.42	2.78	55.56	98	73.13%
Q9 Do you feel comfortable accessing these services provided by Recreation & Golf?	1.16	3.90	77.92	86	64.18%
Q13 How satisfied are you with the program hours offered for the following services?	1.21	2.96	59.11	89	66.42%
Q15 How likely would you be to recommend the following Recreation and Golf services to others?	1.29	3.44	68.89	89	66.42%
Q16 How would you rate Recreation & Golf in providing good value for money in the infrastructure and services provided to your community?	1.37	3.47	69.39	85	63.43%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	1.17	3.17	63.41	52	38.81%



Summary of Specific Service Areas over Several Questions

Registered Swimming Programs

Responses
538
 Respondents
109



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.32	3.59	71.84	645	53.48%
Q5 How do you feel Recreation & Golf have performed overall in the following services?	1.09	3.72	74.47	87	64.93%
Q6 How important to you are the Recreation and Golf sites and services?	1.45	3.98	79.52	50	37.31%
Q7 How satisfied are you with your ability to access these Recreation and Golf sites and services?	1.41	3.45	69.00	74	55.22%
Q8 Do the following Recreation and Golf sites and services meet your needs?	1.38	3.20	64.08	85	63.43%
Q9 Do you feel comfortable accessing these services provided by Recreation & Golf?	1.27	3.90	77.97	75	55.97%
Q13 How satisfied are you with the program hours offered for the following services?	1.18	3.29	65.88	83	61.94%
Q15 How likely would you be to recommend the following Recreation and Golf services to others?	1.23	3.84	76.84	77	57.46%
Q16 How would you rate Recreation & Golf in providing good value for money in the infrastructure and services provided to your community?	1.24	3.63	72.50	70	52.24%
Q17 If you had to choose, would you prefer to see tax rates increase to improve local services? Or would you prefer to see service-level cuts to minimize tax rate increases?	1.21	3.26	65.11	44	32.84%



Definition and Ranking of Consistency and Confidence

Data Grading Scales

Grade	Data Consistency Standard Deviation (σ , Consistency of Responses)	Confidence Level Margin of Error (at 95% Confidence in Sample Size)
A Very High	0 to 0.5 - results are tightly grouped with little to no variance in response	0% to 5% - Minimal to no error in results, can generally be interpreted as is
B High	0.5 to 1.0 - results are fairly tightly grouped but with slightly more variance in response	5% to 10% - Error has become noticeable, but results are still trustworthy
C Medium	1.0 to 1.5 - results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - Error is a significant amount and will cause uncertainty in final results
D Low	1.5 to 2.0 - results show a high variance with a fair amount of disparity in responses	20% to 30% - Error has reached a detrimental level and results are difficult to trust
E Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - Significant error in results, hard to interpret data in much of a meaningful way

$$\text{Margin of Error} = \frac{0.98}{\sqrt{n}}$$

Assigning a lower consistency value (Standard Deviation) to a higher grade doesn't imply that the data is "better" or "worse". Instead, it helps in understanding how divided or similar people are in their responses. When high consistency is observed, it indicates that most respondents agree on a question. But when the consistency is low, opinions are split, with some rating higher and others lower. The key is to understand why the split occurs which provides valuable insights into the data.

The margin of error is calculated using a standard factor of 0.98 and the sample size (n). The margin of error helps assess if the sample size of the survey is suitable. The margin of error, expressed as a percentage, indicates the range around the calculated sample average where the true population average is likely to be. A smaller margin of error suggests a more accurate estimate, while a larger one implies less precision.

Tourism and Culture Asset Management Plan 2024



TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

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SUMMARY AND QUICK FACTS

SERVICE PROFILE



The Tourism & Culture division is responsible for supporting economic growth in the tourism and creative industries, preserving the City of Hamilton’s civic museums, animating public places through heritage programming, public art and performance.

ASSET SUMMARY



Replacement Value
\$446 M
GOOD CONDITION
 Average Age of **147** years



LEVEL OF SERVICE SUMMARY

- Tourism and Culture had **GOOD PERFORMANCE** overall in attractions and events.
- Survey respondents **AGREED** that buildings were clean and in good repair over the last 24 months.
- Survey respondents **AGREED** that buildings and services were inviting appealing & attractive and safe equitable & inclusive.

ASSET HIGHLIGHTS

ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION	STEWARDSHIP MEASURES
Heritage Resource Management Sites	15	\$415 M	GOOD	Sites are inspected annually by staff.
Permanent Public Art	36	\$3.7 M	GOOD	Public Art assets are inspected annually by an art conservator.

DATA CONFIDENCE



TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

DEMAND DRIVERS

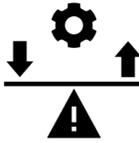


Population Change – Anticipated there will continue to be more demand for green spaces, childcare, and attendance at events and sites which will require funding to increase maintenance at existing sites.



Societal Needs – Anticipated that sites will need to become more accessible for persons with disabilities which will require accessibility improvements at sites.

RISK



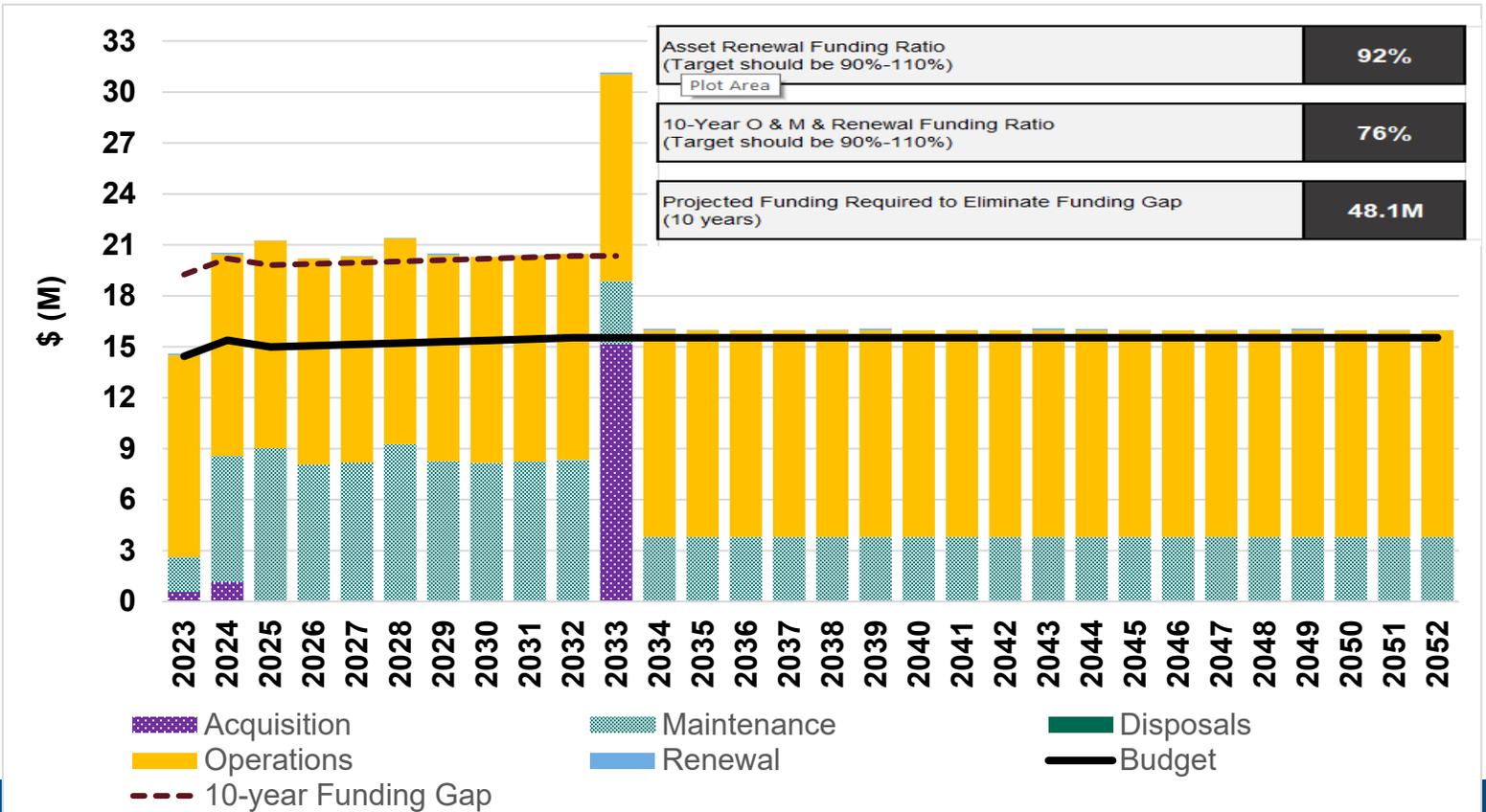
- Critical assets are heritage facilities, monuments, and critical collections.
- A \$15M Collections facility has been proposed to preserve existing collections.

CLIMATE CHANGE MITIGATION



- Transforming Our Buildings mitigation targets may be a challenge for heritage buildings because the proposed work needs to also consider preserving the buildings' historical value.

LIFECYCLE SUMMARY



TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

1. INTRODUCTION

The Tourism and Culture division is responsible for supporting economic growth in the tourism and creative industries, preserving the City of Hamilton's civic museums, and animating public places through heritage programming, public art and performance.

Tourism and Culture is comprised of four sections:

1. Heritage Resource Management (HRM)

- HRM manages the Hamilton Civic Museums comprised of 44 buildings and many parks and landscapes. HRM also manages a large artifact collection, and digital assets and programming. Hamilton Civic Museums are places of discovery, remembrance, learning and recollection.

2. Placemaking, Public Art and Projects (PPAP)

- PPAP supports a number of placemaking projects and events to animate outdoor public places and works with local artists and community organizations to install art pieces that add character to public spaces and reflect shared stories and identities.

3. Creative Industries and Cultural Development (CICD)

- Creative industries and cultural development section includes film, music, fashion, visual and applied arts, live performance, and written and published works.

4. Tourism Hamilton.

- Guides visitors to the City of Hamilton's must-visit attractions, dining and outdoor adventures

This report will focus on the Heritage Resource Management and Placemaking, Public Art and Projects sections because they are the asset owners for the majority of the service's assets. The other two sections are composed of intangible assets which were not able to be quantified at the time of writing.

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements (i.e., O. Reg 588/17¹) and required funding to provide the appropriate levels of service over the 2023-2052 planning period.

Since Sunday, February 25, 2024, the City of Hamilton experienced a cyber incident that disabled some of the IT systems. As a result, this AM Plan was created based on the data that was accessible at the time of publication.

¹ Government of Ontario, 2017

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

2. BACKGROUND

The information in this section is intended to give a snapshot in time of the current state of Tourism and Culture service areas by providing background on the service, outlining legislative requirements, defining the asset hierarchy used throughout the report, and providing a detailed summary and analysis of the existing inventory information as of September 2023 including age profile, condition methodology, condition profile, and asset usage and performance for each of the asset classes. This section will provide the necessary background for the remainder of the AM Plan.

2.1 SERVICE PROFILE

Listed below are related documents reviewed in preparation of the Asset Management Plan:

- **Asset Management Plan Overview Document**
- **Public Art Master Plan 2016**

Additional financial-related documents are identified in **Section 10** Plan Improvement and Monitoring.

As previously mentioned, this report will focus on the Heritage Resource Management and Placemaking, Public Art and Projects sections. These sections have distinct service profiles which are described in the sections below.

2.2 HERITAGE RESOURCE MANAGEMENT

2.2.1 SERVICE HISTORY

The first heritage facility that the City of Hamilton acquired was the Dundurn National Historic Site (NHS) as a civic museum in 1899. Multiple sites were added in the late 20th century during a period of intense heritage conservation activity caused by development pressures that threatened heritage buildings across the City. These included Whitehern Historic House and Gardens NHS in the 1970s and Auchmar Estate in the 1990s.

On January 1, 2001, the communities of Ancaster, Dundas, Flamborough, Glanbrook, Stoney Creek and Hamilton merged to become the 'new' City of Hamilton. As a result of this merger, Heritage Resource Management (HRM) acquired additional heritage sites formally managed by the municipalities that were joined into the City of Hamilton, which included Fieldcote Memorial Park and Museum, Battlefield House Museum and Park NHS, The Hamilton Museum of Steam and Technology NHS and others. These assets were in varying conditions when acquired. Once amalgamated, these buildings and any outstanding repairs became the responsibility of HRM and created pressures on City budgets.

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The latest City acquisition was Griffin House NHS which was added in 2016 as part of an exchange with the Hamilton Conservation Authority which gained Westfield Heritage Village in return.

2.2.2 SERVICE FUNCTION

Heritage Resource Management provides public access to heritage sites and facilities, provides education and interprets the history of Hamilton for its citizens through exhibits, tours, and digital media. HRM manages a large collection of artifacts and conserves monuments owned by the City of Hamilton. The goal of this section is to preserve and share the history of Hamilton with residents and visitors. This section delivers the following services:

- Early childhood education;
- Adult learning;
- Access to green space and recreation;
- Heritage appreciation and presentation;
- Learning about our past, present, and future;
- Learning about social history;
- Equitable access for all incomes and backgrounds;
- Safe places to explore and learn; and,
- Affordable, equitable rental space for groups and events.

A Heritage Facility is a building that serves HRM in its programming. It may have characteristics that make it important to the community including architectural, social, or contextual value. Some of these buildings have heritage designations but not all. They may display challenges in maintenance due to diverse materials and functions. In comparison, a National Historic Site is a heritage facility but is also designated under the Historic Sites and Monuments Board as having value to the people of Canada. These sites are usually comprised of multiple elements including outbuildings and landscapes. Maintenance of these sites is complicated by greater stewardship responsibility and legal obligations.

The HRM Section of the Tourism and Culture Division operates multiple heritage sites which include six National Historic Sites per the list below:

Four historic houses:

- Dundurn National Historic Site
- Battlefield House Museum and Park National Historic Site
- Whitehern Historic House and Garden National Historic Site
- Griffin House National Historic Site

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Three gallery-style museums:

- The Hamilton Military Museum
- Hamilton Children's Museum
- Fieldcote Memorial Park and Museum

One industrial site and Civil Engineering Landmark

- The Hamilton Museum of Steam and Technology National Historic Site

One underwater archaeology site

- Hamilton and Scourge National Historic Site

Seven Heritage Facilities

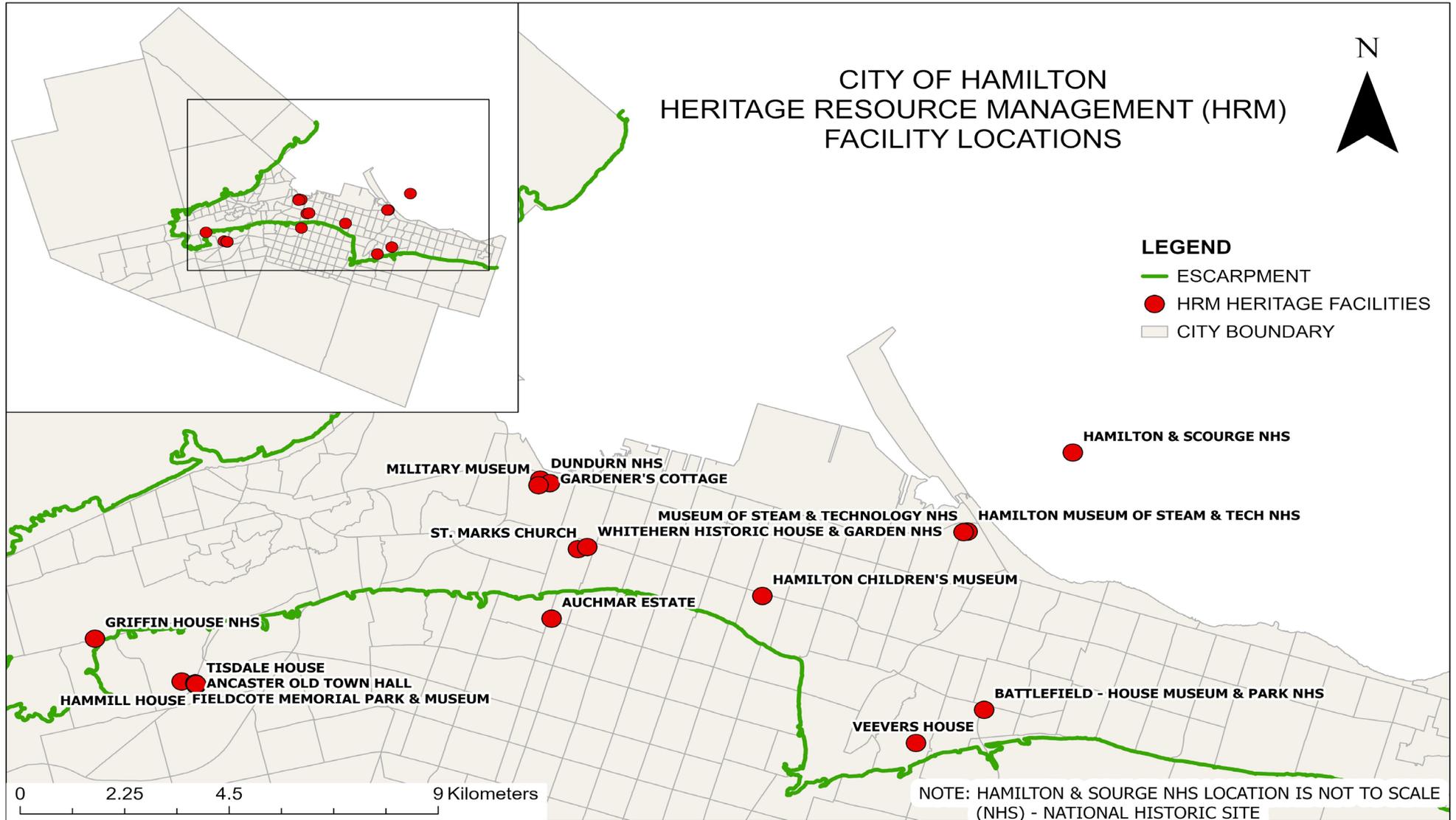
- Ancaster Old Town Hall
- Auchmar Estate
- St. Mark's Church
- Tisdale, Hammill, and Veever's Houses
- Collections Management Building

2.2.3 USERS OF THE SERVICE

Tourism and Culture services are intended to appeal to the City of Hamilton's population as well as visitors to the city. There are an estimated 200,000 visitors to HRM Facilities per year. Per **Figure 1** below, HRM Facilities are located throughout the community in Ancaster, inner-city Hamilton, and Stoney Creek.

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

Figure 1: Heritage Resource Management Facility Locations



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2024 ASSET MANAGEMENT PLAN

2.2.4 UNIQUE SERVICE CHALLENGES

Since HRM is largely composed of heritage facilities, which are assets that are intended to be preserved and not replaced, there are unique challenges that HRM faces.

- The acquisition of a heritage facility has some unique challenges which include that the facility does not have an end-of-life or a scheduled replacement date. In addition, deferring maintenance on heritage facilities poses an additional risk than it does for newer facilities as the building materials are often the reason for the significance of the building.
- Many of the heritage facilities the City has acquired are designated under the Ontario Heritage Act and other similar legislation which specifies that these facilities be maintained at a specific level. Still, HRM does not receive adequate funding to complete all necessary works resulting in deferred maintenance.
- Some sites are acquired and never restored to a level where the public can access and enjoy the site regularly due to budget constraints. This is especially evident for the Auchmar Estate mentioned in **Sections 6 and 8.2**.
- Asset replacement is not undertaken in the same way at heritage facilities where restoration is required to retain heritage value. Restoration can be more costly than replacement and can be complicated by the need to retain specialized contractors.
- HRM manages extensive artifact collections and is responsible for the cataloging and housing of those collections. The ability to preserve and maintain collections at an acceptable level is a challenge with the current budget and resources. There is a current unfunded ask for a new Artifact building in 2033 which is discussed in **Sections 5 and 8.1**.
- Vandalism at HRM facilities has escalated since the COVID-19 pandemic and additional funding has been required for security which was not budgeted.
- Many HRM staff are nearing retirement. With small teams, there is a threat of loss of corporate knowledge.

2.3 PLACEMAKING, PUBLIC ART AND PROJECTS

2.3.1 SERVICE HISTORY

The City of Hamilton formalized its policy supporting art in the City in 1989, leading to the first "Art in Public Places Policy" in 1992 which has the mission statement to "initiate, implement and support a public art programme to encourage public art projects". The Public Art Program was

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implemented a few years later in 1994. In 2009, the City undertook its first Public Art Master Plan that would look ahead 10 years to identify strategies for the development of art in all locales of Hamilton and opportunities for meaningful public art projects across the city. Since 2009 the program has expanded to include donated and community art, and art on publicly accessible private property.

Since the most recent Public Art Master Plan in 2016, the Public Art Collection has grown to include pieces in each of the 15 wards with 58 permanent and 15 temporary installations (by the end of 2023). The City of Hamilton's Public Art Collection continues to grow each year, and the Public Art team is committed to engaging and exploring new ways to support artists and reflect communities.

The oldest pieces in the Public Art Collection are the two sculptural friezes, "Industrial History of Canada" and "Agricultural History of Canada" carved in limestone on the front façade of the former Hamilton-Wentworth County Court building, dating to 1957.

Placemaking was added to the Public Art Section in 2018 and a full-time position was added under Placemaking in 2022. The COVID-19 pandemic highlighted the economic need for artists in local communities and the interest in reinvigorating public spaces for the public. Placemaking started with a focus on temporary art projects such as the Traffic Signal Cabinet Wraps and murals in the downtown area.

2.3.2 SERVICE FUNCTION

Public art is created with the intention of reflecting and engaging the community. The City of Hamilton is committed to enlivening and enhancing the environment of the city for its citizens, businesses, and visitors through the integration of public art in public places.

Public art contributes to an overall sense of place, promotes tourism, and contributes to the economic vitality of the city. Public art is integrated into public places through the City's planning initiatives, public works projects and the implementation of a collaborative public art process involving City staff, artists, and the community.

Placemaking is a hands-on approach to making a meaningful change or impact in a neighbourhood, city, or region. It is a collaborative process by which citizens, businesses and government shape our public realm to maximize shared value, strengthen the connection between people and place, and reflect the physical, cultural, and social identities that define a place and support its ongoing evolution.

Placemaking inspires people to collectively reimagine and reinvent public spaces. Placemaking interacts with the unique geography, culture, and heritage of space and is a way for residents to feel ownership of public space and use it in a way that is specific to community needs.

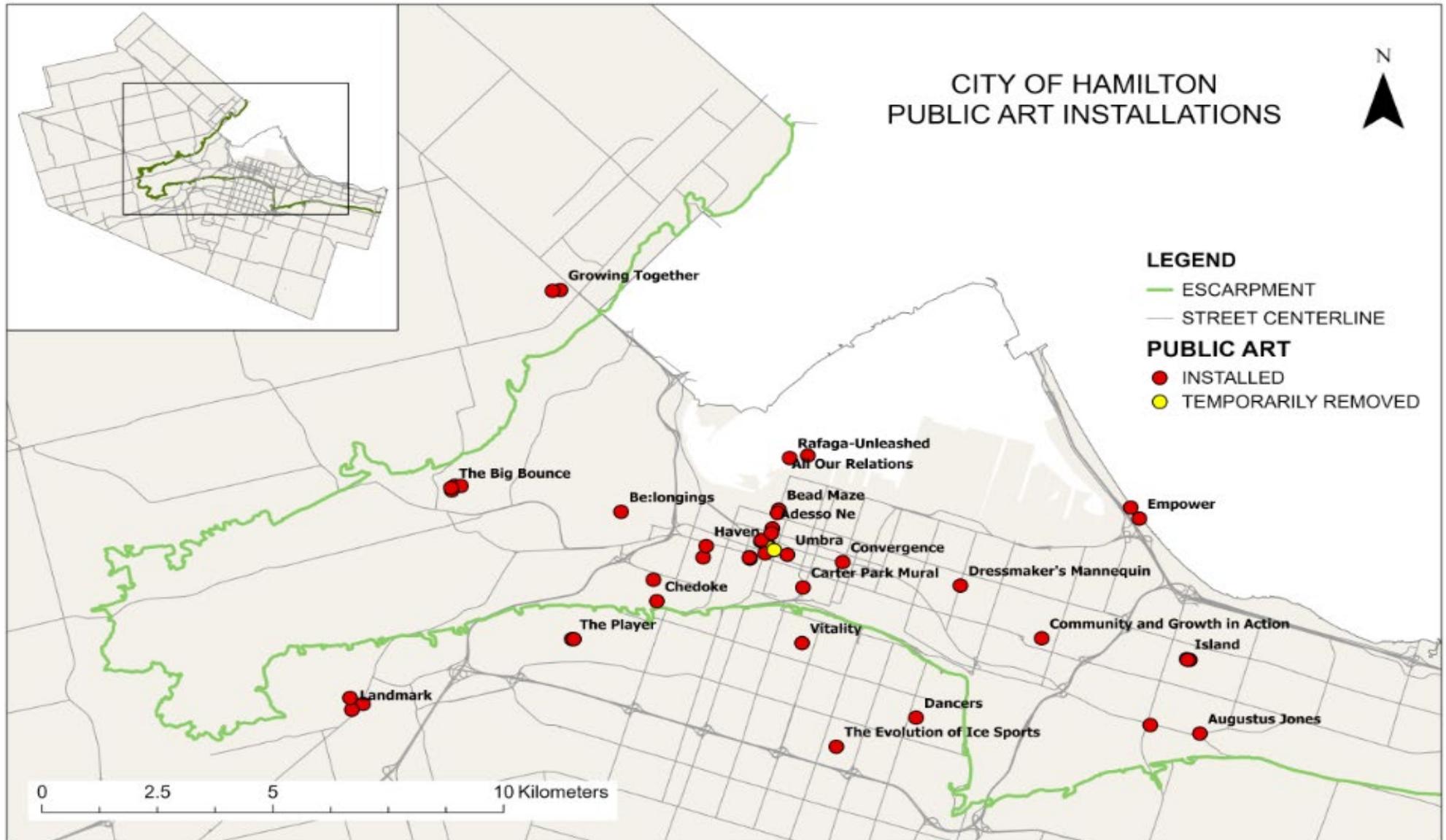
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2.3.3 USERS OF THE SERVICE

Tourism and Culture services are intended to appeal to the City of Hamilton's population as well as visitors to the city. Customer data for Placemaking, Public Art and Projects assets is currently not tracked. A **digital map** showing the location of the Public Art Collection assets is available on the City website and is also shown in **Figure 2** on the following page. A continuous improvement item identified in **Table 29** is to create a method for sharing the location of public art assets in the City with other departments (i.e., snow removal).

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Figure 2: Map of Public Art Installations



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2.3.4 UNIQUE SERVICE CHALLENGES

The number of encampments in Hamilton has increased since the COVID-19 pandemic, and Public Art located in these areas has had an increase in vandalism and graffiti that were not budgeted. The assets in these encampment locations are also typically serviced less by City staff.

2.4 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of Tourism and Culture services are outlined in **Table 1**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

Table 1: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENT
Ontario Heritage Act RSO 1990	The Ontario Heritage Act provides a legislative framework for the identification and protection of cultural heritage resources and archaeological resources in the province. The Ontario Heritage Act gives the province and the municipalities powers to identify and protect properties of cultural heritage value or interest.
Public Art Master Plan Art in Public Places Policy (PAMP)	The Public Art Master Plan identifies and prioritizes potential sites and opportunities for new public art projects across the city and outlines the principles by which this art is commissioned. Art in Public Places Policy provides guidance to staff, artists, citizens, and businesses in the planning, commissioning, and implementation of Art in Public Places projects that are meaningful to the community and enhance public spaces across the City.
Historic Sites and Monuments Board	The HSMB has the authority to designate a site, event or person of national historic significance. HRM manages 6 NHS. Designated sites have a more rigorous set of Standards which must be adhered to, including in some cases multiple levels of heritage designation, and registered archaeological sites.
Ontario Building Code	The OBC, Building Code Act, 1992, regulates the safety and accessibility of buildings that are being constructed, being renovated, or undergoing a change of use.
Ontario Firearms Code	HRM manages a collection of historic firearms. The Firearms Act SC 1995, c.39, regulates the way in which museums possess, buy, display, repair, restore, maintain, store, or alter firearms and ammunition.

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

2.5 ASSET HIERARCHY

The Asset Hierarchy used for this report is shown in **Table 2**. The Heritage Resource Management service area has been broken down into five asset classes.

1. **Facilities:** refers to any City-owned facilities (National Historic Sites and Administrative facilities) necessary to deliver Tourism and Culture services;
2. **Collections:** refers to objects collected because of their historical significance to the city of Hamilton. These include 3d objects, art, and archival material;
3. **Monuments and Plaques:** refer to monuments, plaques, statues, or art pieces which commemorate a historically significant person, location, or event in the city of Hamilton's history;
4. **Vehicles:** describes different types of vehicles (i.e., motor vehicle, bicycle, marine vehicle); and,
5. **Technology:** describes the different types of technology required to deliver the service including communications, IT, desktop, and mobile equipment. *Includes Technology for all of Tourism and Culture.*

The Placemaking, Public Art and Projects service area has been broken down into four asset classes.

1. **Permanent Public Art** refers to three-dimensional art that is located on City-owned land, commissioned in collaboration with artists or artist-led groups through a public process.
2. **Temporary Public Art** refers to art that is located on City-owned land, commissioned in collaboration with artists or artist-led groups through a public process. Temporary Public Art has a temporary set life span and does not get renewed.
3. **Exterior Murals and Reliefs** refer to art on City-owned land or the exterior of buildings, commissioned in collaboration with artists or artist-led groups through a public process. Exterior Murals and Reliefs have a set life span and in most cases are considered permanent.
4. **Interior Murals and Reliefs** refer to art placed within the city or community-owned buildings, commissioned in collaboration with artists or artist-led groups through a public process. Interior Murals and Reliefs have a set life span and are considered permanent.

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

Table 2: Asset Class Hierarchy

SERVICE AREA	HERITAGE RESOURCE MANAGEMENT	PLACEMAKING, PUBLIC ART AND PROJECTS
ASSET CLASS	<ul style="list-style-type: none"> • Facilities (e.g., Heritage Facilities, National Historic Sites and Administrative Buildings) • Collections • Monuments and Plaques • Vehicles • Technology 	<ul style="list-style-type: none"> • Permanent Public Art • Temporary Public Art • Exterior Murals and Reliefs • Interior Murals and Paintings • Technology

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

3. SUMMARY OF ASSETS

Table 3 displays the detailed summary of assets for the Tourism and Culture service area. The information used for this report was sourced from various City databases discussed in **Section 10.1**. It is important to note that inventory information does change often and that this is a snapshot of data available as of September 2023.

The City owns approximately **\$446.3 Million** in Tourism and Culture assets which are on average in **Good** condition. These assets are a weighted average of **147** years of age. Most of the weighting for these averages can be attributed to the HRM Facility asset class which represents 93% of the entire portfolio.

There are a total of 44 HRM buildings which include Heritage Facilities, National Historic Sites and Administrative buildings. For ease of reporting, these buildings have been consolidated into 15 HRM Facilities for this report (e.g., all eight buildings at Dundurn NHS have been consolidated into 1 entity titled Dundurn NHS with a total replacement value of \$224M). A continuous improvement item included in **Table 29** is to source and acquire an Asset Management software program to organize site data. At the time of writing, HRM has been working with Corporate Facilities and Energy Management (CFEM) to explore working within existing City systems.

It is important to note that Heritage Facilities are unique with respect to replacement value because these assets would only be replaced in the event of a catastrophic failure (i.e., destruction due to a fire, or deterioration beyond repair). A replacement value has been included for these assets because the assumption is that if the asset were to fail, the City would reconstruct a replica of the asset. As a result, Remaining Service Life (RSL) has also not been included for these assets because they are assumed to be in service indefinitely.

Data confidence descriptions are outlined on **Page 31** of the **AMP Overview Document**. The majority of replacement values in this report have been estimated based on subject matter expert opinion which was considered to be lower confidence or inflated values of original purchase/replacement cost estimates. Consequently, the overall replacement value data confidence for the service area is **LOW**. The exception to this is the Vehicle and Technology asset categories, whose replacement costs were collected from the most recent purchase price for similar assets, and therefore have a HIGH confidence rating.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. In addition, the assets included below are assets that are assumed and in service at the time of writing.

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

Table 3: Summary of Assets - Heritage Resource Management

HERITAGE RESOURCE MANAGEMENT				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
HRM Facilities (e.g., Heritage Facilities, National Historic Sites and Administrative Buildings)	15 (44) ²	\$414.6M	150 years	2 - GOOD
DATA CONFIDENCE	Very High	Low	High	Medium
Collections	36,323	\$10.0M	170 years	3 - FAIR
DATA CONFIDENCE	Very High	Low	Low	Low
Monuments and Plaques	180	15.7M	100 years	3 - FAIR
DATA CONFIDENCE	Very High	Low	Low	Medium
Vehicles	1	\$0.06M	14 years	5 - POOR
DATA CONFIDENCE	Very High	High	High	Low
Technology	125	\$0.02M	4 years	5 - POOR
DATA CONFIDENCE	High	High	High	Low
SUBTOTAL HERITAGE RESOURCE MANAGEMENT		\$440.5M	149 years	2-GOOD
DATA CONFIDENCE		Low	High	Medium

² There are a total of 44 National Historic Sites and Heritage Facilities. These 44 sites and facilities have been consolidated into 15 parent sites.

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

Table 4: Summary of Assets - Placemaking, Public Art and Projects

PLACEMAKING AND PUBLIC ART				
ASSET CATEGORY :	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE	AVERAGE EQUIVALENT CONDITION
Permanent Public Art	36	\$3.7M	15 years	2 - GOOD
DATA CONFIDENCE	High	Low	High	High
Temporary Public Art	6	\$0.2M	1 year	3 - FAIR
DATA CONFIDENCE	Low	Low	High	High
Exterior Murals and Relief	3	\$1.0M	46 years	3 - FAIR
DATA CONFIDENCE	High	Low	High	High
Interior Murals and Paintings	19	\$0.9M	36 years	2 - GOOD
DATA CONFIDENCE	High	Low	Low	High
SUBTOTAL PLACEMAKING AND PUBLIC ART	64	\$5.8M	30 years	3-FAIR
DATA CONFIDENCE	High	Low	High	High
TOTAL TOURISM AND CULTURE		\$446.3M	147 years	2 - GOOD
DATA CONFIDENCE	Low		High	Medium

3.1 ASSET CONDITION GRADING

Condition refers to the physical state of the Tourism and Culture assets and is a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, **Table 5** below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in **Table 29** is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

Table 5: Equivalent Condition Conversion Table



EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	REMAINING SERVICE LIFE
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance is required only.	>79.5% RSL
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on the asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4% RSL
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset usage. Minor to significant maintenance is required.	39.5% - 69.4% RSL
4 Poor	The asset has significant defects and deterioration. Deterioration has an impact on asset usage. Rehabilitation or major maintenance is required in the next year.	19.5% -39.4% RSL
5 Very Poor	The asset has serious defects and deterioration. The asset is not fit for use. Urgent rehabilitation or closure is required.	<19.4% RSL

The following conversion assumptions were made:

- The condition scores for Facilities, Collections, and Monuments and Plaques, were estimated based on the condition descriptions in the table above using subject matter expert opinion;
- PPAP Assets are already assessed using a 5-point scale which aligns with the table above; and
- For Vehicle and Technology assets, the condition was based on the % of remaining service life and converted per the table above.

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3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile, and Performance Issues for each of the asset classes.

Condition refers to the physical state of assets and is a measure of the physical integrity of assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected/assessed at different frequencies and using different methodologies to determine their condition which are noted in this section.

Normally the age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life (ESL) where they can be planned for replacement. In the case of the HRM section, age is the defining feature/value associated with the asset and therefore age has not been used as a basis for determining replacement schedules.

Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

3.2.1 HERITAGE RESOURCE MANAGEMENT (HRM) – FACILITIES

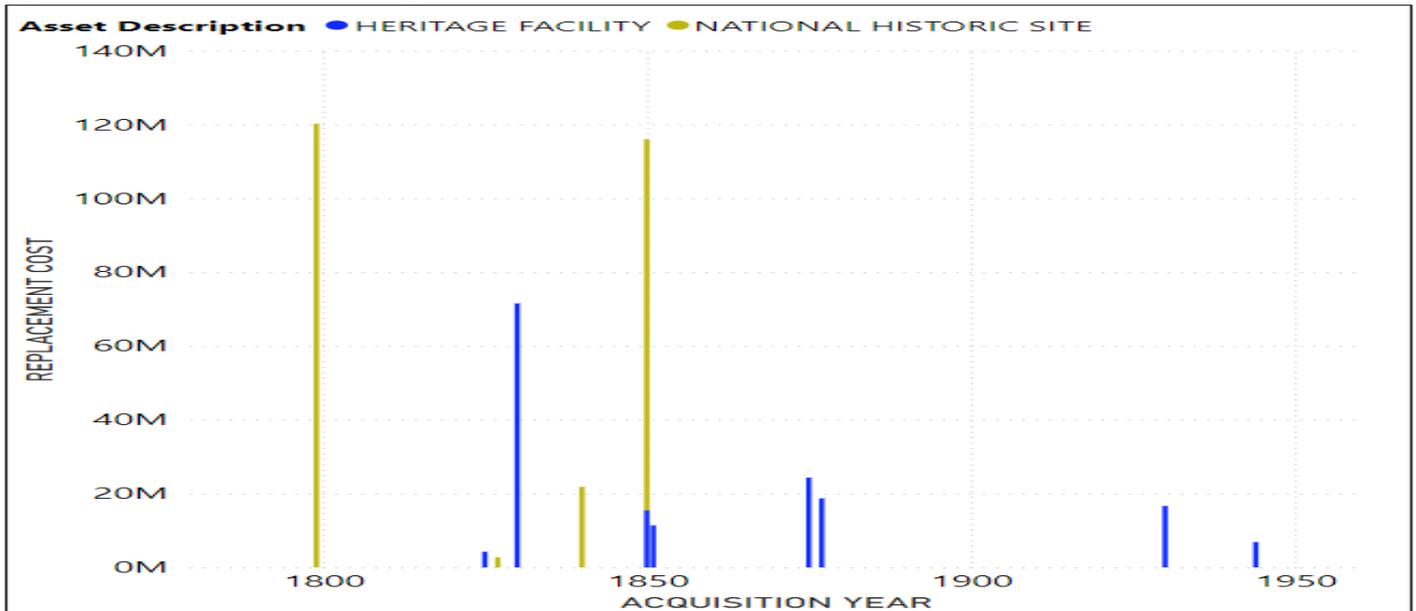
3.2.1.1. AGE PROFILE

The age profile for HRM Facilities assets is shown in **Figure 3**. For Facility assets, the data confidence for age is typically “High”, because this information was either recorded during the construction of the facilities or there are historic records available.

As mentioned earlier, the HRM facilities in this report have been consolidated into 15 sites which are shown in the figure below. The oldest National Historic Site is Dundurn which was built in 1834, and the highest replacement value National Historic site is the Hamilton Museum of Steam and Technology.

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Figure 3: HRM - Facilities Age Profile



3.2.1.2. CONDITION METHODOLOGY AND PROFILE

Condition Assessments are completed for HRM sites and heritage facilities on an annual basis by HRM staff, and the results of these inspections are currently assumed to be a **MEDIUM** data confidence as shown in **Table 6**. Previously, HRM had Building Condition Assessments (BCAs) completed by Corporate Facilities and Energy Management, but the last assessment completed was in 2009 and the information is outdated. A continuous improvement item has been identified to investigate having consultants complete assessments every five years to output a Facility Condition Index to align with the rest of the city’s Building Condition Assessment process, but a budget would need to be allocated for this activity. Due to the unique nature of the building components, the consultant must be qualified to assess heritage facilities, and language for future Requests for Proposals should also be investigated as part of this continuous improvement item.

In the interim, HRM is proposing to update the inventory and condition assessments of sites and formalize them into a software program internally, which is another identified continuous improvement item in **Table 29**.

Table 6: Inspection and Condition Information

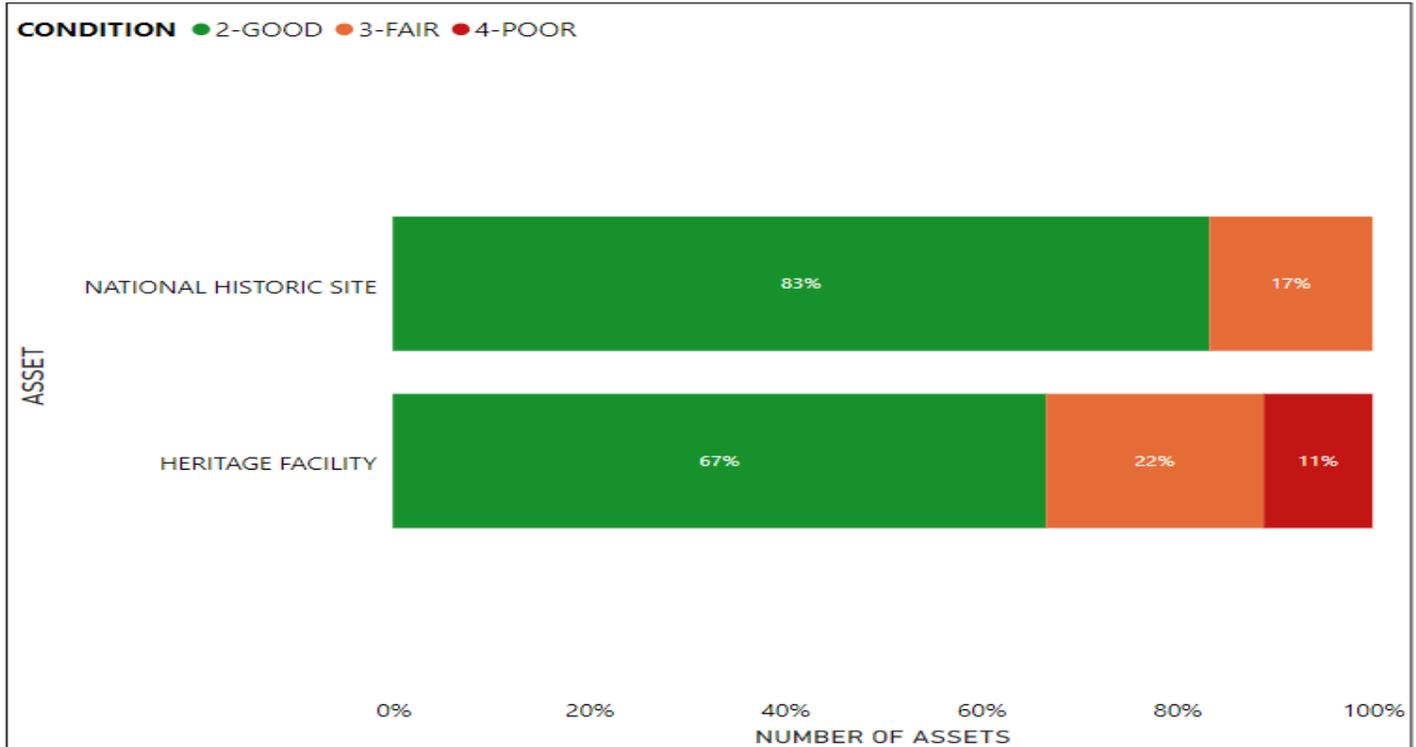
ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
National Historic Site	Annually	August 2023	5-Point Scale
Heritage Facility			

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Figure 4 below, shows the majority of HRM Facilities assets are in good condition.

The only asset identified as Poor Condition is the Auchmar Estate site. This site requires full restoration, new site services and improved access to the site. These items have been incorporated as part of the unfunded maintenance needs in **Section 8.2**.

Figure 4: HRM - Facilities Condition Analysis



3.2.1.3. ASSET USAGE AND PERFORMANCE

Table 7 below lists the known service performance deficiencies for the HRM Facility assets. A Continuous Improvement item has been identified to ensure City of Hamilton condition assessments are performed in an Asset Register format that conforms with the format used by Corporate Facilities and Energy Management (CFEM).

These maintenance activities have been identified as maintenance needs and have been included in the lifecycle plan where data is available and validated by subject matter experts from Tourism and Culture.

Table 7: Known Service Performance Deficiencies

ASSET	DESCRIPTION OF DEFICIENCY
Ancaster Old Town Hall	Requires restoration of exterior woodwork: funded and scheduled for 2024. Estimated at \$1,000,000 in 2023

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ASSET	DESCRIPTION OF DEFICIENCY
Auchmar Estate	Requires full site restoration of all buildings, new site services and updated access to the site. Estimated at \$23,410,000 in 2023.
Hamilton Civic Museums Collections Building	Requires facility upgrades estimated at \$500,000
Dundurn NHS	<p>Main Castle</p> <ul style="list-style-type: none"> • Repainting and woodwork repairs, parapet and stucco repairs, covered porch repairs, borrowed light well repairs, courtyard, and drainage repairs; • HVAC and BAS system in critical condition and requires replacement storm windows and main sash restoration; • Foundation and drainage require repairs; • Roof and eavestrough require repairs; • 50% of rooms require plaster ceiling repair; • Sprinkler system requires updating; • 50% of floor covering repair replacement; and, • 50% of rooms require painting and finish, fixture repair/replacement. <p>Coach House building needs repainting</p> <p>Cockpit Theatre requires cupola and roof repairs and exterior woodwork restoration including replacement of column bases. Masonry requires repointing and stucco restoration. Interior finishes require repair</p> <p>Parking Lot: Requires Regular Maintenance</p> <p>Gardeners Cottage: The roof and exterior woodwork require repair. The brick requires extensive repair. Windows and doors require extensive repair. The Interior requires extensive repair.</p> <p>Military Museum: Requires Regular Maintenance</p>
Hamilton Museum of Steam and Technology NHS	<p>"1913 building": Requires a major capital restoration to address a wet basement, archaic heating system, lack of accessibility and problematic public space.</p> <p>Boiler house: Requires masonry restoration, repainting</p> <p>Carpenter's shed: Requires repainting, new entrances and doors to allow for accessibility</p> <p>Chimney: Requires repointing</p> <p>Pump house: Requires extensive repainting and repair of the steel windows and masonry repointing</p> <p>Woodshed: Requires exterior woodwork repair and repainting.</p>

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ASSET	DESCRIPTION OF DEFICIENCY
Griffin House NHS	Requires cyclical maintenance and landscape planting improvement. Interior restoration is required.
Veever's House	Requires window restoration and replacement, soffit and fascia restoration, attic renovation, interior renovation, Garage renovation and Deck Renovation
Tisdale House	Requires exterior cladding upgrades, Interior renovation
St. Mark's Church	Under construction currently. Requires exterior masonry repointing

3.2.2 COLLECTIONS

3.2.2.1. AGE PROFILE

Collections refer to objects collected because of their historical significance to the city of Hamilton and include 3-dimension objects, art, and archival material.

For this asset category, the age of the assets is not readily available as the assets consist of artifacts from various archaeological sites. The year of construction for all assets in this category was assumed to be 1850 per subject matter expert opinion. Consequently, an age profile was determined to be of limited value and was excluded from this section of the Asset Management Plan.

An important point to note with respect to the age profile for this asset category is that these assets will not be replaced at the end of life or in the event of severe deterioration.

3.2.2.2. CONDITION METHODOLOGY and PROFILE

Currently, the condition of assets in the collection is based on subject matter expert opinion for his report which was given a Low data confidence. Collections assets are inspected at the time of acquisition and given a score of stable or unstable, but inspections do not occur again as shown in **Table 8**. A continuous improvement item identified in **Table 29** is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

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Table 8: Inspection and Condition Information

ASSET	LAST INSPECTION	CONDITION SCORE OUTPUT
Collections	At the Acquisition of an asset	Stable/Unstable

Figure 5 below shows that 60% of the assets are in GOOD condition. The remaining 40% of the assets are in FAIR condition.

The assets classified as fair condition will be managed through appropriate maintenance activities. Since these assets will not be replaced, they have been excluded from the Renewal section of this asset plan.

Figure 5: Collections Asset Condition Distribution:



3.2.2.3 ASSET USAGE AND PERFORMANCE

Currently, service performance deficiencies with Collections assets have not been identified.

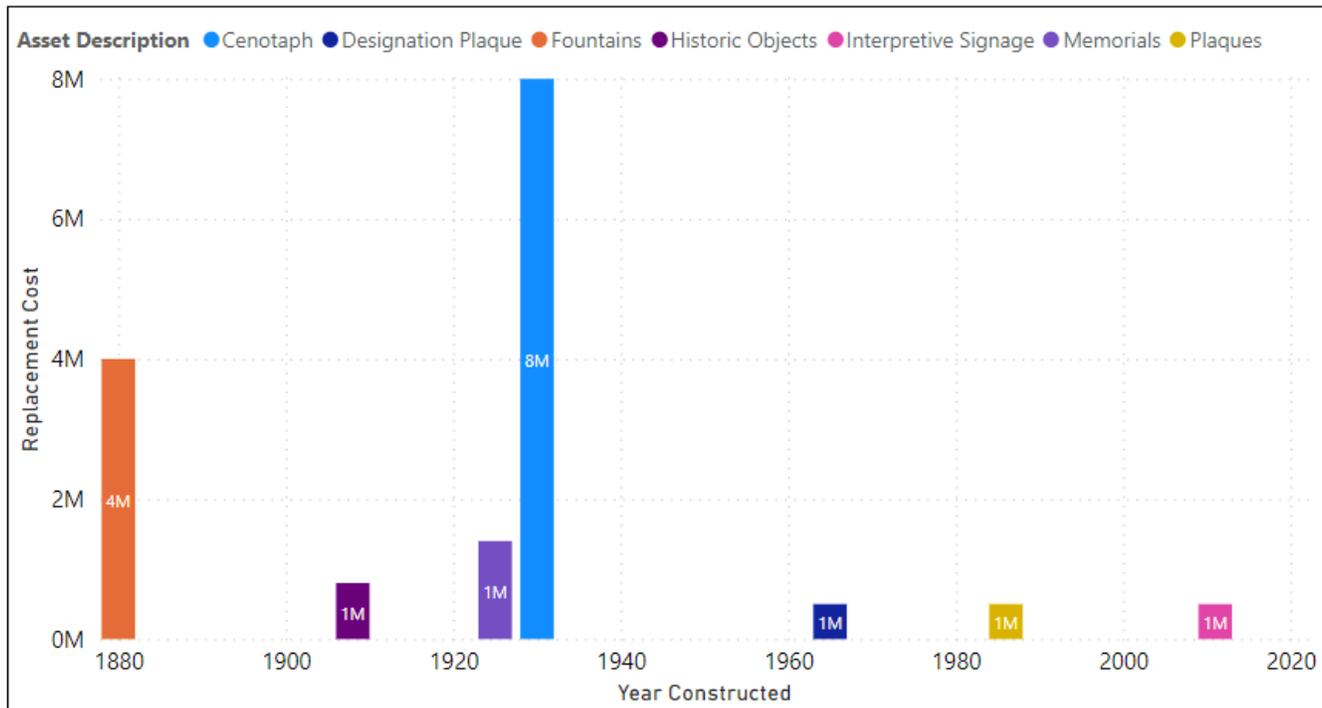
3.2.3 MONUMENTS AND PLAQUES

3.2.3.1. AGE PROFILE

In the Monuments and Plaques age profile below, the Cenotaph ranks as the asset with the highest replacement value at \$8 Million followed by Fountains at \$4 Million. This age profile in **Figure 6**, on the following page has been developed with **Low** confidence as the age of the different components is difficult to evaluate. Additionally, per subject matter expert review, these items would not be replaced at the end of their life.

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Figure 6: Conservation - Age Profile



3.2.3.2. CONDITION METHODOLOGY AND PROFILE

As shown in **Table 9** below, Condition Assessments are completed for monuments and plaques at regular intervals by HRM staff, and the results of these inspections are currently assumed to be a **MEDIUM** data confidence as these values were converted to a condition score by staff based on inspection reports. A continuous improvement item identified in **Table 29** is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

Table 9: Collections Asset Condition Distribution

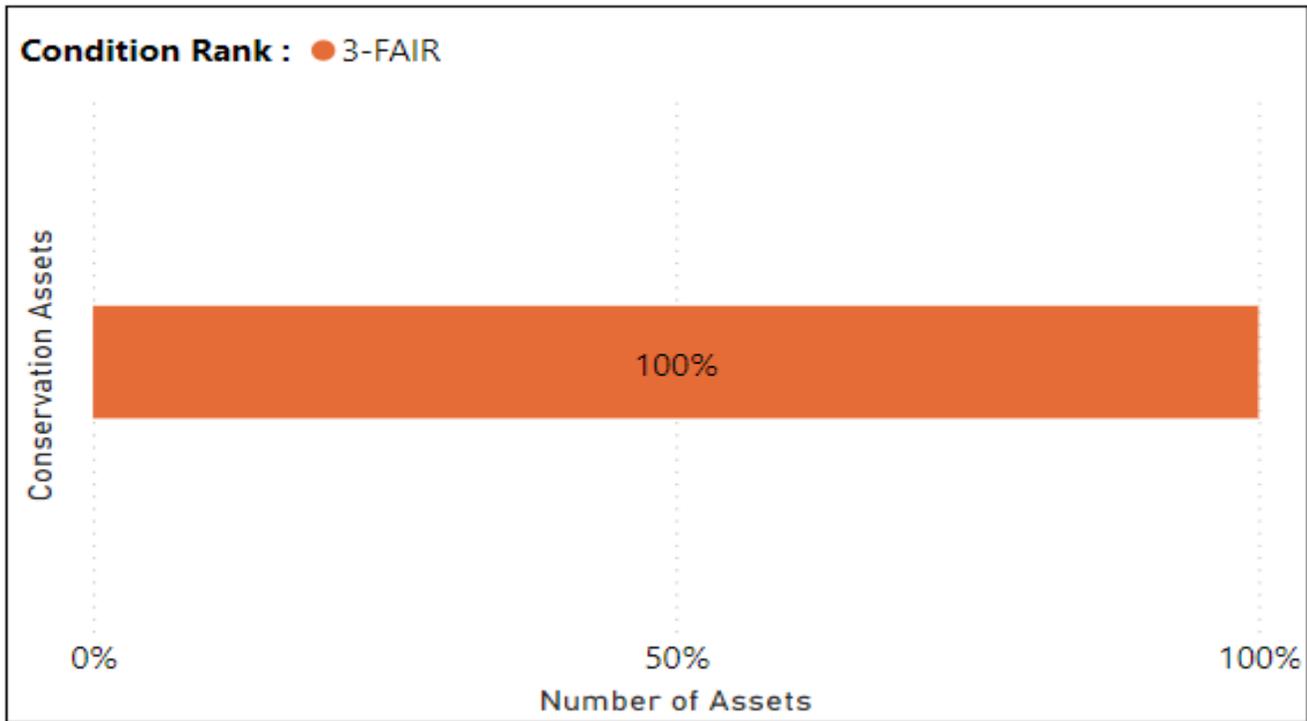
ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Significant Monuments	Every 2 years	2023	Pass/Fail
Plaques	Every 5 years	2023	Pass/Fail

Figure 7, on the following page, shows that all the assets in this subcategory have been identified as **FAIR** condition.

The assets classified as fair condition will be managed through appropriate maintenance activities. Since these assets will not be replaced, they have been excluded from the Renewal section of this asset plan.

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Figure 7: Monuments and Plaques- Asset Condition Distribution



3.2.3.3 ASSET USAGE AND PERFORMANCE

Currently, service performance deficiencies with Monument and Plaque assets have not been identified.

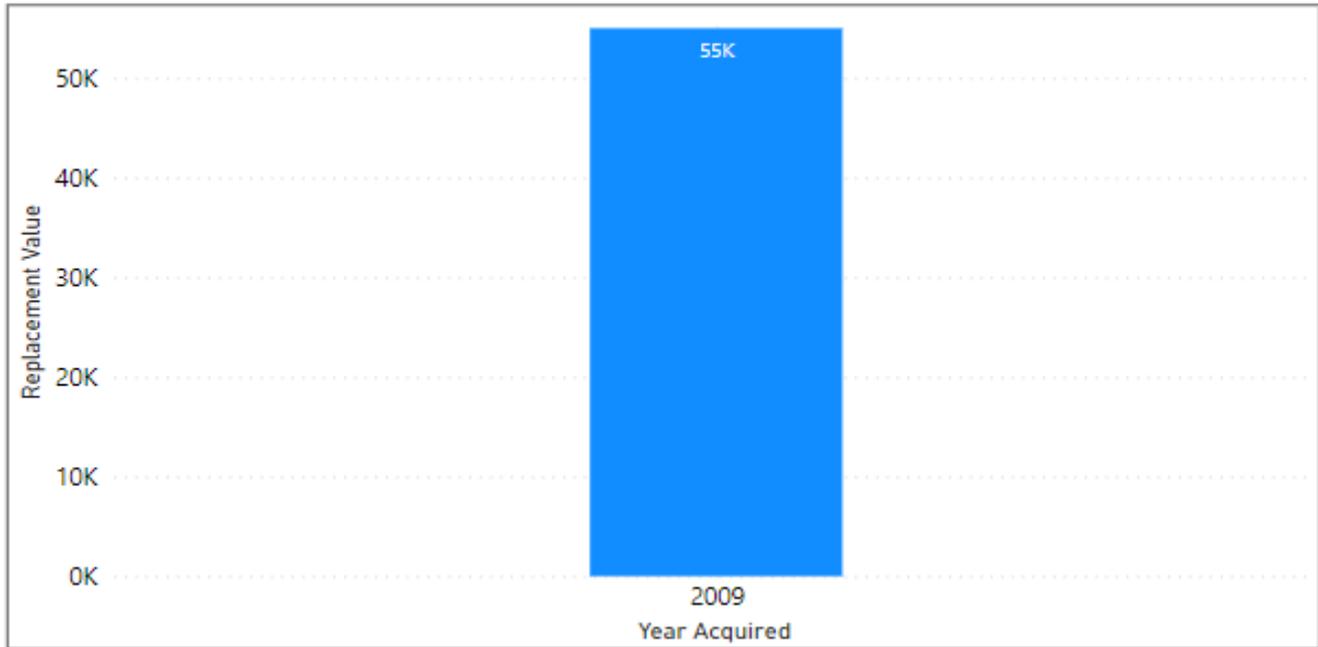
3.2.4 VEHICLES

3.2.4.1. AGE PROFILE

Figure 8, on the following page, represents the one vehicle owned by Tourism and Culture. It is a 2009 Chevrolet Cargo Van with a replacement value of \$55,000. This vehicle is beyond its estimated service life and appears in the backlog in **Section 8.3**. However, it was found when completing the report that this vehicle was recently replaced with an electric vehicle. This change has not been encompassed in the Lifecycle Management Plan in **Section 8**.

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Figure 8: Tourism and Culture Vehicle Age Profile



3.2.4.2. CONDITION METHODOLOGY AND PROFILE

Vehicles are inspected and maintenance activities are conducted at specific intervals throughout the asset’s lifecycle as shown in **Table 10**, however, no formal condition rating is assigned to each vehicle. Therefore, the condition for vehicles has been based on age.

Table 10: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	DESCRIPTION	LAST INSPECTION	CONDITION SCORE OUTPUT
Vehicles	Twice a year	Safety Checks and Regular Maintenance as needed	N/A - Replaced in 2024	N/A

The 2009 Chevrolet Cargo Van had a condition rating of VERY POOR and was beyond its service life but was recently replaced in 2024. As previously mentioned, this change has not been accounted for in the **Lifecycle Management Plan in Section 8**. This vehicle is included in the Renewal forecast in Section 8.3, but no longer requires replacement.

3.2.4.3 ASSET USAGE AND PERFORMANCE

Currently, service performance deficiencies with Vehicle assets have not been identified.

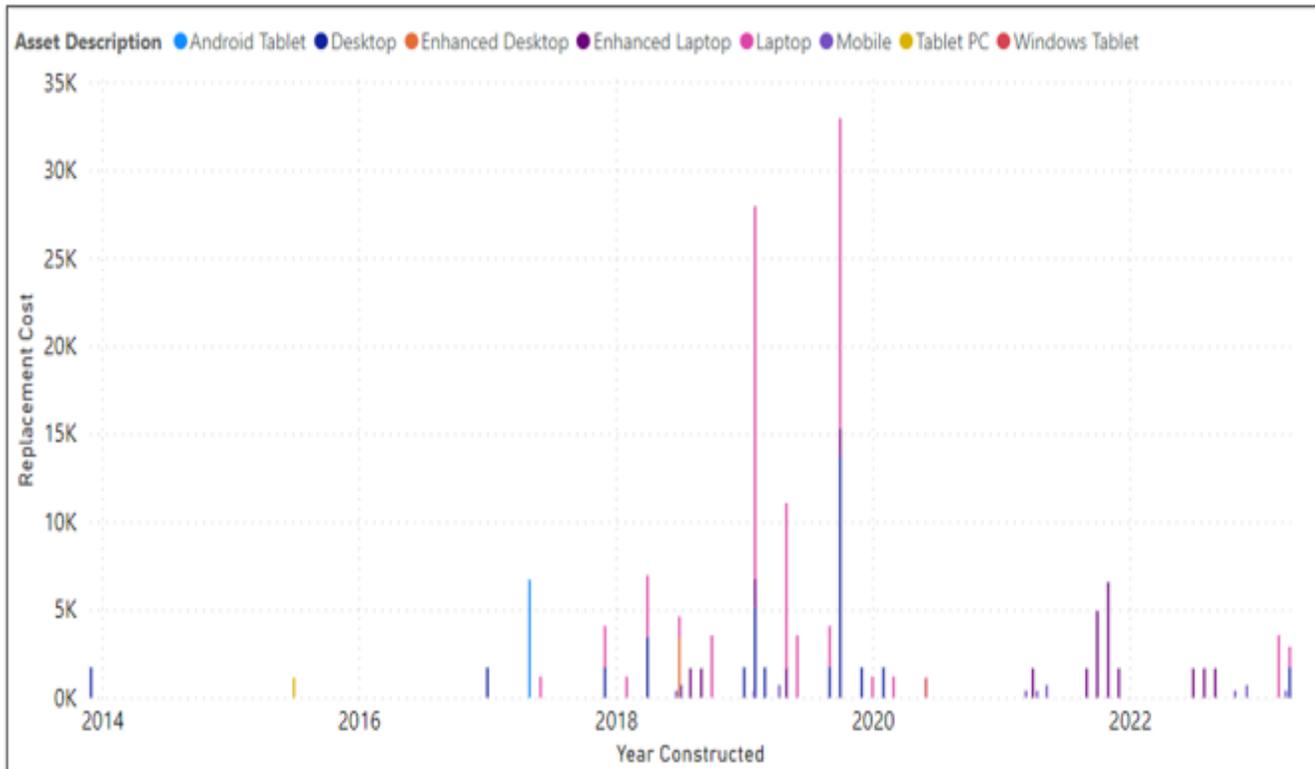
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3.2.5 TECHNOLOGY PROFILE

3.2.5.1. AGE PROFILE

Desktop and laptop assets have a useful life of five years while the remaining assets have a useful life of four years. Per **Figure 9** below, most of these assets are at or close to the end of their ESLs.

Figure 9: Technology Assets Age Profile (Mobiles and Computers)



3.2.5.2. CONDITION METHODOLOGY and PROFILE

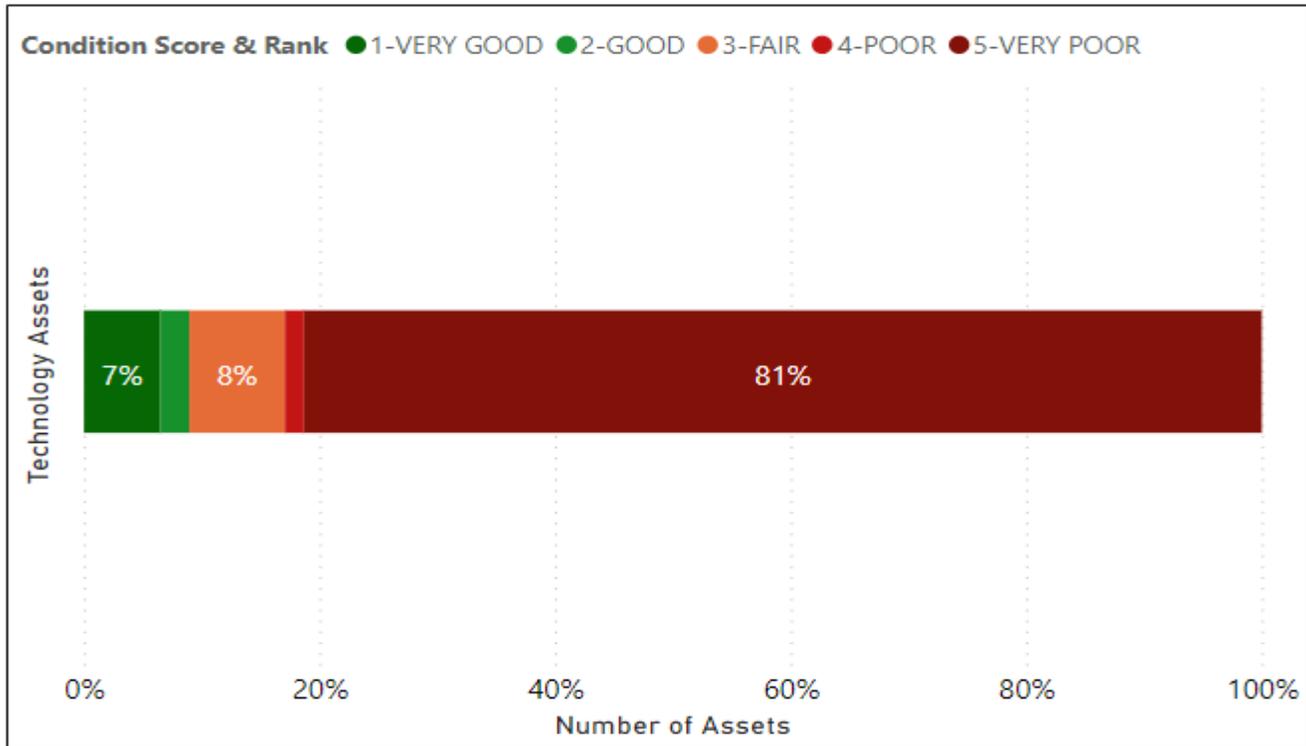
Currently, technology assets are not inspected, and the condition in this report has been estimated based on remaining service life per **Table 5**.

Since many technology assets are beyond service life, **Figure 10**, on the following page, shows that the majority of technology assets are in very poor condition. Since the asset age was based on ESL, this is consistent with the age profile shown in the section above.

The Technology assets which have reached the end of useful life and are ranked in poor condition will be replaced. These assets make up the majority of the renewals in the report because, unlike many heritage assets, they will be replaced at the end of life.

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Figure 10: Technology Asset Condition Distribution



3.2.5.3 ASSET USAGE AND PERFORMANCE

Currently, service performance deficiencies with Technology assets have not been identified.

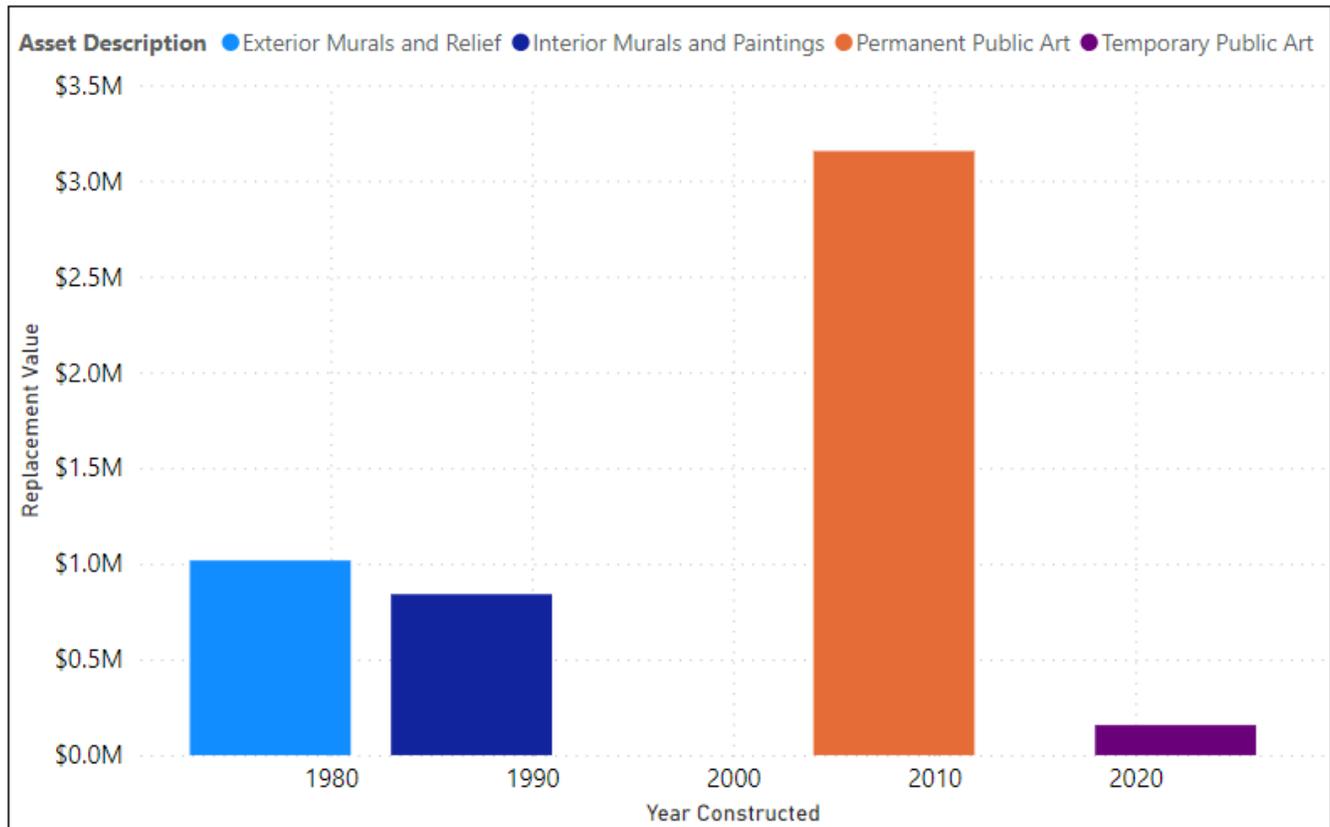
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3.2.6 PLACEMAKING PUBLIC ART AND PROJECTS (PPAP)

3.2.6.1. AGE PROFILE

In the PPAP age profile in **Figure 11**, on the following page, the Permanent Public Art collection ranks as the asset with the highest replacement value at \$3.2M. This age profile has been developed with **MEDIUM** confidence as the age of the different components is difficult to evaluate. Additionally, per subject matter expert opinion/review, these items would not be replaced at the end of life.

Figure 11: PPAP Age Profile



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3.2.6.2. CONDITION METHODOLOGY AND PROFILE

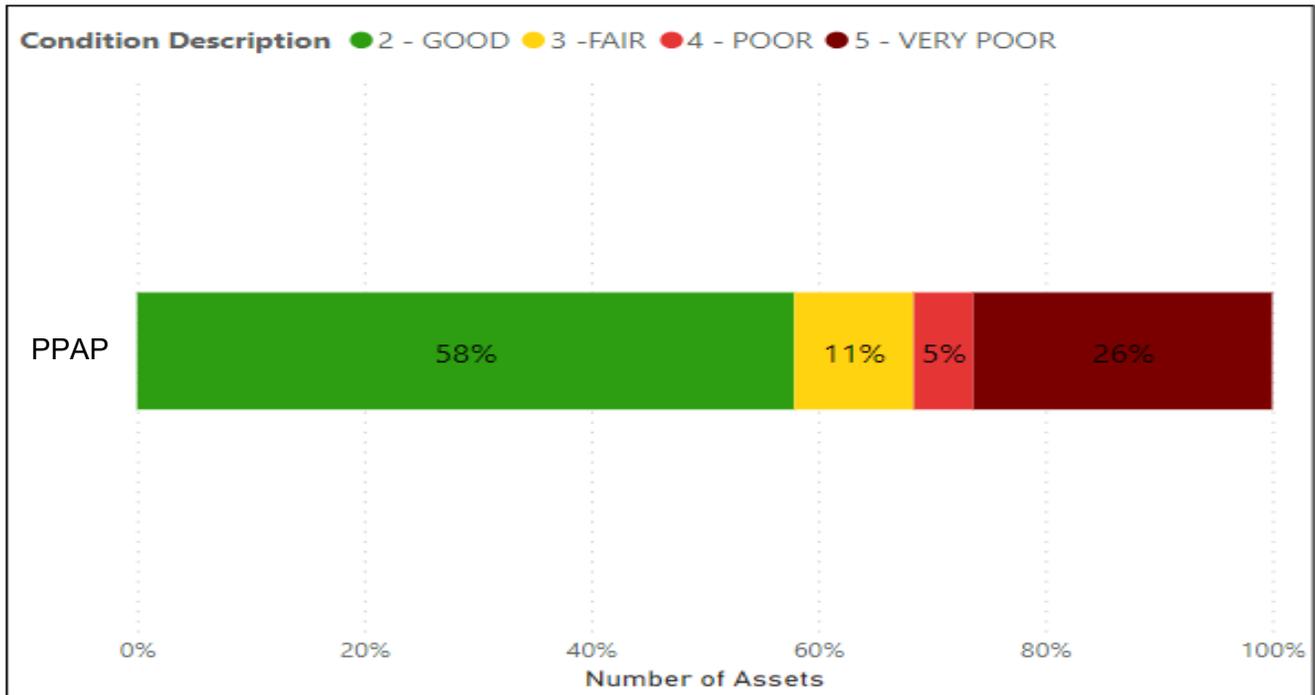
Per **Table 11** below, each of the Public Art assets is inspected annually by an art conservator.

Table 11: Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Public Art	Annually	2023	5-Point Scale

Figure 12 below shows that most assets in the PPAP portfolio are in **GOOD** condition (58%, \$3.2M) while (31%, \$1.8M) are in poor condition or worse.

Figure 12: PPAP – Asset Condition Distribution



3.2.6.3 ASSET USAGE AND PERFORMANCE

Currently, service performance deficiencies with PPAP assets have not been identified.

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4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what the City provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that the City provides those services.

O.Reg 588/17 does not define levels of service for HPS assets and therefore the City has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in **Section 7.5** of the **AMP Overview Document**.

4.1 SURVEY METHODOLOGY

To develop customer values and customer levels of service, a Customer Engagement Survey titled "*Let's Connect, Hamilton – City Services & Assets Review: Tourism and Culture*" was released on **November 27th, 2023**, on the Engage Hamilton platform and closed on **January 2nd, 2024**. The survey results can be found in Appendix "A".

The survey received submissions from **67** respondents and contained **six** questions related to Tourism and Culture service delivery. Based on the number of responses, a sample size of **67** correlates to a **MEDIUM** confidence level with a **12%** margin of error based on an approximate population size of **580,000**. This was determined to be an acceptable confidence level to use to develop the customer values and customer performance measures for this AM Plan. It is important to note that respondents were allowed to opt out of questions, and so different questions may have different confidence levels depending on the opt-out rate for that question.

Although the sample size correlates to a medium confidence level, the data consistency also differed between questions. A high data consistency means that respondents came to the same conclusion more often for a question, whereas a low data consistency means that there is a split in respondent's opinions. Therefore, while CAM may be able to improve survey confidence levels over time by increasing the survey sample size, it may not be possible to improve data consistency over time as this depends on the opinions of the respondents and may require additional insight into why respondents' opinions are split. A low consistency of data does not mean the data is bad, but it does mean that it is difficult to make decisions using that information. Overall, Tourism and Culture's data consistency was typically medium across all questions indicating most respondents are generally in agreement. Data confidence level assumptions are shown in **Table 12**.

While these surveys were used to establish customer values and customer performance measures, it is important to note that there were also limitations to the survey methodology which may reduce the confidence level in the survey data. The survey was only released using an

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online platform and did not include telephone surveys and consequently, there is no way to confirm the identity information provided in the survey. In addition, the survey did not control for IP addresses, and therefore it is possible that respondents could complete the survey more than once and skew the survey results. A continuous improvement item identified in **Table 29** is to introduce meaningful public engagement at regular intervals (e.g., annually).

It is important to note that Dundurn National Historic Site was inadvertently excluded from the survey. Since this is the City’s most significant and visited site, the effects of this omission are noted where appropriate in this section.

Table 12: Data Confidence Levels

GRADE	DATA CONSISTENCY (STANDARD DEVIATION)	CONFIDENCE LEVEL (MARGIN OF ERROR AT 95% CONFIDENCE IN SAMPLE SIZE)
Very High	0 to 0.5 – results are tightly grouped with little to no variance in response	0% to 5% - minimal to no error in results, can generally be interpreted as is
High	0.5 to 1.0 – results are tightly grouped but with slightly more variance in response	5% to 10% - error has become noticeable, but results are still trustworthy
Medium	1.0 to 1.5 – results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - error is a significant amount and will cause uncertainty in the final results.
Low	1.5 to 2.0 – results show a high variance with a fair amount of disparity in responses	20% to 30% - error has reached a detrimental level and results are difficult to trust
Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - significant error in results, hard to interpret data in a meaningful way

4.2 CUSTOMER VALUES

Customer values are what the customer can expect from their tax dollar in “customer speak” which outlines what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

Customer Values indicate:

- What aspects of the service are important to the customer;
- Whether they see value in what is currently provided; and,
- The likely trend over time based on the current budget provision.

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As previously mentioned, the customer values below were determined using the results from the *Let's Connect, Hamilton – City Services & Assets Review: Tourism and Culture*. It is important to note that this first iteration of the survey focused mostly on the Heritage Resource Management section of Tourism and Culture. A continuous improvement item identified in **Table 29** is to explore public engagement opportunities for new and existing permanent PA and temporary public art.

As previously mentioned, Dundurn NHS was not included in the Tourism and Culture survey but would likely be considered an important attraction. Customer values are shown below in **Table 13**.

Table 13: Customer Values

SERVICE OBJECTIVE			
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
The most important attraction is the Remembrance Day Service.	2023 Tourism and Culture Services and Assets Review Survey	The average survey respondent rated this as an important customer value with medium data consistency but was approaching very important.	Maintain
Applefest at Battlefield Museum and Park NHS is less important than other services.		The average survey respondent rated this as a fairly important customer value with medium data consistency but was approaching very important.	Maintain
The sites are clean and in good repair		The average survey respondent rated this as an important customer value with a high data consistency.	Decline
Accessible; Sites meet the Accessibility for Ontarians with Disabilities Act (AODA), 2005 standards		The average survey respondent rated this as an important customer value with a high data consistency. A key point to note for this customer value is that in some instances, Heritage facilities cannot be made AODA compliant.	Maintain

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SERVICE OBJECTIVE			
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Sites are safe, equitable and inclusive		The average survey respondent rated this as an important customer value with a high data consistency.	Decline
Sites are Accessible by public transportation		The average survey respondent rated this as an important customer value with a high data consistency.	Maintain
Sites are inviting, appealing and attractive		The average survey respondent rated this as an important customer value with a high data consistency.	Decline
Sites are Comfortable, with appropriate levels of lighting and noise		The average survey respondent rated this as an important customer value with a high data consistency.	Decline
Sites are reducing greenhouse gases by decreasing utility use)		The average survey respondent rated this as an important customer value with a high data consistency. A key point to note for this customer value is that in some instances, Heritage facilities may have limitations in meeting this customer value requirement.	Maintain

4.3 CUSTOMER LEVELS OF SERVICE

Ultimately customer performance measures are the measures that the City will use to assess whether it is delivering the level of service customers desire. Customer level of service measurements relate to how the customer feels about the City’s Tourism and Culture service in terms of their quality, reliability, accessibility, responsiveness, sustainability and over the course, their cost. The City will continue to measure these customer levels of service to ensure a clear understanding of how the customers feel about the services and the value of their tax dollars.

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The Customer Levels of Service are considered in terms of:

Condition	How good is the service? What is the condition or quality of the service?
Function	Is it suitable for its intended purpose? Is it the right service?
Capacity/Use	Is the service over or underused? Do we need more or less of these assets?

In **Table 14** under each of the service measure types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current allocation.

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Table 14: Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET	
Quality / Condition	Support economic growth by animating public places.	2023 Tourism and Culture Services and Assets Review Survey	Average survey respondent opinion on how Tourism and Culture have performed overall in attractions or events.	Good Performance	Maintain	
				Confidence Level		Medium
				Data Consistency		High
	Ensure that Tourism and Culture services and assets are maintained in good condition.	2023 Tourism and Culture Services and Assets Review Survey	Average survey respondent opinion on whether Tourism and Culture facilities are clean and in good repair over the last 24 months.	Agree	Decline	
				Confidence Level		Medium
				Data Consistency		High
	Ensure that Tourism and Culture services and assets are environmentally friendly.	2023 Tourism and Culture Services and Assets Review Survey	Average survey respondent opinion on whether Tourism and Culture facilities are reducing greenhouse gases by decreasing utility use.	Neutral	Decline	
				Confidence Level		Medium
				Data Consistency		High
	Provide museum and culture services that meet the needs of the public.	2023 Tourism and Culture Services and Assets Review Survey.	Average survey respondent opinion on whether Tourism and Culture services are comfortable, with appropriate levels of lighting and noise.	Agree	Decline	
				Confidence Level		Medium
				Data Consistency		High
Capacity	Ensure Tourism and Culture services and assets are accessible to the public	2023 Tourism and Culture Services and Assets Review Survey.	Average survey respondent opinion on the satisfaction of accessing Tourism and Culture services by Transit.	Neutral	Maintain	
				Confidence Level		Medium
				Data Consistency		Medium
		2023 Tourism and Culture Services and Assets Review Survey.	Average survey respondent opinion on Tourism and Culture services being AODA compliant.	Neutral	Maintain	
				Confidence Level		Medium
Data Consistency		High				
Function	Ensure Tourism and Culture services and assets have the right kind of facilities and amenities	2023 Tourism and Culture Services and Assets Review Survey.	Average survey respondent opinion on Tourism and Culture being inviting appealing and attractive.	Agree	Maintain	
				Confidence Level		Medium
				Data Consistency		Medium
		2023 Tourism and Culture Services and Assets Review Survey.	Average survey respondent opinion on Tourism and Culture being safe equitable and inclusive.	Agree	Maintain	
				Confidence Level		Medium
Data Consistency		High				

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4.3.1 CUSTOMER INDICES

The two indices calculated to assess how customer expectations for a service align with the perceived performance for a service are listed below in **Table 15**. These indices are explained and analyzed in detail in the sections below.

Table 15: Customer Indices

CUSTOMER INDICES	AVERAGE RESULT
Services Importance Versus Performance Net Differential	-3
Facilities Importance Versus Performance Net Differential	-19
Net Promoter Score (%)	6.57

The information below is intended to provide context around the survey results to assist Tourism and Culture with areas to further investigate before proposing any new levels of service.

It is important to note that the opt-out rate was 66% for the question “How many times have you visited Tourism and Culture attractions and/or events in the last 2 years?”. This suggests that some of these survey results could be a reflection of the customer’s perception of Tourism and Culture’s performance, and not based on actual customer experience with Tourism and Culture’s performance.

In addition, as previously mentioned, Dundurn National Historic Site was omitted from the survey, and since this is the City’s most visited site, this omission may affect the overall results.

SERVICES IMPORTANCE VERSUS PERFORMANCE INDICE

The Services Importance versus Performance indices are used to determine if a service’s importance correlates with the perceived performance. Areas where the average importance rating exceeds the average performance rating by 20 points are indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale.

Per **Figure 13** below, the net differential does not exceed 20 points for any of the services with an average result of -3 which is close to zero suggesting a match between the importance of the service and how Tourism and Culture are perceived to be performing in each aspect of the service. This information has a **MEDIUM** data consistency meaning that most respondents are generally in agreeance. Therefore, this result suggests that HRM should continue to maintain levels of service.

The services with the largest mismatch between importance and performance were the Remembrance Day services and Battlefield House Museum and Park National Historic Site. These are areas where Tourism and Culture could investigate improving performance if they were to consider proposing different levels of service. To reduce the net differential, HRM would

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have to increase their performance for these services, which they would accomplish by altering their Technical Levels of Service.

Figure 13: Importance versus Performance Index Score

Service Area	Performance (index score)	Importance (index score)	Net Differential	Opt Out %
Total	74	77	-3	39%
Remembrance Day services	75	88	-12	35%
Summer Concert Series	76	81	-5	32%
Hamilton Museum of Steam & Technology National Historic Site	75	81	-5	34%
Canada Day at Bayfront Park	74	79	-5	29%
Pop-Ups at Pier 8 event series	80	79	1	25%
Battlefield House Museum & Park National Historic Site	69	78	-9	43%
Re-enactment of the Battle of Stoney Creek at Battlefield House Museum & Park National Historic Site	73	74	-1	46%
Canadian Pacific (CP) Railway Holiday Train	78	73	5	28%
Fieldcote Memorial Park & Museum	65	72	-6	51%
Annual Arts Awards	70	69	2	51%
Applefest at Battlefield House Museum & Park National Historic Site	64	63	1	53%

FACILITIES IMPORTANCE VERSUS PERFORMANCE INDICE

Similarly, to above, the Facilities Importance versus Performance Indice is used to determine if the importance of a Facility’s condition correlates with the perceived performance of a Facility’s condition. Areas where the average importance rating exceeds the average performance rating by 20 points are indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale.

Per **Figure 14** below, the average net differential is –19 which is approaching 20 points, and many areas have a net differential score of 20 or higher. This suggests that there is a mismatch between the importance of HRM-Facilities versus Tourism and Culture’s performance in the services related to HRM-Facilities. This information has a **MEDIUM** data consistency meaning that most respondents are generally in agreeance. Therefore, this result suggests that Tourism and Culture could focus on improving their performance in the majority of services related to these Facilities. To reduce the net differential, Tourism and Culture would have to increase their performance in these metrics, which they would accomplish by altering their Technical Levels of Service.

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Figure 14: Facilities Importance versus Performance

Service Area	Performance (index score)	Importance (index score)	Net Differential
Total	70	89	-19
Clean and in good repair	71	91	-20
Accessible; Meets the Accessibility for Ontarians with Disabilities Act (AODA), 2005 standards	66	91	-25
Safe, equitable and inclusive	71	90	-19
Accessible by public transportation	67	90	-22
Inviting, appealing and attractive	70	89	-20
Comfortable, with appropriate levels of lighting and noise	73	88	-15
Reducing greenhouse gases by decreasing utility use)	66	84	-17

NET PROMOTER SCORE INDICE

The Net Promoter Score indices outline how likely an individual is to recommend a service to another person and measure customer loyalty. For municipal services, this score is difficult to interpret because oftentimes individuals do not have many alternatives for utilizing different services and also there may be internal biases for certain service areas, however, this score does provide valuable information for if customers would recommend using the service or whether they may seek alternatives or avoid using the service altogether.

Likert choices less than a score of 4 are considered 'Detractors' meaning that they would not recommend the service, while scores of 5 are considered 'Promoters' who would recommend the service, and scores of 4 are considered 'Passive' which means they do not have strong feelings about the service. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Promoters) and (% Detractors). The Standard Deviation (σ) is calculated in percent and has the same units as the Net Promoter Score.

Per **Figure 15**, the Net Promoter Score for Tourism and Culture service areas was **6.57**. Although this positive score indicates that on average Tourism and Culture services are likely to be recommended by survey respondents, this score is also close to zero, meaning many survey respondents overall felt neutral about Tourism and Culture Services. As previously mentioned, Dundurn National Historic Site was omitted from the survey, and since this is the City's most visited site, if this omission had not occurred, the net promoter score result would have likely been higher.

The three lowest-scoring service areas are Applefest at Battlefield House Museum and Park National Historic Site, Annual Arts Awards and Fieldcote Memorial Park and Museum. The

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Tourism and Culture group should consider investigating further those service areas in the bottom tier.

Figure 15: Net Promoter Score

Service Area	σ	NPS	Detractors	Passives	Promoter	
All Service Areas	25.9%		6.57	191	116	226
Summer Concert Series	24.8%		28.30	14	10	29
Pop-Ups at Pier 8 event series	22.7%		25.93	14	12	28
Canadian Pacific (CP) Railway Holiday Train	25.4%		24.07	16	9	29
Remembrance Day services	25.1%		21.15	15	11	26
Hamilton Museum of Steam & Technology National Historic Site	20.7%		20.41	13	13	23
Canada Day at Bayfront Park	22.9%		10.71	16	18	22
Re-enactment of the Battle of Stoney Creek at Battlefield House Museum & Park National Historic Site	28.8%		-4.35	20	8	18
Battlefield House Museum & Park National Historic Site	26.3%		-5.77	22	11	19
Fieldcote Memorial Park & Museum	24.0%		-9.30	16	15	12
Annual Arts Awards	29.7%		-30.56	22	3	11
Applefest at Battlefield House Museum & Park National Historic Site	26.3%		-36.84	23	6	9

4.3.2 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how the City delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. The City will measure specific lifecycle activities to demonstrate how the City is performing in delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.³

Table 16 shows the activities expected to be provided under the current 10-year Planned Budget allocation and the Forecast activity requirements being recommended in this AM Plan. The proposed 10-year performance budget amounts have not been included in the Lifecycle Management Plan in Section 8 but are areas where Tourism and Culture is investigating proposing different levels of service.

³ IPWEA, 2015, IIMM, p 2|28.

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Table 16: Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE 2023 ⁴	CURRENT TARGET PERFORMANCE 2024 ⁵	PROPOSED 10-YEAR PERFORMANCE (2024 – 2032) ⁵
Acquisition	To add additional green infrastructure and site amenities	# of Trees Replaced/ Increased annually	Current trees are mature and some are at the end of life	Meeting Status Quo	a total of 30 trees are planted yearly along with archaeology completed
		Budget		\$0	1,200,000
		% of naturalized space at sites	Naturalized space is not enough to promote resilient habitat	Meeting Status Quo	Increase naturalized space at sites where this is possible by 1% per year
		Budget		\$0	\$900,000
	To increase the Public Art Collection.	# of landscapes where pathways were upgraded	Dundurn NHS requires the renewal of pathways and courtyards to be accessible.	Meeting Status Quo	Increase accessibility at Dundurn NHS including public consultation and archaeology
		Budget		\$0	\$6,000,000
Operation	Buildings are repaired and landscapes are cleaned and maintained	# of capital and maintenance projects completed	2 Capital delivery staff and 2 maintenance delivery staff Capital and maintenance budgets are capped and not keeping pace with infrastructure needs On average 6 capital projects are completed each year, for a total of 60 over 10 years.	Meeting Status Quo	Add 1 capital delivery staff person Add 1 facility maintenance staff person, for a total of 3 maintenance and 3 capital delivery staff. Increase delivery of projects to an average of 10 projects per year and/or increase ability to manage greater size and complexity of individual projects
		Budget		\$400,000	\$6,000,000
		Frequency and quality of garbage collection	Current site collection is once per week, mostly undertaken by Municipal garbage collection Some sites do not have blue or green bin collections. Current park garbage bin collection is daily in partnership with Parks, but this does not include litter or Hazmat	Meeting Status Quo	Keep site collection at once per week Implement green and blue bin pick-up for all sites Add litter collection daily along public paths at sites including Hazmat
		Budget		\$6,000	\$100,000
		Frequency of snow removal	Current snow removal is after each snow	Meeting Status Quo	
		Budget		\$123,000	\$ 1,230,000
	Public Art is clean and in good repair	A number of public art pieces are cleaned every year.	As needed (PA staff or external contractor)	Maintain status quo.	Maintain status quo.
		Budget			TBD

⁴ Budget for Current Actual Performance and Current Target Performance represent the budget available in 2023.

⁵ Budget for Proposed 10-Year Performance represents the total cumulative budget required over 10 years.

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LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE 2023 ⁴	CURRENT TARGET PERFORMANCE 2024 ⁵	PROPOSED 10-YEAR PERFORMANCE (2024 – 2032) ⁵
Maintenance	Buildings are repaired and landscapes are cleaned and maintained	Renewal of major components in backlog (roof, windows, cladding, pathways)	A large # of repairs do not get completed due to lack of capital and operational funding capital repairs are triaged due to the volume of work Preventative maintenance is postponed to prioritize urgent repairs Formal Asset Planning and data collection are not currently input into a database due to a lack of resources and staff	Meeting Status Quo	Increase delivery of projects to an average of 10 projects per year and/or increase ability to manage greater size and complexity of individual projects Increase Asset Management tasks yearly and acquire an Asset Management program.
		Budget		\$4,087,000	\$60,000,000
	Public Art is in clean safe and good condition	# of Exterior Bronze Permanent Public art washed and waxed every year.	8-10 pieces washed and waxed by an external contractor every year.	Maintain status quo.	Maintain status quo.
		# of Permanent Public art pieces deemed non-functional / safety risk	Typically, 1 -2 Permanent Public art pieces are deemed non-functional every year.	Maintain status quo.	Maintain status quo.
	Budget				TBD

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4.3.3 PROPOSED LEVELS OF SERVICE DISCUSSION

Based on the *2023 City Services and Assets Review: Tourism and Culture*, there is a correlation between customer expectations and Tourism and Culture's performance (Refer to **Figure 13: Importance versus Performance Index Score**). Additionally, the opt-out % was relatively high (66%) when respondents answered questions about having visited or used the services/sites listed in the survey. This suggests that some of the results of the survey are based on a customer's perception of the service provided versus actual experience of the service. Additionally, the survey results only have a **MEDIUM** level of data confidence which suggests more data needs to be collected before proposing a change to levels of service. A continuous improvement item identified in **Table 29** is to investigate proposed levels of service further.

CONDITION / QUALITY

Two survey questions were applicable to the condition of the sites and services. In these questions, survey respondents were asked to rate if Tourism and Culture sites were "Clean and in good repair" and "Comfortable, with appropriate levels of lighting and noise". For the above two questions, survey results show a divergence of almost 20 points between performance and importance. This indicates a mismatch between how important customers think the service is and the way customers perceive Tourism and Culture's performance in delivering those services.

When comparing these results to the technical levels of services, there is a lack of funding to address urgent maintenance needs. As a result, preventative maintenance is postponed in order to prioritize urgent repairs. Often repairs are triaged which leads to a backlog of work that needs to be completed. A key theme of this report relates to the importance of a Maintenance Funding ratio which is discussed in Section 10.1. When proposing new levels of service, the City should investigate increasing funding to address these maintenance items to address the mismatch between importance and performance.

FUNCTION

Two survey questions were applicable to the Function of buildings and services. In these questions, survey respondents were asked to rate if Tourism and Culture sites were "Safe Equitable and Inclusive" and "Inviting Appealing and Attractive". For the above two questions, survey results show a divergence of almost 20 points between performance and importance. This indicates a mismatch between how important customers think the service is and the way customers perceive Tourism and Culture's performance in delivering those services.

In reviewing the Technical Levels of Service, currently, Tourism and Culture are meeting their targets with respect to tree planting, naturalized space availability, and frequency of garbage pickup. However, Tourism and Culture are proposing to improve service levels in these areas, which may address the mismatch mentioned above, but this would require additional funding and agreement from the public and should be investigated further.

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CAPACITY

Two specific survey questions targeted this metric which included: compliance with the Accessibility for Ontarians with Disabilities Act (AODA) and public transportation access to Tourism and Culture services). For the above two questions, survey results show a divergence of 20 points or higher between performance and importance. This indicates a mismatch between customer expectations and service levels that Tourism and Culture are delivering.

In addition, all buildings in the City are considered to be compliant with AODA requirements since the City is only required to address AODA compliance when completing renewals or significant retrofits to a facility. This question will be corrected in future iterations of the survey. However, not all heritage sites are fully accessible. In order to preserve the heritage attributes associated with some of the facilities, Tourism and Culture may face limitations in meeting this customer value requirement. However, the Technical Levels of Service do indicate that Tourism and Culture are investigating ways to make pathways at Dundurn Castle more accessible, but this would require additional funding and agreement from the public and should be investigated further.

Transit access to the Tourism and Culture facilities and Public Art sites was not measured as part of this plan and is a continuous improvement item identified in **Table 29**. In order to make improvements to this customer service level, baseline information on travel times and routes would need to be collected and analyzed, and a target would need to be set.

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5. FUTURE DEMAND

Demand is defined as the desire customers have for assets or services that they are willing to pay for. These desires are for either new assets/services or current assets.

The ability for the City to be able to predict future demand for services enables the City to plan ahead and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of services required.

5.1 DEMAND DRIVERS

Drivers affecting demand include things such as population change, regulations, changes in demographics, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, agricultural practices, environmental awareness, etc.

For the Tourism and Culture service area, the key drivers are population growth and societal changes.

5.2 DEMAND FORECASTS

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 17**. Growth projections have been shown on **Page 45** of the **AMP Overview Document**.

Where costs are known, these additional demands as well as anticipated operations and maintenance costs have been encompassed in the Lifecycle Models in **Section 8**.

5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets is shown in **Table 17**. Climate change demands are included in **Section 7**. Demand for new services will be managed through a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

The demands identified below have not yet been incorporated into the Lifecycle Management Plan in Section 8. A continuous improvement item identified in **Table 29** is to ensure the costs associated with the demand management plans are quantified and incorporated into the next iteration of the AM Plan.

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Table 17: Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Population Growth	560,000	680,000	<p>More demand for green spaces, parks, recreation, and educational opportunities.</p> <p>More demand for childcare.</p> <p>Intensification in lower City leading to increased attendance at sites and events.</p>	<p>Per asset owner (AO) analysis, the asset size and number are sufficient.</p> <p>Demand can be met by developing and maintaining existing assets (ex: Many buildings are underutilized or closed due to funding shortfall)</p> <p>Capital Budget funding to upgrade and maintain existing sites.</p> <p>Increased operating funding to add 2 FTE.</p>
Societal Needs	18 % of the population is over 65	~20% aged 65 and older	<p>More inclusive sites and services are required particularly for persons with disabilities.</p> <p>Supports for all incomes.</p> <p>Services that reflect the population diversity</p>	<p>Address backlog of accessibility improvements such as ramps and pathways.</p> <p>Focus on expanding diverse programming.</p>

5.4 ASSET PROGRAMS TO MEET DEMAND

The new assets required to meet demand may be acquired, donated or constructed. For Tourism and Culture, assets are typically acquired or constructed.

At this time there is approximately **\$1.7 Million** in assets acquired over the next 10 years and an anticipated **\$17M** in assets acquired over the 30-year planning period. Acquiring new assets will commit Tourism and Culture to ongoing operations, maintenance and renewal costs for the amount of time that the service is required. These future costs have been estimated at a high level in the Lifecycle Models in **Section 8** but should be quantified further for future iterations of the report for consideration in developing higher confidence forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan.

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6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk⁶.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

6.1 CRITICAL ASSETS

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarized in **Table 18**. Failure modes may include physical failure, collapse or essential service interruption.

Table 18: Critical Assets

CRITICAL ASSET	FAILURE MODE	IMPACT
Heritage Facilities	Service disruption due to lack of staff to manage services due to retirement or resignation.	Unable to effectively deliver services in HRM.
	Physical Failure	Facilities are not accessible to the public. Closure of or damage to unique assets with cultural heritage value. Health and safety of staff/public.

⁶ ISO 31000:2009, p 2

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CRITICAL ASSET	FAILURE MODE	IMPACT
Monuments	Physical Failure	Loss of unique assets with cultural heritage value.
Critical Collections	Physical Failure of Storage Facility	

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, the evaluation of the risk and the development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

Critical risks are those assessed with ‘Very High’ (requiring immediate corrective action) and ‘High’ (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan are shown in **Table 19**. It is essential that these critical risks and costs are reported to management.

The treatment costs for the risks below have been incorporated into the Lifecycle Management Plan in **Section 8** and are included as part of the infrastructure gap.

Table 19: Risks and Treatment Plans

SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
Auchmar Estate	Continued degradation of the site making repairs continually more expensive.	High	Complete identified works to restore the facility.	Low	\$24,000,000
Collections (Artifacts)	Failure of building systems such as roofs and HVAC systems in museums impacts artifact collection	High	Acquire new Artifacts Building. Provide capital FTE to speed response to capital projects and provide capital.	Low	\$15,000,000

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SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
Heritage Facilities	Vandalism to buildings and structures	High	Increase security to sites.	Low	N/A
Public Art	Change in perception of artwork	High	Stay up to date with trends, social movement	Low	N/A
Public Art	Vandalism - Graffiti	High	Apply anti-graffiti coatings (mandatory)	Medium	\$1000
HRM staff	Retirement, resignation of staff on a small team	High	Prioritize succession planning, stabilization of workload within teams and change management communication to manage expectations	Medium	N/A
Heritage Facilities	Existing buildings are not all barrier-free	High	Provide 1 capital FTE and increase capital budget accordingly, to speed response to capital projects and increase capital budget	Low	\$2,300,000
Monuments	Outdated and do not suit changing societal needs	High	Review monuments, under public consultation, do nothing else	High	\$95,000
Heritage Facilities	Preventative maintenance not performed on time: such as painting	High	Provide funding for 1 FTE in capital and 1 FTE in maintenance to prioritize the backlog of repairs, increase capital and maintenance budgets	Medium	\$300,000

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6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City needs to understand its capacity to ‘withstand a given level of stress or demand’, and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan and has been included as a continuous improvement item in **Table 29**.

Resilience covers the capacity of the City to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapt to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment and crisis leadership.

6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective of achieving the optimum benefits from the available resources.

Table 20 outlines what activities Tourism and Culture cannot afford to do over the next 10 years with their existing budget and provides the associated service and risk tradeoffs.

Table 20: Service and Risk Tradeoffs

WHAT WE CANNOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
Auchmar Estate restoration	Status Quo	Repairs may end up becoming more costly and eventually result in a renewal. Reputational risk.
All required maintenance items at all HRM Facilities	Accessibility to Sites. Reduction in the level of service. Inability to Expand Services.	Minor repairs may end up becoming more costly and eventually result in a major maintenance item. Reputational risk.

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7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we've already begun to experience (adaptation). At a minimum, the City must consider how to manage our existing assets given the potential climate change impacts for our region.

Changes to Hamilton's climate will impact City assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and,
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models as well as levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan. This has been identified as a Continuous Improvement item in **Table 29**.

7.1 CLIMATE CHANGE MITIGATION

Climate Mitigation refers to human intervention to reduce GHG emissions or enhance GHG removals (e.g. building transportation infrastructure that can support cycling and public transit and reduce the need for car travel). The City of Hamilton's Community Energy + Emissions Plan⁷ (CEEP includes five Low-carbon Transformations necessary to achieve the City's target of net-zero GHG emissions by 2050:

- Innovating our industry;
- Transforming our buildings;
- Changing how we move;
- Revolutionizing renewables; and
- Growing Green.

⁷ Newbold, Skidmore, Chessman, Imhoff, & McDowell, 2022

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Mitigation Demand Analysis

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City’s modelled targets for the low carbon transformations that applied to the service/asset;
- Discussing the impact, the targets would have on the service/asset; and
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050 as shown in **Table 21** below.

As previously mentioned, due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below have not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AM Plan. This has been identified as a continuous improvement item in **Table 29**.

Moving forward, the Climate Lens tool discussed in the **AMP Overview Document** will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

Table 21: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Transforming Our Buildings - HRM	By 2050, all Tourism and Culture buildings achieve net-zero emissions.	Although improvements can be made, this target may be difficult to achieve due to the historic character of sites/buildings. Improvements may require facilities to close to undertake this work. Costs on some systems such as heating and cooling will be high.	An evaluation of which historic buildings can be transformed to prioritize the greatest benefit without damaging the asset needs to be undertaken. Budgets need to be allocated. Adequate staffing needs to be allocated.
	By 2050, all municipal buildings will be retrofitted to achieve 50% energy efficiency relative to 2016.	These mitigation goals may be easier to achieve than net zero May require facilities to close to undertake this work.	
	As systems are renewed, switch buildings to heat pumps and water heating by 2050.		

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CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
Revolutionizing Renewables - HRM	By 2050, 50% of municipal buildings will add rooftop solar PV, covering 30% of the building's electrical load.	An estimated 50% of portfolio buildings can be retrofitted to use solar/wind power or have units installed in the landscape. These sites are different than regular resources and require creative solutions.	An assessment and implementation plan needs to be developed and put into place. To do this, budgets need to be allocated. Adequate staffing needs to be allocated.
	By 2050, 95% of organic waste will be sent to anaerobic digestion for local energy use.	Currently, services are not provided to enable meeting this target. This service if provided can be met operationally with minimal change to the process	Currently, all museum facilities do not have adequate staff hours to facilitate garbage pickup and 3-stream sorting is not possible as there is no service for pick up. Systems and resources would need to change.
Growing Green - HRM	Planting 50,000 trees a year Citywide through to 2050	100 trees can be planted over 10 years with minimal operational change.	A plan would need to be made in consultation with the Forestry and Horticulture division. Budget and staff resources will need to be allocated.
Transforming Our Buildings - PPAP	Changes in heating/cooling inside buildings	Indoor murals, reliefs, artwork etc. require stable and monitored temperatures and relative humidity to ensure their long-term preservation.	Facility assessments will need to be done prior to the installation of artwork inside any building. Collaboration and increased communication with Facilities to ensure the care of Public Art currently in interiors.

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CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
<p>Growing Green - PPAP</p>	<p>Planting more trees and introducing more green space to the city.</p>	<p>Changes in the landscape of parks and spaces where assets are installed (more trees, gardens etc.), may impact the maintenance of PA assets. Potential for more parks and green space for placemaking initiatives and new installations to be introduced.</p>	<p>May cause a shift in funding or direction of projects. Not a significant impact but may expand opportunities for PA.</p>

MITIGATION RISK ANALYSIS

Additionally, since the risk of not completing climate change mitigation projects is that the City continues to contribute to climate change in varying degrees which were modelled in the Climate Science Report for the City of Hamilton completed by ICLEI Canada, a risk analysis has not been completed in this AM Plan for not completing climate mitigation projects (ICLEI Canada, 2021).

7.2 CLIMATE CHANGE ADAPTATION

Climate Adaptation refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads).

The impacts of climate change may have a significant impact on the assets we manage and the services we provide. Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.⁸

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report⁹ guided by ICLEI’s Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP). The BARC Framework identified thirteen high-impact areas. Applicable impact statements with their impacts and demand management plans are included in **Table 22** below.

⁸ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

⁹ City of Hamilton & Local Governments for Sustainability Canada, 2021

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Adaptation Demand Analysis

Table 22: Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	BASELINE (1976 - 2005) ¹⁰	AVERAGE PROJECTED CHANGE 2021-2050 ¹⁷ (ASSUMING RCP4.5 ¹¹ SCENARIO)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Increased instances of heat-related issues due to extreme heat.	16.1 Average Days Where The Temperature Is 30 Degrees Celsius or Higher	34.4 Average Days Where The Temperature Is 30 Degrees Celsius or Higher	This may cause facilities to close due to the failure of systems. Collections may be damaged. Additional stress on aged building systems. Increased risk of flooding. Higher cost of utilities. More repairs are required as extreme weather intensifies	Prioritize maintenance and upgrading of building systems. Introduce passive climate controls such as operable windows into buildings. Upgrade building systems to improve efficiency and withstand changing weather patterns. Upgrade systems to reduce energy consumption retain grass spaces and reduce paving to improve permeability
More intense summer precipitation combined with increasing temperatures lowering the water supply as well as increasing water demand for drinking, landscaping, and irrigation. (Rural)	217mm Average Total Summer Precipitation	221mm Average Total Summer Precipitation	Landscapes and gardens may be damaged	Prioritize planting native and more resilient planting that do not require as much irrigation Introduce passive water collection on some sites Lower expectations for appearance Plant more trees and shrubs
Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.	6.7 Heavy Precipitation Days (20mm)	7.7 Heavy Precipitation Days (20mm)	Facilities may have to face more water damage to landscapes and basements and the costs to remediate.	Prioritize grading, redirecting to water infiltrating areas on site and repairs to foundations. Will require adequate funding and staff.
Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns.	187mm Average Total Winter Precipitation	204mm Average Total Winter Precipitation	This may cause facilities to close due to failure of systems or life safety concerns. Collections may be damaged.	Develop an emergency plan to deal with this scenario and triage
Changes in the frequency of extreme rainfall events - increased instances of flooding on private/public properties.	6.7 Heavy Precipitation Days (20mm)	7.7 Heavy Precipitation Days (20mm)	Public Art located on/near buildings (private and public) is at risk of damage. Increased rain will shorten the lifespan of temporary art and permanent, especially acidic rain or rain carrying other pollutants. Pollutant rain will accelerate the deterioration of many materials and cause erosion of some materials. Higher winds will cause vibrational stress to taller Public Art. Potential erosion around the foundation of artwork.	Will require additional maintenance requirements requiring increased funds. Consideration when acquiring community/donated art.

¹⁰ ICLEI Canada, 2022

¹¹ RCP4.5 Scenario: Moderate projected Green House Gas concentrations, resulting from substantial climate change mitigation measures. It represents an increase of 4.5 W/m2 in radiative forcing to the climate system. RCP 4.5 is associated with 580-720ppm of CO2 and would more than likely lead to 3°C of warming by the end of the 21st century.

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ADAPTATION IMPACT STATEMENT	BASELINE (1976 - 2005) ¹⁰	AVERAGE PROJECTED CHANGE 2021-2050 ¹⁷ (ASSUMING RCP4.5 ¹¹ SCENARIO)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Changes in precipitation resulting in erosion of natural systems (i.e. water banks, escarpment erosion)	844mm Average Annual Total Precipitation	886mm Average Annual Total Precipitation	Public Art located near escarpments, water banks etc. that are susceptible to erosion may become structurally unstable or may need to be deaccessioned/relocated	Request that engineering drawings can mitigate higher wind loading (included in the acquisition process). Deaccessioning policy
Increased intensity of rainfall	25.8 Heavy Precipitation Days (10 mm)	27.6 Heavy Precipitation Days (10 mm)	Increased rain will shorten the lifespan of temporary art and permanent, especially acidic rain or rain carrying other pollutants. Pollutant rain will accelerate the deterioration of many materials and cause erosion of some materials. Higher winds will cause vibrational stress to taller Public Art.	Future artworks to be sited outside of the 100-year flood plain – Conservator to monitor changes in flood plain data. Will require additional maintenance requirements.
Overall, dryer, hotter, longer summers	71.6 Days Average Length of Hot Season; 25.9 Degrees Celsius Average Summer Seasonal Temperature	102 Days Average Length of Hot Season; 27 Degrees Celsius Average Summer Seasonal Temperature	Higher temperatures (and higher humidity) will accelerate the deterioration and natural aging of Public Art and Temporary Art. A different climate may make some techniques/materials obsolete and introduce other materials to our approved material list	Conservators to continue researching and finding new materials that are adapted to our changing climate.
More frequent and intense heat waves	2.1 Average Annual Heat Waves	4.7 Average Annual Heat Waves	Higher temperatures (and higher humidity) will accelerate the deterioration and natural aging of Public Art and Temporary Art materials.	Conservators to continue researching and finding new materials that are adapted to our changing climate.
Overall, dryer, hotter, longer summers	71.6 days Average Length of the Hot Season; 25.9 Degrees Celsius Average Summer Seasonal Temperature	102 days Average Length of the Hot Season; 27 Degrees Celsius Average Summer Seasonal Temperature	Higher temperatures (and higher humidity) will accelerate the deterioration and natural aging of Public Art and Temporary Art. A different climate may make some techniques/materials obsolete and introduce other materials to our approved material list	Conservators to continue researching and finding new materials that are adapted to our changing climate.
More frequent and intense heat waves	2.1 Average Annual Heat Waves	4.7 Average Annual Heat Waves	Higher temperatures (and higher humidity) will accelerate the deterioration and natural aging of Public Art and Temporary Art materials.	Conservators to continue researching and finding new materials that are adapted to our changing climate.

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ADAPTATION RISK ANALYSIS

Additionally, the City should consider the risks for the asset or service as a result of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

For this plan, no climate adaptation risks were identified, this has been identified as a continuous improvement item in **Table 29**.

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8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budgets. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated together and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of Whole-Life Costs and funding options. However, at this time the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

8.1 ACQUISITION PLAN

The acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs. Assets can either be donated through development agreements to the City or through the construction of new assets which are mostly related to population growth.

CURRENT PROJECT DRIVERS – 10-YEAR PLANNING HORIZON

The City prioritizes capital projects based on various drivers to help determine a ranking for project priorities and investment decisions. As part of future AM Plans, the City will continue to develop its understanding of how projects are prioritized and ensure that multiple factors are being considered to drive investment decisions. These drivers may include legal compliance, risk mitigation, O&M impacts, growth impacts, health and safety, reputation and others.

Typically HRM's acquisitions are driven by City-owned assets that have been previously operated by other divisions but are classified as heritage buildings and require expertise. PPAP's assets are acquired through donations, direct commission, and public commission done annually through public consultation and a call for artists. The Public Art Master Plan also gives guidance on priority locations to be considered for public art and the council sometimes provides direction on locations that could benefit from new art and projects.

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DONATED ACQUISITIONS

Donated Acquisitions are assets where the City does not pay the acquisition cost but is responsible for all costs after the asset has been acquired.

For the Tourism and Culture group, there were **no donated assets** reported for the next 10 years. However, Tourism and Culture have historically had heritage facilities donated to them by private entities (e.g., Auchmar Estate). For collections, there is a vetting process which requires a proposal and board approval to ensure the assets acquired bring value to the City.

Donated heritage assets commit the City to indefinite operations and maintenance costs and have historically resulted in unmet O&M needs for these facilities since the additional budget was often not considered during the acquisition of these assets. In recent years, Tourism and Culture has not acquired any heritage facilities that were not already owned by the City.

The City is reviewing its donated asset assumption process to ensure that it proactively understands what assets are being donated annually to ensure they are appropriately planned for. This will allow multiple departments across the City to plan for the assets properly such as:

- AM to forecast the long-term needs and obligations of the assets
- Operations and maintenance can include the assets in their planned activities (inspections, legislative compliance activities)
- Finance can ensure that assets are properly captured and recognized appropriately (Audited Financial Statements, TCA process, Provincial reporting such as the FIR)

CONSTRUCTED OR PURCHASED ACQUISITIONS

Over the next 30-year planning period the City will acquire approximately **\$16.7 Million** of constructed or purchased Tourism and Culture assets which can either be new assets which did not exist before or expansion of assets when they are to be replaced which are shown in **Figure 16**.

The 10-year capital budget submitted shows work in 2023 – 2024 categorized as acquisitions from a lifecycle perspective. The most significant acquisition is the Children's Museum Expansion project which is calculated at \$1.49M. This is an ongoing project and the \$1.49M represents the remaining acquisition costs for the project.

Table 23 below outlines the projects that have been categorized as planned Acquisitions for the 10 years ending in 2032. It is important to note that the 2023 acquisition amounts for Public Art were not encompassed in this report. In addition, Public Art has \$71k of dedicated funding for acquisitions annually but often additional community requests occur which are approved by Council on a case-by-case basis. Finally, the Public Art Master Plan is currently being updated, and therefore the 10-year forecast for Public Art will be more accurate in future iterations of the AM Plan.

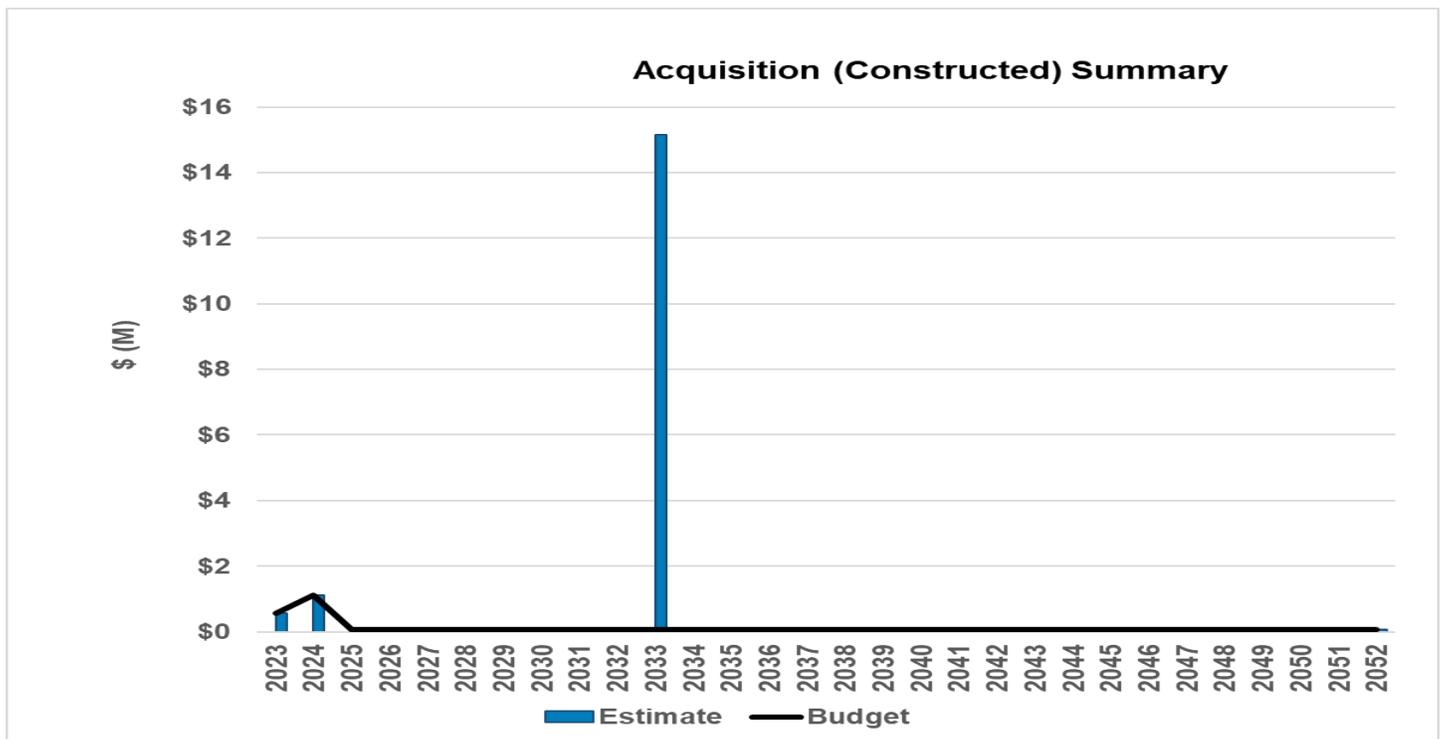
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Table 23: Planned Acquisitions

YEAR	ACQUISITION	AMOUNT (\$ 000)
2023-2024	Children's Museum Expansion Fit-up	970
2024	Ancaster Memorial Arts Centre Public Art	235
2024	Artifacts Storage Facility Improvements	200
2024	Public Art Locke Street Marker	167
2024	Public Art-King William ArtWalk	70
2024	Public Art-West Ham Rail Trail	25
2024	Public Art-Hamilton the Electric City	15
2024	Public Art-Dundas Driving-Ph2	10
2024	Mount Hope Gateway	1
2025-2032	Public Art – Dedicated Acquisition Funding	71
	TOTAL	\$1.7M

After the 10-year planning period, there is an unfunded Acquisition for an Artifacts Building valued at approximately \$15M in 2033. This building is required to continue to preserve collections in the City. Currently, Collections are stored at 240 Burlington St which does not meet the asset owner's needs (e.g., inadequate set-up, poor temperature controls, no separate storage by material type etc.). If this acquisition remains unfunded it could result in degraded collection assets over time which are irreplaceable this has been discussed in **Section 6**.

Figure 16: Acquisition (Constructed) Summary

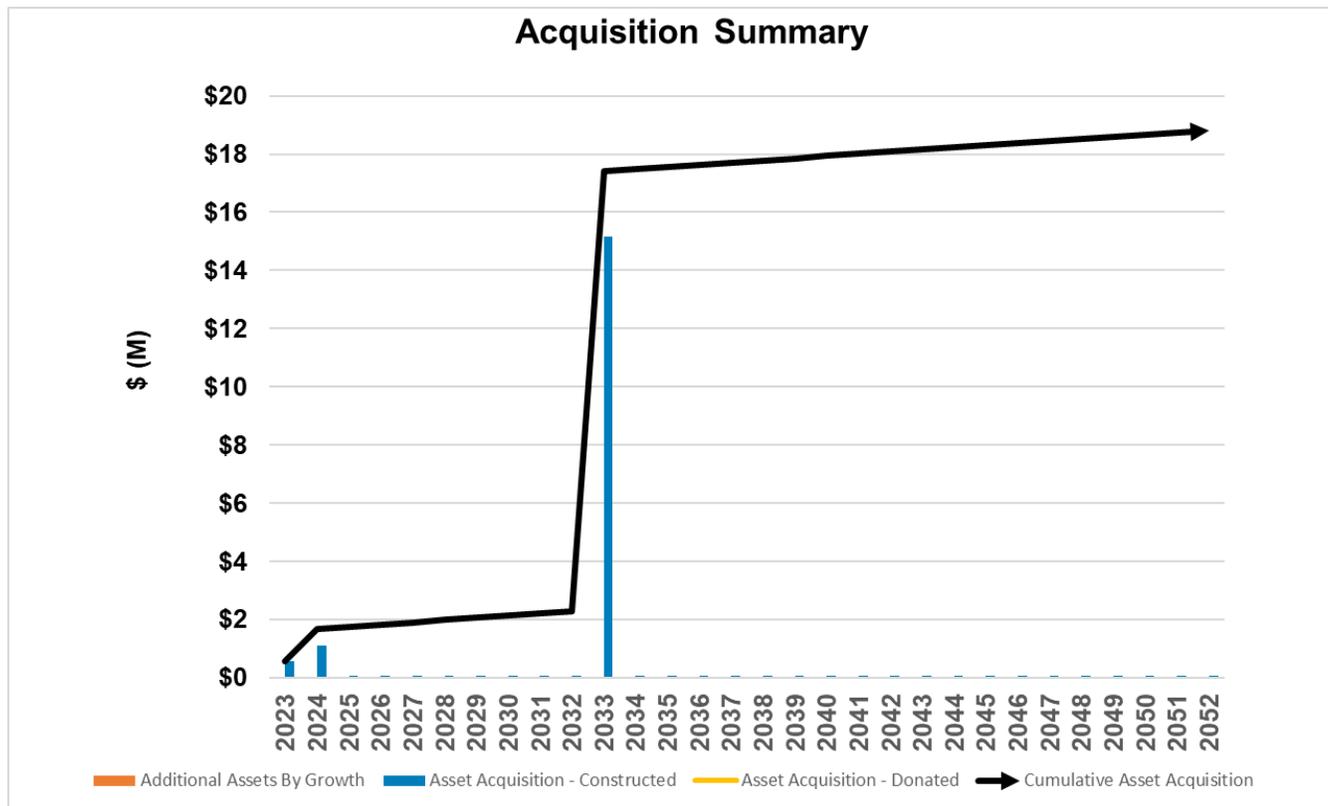


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ACQUISITIONS SUMMARY

When Hamilton commits to constructing new assets, the municipality must be prepared to fund future operations, maintenance, and renewal costs. Hamilton must also account for future depreciation when reviewing long-term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken which is shown in **Figure 17**.

Figure 17: Acquisition Cumulative Summary



The City has **sufficient** budget for its planned constructed acquisitions for the 10 years at this time however this does not address future acquisitions such as the \$15M required for the Artifacts Building acquisition in 2033. The Operating and Maintenance costs associated with each acquisition have been added to the respective Operating and Maintenance budgets following the year of the acquisition as shown in **Section 8.2**.

With competing needs for resources across the entire city, there will be a need to investigate trade-offs and design options to further optimize asset decisions and ensure intergenerational equity can be achieved. Hamilton will continue to monitor its constructed assets annually and update the AM Plan when new information becomes available.

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It will become critical to understand that through the construction or assumption of new assets, the City will be committing to funding the ongoing operations, maintenance and renewal costs which are very significant. Hamilton will need to address how to best fund these ongoing costs as well as the costs to construct the assets while seeking the highest level of service possible. Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options. However, at this time the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding.

8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal, and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons.

Some of the major operational investments over the next 10 years include:

- **\$5 million** allocated for employee-related costs in 2024 (i.e., salaries, wages, benefits, contractual agreement etc.)

Maintenance should be viewed as the ongoing management of deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure they reach its intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition.

Examples of typical maintenance activities include equipment repairs and component replacements along with appropriate staffing and material resources required to perform these activities.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. The City needs to plan and properly fund its maintenance to ensure the Tourism and Culture assets are reliable and can achieve the desired levels of service.

From **2023-2032** the City will need to invest an estimated **\$78.5 Million** for maintenance of various projects across the City. These investments for maintenance are intended to allow these assets to continue to operate and minimize reactive maintenance costs.

Deferred maintenance (i.e. works that are identified for maintenance activities but unable to be completed due to available resources) will be included in the infrastructure risk management plan in future iterations once those works have been identified and prioritized.

The unfunded maintenance forecast for the next 10 years is estimated at **\$44M**, driven by several projects defined by the subject matter experts on this team. **Table 24** shows the list of significant projects identified as Maintenance needs from 2023 to 2032. Beyond 2032, Maintenance needs

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to sustain acquisitions (\$370K per year) have been forecasted and added to the Maintenance Forecast.

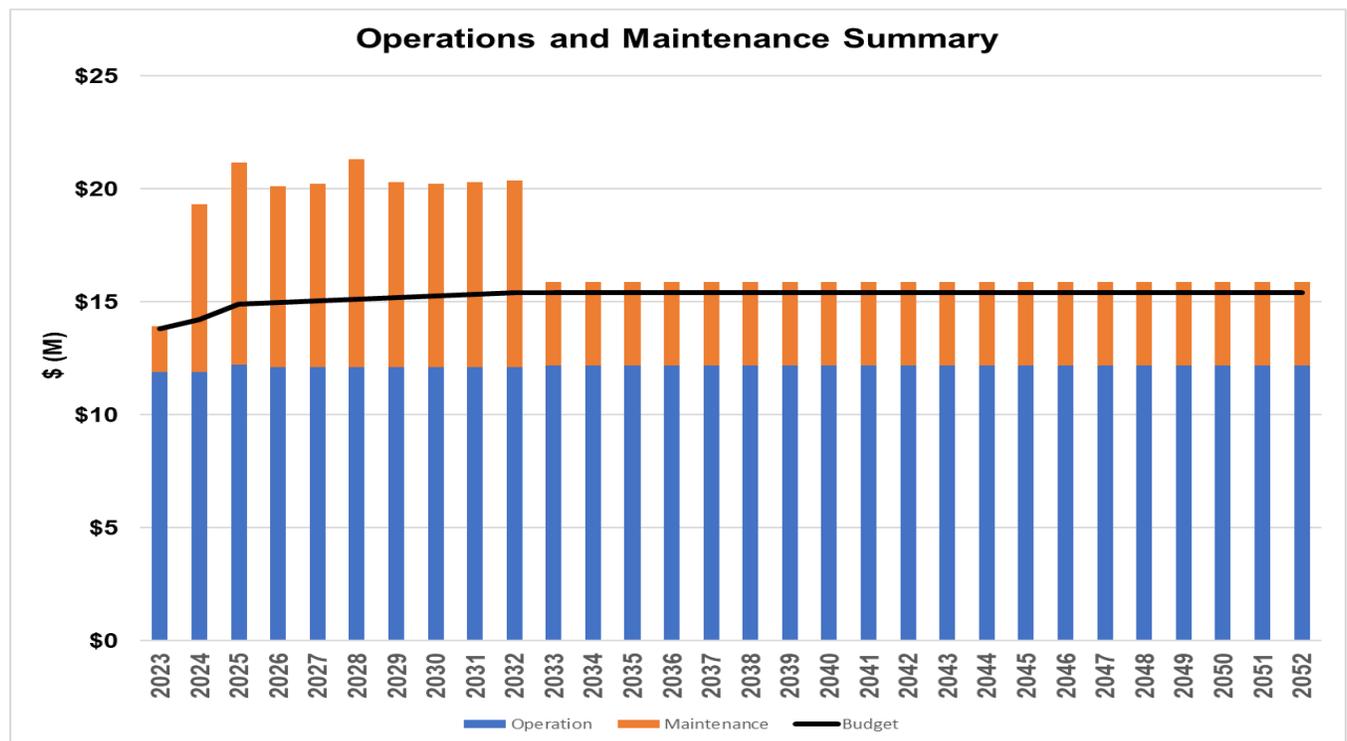
Table 24: Maintenance Forecast

YEAR	PROJECT	TOTAL MAINTENANCE COST (\$ M)
2024 - 2032	Auchmar Estate Restoration	\$ 24
2024 - 2032	Hamilton Museum of Steam and Technology NHS Needs	\$ 11
2024 - 2032	Dundurn NHS Needs	\$ 8
2023 - 2027	Dundurn NHS HVAC Needs	\$ 2

The Auchmar Estate Restoration project accounts for the highest maintenance need at **\$24 M** which is currently unfunded. Capital funding is required to meet stewardship obligations required by an easement with the Ontario Heritage Trust and to allow safe community use of the site. Restoration of the site will allow for revenue opportunities including rentals, film and community programs.

Per **Figure 18** below, based on the needs identified for Operations and Maintenance, the service trend is likely to deteriorate over the long-term forecast. Consequently, this will have an impact on the levels of service (i.e., accessibility to sites, hours of operation, and ability to provide services).

Figure 18: Operations and Maintenance Summary



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8.3 RENEWAL PLAN

Renewal is major work which does not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs

Asset renewals are typically undertaken to either ensure the assets' reliability or quality will meet the service requirements set out by the City. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 25** and are based on the estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2022 however they will be reviewed annually until their accuracy reflects the City's current practices.

As noted in previous sections of this report (asset hierarchy), the NHS facilities make up the majority of assets in this portfolio. As also discussed earlier, an NHS site gains value by virtue of its age and historical attributes. The other assets in this asset plan (i.e., Collections, Monuments and Plaques and assets from PPAP) will not be replaced when the assets reach their end of life.

As a result, the lifecycle discussion on Renewal will mainly focus on the renewal of IT and Fleet assets (1 vehicle).

Table 25: Useful Lives of Assets

ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Desktops/Laptops	5 years
Mobile Devices	2 years
Vehicle	10 years

RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).¹²

¹² IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

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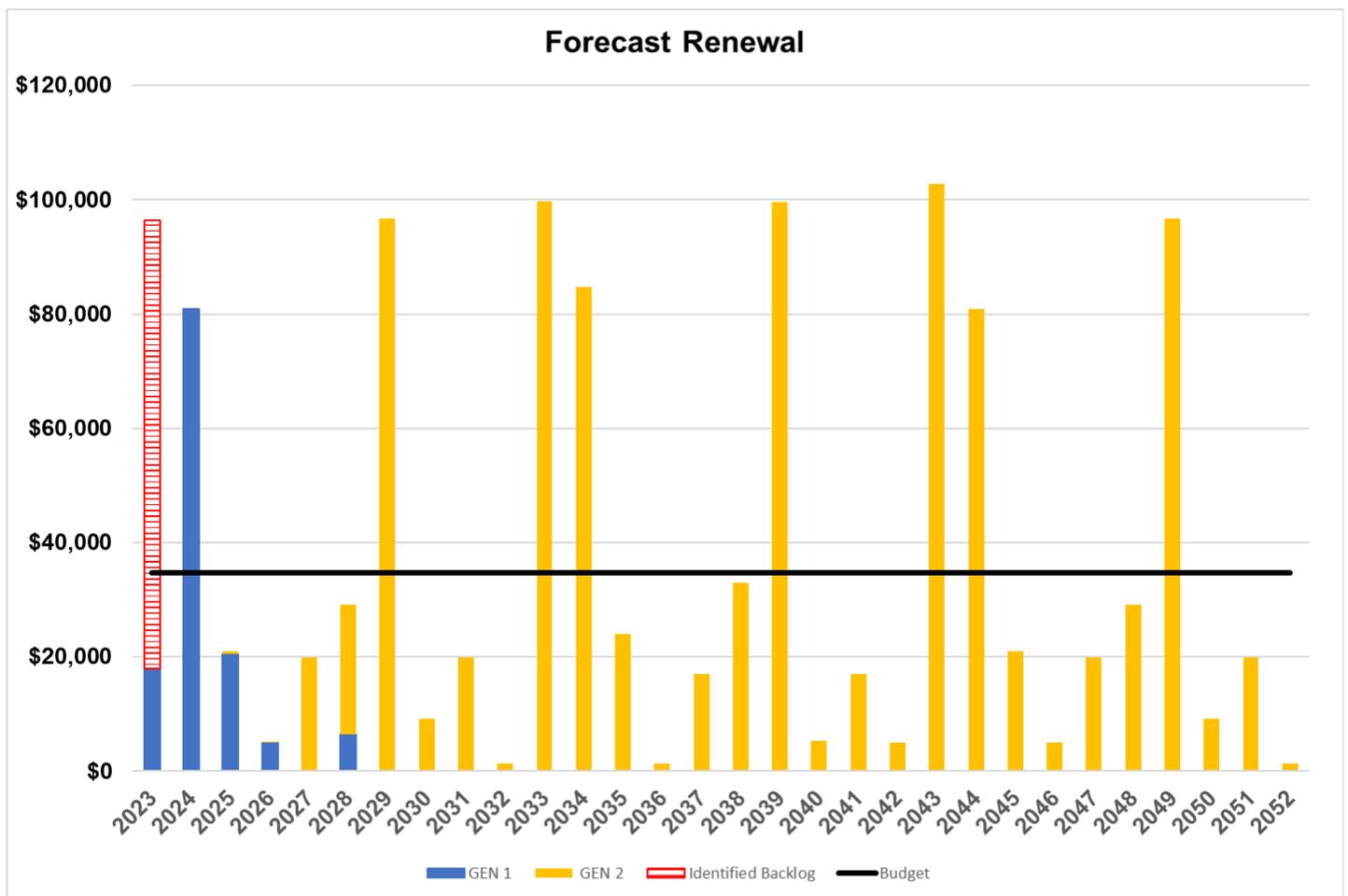
Future methodologies may be developed to optimize and prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure.
- Having high use and subsequent impact on users would be significant.
- Have higher than expected operational or maintenance costs; and,
- Have the potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.¹³

SUMMARY OF FUTURE RENEWAL COST

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in **Figure 19** below.

Figure 19: Forecast Renewal
 All figure values are shown in 2023 dollars.



13 Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

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Currently, there is insufficient funding to accomplish all the renewals that are planned. Further investigation is recommended to address these deferred renewals.

- Total Unfunded gap is \$96K and is comprised of technology assets and one vehicle that are due for renewal in 2023.
 - As previously mentioned, this vehicle was renewed in 2024 during the completion of this AM Plan but was not able to be updated in this report. The additional spike in 2033 is related to this vehicle-renewal cost of \$55K. This pattern is repeated every 10 years because that is the estimated service life of the vehicles.
- In 2024, approx. \$81K of IT assets need to be renewed per service life estimates. This pattern is repeated every 5 years. The amount varies every 5 years due to the IT asset mix.
- In between the spikes in the Forecast Renewals costs charts, the budget exceeds the needs. A recommendation would be to smooth out these purchases to reduce the spikes every 5 years (i.e., 2025, 2026, 2027 and 2028 renewal needs are below the budget line).

As previously mentioned, the most significant assets (i.e., HRM - Facilities) are not included in this Renewal Plan as renewal will occur only in exceptional circumstances (e.g., a complete destruction due to a fire etc.). The other assets such as Conservation, Collections and PPAP assets have also been excluded from this Renewal Plan as these assets are not expected to be replaced at the end of useful life. A replacement value for these assets has been included in Section 3 if these assets do eventually require replacement.

8.4 DISPOSAL PLAN

Disposal includes any activity associated with the disposal of a decommissioned asset including the sale, possible closure of service, decommissioning, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen.

No assets were identified for Disposal in this iteration of the plan. However, HRM does have a deaccession process for collections, and temporary public art is disposed of regularly. A continuous improvement item identified in **Table 29** is to develop a disposal plan for public art assets.

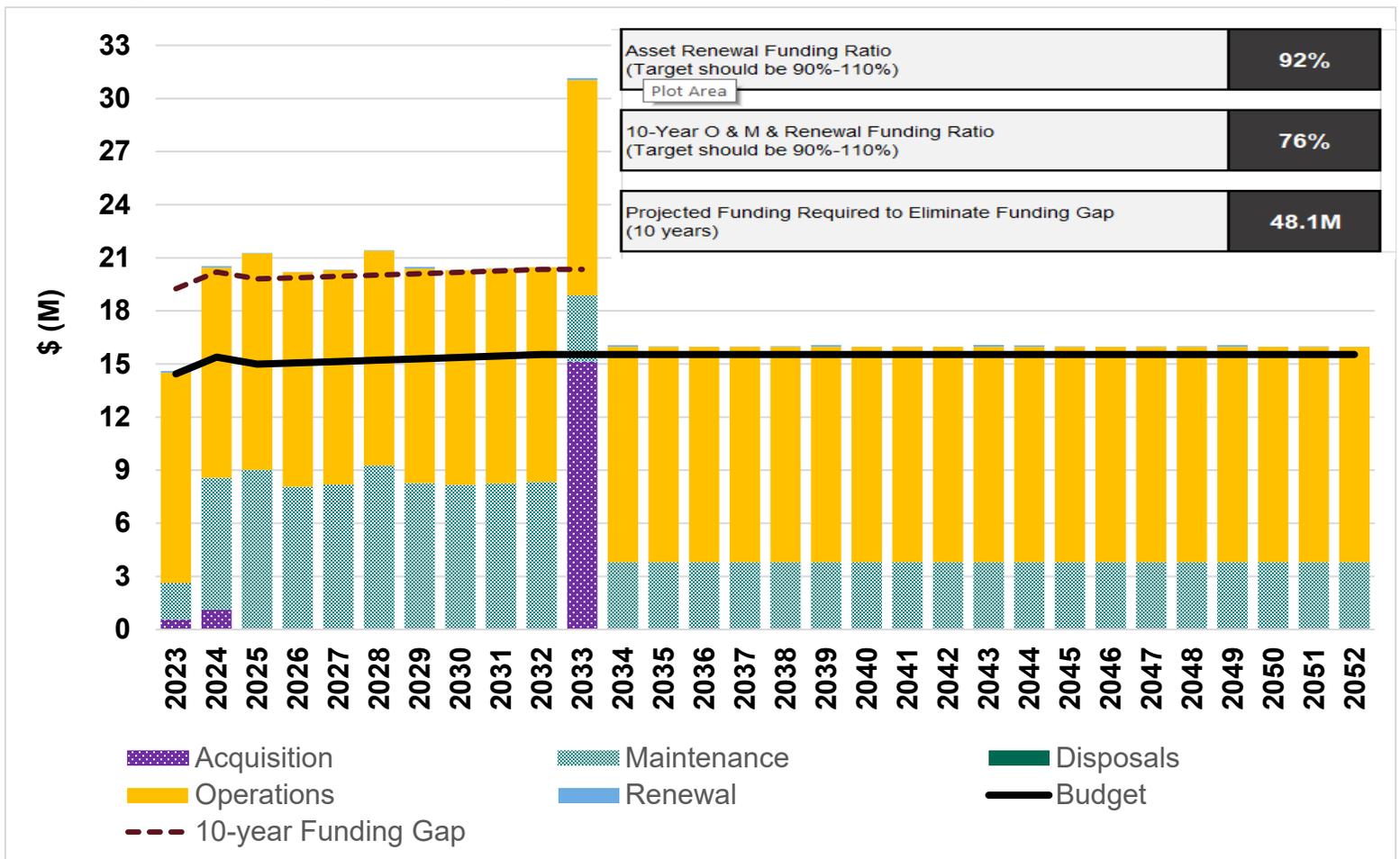
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8.5 LIFECYCLE COST SUMMARY

The financial projections from this asset plan are shown in **Figure 20**. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving a balance between costs, levels of service and risk to achieve the best value outcome.

Figure 20: Life Cycle Summary



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9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will enable the City to ensure that the Tourism and Culture section provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-term financial planning (LTFP) is critical for the City to ensure that network lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly for the Tourism and Culture section; the City will have difficult choices to make in the future which will include options such as higher costs reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all of the network's needs will be met while the City is finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

9.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years/renewal forecast for next 10 years); and,
- Medium-term funding ratio (forecast costs/proposed budget (over 10 years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio¹⁴ **92%**

The Asset Renewal Funding Ratio is used to determine if the City is accommodating asset renewals optimally and cost-effectively from a timing perspective and relative to financial constraints, the risk the City is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable, however, the expenditures are below this level in some service areas predominantly due to

¹⁴ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

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underinvestment, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

If assets are not renewed at the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets.
- Increased complaints and reduced customer satisfaction.
- Increased reactive maintenance and renewal costs; and,
- Damage to the City’s reputation and risk of fines or legal costs

The lack of renewal resources will be addressed in future AM Plans while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

MAINTENANCE FUNDING RATIO

Maintenance Funding Ratio **38%**

In this Asset Management plan, HRM – Facilities is the largest asset group by replacement value. As discussed earlier these assets are expected to exist into perpetuity through the proper implementation of Maintenance plans. As also discussed earlier these facilities would only be replaced in the event of a catastrophic failure (i.e., a fire). Therefore, the Asset Renewal Funding Ratio is not the best indicator of the performance of the service.

This report intends to stress the importance of Maintenance activities due to the historic and unique nature of the assets under this portfolio. Therefore, a more representative indicator of the service’s sustainability would be the ratio between the Maintenance Budget and Maintenance Forecast over the 10-year planning period. This will indicate the amount of budget allocated towards the maintenance of the heritage facilities.

As shown in **Table 26**, for the 10-year period (2023 to 2032) this ratio has been calculated as 38%. (The ten-year total Maintenance Forecast = \$76.6M divided by the total ten-year Maintenance Budget = \$28.8M).

Similarly to the ARFR, the target Maintenance Renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. Funding maintenance at an adequate level to preserve Tourism and Culture assets should be a key takeaway from this AM Plan. The ability to increase the performance of this ratio has a direct impact on this group’s ability to operate and maintain the assets in this portfolio.

Table 26: Maintenance Budget vs Maintenance Forecast

Year	Maintenance Budget	Maintenance Forecast	Total
2023	1,950,770	2,050,770	4,001,540

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Year	Maintenance Budget	Maintenance Forecast	Total
2024	2,344,920	7,442,142	9,787,062
2025	2,717,920	8,950,142	11,668,062
2026	2,884,920	7,992,142	10,877,062
2027	2,957,920	8,115,142	11,073,062
2028	3,032,920	9,190,142	12,223,062
2029	3,109,920	8,192,142	11,302,062
2030	3,187,920	8,095,142	11,283,062
2031	3,268,920	8,176,142	11,445,062
2032	3,352,920	8,260,142	11,613,062
10- year Average	2,880,905	7,646,405	10,527,310

MEDIUM-TERM – 10 YEAR FINANCIAL PLANNING PERIOD

10-Year O&M and Renewal Ratio 76%

Although this AM Plan includes forecast projections to 30 years, the higher confidence numbers are typically within the first 10 years of the lifecycle forecast. The 10-year Lifecycle Financial Ratio compares the Planned Budget with the Lifecycle Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the AARF, the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization’s risk and service level commitments.

The forecast for operations, maintenance and renewal costs over the 10-year planning period is **\$19.8M** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The budget (proposed) for operations, maintenance and renewal is **\$14.9MM** on average per year giving a 10-year funding shortfall of **\$4.8M** per year or **\$48M** over the 10-year planning period.

This indicates that **76%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget, which is not within the 90-110% range. Further analysis will be needed to understand and close this gap. Note, that these calculations exclude acquired assets.

Funding an annual funding shortfall or funding ‘gap’ should not be addressed immediately. The overall gap in funding city-wide will require vetting, planning and resources to begin to incorporate gap management into the future budgets for all City services. This gap will need to be managed over time to reduce it sustainably and limit financial shock to customers. Options for managing the gap include;

- Financing strategies – increased funding, block funding for specific lifecycle activities, long-term debt utilization;

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- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets; and,
- Influence level of service expectations or demand drivers.

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of 90-110% for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

9.2 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Table 27 shows the forecast costs (outlays) required for consideration in the 30-year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

The City will manage the ‘gap’ by continuing to develop this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community. Options to manage the gap include reduction and closure of low-use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

Table 27: Forecast Costs (Outlays) For the Long-term Financial Plan
Forecast Costs Are Shown In 2023 Dollar Values.

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL	BUDGET
2023	\$571,730	\$11,881,920	\$2,050,770	\$96,328	\$0	\$14,439,148
2024	\$1,125,097	\$11,881,661	\$7,442,142	\$80,958	\$0	\$15,386,406
2025	\$1,730	\$12,219,920	\$8,950,142	\$20,963	\$0	\$14,924,298
2026	\$1,730	\$12,124,920	\$7,992,142	\$5,046	\$0	\$14,996,298
2027	\$1,730	\$12,124,920	\$8,115,142	\$19,919	\$0	\$15,069,298
2028	\$1,730	\$12,124,920	\$9,190,142	\$29,126	\$0	\$15,144,298

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL	BUDGET
2029	\$1,730	\$12,124,920	\$8,192,142	\$96,621	\$0	\$15,221,298
2030	\$1,730	\$12,125,920	\$8,095,142	\$9,105	\$0	\$15,300,298
2031	\$1,730	\$12,125,920	\$8,176,142	\$19,919	\$	\$15,381,298
2032	\$1,730	\$12,125,920	\$8,260,142	\$1,241	\$0	\$15,465,298
2033	\$15,001,730	\$12,175,920	\$3,722,920	\$99,789	\$0	\$15,465,298
2034	\$1,730	\$12,175,920	\$3,722,920	\$84,763	\$0	\$15,465,298
2035	\$1,730	\$12,175,920	\$3,722,920	\$23,978	\$0	\$15,465,298
2036	\$1,730	\$12,175,920	\$3,722,920	\$1,241	\$0	\$15,465,298
2037	\$1,730	\$12,175,920	\$3,722,920	\$16,904	\$0	\$15,465,298
2038	\$1,730	\$12,175,920	\$3,722,920	\$32,931	\$0	\$15,465,298
2039	\$1,730	\$12,175,920	\$3,722,920	\$99,636	\$0	\$15,465,298
2040	\$1,730	\$12,175,920	\$3,722,920	\$5,300	\$0	\$15,465,298
2041	\$1,730	\$12,175,920	\$3,722,920	\$16,904	\$0	\$15,465,298
2042	\$1,730	\$12,175,920	\$3,722,920	\$5,046	\$0	\$15,465,298
2043	\$1,730	\$12,175,920	\$3,722,920	\$102,804	\$0	\$15,465,298
2044	\$1,730	\$12,175,920	\$3,722,920	\$80,958	\$0	\$15,465,298
2045	\$1,730	\$12,175,920	\$3,722,920	\$20,963	\$0	\$15,465,298
2046	\$1,730	\$12,175,920	\$3,722,920	\$5,046	\$0	\$15,465,298
2047	\$1,730	\$12,175,920	\$3,722,920	\$19,919	\$0	\$15,465,298
2048	\$1,730	\$12,175,920	\$3,722,920	\$29,126	\$0	\$15,465,298
2049	\$1,730	\$12,175,920	\$3,722,920	\$96,621	\$0	\$15,465,298
2050	\$1,730	\$12,175,920	\$3,722,920	\$9,105	\$0	\$15,465,298
2051	\$1,730	\$12,175,920	\$3,722,920	\$19,919	\$0	\$15,465,298
2052	\$1,730	\$12,175,920	\$3,722,920	\$1,241	\$0	\$15,465,298

9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in the City’s operational budget and 10-year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM plan will provide service delivery options and alternatives to optimize limited financial resources.

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

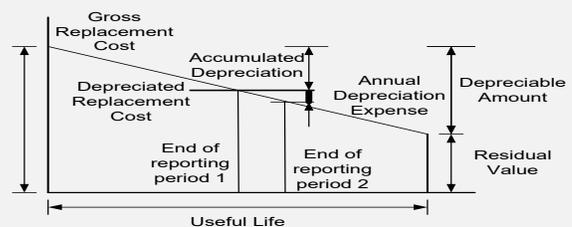
9.4 VALUATION FORECASTS

Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and remove the high costs of renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs, however, this will be improved for the next iteration of the plan.

9.5 ASSET VALUATION

Replacement Cost (Current/Gross)	\$213,633
Depreciable Amount	\$209,141
Current Replacement Cost¹⁵	\$37,079
Depreciation	\$40,855



The replacement value above only includes assets that are included in the renewal forecast, which does not include heritage assets.

9.6 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 30-year horizon and do not address other operational needs not yet identified.
- Maintenance forecasts are based on current budget allocations and do not identify asset needs at this time. It is solely based on planned activities; and,
- Replacement costs were based on historical costing. They were also made without determining what the asset would be replaced with in the future.

¹⁵ Also reported as Written Down Value, Carrying or Net Book Value.

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

9.7 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the **AMP Overview Document**.

The estimated confidence level for and reliability of data used in this AM Plan is shown in **Table 28** and is considered to be a **Low** confidence level.

Table 28: Data Confidence Assessment for Data Used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand Drivers	Medium	Demand drivers were not able to be quantified at this time.
Acquisition Forecast	Medium	Anticipated acquisitions required to support service were included such as Artifacts Building, However, the costs associated with these acquisitions need further validation.
Operation Forecast	Medium	Operations costs for new acquisitions were estimated using like-sized facilities
Maintenance Forecast	Low	Maintenance costs for new acquisitions were estimated using like-sized facilities. Maintenance projects and associated costs were estimated using subject matter expert opinion.
Renewal Forecast Asset Value	High	Market pricing was used for renewal replacement costs for vehicles and IT equipment which have high confidence,
Asset Useful Life	Low	Aside from IT assets, useful life for all other asset classes was estimated using subject matter expert opinion.
Condition Modelling	Low	Aside from IT assets, the condition for all other asset classes was estimated using subject matter expert opinion.
Disposal forecast	Very Low	No disposals were integrated into the forecast

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PRACTICES

ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2023 Approved Operating Budget.
- 2024-2025 Multi-Year Operating Forecast.
- 2023 Approved Capital Budget.
- 2024-2032 Multi-Year Capital Forecast.
- Building Condition Assessment Reports.
- Asset Management Data Collection Templates.
- Audited Financial Statements and Government Reporting (FIR, TCA etc.);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter Expert Opinion and Anecdotal Information; and,
- Reports from the mandatory inspections, operational and maintenance activities internal reports.

10.2 IMPROVEMENT PLAN

It is important that the City recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision-making. The tasks listed below are essential to improving the AM Plan and the City's ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning and plans to physically improve the assets.

The Improvement Plan **Table 29** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this AM Plan will provide updates on these improvement plans.

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

Table 29: Improvement Plan

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1	Create a method for sharing the location and information of PA in the City with other departments (i.e., snow removal).	PPAP Staff	Staff time to create methods and then to maintain and keep up to date. Ongoing time to answer questions and respond to enquiries.	2026-2029
2	Source and acquire an Asset Management software program to organize site data.	IT HRM Manager	~\$9000 per year licensing fee (estimate based on Proficio license).	Q1-2024
3	Review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions (i.e., Collections, Monuments and Plaques).	HRM Manager	Internal Resources	2025
4	Investigate having consultants complete building condition assessments every five years on HRM-Facilities to output a Facility Condition Index to align with the rest of the City's processes	HRM Manager	Internal Resources Consultant Assignment	2025
5	Update Inventory and condition assessments of sites and formalize them into software programs.	Heritage Facilities	One summer student for 4 months at \$25 an hour, total cost ~\$14,000+any employee and equipment costs. Young Canada Works Grant may be a possible solution.	Q2-2024
6	Ensure City of Hamilton condition assessments are performed in an Asset Register format that conforms with the format used by Corporate Facilities and Energy Management (CFEM)	HRM Manager	Internal Resources Consultant Assignment	2025
7	Introduce meaningful public engagement at regular intervals.	Heritage Facilities	Hire a consultant to undertake visitor surveys at sites every 3 years ~\$90,000.	Q1-2027

TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
8	Explore public engagement opportunities for new and existing permanent PA and temporary public art.	PPAP staff.	Staff time to create surveys and gather and tabulate results.	2029
9	Investigate proposed levels of service further	CAM, HRM Staff, PPAP Staff	Internal Resources	Q1-2025
10	Investigate quantifying Transit access for Tourism and Culture Assets	CAM, HRM Staff, PPAP Staff	Internal Resources	Q1-2025
11	Ensure the costs associated with the demand management plans are quantified and incorporated into the next iteration of the AM Plan.	HRM Staff, CAM	Internal Resources	Q1-2025
12	Include measurement of Infrastructure Resilience in future AM plans.	CAM, HRM Staff, PPAP Staff	Internal Resources	Q2-2025
13	Quantify the effects of the proposed demand management described in the Climate Change and Mitigation Section, identify adaptation risks and management plans, and quantify associated levels of service and costs.	HRM Staff, CAM	Internal Resources	Q2-2025
14	Investigate designating funds for ongoing maintenance, renewal, and de-accessioning of all public art assets.	PPAP manager and conservator.	Management time to confirm/create maintenance budget. Conservator time to manage budget.	2029
15	Develop a disposal plan for PA assets.	A conservator with direction from management.	Staff time and management approval/supervision.	2026-2029

TOURISM AND CULTURE

2024 ASSET MANAGEMENT PLAN

10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated regularly to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one-to-10-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 110%).

TOURISM AND CULTURE

2024 ASSET MANAGEMENT PLAN

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TOURISM AND CULTURE 2024 ASSET MANAGEMENT PLAN

12. APPENDIX "A" – SURVEY ANALYSIS



Hamilton
Corporate Asset Management

Tourism & Culture

Survey Period: November 27th 2023 - January 2, 2024

May 2024

67 Respondents	65 Survey Questions	5 Demographic Questions	3847 Survey Responses	395 Demographic Responses
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Age	% Pop. by Age	% of Respondents	Respondents
18 to 34	22.1%	17.9%	12
35 to 64	41.7%	58.2%	39
65+	19.5%	20.9%	14

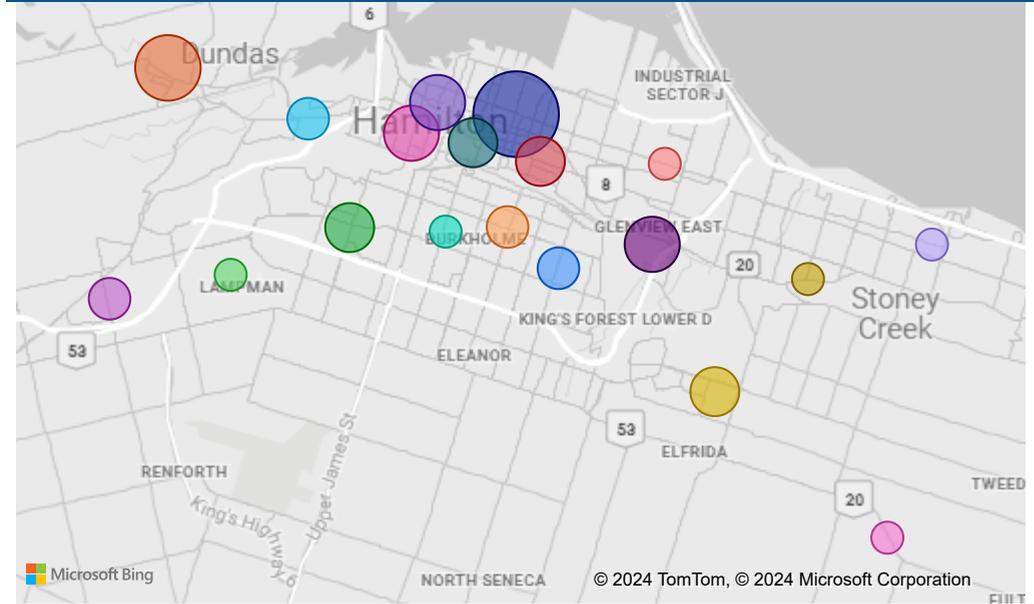
Resident/Working in Hamilton	% of Respondents	Respondents
Yes	100.0%	67

Identity	% of Respondents	Respondents
No	74.6%	50
Other	14.9%	10
I'd prefer not to say	10.4%	7

Region	% Pop. by Region	Population	% of Respondents	Respondents
Lower	45.6%	432,375	59.7%	40
Upper	37.3%	353,485	20.9%	14
Rural	17.1%	161,840	1.5%	1

These tables may not sum to 100% because the survey allowed respondents to choose multiple options or opt out of the question

Respondent Density Map



Respondents by Day

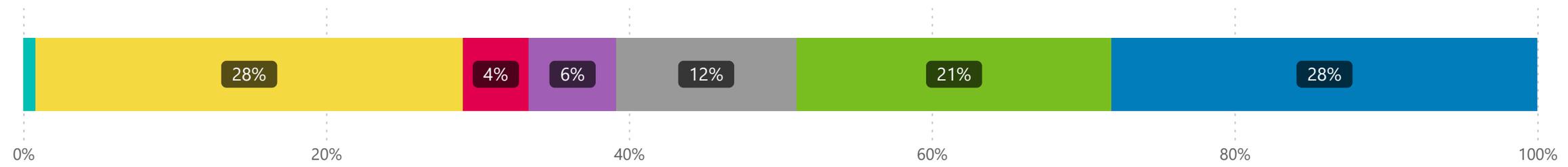


Responses Respondents

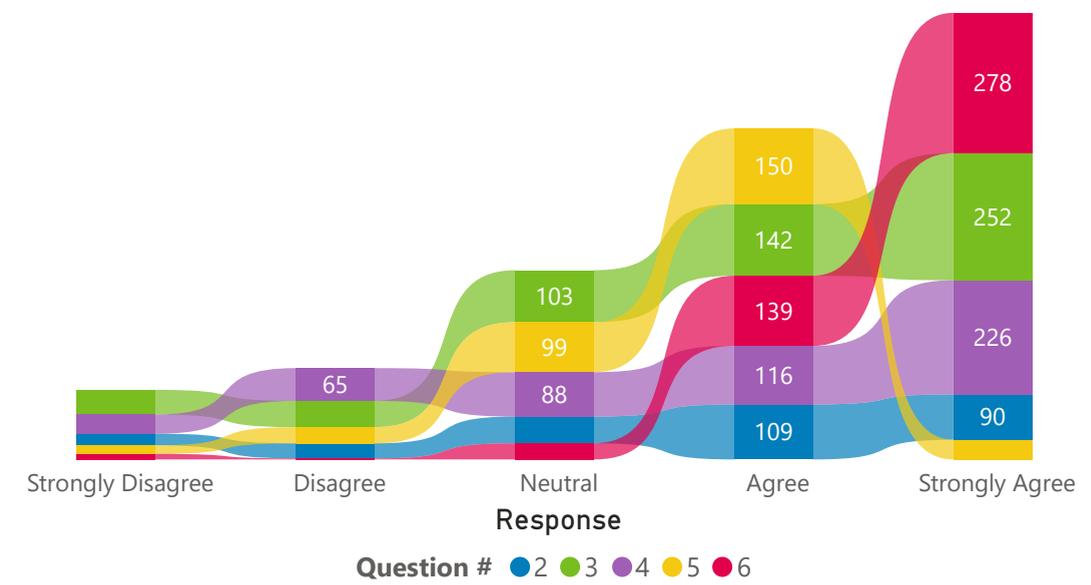
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Summary of Survey Results

● Didn't Answer ● Can't Say ● Strongly Disagree ● Disagree ● Neutral ● Agree ● Strongly Agree



Questions	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.20	3.88	77.6%	914	29.0%
Q6 Attraction Ideal Condition	0.84	4.45	89.0%	7	1.5%
Q3 Attraction Importance	1.28	3.83	76.6%	139	18.9%
Q4 Attraction Recommendation	1.30	3.80	76.0%	204	27.7%
Q2 Overall Performance	1.20	3.70	74.0%	432	58.6%
Q5 Attraction Current Condition	0.99	3.48	69.6%	132	28.1%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Responses Respondents
2483 **67**

Survey Question Summary

Question #	Survey Question	n (Sample Size)	σ (Consistency)	Margin of Error (Confidence Level \pm)
1	How many times have you visited the following Tourism and Culture attractions and/or events in the last 2 years?	23	0.77	21%
2	How do you feel Tourism and Culture have performed overall with the following attractions or events over the last 2 years?	28	1.20	19%
3	How would you rate the importance of the following Tourism and Culture attractions or events to the City as a whole?	54	1.28	13%
4	How likely are you to recommend to others the following Tourism and Culture attractions or events?	48	1.30	14%
5	Do you agree with the following statements? Tourism and Culture buildings and services are:	48	0.99	14%
6	Do you agree with the following statements? Tourism and Culture buildings and services should be:	66	0.84	12%

Question

1

Visits to Attractions

How many times have you visited the following Tourism and Culture attractions and/or events in the last 2 years?

Responses

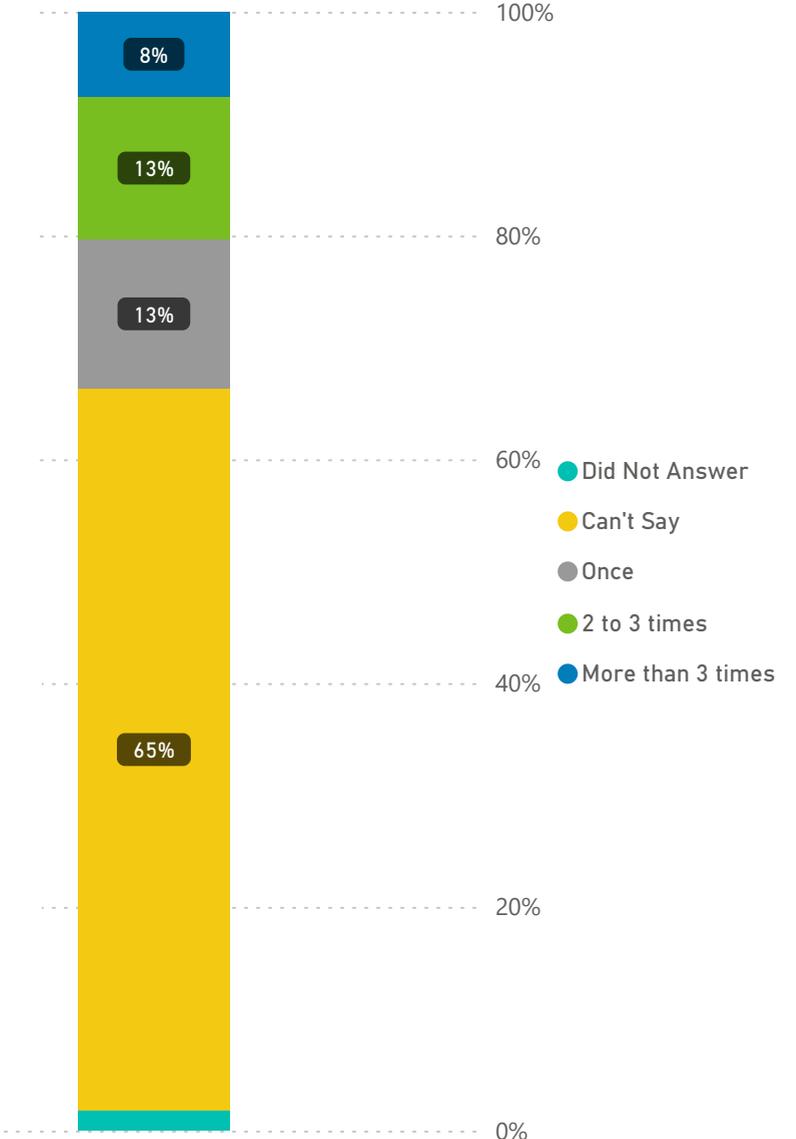
248

Respondents

56

Service Area	Can't Say, I have not visited these attractions or events	Once	2 to 3 times	More than 3 times
Total	476	98	94	56
Annual Arts Awards	52	5	5	3
Applefest at Battlefield House Museum & Park National Historic Site	55	5	3	2
Battlefield House Museum & Park National Historic Site	42	11	6	7
Canada Day at Bayfront Park	38	14	11	3
Canadian Pacific (CP) Railway Holiday Train	38	16	10	3
Fieldcote Memorial Park & Museum	52	5	5	4
Hamilton Museum of Steam & Technology National Historic Site	41	12	7	6
Pop-Ups at Pier 8 event series	26	10	18	12
Re-enactment of the Battle of Stoney Creek at Battlefield House Museum & Park National Historic Site	51	6	6	3
Remembrance Day services	46	6	10	4
Summer Concert Series	35	8	13	9

Service Area	Opt Out	Opt Out %
Total	489	66.4%
Annual Arts Awards	54	80.6%
Applefest at Battlefield House Museum & Park National Historic Site	57	85.1%
Battlefield House Museum & Park National Historic Site	43	64.2%
Canada Day at Bayfront Park	39	58.2%
Canadian Pacific (CP) Railway Holiday Train	38	56.7%
Fieldcote Memorial Park & Museum	53	79.1%
Hamilton Museum of Steam & Technology National Historic Site	42	62.7%
Pop-Ups at Pier 8 event series	27	40.3%
Re-enactment of the Battle of Stoney Creek at Battlefield House Museum & Park National Historic Site	52	77.6%
Remembrance Day services	47	70.1%
Summer Concert Series	37	55.2%



Respondents who did not answer or selected 'Can't Say' are included in opt out.

Question

2

Overall Performance

How do you feel Tourism and Culture have performed overall with the following attractions or events over the last 2 years?

Responses

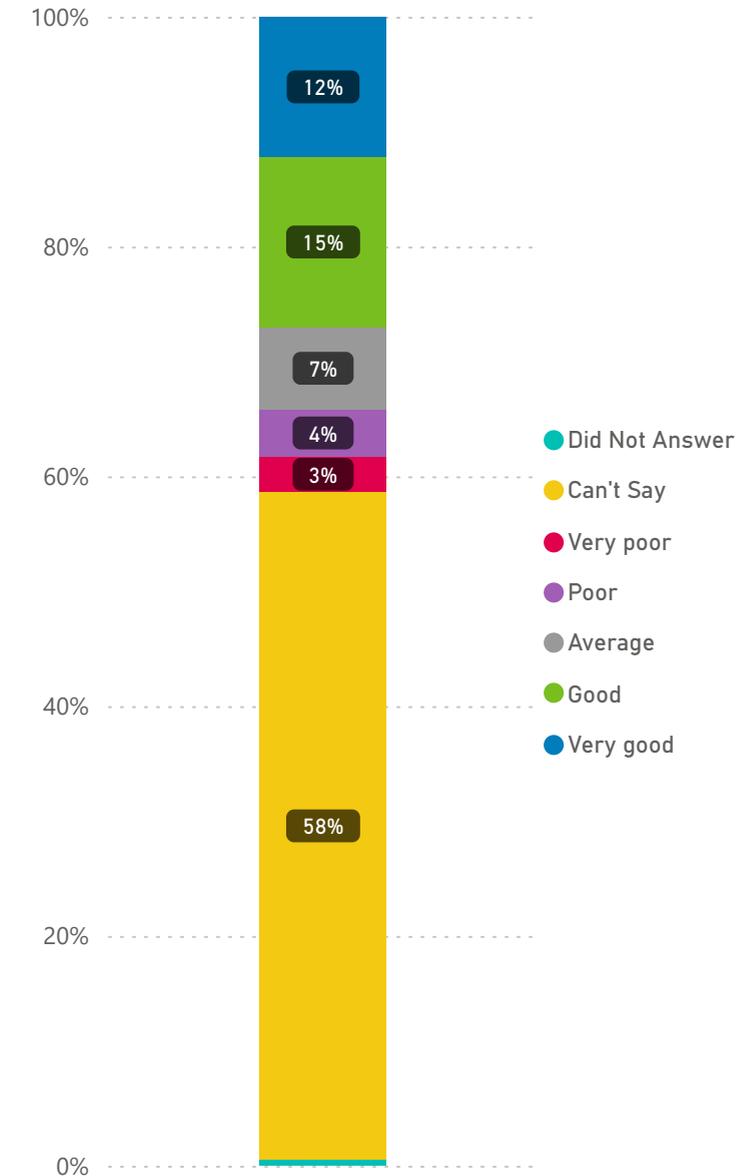
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Respondents

59

Service Area	Very poor	Poor	Average	Good	Very good
Total	23	30	53	109	90
Annual Arts Awards	2	3	5	4	7
Applefest at Battlefield House Museum & Park National Historic Site	2	2	6	3	3
Battlefield House Museum & Park National Historic Site	2	2	8	6	5
Canada Day at Bayfront Park	3	3	4	16	9
Canadian Pacific (CP) Railway Holiday Train	2	3	6	10	15
Fieldcote Memorial Park & Museum	2	4	4	10	2
Hamilton Museum of Steam & Technology National Historic Site	2	4	3	11	10
Pop-Ups at Pier 8 event series	2	4	3	17	16
Re-enactment of the Battle of Stoney Creek at Battlefield House Museum & Park National Historic Site	2	2	4	6	7
Remembrance Day services	2	1	5	11	7
Summer Concert Series	2	2	5	15	9

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.20	3.70	432	58.6%
Pop-Ups at Pier 8 event series	1.12	3.98	25	37.3%
Canadian Pacific (CP) Railway Holiday Train	1.19	3.92	31	46.3%
Summer Concert Series	1.09	3.82	34	50.7%
Remembrance Day services	1.12	3.77	41	61.2%
Hamilton Museum of Steam & Technology National Historic Site	1.23	3.77	37	55.2%
Canada Day at Bayfront Park	1.18	3.71	32	47.8%
Re-enactment of the Battle of Stoney Creek at Battlefield House Museum & Park National Historic Site	1.28	3.67	46	68.7%
Annual Arts Awards	1.33	3.52	46	68.7%
Battlefield House Museum & Park National Historic Site	1.17	3.43	44	65.7%
Fieldcote Memorial Park & Museum	1.14	3.27	45	67.2%
Applefest at Battlefield House Museum & Park National Historic Site	1.24	3.19	51	76.1%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.



Question

3

Attraction Importance

How would you rate the importance of the following Tourism and Culture attractions or events to the City as a whole?

Responses

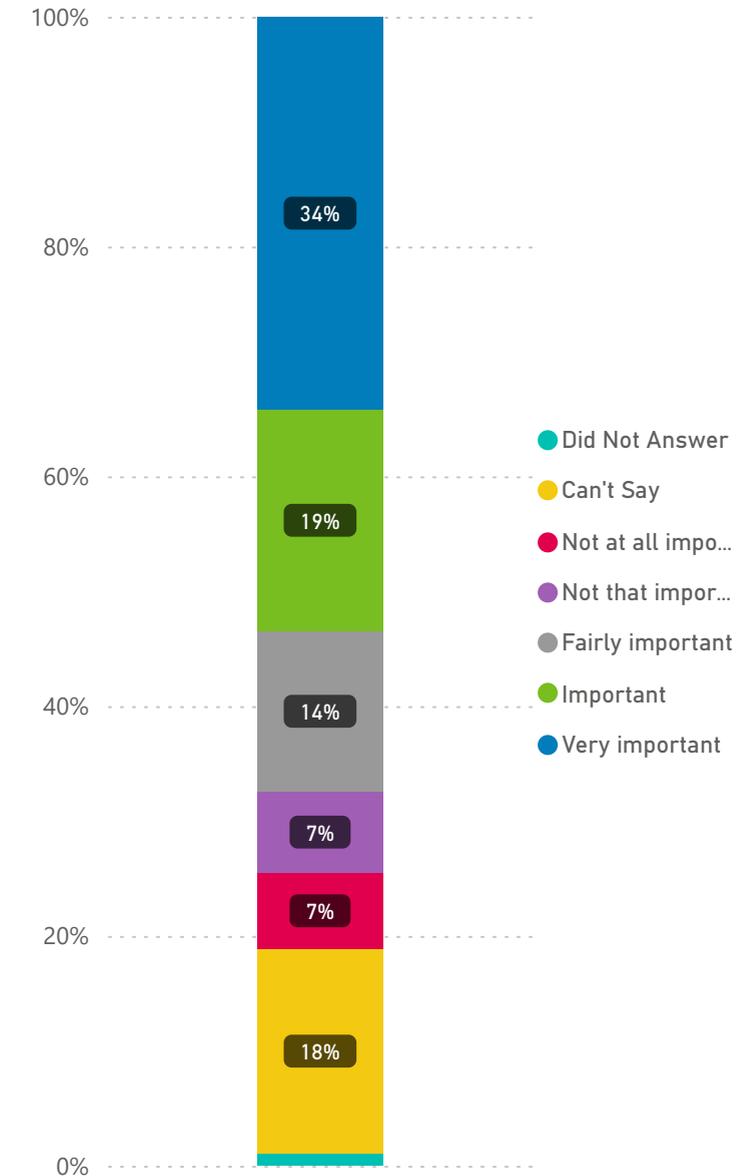
598

Respondents

66

Service Area	Not at all important	Not that important	Fairly important	Important	Very important
Total	49	52	103	142	252
Annual Arts Awards	4	8	12	6	15
Applefest at Battlefield House Museum & Park National Historic Site	4	13	13	7	10
Battlefield House Museum & Park National Historic Site	3	4	12	11	24
Canada Day at Bayfront Park	6	2	8	17	27
Canadian Pacific (CP) Railway Holiday Train	8	1	15	15	21
Fieldcote Memorial Park & Museum	4	5	9	13	13
Hamilton Museum of Steam & Technology National Historic Site	2	3	10	20	24
Pop-Ups at Pier 8 event series	5	5	6	15	28
Re-enactment of the Battle of Stoney Creek at Battlefield House Museum & Park National Historic Site	5	5	9	13	19
Remembrance Day services	2	4	3	12	40
Summer Concert Series	6	2	6	13	31

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.28	3.83	139	18.9%
Remembrance Day services	1.06	4.38	6	9.0%
Summer Concert Series	1.31	4.05	9	13.4%
Hamilton Museum of Steam & Technology National Historic Site	1.04	4.03	8	11.9%
Canada Day at Bayfront Park	1.27	3.95	7	10.4%
Pop-Ups at Pier 8 event series	1.29	3.95	8	11.9%
Battlefield House Museum & Park National Historic Site	1.21	3.91	13	19.4%
Re-enactment of the Battle of Stoney Creek at Battlefield House Museum & Park National Historic Site	1.32	3.71	16	23.9%
Canadian Pacific (CP) Railway Holiday Train	1.32	3.67	7	10.4%
Fieldcote Memorial Park & Museum	1.27	3.59	23	34.3%
Annual Arts Awards	1.34	3.44	22	32.8%
Applefest at Battlefield House Museum & Park National Historic Site	1.27	3.13	20	29.9%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Differential of Importance and Performance

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

903

Respondents

67

Service Area	Performance	Importance	Net Differential	Opt Out %
Total	74	77	-3	39%
Remembrance Day services	75	88	-12	35%
Summer Concert Series	76	81	-5	32%
Hamilton Museum of Steam & Technology National Historic Site	75	81	-5	34%
Canada Day at Bayfront Park	74	79	-5	29%
Pop-Ups at Pier 8 event series	80	79	1	25%
Battlefield House Museum & Park National Historic Site	69	78	-9	43%
Re-enactment of the Battle of Stoney Creek at Battlefield House Museum & Park National Historic Site	73	74	-1	46%
Canadian Pacific (CP) Railway Holiday Train	78	73	5	28%
Fieldcote Memorial Park & Museum	65	72	-6	51%
Annual Arts Awards	70	69	2	51%
Applefest at Battlefield House Museum & Park National Historic Site	64	63	1	53%

- Performance *Q2 How do you feel Tourism and Culture have performed overall with the following attractions or events over the last 2 years?*
- Importance *Q3 How would you rate the importance of the following Tourism and Culture attractions or events to the City as a whole?*

The Net Differential is calculated here by taking the average Likert score for each service area and multiplied by 20, the difference between performance and importance is then calculated as our final product. A negative differential indicates that the current performance doesn't meet the ideal importance. A positive differential is the opposite.



Question

4

Attraction Recommendation

How likely are you to recommend to others the following Tourism and Culture attractions or events?

Responses

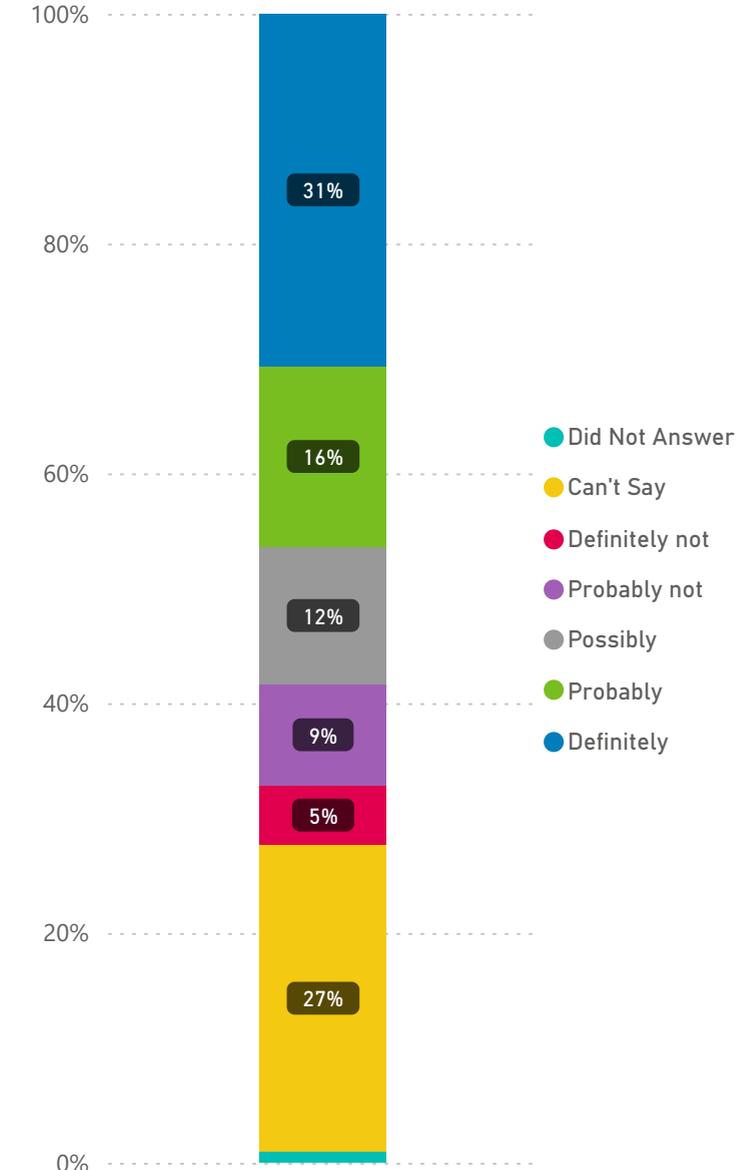
533

Respondents

64

Service Area	Definitely not	Probably not	Possibly	Probably	Definitely
Total	38	65	88	116	226
Annual Arts Awards	6	9	7	3	11
Applefest at Battlefield House Museum & Park National Historic Site	4	9	10	6	9
Battlefield House Museum & Park National Historic Site	4	8	10	11	19
Canada Day at Bayfront Park	3	4	9	18	22
Canadian Pacific (CP) Railway Holiday Train	3	6	7	9	29
Fieldcote Memorial Park & Museum	2	8	6	15	12
Hamilton Museum of Steam & Technology National Historic Site	1	3	9	13	23
Pop-Ups at Pier 8 event series	2	4	8	12	28
Re-enactment of the Battle of Stoney Creek at Battlefield House Museum & Park National Historic Site	6	6	8	8	18
Remembrance Day services	4	3	8	11	26
Summer Concert Series	3	5	6	10	29

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	1.30	3.80	204	27.7%
Pop-Ups at Pier 8 event series	1.13	4.11	13	19.4%
Hamilton Museum of Steam & Technology National Historic Site	1.03	4.10	18	26.9%
Summer Concert Series	1.24	4.08	14	20.9%
Canadian Pacific (CP) Railway Holiday Train	1.27	4.02	13	19.4%
Remembrance Day services	1.26	4.00	15	22.4%
Canada Day at Bayfront Park	1.15	3.93	11	16.4%
Battlefield House Museum & Park National Historic Site	1.32	3.63	15	22.4%
Fieldcote Memorial Park & Museum	1.20	3.63	24	35.8%
Re-enactment of the Battle of Stoney Creek at Battlefield House Museum & Park National Historic Site	1.44	3.57	21	31.3%
Applefest at Battlefield House Museum & Park National Historic Site	1.31	3.18	29	43.3%
Annual Arts Awards	1.49	3.11	31	46.3%



Respondents who did not answer or selected 'Can't Say' are included in opt out.



Question

4

Responses

533

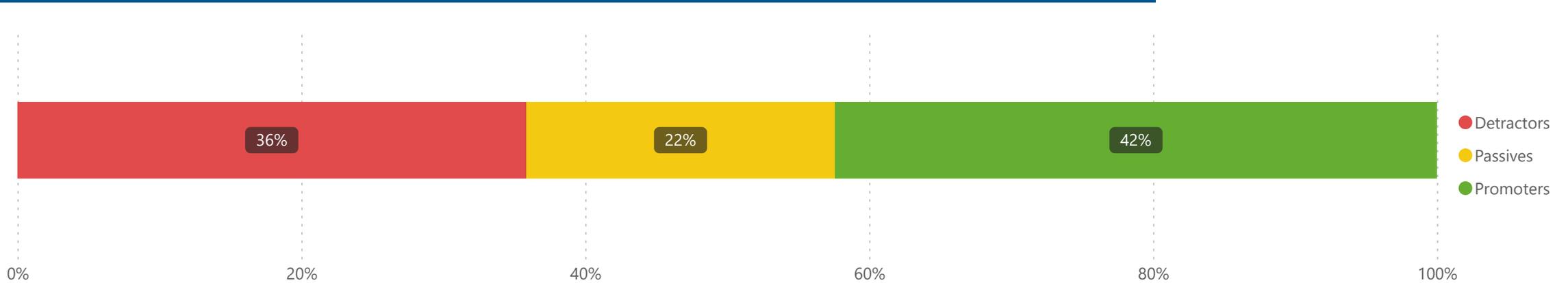
Respondents

64

Net Promoter Score

Typically the Net Promoter Score is used to measure customer loyalty.

How likely are you to recommend to others the following Tourism and Culture attractions or events?



Service Area	σ	NPS	Detractors	Passives	Promoter
All Service Areas	25.9%	6.57	191	116	226
Summer Concert Series	24.8%	28.30	14	10	29
Pop-Ups at Pier 8 event series	22.7%	25.93	14	12	28
Canadian Pacific (CP) Railway Holiday Train	25.4%	24.07	16	9	29
Remembrance Day services	25.1%	21.15	15	11	26
Hamilton Museum of Steam & Technology National Historic Site	20.7%	20.41	13	13	23
Canada Day at Bayfront Park	22.9%	10.71	16	18	22
Re-enactment of the Battle of Stoney Creek at Battlefield House Museum & Park National Historic Site	28.8%	-4.35	20	8	18
Battlefield House Museum & Park National Historic Site	26.3%	-5.77	22	11	19
Fieldcote Memorial Park & Museum	24.0%	-9.30	16	15	12
Annual Arts Awards	29.7%	-30.56	22	3	11
Applefest at Battlefield House Museum & Park National Historic Site	26.3%	-36.84	23	6	9



Likert choices less than 4 are considered 'Detractors' while 5s are considered 'Promoters' and 4s are 'Passive'. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Detractors) from (% Promoters). σ (Standard Deviation) is calculated in percent, the same units as the Net Promoter Score.

Question

5

Attraction Current Condition

Do you agree with the following statements? Tourism and Culture buildings and services are:

Responses

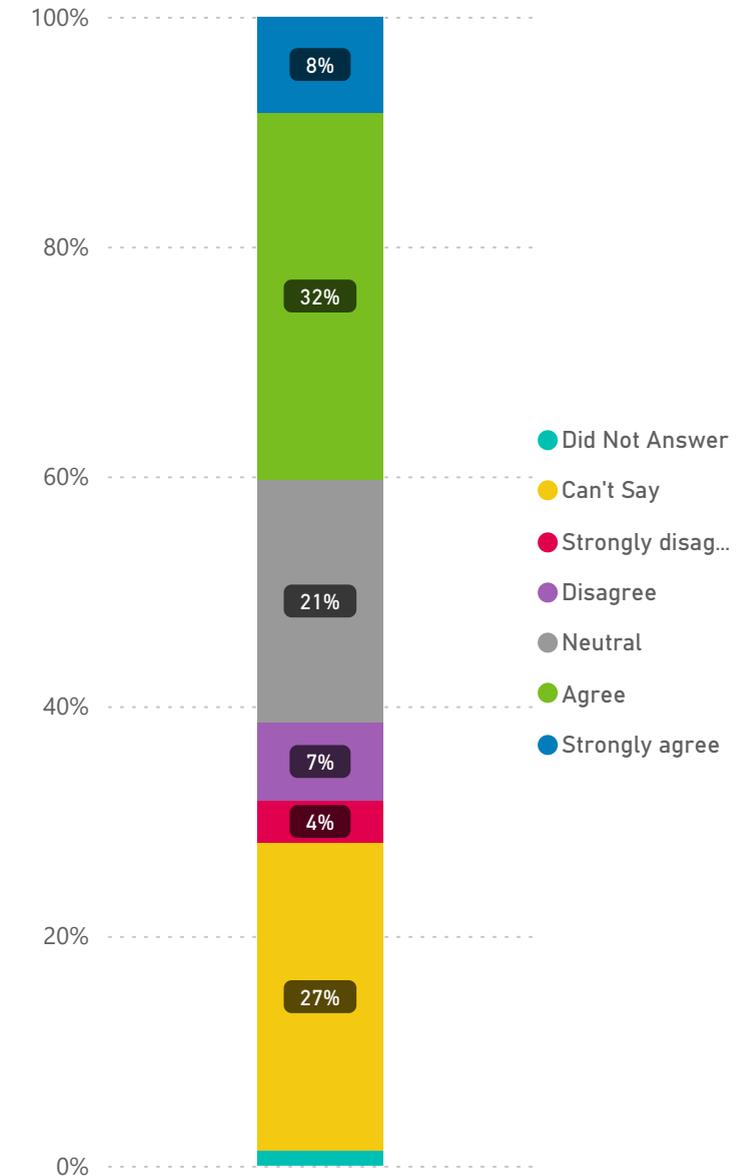
337

Respondents

63

Service Area	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	17	32	99	150	39
Accessible by public transportation	3	9	14	23	6
Accessible; Meets the Accessibility for Ontarians with Disabilities Act (AODA), 2005 standards	2	4	17	12	4
Clean and in good repair	3	4	12	28	6
Comfortable, with appropriate levels of lighting and noise	2	3	11	29	6
Inviting, appealing and attractive	3	6	18	23	9
Safe, equitable and inclusive	2	4	16	24	6
Reducing greenhouse gases by decreasing utility use)	2	2	11	11	2

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	0.99	3.48	132	28.1%
Comfortable, with appropriate levels of lighting and noise	0.90	3.67	16	23.9%
Clean and in good repair	0.98	3.57	14	20.9%
Safe, equitable and inclusive	0.93	3.54	15	22.4%
Inviting, appealing and attractive	1.03	3.49	8	11.9%
Accessible by public transportation	1.05	3.36	12	17.9%
Reducing greenhouse gases by decreasing utility use)	0.97	3.32	39	58.2%
Accessible; Meets the Accessibility for Ontarians with Disabilities Act (AODA), 2005 standards	0.96	3.31	28	41.8%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Question

6

Attraction Ideal Condition

Do you agree with the following statements? Tourism and Culture buildings and services should be:

Responses

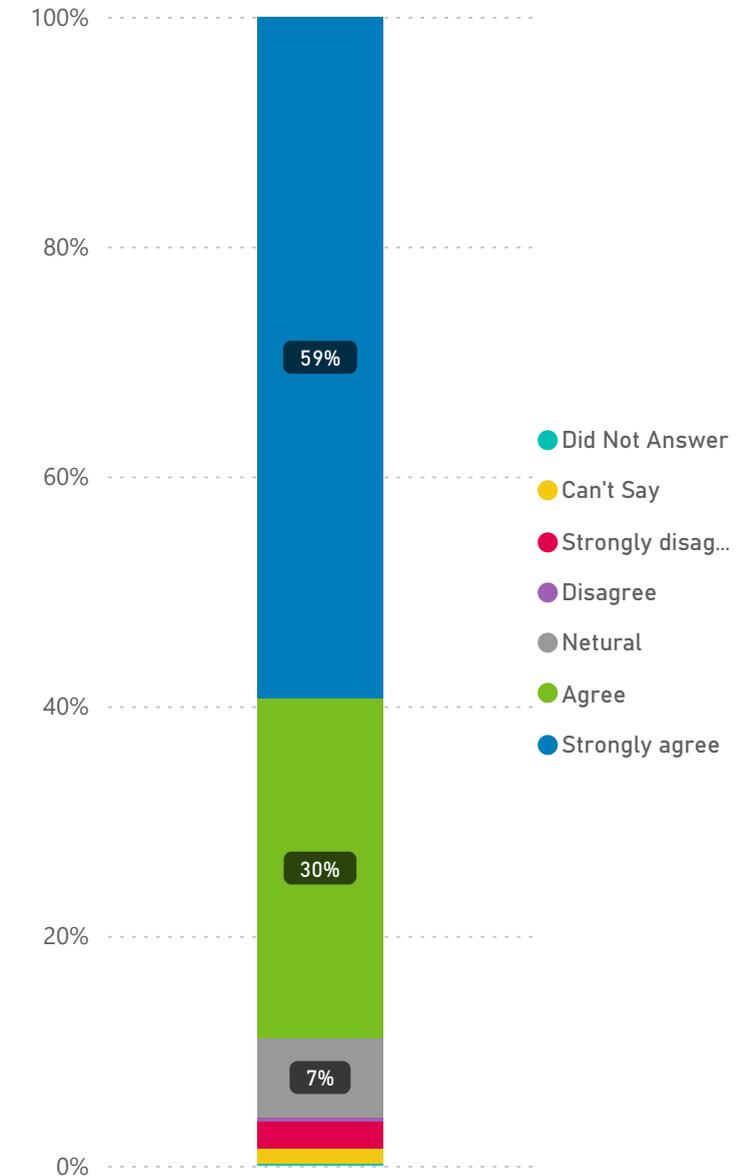
462

Respondents

67

Service Area	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total	11	2	32	139	278
Accessible by public transportation	1		5	20	40
Accessible; Meets the Accessibility for Ontarians with Disabilities Act (AODA), 2005 standards	1	1	3	16	45
Clean and in good repair	2		2	17	46
Comfortable, with appropriate levels of lighting and noise	2		2	28	34
Inviting, appealing and attractive	1		3	25	37
Safe, equitable and inclusive	2		5	16	44
Reducing greenhouse gases by decreasing utility use)	2	1	12	17	32

Service Area	σ	Avg.	Opt Out	Opt Out %
Total	0.84	4.45	7	1.5%
Clean and in good repair	0.81	4.57		
Accessible; Meets the Accessibility for Ontarians with Disabilities Act (AODA), 2005 standards	0.78	4.56	1	1.5%
Safe, equitable and inclusive	0.87	4.49		
Accessible by public transportation	0.76	4.48	1	1.5%
Inviting, appealing and attractive	0.72	4.47	1	1.5%
Comfortable, with appropriate levels of lighting and noise	0.81	4.39	1	1.5%
Reducing greenhouse gases by decreasing utility use)	1.00	4.19	3	4.5%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Differential of Current Condition vs. Ideal Condition

Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

Responses

799

Respondents

67

Service Area	Current Condition (index score)	Ideal Condition (index score)	Net Differential	Opt Out %
Total	70	89	-19	15%
Clean and in good repair	71	91	-20	10%
Accessible; Meets the Accessibility for Ontarians with Disabilities Act (AODA), 2005 standards	66	91	-25	22%
Safe, equitable and inclusive	71	90	-19	11%
Accessible by public transportation	67	90	-22	10%
Inviting, appealing and attractive	70	89	-20	7%
Comfortable, with appropriate levels of lighting and noise	73	88	-15	13%
Reducing greenhouse gases by decreasing utility use)	66	84	-17	31%

Performance

Q5 Do you agree with the following statements? Tourism and Culture buildings and services are:

Importance

Q6 Do you agree with the following statements? Tourism and Culture buildings and services should be:

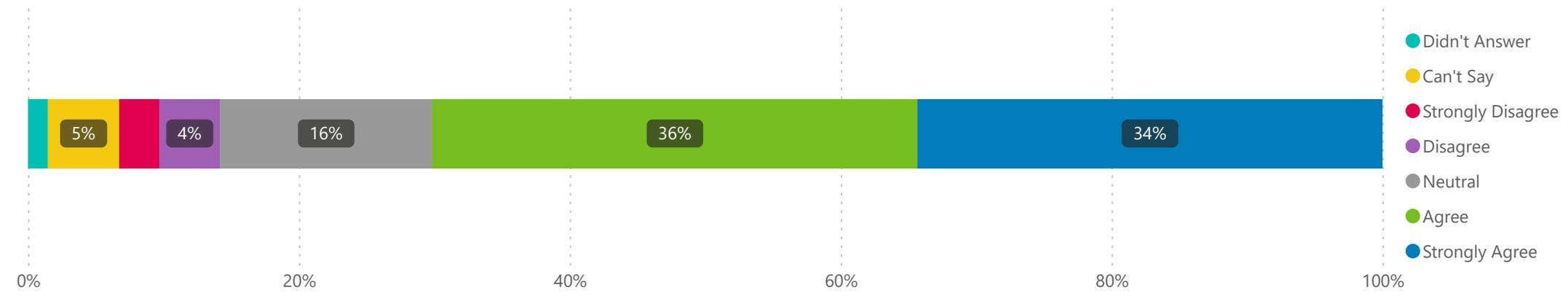
The Net Differential is calculated here by taking the average Likert score for each service area and multiplied by 20, the difference between performance and importance is then calculated as our final product. A negative differential indicates that the current performance doesn't meet the ideal importance. A positive differential is the opposite.



Summary of Specific Service Areas over Several Questions

Inviting, appealing and attractive

Responses
121
 Respondents
67



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.01	4.01	80.2	9	6.7%
Q6 Do you agree with the following statements? Tourism and Culture buildings and services should be:	0.72	4.47	89.4	1	1.5%
Q5 Do you agree with the following statements? Tourism and Culture buildings and services are:	1.03	3.49	69.8	8	11.9%

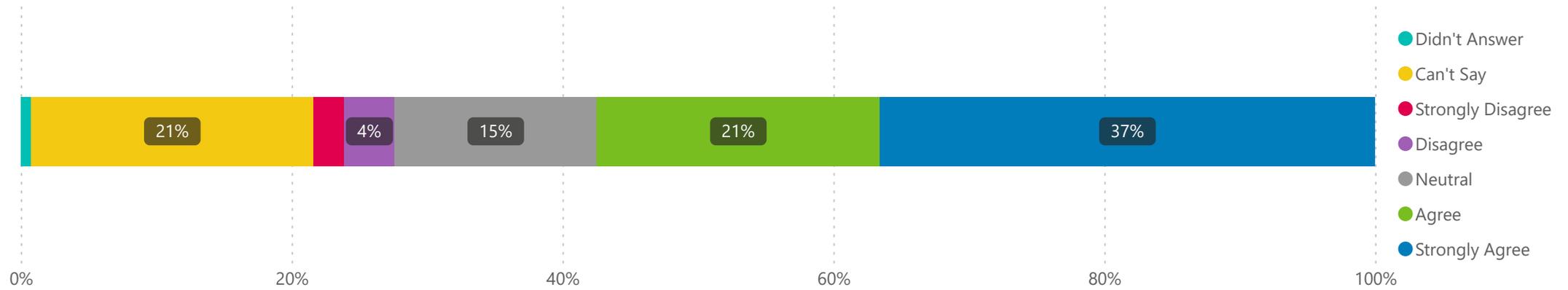


Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

Accessible; Meets the Accessibility for Ontarians with Disabilities Act (AO...)

Responses
102
 Respondents
66



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.05	4.10	81.9	29	21.6%
Q6 Do you agree with the following statements? Tourism and Culture buildings and services should be:	0.78	4.56	91.2	1	1.5%
Q5 Do you agree with the following statements? Tourism and Culture buildings and services are:	0.96	3.31	66.2	28	41.8%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

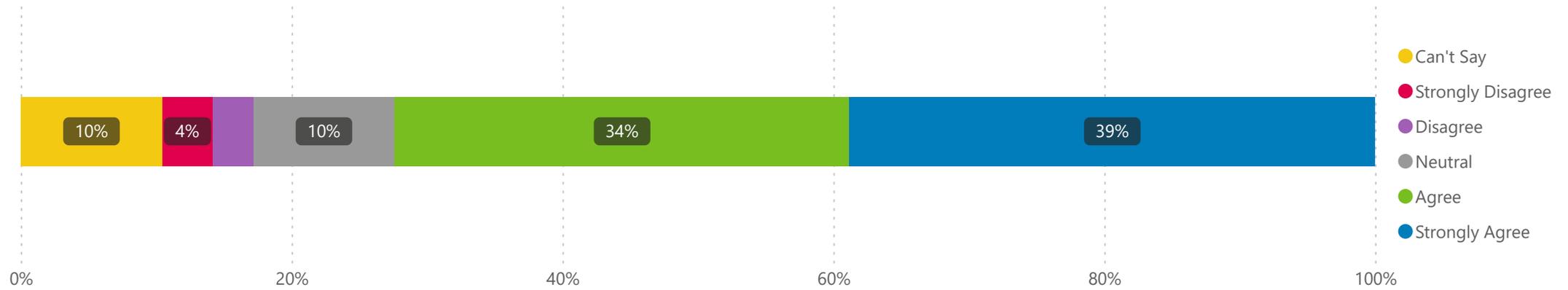
Clean and in good repair

Responses

115

Respondents

67



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.02	4.13	82.5	14	10.4%
Q6 Do you agree with the following statements? Tourism and Culture buildings and services should be:	0.81	4.57	91.3		
Q5 Do you agree with the following statements? Tourism and Culture buildings and services are:	0.98	3.57	71.3	14	20.9%

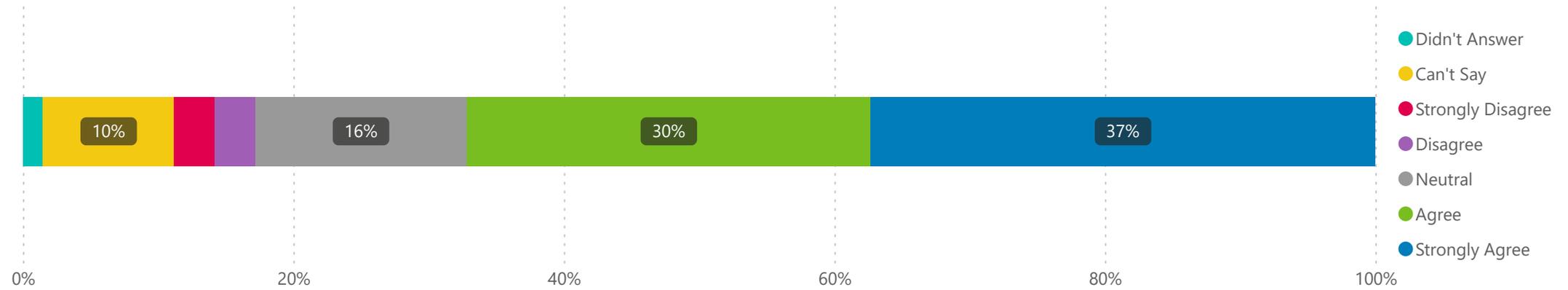


Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

Safe, equitable and inclusive

Responses
115
 Respondents
67



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.01	4.08	81.5	15	11.2%
Q6 Do you agree with the following statements? Tourism and Culture buildings and services should be:	0.87	4.49	89.9		
Q5 Do you agree with the following statements? Tourism and Culture buildings and services are:	0.93	3.54	70.8	15	22.4%

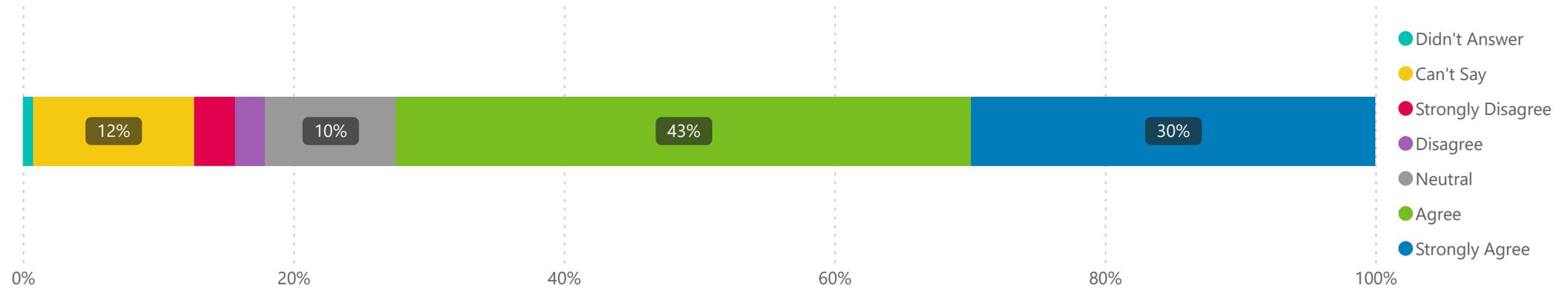


Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

Comfortable, with appropriate levels of lighting and noise

Responses
113
 Respondents
66



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	0.93	4.08	81.5	17	12.7%
Q6 Do you agree with the following statements? Tourism and Culture buildings and services should be:	0.81	4.39	87.9	1	1.5%
Q5 Do you agree with the following statements? Tourism and Culture buildings and services are:	0.90	3.67	73.3	16	23.9%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

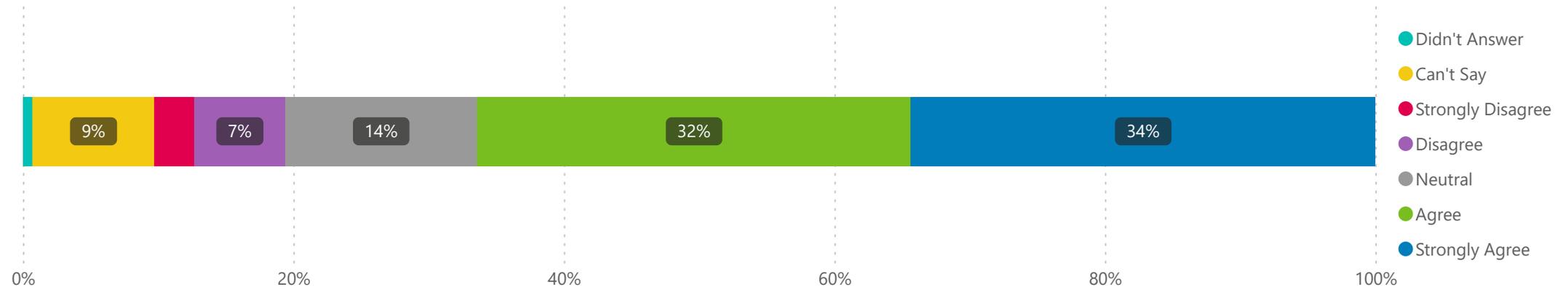
Accessible by public transportation

Responses

117

Respondents

66



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.06	3.98	79.5	13	9.7%
Q6 Do you agree with the following statements? Tourism and Culture buildings and services should be:	0.76	4.48	89.7	1	1.5%
Q5 Do you agree with the following statements? Tourism and Culture buildings and services are:	1.05	3.36	67.3	12	17.9%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Summary of Specific Service Areas over Several Questions

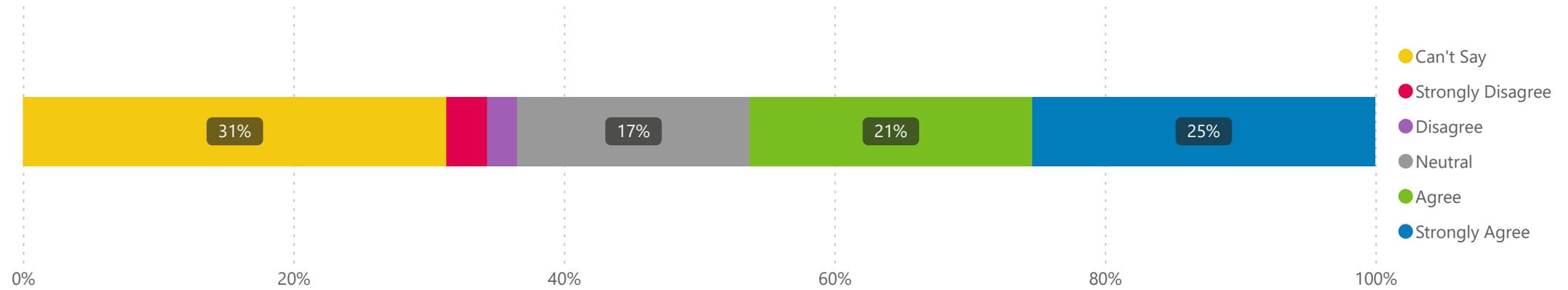
Reducing greenhouse gases by decreasing utility use)

Responses

88

Respondents

64



Question	σ	Avg.	Avg. %	Opt Out	Opt Out %
All Questions	1.07	3.92	78.5	42	31.3%
Q6 Do you agree with the following statements? Tourism and Culture buildings and services should be:	1.00	4.19	83.8	3	4.5%
Q5 Do you agree with the following statements? Tourism and Culture buildings and services are:	0.97	3.32	66.4	39	58.2%



Respondents who opted out by not answering or selecting 'Can't Say' are included in opt out.

Definition and Ranking of Consistency and Confidence

Data Grading Scales

Grade	Data Consistency Standard Deviation (σ , Consistency of Responses)	Confidence Level Margin of Error (at 95% Confidence in Sample Size)
A Very High	0 to 0.5 - results are tightly grouped with little to no variance in response	0% to 5% - Minimal to no error in results, can generally be interpreted as is
B High	0.5 to 1.0 - results are fairly tightly grouped but with slightly more variance in response	5% to 10% - Error has become noticeable, but results are still trustworthy
C Medium	1.0 to 1.5 - results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - Error is a significant amount and will cause uncertainty in final results
D Low	1.5 to 2.0 - results show a high variance with a fair amount of disparity in responses	20% to 30% - Error has reached a detrimental level and results are difficult to trust
E Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - Significant error in results, hard to interpret data in much of a meaningful way

$$\text{Margin of Error} = \frac{0.98}{\sqrt{n}}$$

Assigning a lower consistency value (Standard Deviation) to a higher grade doesn't imply that the data is "better" or "worse". Instead, it helps in understanding how divided or similar people are in their responses. When high consistency is observed, it indicates that most respondents agree on a question. But when the consistency is low, opinions are split, with some rating higher and others lower. The key is to understand why the split occurs which provides valuable insights into the data.

The margin of error is calculated using a standard factor of 0.98 and the sample size (n). The margin of error helps assess if the sample size of the survey is suitable. The margin of error, expressed as a percentage, indicates the range around the calculated sample average where the true population average is likely to be. A smaller margin of error suggests a more accurate estimate, while a larger one implies less precision.





ASSET MANAGEMENT PLANS

General Issues Committee

June 19, 2024

- Ontario Regulation 588/17
- Non-Core AM Plans – Findings
- Core and Non-Core Funding Gap
- Continuous Improvement
- Natural Assets
- Next Steps



O. Reg. 588/17:
Asset Management
Planning for
Municipal Infrastructure

Recommendation

- To approve the Asset Management Plans as attached to Recommendation Report PW23073(b) (Appendices “A”, “B”, “C”, “D”, “E”, “F”, “G”, “H”, “I”, “J”, “K”, “L”, “M” and “N”)

Asset Management Policy PW19053



2019

Asset Management Plan: Non-Core Assets

- All remaining assets
- Current LOS with cost to maintain

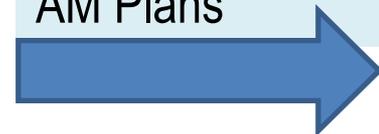
PW23073



PW23073(a)



Ongoing annual review and updating of all AM Plans



JULY 1, 2022



JULY 1, 2024



JULY 1, 2025



Asset Management Plan: Core Assets PW22048

- Transportation
 - (Roads, Engineered Structures)
- Water Works
 - (Water, Wastewater, Stormwater)
- Current LOS with cost to maintain.

Proposed LOS and Financial Strategy Completed

LOS – Levels of Service

ASSET CATEGORY	REPLACEMENT VALUE	AVERAGE AGE (YEARS)	AVERAGE CONDITION	RENEWAL FUNDING RATIO	10-YEAR O&M & RENEWAL FUNDING RATIO	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS
Animal Services, Licensing and Municipal Law Enforcement	\$9.4M	26 Years (43%)	4-POOR	80%	94%	\$1.2M	\$12.0M
Data Confidence	Medium	High	High	Low	Low	Low	Low
Cemeteries	\$29.5M	33 years (31%)	3-FAIR	29%	86%	\$1.0M	\$10.0M
Data Confidence	Low	Low	Low	Low	Low	Low	Low
Children's and Community Services	\$10.6M	99 years (68%)	3-GOOD	76%	100%	\$0.1M	\$1.3M
Data Confidence	Medium	High	Medium	Medium	Medium	Medium	Medium
CityHousing Hamilton	\$2.95B	40 years (46%)	3-FAIR	7%	56%	\$63.0M	\$630.0M
Data Confidence	Medium	Medium	Medium	Medium	Low	Low	Low

ASSET CATEGORY	REPLACEMENT VALUE	AVERAGE AGE (YEARS)	AVERAGE CONDITION	RENEWAL FUNDING RATIO	10-YEAR O&M & RENEWAL FUNDING RATIO	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS
* Corporate Asset Management (Fleet and EAM)	\$87.4M	26 years (39%)	4-POOR	55%	87%	\$2.5M	\$25.4M
Data Confidence	Medium	Medium	Medium	Low	Low	Low	Low
* Corporate Facilities and Energy Management	\$912.7M	39 years (18%)	2-GOOD	42%	84%	\$4.6M	\$46.0M
Data Confidence	Medium	High	Medium	Medium	Medium	Medium	Medium
Forestry and Horticulture	\$390.0M	26 years (48%)	2-GOOD	95%	91%	\$0.17M	\$1.7M
Data Confidence	Low	High	Low	Low	Medium	Low	Low
* Information Technology	\$25.2M	7 Years (16%)	3-FAIR	59%	92%	\$2.0M	\$19.6M
Data Confidence	Medium	Medium	Low	Low	Medium	Medium	Medium
Long-Term Care	\$319.0M	24 years (51%)	2-GOOD	98%	97%	\$2.5M	\$24.7M
Data Confidence	Medium	High	High	Medium	Medium	Medium	Medium

* These service areas are both Asset Owners and internal service providers across the City. The Asset Management Plans for these areas include only the assets needed to deliver their respective services.⁵

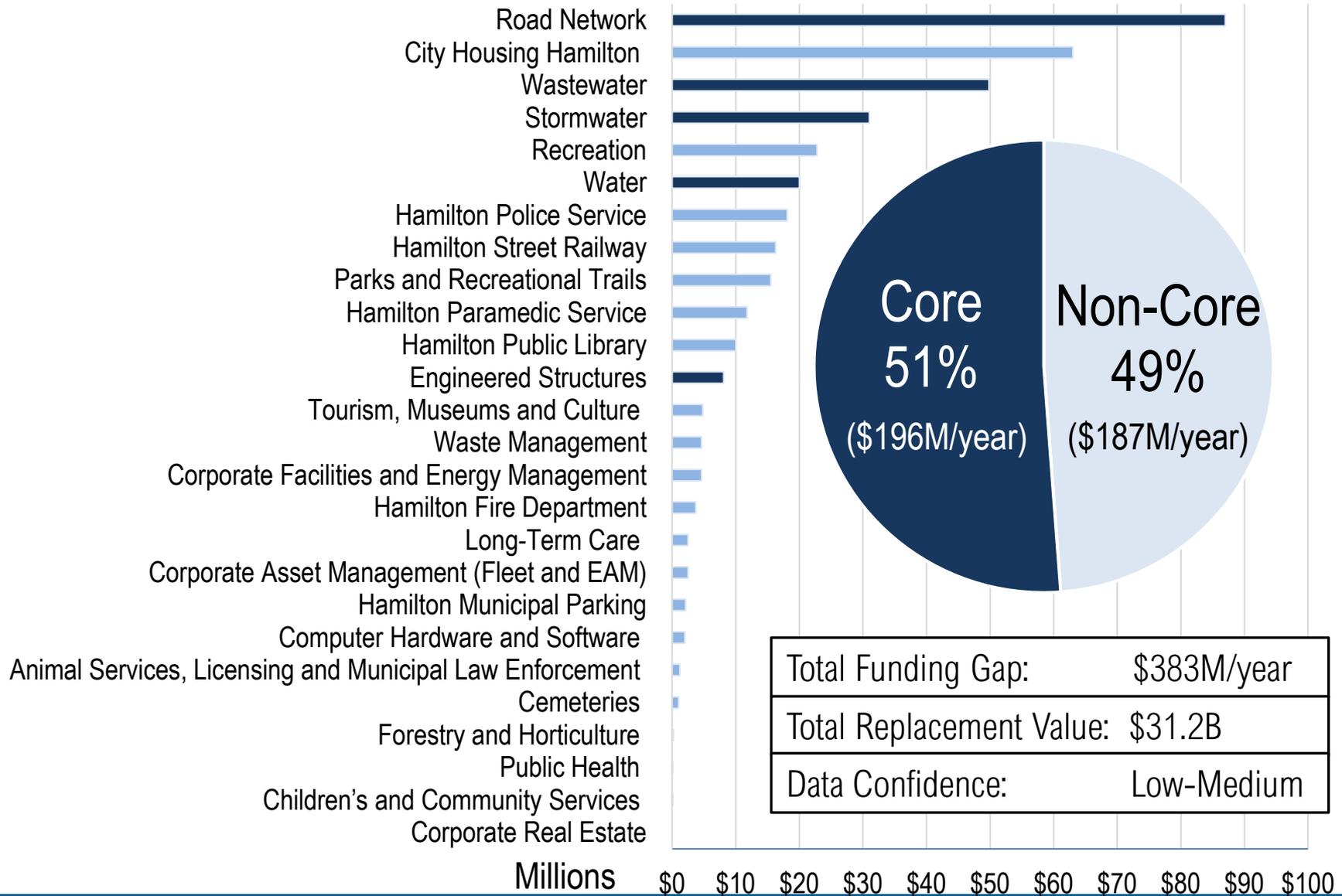
ASSET CATEGORY	REPLACEMENT VALUE	AVERAGE AGE (YEARS)	AVERAGE CONDITION	RENEWAL FUNDING RATIO	10-YEAR O&M & RENEWAL FUNDING RATIO	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS	
Parks and Recreational Trails	\$643.2M	28 years (45%)	3-FAIR	35%	71%	\$15.5M	\$155.0M	
Data Confidence	Medium	Low	Low	Low	Low	Low	Low	
Public Health	\$3.4M	5 years (36%)	3-FAIR	67%	100%	\$0.1M	\$1.3M	
Data Confidence	Low	High	Medium	Low	Medium	Medium	Medium	
Recreation	\$1.57B	39 years (49%)	3-FAIR	94%	74%	\$22.9M	\$229.0M	
Data Confidence	Medium	Medium	Medium	Low	Low	Low	Low	
Tourism, Museums and Culture	\$446.3M	147 years	2-GOOD	92%	76%	\$4.8M	\$48.0M	
Data Confidence	Low	High	Medium	High	Medium	Medium	Medium	
TOTAL	\$7.4B					\$120.4M	\$1.2B	
Funding Gap \$120.4 annually (data confidence low-med)								

Summary of Findings – Core and Non-Core

Report Number	ASSET MANAGEMENT PLANS	REPLACEMENT VALUE (B)	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS
Core Assets June 2022 - PW22048	Water Wastewater Stormwater Roads Engineered Structures	\$21.3	\$195.9	\$1.96B
Non-Core Assets December 2023 – PW23073	Waste Management Hamilton Police Service Parking	\$1.04	\$24.8	\$248M
Non-Core Assets April 2024 – PW23073(a)	Hamilton Street Railway (HSR) Hamilton Fire Department Hamilton Paramedic Service Corporate Real Estate Office Hamilton Public Library	\$1.26	\$41.8	\$418M
Non-Core Assets June 2024 - PW23073(b)	Animal Services, Licensing and Municipal Law Enforcement Hamilton Municipal Cemeteries Children's and Community Services CityHousing Hamilton Corporate Asset Management (Fleet, EAM) Corporate Facilities and Energy Management Forestry and Horticulture Information Technology Long-Term Care Natural Assets Parks and Recreational Trails Public Health Recreation Tourism, Museums and Culture	\$7.4	\$120.4	\$1.20B
Unallocated Assets	To Be Determined	\$0.2	To be Determined	To Be Determined
DATA CONFIDENCE		Low-Medium	Low-Medium	Low-Medium
TOTAL		\$31.2	\$383	\$3.83B

7

Annual Funding Gap – Core and Non-Core Page 1507 of 1695





Data

- Asset Registry data missing, old or incomplete,
- Lack of Condition Assessments,
- Challenges to maintain accurate replacement values.



Lifecycle Management

- Not all lifecycle activities for assets are defined or optimized,
- The impact of acquired assets on O&M activities and the timing of renewals requires more analysis.



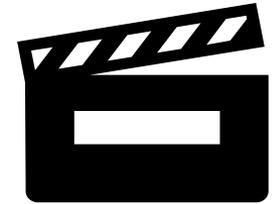
Levels of Service

- Levels of Service are critical for asset owners to understand,
- Challenges to obtain customer sentiment.



Governance

- Asset owner definition established, some grey areas and gaps, need to define roles and responsibilities further.



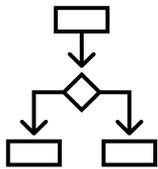
Knowledge Growth and Engagement



- Hamilton developed in-house training modules ,
- Highly collaborative project management and workshop style approach,
- Continuous improvement focus.

Standardizing Processes

- 17 Standard Operating Procedures (SOP) identified to ensure consistent asset management methodologies and approaches are applied across the organization:



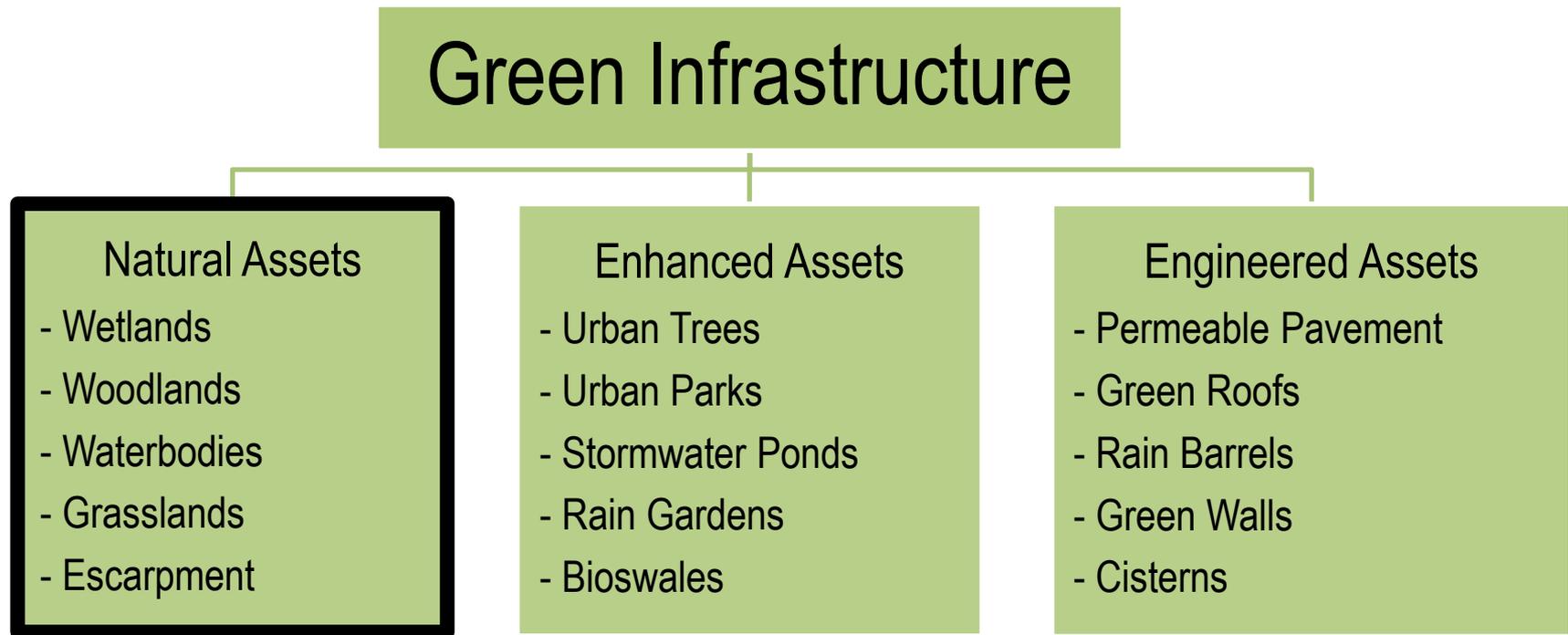
- Lifecycle Management SOP Level I,
- Levels of Service SOP Level I,
- Risk Management SOP Level I,
- Demand Management SOP Level I – in Development,
- Asset Registry Quick Guide.

Corporate Asset Management Program Strategies	Status
Strategic Asset Management Policy	
Governance	
Communications	
Levels of Service	Under Review
Data Management	Under Development
Demand Management	
Risk Management	
Lifecycle Management	
Integration	
Finance	

Continuous Improvement

- Over 375+ CI Items have been identified across all asset groups to address the issues/opportunities identified,
- 30+ items identified in the Natural Assets Roadmap.

It is a requirement per O.Reg 588/17 to include green infrastructure assets in municipal asset management planning. Scope of this discussion today is **natural assets only**.



For Ontario municipalities to meet O. Reg 588/17 for natural assets, the scope needs to cover **municipally owned** natural assets only.

Natural assets do not always follow traditional asset or financial management practices. The City of Hamilton is early in its recognition of natural assets in asset management plans and financial reports.

TRADITIONAL ASSETS	NATURAL ASSETS
Must be constructed or bought	Natural forming
Have an end of life and must be replaced	Have no end of life, don't need to be planned for replacement
Expected service levels achieved after construction / installations	Desired service capacity can take months to decades to achieve
Generally Accepted Accounting Principles / Tangible Capital Assets	Not incorporated into Generally Accepted Accounting Principles / Tangible Capital Assets
Typically only provides the service it is intended to perform and can be quantified	May also provide additional ecosystem services that benefit the City but may not be able to be quantified at this time
Many available best practices and guides	Few available best practices

Natural assets provide services to the City, but these services are not typically quantified. The first step in effective asset management is to link natural assets to the services they provide.

NATURAL ASSET	FUNCTION / SERVICE	POTENTIAL BENEFIT INDICATORS
Example: Wetlands	Stormwater management	Reduction of flood impacts from storms, reduces pollutant load in receiving waterbody, water available for multiple uses in the watershed
	Recreational	Improved human health and well-being by recreating in natural areas
	Wildlife habitat	Increased biodiversity, improved crop and forage production through pollination
	Temperature regulation	Local temperature reduction in urban settings
	Carbon sequestration	Mitigate climate change impacts

- The City of Hamilton was accepted into the Natural Asset Management Roadmap program conducted by the Natural Assets Initiative (NAI) which was completed in **November 2023**.
- **Over 30 actions** were identified with an associated priority (high / medium) and timeline (short (12 months) / medium (1-3 years)).
- Key themes for identified actions include:
 - Data inventory collection,
 - Condition assessments,
 - Financial planning, and
 - Training.



Natural Asset Management Roadmap Gantt Chart

Tasks	2023				2024				2025				2026				2027				2028				2029				2030				2031															
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4												
First Asset Management Plan & Roadmap Development	Internal Resources + \$600 External																																															
Initial Data Collection & Condition Assessment					Internal Resources + Roster Assignment																																											
Initial Financial Planning					Internal Resources																																											
Additional Data Collection & Risk Assessment									Internal Resources + Roster Assignments																																							
Lifecycle Management, Levels of Service & Long-Term Financial Planning													Internal Resources + Consultant Assignment																																			
Ongoing Training, Communication and Progress Reporting		Internal Resources																																														



Future State: Levels of Service, Lifecycle Management & Financial Planning

Service Delivery Objective	Customer Levels of Service	Technical Levels of Service	Natural Asset Activity Type	Lifecycle Stage	Budget
Levels of Service Objectives	<i>Condition</i>		Rehabilitation or restoration	Renewal	Capital Budget
	Customers are satisfied with the quality of the service.	Assets are maintained in adequate condition to deliver service.			
	<i>Function</i>		Monitor / Manage	Operations & Maintenance	Operating Budget
	Services meet customer needs and limit negative impacts.	Assets comply with regulations and perform as expected.			
	<i>Capacity</i>		Acquire Asset Ownership	Acquisition	Capital Budget
	Services have enough capacity and are accessible to customers.	Assets of sufficient capacity are available.			

Corporate Services

- Financial Planning and Policy Division, Brian McMullen and Staff
- Information Technology, Doug Kay and Staff

Public Works

- Environmental Services, Cynthia Graham and Staff
- Corporate Facilities and Energy Management, Indra Maharjan and Staff

City Housing Hamilton

- City Housing, Adam Sweedland and Staff

Planning and Economic Development

- Tourism, Museums and Culture, Debra Seabrook and Staff
- Animal Services, Licensing and Municipal Law Enforcement, Dan Smith and Staff

Community Services

- Recreation, Steve Sevor and Staff
- Long Term Care, Holly Odoardi and Staff
- Children's and Community Services, Brenda Bax and Staff

Healthy and Safe Communities

- Public Health, Dr. Elizabeth Richardson and Staff

Natural Assets

- Stakeholder team members and associated Directors

Corporate Asset Management



**Hamilton-Wentworth District School Board (HWDSB)
Liaison Committee
REPORT 24-001
Monday, May 27, 2024
2:00 p.m.
Room 264, 2nd Floor,
71 Main Street West, Hamilton**

Present: M. Felix-Miller, HWDSB (Co-Chair)
Councillors J. Beattie and M. Tadeson
Trustee D. Danko

Also Present: Councillor M. Francis, Trustee T. White

Absent with regrets: Mayor A. Horwath (Co-Chair) – City Business; Trustee P. Tut – HWDSB Business; T. Lin (Student Trustee) and H. Wang (Student Trustee)

THE HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD LIAISON COMMITTEE PRESENTS REPORT 24-001 AND RESPECTFULLY RECOMMENDS:

FOR INFORMATION:

(a) APPROVAL OF THE AGENDA (Item 2)

The Committee Clerk advised that the Committee of the following changes to the agenda:

10. DISCUSSION ITEM

10.3 Update respecting Bike Lanes on Dewitt Road (Orchard Park) (no copy)

The agenda for the May 27, 2024 meeting of the Hamilton-Wentworth District School Board Liaison Committee was approved, as amended.

(b) DECLARATIONS OF INTEREST (Item 3)

There were no declarations of interest.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 4)

(i) July 18, 2023 (Item 4.1)

The Minutes of the July 18, 2023 meeting of the Hamilton-Wentworth District School Board Liaison Committee were approved, as presented.

(d) DISCUSSION ITEMS (Item 10)

(i) Housing Sustainability and Investment Roadmap Work Program: City Property Review and Property Disposition Strategies (Motion referred from the General Issues Committee, February 21, 2024) (Item 10.1)

That staff of both the HWDSB and City of Hamilton will proceed with the Council-approved direction to reconvene meetings to discuss the challenges faced regarding the proposed construction of new affordable housing units for seniors, as part of the Dominic Agostino Riverdale Recreation Centre and Community Hub expansion project.

The information respecting the Housing Sustainability and Investment Roadmap Work Program: City Property Review and Property Disposition Strategies, was received.

(ii) Bernie Custis Secondary Access to Tim Horton's Field Verbal Update (Item 10.2)

- (a) Public Works staff were directed to investigate additional opportunities for Bernie Custis Secondary students to utilize Tim Horton's Field, and
- (b) Staff were also directed to provide an update on the Brightside Park Dom Glass Project, with timelines of completion to the HWDSB Liaison Committee.

The update respecting Bernie Custis Secondary Access to Tim Horton's Field, was received.

(iii) Update respecting Bike Lanes on Dewitt Road (Orchard Park) (no copy) (Added Item 10.3)

Committee members discussed additional protections around the bike lanes in front of Orchard Park Secondary School and Dewitt Road, for student pick-ups and drop-offs.

The update respecting Bike Lanes on Dewitt Road (Orchard Park), was received.

(e) ADJOURNMENT (Item 15)

There being no further business, the Hamilton-Wentworth District School Board Liaison Committee meeting adjourned at 2:49 p.m.

Respectfully submitted,

Maria Felix-Miller, Co-Chair
Hamilton Wentworth District School
Board Liaison Committee

Loren Kolar
Legislative Coordinator
Office of the City Clerk



INFORMATION REPORT

TO:	Mayor and Members General Issues Committee
DATE:	June 19, 2024
SUBJECT:	Response to the Office of the Chief Coroner Ontario Forensic Pathology Service (HSC24026) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Robyn Perry (905) 546-2424 Ext. 7801 Shannon Honsberger (905) 546-2424 Rob Mastroianni (905) 546-2424 Ext. 8035
SUBMITTED BY:	Michelle Baird Director, Housing Services Division Healthy and Safe Communities Department
SIGNATURE:	<i>Michelle Baird</i>

COUNCIL DIRECTION

N/A

INFORMATION

On November 7, 2023, The Ministry of the Solicitor General, Office of the Chief Coroner Ontario Forensic Pathology Service provided a Patient Safety Review Committee Report (PSRC 2022-10). This report was issued to the City of Hamilton as well as the Good Shepherd Centre Hamilton, the organization that operates the Emergency Shelter in which a person passed away in November 2020. The tragedy was deemed an accidental death due to drug toxicity. A reply is expected from both the service provider and the City. The response will be considered a public document and may be released to interested parties upon request. The purpose of this Information Report is to inform Council of the Coroner's report and responses to its recommendations.

The City is included as a recipient of the report given our role as the Service Manager of local homelessness funding that resources emergency shelters. We take the lead on contracts, operating standards, and recommending best practice. As such, we have influence into the operation of shelters that we fund. However, the City does not directly

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

SUBJECT: Response to Office of the Chief Coroner Ontario Forensic Pathology Service (HSC24026) (City Wide) - Page 2 of 3

own or operate any emergency shelters and is not the sole funder of these organizations.

The death and subsequent report occurred prior to Council approval of the City's adoption of the updated Hamilton's Emergency Shelter Standards. The Standards were presented to Emergency and Community Services Committee in report HSC23007 in September 2023. The document was co-written by emergency shelter operators and informed by people with living experience as well as community groups. It outlines the standards of service and care that are mutually agreed upon and guide the work of emergency shelters, including harm reduction practices that overlap with the intentions of the Coroner's recommendations.

The Coroner's report makes four recommendations to both the City and the specific shelter, as outlined below. Considering the local operational viability, potential benefit of the recommendations, and the City's ability to influence shelter operations, staff have prepared a response for each. All responses have been developed in collaboration with the City's Legal Services Division.

1. Daily room checks should be conducted in a way to ensure the wellbeing of the client. A room check consent should be obtained between the shelter and client with clear client expectations in how the daily room checks should be conducted to ensure safety.
Response: This is already implemented and is practiced at all shelter locations; the only exception is the weekly checks for the family shelters' apartments.
2. A buddy peer system, supported by and overseen by the shelter, could be considered for use in shelters.
Response: While the overarching policy is to abstain from substance use in shelters, the City encourages people to use available technology, safe use spaces, and inform someone if they are using. It would be inappropriate to facilitate other shelter stayers to take on the responsibility of monitoring other shelter stayer's substance use.
3. Harm reduction measures should be expanded with any available technologies to ensure residents are responsive.

Response:

The Shelter Standards set out minimum expectations around harm reduction practices in shelter. This includes things like, emergency shelter operators having a harm reduction policy and procedures in place that will make explicit that the shelter operates using a harm reduction approach and that the policy and procedures include, but are not to be

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SUBJECT: Response to Office of the Chief Coroner Ontario Forensic Pathology Service (HSC24026) (City Wide) - Page 3 of 3

limited to, responding to overdose; wellness checks; how harm reduction supplies are distributed, collected, and disposed of. Further, shelter operators and the City share best and promising practice and discuss any system-wide implications and adaptations at regular monthly meetings of the Emergency Shelter Coordination Table. The City and shelter operators also sit on several community tables regarding harm reduction. However, the City encourages shelter operators to expand their harm reduction services to include new technologies. To support this expansion, Public Health Services has made available limited program funding to cover the cost of implementing bathroom monitoring technology. Some shelters already utilize or committed to utilizing harm reduction technologies and staff continue to collaborate with partners to explore continued use.

4. Application of the Duty of Care Principal for all shelters – designed for and by shelter staff and the clients that use them.
 Response: In 2023, the City finalized Hamilton’s Emergency Shelter Standards. This document outlines service and care standards for all emergency shelters, including the approach to harm reduction. Through this document, the City has set expectations around reasonable efforts to ensure safety within shelters. The Duty of Care Principle can be defined in general as a legal obligation that may be imposed on an individual or organization to take reasonable care to avoid conduct that poses an unreasonable risk of harm to others.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report HSC24026 – Patient Safety Review Committee Report (PSRC–2022-10)

Appendix “B” to Report HSC24026 – Office of the Chief Coroner and Ontario Forensic Pathology Service Response to Recommendations

Appendix “C” to Report HSC24026 – Hamilton’s Emergency Shelter Standards, see Section 6.4 “Substance Use, Harm Reduction and Safer Use”

Ministry of the Solicitor General

Ministère du Solliciteur général

Office of the Chief Coroner
Ontario Forensic Pathology ServiceBureau du coroner en chef
Service de médecine légale de l'OntarioForensic Services and
Coroners Complex
25 Morton Shulman Avenue
Toronto ON M3M 0B1Complexe des sciences judiciaires
et du coroner
25, Avenue Morton Shulman
Toronto ON M3M 0B1Telephone: (416) 314-4000
Facsimile: (416) 314-4030Téléphone: (416) 314-4040
Télécopieur: (416) 314-4030Via E-mail to: publichealth@hamilton.ca

November 7, 2023

Public Health Hamilton
71 Main Street West
Hamilton, Ontario
L8P 4Y5

To whom it may concern

Re: Patient Safety Review Committee Report (PSRC 2022-10)

Date of death:	November 26, 2020
PSRC File No.:	2022-10 (2020-18590)

Please find enclosed a copy of the report and recommendations prepared by the Patient Safety Review Committee (PSRC) concerning the above-mentioned case.

The purpose of the PSRC is to assist the Office of the Chief Coroner in the investigation, review and development of recommendations towards the prevention of future deaths relating to healthcare-related cases where systems-based errors appear to be a major factor and to assist coroners in improving the investigation of deaths within, or arising from, the healthcare system in which system-based errors appear to have occurred.

Upon reviewing this case and preparing recommendations towards the prevention of future deaths, the PSRC has indicated that your organization may be in a position to implement recommendations **1 to 4**. I would appreciate your response to these recommendations by **May 7, 2024**.

If you feel the recommendations have been assigned incorrectly, your suggestions as to where to direct it would be greatly appreciated.

Please be advised that your response will be considered a public document and may be released to interested parties upon request.

PSRC recommendations are not legally binding; however, we trust they will be given careful consideration for implementation and, if not implemented, that your organization provides an explanation.

Please direct your response to:

Executive Lead – Committee Management
Office of the Chief Coroner
occ.deathreviewcommittees@ontario.ca

Thank you for participating in this important process. Please contact us if you have any questions.

Yours truly,

A handwritten signature in black ink, appearing to be 'RJ', with a horizontal line through the middle and a vertical line extending upwards from the center.

Reuven Jhirad, MD MPH CCFP FCFP
Deputy Chief Coroner
Chair – Patient Safety Review Committee

RJ:rg

Enclosure



PATIENT SAFETY REVIEW COMMITTEE

This document is produced pursuant to section 15(4) of the Coroners Act, R.S.O. 1990, c. 37, on the basis that it is to be used for the sole purpose of a Coroner's investigation, and not for any litigation or other proceedings unrelated to the Coroner's investigation. Moreover, the opinions expressed herein do not necessarily take into account all of the facts and circumstances surrounding the death. The final conclusions of the Coroner's investigation may differ significantly from the opinions expressed herein.

Date of death: November 26, 2020
Age: 38
File number: 2020-18590 (PSRC 2022-10)

Reason for review:

Concerns were raised with respect to monitoring in the shelter.

Documents reviewed:

1. Police Report
2. Coroner Report
3. Autopsy Report
4. Review of the Toronto Shelter Standards
5. Review of the Shelter By-law
6. Interview with Manager at Public Health Department - conducted May 11, 2023.
7. Interview with person with lived experience with addiction and homelessness - conducted May 16, 2023.

History:

The patient, who resided in a woman's shelter, had a history of polysubstance use, post traumatic stress disorder, and borderline personality disorder. She had frequent emergency visits related to substance use. On November 26, 2020, she was discovered by staff lying on the floor in her room deceased. The coroner documented early signs of decomposition. There was drug paraphernalia seen by the body. According to the police report, the patient was last seen alive on November 24, 2020. On November 24, she was observed entering her room alone on a video at 3:38 AM and was last spoken to by staff at 4:54 AM that day. On November 25, there was a door knock by staff twice with no response noted as per staff. A note was reported to have been left under her door. She was not seen or spoken to by staff on that day. On November 26, 2020, at 1:16 PM, staff

entered her room to clean the bathroom and to conduct water inspections in the bathroom. The door was held open by staff while the technician worked in the bathroom. The patient was not seen at this time. Staff later re-entered her room at 3:09 PM the same day and discovered her body by the bed. She was deceased. According to staff, the patient had been feeling unwell for the past few weeks and was spending time resting in her room. The mother raised concerns after her death that her daughter had last used her cell phone on November 22, 2020, and had not been seen for several days. An autopsy was conducted which concluded the cause of death as Fentanyl, Heroin, Methamphetamine, and Amphetamine toxicity. The manner of her death was deemed an accident. The coroner recommended daily recorded checks that would include ensuring that the person was conscious and responsive.

Post-mortem examination

Cause of Death: Fentanyl, Heroin, Methamphetamine, and Amphetamine Toxicity

Manner: Accident

Discussion:

To address the complex issue of preventing fatalities related to mental health and addiction disorders in the shelter system requires reviewing their policies.

According to the Mental Health Commission of Canada (MHCC), structural stigma can increase risk of adverse outcomes for persons with lived experience of mental health and addiction issues.¹ This may occur unknowingly through possible biases that can impact laws, policies, and practices which ultimately can impact the treatment of people.¹ Concerns exist for some of the approaches toward care of individuals with substance use challenges and mental health issues. There is a concern that some approaches are too restrictive in attempts to achieve treatment compliance.

An insightful remark from a participant in a study examining stigma associated with drug use stated “let’s not lose sight of the fact that effective treatment is one of the best antidotes to stigma” in their reference to readily available consumption sites and opioid agonist treatment in shelters. According to the BC Centre on substance abuse, there is a double standard in what sorts of substances are deemed acceptable and which are not.

In a discussion with a manager at a local Public Health Department there were several important considerations reviewed:

- i. There has been an observation that being alone in a room increases the risk of overdose not just during the COVID-19 pandemic but at other times as well.
- ii. Several shelters have attempted to implement several measures to reduce the risk of an overdose. These include: low barrier access to naloxone, overdose

¹ Mental Health Commission of Canada, 'Structural Stigma' (Mental Health Commission of Canada, accessed 15 May 2023) <<https://www.mentalhealthcommission.ca/English/focus-areas/stigma-and-discrimination/structural-stigma>>.

and harm reduction training for shelter workers and people who use drugs, the implementation of Urgent Public Health Need Sites (UPHNS) which are supervised consumption services, monitoring of drug use for people who use drugs by other people who use drugs (called safe spotting or peer witnessing), promoting technologies like the National Overdose Response service where you call if you are going to use, and if they can't reach you after they will call 911, and anti stigma training.

- iii. The use of safety checks was reviewed and although it was stated that there was no definitive study supporting these checks reported it was stated that they could be beneficial if done properly. This would require the appropriate staff protocols, client input and the use of modern technologies as available.

There was also discussion with an individual who had lived experience with substance used for further information to inform possible recommendations. This conversation resulted in the following points for consideration:

- i. The use of room and bathroom checks was known to occur and thought to be helpful in death prevention.
- ii. Peer supporters/counsellors were felt to be quite helpful with substance-use related challenges.

Summary

With respect to the patient, the mother raised concerns that she had last used her cell phone on November 22 which would imply death for several days without being accounted for. According to the police report and video surveillance, the patient was seen without any reports of distress on November 24. However, on November 25, there were two door knocks only with no response and no room entry. A note was left for the patient. She was discovered the following day after room maintenance. Although her well being was unaccounted for on the day before her death, it cannot be extrapolated from this that her death could have been prevented. An overdose can occur rapidly. Checking on her the day before may not have changed the outcome. The fact that she was alone at the time without a peer support network to regularly account for her wellbeing may have been a more significant contributing factor.

Recommendations:

To the Shelter System, Local Public Health Units/Substance Use Divisions

1. Daily room checks should be conducted in a way to ensure the well being of the client. A room check consent should be obtained between the shelter and client with clear client expectations in how the daily room checks should be conducted to ensure safety.

2. A buddy peer system, supported by and overseen by the shelter, could be considered for use in shelters.
3. Harm reduction measures should be expanded with any available technologies to ensure residents are responsive.
4. Application of the Duty of Care Principle for all shelters – designed for and by shelter staff and the clients that use them.

Ministry of the Solicitor General

Ministère du Solliciteur général

Office of the Chief Coroner
Ontario Forensic Pathology ServiceBureau du coroner en chef
Service de médecine légale de l'OntarioForensic Services and
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25 Morton Shulman Avenue
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Télécopieur: (416) 314-4030

Office of the Chief Coroner and Ontario Forensic Pathology Service Response to Recommendations

OCC File No. XXXXX
Committee/Inquest File No. 2022-10(2020-18590)

A. Recipient Information	
Responding Organization	City of Hamilton
Name of individual(s) completing this form	Robyn Perry
Contact information for who to direct any additional inquiries/questions to	Rob Mastroianni 350 King St E Unit 110, Hamilton ON 905-546-2424 ext 8035
Date of Response	TBD

B.1 Recommendation Response	
<i>Please complete this section per recommendation.</i>	
Daily room checks should be conducted in a way to ensure the well being of the client. A room check consent should be obtained between the shelter and client with clear client expectations in how the daily room checks should be conducted to ensure safety.	
Response (Please Select One)	<input checked="" type="checkbox"/> Implemented <input type="checkbox"/> In Progress <input type="checkbox"/> Not Implemented <input type="checkbox"/> Not Applicable

Justification / Detailed Response (MANDATORY):

Please provide additional context to your response including how you are implementing the recommendation, any progress you are making or planning to make regarding its implementation, or a detailed justification for why you will not be implementing the recommendation. If this recommendation is not applicable to your organization, please let us know why, and who might be best suited to receive it instead. Thank you.

Please Note: The City of Hamilton has a funding relationship with Emergency Shelters and does not own or operate any directly, but is the Service Manager for Provincial funding, and the Community Entity for Federal funding. The City is also not the sole funder of Emergency Shelters programs and therefore the City has limited authority to mandate shelters in operational policies and procedures, especially work that may fall into the category of healthcare or other service provision beyond what we fund, which is housing-focused sheltering.

Since 2020, but before received this report from the Coroner's Office, Hamilton has updated their Emergency Shelter Standards that articulate minimum expectations for operating, service deliver, and facility standards in relation to funding agreements.

Mandatory hourly, nightly and daily room checks are conducted at emergency shelters with congregate settings. Emergency shelters where guests have their own self-contained apartment have less frequent check ins. If people identify a safety concern, including a safety plan for harm reduction, staff will arrange to check in more often. Non congregate settings have one time per day check ins. The family shelter apartment-style setting has weekly apartment checks. Hotel shelter beds have an "eyes on the client" check-in once per day.

B.2 Recommendation Response

Please complete this section **per recommendation**.

A buddy peer system, supported by and overseen by the shelter, could be considered for use in shelters.

Response (Please Select One)	<input type="checkbox"/> Implemented
	<input type="checkbox"/> In Progress
	<input type="checkbox"/> Not Implemented
	<input checked="" type="checkbox"/> Not Applicable

Justification / Detailed Response (MANDATORY):

Last year, the City renewed Hamilton's Emergency Shelter Standards with a section concerning Harm Reduction that indicates each shelter must have a harm reduction policy and share it with clients upon intake or shortly afterwards. The specific recommendation of a "buddy system" was rejected as too risky and opening people up to risk and trauma. People are encouraged to utilize harm reduction technologies, safer use sites, and to not use alone. When discussing this with the emergency shelter operators indicated that they feel it is irresponsible to have a formal process to promote the buddy system between clients as it puts an undue burden on shelter clients to monitor and respond to drug use and potential toxicity events.

B.3 Recommendation Response

Please complete this section **per recommendation**.

Harm reduction measures should be expanded with any available technologies to ensure residents are responsive.

Response (Please Select One)	<input type="checkbox"/> Implemented
	<input checked="" type="checkbox"/> In Progress
	<input type="checkbox"/> Not Implemented
	<input type="checkbox"/> Not Applicable

Justification / Detailed Response (MANDATORY):

Please provide additional context to your response including how you are implementing the recommendation, any progress you are making or planning to make regarding its implementation, or a detailed justification for why you will not be implementing the recommendation. If this recommendation is not applicable to your organization, please let us know why, and who might be best suited to receive it instead. Thank you.

Again, in 2023 the City renewed Hamilton's Emergency Shelter Standards with a section concerning Harm Reduction. At least one emergency shelter utilizes Brave sensors in the common washroom. Brave sensors are fixed location devices that alert someone when there is no movement for a set period of time. Hamilton's Public Health is funding 12 sensor devices for the common bathrooms in emergency shelters but the annual and start-up costs of installing sensors in each individual unit bathroom is prohibitive. System level conversations are unfolding regarding the adaptation and use of various technologies from phone apps to wearable technology, to overdose detection alert systems installed in bathrooms. The City is limited in what it can mandate the emergency shelter operators to take on, especially in the realm of health care or other duties outside of housing-focused sheltering.

B.4 Recommendation Response

Please complete this section **per recommendation**.

Application of the Duty of Care Principle for all shelters – designed for and by shelter staff and the clients that use them.

Response (Please Select One)	<input type="checkbox"/> Implemented
	<input checked="" type="checkbox"/> In Progress
	<input type="checkbox"/> Not Implemented
	<input type="checkbox"/> Not Applicable

Justification / Detailed Response (MANDATORY):

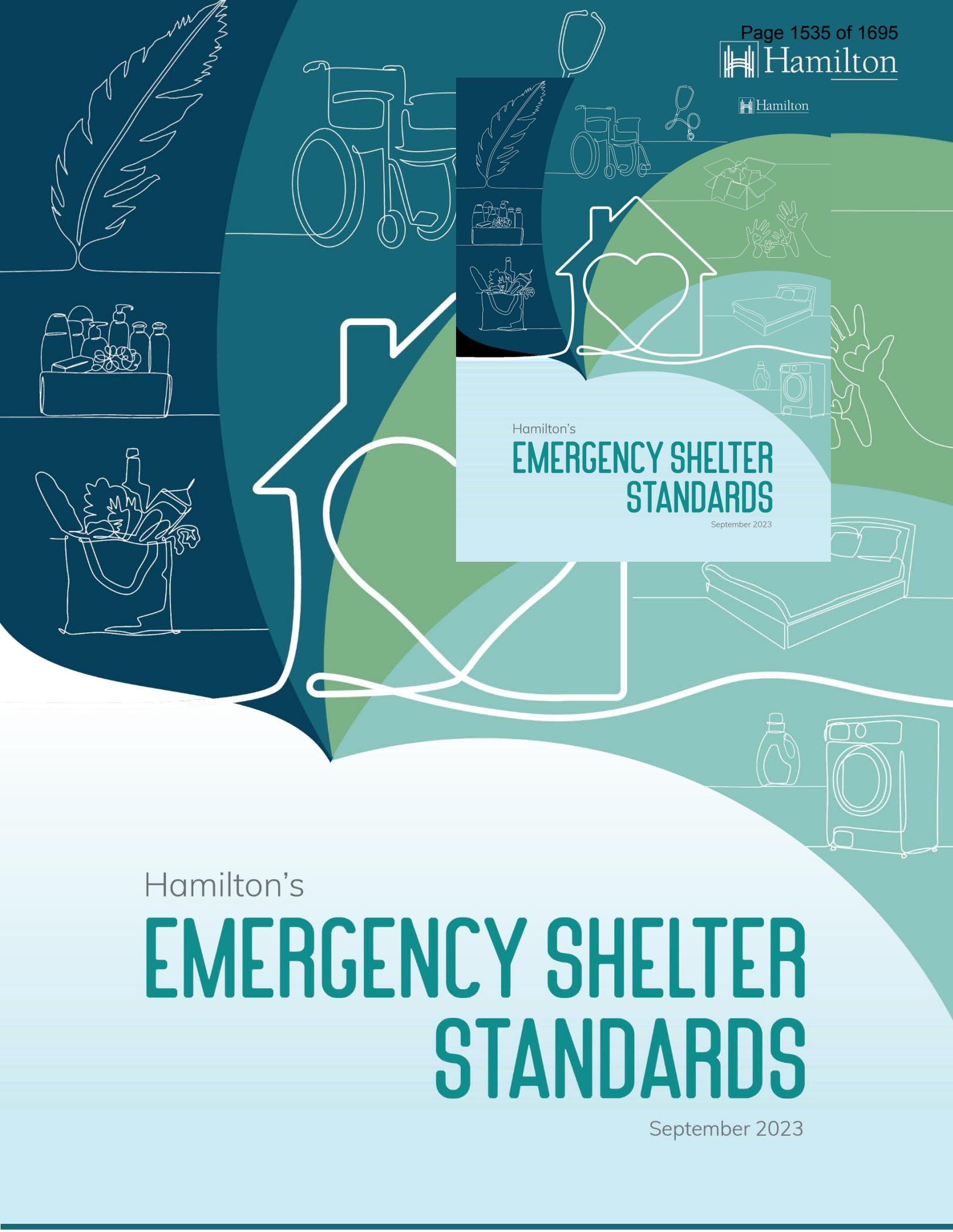
Please provide additional context to your response including how you are implementing the recommendation, any progress you are making or planning to make regarding its implementation, or a detailed justification for why you will not be implementing the recommendation. If this recommendation is not applicable to your organization, please let us know why, and who might be best suited to receive it instead. Thank you.

Hamilton's Emergency Shelter Standards lays out service and care standards, including the area of harm reduction. It is a document that is reviewed and updated every 5 years. It was co-created with emergency shelter operators and informed through extensive consultation with emergency shelter clients and interested community groups. It lays out the minimum expectations for operating service-delivery and facility standards in relation to funding agreements. Please see attached.

Hamilton's
**EMERGENCY SHELTER
STANDARDS**
September 2023

Hamilton's
**EMERGENCY SHELTER
STANDARDS**

September 2023



Hamilton's Emergency Shelter Standards

1. **Introduction**

- 1.1. Acknowledgments
- 1.2. Background
- 1.3. Writing the Standards
- 1.4. Local Homeless-Serving Sector
 - 1.4.1. Role of the City
 - 1.4.2. Role of Emergency Shelter Operators
 - 1.4.3. Role of Indigenous Partners and Community Leaders
 - 1.4.4. Role of People with Lived Experience
- 1.5. Guiding Principles
- 1.6. Key Terms and Definitions

2. **Client Rights and Responsibilities**

- 2.1. Rights and Responsibilities
- 2.2. Client Input
- 2.3. Complaints Process

3. **Accessing Services**

- 3.1. Intake and Initial Assessment
- 3.2. Belongings
- 3.3. Daytime Access
- 3.4. Curfew and Overnight Passes
- 3.5. Length of Stay
- 3.6. Capacity Limits
- 3.7. Service Restrictions

4. **Services Provided**

- 4.1. Housing-Focused Supports and Case Management
- 4.2. Basic Needs
 - 4.2.1. Bedding
 - 4.2.2. Hygiene
 - 4.2.3. Laundry
 - 4.2.4. Clothing
 - 4.2.5. Nutrition
 - 4.2.6. Pets
- 4.3. Health Supports and Partnerships

5. **Addressing Indigenous Homelessness**

- 5.1. Indigenous Persons

6. Supporting Diverse Communities

- 6.1. Children
- 6.2. Youth
- 6.3. Health and Accessibility
- 6.4. Substance Use, Harm Reduction and Safer Use
- 6.5. 2SLGBTQIA+
- 6.6. Race, Ethnicity and Immigration Status
- 6.7. Gender
- 6.8. Religion
- 6.9. Owners of Service Animals

7. Shelter Operations

- 7.1. Training Requirements
- 7.2. Neighbourhood Relationships
- 7.3. Facility Ratios

8. Health and Safety

- 8.1. Infectious Disease Prevention and Management
- 8.2. Cold Alerts and Heat Warnings
- 8.3. Safety Planning
- 8.4. Serious Incidents

9. Accountability and Governance

- 9.1. Program Accountability
- 9.2. Board Requirements
- 9.3. Finance
- 9.4. Relevant Legislation

10. Information Systems

- 10.1. Client Database Information Management Systems
- 10.2. Consent
- 10.3. Confidentiality
- 10.4. Storing Information

11. Standards Administration

- 11.1. Review History and Approval
- 11.2. Related Documents



1. Introduction

1.1. Acknowledgments

1.2. Background

1.3. Writing the Standards

1.4. Local Homeless-Serving Sector

1.4.1. Role of the City

1.4.2. Role of Emergency Shelter Operators

1.4.3. Role of Indigenous Partners and Community Leaders

1.4.4. Role of People with Lived Experience

1.5. Guiding Principles

1.6. Key Terms and Definitions

1.1 Acknowledgments

The Hamilton Emergency Shelter Standards (“the Standards”) were created in collaboration with local Indigenous leaders, people experiencing homelessness, emergency shelter operators, and shelter staff. In addition, the Standards were informed by best practices learned from other municipalities across Canada.

Indigenous Peoples are respected partners and leaders in the work of ending homelessness. The City of Hamilton and shelter operators value the ongoing collaboration with local Indigenous leaders that informs continuous improvement to the homeless-serving sector beyond updating the Standards. This document is representative of the City of Hamilton’s commitment to addressing and preventing Indigenous homelessness in ways that are rooted in the spirit and actions of reconciliation.

The City of Hamilton is situated upon the traditional territories of the Erie, Neutral, Huron-Wendat, Haudenosaunee, and Mississaugas. This land is covered by the Dish With One Spoon Wampum Belt Covenant, which was an agreement between the Haudenosaunee and Anishinaabek to share and care for the resources around the Great Lakes. We further acknowledge that this land is covered by the Between the Lakes Purchase, 1792, between the Crown and the Mississaugas of the Credit First Nation.

Today, the City of Hamilton is home to many Indigenous people from across Turtle Island (North America) and we recognize that as part of our commitment to truth and reconciliation, we must do more to learn about the rich history of this land so that we can better understand our roles as residents, neighbours, partners, and caretakers. The City of Hamilton is grateful for the experience, knowledge, and feedback our community partners and people with lived experience contributed throughout the process of developing the Standards.



1.2 Background

The Hamilton Emergency Shelter Standards were designed to support the work happening to end homelessness in our community by providing a transparent framework of consistent shelter services for all individuals and families experiencing homelessness in Hamilton. Building upon the 2008 Emergency Shelter Standards, the updated 2023 Standards provide more comprehensive and detailed information with 24 new sections and 39 enhanced sections. By establishing expectations for minimum operating, service-delivery, and facility standards based on local community input, research, and best practices from the Canadian Shelter Transformation Network and other jurisdictions across Canada, this document is a guide for emergency shelters to continue their individual and collective success in helping individuals resolve their homelessness in order to live safer, healthier lives. This document serves as a tool to support quality, consistency, and transparency in the provision of emergency shelter services in Hamilton.

The Standards apply to Emergency Shelter Operators within the homeless-serving sector of Hamilton. Other services such as Violence Against Women, short-term/transitional housing, and supportive housing programs are all essential components of addressing homelessness, however, these services require distinct service delivery models and standards.

The Standards are not intended to be exhaustive as our homeless-serving sector is continuously adapting to changing circumstances, demands, and challenges. Emergency Shelter Operators will have their own policies and procedures in addition to the expectations laid out in the standards. For issues not covered within the Standards, it is expected that Emergency Shelter Operators will exercise reasonable judgment and/or consult with City of Hamilton staff where necessary.

It is recommended that the Standards be reviewed and updated every four years in order to reflect and adapt to evolving research and needs within the City of Hamilton. The City of Hamilton, Emergency Shelter Operators, and local Indigenous leaders are committed to reconvening as needed to adapt to changing circumstances between the four-year review point.

1.3 Writing the Standards

The Standards were written in collaboration with the community. The City sketched out an initial rough draft of the Standards based on Hamilton's 2008 Standards, a jurisdictional scan of the standards from other municipalities, and best practice documents. Based on this rough draft, the City initiated two parallel consultation processes. A working group made up of emergency shelter operators and Indigenous representatives formed and met weekly to write the Standards. Also, a consultation group was formed between the City and Keeping 6 peer workers to engage people with living experience. People accessing each of the City funded emergency shelters plus three drop-ins were engaged in open-ended small group discussions about the Standards, and what was important to them. The expertise of these two groups, emergency shelter operators and people with living experience, are foundational to the Standards. A first draft was completed and brought to several community groups with expertise related to specific standards. The suggested edits were brought back to the shelter operators' steering committee to draft a final version of the Standards.

1.4 Local Homeless-Serving Sector

The successful ongoing implementation of the Hamilton Emergency Shelter Standards depends on a reciprocal process between the City of Hamilton, emergency shelter operators, and Indigenous community partners. Collaboration to support a coordinated system is essential for improving service integration and effectiveness. Service delivery and positive housing outcomes are enhanced through open and collaborative working relationships. The City of Hamilton, emergency shelter operators, and Indigenous community partners each have important roles to play in supporting each other and the clients we serve.

1.4.1 Role of the City

The City of Hamilton is responsible for coordinating the provision of emergency shelter services within Hamilton through the purchase of services with emergency shelter operators. Funding for emergency shelters is provided through municipal, provincial, and federal funding. Municipal funds are approved by Hamilton's City Council through the annual operating budget process.

The City of Hamilton fulfils the municipal role by:

- Entering into contractual arrangements (purchase of service agreements) with community-based agencies and providers to purchase shelter assistance for people who are homeless, in accordance with the above-mentioned service agreements.
- Acting as the Service Manager for federal and provincial funding by administering and maintaining the shelter system through Funding Agreements with shelters.

- Ensuring that all shelter programs meet the Standards and the contractual obligations as set out in the Subsidy Agreements.
- Coordinating and administrating strategic planning.
- Undertaking an annual review of the funding and service levels.
- Conducting partial reviews as deemed necessary by the City, funders, and/or as requested by the emergency shelter operator.

In addition, the City of Hamilton is accountable to people experiencing homelessness, Indigenous community partners, and emergency shelter operators for:

- Inviting and reviewing the recommendations brought forward by Indigenous community partners, people with lived experience, and emergency shelter operators.
- Aiming to design a system that not only responds to Indigenous homelessness, but also respects, honours and promotes the strength and resiliency of Indigenous peoples.
- Being available for sharing information, resources, etc. that support both client services and developing organizational capacity.
- Leading the development and implementation of a coordinated access system to serve individuals experiencing homelessness more equitably with consistent best practices and service integration across providers.
- Providing support with policy development, research, program development, evaluation, and reviews as needed.
- Reviewing and updating the Standards every four years in partnership and collaboration with emergency shelter operators, Indigenous leaders, and people with lived experience.
- Supporting each emergency shelter operator as a contributing member of the overall service system for the homeless and at-risk population in Hamilton.

1.4.2 Role of Emergency Shelter Operators

As a primary delivery agent of emergency shelter services, each emergency shelter operator will be responsible for ensuring:

- Compliance with the operating agreement between the City of Hamilton and the emergency shelter organization.
- Compliance with the Standards.
- Participation in the Standards review.
- An understanding of their role as a key stakeholder in the emergency shelter service system in Hamilton and the coordinated access system.
- Shelter services respond to the unique needs of Indigenous clients.
- Shelter services understand and respect the needs of other marginalized clients.
- Ensure that all staff have education on the unique needs and experiences of Indigenous clients.

To this end, emergency shelter operators will:

- Ensure full understanding of the requirements of the Standards to implement them.
- Provide input for the regular review of the Standards and other evaluation and improvement projects coordinated by the City of Hamilton (this includes having ready all documentation necessary to support compliance and being prepared to arrange interviews/questionnaires for selected staff, volunteers, clients, and Board members).
- Be available for partial reviews as requested by the City of Hamilton.
- Ask the City of Hamilton to schedule a review if it is deemed an exercise that could be helpful in developing organizational capacity.
- Collaborate with other emergency shelter operators and Indigenous community partners to strengthen client service delivery as a shelter service system.

1.4.3 Role of Indigenous Partners and Community Leaders

Hamilton's homeless-serving system must account for the systemic over-representation of Indigenous peoples experiencing homelessness. Advancing Indigenous partners' autonomy and self-determination, the City of Hamilton is committed to ongoing investments to Indigenous leadership and autonomy. We will work together to develop connections to housing and supports that are culturally appropriate, rooted in the spirit and actions of reconciliation.

As leaders in the City of Hamilton and representatives of the Indigenous community, Indigenous community partners are advancing work related to emergency shelter services through:

- Self-determination and autonomy, identifying local priorities and making investment decisions.
- Leading Indigenous-led research and policy development activities and working in collaboration with the City and shelter providers to support improvements in emergency shelter service delivery.
- Participating in and providing guidance on City-led research and policy development activities.

1.4.4 Role of People with Lived Experience

People with Lived Experience (PWLE) are invaluable to shaping programs, facilities, and policies in the emergency shelter sector. People with living experience know how the system works, they know what their needs are, and experience the system at work on the everyday level. They can bring to light perspectives that may be unknown or unknowable at the staff or senior leadership level.

Updating Hamilton's Emergency Shelter Standards included consulting with PWLE who were currently accessing emergency shelter beds and drop-in programs for people experiencing homelessness. City of Hamilton staff held 12 engagement sessions over the course of four months and met with people accessing the men's, women's, youth, and family sectors as well as Indigenous service providers. People who attended the sessions were compensated for their time and expertise. City staff documented 1,650 suggestions, experiences, and feedback during the engagement process.

Throughout the writing process City staff brought forward feedback from PWLE and integrated responses from PWLE into the updated Standards. Many sections of the Standards were expanded on in ways that reflect suggestions from participants or attempts to address gaps identified by PWLE. The City is grateful to all the people who participated in the engagement sessions for sharing their knowledge, experiences, and ideas.

People with living experience will continue to be invited and supported to take part in the homeless serving sector through:

- A Living Engagement Strategy developed by the City of Hamilton which will promote best practices for engaging PWLE and build formal opportunities for people experiencing homelessness to share their feedback to improve programs and services.
- Client input activities led by emergency shelter operators, such as PWLE advisory committees, satisfaction surveys, etc.

1.5 Guiding Principles

The City of Hamilton and emergency shelter operators are committed to delivering emergency shelter services that uphold the following guiding principles:

- **Accountability:** Emergency shelter operators are held accountable to the standards through multiple mechanisms, including funding contracts, data analysis, the complaints process, and governance tables. Governance tables comprised of representatives from the emergency shelter sector, the local Indigenous community entity, and the City of Hamilton meet regularly to ensure accountability to the Standards and ownership over their development, operationalization, and implementation, especially as it applies to equity policies.

- **Truth and Reconciliation:** Indigenous homelessness is defined as a human condition that describes First Nations, Métis, and Inuit individuals, families or communities lacking stable, permanent, appropriate housing or the immediate prospect, means, or ability to acquire such housing. Services must be committed to supporting Indigenous populations and the commitments outlined in the report on Ontario's Response to the Truth and Reconciliation Committee.
- **Acknowledging the Unique Autonomous Leadership of the Indigenous Community in the Work in Homelessness:** Hamilton's homeless-serving system must account for systemic over-representation of Indigenous persons experiencing homelessness. Indigenous peoples experience homelessness, as well as other forms of social exclusion, at a higher rate than the general population. Specific policy interventions are therefore needed to account for these circumstances. Homelessness amongst Indigenous peoples is a colonial legacy. The interconnectedness of ongoing colonialism, residential schools, intergenerational trauma, and ongoing systematic social and economic marginalization of Indigenous peoples shape our understanding of Indigenous homelessness in Canada. Acknowledging our Indigenous partners' autonomy and self-determination, we will work together to develop connection to housing and supports that are culturally appropriate, rooted in the spirit and actions of reconciliation. Building upon strong relationships between the City of Hamilton and local Indigenous leadership, we aim to design a system that not only responds to Indigenous homelessness, but also respects, honours, and promotes the strength and resiliency of Indigenous peoples.
- **Coordinated Access:** Hamilton's homeless-serving system is made up of a range of community agencies who together offer a continuum of integrated supports to assist people in preventing and ending homelessness. Ending homelessness requires a coordinated approach to reduce gaps in services and improve the process of connecting people to the most appropriate housing supports. The City of Hamilton, Indigenous leaders, and homeless-serving sector partners have developed coordinated access processes to share knowledge of clients experiencing homelessness, establish consistent best practices applied across the sector, and ensure that limited resources are allocated effectively and equitably. Coordinated Access relies on collaborating with other service providers and stakeholders across the homeless-serving sector and with relevant health and community services to connect people to resources that will help them access and retain stable housing.
- **Equitable Access:** Access to appropriate shelter space will never be denied based on citizenship, race, place of origin, ethnic origin, colour, ancestry, disability, age, creed, sex/pregnancy, family status, marital status, sexual orientation, gender identity, gender expression, or economic status.

- **Equity, Diversity, and Inclusion:** While acknowledging strength and resiliency of unique populations, there is also an awareness of unique structural and institutional barriers that each group may experience linked to systemic discrimination and oppression. Services must not be a one-size-fits-all approach and should be able to be effectively adapted to meet the specific needs of the people they serve. An anti-racist, anti-oppression approach and analysis should be applied to the policies, procedures, and services connected to the homeless-serving sector.
- **Harm Reduction:** Hamilton's homeless-serving sector recognizes the complex, intersecting social inequalities which put people experiencing homelessness at high risk of substance use and other activities which may endanger their safety and wellbeing. Partners across the sector work to minimize the harm and risks faced by people experiencing homelessness through a continuum of harm reduction approaches, the minimum of which are referrals to harm reduction supplies, detox, or addiction services.
- **Lived and Living Experiencing Input:** The City of Hamilton and emergency shelter operators will seek to engage people with lived or living experience of homelessness in intervention development, evaluation, and decision-making.
- **Non-Judgment:** A non-judgmental approach is critical to building relationships of openness and trust with program participants that can lead to positive life change. Staff also use a non-judgmental approach to ensure service is provided objectively and consistently to everyone.
- **Respect:** Staff treat program participants with dignity and respect, putting the person at the centre of decision-making and recognizing that an individual's autonomy and self-determination will guide their plan of care. Staff understand that individuals have a right to their choices. Shelters should make every effort to provide an environment that fosters a sense of personal control through providing choice and autonomy and building capacity wherever possible.
- **Strengths-Based and Empowerment Focused:** The homeless-serving sector recognizes that people experiencing homelessness have unique strengths and diverse needs. People experiencing homelessness will be empowered to identify their own goals and provide input into the development of emergency shelter services and policies.

1.6 Key Terms and Definitions

- **2SLGBTQIA+:** An acronym that refers collectively to two-spirited, lesbian, gay, bisexual, transgender, queer, intersex, asexual, and questioning people. While terms and identities evolve and more inclusive acronyms may be introduced elsewhere (e.g. LGBTQQIP2SAA, LBGTQIA), 2SLGBTQIA+ will be used as an all-encompassing term in the Standards.
- **Client:** Any individual who is in receipt of any support services provided by a shelter.
- **Common Intake and Assessment:** A standardized approach to assessing a person's current situation, the acuity of their needs, the services they currently receive/may require in the future, and their preferences for service delivery. It takes into account the background factors that contribute to risk and resilience, changes in acuity, and the role of friends, family, caregivers, community and environmental factors.
- **Discharge:** The process of concluding a client's stay at a shelter. Discharge from shelter may be initiated by the client or staff for a variety of reasons, including finding housing or exceeding the maximum length of stay in shelter.
- **Discrimination:** An action or decision that treats an individual, family, or group negatively and/or denies social participation based on perceived or actual protected human rights grounds: citizenship, race, place of origin, ethnic origin, colour, ancestry, disability, age, creed, sex/pregnancy, family status, marital status, sexual orientation, gender identity, gender expression, receipt of public assistance (in housing) and record of offences (in employment).
- **Emergency Shelter:** An organization that provides shelter to an individual or family experiencing homelessness with or without a referral, with the intention of providing short-term accommodation and support services to move clients into housing.
- **Harm Reduction:** A non-judgmental, non-coercive philosophy and set of practical strategies aimed at improving safety and reducing the adverse health, social, and economic consequences associated with legal and illegal substance use.
- **HMIS:** The Homelessness Management Information System (HMIS) is a system whereby data pertaining to people experiencing homelessness are recorded, stored, retrieved, and processed to improve service coordination and decision-making.

- **HIFIS:** The Homeless Individuals and Families Information System (HIFIS) is a web-enabled database that is used to support coordinated access using real-time information of individuals and families accessing the homeless serving sector. HIFIS is the current primary Homelessness Management Information System (HMIS) used by the City of Hamilton.
- **Homeless:** Academic research on homelessness demonstrates a complex interplay of structural factors, systems failures, and individual circumstances. The Canadian Observatory on Homelessness defines homelessness as “the situation of an individual, family or community without stable, permanent, appropriate housing, or the immediate prospect, means and ability of acquiring it.” This includes individuals or families who are unsheltered, in emergency shelter, provisionally accommodated and at risk of losing their housing. This working definition of homelessness has been endorsed by the federal government and has been adopted by municipalities across Canada.
- **Housing First:** A service approach that focuses on moving people experiencing homelessness into permanent housing without preconditions and then connecting them to supports and services as needed in order to stabilize their housing.
- **Housing-Focused Shelter:** A housing-focused shelter is unrelenting in its pursuit to make homelessness as brief as possible while returning people to permanent accommodation. From the moment an individual or family pursues shelter, there are efforts to ensure a safe and appropriate exit from shelter. Housing-focused shelter does not operate other programming that can interfere with ensuring stays are short-term with a return to housing rapidly¹.
- **Indigenous:** Persons who identify as having First Nations, Inuit, and/or Métis ancestry.
- **Indigenous Homelessness:** Indigenous Homelessness is a colonial legacy. Indigenous homelessness is a human condition that describes First Nations, Métis, and Inuit individuals, families or communities lacking stable, permanent, appropriate housing, or the immediate prospect, means or ability to acquire such housing. Unlike the common colonialist definition of homelessness, Indigenous homelessness is not defined as lacking a structure of habitation; rather, it is more fully described and understood through a composite lens of Indigenous worldviews. These include: individuals, families and communities isolated from their relationships to land, water, place, family, kin, each other, animals, cultures, languages and identities. Importantly, Indigenous people experiencing these

¹ OrgCode Consulting Inc. in partnership with the Canadian Shelter Transformation Network and Canadian Alliance to End Homelessness. (March 2019). *Housing Focused Shelter*.

kinds of homelessness cannot culturally, spiritually, emotionally, or physically reconnect with their Indigeneity or lost relationships.²

- **Medication:** Any prescribed or over the counter medications the client identifies as part of their health care needs.
- **Sector:** Emergency shelters are sub-categorized by the client groups they serve; each of these sub-categories is called a sector. Presently, there are four sectors: single adult men, single adult women, youth, and families. Trans, non-binary, and gender diverse individuals may self-select the shelter environment that feels best able to maintain their safety and well-being.
- **Serious Incidents:** Any occurrence or event that takes place on shelter premises which results in significant negative impact(s) on the health, safety, or well-being of clients and/or staff, such as fire, death, or critical injury.
- **Service Restriction:** Restricting a client's access to one or more shelter services for a length of time due to circumstances, incident(s) or behaviours that jeopardize the safety and well-being of others.
- **Shelter Diversion:** The process of working with clients to explore safe and appropriate accommodations which could be accessed prior to admittance into emergency shelter or the shelter overflow hotel system. Diversion is not saying "no" to sheltering people that have exhausted all their alternate housing options. Rather, diversion works to prevent people from accessing emergency shelter services where other housing options can be explored and, if necessary, supported with services and financial assistance to help them return to permanent housing.
- **Emergency Shelter Operators:** An organization that receives funds from the City to provide emergency shelter services in Hamilton.
- **Support Services:** Any program or service offered on shelter property by a shelter provider or external service provider to help clients meet their goals or needs including, but not limited to a shelter's meal programs, housing services, employment programs, health services, etc.
- **Trauma-Informed Care:** An approach to providing services which acknowledges the impact that trauma and abuse have on the development and behaviour of



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intent:

This section of the Standards outlines the minimum

2. Client Rights and Responsibilities

- 2.1. Rights and Responsibilities
- 2.2. Client Input
- 2.3. Complaints Process

Intent: This section of the Standards outlines the minimum rights and responsibilities clients can expect while accessing emergency shelters. In addition, this section intends to emphasize how the valuable knowledge of people with lived experience helps shape shelter services, conditions, and decisions related to their experiences.

2.1 Rights and Responsibilities

<p>Standard Statement</p>	<p>Clients accessing emergency shelter will have access to information on their rights and responsibilities while in shelter. Each shelter will have a written policy concerning the rights and responsibilities of clients using the shelter. The policy will be posted in a common area of the shelter and be communicated to clients through various ways such as intake, admission, and meetings.</p> <p>At a minimum, everyone in shelter has the right to:</p> <ul style="list-style-type: none"> • Be provided with a copy of the client rights and responsibilities at intake (or as soon as possible after admission). • Expect that the standards outlined in this document will be followed. • Be treated in a non-judgmental and respectful way. • Be free from discrimination and harassment. • Be recognized as having unique cultural needs and based on the identified connection (e.g., Indigenous ancestry) be informed of and referred to related community support(s) as requested. • Be provided with access to services in French if required. • Safe, adequate, and nutritious food. Every effort will be taken to meet dietary needs related to religious, cultural, or medical conditions. • Have forms, consent procedures, and policies explained in an accessible way. • Identify their own goals and receive support from staff to achieve them within shelter mandates. • Be given information about services and resources to make informed decisions. • A fair, clear complaints and appeals process without fear of punishment. • Be involved in decisions that affect them. • Have personal information treated confidentially. • Access their personal file if requested. • Provide input and feedback into shelter programs and policies. <p>Clients are responsible for the following:</p>
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	<ul style="list-style-type: none"> • Reviewing and signing a copy of the client rights and responsibilities at intake (or as soon as possible after admission). • Abstain from any form of violence (including physical, verbal, emotional, sexual) and discrimination based on protected grounds. • Follow the rules of the shelter. • Treat shelter staff, volunteers, neighbours, visitors to the shelter, and other shelter residents with respect. • Respect the privacy and confidentiality of other shelter residents. • Respect the private property and belongings of other shelter residents. • Respect the private property and belongings of the shelter. • Work with shelter staff to improve their housing situation within their capacity. Notify the shelter when they will be late for curfew or no longer need to access emergency shelter. • Contribute to maintaining their own space in the shelter whenever possible.
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • The rights and responsibilities of clients using the shelter which will, at a minimum, include the expectations outlined in Section 2.1: Rights and Responsibilities of the Standards.

2.2 Client Input	
Standard Statement	<p>Clients have unique insight and knowledge which can contribute to continuous quality improvement within emergency shelters. Client input will be sought in all areas of program development, client experience, policy development, and program evaluation in multiple ways, including but not limited to exit interviews, discharge surveys, one-on-one interviews, client surveys, client focus groups, and resident meetings.</p> <p>Emergency shelter operators will promote engagement opportunities and provide accessible methods of participation to all clients, especially those who are members of communities that may have complex barriers to accessing shelter services and taking part in engagement activities. This process will include feedback on harm reduction interventions and supports.</p> <p>On occasion, the City of Hamilton may ask emergency shelter operators for support with seeking input from clients for research, policy development, and program review purposes. Shelters will have a policy and plan regarding client engagement activities and will report activities and outcomes to the City when requested.</p>
Policy	<p>Emergency shelter operators will develop a client input and engagement policy which will, at a minimum, include:</p> <ul style="list-style-type: none"> • The frequency and format of engagement activities. • How engagement activities will be designed to be accessible for all clients especially members of communities more likely to be marginalized. • How engagement activities will be documented. • How feedback that details experiences of discrimination or harassment will be actioned • How clients will be informed of the impact of their input and any decisions or changes which are a result of client input.

2.3 Complaints Process	
Standard Statement	<p>Clients have the right to participate in a fair and clear complaint and appeal process without fear of reprisal.</p> <p>Each shelter will have a board-approved policy regarding complaints and appeals, including how complaints can be made at the shelter level by clients or community members, how complaints will be investigated and resolved in a timely manner, and any subsequent escalation or appeal processes, including escalating a complaint to the City when all other options have been exhausted, in accordance with the City of Hamilton complaint resolution process.</p> <p>The process will be accessible to all people upon intake, posted within the shelter, and issued upon request.</p> <p>People will be referred to supports throughout this process, if requested. Shelters will allow clients to bring a support person with them throughout the complaint process if requested. If a client does not have support for making a complaint and requests one, shelters will provide information and/or referrals to community resources.</p> <p>Shelter providers will collect and evaluate all complaints and take any necessary corrective action whenever possible.</p>
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • City of Hamilton complaint resolution process • A complaints policy which will: <ul style="list-style-type: none"> ○ Be submitted as an appendix of the contract and updated when changed. ○ Outline how complaints are received, reviewed, and responded to by the emergency shelter, and escalated within the organization as required. ○ Include a process for referrals of support to the shelter stayer. ○ Detail an internal documentation process for tracking and evaluating complaints. ○ Establish how unresolved complaints will be referred to the manager of Homelessness and Housing Support if resolution is not possible at the level of the emergency shelter, in accordance with the City of Hamilton complaint resolution process.

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intent:

This section of the standards aims to outline the practices required to support standardized and equitable access to emergency shelter services for all clients. In addition, this section clarifies expectations around how shelters balance operational capacity and maintain safety within the shelter environment, while ensuring that clients have clear information on how emergency shelter facilities can be accessed.

ACCESSING SERVICES

- 3.1 Intake and Initial Assessment
- 3.2 Belongings
- 3.3 Daytime Access
- 3.4 Curfew and Overnight Passes
- 3.5 Length of Stay
- 3.6 Capacity Limits
- 3.7 Service Restrictions

3.1 Intake and Initial Assessment	
Standard Statement	<p>Each shelter will have an intake procedure, which includes a diversion assessment, an assessment of eligibility, and an initial assessment of the person's and dependents' support needs. Clients will be informed of key policies and procedures at intake, including rights and responsibilities, curfew, available supports, service restriction policies, etc.</p> <p>With the appropriate Indigenous training shelter staff will ask whether a person has Indigenous ancestry and if so, will inform client of option for a referral to an Indigenous organization of the person's choice as well as option to not be listed on HIFIS, not complete a VI-SPDAT intake and/or complete the alternative intake process for Indigenous clients. Other referrals may be appropriate at intake including supports for newcomers, health services, or supports based on a person's gender.</p> <p>Each shelter will seek coordinated access consent with clients and complete consent forms in accordance with the data sharing protocol, consent policy, and intake policy. Information will be added to HIFIS following the guidance in the HIFIS User Manual, policies, and training materials.</p> <p>Shelters will document a person's preliminary information including but not limited to legal names, date of birth, dependent details, gender, veteran status, Indigenous ancestry (as voluntarily provided by clients), housing history, contact information, and financial income. In addition to preliminary information, shelters will determine the appropriate length of time to complete the common triage assessment (typically at 15 days of cumulative stay in the shelter system) and assess and document any safety concerns and/or risks as appropriate.</p> <p>A comprehensive, housing-focused plan should be developed with clients within 14 days of admission to shelter. Shelter staff will work with clients to understand their needs by completing common assessment tools as agreed upon with the City. Indigenous clients are not required to participate in the completion of any mainstream assessment tool. These plans may evolve as client circumstances and goals change.</p>

Policy	<p>Emergency shelter operators will adhere to the following policies related to this standard:</p> <ul style="list-style-type: none">• <i>HIFIS Data Sharing Protocol for Hamilton's Homeless Serving System</i> and applicable data entry guidance.• <u>Hamilton's Coordinated Access System Process Guide</u>.• <u>Hamilton's Homeless Serving System Triage and Assessment Policy</u>.• <i>Coordinated Access Case Management Policy</i>.
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3.2 Belongings	
Standard Statement	<p>What people carry with them into the shelter may be their only possessions and should be treated with respect and kept securely. Emergency shelter operators retain the right to limit the type of belongings allowed on-premises based on safety, staffing, and space limitations.</p> <p>Secured storage will be made available for all clients staying in the emergency shelter. Emergency shelter operators will have a policy outlining the limits to storing personal belongings, including length of time belongings will be stored after a client leaves shelter. Policies regarding storage and limitations on specific items will be posted and explained to clients upon intake.</p> <p>At intake and throughout the shelter stay, emergency shelter operators will support clients in maintaining possession of their sacred items and traditional medicines.</p> <p>When a client is discharged and they have left behind their belongings, the items will be securely stored for a minimum of 48 hours. Clients requiring storage for their belongings beyond this length of time should reach out to the shelter to discuss an extension, however emergency shelter operators may not be able to accommodate such requests.</p>
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • Weapons • Prescribed drugs • Illicit drugs • Drug use equipment

3.3 Daytime Access	
Standard Statement	<p>Emergency shelters provide temporary accommodation while supporting people experiencing homelessness work towards finding housing. Emergency shelters may have common spaces, programs, and services available for clients during the day, however, to address a diverse range of needs, shelter staff will connect clients with other programs and services as appropriate. Access to sleeping quarters and other shelter facilities may be limited at times due to a variety of factors such as staffing levels, resourcing, maintenance, cleaning, and ability to maintain safety in the shelter.</p> <p>At shelters where daytime access is limited, provisions will be in place for people who work overnight shifts or who are ill and need a place to rest (provided they are not in need of medical care). Some emergency shelter operators may require a doctor's note specifying the medical need and timeline for accommodating clients during the day.</p> <p>Clients will have access to hygiene facilities such as toilets, sinks, and showers at all times and in rare instances that access is not possible during daytime hours, emergency shelter operators will provide clients with information on drop-in programs and other services with hygiene facilities that clients can access during daytime hours.</p> <p>In addition, shelters will provide information on recreation and community-based activities that clients could access during the day, for example, use of libraries, recreation centres, seniors programming, connections to programming at non-profit organizations or religious centres of a client's choosing.</p> <p>During Cold Weather or Heat Alerts, it is necessary that all shelters attempt to relax service restrictions and extend daytime access hours wherever possible to minimize risk factors to people experiencing homelessness. When unable to admit a client during a Cold Weather or Heat Alert emergency shelter operators will provide clients with information on drop-in programs and warming and cooling centres.</p>
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • Accessing beds and common areas during daytime hours, including accommodation guidelines. This policy will be explained to clients at intake and made available to them in writing if requested.

3.4 Curfew and Overnight Passes	
Standard Statement	<p>Emergency shelters may require clients to return to the shelter to access their bed by a certain time. Curfews are a tool for managing safety, reducing interruptions during the night for clients, and managing shelter occupancy. Emergency shelters are intended to support clients without any other options for safe accommodations, therefore emergency shelter operators may require clients to return to access their shelter bed on a nightly basis until they have found housing. Failure to return to shelter may result in a client being discharged from shelter. Each shelter will post their curfew policy, which includes information on extensions and overnight passes. Staff will explain the rules at check-in or at the next available opportunity.</p> <p>In shelters where a nighttime curfew exists, provisions will be in place to accommodate clients who expect to be late for reasons such as work, accessing medical services, family reunion, etc. Emergency shelter operators may grant extensions to curfews or overnight passes to accommodate clients at their discretion. Clients are required to notify shelter staff when they anticipate they will be unable to return by curfew. Due to limited shelter beds within the homeless-serving sector, emergency shelter operators may re-allocate a shelter bed if a client has not been approved for a curfew extension or overnight pass.</p> <p>Whenever possible, shelter staff will provide clients being discharged with information on alternate options when available.</p>
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • Curfews, which includes information on extensions and overnight passes.

3.5 Length of Stay	
Standard Statement	<p>Emergency shelters are intended to provide temporary shelter, support for meeting basic needs, and housing-focused supports. People experiencing homelessness may face complex circumstances that impact their length of stay in emergency shelter. Emergency shelter operators will use a person-centered approach to determine the length of stay based on each client's unique strengths and support needs. These decisions are to be made using factors which include, but are not limited to:</p> <ul style="list-style-type: none"> • The safety needs of the client and their dependents. • The level of support needed to exit homelessness successfully. • Availability of affordable, suitable, and adequate housing. • Client's level of engagement toward achieving housing goals. • Upcoming admission to transitional or permanent housing. • The length of time the person has been homeless. <p>A comprehensive, housing-focused plan should be developed within 14 days of admission to shelter. These plans may evolve over time as client circumstances and goals change.</p> <p>Documentation of a stay should include all consecutive days that a client is booked into a shelter from book in to book out.</p>
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • How maximum lengths of stay will be determined. • <i>HIFIS Data Sharing Protocol for Hamilton's Homeless Serving System</i> and applicable data entry guidance.

3.6 Capacity Limits	
Standard Statement	<p>The level of need for emergency shelter varies based on community realities and conditions outside the control of the homeless-serving sector. Unfortunately, shelters may not always be able to accommodate all requests for shelter. Emergency shelter capacity limits adhere to local building code and are designed to maintain safety for clients, staff, and guests.</p> <p>Shelters may exceed their capacity in cases of Cold Weather Alerts, Heat Warnings, or unforeseen emergencies, however, will not exceed capacity if doing so would compromise the safety of other clients, staff, etc. Shelters may need to reduce their capacity in response to health and safety circumstances (e.g. infectious outbreaks). Emergency shelter operators will notify the City when their capacity must be reduced or is at risk of being reduced.</p> <p>At times emergency shelter operators may reach capacity and be unable to provide shelter for all individuals seeking emergency shelter. In these instances, where possible, shelters will assist clients with referrals and transportation to other emergency shelters, drop-in programs, or support services.</p>
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • Plans for supporting clients when shelter is at capacity, including overflow spaces and referrals to other shelters. • <i>HIFIS Data Sharing Protocol for Hamilton's Homeless Serving System</i> and applicable data entry guidance.

3.7 Service Restrictions

<p>Standard Statement</p>	<p>Service restrictions are primarily utilized in situations where other interventions and responses do not resolve behaviours or circumstances that pose significant risk to the safety and well-being of the client, other shelter stayers, staff, shelter property and/or the community. Service restrictions may also be issued due to ongoing behaviours which interfere with shelter operations, illegal activities, court order, significant damage to property, or prolonged refusal to engage with program requirements. Emergency shelter operators must balance the well-being of individual clients against risk of harm to other clients, staff, guests, volunteers, and neighbours, as well as their obligations under the <i>Occupational Health and Safety Act</i>.</p> <p>All emergency shelters will follow the City of Hamilton's service restriction policy and appeal process. The service restriction policy provides guidance for emergency shelter operators and staff on best practices and considerations when issuing restrictions, including:</p> <ul style="list-style-type: none"> • The process for approving, reviewing, documenting, and appealing service restrictions. • Informing clients of the service restriction policy and appeals process at intake, or as soon as is feasible. • How and when clients will be informed of a service restriction, including information on re-accessing shelter services. • How data on service restrictions will be collected and analyzed with homeless-serving sector leadership. • Expectations during cold alerts and heat warnings to relax restrictions where possible. • Using a trauma-informed, anti-racist, anti-oppressive, gender and equity lens, recognizing the systemic barriers faced by women, trans, gender-diverse or non-binary people, and those experiencing intersecting oppressions including, but not limited to, race/ethnicity, substance use, mental health, disability, gender identity, and sexual orientation. This approach will include the following practices: <ul style="list-style-type: none"> ○ When an Indigenous person is restricted from emergency shelter, shelter staff will work in partnership with the client's identified Indigenous service provider. If they are not yet connected to one, the shelter will provide a referral at the client's request. ○ When a youth is restricted from emergency shelter, shelter staff will work with the client to find alternate shelter options through family or emergency shelters in other municipalities.
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	<ul style="list-style-type: none"> ○ Whenever possible shelter staff will attempt to refer clients to supports (e.g. a referral to another shelter) before discharge or at the request of the client.
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • <i>Hamilton's Homeless Serving System Service Restriction Policy.</i> • <i>HIFIS Data Sharing Protocol for Hamilton's Homeless Serving System</i> and applicable data entry guidance.

4



intent:

This section of the standards outlines best practices for delivering basic needs services offered by emergency shelter operators as part of their housing-focused shelter model. In addition, this section emphasizes the importance of Hamilton's coordinated approach and partnerships to meet a broader range of health and social needs.

SERVICES PROVIDED

4.1 Housing-Focused Supports and Case Management

4.2 Basic Needs

- 4.2.1 Bedding
- 4.2.2 Hygiene
- 4.2.3 Laundry
- 4.2.4 Clothing
- 4.2.5 Nutrition
- 4.2.6 Pets

4.3 Health Supports and Partnerships

4.1 Housing-Focused Supports and Case Management	
Standard Statement	<p>Emergency shelter operators are part of a larger network of homeless-serving agencies operating in the context of a housing crisis with limited availability of affordable housing. Emergency shelter operators will maintain a housing-focused approach, following Housing First principles recognizing that stable housing is the primary need shared by all people experiencing homelessness with health and social supports offered in addition as needed to support housing access and retention.</p> <p>Housing-focused sheltering begins at intake, and all emergency shelter operators will offer housing-focused case management to their clients. Case management activities will include:</p> <ul style="list-style-type: none"> • Reviewing housing expectations and planning how to pursue goals via progressive engagement with housing options. • Supporting clients to access identification, income, and applications for financial benefits and/or subsidized housing to enable their ability to obtain housing. • Sharing information on the Coordinated Access system and how participation facilitates connections to appropriate housing supports. • Assessing client needs using assessment tools and community prioritization criteria. • Addressing barriers to housing through service coordination and referrals to health and social supports. • Shelter staff will work with case managers from housing support programs to ensure that clients receive warm transfers when entering those programs. <p>Clients do not need to demonstrate any preconditions to take part in case management or housing support programs.</p>
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • <i>HIFIS Data Sharing Protocol for Hamilton's Homeless Serving System</i> and applicable data entry guidance. • <u>Hamilton's Coordinated Access System Process Guide</u>. • <u>Hamilton's Homeless Serving System Triage and Assessment Policy</u>. • <i>Hamilton's Coordinated Access Case Management Policy</i>. • <u>Hamilton's Homeless Serving System Consent and Intake Policy</u>. • <u>Hamilton's Coordinated Access Prioritization Policy</u>.

4.2 Basic Needs	
Standard Statement	<p>Emergency shelters are primarily focused on providing clients experiencing homelessness with temporary accommodation and assistance finding housing. People experiencing homelessness often have few resources to meet the basic necessities of life, such as: meals, hygiene products, laundry services, clothing, etc.</p> <p>4.2.1 Bedding</p> <p>Each client will be offered, at minimum, a bed with a mattress, pillow, and necessary bedding. Necessary bedding consists of a minimum of two sheets, a blanket, and pillowcase. A minimum of one shower towel will be provided to each new client upon admission along with bedding/towels. Bedding and towels will be changed weekly, or whenever these articles become soiled.</p> <p>4.2.2 Hygiene</p> <p>Emergency shelters will, at a minimum, have a supply of soap, shampoo, shaving products, and menstrual hygiene products for emergency use by clients. Menstrual hygiene products will be made available at all shelters.</p> <p>4.2.3 Laundry</p> <p>Shelters with laundry facilities may require that clients launder their own bedding, towels, and clothing. Emergency shelter operators may limit access to laundry facilities if required to maintain peace overnight or if operating laundry machines requires staff supervision.</p> <p>4.2.4 Clothing</p> <p>Emergency shelters will help clients obtain basic clothing and footwear for all seasons by using internal resources and/or connecting clients with other community agencies and resources.</p> <p>4.2.5 Nutrition</p> <p>Emergency shelters which serve meals to clients will follow the nutritional requirements outlined below. Some emergency shelters provide clients with meal cards or financial support to obtain their own meals and are not required to follow the nutritional standards outlined here. Adult clients will be served three meals and at least one healthy snack per day or provided with resources to access food where units have their own kitchens. Where parents are not providing food for the family unit, children under</p>

	<p>the age of 16 will be offered three meals and two to three healthy snacks per day.</p> <p>Each meal will be of a size, quality, variety, and nutritional value to meet the recommended daily intake based on Canada's Food Guide.</p> <p>A poster stating that shelters cannot guarantee allergen-free food (e.g., peanuts, nuts, eggs, and shellfish) should be posted in the dining area.</p> <p>4.2.6 Pets</p> <p>Animal companions may add great value to an individual's emotional well-being and feelings of safety, however most services for people experiencing homelessness are not designed to accommodate pets. Reluctance to give up a pet may cause people to stay in unsafe situations, including sleeping unsheltered. The City of Hamilton and emergency shelter operators will continue to explore ways to design programs which can accommodate pets, however there are significant barriers to adapting existing shelters to safely provide shelter to pets.</p> <p>Emergency shelter operators will support clients with pets through the following practices:</p> <ul style="list-style-type: none"> • Providing information to pet owners on the community services that accept pets and offer pet-related supports (e.g., pet food, veterinary services, emergency boarding). • Offering support in finding alternative accommodations for their pets and should record what alternative arrangements have been made for the client's pet so that clients can be supported in getting their pet back from emergency accommodations.
Policy	Not applicable

4.3 Health Supports and Partnerships	
Standard Statement	<p>Although the primary focus of emergency shelters is housing, housing-focused sheltering takes a wholistic view of the client as a person with complex and diverse needs. Collaboration within the network of health supports is important to ensure effective and coordinated services.</p> <p>To help clients meet their health needs, emergency shelter operators will:</p> <ul style="list-style-type: none"> • Offer support with navigating access to physical and mental health services, including providing referrals to health care providers in order to facilitate clients' health needs. • Host health care professionals onsite and continue to connect clients to primary care within the community. • Consider the client's stated health care requirements and any recommendations by a clinician or health care professional when determining whether the client is eligible for service. Clients may have a support person to assist, whether a family member or home and community care. • Work in collaboration with community health care providers to support optimal function and well-being of shelter residents. Emergency shelter operators will assess their ability and resources to meet the needs of residents with complex physical and/or mental health needs. • Ensure that all clients are aware of these potential health supports by informing people at intake and posting information throughout the shelter. Partnerships with health and cultural supports will be informed by the needs of people with living experience.
Policy	Not applicable

5



ADDRESSING INDIGENOUS HOMELESSNESS

5.1 Indigenous Persons

5



ADDRESSING INDIGENOUS HOMELESSNESS

intent:

This section acknowledges the City of Hamilton's distinct commitment to Indigenous Peoples in recognition of their inherent Rights as well as the historic and ongoing social, economic, and political programs in Canada that have led to the disproportionality of Indigenous Peoples experiencing homelessness in Hamilton.

While acknowledging the successes of local Indigenous leadership in addressing and preventing Indigenous homelessness in Hamilton, the homeless-serving sector remains cognizant of historic underinvestment in Indigenous communities as well as systemic discrimination, which requires intentional and sustainable investments specific to redressing the causes and experiences of Indigenous homelessness.

In addition to the recommendations identified in this section and throughout the Standards, the City of Hamilton and emergency shelter operators shall:

- Work in partnership with the Indigenous Community Entity and local Indigenous agencies to address and prevent Indigenous homelessness in ways that advance and grow the autonomy and capacity of urban Indigenous leadership.
- Recognize Indigenous homelessness as distinct throughout development, implementation and review of emergency shelter policies, priorities, and practices.
- Foster more inclusive environments through signage and programs that reflect the causes, experiences, and needs of Indigenous Peoples experiencing homelessness.
- Continually work to ensure Indigenous leadership and experiences are appropriately supported to continue co-developing the City of Hamilton's homelessness response.

5.1 Indigenous Persons	
Standard Statement	<p>Colonialism continues to negatively impact Indigenous individuals, communities, and families in many ways. One consequence of colonialism is that Indigenous peoples experience homelessness, as well as other forms of social exclusion, at a higher rate than the general population. The City of Hamilton and emergency shelter operators work closely with Indigenous leaders and community agencies to respond to the needs of Indigenous clients with culturally appropriate and Indigenous specific supports through the following practices:</p> <ul style="list-style-type: none"> • Emergency shelter operators will incorporate Indigenous cultural competency training into staff training resources. Having this understanding and perspective can lead to building stronger rapport with clients and a greater understanding of their unique needs when offering services. • Creating welcoming spaces for Indigenous clients through highly visible cultural signage and art posted throughout the shelter to help communicate to Indigenous persons that they are able to share information about their Indigenous ancestry throughout their shelter stay, not just intake, and shelter staff will support with referrals to Indigenous services if requested. • Ongoing Indigenous cultural training will be required for all shelter staff, volunteers, students, leadership, and board of directors. • With the benefit of Indigenous training, staff may be better capable of appropriately inquiring during intake whether a person identifies as having Indigenous ancestry and will inform clients of opportunity to be referred to an Indigenous organization of their choice. • At intake and throughout the shelter stay, emergency shelter operators will support clients in maintaining possession of, and using, their sacred items and traditional medicines. • Shelter staff will inform Indigenous clients that they are not required to use mainstream triage and assessment tools in order to receive homeless/housing services or be prioritized for housing supports through the Coordinated Access system. An alternative process to the “Common Assessment Tool” developed by the Indigenous Community Entity will be offered as an option to Indigenous clients. Indigenous clients’ names are not required to appear on the By-Name List (BNL) or By-Name-Prioritization-List (BNPL) to be prioritized for service. • Indigenous clients will be made aware of resources and services offered specifically to Indigenous individuals at intake and throughout a person’s stay, both verbally and through signage posted in common areas of the shelter.

	<ul style="list-style-type: none"> Recognizing that there is a high number of Missing and Murdered Indigenous Women, girls, 2-Spirit, men, and boys; shelters will have a protocol with Hamilton Police Services (developed in partnership with CHIL, HRIC, and the HPS Indigenous Liaison), which will include relevant procedures to respond to missing Indigenous persons, including their dependents. This protocol will be led by the Indigenous Community Entity, being considerate of the history of policing and the Indigenous community. Ongoing, regular training as recommend by the Indigenous Community Entity will be provided to all shelter staff. <p>The City and emergency shelters commit to continue working with the Indigenous Community Entity to explore how to best deliver culturally safe supports and the resources that are required to make that happen.</p> <p>The City and emergency shelters commit to partnering with the Indigenous Community Entity respond to Indigenous homelessness in ways that respect the Rights of Indigenous Peoples, reflect their unique experiences and needs, and continuing to work in ways that respond to the spirit and intent of Canada’s Truth and Reconciliation Commission’s Calls to Action.</p>
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> Supports that will be provided to Indigenous persons and dependents accessing shelter services.

6. Supporting Diverse Communities

- 6.1. Children
- 6.2. Youth
- 6.3. Health and Accessibility
- 6.4. Substance Use, Harm Reduction and Safer Use
- 6.5. 2SLGBTQIA+
- 6.6. Race, Ethnicity, and Immigration Status
- 6.7. Gender
- 6.8. Religion
- 6.9. Owners of Service Animals

Intent: This section emphasizes the importance of understanding the unique needs of our diverse community when developing and delivering emergency shelter policies, programs, and services. Hamilton's homeless serving sector recognizes that people experiencing homelessness are impacted by intersecting aspects of their identities, especially race, gender, age, religion, orientation, substance use, and disability. While acknowledging the strength and resiliency of unique populations, the homeless-serving sector is aware of the differing structural and institutional barriers that are linked to systemic racism, discrimination, and oppression. Understanding and being prepared to meet the unique needs of people experiencing homelessness is essential for helping them find and maintain housing.

In addition to the recommendations outlined in this section and throughout the Standards, the City of Hamilton and emergency shelter operators will:

- Strive to apply an equity lens to all activities to identify and remove barriers and to support best practices in planning, budgeting, delivery and evaluation of programs and services.
- Work in partnership with the Indigenous Community Entity, local Indigenous agency representatives, and other systems to determine emerging best practices for combating discrimination and developing approaches that support the diverse needs of people experiencing homelessness.
- Foster more inclusive environments through signage and programs that welcome the unique populations accessing shelters.
- Recognize that power and privilege are inherent to relationships between shelter staff, management, and clients and use the Standards to ensure clients receive respectful and equitable service.
- Adopt a zero-tolerance approach to racism, sexism, ableism, homophobia, transphobia and discrimination for staff and clients.

6.1 Children	
Standard Statement	<p>Children have their own set of requirements and standards set out by various levels of government to ensure that children are well cared for and that services are designed for their unique needs. Children who experience homelessness are at greater risk of a number of long-term consequences, including chronic homelessness, violence, exploitation, mental health, substance use, dropping out of school and criminality.³</p> <p>Where families are being served parents are responsible for meeting the wellbeing, supervision, and basic needs of the children. Parents may reach out to staff for support, guidance, and referrals.</p> <p>Emergency shelter operators will support children through the following activities and practices:</p> <ul style="list-style-type: none"> • Staff are trained in their obligations under the <i>Child and Family Services Act</i> to report any suspected cases of child abuse or neglect. • Staff will actively work with parents/guardians to promote positive parenting techniques and share information on a variety of age appropriate play experiences for children and dependent youth within the shelter or off-site. • Staff will provide information on, and referrals to, available community resources. • Any program plans and/or outlines of planned activities are shared with parents/guardians and conducted with written parental/guardian consent when safe, or appropriate. • Staff will work with parents/guardians and/or school boards to encourage children's regular attendance at school when safe, or appropriate. • Shelter staff are not obligated to provide child minding. In the case where child minding is provided, there will be a policy in place for situations where a parent does not return, which will be explained to parents at intake. • Sleeping arrangements and children's equipment is monitored for age appropriateness and is well-maintained. Cribs, appropriate bedding, car seats, strollers, highchairs, toys, and playpens should reference specifications approved by the Canadian Standards Association (CSA).

³ Homeless Hub. *About Homelessness: Topics: Child, Youth, and Family Programs*. Canadian Observatory on Homelessness. Retrieved on April 20, 2023 from <https://www.homelesshub.ca/about-homelessness/service-provision/child-youth-and-family-programs>

Policy	<p>Emergency shelters operators that offer child minding will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • How child-minding support will be offered, including instances where parents do not return at the agreed upon time.
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6.2 Youth	
Standard Statement	<p>Youth presenting to shelter independently have their own unique needs and are at greater risk of a number of long-term consequences, including chronic homelessness, violence, exploitation, mental health, substance use, dropping out of school and criminality.⁴ In particular, youth aged 16 to 17 may experience homelessness differently than youth over 18 due to factors such as involvement with child welfare systems, requirements related to attending school, and differences with financial assistance programs. As a result, the homeless serving sector in Hamilton has developed programs to support youth outside of the adult sector when possible.</p> <p>Youth emergency shelter operators will support youth through the following activities and practices:</p> <ul style="list-style-type: none"> • Youth shelters will work to divert youth from shelter whenever possible. When safe, shelter staff will work with youth to support reconciliation and return to living with their family or guardians. • Youth shelters will not take children under the age of 16. Shelter staff will consult, report, refer and collaborate with Child Welfare agencies if children under the age of 16 come to shelter independently and it has been deemed that they need support and or are at risk of or homelessness. • Staff will be trained on their obligations under the <i>Child and Family Services Act</i> and the Duty to Report regulations. • Staff will provide or refer youth to age appropriate recreation activities. • Staff will provide information on, and referrals to, available community resources. • Staff will work with parents/guardians and/or school boards to encourage youth's regular attendance at school when safe, and appropriate.

⁴ Homeless Hub. *Child, Youth And Family Programs*. Canadian Observatory on Homelessness. Retrieved on April 20, 2023 from <https://www.homelesshub.ca/about-homelessness/service-provision/child-youth-and-family-programs>

Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • Hamilton's Homeless Serving System Consent and Intake Policy.

6.3 Health and Accessibility	
Standard Statement	<p>Those experiencing homelessness often live in conditions that adversely affect their overall mental and physical health. Disability and mental illness are connected to an increased risk of homelessness. Being unhoused makes it difficult to access general health care and mental health services, or follow-up care after receiving treatment or hospitalization, and care is often only accessed through hospital emergency departments. Mortality and morbidity are higher amongst people experiencing homelessness than housed people, as are substance use and mental health issues. Emergency shelter operators and the City of Hamilton work towards creating barrier free environments for people with all types of disability, however many shelters are limited by physical facilities which do not have the capacity for all accessibility features (e.g., elevators).</p> <p>Emergency shelter operators will support client health and disability needs through the following activities and practices:</p> <ul style="list-style-type: none"> • Prior to intake, shelter staff will assess the health needs of clients and determine if the shelter has the capacity to accommodate the clients' ailments or illnesses, if present. • The shelter operator will ensure staff are able to assist clients in obtaining access to a physician or health care centre and appropriate referrals to essential health care services, when required, including mental health and addictions support services; and obtaining home-care services, or emergency nursing care. • Shelter operators will be conscious of discrimination and racism that clients may have experienced in accessing healthcare services and will work with clients to ensure that they are able to get access to services in a safe and culturally appropriate way. • The shelter will allow such home care services or nursing care to be provided as the shelter can reasonably accommodate (refer to the <i>Health Insurance Act, R.S.O. 1990, c.H.6</i>, as amended, and its regulations, for a definition of home care services).

- Where possible, programs and clinics should be offered on-site; and when not possible, clear referral pathways and connections with the healthcare system should be established.
- Shelter staff will respect a client's right to choose to access health services, however if refusing health services results in harm or significant risk of harm to other clients or staff, shelters may be unable to support a client with accessing emergency shelter. In these instances, emergency shelter operators will work with the client to find alternative accommodations whenever possible.
- A person with a disability will be supported to receive shelter services unless there are accommodation restrictions such as the need for a level of personal attendant care that cannot be accommodated by shelter staff, etc. Where access to a shelter is limited due to a disability, shelter staff will attempt to find alternative housing, shelter arrangements, or will work with health care providers when admission to hospital is required.
- Emergency shelter operators will provide access to safer sex supplies on-site or referrals to community services if unable to provide safer sex supplies.
- Emergency shelter operators will provide a minimum of one washroom that is barrier-free, fully accessible and marked as gender neutral.

Considerations for service accessibility include:

- Providing people who have serious health conditions with the option to remain in the shelter during day.
- Materials are made available in large print, in accordance with AODA regulations.
- Striving to remove communication barriers through technology and interpreters when possible.
- Training for staff on disability accommodations.

Shelters will have policies regarding the handling of client medication. Policies should include the following:

- For the protection of all clients, medication held by staff will be kept in a secure location such as a locked cabinet in an office.
- Clients are fully responsible for taking their own medication; however, some shelters may provide assistance with medication storage and monitoring.
- Shelters that choose to provide some assistance with medication will encourage clients to properly self-administer.

	<ul style="list-style-type: none"> • Where possible and with client consent, staff may consult with a nurse, psychiatrist, physician, or pharmacist to coordinate access to medication or in any situation where they are concerned about the safety of a client taking medication. • Shelters that document medication will maintain a consistent method of documentation. • All sharps will be placed in a regulation sharps container which should be kept in a secure location and out of reach of children. • All expired or unclaimed medications will be returned to a pharmacy for proper disposal.
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • Handling of client medication.

6.4 Substance Use, Harm Reduction and Safer Use

Standard Statement	<p>The homeless-serving sector actively works with clients, community partners, and the health care sector to operate emergency shelter services in ways that minimize the harmful effects of substance use rather than ignoring or condemning these activities.</p> <p>A harm reduction philosophy is essential for effectively supporting individuals engaging in substance use; however, to meet the needs of diverse clients in complex journeys with substance use Hamilton's homeless-serving sector offers a broad range of services across the harm reduction continuum, which includes withdrawal management, treatment options, provision of harm reduction supplies, referrals to safe consumption service, and addiction services.</p> <p>Emergency shelter operators reduce the risks associated with substance use through the following best practices and recommendations:</p> <ul style="list-style-type: none"> • Emergency shelter operators will have a harm reduction policy and harm reduction procedures in place that will make explicit that the shelter operates using a harm reduction approach. The policy and procedures will include, but not be limited to,
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	<p>responding to overdose; wellness checks; how harm reduction supplies are distributed, collected, and disposed of.</p> <ul style="list-style-type: none"> • Harm reduction services and resources should be delivered in combination with other services to reduce stigma and increase accessibility of harm reduction programs. • Emergency shelter operators will have a policy and procedure in place that outlines under which circumstances it is and is not appropriate to contact Child Welfare Services when clients have dependent children. The policy will indicate that substance use alone is not sufficient cause for contacting Child Welfare Services. • During client admission/intake, and periodically throughout a shelter stay, shelter staff will explain what harm reduction services are available at the location and will make explicit that: <ul style="list-style-type: none"> ○ The site is a harm reduction positive location ○ Harm reduction supplies are readily available, onsite or through mobile community services ○ Naloxone is readily available ○ Staff are available to help with safety planning and arranging post-drug use safety checks within the scope of their roles. • Ensuring naloxone kits are available at all sites for staff to administer and for client use. All staff will be trained in overdose prevention, recognition, and response, including the administration of naloxone. All clients will be offered an active referral for naloxone kit and training on-site or to a community-based organization. • Posting signage in communal, semi-private and private washrooms and washroom stalls and other visible areas (e.g. hallways, entrances, stairwells, etc.) noting the overdose prevention initiatives available onsite, availability of naloxone and other available harm reduction supplies, and encouraging substance users to let someone know they are using. • Providing safer drug use equipment, and related information on appropriate use (if qualified to do so) or a referral to a community service if the shelter does not provide the requested equipment. • Shelters will monitor the number of suspected overdoses to inform the development of harm reduction strategies and programs. Emergency shelter operators will work with the City and Public Health to share records when appropriate and in accordance with MFIPPA legislation. • Referring clients, when appropriate, to programs that offers addiction supports, detox, harm reduction supplies, training, and related support services.
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	<ul style="list-style-type: none"> • Ensuring that shelter staff have training and access to updated resources on programs and services that support harm reduction for clients and provide referrals as needed (e.g. opioid agonist treatment, supervised consumption sites). • Installing sharps containers are secured against tampering and available throughout a site. Shelter staff will inform clients of the presence of fixed sharps containers and availability of personal sharps containers and how to use them. • Maintaining a regular schedule of monitoring sharps containers and ensuring a contract is in place with a biohazardous waste disposal company to replace them when they are full. • Supporting clients to maintain possession of safer drug use supplies and/or safer sex products. • Emergency shelter operators will comply with their legal obligations, while maintaining the clients' right to privacy and property. • Supporting clients who wish to engage in harm reduction programs by offering public transit fare to attend such programs or related appointments. • Not discharging or impose service restrictions on the basis of substance use alone. • Supporting client-led or community-based harm reduction initiatives (e.g. peer-led programs, safety plans, etc.).
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • Harm Reduction Policy. • <i>Hamilton's Homeless Serving System Service Restriction Policy.</i>

6.5 2SLGBTQIA+

Standard Statement	<p>Despite significant advances towards 2SLGBTQIA+ equality, homophobia and transphobia are still deeply ingrained in our everyday behaviours, language, and in the policies of many institutions. Due to underreporting of incidents, discrimination against queer and trans individuals remains largely invisible to shelter workers and management, policy makers, and City management, at a time when 2SLGBTQIA+ youth homelessness, in particular, is on the rise.⁵</p>
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⁵ Homeless Hub. *Solutions: Priority Populations: Lesbian, Gay, Bisexual, Transgender, Transexual, Queer, Questioning and 2-Spiritd (LGBTQ2S)*. Canadian Observatory on Homelessness. Retrieved on

The risks encountered on the streets and in the shelter system by 2SLGBTQIA+ homeless individuals versus heterosexual and cisgender homeless individuals differ largely due to frequent incidents of homophobic and transphobic violence. Not only are the risks and barriers encountered different, but the needs of 2SLGBTQIA+ individuals differ from those of their heterosexual and cisgender counterparts.

Emergency shelter operators will support 2SLGBTQIA+ clients through the following practices:

- Staff will provide an atmosphere of dignity and respect for all clients and provide services in a non-judgmental manner.
- Establishing clear policies that reflect inclusiveness of 2SLGBTQIA+ individuals to ensure safer spaces for non-binary and gender diverse people in emergency shelters.
- Respecting and accepting the self-defined sexual orientation, gender identity, and gender expression of an individual, including their pronouns.
- Ensuring that transgender individuals are able to access services in the shelter sector that reflects their gender identity.
- A confidentiality strategy that works with clients to ensure that staff do not “out” their gender or orientation. Staff will be aware of what information about a client’s gender/orientation/transition experience is not to be disclosed.
- Providing clients with options for private access to hygiene facilities to reduce the risk of violence and harassment which 2SLGBTQIA+ persons are at higher risk of experiencing.
- Treating hormones that belong to trans clients as any other medication. Clients will be given privacy to self-administer hormones.
- Emergency shelter operators are encouraged to seek partnerships with 2SLGBTQIA+-positive health/services providers. Emergency shelter operators will make information on 2SLGBTQIA+-positive health/ services providers available to all clients and facilitate referrals as needed.⁶
- Providing and education on 2SLGBTQIA+ issues for staff, volunteers, management, and other residents.
- Hiring employees to reflect gender and orientation diversity.

April 20, 2023 from <https://www.homelesshub.ca/solutions/priority-populations/lesbian-gay-bisexual-transgender-transsexual-queer-questioning-and-2>

⁶ Shelter, Support & Housing Administration. (2023). *Toronto Shelter Standards, Version 5*, City of Toronto.

Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • 2SLGBTQIA+ inclusiveness policy.
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6.6 Race, Ethnicity, and Immigration Status	
Standard Statement	<p>Black, racialized, newcomer, immigrant, and refugee individuals and families experiencing homelessness often face additional barriers, experiences of discrimination, and challenges when attempting to access services, including emergency shelter. Although the City of Hamilton and emergency shelter operators strive to provide equitable service to everyone experiencing homelessness, systemic racism influences all institutions and levels of government. From microaggressions to overt forms of racism to stereotyping, racism impacts all areas of racialized people's lives culminating in a higher risk of homelessness.</p> <p>Emergency shelters will support racialized and newcomer clients through the following practices:</p> <ul style="list-style-type: none"> • Where possible and requested, translators will be used to assist with communication. • Emergency shelter operators will not request or collect immigration status information in order to determine service eligibility as part of a shelter's intake or admission process, unless approved by the City of Hamilton. • Providing information on legal and community resources for newcomer clients as needed. • Responding to and addressing complaints of racism or discrimination reported by clients, staff, volunteers, and management. • Communicating to all clients that racism, discrimination, and hate speech are against the law and shelter policy. • Providing ongoing training and education for all staff, volunteers, management, and other residents on anti-racist, including anti-Black racism, and anti-oppression practices and considerations. • Hiring employees to reflect racial diversity. <p>Emergency shelter operators and the City of Hamilton should develop policies and practices that take into consideration the following recommendations for combating racism in the shelter system:</p>

	<ul style="list-style-type: none"> • Anti-oppression and anti-racism training for all staff, leadership, and board of directors. • Work with Black and racialized community leaders and clients to gather input through engagement activities. • Apply an equity, diversity, and inclusion analysis to current Human Resources policies and practices (hiring, retention, promotion, performance evaluation, and workplace culture initiatives) to support the implementation of processes to address unconscious bias and systemic anti-Black racism, as well as intentional hiring and advancement opportunities for racialized clients and staff. • Support clients with accessing health and mental health supports and services that are culturally responsive when requested and available. • Facilitate and build partnerships with community organizations, racialized and Black community leaders, advocating for the rights of racialized community members and learn from best practices.
Policy	Not applicable

6.7 Gender	
Standard Statement	<p>Gender-based discrimination and violence continues to impact cis and trans women as well as gender diverse individuals, especially during experiences of homelessness. The unique needs of those marginalized due to gender include increased risk of violence, caregiver responsibilities, and pregnancy.</p> <p>Emergency shelter operators support women and gender diverse clients through the following practices:</p> <ul style="list-style-type: none"> • Accepting gender identity as defined by the individual rather than by the perception of shelter staff and/or other clients. Sometimes this may not correspond with a person's physical appearance. Emergency shelter operators will ask all clients for their gender and pronouns at intake rather than assume and will include a line on intake forms indicating that the shelters welcome trans and gender diverse clients. • Supporting the choices of transgender clients to access designated sleeping areas that will best preserve their safety and dignity. In instances where a transgender client expresses concerns about their safety or dignity, emergency shelter

	<p>operators will accommodate requests for a bed in a gender neutral/private room, if possible.</p> <ul style="list-style-type: none"> • Providing information on and referrals to reproductive health services. • If a client discloses that they are fleeing gender-based violence or intimate partner violence shelters will provide information on Violence Against Women services and shelters, as well as engage in safety planning if requested. • If possible and available, emergency shelter operators will create safer zones such as semi-private rooms. • Addressing harassment of transgender and gender diverse clients by focusing on the inappropriate behaviour and enforcing rights and responsibilities. • Enforcing policies around confidentiality that do not require transgender individuals to disclose their status. If they do disclose, emergency shelter operators will maintain confidentiality and ask the individual how they would like the topic to be addressed if it is raised. • Having a notification process for when men will be entering private shelter spaces of women, trans, and gender diverse persons. • All shelters will provide menstrual products for clients who menstruate. • A minimum of one washroom that is barrier-free, fully accessible and marked as gender neutral will be provided. Emergency shelter operators will provide options for private bathroom access whenever possible. • Emergency shelter operators will provide staff training on safety planning and resources to connect with a VAW shelter for support for gender based or domestic violence considerations.
Policy	Not applicable

6.8 Religion	
Standard Statement	Emergency shelters serve clients from a wide array of backgrounds, experiences, and religious affiliations. It is important to acknowledge that people experiencing homelessness may have experienced persecution based on their religious affiliations or may have had traumatic experiences stemming from exposure to or involvement with a particular religion or religious organization. To provide a respectful environment for people practicing many different religions emergency shelter operators will ensure that their spaces, staff, and

	<p>clients are welcoming and provide a respectful environment for people affiliated with all religions.</p> <p>Emergency shelter operators support religious diversity through the following practices:</p> <ul style="list-style-type: none"> • Ensuring that respect for religious differences is maintained through anti-discrimination policies, made clear in written shelter policies and practices, but also posted in visible locations. • Allocating space for religious practice, such as a quiet space or prayer room with a closed door, is important to allow clients to maintain religious observation. • If requested, provide information on local religious communities or congregations that clients can access for support and community building is important for building up local support systems and community connections. • Allowing for flexibility at mealtimes for emergency shelters that provide food to accommodate religious fasting (e.g. during Ramadan). • Not requiring clients to participate in or attend any religious services or activities offered by the shelter.
Policy	Not applicable

6.9 Owners of Service Animals

Standard Statement	<p>According to the Accessibility for <i>Ontarians with Disabilities Act</i> (AODA), clients are permitted to bring service animals into areas that are open to the public unless the animal is excluded by another law. In cases where another law prohibits service animals from entering the premises, emergency shelter operators will provide another way for clients to access services or facilities. Emergency shelter operators will accommodate service animals, however, may refer clients to alternative services if a service animal's behaviour is compromising the safety of staff or clients.</p> <p>Clients must provide documentation from a regulated health professional for their service animal or an identification card from the Ontario Ministry of the Attorney General for people who are blind and use guide dogs.</p> <p>Clients are responsible for managing the behaviour of their service animal, arranging veterinary care, and meeting the basic needs of their service animal.</p>
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	If a client requires a service animal, emergency shelter operators should support clients in connecting with appropriate health supports when a service animal designation is needed and advocate for accommodation in housing options for clients with service animals.
Policy	Not applicable

7



intent:

This section details requirements related to the daily operations of emergency shelters, including staff training, facility ratios, and neighbourhood relations.

SHELTER OPERATIONS

7.1 Training Requirements

7.2 Neighbourhood Relationships

7.3 Facility Ratios

7.1 Training Requirements	
Standard Statement	<p>Emergency shelter operators will have a written policy that outlines the orientation procedure and mandatory training for all its new employees, peer workers, volunteers, and Board of Directors members.</p> <p>The training requirements outlined below may change to meet new and emerging needs in the homeless-serving sector. Emergency shelter operators will work with the City to identify and implement new training as required.</p> <p>The minimum mandatory training for shelter staff includes:</p> <ul style="list-style-type: none"> • Ongoing Indigenous cultural competency and accountability • Shelter Diversion practices • Housing-Focused Case Management Supports • Discharge planning • Serious Incident Guidelines and Reporting • Service Restriction Guidelines and Reporting • Single Facilities Incident Plan (Emergency Contingency Plan) • VI - SPDAT (City to provide training) • HIFIS and/or applicable HMIS and data entry guidance (City to provide training) • Anti-racism, anti-oppression (AROP) • Infection Prevention and Control (IPAC) measures • Standard First Aid/CPR (at least one person per shift is certified in Standard First Aid/ CPR) and health and safety training (in accordance with the Workplace Safety and Insurance Act) • Workplace Hazardous Materials Information System (WHMIS) (for those exposed to hazardous materials in accordance with Regulation 101 under the Workplace Safety and Insurance Act) • Safe Food Handling Certificate (for any staff serving food for over 10 people in accordance with Ontario Food Premised Regulations 562/90) <p>Shelters will also ensure that their volunteers, employees, Board of Directors, or agents, who deal with members of the public, receive training in the following areas:</p> <ul style="list-style-type: none"> • Suicide intervention; crisis intervention; de-escalation

	<ul style="list-style-type: none"> • Provision of services to persons with disabilities, in compliance with the <i>Accessibility for Ontarians with Disabilities Act, (2005)</i> • Harm reduction education including overdose risk assessment, referral to receive naloxone kits and training for staff and clients • Regular ongoing equity training • Training and education for staff and clients on experiences and issues related to the 2SLGBTQIA+ community • Training for safety planning, or connect with a VAW shelter for support for gender-based or domestic violence • Training on the Hamilton Emergency Shelter Standards
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • Orientation procedures and mandatory shelter staff training.

7.2 Neighbourhood Relationships	
Standard Statement	<p>The City of Hamilton and emergency shelter operators recognize that emergency shelters operate within and for the Hamilton community, which requires respectful and responsive relationships with properties, businesses, and residents that neighbour shelter facilities.</p> <p>Emergency shelter operators will develop a good neighbour commitment that outlines:</p> <ul style="list-style-type: none"> • How emergency shelter operators will mitigate and minimize the impacts of shelter activities on neighbouring properties, businesses, and residents. • How to contact the shelter to report incidents or concerns and when to contact police/bylaw for issues outside of shelter scope. • Provide community members with information on the complaints policy.
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • Complaints policy.

7.3 Facility Ratios	
Standard Statement	<p>Clients accessing emergency shelters are entitled to adequate and appropriate sleeping facilities, washrooms, and bathing facilities. Emergency shelter operators are accountable to the City of Hamilton – Property Standards, zoning requirements, and provincial fire code.</p> <p>Emergency shelter operators will ensure clients have reasonable accommodations to meet their basic needs by:</p> <ul style="list-style-type: none"> • Ensuring that ratios for amenities follow the Ontario Building Code, emergency safety planning guidelines, and Zoning by-laws as applicable. • Providing a minimum amount of space per person in the sleeping area, in accordance with Ontario Building Code, to decrease the potential spread of illness, to enhance personal security and to decrease altercations resulting from a lack of personal space. • Beds, cribs, and bassinets will be arranged in a manner that: <ul style="list-style-type: none"> ○ Facilitates clear walking paths and sightlines for emergency evacuations. ○ Does not block air vents, windows, doors, plumbing, or access panels. ○ Does not expose a client to existing or potential danger. <p>To assist clients in meeting their hygiene and sanitary needs, each shelter will provide a minimum of:</p> <ul style="list-style-type: none"> • One toilet for every 15 clients up to the first 100 clients and one toilet for every 30 clients thereafter (urinals may replace up to half the number of required toilets). • One washbasin for every 15 clients (with liquid soap and paper towels). • One shower for every 20 clients.
Policy	Not applicable

8



intent:

This section details key areas of health and safety concerns which impact the operations of emergency shelters. Information in this section clarifies how emergency shelter operators prepare and respond to serious health and safety concerns in the shelter environment.

HEALTH AND SAFETY

8.1 Infectious Disease Prevention and Management

8.2 Cold Alerts and Heat Warnings

8.3 Safety Planning

8.4 Serious Incidents

8.1 Infectious Disease Prevention and Management	
Standard Statement	Emergency shelter operators will follow all directions and standards for infectious disease prevention and management set out by Health Canada and Infection Prevention and Control Canada. In the event of an outbreak or public health risk, emergency shelter operators will follow directions from Hamilton Public Health and the Ministry of Health.
Policy	Not applicable

8.2 Cold Alerts and Heat Warnings	
Standard Statement	When the City's Medical Officer of Health issues a Cold Alert or Heat Warning recreation centres, social service agencies, and the homeless-serving sector respond as they are able to the needs of homeless and vulnerable residents by expanding service hours, easing service limitations/caps, and ensuring locations offer a welcoming space for individuals and families to stay out of the cold. More information on cold alerts and heat warnings can be found online (Cold Alerts: http://hamilton.ca/cold , Heat Warning: http://hamilton.ca/heat).
Policy	Not applicable

8.3. Safety Planning	
Standard Statement	<p>Emergency shelter operators undertake safety planning with clients for a number of reasons. Safety planning is a component of trauma-informed care and may be done at the request of the client when entering shelter and reviewed regularly throughout a shelter stay as needed. Emergency shelter operators and clients will build safety plans together which leverage available resources and reflect shelter limitations related to staffing and physical facilities. In some cases, emergency shelter operators may be able to offer interim safety measures until a more secure arrangement can be made.</p> <p>Safety planning is done in response to a risk assessment and for a variety of reasons including:</p> <ul style="list-style-type: none"> • Protecting client safety in cases of conflict between residents or from an outside aggressor. • Protecting client safety in known incidents or suspected risk of human trafficking. • Protecting client safety related to harm reduction planning in cases where substance use may be a consideration for clients. • Protecting client safety in cases where suicide risk or self-harm may be a consideration. • Providing trauma-informed care for clients who have experienced abuse, trauma, and/or gender-based violence. • As a means of supporting clients engaging in sex work. • Connecting clients with health or mental health considerations to resources in the community. • Doing community safety planning when a risk may be posed to the surrounding community. • Having a documented approach for how emergency shelter operators and staff will support a client and modify approaches as may be needed to aid in de-escalation. • Maintaining safety at the shelter in accordance with the <i>Occupational Health and Safety Act</i>. <p>Safety plans should be time limited and reviewed regularly.</p>
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • Safety planning.

8.4 Serious Incidents	
Standard Statement	<p>Emergency shelter operators will have a system in place for recording unusual incidents. The recording of the incident should include identifying any residents and staff who were involved in or witnessed the incident in the event of a criminal investigation.</p> <p>An incident report will be completed within 24 hours of all serious incidents involving fire, death, severe assault/accidental injuries and/or attempted suicides requiring medical assistance, and occurrences involving a firearm. One copy of the Serious Incident Report will be forwarded within 24 hours to the City of Hamilton.</p> <p>Shelter providers will make grief and loss support available to staff and clients following a client death or serious incident. Support may include de-briefing, healing circles, one-on-one counselling, and peer-to-peer supports.</p>
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • Serious incident policy.

9

**intent:**

Emergency shelter services are shaped by and responsible to numerous external stakeholders. This section clarifies how emergency shelters are held accountable and governed through a combination of internal organizational structures, relevant legislation, and funding agreement requirements.

ACCOUNTABILITY AND GOVERNANCE

9.1 Program Accountability

9.2 Board Requirements

9.3 Finance

9.4 Relevant Legislation

9.1 Program Accountability	
Standard Statement	<p>The City of Hamilton and emergency shelter operators work in collaboration to ensure that shelter services are delivered in accordance with the Hamilton Emergency Shelter Standards. Emergency shelter operators and the City of Hamilton are held accountable through the following mechanisms:</p> <p>Governance and Partnerships:</p> <ul style="list-style-type: none"> • The City of Hamilton convenes regularly with emergency shelter operators and Indigenous Community Entity to review emerging issues in the homeless-serving sector, including but not limited to: <ul style="list-style-type: none"> ○ Reviewing the size and composition of the emergency shelter sector to determine if adjustments are needed to the number of beds and supports available. ○ Reporting and reviewing service restriction data on a quarterly basis. ○ Reviewing best practices and developing partnerships to meet client needs. ○ Strengthening and growing their relationship with Indigenous Community Entity to support Indigenous clients by exploring how to best deliver culturally safe supports and identifying the resources that would be required to make that happen. ○ Sharing feedback from PWLE engagement activities regarding system gaps, suggestions, and feedback. <p>Contract Requirements:</p> <ul style="list-style-type: none"> • Funding contracts will be maintained and monitored by the City of Hamilton. Program reviews will be conducted as required by funding contracts or at the request of the City of Hamilton. • Emergency shelter operators will submit information as outlined in funding contracts. <p>Communicating Policies and Expectations:</p> <ul style="list-style-type: none"> • Emergency shelter operators will explain at intake (or as soon as possible) and post the following policies and expectations in a visible area of the shelter: Client rights and responsibilities, curfew policy, policies related to storing personal belongings, service restriction policy, and complaints

	<p>policy. If requested, shelter staff will provide clients with a written copy of any shelter policy.</p> <p>Information Management:</p> <ul style="list-style-type: none"> • Emergency shelter operators will fully participate in Hamilton’s Homelessness Management Information System (HMIS), as outlined in Section 10: Information Systems of the standards. • Information management will be assessed in accordance with the applicable policy and guidance as available via HMIS for auditing including but limited to data field completion, user access and activities, attestations, and staff role assignments. System reporting will be assessed in accordance with the applicable policy and guidance as available via HMIS for reporting including but limited to service reach, client demographics, service outcomes, client follow ups, time to service, and service types. <p>Complaints Policy:</p> <ul style="list-style-type: none"> • If a client, advocate, or community member feels that emergency shelter operators are not meeting their obligations as outlined in the Standards, they may follow the process outlined under Section 2.3: Complaints Process. • Complaints which are not resolved by the shelter operator may be escalated to the City of Hamilton as outlined in the complaint resolution process (pending City Council approval September 2023). The City of Hamilton will report back to emergency shelter operators a summary of complaints received after emergency shelter operators complete their internal complaints process. <p>Applicable Legislation and Bylaws:</p> <ul style="list-style-type: none"> • Emergency shelter operators and their Board of Directors are responsible for ensuring that their organization complies with all relevant and applicable federal, provincial, and municipal legislation, including but not limited to those outlined in Section 9.4: Relevant Legislation of the Standards. • Emergency shelter operators will work with the City of Hamilton and Hamilton Public Health to respond as needed to infectious disease situations.
Policy	Not applicable

9.2 Board Requirements	
Standard Statement	<p>Not-for-profit organizations funded to provide emergency shelter services will be governed by a volunteer Board of Directors.</p> <p>At a minimum, the Board of Directors is responsible for:</p> <ul style="list-style-type: none"> • Ensuring the mandate, mission, values, and strategies of the organization are followed. • Setting agency priorities. • Reviewing and approving policies. • Evaluating services. • Ensuring that the organization meets funder expectations and contract conditions including compliance with the Standards. • Reviewing budgets and expenditures. • Reviewing and approving accounting and reporting procedures. • Selecting and conducting an annual performance review of the Executive Director.
Policy	Not applicable

9.3 Finance	
Standard Statement	<p>On a monthly basis, all shelters will provide program and financial information to the Housing Services Division in a format specified by the City of Hamilton. All annual budget submissions will be submitted, in the specified format, to the City by a date determined by the City of Hamilton.</p> <p>Agencies will invoice the City in accordance with the terms and conditions of the funding agreements.</p> <p>Bookkeeping and financial records will be set up according to generally accepted accounting procedures, adhering to the terms and conditions of the funding agreements, and an annual audit will be conducted by a qualified independent auditor. All financial records will be kept for a minimum of seven years for financial audit purposes.</p>
Policy	Not applicable

9.4 Relevant Legislation	
Standard Statement	<p>Emergency shelter operators and their Board of Directors are responsible for ensuring that their organization complies with all relevant and applicable federal, provincial, and municipal legislation, including but not limited to:</p> <p>FEDERAL</p> <ul style="list-style-type: none"> • Canada Consumer Product Safety Act <p>PROVINCIAL</p> <ul style="list-style-type: none"> • Accessibility for Ontarians with Disabilities Act • Child and Family Services Act • Ontario's Homelessness Prevention Program, including its guidelines • Employment Standards Act • Fire Prevention and Protection Act • French Language Services Act • Health Protection and Promotion Act • Health Insurance Act, R.S.O. 1990 • Municipal Freedom of Information and Protection of Privacy Act • Occupational Health and Safety Act • Ontario Building Code Standards • Ontario Fire Code • Ontario Human Rights Code • Ontario Food Premises Regulation • Personal Health Information Protection Act • Smoke Free Ontario Act • Workplace Safety and Insurance Act <p>MUNICIPAL</p> <ul style="list-style-type: none"> • Property Maintenance By-laws • Property Standards By-laws • Zoning By-laws <p>In the event of any legal conflict between the Hamilton Emergency Shelter Standards and applicable legislation, the legislation shall prevail to the extent of the conflict.</p> <p>Shelter providers and their Board of Directors will consult qualified legal professionals about any and all legal and financial obligations related to their operation as a shelter.</p>

Policy	Not applicable
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10

intent:

This section outlines how information about people experiencing homelessness will be recorded, including the process for obtaining consent from clients. Shelter operators and the City of Hamilton are responsible for maintaining records which include sensitive and personal information and as a sector, strive to maintain information in ways that are client centred and reflect best practices for maintaining the privacy and dignity of clients.

INFORMATION SYSTEMS

10.1 Client Database Information Management Systems

10.2 Consent

10.3 Confidentiality

10.4 Storing Information

10.1 Client Database Information Management Systems	
Standard Statement	Emergency shelter operators are directed to fully participate with Hamilton's Homelessness Management Information System (HMIS), including participation in HIFIS-related activities, data collection, and reporting cycles. Programs are directed to use HIFIS or any other designated system to collect, manage, and share data at the direction of the City of Hamilton with the consent of the client for the purpose of providing clients with housing supports and helping clients find and maintain a place to live.
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • <i>HIFIS Data Sharing Protocol for Hamilton's Homeless Serving System</i> and applicable data entry guidance. • <i>Hamilton's Homeless Serving System – HIFIS Confidentiality and User Agreement.</i> • <u>Hamilton's Homeless Serving System Consent and Intake Policy.</u>

10.2 Consent	
Standard Statement	<p>Shelter staff will obtain informed consent from persons and dependents accessing shelter services, prior to consulting with or providing referrals to other service providers. Consent can change over time and shelters may review consent with clients periodically or at client request.</p> <p>Individuals must provide consent to have their personal information stored in the Homelessness Management Information System (HIFIS 4.0 and the By-Name List). All new clients are required to review and sign the Consent to Share Personal Information with Hamilton's Homeless Serving System. In cases of declined consent, no information will be added to HIFIS and the client's name will not appear on the By-Name List. Staff will make every attempt to progressively engage clients to help them understand the benefits of participating in the Coordinated Access system of care and to obtain consent.</p> <p>Progressive engagement to obtain consent should be conducted according to agency practice in a way that is culturally considerate and respects individual autonomy. Consent must be provided in order for a client to be known to the homeless-serving system to be referred to additional supports through Coordinated Access. However, clients who decline consent still have full access to emergency sheltering, outreach, and drop-in services without restriction. The use of declined consent in HIFIS is used in exceptional circumstances and requires City approval. Referrals of Indigenous clients and other clients who do not consent to be added on HIFIS but do consent to their information being shared with the City and/or a specific program, can be made through the City of Hamilton based on the Urgent Health and Safety or Missing/Inaccurate Information criteria in the Coordinated Access Prioritization Policy.</p> <p>Indigenous clients are not required, but may choose, to consent to their information being stored in HIFIS and on the By-Name List (BNL). Indigenous clients are not required to complete a VI-SPDAT or SPDAT.</p> <p>This also applies to consent for data storage outside of HIFIS including other databases, tracking sheets, and paper records.</p>
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • <u>Hamilton's Homeless Serving System Consent and Intake Policy.</u>

10.3 Confidentiality	
Standard Statement	<p>Emergency shelter operators have access to detailed and highly sensitive personal information about clients. Protecting the privacy and confidentiality of shelter clients and their personal information is of the utmost importance.</p> <p>Each shelter operator and its staff will keep in confidence the personal information of clients to which it has access as part of the <i>HIFIS Data Sharing Protocol for Hamilton's Homeless Serving System</i>.</p> <p>All emergency shelter operators will comply with applicable municipal, provincial, and federal legislation relating to the collection, storage, and sharing of client personal information and in so doing will take all reasonable precautions to protect all personal information from any unauthorized use, disclosure, copying, modification, and destruction.</p> <p>Emergency shelter operators will notify clients that personal information collected in HIFIS may be shared with designated parties for the purposes of providing and funding ongoing or future housing supports. Emergency shelter operators will inform clients at intake of the process for requesting access to their personal file and will provide access within a reasonable timeframe of a client request for their file.</p> <p>Emergency shelter operators will develop a confidentiality strategy that works with clients to ensure that staff do not disclose personal information that a client wishes to remain private. Shelter staff will explain the limits of confidentiality to clients at intake, or as soon as possible.</p>
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • <i>HIFIS Data Sharing Protocol for Hamilton's Homeless Serving System</i> and applicable data entry guidance. • Hamilton's Homeless Serving System – <i>HIFIS Confidentiality and User Agreement</i>.

10.4 Storing Information	
Standard Statement	<p>As per the <i>HIFIS Data Sharing Protocol for Hamilton's Homeless Serving System</i> the HIFIS Community Coordinator (The City of Hamilton) is responsible for the secure storage of all HIFIS data collected from the service providers. The HIFIS Community Coordinator will ensure that the data is backed up daily and stored in a secure location.</p> <p>It should be made clear to clients, through the signing of the Consent to Share Personal and Health Information with the Hamilton's Homeless Serving System, where the client's information will be stored, and which community partners have access to that information. For all new clients who sign the Consent form, staff will scan the signed copy of the consent on a secure scanning device and upload it to HIFIS, delete the electronic copy of the consent, and then retain the physical signed copy of the form in a securely locked cabinet.</p> <p>This also applies to storage methods outside of HIFIS including other databases, tracking sheets, and paper records.</p>
Policy	<p>Emergency shelter operators will develop or adhere to the following policies related to this standard:</p> <ul style="list-style-type: none"> • Where and how hard copies/files are stored securely, for how long, and who has access to those files. • Hamilton's Homeless Serving System Consent and Intake Policy • <i>HIFIS Data Sharing Protocol for Hamilton's Homeless Serving System</i>



11

STANDARDS ADMINISTRATION

11.1 Review History and Approval

11.2 Related Documents

11.1 Review History & Approval			
Revision Number	Revision and Approval Date	Description of Change(s)	Process Approval Name & Position
0	October 2008	Creation of the first Hamilton Emergency Shelter Standards.	City of Hamilton – Housing Services Division
1	July 2023	<p>Creation of the revised Hamilton Emergency Shelter Standards.</p> <p>New Sections created. Major additions to Sections 3, 5 and 6.</p> <p>Updated all existing sections to add clarification on expectations and best practices related to the homeless-serving sector.</p> <p>Endorsed by all sectors including men’s, women’s, family, youth, and Indigenous community.</p>	Michelle Baird, Director, Housing Services Division
Next Review Date: January 2027			

11.2 Related Documents
<p>The following policies and guides related to Hamilton’s homeless serving system referenced in the Standards can be found online: https://www.hamilton.ca/people-programs/housing-shelter/preventing-ending-homelessness/resources-homeless-serving-partners.</p> <ul style="list-style-type: none"> • <i>City of Hamilton complaint resolution process</i> • <i>Hamilton’s Coordinated Access Case Management Policy</i> • <i>Hamilton’s Coordinated Access Prioritization Policy</i> • <i>Hamilton’s Coordinated Access System Process Guide</i> • <i>Hamilton’s Homeless Serving System Consent and Intake Policy</i> • <i>Hamilton’s Homeless Serving System HIFIS Confidentiality and User Agreement</i> • <i>Hamilton’s Homeless Serving System Service Restriction Policy</i> • <i>Hamilton’s Homeless Serving System Triage and Assessment Policy</i> • <i>HIFIS Data Sharing Protocol for Hamilton’s Homeless Serving System</i>



INFORMATION REPORT

TO:	Chair and Members General Issues Committee
COMMITTEE DATE:	June 19, 2024
SUBJECT/REPORT NO:	Shelter Inspection Feasibility (HSC24013) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Robyn Perry (905) 546-2424 Ext. 7801 Shannon Honsberger (905) 546-2424 Rob Mastroianni (905) 546-2424 Ext. 8035
SUBMITTED BY:	Michelle Baird Director, Housing Services Division Healthy and Safe Communities Department
SIGNATURE:	

COUNCIL DIRECTION

On September 21, 2023, the Emergency and Community Services Committee approved Report HSC23007, Hamilton's Emergency Shelter Standards which included the following:

- (b) "that staff be directed to investigate the feasibility of implementing at least one random inspection of each Hamilton Emergency Shelter on an annual basis and report back to the Emergency and Community Services Committee".

INFORMATION

The City currently has several ways to connect with shelter providers on a regular basis, such as case worker's site visits, coordinated access community meetings, operations group meetings, and ongoing strategic planning meetings. Shelter providers are required to follow City policies, such as the shelter standards, as a requirement of their contract. Shelters also engage in accreditation through various accreditation bodies and are reviewed for compliance to industry standards. The City ensures compliance with contractual requirements through these various visits and meetings and does not currently complete random inspections of facilities. Further, there is no current reason to

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SUBJECT: Shelter Inspection Feasibility (HSC24013) (City Wide) - Page 2 of 5

believe there is non-compliance with policies. Where there has been deviation or discrepancies in policy or procedure, those items are addressed through the various forums noted above. When required, a new policy process is initiated by the City, informed by shelter operators and what we hear from people with living experience through the shelter consultation process, and implemented (see for example the Shelter Complaints Process or the Service Restriction Policy). The City works on continuous quality improvement through a variety of coordination tables, engagement, and data analysis.

The Emergency Shelter and Residential Care Facilities Systems Complaints Resolution Process was recommended through Council Report HSC23053 and presented on September 21, 2023. Policy for the complaints process is established and complaints are triaged by current housing staff to be addressed by the appropriate staff within impacted Divisions City wide.

Beyond these collaborative efforts and the existing complaints process, whereby issues can be escalated to the City, the City could use financial means to enforce compliance with shelter standards. However, there is a risk in using financial means in this way in a system that is experiencing significant pressure, including loss of shelter beds during a crisis of homelessness in Hamilton. Should shelter beds be lost there would be immediate impacts to the encampments, drop-ins, and other supports in the homeless-serving system.

Given the existing work to implement continuous quality improvement and compliance with City policies, and where there is no reason to believe there is non-compliance, staff do not recommend implementing a shelter inspection process. Instead, staff would prefer focusing on continuous quality improvement to policy compliance, the shelter complaints process, and higher priority projects within the homelessness serving system such as encampment management and reducing homelessness.

In addition, developing and implementing a shelter inspection protocol based on the shelter standards would require additional staffing resources. Information about the resourcing, as well as preliminary program design, outcomes, and consultation are considered below.

Program Design:

Should staff be directed to develop and deliver random, annual inspections of all City-funded shelters, staff would recommend developing a defined list of indicators based on the shelter standards. The standards are community-informed and meant to clarify expectations of shelter provision to protect vulnerable people staying in emergency shelters. This would include categories such as Rights and Responsibilities, Services Provided, Supporting Diverse Communities, and Shelter Operations. Attached in Appendix "A" are potential example questions for a Shelter Inspection Protocol; however, the protocol should be developed in collaboration with shelter providers,

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people with living experience, other services providers working with shelters, and best and promising practice to ensure indicators are relevant and minimally invasive.

The guiding questions for the inspection would come from a collaboratively established “question bank” with mandatory and optional questions depending on the operational focus for the year as well as the individual circumstances of the unique shelter. This method would seek to balance transparency and equitable treatment with the changing needs and policy focus of the City.

The inspection process for all 12 emergency shelters would likely take one full day each, excluding planning, report drafting, and correspondence. There could be follow up visits and communications should there be an instance of non-compliance. The inspector would speak to a range of people (management, staff, clients) to better understand the operations, client experience, and compliance to the standards. Given the low risk of non-compliance, staff estimate 75% or more will be compliant.

Following an inspection, the inspector would provide their scoring back to the provider, along with guidance on how to improve operations and better align to the shelter standards. Depending on the results, the inspector may need to conduct follow-up visits to support compliance and continuous improvement. Improvements would be prioritized with appropriate turnaround times.

Staffing:

Should the City move forward with implementing a random inspection protocol, staff would require eight months of lead time to develop the protocol, recruit an inspector, and engage with community partners on design. Staffing requirements include a 0.25 FTE Housing Administration Officer. Salary, benefits, and travel for this position are an estimated \$42,000.

Anticipated Outcomes:

The City has historically had positive and collaborative working relationships with shelter providers to promote compliance with City policies, including shelter standards. Regular visits to observe conditions via Housing Services Division Leadership and Emergency Shelter Case Managers and community engagement activities like the shelter standards review provide the needed opportunity for quality improvement. Staff do not anticipate a marked increase in compliance because of formalized inspections.

Consultation:

In developing the Emergency Shelter Standards Report (HSC23000), staff worked closely with the Emergency Shelter Coordination Table, which includes senior leadership of each emergency shelter. This group is currently working on implementation, including measuring how well staff understand the organizational commitment to the standards, and how to measure compliance. The group raised

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concerns about being singled out for additional work at a time when all resources are being directed towards addressing the housing crisis and overcapacity within shelters.

When developing this report, staff reviewed the inspections currently completed by the City, which includes Fire, Building, and Public Health. These divisions monitor areas relating to environmental health and safety, building inspections, and fire inspections.

Specific feedback was provided by Fire related to inspections. As a Fire department they recognize the importance of preserving building stock used to provide shelter for a vulnerable population and that any reduction in shelter space may contribute to an increase in unsheltered people. The opinion of the Fire Department is that a proactive approach to inspection by the Fire Prevention Division would help to limit the amount of damage and reduce the number of incidents through ensuring the required fire safety systems are in place and functioning and to provide the sheltered occupants with fire safety education. In the event that public health would recognize an emergency situation whereby it would be necessary to increase capacity to shelter individuals the Fire Department would support a task force-based approach to inspection only when increased capacity due to emergency situations are in place. Sufficient resourcing would be necessary to support any involvement by the Fire Department moving forward.

Staff also reached out to municipalities to determine where a similar inspection protocol exists. Two responded, however neither completed inspections related to operating standards.

- In Windsor, inspections were related to COVID compliance measures and conducted by their Housing with Supports workers during their weekly visits for case management.
- In the York region, the Licensing and Compliance Office visits emergency shelters and ensures that providers adhere to the Service Contract and the Core Standards. This would be more similar to a licensing inspection completed by Hamilton's Municipal Law Enforcement staff.

Background:

Housing Services Division does not currently conduct random inspections of any shelter, or any other funded homeless serving programs, to understand the quality of customer service and compliance with program standards. There are several other ways that programs are monitored by The City of Hamilton and other entities, including the following:

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Monitor	Area Monitored
Housing Services Division Case Managers and Leadership	Weekly visits to liaise with providers, observe conditions and meet with clients for housing focused case management or other onsite meetings with leadership
Public Health Services, City of Hamilton	Environmental health - one unannounced inspection annually Food Safety - 2 - 3 unannounced inspections annually Unannounced inspections can also be complaint/incident driven
Building Division, City of Hamilton	New build/renovation inspections or for change of use (permits required), no ongoing maintenance inspections post approved occupancy. Where temporary health and residential facilities have been extended, building permits are waived, but inspections are mandatory
Fire Department, City of Hamilton	Fire inspections are complaint/incident driven
Housing Services Division, City of Hamilton	Contract Compliance (finances, funding outcomes), monthly Complaint process for clients ad hoc
Accreditation Bodies (Commission on Accreditation for Rehab Facilities, Canadian Centre for Accreditation)	Compliance to industry standards, frequency varies

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" to Report HSC24013 – Example Questions for a Shelter Inspection Protocol

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Appendix "A" Example Questions for a Shelter Inspection Protocol

Standard Inspection Area	Standard Sub Section	Management and Staff Questions	Client Questions
2. Client Rights and Responsibilities	2.1. Rights and Responsibilities	<p>Is the Rights and Responsibilities Form available at intake and posted in a public area?</p> <p>Does the Rights and Responsibilities Form contain the rights laid out in the Standard?</p> <p>Is the complaints and appeals process laid out and continuously accessible as part of the client's rights and responsibilities?</p>	<p>Did clients receive and understand the Rights and Responsibilities Form within 48 hours of intake?</p> <p>Do clients have a copy of or know where to find a copy of the Rights and Responsibilities Form?</p> <p>How well do clients feel the rights and responsibilities are upheld by shelter staff? (Likert scale)</p> <p>Do clients know how to submit a complaint and the appeals process?</p>
3. Accessing Services	3.2 Belongings	<p>Does the shelter have a policy and plan regarding the secure storage of client belongings?</p> <p>Are the storage containers secure?</p> <p>Does the shelter have a policy and plan regarding the secure storage of unpermitted items?</p>	<p>Are clients aware of the storage options?</p> <p>Do clients feel that their belongings are safe and secure?</p> <p>Do clients feel the storage options are adequate for their needs?</p>

		Does the list of unpermitted items align with the shelter standards?	
4 Services Provided	4.2 Basic Needs	<p>Is each client offered, at minimum, a bed with a mattress, pillow, and necessary bedding? Necessary bedding consists of a minimum of two sheets, a blanket, and pillowcase, a minimum of one shower towel upon admission.</p> <p>Are bedding and towels changed weekly, with each new client, and whenever these articles become soiled?</p> <p>At a minimum, are soap, shampoo, shaving products, and menstrual hygiene products available for use by clients?</p>	<p>How do clients rate the cleanliness of sheets and linens? (Likert scale)</p> <p>Do clients feel that bedding and towels are changed weekly, with each new client, and whenever these articles become soiled?</p> <p>Are clients able to access soap, shampoo, shaving products, and menstrual hygiene products when they are needed?</p>
5. Addressing Indigenous Homelessness	5.1 Indigenous Persons	<p>Have all shelter staff received cultural competency training this year?</p> <p>Is there visible Indigenous signage and art posted throughout the shelter to help create a welcoming environment and encourage dialogue about ancestry and culturally specific referrals?</p> <p>Is staff aware that people may maintain possession of their sacred items and</p>	<p>Were clients given opportunity to disclose Indigenous ancestry?</p> <p>Did clients feel comfortable to disclose their Indigenous ancestry?</p> <p>Are Indigenous clients made aware of resources and services offered specifically to Indigenous individuals at intake and throughout their stay?</p>

		traditional medicines, and are spaces available for traditional practices?	
7. Shelter Operations	7.1 Training Requirements	<p>Does the shelter have a written policy that outlines the orientation procedure and mandatory training for all its new employees, peer workers, volunteers, and Board of Director members?</p> <p>Does the training schedule include the minimum mandatory training for shelter staff as laid out in the Standards?</p> <p>Does the shelter provide any additional training beyond the minimum mandatory training?</p>	<p>Based on their experience, what training does the client feel would be beneficial to the shelter staff to enhance client outcomes?</p> <p>How well do clients think staff are trained in supporting the needs of people experiencing homelessness? (Likert scale)</p>



Hamilton

**West Harbour Development Sub-Committee
REPORT 24-001**

10:00 a.m.

**Wednesday, May 29, 2024
Room 264, 2nd Floor, City Hall**

Present: Councillor M. Spadafora (Chair)
Councillors C. Cassar and C. Kroetsch

Absent with

Regrets: Mayor A. Horwath (Vice-Chair) – City Business

THE WEST HARBOUR DEVELOPMENT SUB-COMMITTEE PRESENTS REPORT 24-001 AND RESPECTFULLY RECOMMENDS:

1. West Harbour Re-Development Plan - Status Update (PED17181(g)) (Ward 2) (Item 8.1)

That Report PED17181(g), respecting West Harbour Re-Development Plan - Status Update, be received.

FOR INFORMATION:

(a) CHANGES TO THE AGENDA (Item 2)

The Committee Clerk advised there were no changes to the agenda.

The Agenda for the May 29, 2024 meeting of the West Harbour Development Sub-Committee was approved, as presented.

(b) DECLARATIONS OF INTEREST (Item 3)

There were no declarations of interest.

(c) APPROVAL OF MINUTES (Item 4)

(i) November 7, 2023 (Item 4.1)

The Minutes of the November 7, 2023 meeting of the West Harbour Development Sub-Committee were approved, as presented.

(d) STAFF PRESENTATIONS (Item 8)

**(i) West Harbour Re-Development Plan - Status Update (PED17181(g))
(Ward 2) (Item 8.1)**

Chris Phillips, Manager, Municipal Land Development and Sarah Ehmke, Senior Project Manager, Placemaking and Animation, addressed Committee, respecting West Harbour Re-Development Plan - Status Update with the aid of a presentation.

The presentation from Chris Phillips, Manager, Municipal Land Development and Sarah Ehmke, Senior Project Manager, Placemaking and Animation, respecting West Harbour Re-Development Plan - Status Update, was received.

(e) ADJOURNMENT (Item 15)

There being no further business, the West Harbour Development Sub-Committee was adjourned at 11:11 a.m.

Respectfully submitted,

Councillor M. Spadafora, Chair
West Harbour Development Sub-
Committee

Tamara Bates
Legislative Coordinator
Office of the City Clerk



COMMUNITY BENEFITS PROTOCOL SUB-COMMITTEE REPORT 24-001

2:00 p.m.

May 28, 2024

Room 264, City Hall, 2nd Floor
71 Main Street West, Hamilton, Ontario

Present: Councillors C. Kroetsch (Chair), T. Hwang, M. Tadeson and M. Wilson
K. Andrus (Vice-Chair) and V. Nikolskaya

**Absent
with Regrets:** Councillor N. Nann - Personal
C. Craven, M. Ellerker

THE COMMUNITY BENEFITS PROTOCOL SUB-COMMITTEE PRESENTS REPORT 24-001 AND RESPECTFULLY RECOMMENDS:

1. Procurement Pilots Undertaken Utilizing Social Value (FCS24035) (City Wide) (Outstanding Business List Item) (Item 9.1)

That Report FCS24035 respecting Procurement Pilots Undertaken Utilizing Social Value, be received.

FOR INFORMATION:

(a) CHANGES TO THE AGENDA (Item 2)

The Committee Clerk advised the Committee of the following changes to the agenda:

12. NOTICES OF MOTION

12.2 Policy Framework for Voluntary Donations for Community Benefits

CHANGES TO THE ORDER OF AGENDA ITEMS:

Item 5.1 - Correspondence from Hamilton Community Benefits Network respecting The Successes of Community Benefits Agreements and Item 5.2 -

Correspondence from Hamilton Community Benefits Network respecting Municipal Social Procurement Policies in Canada: An Environmental Scan and Recommendations for Hamilton are to be considered following the consideration of Item 7 - Delegations.

The agenda for the May 28, 2024, Community Benefits Protocol Sub-Committee was approved, as amended.

(b) DECLARATIONS OF INTEREST (Item 3)

K. Andrus declared a Non-Disqualifying interest to Item 5.1 – Correspondence from Hamilton Community Benefits Network respecting The Successes of Community Benefits Agreements; Item 5.2 – Correspondence from Hamilton Community Benefits Network respecting Municipal Social Procurement Policies in Canada: An Environmental Scan and Recommendations for Hamilton; and Item 6.1 - Amandeep Saini, Research Shop, McMaster University, respecting Item 5.2, Correspondence from Hamilton Community Benefits Network respecting Municipal Social Procurement Policies in Canada: An Environmental Scan and Recommendations for Hamilton as he was involved with the creation of these documents through his work at the Hamilton Community Benefits Network.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 4)

(i) September 28, 2023 (Item 4.1)

The Minutes of the September 28, 2023, meeting of the Community Benefits Protocol Sub-Committee were approved, as presented.

(d) DELEGATION REQUESTS (Item 6)

(i) Amandeep Saini, Research Shop, McMaster University, respecting Item 5.2, Correspondence from Hamilton Community Benefits Network respecting Municipal Social Procurement Policies in Canada: An Environmental Scan and Recommendations for Hamilton (Item 6.1)

The delegation request from Amandeep Saini, Research Shop, McMaster University, respecting Item 5.2, Correspondence from Hamilton Community Benefits Network respecting Municipal Social Procurement Policies in Canada: An Environmental Scan and Recommendations for Hamilton, was approved for today's meeting.

(e) DELEGATION (Item 7)

(i) Amandeep Saini, Research Shop, McMaster University, respecting Item 5.2, Correspondence from Hamilton Community Benefits

**Network respecting Municipal Social Procurement Policies in Canada:
An Environmental Scan and Recommendations for Hamilton (Item 7.1)**

Amandeep Saini, Research Shop, McMaster University, was granted an additional 25 minutes, beyond the 5-minute time limit, to complete their delegation respecting Item 5.2, Correspondence from Hamilton Community Benefits Network respecting Municipal Social Procurement Policies in Canada: An Environmental Scan and Recommendations for Hamilton.

Amandeep Saini, Aiden McIlvaney, Ananya Yadov, and Brooklyn Lanosky, Research Shop, McMaster University addressed Committee respecting Item 5.2, Correspondence from Hamilton Community Benefits Network respecting Municipal Social Procurement Policies in Canada: An Environmental Scan and Recommendations for Hamilton.

The delegation from Amandeep Saini, Research Shop, McMaster University, respecting Item 5.2, Correspondence from Hamilton Community Benefits Network respecting Municipal Social Procurement Policies in Canada: An Environmental Scan and Recommendations for Hamilton, was received.

- (ii) Staff were directed to report back to the Community Benefits Protocol Sub-Committee by Q4 2024 with an analysis of the recommendations contained within the presentation material from Amandeep Saini, Aiden McIlvaney, Ananya Yadov, and Brooklyn Lanosky, Research Shop, McMaster University addressed Committee respecting Item 5.2, Correspondence from Hamilton Community Benefits Network respecting Municipal Social Procurement Policies in Canada: An Environmental Scan and Recommendations for Hamilton.

(f) COMMUNICATIONS (Item 5)

- (i) The following Communications were approved, ***as amended***:
 - (a) Correspondence from Hamilton Community Benefits Network respecting The Successes of Community Benefits Agreements (Item 5.1)

Recommendation: Be received ***and referred to staff for appropriate action.***
 - (b) Correspondence from Hamilton Community Benefits Network respecting Municipal Social Procurement Policies in Canada: An Environmental Scan and Recommendations for Hamilton (Item 5.2)

Recommendation: Be received ***and referred to staff for appropriate action.***

(g) NOTICES OF MOTION (Item 12)

Councillor Hwang introduced the following Notice of Motion:

(i) Light Rail Transit Early Works Community Employment Benefits (Item 12.1)

WHEREAS, the construction of the Light Rail Transit (LRT) project and the delivery of regular operation and service will create significant employment opportunities;

WHEREAS, community benefits agreements ensure residents have equitable opportunities and economic inclusion through commitments to social procurement and social enterprise opportunities;

WHEREAS, the Pillar One “Employment Opportunities” of Metrolinx’s Community Benefits and Supports Program, and reiterated by their President and Chief Executive Officer Phil Verster, looks to promote apprenticeship training and workforce development opportunities for local communities and equity seeking groups;

WHEREAS, Metrolinx, through project delivery on the Finch West, Eglinton Cross Town and Hazel McCallion LRTs, has gained substantial experience in delivering Community Employment Benefits and providing apprenticeship training and workforce development opportunities for local communities and equity seeking groups; and

WHEREAS, The City of Hamilton has been responsible for the delivery of several LRT early works, including Wentworth – Construction of a 500mm and 200mm watermain, Sherman – Construction of a 300mm watermain; and, Rosewood/Main – Construction of a 1200mm watermain paid for by Metrolinx.

THEREFORE, BE IT RESOLVED:

- (a) That staff be directed to work with Metrolinx, to identify projects, and attempt to deliver community employment benefits and social procurement ideals to the City-led procurement for any future LRT early works tendered in 2025 and beyond;
- (b) City Staff report back to the relevant committees the findings of those conversation with Metrolinx, including any challenges, barriers or successes; and

- (c) That the Mayor and City Clerk be authorized and directed to execute any required agreement(s) and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor and Metrolinx while meeting the City's procurement policy and authority to award the contracts.

(ii) Policy Framework for Voluntary Donations for Community Benefits (Added Item 12.1)

The Rules of Order were waived to allow for the introduction of a Motion respecting Policy Framework for Voluntary Donations for Community Benefits.

(h) MOTIONS (Item 11)

(i) Policy Framework for Voluntary Donations for Community Benefits (Added Item 11.1)

The Motion was placed on the floor as follows:

WHEREAS, Community Benefits Agreements have become a growing tool in other Ontario cities;

WHEREAS, the City of Ottawa has been using Community Benefits Agreements as a tool to negotiate between private developers, communities, and city staff as part of major development applications in Ottawa, such as the Manor Park Estates and Herongate agreements;

WHEREAS, a number of formats for Community Benefits Agreements have been used by other communities, including the City of Ottawa, over the last several years in the case of voluntary donations and other community benefits,

WHEREAS, voluntary contributions have not been advanced by Ward Councillors and staff for developments because there is an absence of a policy framework governing such contributions;

WHEREAS, interpretations from the City of Ottawa Integrity Commissioner to Ottawa Councillors have indicated that the provision of voluntary donations for community benefits is a policy matter;

WHEREAS the City of Hamilton has no existing donations to the City for Community Benefits Policy to specifically address such developer contributions or provide guidance to Members of Council; and

WHEREAS other municipalities, including Ottawa and Toronto, have established a policy to provide a framework for voluntary donations for community benefits.

THEREFORE, BE IT RESOLVED:

- (a) That staff be directed to reach out to the City of Ottawa and the City of Toronto respecting best practices and lessons learned on the use of Community Benefit Agreements and voluntary donations and report back to the Community Benefits Protocol Sub-Committee;
- (b) That staff be directed to:
 - (i) Work with Councillors of the Community Benefits Sub-Committee to identify projects in their wards which might be used as a template to prototype certain types of Community Benefits Agreements/Voluntary donations agreements;
 - (ii) Begin opening dialogue with any developers identified by the Ward Councillors to understand expectations and the potential for voluntary community benefit donations; and
 - (iii) Report back to the Community Benefits Protocol Sub-Committee with suggested project requirements for prototype agreements.

Chair Kroetsch relinquished the Chair to Vice-Chair Andrus for the remainder of the meeting.

The Motion above respecting Policy Framework for Voluntary Donations for Community Benefits (Added Item 11.1) was WITHDRAWN.

(i) GENERAL INFORMATION / OTHER BUSINESS (Item 13)

(i) Amendments to the Outstanding Business List (Item 13.1)

The following amendments to the Community Benefits Protocol Sub-Committee's Outstanding Business List, were approved:

- (1) Items Considered Complete and to be Removed (Item 13.1(a)):
 - (i) Hamilton Community Benefits Protocol Sub-Committee Update
Added: September 28, 2023 at Community Benefits Protocol Sub-Committee (Item 3)
Addressed as Item 9.1 on today's agenda.

(j) **ADJOURNMENT (Item 15)**

There being no further business, the Community Benefits Protocol Sub-Committee adjourned at 4:00 p.m.

Respectfully submitted,

Councillor Cameron Kroetsch
Chair, Community Benefits
Protocol Sub-Committee

Karl Andrus
Vice-Chair, Community Benefits
Protocol Sub-Committee

Matt Gauthier
Legislative Coordinator
Office of the City Clerk



CITY OF HAMILTON
HEALTHY AND SAFE COMMUNITIES DEPARTMENT
Housing Services Division

TO:	Chair and Members General Issues Committee
COMMITTEE DATE:	June 19, 2024
SUBJECT/REPORT NO:	Contractual Obligations and Substandard Tenant Conditions (HSC24009) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Elissa Press Pilar Homerston (905) 973-1129
SUBMITTED BY:	Michelle Baird Director, Housing Services Division Healthy and Safe Communities Department
SIGNATURE:	<i>Michelle Baird</i>

RECOMMENDATIONS

- (a) That Housing Services and Municipal Law Enforcement staff be directed to develop a process to review and respond to property standard violations as they relate to rent subsidy units, with the results reported annually in the Social Housing Update Report.
- (b) That the Outstanding Business list item concerning the contractual relationship with landlords be considered complete and removed from the Outstanding Business List.

EXECUTIVE SUMMARY

On August 17, 2023, Emergency and Community Services Committee approved a motion directing staff to investigate the status of contractual relationships with landlords in receipt of rent subsidies and providing substandard tenant conditions.

Due to the cyber disruption and loss off access to operating systems, staff are not able to identify the current status of contractual relationships with providers receiving subsidy. This has put a limitation on the scope of analysis that can be performed to suggest changes to current practice. It was clear however, that there is no formal

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communication between departments to identify properties with past due Orders to Comply and who are in receipt of a rent subsidy.

This report recommends that staff be directed to strengthen the relationship between the Housing Services Division and Licensing and By-law Services to develop a process for sharing data between the two departments, as well as a process for following up with providers who are not meeting contractual obligations. A summary of this data, including actions taken by the City of Hamilton, will be reported annually to the General Issues Committee through the Social Housing Update Report.

Alternatives for Consideration – Not Applicable

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: Not applicable

Staffing: Not applicable

Legal: Legal Services was consulted to review and provide feedback on the content of this report.

HISTORICAL BACKGROUND

As a result of delegations from tenants who are experiencing deplorable living conditions, on August 17, 2023 Emergency and Community Services Committee approved a motion to better understand the contractual relationship between the City of Hamilton and landlords with respect to rent subsidies and substandard tenant living conditions.

On February 15, 2024, Council approved report PED23072(b)/HSC23023(c) Opportunities for Tax Levy Savings in the Hamilton Apartment Rental Program and Tenant Support Program. Based on the new timeframe for the Safe Apartment Buildings By-law, staff anticipate that initial evaluations of all registered buildings City-wide would be completed by September 2027.

Both the recently Council-endorsed Hamilton Tenant Support Program and the Hamilton Apartment Rental Program help to further protect tenants' rights. While not specific to rent subsidy units, by being all encompassing, these programs provide additional mechanisms to ensure that rental units are well maintained.

**SUBJECT: Contractual Obligations and Substandard Tenant Conditions
(HSC24009) (City Wide) - Page 3 of 4**

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

There are no policy implications or legislated requirements associated with the recommendation in report HSC24009.

The primary approach for municipal agreements for addressing quality is ensuring that agreement holders comply with other legislation. Given that City By-laws and other legislation exist to define the landlord's responsibilities in respect of the conditions of apartments, redefining this within our agreements is not necessary because the agreements require compliance with applicable City By-laws and Provincial legislation.

RELEVANT CONSULTATION

The following internal divisions were consulted, and are supportive of the recommendation:

- Corporate Services Department, Legal and Risk Management Services Division, Legal Services Section
- Corporate Services Department, Financial Planning Administration and Policy Division
- Planning and Economic Development Department, Licensing & By-law Services Division

ANALYSIS AND RATIONALE FOR RECOMMENDATION

This motion approved by Committee was a result of delegations from tenants who are experiencing deplorable living conditions. Committee approved the motion to better understand the City's obligation to ensure landlords are maintaining units in a condition fit for habitation and in a state of good repair when receiving subsidy from the City of Hamilton. Information requested through recommendation (b) of the motion has been provided in Appendix "A" to Report HSC24009. This information helped form the recommendation.

Monitoring if a unit is substandard requires staff with the requisite skill set and staff who are properly resourced to respond to tenant complaints. Currently, property standard violations fall under the domain of Licensing and By-law Services. Municipal Law Enforcement Officers also track and investigate all formal complaints lodged against landlords to determine if there is a By-law violation.

In 2023, the City of Hamilton provided some form of rent subsidy for approximately 8,255 units/households. Appendix "B" to Report HSC24009 provides a summary of landlord agreement contractual obligations under the various forms of rent subsidy. Not all landlords who provide rent subsidies have signed agreements with the City of Hamilton. Agreements with the City reference the need for compliance with other

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legislation, codes, and By-laws to ensure that units are maintained in a satisfactory state of repair. Landlords who have agreements with the city and are in contravention of an agreement risk losing their subsidy.

To determine the scope of this issue, staff propose that communication between Social Housing Services Division and Licensing and By-law Services be strengthened. Specifically, staff have identified the need to cross reference property standard violations with subsidized rental units. A process for Housing Services Staff to receive data from Licensing and By-law Services for landlords in receipt of rent subsidies will be developed. This data will also be reported on in the annual Social Housing Update Report.

ALTERNATIVES FOR CONSIDERATION

Not applicable

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" to Report HSC24009 – Information pertaining to the relationship and obligations between the City of Hamilton and Landlords

Appendix "B" to Report HSC24009 – Rent Subsidy Agreements with the City of Hamilton

Number of households and buildings supported by rent subsidies provided by the City and the overall funding amounts from levels of government:

All subsidies help protect housing affordability by covering a portion of the tenant's rent and are paid directly from the City of Hamilton to the landlord for the unit being occupied. Rent subsidies include rent supplements, rent-geared-to-income subsidies, and housing allowances.

In 2023, there were approximately 45 Non-Profit property owners, of which 38 were social housing providers, and 114 for-profit property owners administering some form of rent subsidy.

The charts below show the breakdown of rent subsidies and their funding source. Buildings are double counted if landlords provide more than one type of rent subsidy for tenants in the same building. Data reflects a point-in-time analysis.

Rent Subsidy Summary Chart – Number of Units

Type of Rent Subsidy	# of units/households supported	# of buildings
Rent supplement (2023)	1,216	200
Housing allowances (2023)	295	207
Rent-geared-to-income (2022)	6,744	953
Total	8,255	1,360

As a result of the cyber-incident and lack of CityHousing Hamilton data, rent-geared-to-income data is based on 2022 rather than the 2023 year-end reporting.

Staff also attempted to analyze data by ward but, due to the cyber-incident and a lack of access to databases, a breakdown of subsidized units and buildings by ward was not possible.

Rent Subsidy Summary Chart- Funding (as of December 2023)

	Municipal Funding	Provincial Funding	Federal Funding
Rent Supplements	\$4,541,847.35	\$4,004,050.90	\$452,975.74
Housing Allowances	\$487,479.73	\$984,507.25	-
Social Housing Provider Subsidies	\$29,410,291.70	-	\$11,012,035.00
Total funding	\$34,439,618.78	\$4,988,558.15	\$11,465,010.74

As of December 2023, the City of Hamilton provided approximately 8,255 rent subsidies at a cost of \$50,893,187.67 of which \$34,439,618.78 was from municipal funding sources.

Nature of the relationship between the City and the landlord, the City and the tenant, and the City:

Defining Substandard tenant conditions

There is no single legal standard by which substandard tenant conditions in a residential rental unit can be defined, resulting in a certain degree of subjectivity. There are, however, several legal mechanisms through which substandard tenant conditions can be understood:

- City of Hamilton By-Laws (e.g., Property Standards By-Laws)
- Provincial legislation/Acts (e.g., The Residential Tenancy Act)
- Residential Tenancy Agreements (i.e., standard lease)
- Provincial Codes (e.g., fire, building, etc.)

Various legislation, such as the *Fire Protection and Prevention Act, 1997, S.O. 1997 c.4* (fire code), *Building Code Act, 1992, S.O.1992, c.23* (building code), and the City of Hamilton Vital Services By-law 23-161 define substandard from the perspective through which they were drafted. Both the *Residential Tenancies Act, 2006, S.O.2006, c.17* (Residential Tenancy Act) and the *Housing Services Act, 2001, S.O.2011, c.6, Sched.1* (Housing Services Act) state the need for units to be maintained in a 'satisfactory' or 'good' state of repair and 'fit for occupancy' but do not further define these terms. The most thoroughly described standards for rental units and residential buildings are contained in the City of Hamilton's Property Standards By-law 23-162 and Safe Apartment Buildings By-law 24-054. Conditions that lead to substandard conditions in a rental unit can be a result of either landlord or tenant actions or inactions. However, it is unclear when and how frequently tenant living conditions should be appraised. Applicable excerpts from the Acts can be provided if requested.

Contracts with Landlords for Rent Subsidies

Contractual relationships with landlords are one of several mechanisms that allow the City to define the standards for rented units. The terms of the agreement for rent subsidies vary depending on type of rent subsidy received and the nature of the agreement entered. All rent subsidy agreements with the City of Hamilton require that the units and building are clean, fit for habitation and kept in a satisfactory state of repair. Landlords with agreements are bound to the terms described in those agreements. Furthermore, agreements between the City of Hamilton and landlords reference the need to comply with other legislation to ensure that landlords are maintaining units and buildings in a habitable and safe condition.

Staff reviewed rent subsidy agreements to determine obligations to tenants and remedies for failing to meet these obligations. Agreements reviewed can be found in Appendix B.

Legislative requirements under Provincial Acts and Municipal By-Laws

The province governs residential landlords and tenants through the *Residential Tenancies Act*. This Act provides for obligations of maintenance on the landlord and an opportunity for the Board to intervene when there is non-compliance with obligations. The *Housing Services Act* requires that housing providers listed under this Act maintain their projects in a satisfactory state of repair and fit for occupancy. Service Managers are expected to assist housing projects not meeting these requirements either through additional funding or by applying remedies to the project. Other Provincial Acts reviewed such as the *Ontario Building Act* and the *Fire Protection and Prevention Act* allow for the governing standards to apply to buildings to ensure the health and safety of the inhabitants. A summary of legislation related to the regulation of rental conditions was drafted and can be shared upon request.

The Safe Apartment Building By-law, recently passed by the City of Hamilton, applies minimum maintenance standards to rental units within an apartment building and the apartment building itself. The Safe Apartment Buildings By-law establishes a process for tenant service requests and proactive inspections. Furthermore, landlords are required to have plans in place for ensuring the upkeep of their building. Supporting documentation submitted to the City includes:

- Integrated Pest Management Plan
- Cleaning Plan
- Waste Management Plan
- State of Good Repair Plan
- Electrical Maintenance Plan
- Vital Services Disruption Plan

Responsibility for compliance of the improved Property Standards By-law falls on the Owner of the property or unit. This By-law details the minimum standard for all property in the City of Hamilton to be habitable and safe, for example, it specifies interior structural components for floors, ceilings, walls, interior lighting, windows, security requirements, plumbing and ventilation.

Rent Supplements and Housing Allowances – Relationship of Service Manager to Landlord

Rent supplements and housing allowances are forms of rent subsidy that are paid to the landlord on behalf of the tenant and secured with either an informal or formal agreement between the landlord and the City of Hamilton.

Enticing private landlords to participate in the rent subsidy program can be challenging. Landlords could choose to rent these units at a higher market rent to other individuals and forego a relationship with the City, especially if they are not community housing providers and do not have a community housing mandate. Given the ease with which units could be rented through market, the City allows private landlords to participate in our program without signing a formal agreement.

For providers with a rent subsidy agreement, the agreement is clear that the rent subsidy tenant should be treated as other tenants; that units must be fit for habitation, kept in a satisfactory state of repair, and in compliance with applicable law such as *Building Code* and *Fire Code* requirements. Depending on the agreement, (or lack thereof), there may be limited recourse for the Service Manager for rent subsidy units kept in poor condition based on an agreement itself (other than canceling, suspending, or terminating the agreement). However provincial legislation and local By-laws provide greater mechanisms through which substandard conditions can be addressed.

Rent-gear-to-income subsidies – Relationship of Service Manager to Landlord

There is far greater accountability and enforceability with respect to unit upkeep for social housing providers compared to other landlords. Of all types of agreements, the Service Agreement provides Service Managers the greatest oversight of Housing Providers, including the power to implement a strong set of remedies, at the most extreme, the ability for the Service Manager to take over and manage the project..

A new operating agreement has been drafted for Housing Projects that are reaching their End of Mortgage and will now become part 7.1 Housing Projects under the *Housing Services Act*. Like other agreements, the new operating agreement requires that all units are maintained in a satisfactory state of repair, fit for occupancy, and complies with all applicable laws. The proposed operating draft agreement contains substantially the same enforcement mechanisms as those proposed under the *Housing Services Act*.

The City of Hamilton's accountability to tenants receiving rent subsidies

While rent subsidy tenants can feel assured that the City will pay the remaining balance for the unit so long as they remain eligible, the City is not a party to the contractual

relationship between the tenant and the landlord. Agreements clearly state that the 'normal' landlord-tenant relationship exists between the building owner and the rent subsidy tenant.

Similarly, while tenants must maintain eligibility and supporting documents, there is no contractual relationship between the tenant and the City. Furthermore, agreements state "The Service Manager shall not be responsible to the Landlord for any breach of or failure by the Rent Supplement Tenant to observe any of the terms of his lease with the Landlord, including the covenant to pay Rent."

Current and proposed processes and mechanisms to support adequate tenant living conditions

Currently, the Hamilton Tenant Defence Program offers tenants resources, as do the staff of the Housing Services Division. Additionally, tenant information is posted on the City of Hamilton's website.

The Hamilton Tenant Support Program provides tenants with even greater access to resources to support tenants' rights and provides a mechanism through which their concerns can be voiced; this includes concerns related to substandard rental living conditions.

The proposal to expand the Tenant Defence Program includes coverage for T-6's, tenant applications for maintenance on their units. Additional information about this support program can be found in Report HSC23023(b) (City Wide) "Hamilton Tenant Support Program" approved by Committee on August 17, 2023.

The Hamilton Tenant Support Program was presented in tandem to a full suite of municipal law enforcement mechanisms to increase landlord to tenant accountability. Specifically, the new Safe Apartment Buildings By-law regulates apartment building property standards and registration of apartment buildings, while updates to the City's Vital Services and Property Standards By-laws better regulate the supply of vital services and proscribe clearer standards for the maintenance and occupancy of rental properties.

These By-laws, along with other legislation and building codes, currently regulate building conditions including obligatory services/repairs and maintenance expectations. Requiring management, maintenance and repair plans will help to improve substandard rental conditions throughout the city of Hamilton, which will also reduce the likelihood of a renoviction occurring in the long-term.

Under the new program, all buildings, including those with rent subsidies, will be evaluated/inspected by September 2027. Based on the evaluations and scoring,

buildings will continue to be evaluated at least every 3 years (and more frequently should they score poorly or below standard).

While not specific to rent subsidy units, by being all-encompassing, these new supports and By-laws will impact the standards for several types of rental buildings in the City of Hamilton, including units being funded through the municipality.

Proposed changes to current practice to improve conditions for tenants

To determine the scope of this issue, staff propose that communication between Social Housing Services Division and Licensing and By-law Services be strengthened. Specifically, staff have identified the need to cross reference property standard violations with subsidized rental units. A process for Housing Services Staff to receive data from Licensing and By-law Services for landlords in receipt of rent subsidies will be developed. This data will also be reported on in the annual Social Housing Update Report.

	Rent Subsidy Agreements with the City of Hamilton					
	Canada-Ontario Community Housing Initiative (COCHI)	Homelessness Prevention Program (HPP)	Ontario Community Housing Assistance Program (OCHAP)	Commercial Rent supplement *	Municipally funded Rent Supplement	New 7.1 Housing Provider Operating Agreement
'Normal relationship' between landlord and rent supplement tenant / rent supplement tenant to be treated as other tenants	✓	✓	✓	✓	✓	✓
Provider must prepare and execute a lease, in its standard form	✓	✓	✓	✓	✓	✗
Property and structures thereon are in conformity with applicable law (e.g., zoning, building code, fire code, occupational health and safety...)	✓	✓	✓	✓	✓	✓
Rent supplement units and building are clean, fit for habitation and in a satisfactory state of repair and in compliance with applicable building & fire code requirements	✓	✓	✓	✓	✓	✓
Property is in good repair and in compliance with the provisions of the Service Manager's Property Standards By-law	✓	✓	✗	✗	✓	✓
Appliances included in full unit rent: heat, water, hot water, refrigerator and stove	✓	✓	✗	✗	✓	✗ not included in rent but agreement

						states that must have
Provider to give notice to Service manager for violations of Applicable law in respect of the Property, buildings located on the Property and the residential tenancies within those buildings (e.g. RTA, Building Code, the Ontario Fire Code and any municipal by-law)	✓	✓	✗	✗	✓	✓
The Service Manager is not responsible to the Landlord for any breach of or failure by the Rent Supplement Tenant to observe any of the terms of their lease with the landlord, including paying rent. (Service Manager is not a tenant).	✓	✓	✓	✓	✓	✓
The Service Manager determines and makes rent supplement payments as per Agreement	✓	✓	✓	✓	✓	✓
The Service Manager is responsible for determining whether a tenant is entitled to participate in the program and monitoring continued eligibility / referring a qualified applicant	✓	✓	✓	✓	✓	✓
Service Manager upon receiving satisfactory documentation evidencing the undue damage and the expenses incurred, shall reimburse the Owner for all authorized expenses for repairing the damage to the Rent Supplement Unit.	✓	✓	✓	✓	✗	✗
Service Manager will pay an amount not exceeding the rent for 2 months of unit vacancy	✓	✓	✓	✓	✓	✓

Service Manager may cancel any further rent supplement payments or portion thereof under the Agreement	✓	✓	✓	✓	✓	✓
Service Manager may provide the Landlord with an opportunity to remedy the Event of Default	✓	✓	✗ Not explicitly stated but is an option	✗ Not explicitly stated but is an option	✓	✓
Service Manager may suspend or discontinue rent supplement payments or portion thereof for such period as the Service Manager deems appropriate	✓	✓	✓	✓	✓	✓
Service Manager may demand the repayment of any Rent Supplement payments paid to the Landlord by the Service Manager following the date of the event of default	✓	✓	✗	✗	✓	✓
Service Manager may terminate the Agreement	✓	✓	✓	✓	✓	✓ with exit agreement
Service Manager may access records/conduct audit	✓	✓	✗	✗	✓	✓
Service Manager may investigate/inspect property/units	✓	✓	✗	✗	✓	✓
The Owner shall permit the rent supplement tenants occupancy until their tenancy is terminated or until they cease to qualify for rent supplement program benefits, whichever first occurs, under the same conditions as to the payment of the rent supplement by the Service	✗	✗	✓	✓	✗	✗

manager and the Agreement shall remain binding on both parties, as if it were still in force						
The Service Manager may perform the obligations of the Provider	X	X	X	X	X	✓
The Service Manager may exercise any of the powers or perform any of the duties of the Provider under this Agreement	X	X	X	X	X	✓
The Service Manager may appoint or seek the appointment of a manager and/or a receiver	X	X	X	X	X	✓
Remove some or all of the directors or the deemed directors of the Provider/ Appoint individuals as directors of the Provider	X	X	X	X	X	✓
Require specified individuals connected with the Project to receive training	X	X	X	X	X	✓

*review of Commercial Rent Supplement based on review of OCHAP agreement as both use the same template



CITY OF HAMILTON
HEALTHY AND SAFE COMMUNITIES DEPARTMENT
Housing Services Division

TO:	Chair and Members General Issues Committee
COMMITTEE DATE:	February 21, 2024
SUBJECT/REPORT NO:	Authority to Enter into Rent Supplement Agreements Under Various Programs (HSC24005) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	George Gambioli (905) 546-2424 Ext. 4840 Brian Kreps (905) 546-2424 Ext. 1782
SUBMITTED BY:	Michelle Baird Director, Housing Services Division Healthy and Safe Communities Department
SIGNATURE:	<i>Michelle Baird</i>

RECOMMENDATION(S)

- (a) That the City provide rent supplements and enter into Rent Supplement Agreements under the Ontario Community Housing Assistance Program and Commercial Rent Supplement Program with Housing Providers determined by the General Manager of the Healthy and Safe Communities Department and subject to:
- (i) The terms and conditions contained in Appendix "A" to Report HSC24005;
 - (ii) Additional terms and conditions as determined by the General Manager of the Healthy and Safe Communities Department and the City Solicitor that do not conflict with those in Appendix "A" to Report HSC24005;
 - (iii) In a form satisfactory to the City Solicitor; and
 - (iv) That the General Manager of Healthy and Safe Communities Department be authorized and directed to execute the agreements and any ancillary documents thereto and enter into and execute any ancillary agreements thereto;

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SUBJECT: Authority to Enter into Rent Supplement Agreements Under Various Programs (HSC24005) (City Wide) - Page 2 of 5

- (b) That the General Manager of Healthy and Safe Communities Department be authorized to amend any Rent Supplement Agreement entered into as a result of the approval of Recommendation (a) of Report HSC24005 so long as the terms and conditions are consistent with said recommendation; and
- (c) That, subject to the availability of funding, the General Manager of Healthy and Safe Communities Department be authorized to extend the term of any Rent Supplement Agreements entered into as a result of the approval of Recommendation (a) of Report HSC24005 on the same terms and conditions and any additional terms not inconsistent with Appendix "A" of Report HSC24005 for such period of time not exceeding five years and be authorized to make further extensions within the same parameters as the General Manager of Healthy and Safe Communities Department deems appropriate.

EXECUTIVE SUMMARY

Rent supplements reduce the cost of housing for qualified individuals and families in residential rental units operated by Community Housing Providers and private landlords. The tenant's portion of the rent is calculated based on their income. The rent supplement, which is the difference between the tenant's portion and the market rent, is paid directly to the landlord on a monthly basis. The rent supplement agreement is between the landlord and the City of Hamilton.

Both the Ontario Community Housing Assistance Program and Commercial Rent Supplement Program rent supplement funding were administered and funded by Ministry of Municipal Affairs and Housing from the mid-1980's until 2001. In 2001 the Province of Ontario under the *Social Housing Reform Act, 2001* downloaded the administration and funding associated with social housing to the City of Hamilton. The City of Hamilton then entered into Ontario Community Housing Assistance Program and Commercial Rent Supplement Program Funding Agreements with the Community Housing Providers utilizing the same Rent Supplement Agreements that were previously administered by the Ministry of Municipal Affairs and Housing.

The majority of the Community Housing Providers and buildings that receive Ontario Community Housing Assistance and Commercial Rent Supplement Program funding have been funded since 2001. Only a small number of housing units have been added over time and some Community Housing Providers have opted out of these rent supplement programs over time and do not fill any vacant units utilizing this funding.

After more than 20 years of operating these programs, the current authority to enter into these agreements is vague. Clear approval to operate these programs and delegated authority to enter into agreements is being requested.

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Alternatives for Consideration – Not Applicable

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: The budget for each of the rent supplement programs appears in Table A below. The funding for these programs is largely Municipal with a small contribution from the Federal government social housing transfer.

Table A – Proposed 2024 budget for Ontario Community Housing Assistance Program and Commercial Rent Supplement Program.

Program	Municipal Tax Levy	Federal Contribution	Total
Ontario Community Housing Assistance Program	\$2,745,615	\$326,716	\$3,072,335
Commercial Rent Supplement Program	\$1,186,291	\$10,135	\$1,196,431

Staffing: N/A

Legal: As legacy social housing programs, these funding agreements were executed by the General Manager of the Healthy and Safe Communities Department. However, Legal Services recommends that City Council formally grant authority to enter into these agreements and further delegate authority to the General Manager to execute these agreements moving forward. This is the process for all other social housing funding where formal agreements are executed between the Community Housing Provider and the City of Hamilton. Report HSC24005 also recommends the General Manager be provided with delegated authority to amend the agreements and extend their terms.

The current Ontario Community Housing Assistance Program and Commercial Rent Supplement Program rent supplement agreements are the same as the ones that were previously utilized by the Ministry of Municipal Affairs & Housing prior to the download of social housing to Municipalities in 2001. A new rent supplement agreement will be developed to ensure that all requirements are being met.

HISTORICAL BACKGROUND

The Ontario Community Housing Assistance Program and the Commercial Rent Supplement Programs were included as part of the downloading of social housing to Municipalities in December 2001. As part of the transfer, these Provincially funded rent

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supplement programs became administered by the City, as Service Manager, pursuant to the *Housing Services Act, 2011* (the “Act”).

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

The *Housing Services Act, 2011* (“Act”) requires that the Service Manager maintain a Service Level of 9,257 Rent-Geared-to-Income (RGI) units. The RGI units funded by both the Ontario Community Housing Assistance Program and Commercial Rent Supplement Program Rent Supplement Funding are included in the Service Level for RGI units in the City of Hamilton.

RELEVANT CONSULTATION

Corporate Finance has confirmed the financial information contained in this report.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

Rent Supplement programs are important because they reduce the cost of housing for qualified individuals and families in housing operated by Community Housing providers and private landlords. Households receiving rent supplements funded under the Ontario Community Housing Assistance Program and Commercial Rent Supplement program pay Rent-Geared-to-Income which means their rent is no more than 30% of their net household income.

Ontario Community Housing Assistance Program was originally created to extend affordability and protect tenancies in former Federal social housing projects once their mortgages were paid off. This has been a valuable tool to encourage these projects to remain part of the social housing system instead of increasing rents or selling their properties. There are currently 530 Ontario Community Housing Assistance Program rent supplement units in 11 non-profit buildings.

The Commercial Rent Supplement Program was developed to provide affordability to units in private market buildings. Over time this has been an important strategy to expand the supply of affordable housing and reduce the pressure on non-profit and community housing providers. There are currently 145 Commercial rent supplement units in 14 buildings. Two of the buildings are owned by Community Housing Providers and the balance are owned by private sector landlords.

The City also offers rent supplements funded by the Homelessness Prevention Program (HPP) which is an initiative of the Provincial government. HPP replaced the Strong Communities program. The program provides funding for regular rent supplement units, as well as supportive housing units in partnership with the Ministry of Health and Long-Term Care and the Ministry of Community and Social Services. Like its predecessor,

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HPP is 100% Provincially funded and does not count toward Hamilton's mandated Service Level Standard. HPP funds 186 rent supplement units in 15 buildings at a projected cost of \$2,2443,453 for 2023-24.

The newest rent supplement program is the Canada-Ontario Community Housing Initiative rent supplement program which is funded by the Provincial and Federal governments. The Canada-Ontario Community Housing Initiative is exclusively for use with *Housing Services Act 2011* housing providers and is targeted to providers who have reached End of Agreement or End of Mortgage. There are currently 207 rent supplement units being provided in 8 buildings and 109 scattered units at a cost of \$1,229,418 in 2023.

Hamilton is experiencing a housing affordability crisis. The Housing Sustainability and Investment Roadmap's four-pillar approach includes the retention of affordable housing units as one of their objectives. Retaining current units through rent supplements is timelier and more cost-effective than constructing new units. This would protect the tenants currently receiving a rent supplement and extend the affordability of these housing units. The need for social housing can be seen in the Access to Housing waitlist which sat at 6,111 as of December 31, 2022. Households receiving Ontario Community Housing Assistance Program and Commercial Rent Supplement Funding generally come from the Access to Housing waitlist.

The current agreements being utilized are outdated and need to be reviewed and revised by Legal Services to meet all current legislation under the *Housing Services Act 2011*. It is important to provide continuity by funding existing agreements. It is important to increase these rent supplements each year by the annual rent increase guideline to keep pace with rents.

ALTERNATIVES FOR CONSIDERATION – Not Applicable

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" to Report HSC24005 – Term Sheet

Term Sheet for Ontario Community Housing Assistance and Commercial Rent Supplement Program Rent Supplement Agreement

Landlord: Various

Rent Supplement Conditions

1. The agreement shall have a term of 5 years subject to earlier termination by the City of Hamilton if funding for the rent supplements provided for in the agreement is not approved by Council.
2. The rent supplement assistance shall be provided to households selected from the centralized waiting list (Access to Housing) maintained by the City of Hamilton. Any exceptions will be at the sole discretion of the General Manager of the Healthy and Safe Communities Department.
3. The rent supplements shall only be used at the property indicated in the agreement.
4. The level of financial assistance provided to tenants through the Rent Supplement will be sufficient to meet the provincial service level standards as described in the *Housing Services Act, 2001* and associated regulations, and will use Rent-Geared-to-Income calculations or portable housing benefit calculations as determined by the City of Hamilton.
5. Non-profit housing providers will be responsible for determining eligibility for assistance of prospective tenants, calculating rent and collecting the tenant portion in the manner determined by the General Manager of Healthy and Safe Communities. The City of Hamilton will be responsible for determining eligibility for assistance of prospective tenants and calculate the tenant's rent for private landlords.
6. Rent Supplement agreement holders will provide reports to the City of Hamilton in a manner determined by the General Manager of the Healthy and Safe Communities Department.
7. The agreement can only be transferred at the sole discretion of the General Manager of the Healthy and Safe Communities Department and only in the following circumstances:
 - (a) the property is sold to another provider of "non-profit housing" who enters into an assignment agreement with the City of Hamilton and the agreement holder

Appendix "A" to Report HSC24005**Page 2 of 2**

agreeing to be subject to all of the terms and conditions of the Rent Supplement Agreement for the remainder of the term of those agreements and such other terms and conditions as the General Manager of the Healthy and Safe Communities Department and City Solicitor in their sole discretion deem appropriate.

8. Units subject to the Rent Supplement Agreement may not increase the rent charged to a tenant annually for a unit that is subject to a Rent-Geared-to-Income supplement to more than the lesser amount of:
 - (a) Provincial Guideline amount as provided for in the Residential Tenancies Act, 2006, S.O. 2006, c. 17, as amended or replaced as specified annually by the Ontario Ministry of Municipal Affairs and Housing; or
 - (b) the amount permitted by any other Agreement restricting rent increases that the Housing Provider is subject to.
9. Higher rent increases may be permitted at the sole discretion of the General Manager of the Healthy and Safe Communities Department following submission of a business case justifying the increase if not prohibited by: any agreement entered into by the Housing Provider; or law including but not limited to the Residential Tenancies Act, 2006, S.O. 2006, c. 17, as amended or replaced and the Housing Services Act, Housing Services Act, 2011, S.O. 2011, c. 6, Sched. 1, as amended or replaced.
10. The Housing Provider shall maintain the building in which the rent supplement units are located and all units therein, whether rent supplement units or not in a state clean and fit for habitation, in a satisfactory state of repair, and in compliance with applicable law including without limitation the Building Code and Ontario Fire Code requirements.
11. Such additional terms and conditions as the General Manager of the Healthy and Safe Communities Department and City Solicitor may determine.



CITY OF HAMILTON
PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT
Tourism and Culture Division

TO:	Mayor and Members General Issues Committee
COMMITTEE DATE:	June 19, 2024
SUBJECT/REPORT NO:	Major Hosted Tourism Event Opportunities (PED23129(b)) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Ryan McHugh (905) 546-2424 Ext. 4132 Pam Mulholland (905) 546-2424 Ext. 4514
SUBMITTED BY:	Lisa Abbott Acting Director, Tourism and Culture Planning and Economic Development Department
SIGNATURE:	

RECOMMENDATION

- (a) That a contribution to an upset limit of \$500 K from the Conventions/Sports/Events Reserve No. 112231 be authorized and allocated towards funding any hosting fees and City of Hamilton and/or or third-party in-kind goods and/or services associated with hosting the JUNO Awards in either 2026 or 2027;
- (b) That a contribution to an upset limit of \$500 K from the Conventions/Sports/Events Reserve No. 112231 be allocated towards funding any hosting fees and City of Hamilton and/or or third-party in-kind goods and/or services associated with hosting the 2026 Brier Canadian Men's Curling Championship;
- (c) That upon allocating the remaining balance of funds in the Conventions/Sports/Events Reserve No. 112231 towards hosting fees and City of Hamilton and/or or third-party in-kind goods and/or services associated with hosting the 2026 or 2027 JUNO Awards and the 2026 Brier Canadian Men's Curling Championship, Reserve No. 112231 be closed;

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SUBJECT: Major Hosted Tourism Event Opportunities (PED23129(b)) (City Wide)
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- (d) That upon closing the Conventions/Sports/Events Reserve No. 112231, staff be authorized and directed to allocate, on an annual basis, any unspent funds from the Tourism Operations DeptID 362238/Grant Account 58201 to the City of Hamilton's Municipal Accommodation Tax Reserve No. 108072;
- (e) That the Mayor and City Clerk, or their designates, be authorized and directed to execute all required agreements and associated documents, on behalf of the City of Hamilton, with the Canadian Academy of Recording Arts and Sciences to host the 2026 or 2027 JUNO Awards in Hamilton, contingent on Hamilton being selected as the host city, with content acceptable to the General Manager, Planning and Economic Development, and all in a form satisfactory to the City Solicitor;
- (f) That the Mayor and City Clerk, or their designates, be authorized and directed to execute all required agreements and associated documents, on behalf of the City of Hamilton, with Curling Canada to host the 2026 Brier Canadian Men's Curling Championship in Hamilton, contingent on Hamilton being selected as the host city, with content acceptable to the General Manager, Planning and Economic Development, and all in a form satisfactory to the City Solicitor;
- (g) That the Mayor and City Clerk, or their designates, be authorized and directed to execute all required agreements and associated documents, on behalf of the City of Hamilton, with Youth Science Canada to host the 2027 and 2029 Canada Wide Science Fairs in Hamilton, with content acceptable to the General Manager, Planning and Economic Development, and all in a form satisfactory to the City Solicitor.

EXECUTIVE SUMMARY

In September 2023, Report PED23129 was brought forward to the General Issues Committee, outlining the pursuit of various major hosted tourism events to be held in Hamilton. Council was informed of ongoing efforts to pursue these opportunities and directed staff to report back with recommendations for how the City of Hamilton would fund any hosting fees or in-kind City of Hamilton or third-party goods and services required to successfully secure major hosted tourism events, using Municipal Accommodation Tax funds, private sector contributions, existing tourism reserves and provincial funding as applicable, for Council's consideration.

This report seeks the City of Hamilton funding and Council authorization required to formally bid on or secure the following events:

- **2026 or 2027 JUNO Awards:** The JUNO Awards is a 5-day series of music and cultural events across all genres of music, presented by the Canadian Academy

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of Recording Arts and Sciences. JUNOS culminates in the live CBC Canada-wide broadcast of the Awards which recognizes outstanding achievements in Canada's music industry. The JUNOS is Canada's largest music & culture property, with a reach of over 16 million fans.

- The total direct economic impact to the host municipality for the event in 2026 is estimated to be \$12,000,000. The Canadian Academy of Recording Arts and Sciences has issued staff a Request for Partnership.
- If the City is to pursue this opportunity, staff must submit a fully funded bid by the end of August 2024.
- **2026 Brier, Canadian Men's Curling Championship:** The Brier is the annual curling championship sanctioned by Curling Canada. The winner of the Brier goes on to represent Canada at the World Curling Championships. The Brier is among the best attended curling competitions, often attracting crowds larger than the World Curling Championships.
 - The total direct economic impact to the host municipality for the event in 2026 is estimated to be \$10,000,000.
 - Curling Canada has issued a Request for Proposal for the 2026 Brier and if the City is to pursue this opportunity staff must submit a fully funded bid by the end of September 2024.
- **2027 and 2029 Canada Wide Science Fair:** Hosted annually by Youth Science Canada, this event brings together Canada's brightest young minds, celebrating their passion for science, technology, engineering, mathematics (STEM) and innovation.
 - The total direct economic impact to the host municipality for the event is estimated to be \$3,800,000 per year.
 - The City of Hamilton has successfully secured commitments for the 2027 and 2029 events and seeks Council authority to finalize an agreement to bring them to Hamilton.

Given that the Municipal Accommodation Tax will serve as the primary means to fund major hosted tourism event opportunities moving forward, the recommendations seek Council approval to allocate the remaining balance of the Conventions/Sports/Events Reserve No. 112231 and, subsequently, close this reserve fund.

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Furthermore, staff have requested Municipal Accommodation Tax funds from the Hamilton Tourism Development Corporation and secured private sector contributions to contribute to the JUNO Awards and the Brier Canadian Men's Curling Championship bids. As authorized and directed by Council in Report PED23129, staff are also seeking provincial funding to contribute to the 2026 or 2027 JUNO Awards bid. Should the City of Hamilton be unsuccessful in its bid to host the JUNO Awards and/or the Brier, there would be no financial commitment required of the City.

Alternatives for Consideration – Not Applicable

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: **JUNO Awards Funding Model:** As a prospective host city for the 2026 or 2027 JUNO Awards, there is a required hosting fee which will be determined by the City of Hamilton and the Canadian Academy of Recording Arts and Sciences based on the specifications of Hamilton's JUNO Awards broadcast venue (arena capacity and cost of the venue), other venue costs, hotel accommodation costs, and other geographical/logistical factors to be outlined in the City of Hamilton's Request for Partnership proposal.

Typically, the host municipality's contribution to the JUNO Awards hosting cost is 25-40% and the provincial contribution is 75-60%, as follows:

- 2019 (London): City of London \$400,000; Province of Ontario \$1,250,000
- 2024 (Halifax): City of Halifax \$750,000; Province of Nova Scotia \$1,000,000

For JUNO economic impact data, refer to this report's "Analysis and Rationale for Recommendations" section.

Revenue Source	Amount (\$)	Current Status
City of Hamilton Conventions/Sports / Events Reserve	\$500,000	\$500,000 - Pending Council approval at its meeting on June 26, 2024
Hamilton Tourism Development Corporation	\$300,000	\$300,000 – Pending approval by the Hamilton Tourism Development Corporation at its meeting in June 2024.
Private Sector	\$150,000	\$150,000 – Confirmed April 30, 2024

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Revenue Source	Amount (\$)	Current Status
Municipal and Private Sector Revenues	\$950,000*	

*The City of Hamilton has formally notified the Province of Ontario of the City of Hamilton's proposal to host the JUNO Awards. Provincial funding will become part of the public record, contingent on Hamilton being selected as the host city.

The City of Hamilton's funding contribution will be attributed to hosting fees payable to the Canadian Academy of Recording Arts and Sciences, in-kind municipal or third-party goods and services (e.g., road closure, on and off-street parking expenses) and host committee responsibilities, including the JUNO volunteer program, economic impact reports, local marketing, transportation initiatives, and any events outside of the regular JUNO Awards events.

The Canadian Academy of Recording Arts and Sciences is a non-profit organization created to preserve and enhance the Canadian music industry and to contribute toward higher artistic and industry standards.

Brier Funding Model: The 2026 Brier Canadian Men's Curling Championship hosting fee is determined by the City of Hamilton and Curling Canada based on Hamilton's arena capacity and anticipated live television audience draw, hotel accommodation costs, and other logistical factors to be outlined in the City of Hamilton's Request for Proposal application.

For Brier economic impact data, refer to this report's "Analysis and Rationale for Recommendations" section.

Revenue Source	Amount (\$)	Current Status
City of Hamilton (Conventions/Sports/Events Reserve*)	\$500,000	\$500,000 - Pending Council approval at its meeting on June 26, 2024
Hamilton Tourism Development Corporation (Municipal Accommodation Tax)	\$300,000	\$300,000 – Pending approval by the Hamilton Tourism Development Corporation at its meeting in June 2024.
Private Sector	\$200,000	\$200,000 – Confirmed on February 13, 2024.
Total Revenues	\$1,000,000	

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The City of Hamilton's funding contribution will be attributed to hosting fees payable to Curling Canada, in-kind municipal or third-party goods and services (e.g., road closure, on and off-street parking expenses), and host committee responsibilities, including the Brier volunteer program, local marketing, events to introduce newcomers and diverse communities to the sport of curling, and initiatives that engage local Indigenous communities in a meaningful way leading up to and during the Brier.

Curling Canada is a non-profit sanctioning body for curling in Canada. It is associated with more than a dozen provincial and territorial curling associations across the country and organizes Canada's national championships.

Canada Wide Science Fair Funding: There is no funding request of the City of Hamilton associated with these events. Funding as follows:

Revenue Source	Amount (\$)	Status
Hamilton Tourism Development Corporation (Municipal Accommodation Tax - \$255,000 for 2027 and \$255,000 for 2029)	\$510,000	\$510,000 – Pending approval by the Hamilton Tourism Development Corporation at its meeting in June 2024

Hamilton Tourism Development Corporation's contribution will be applied to facility rental fees, transportation services for participants, and an awards event. The Canada Wide Science Fair is produced by Youth Science Canada, a non-profit that enables Canadian youth to investigate scientific questions and develop innovative solutions for current and future challenges.

The recommendations in this report do not request any City of Hamilton funding be allocated to these events. Instead, recommendation (g) seeks Council authority for staff to enter into a Sponsorship Agreement with Youth Science Canada to allocate the \$510,000 to be secured from the Hamilton Tourism Development Corporation, at its June 2024 meeting, towards hosting the 2027 and 2029 Canada-Wide Science Fairs.

For Canada Wide Science Fair economic impact data, refer to this report's "Analysis and Rationale for Recommendations" section.

Given that the Municipal Accommodation Tax will serve as the primary means to fund major hosted tourism event opportunities moving forward, recommendation (d) seeks Council approval to allocate the remaining

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balance of the Conventions/Sports/Events Reserve No. 112231 and, subsequently, close this reserve.

Currently, any unspent funds from the Tourism Operations DeptID 362238/Grant Account 58201 are transferred to the Conventions/Sports/Events Reserve No. 112231 on an annual basis. Once the Conventions/Sports/Events Reserve No. 112231 is closed, it is recommended that any unspent funds from the Tourism Operations DeptID 362238/Grant Account 58201 be allocated to the City of Hamilton's Municipal Accommodation Tax Reserve No. 108072 on an annual basis.

Legal: For any major hosted tourism events that the City of Hamilton secures, Legal Services staff will assist in developing and executing the necessary legal agreements outlining matters including but not limited to the costs, benefits, and commitments between the City of Hamilton and the event organizers.

Staffing: Not Applicable.

HISTORICAL BACKGROUND

JUNO Awards Overview: Hamilton has hosted the JUNOS Awards 6 times, the last time in 2015.

The JUNO Awards is a 5-day series of music and cultural events across all genres presented by the Canadian Academy of Recording Arts and Sciences. It culminates in a live television broadcast on CBC (Canada-wide), which recognizes outstanding achievements in Canada's music industry. The JUNO Awards is Canada's largest music and culture property, with a reach of over 16 million fans.

Event Details:

- March 25 - March 29, 2026, or March/April 2027 (2027 dates to be confirmed).
- Attendance – 20,000 unique attendees throughout the 5 days;
- JUNO Awards live television coverage on CBC;
- Additional JUNO events live streamed on CBC Gem digital video streaming service;
- 4,300 room nights required over 10 days for television and production crews, musicians/bands, other music industry professionals, media, and CARAS staff (does not include rooms booked by fans);
- Volunteers –1,500; and,
- The total direct economic impact to the host municipality for the event in 2026 is estimated to be \$12,000,000.

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As part of the City of Hamilton's JUNO Awards proposal, there are plans to host additional concerts in Hamilton before the JUNO Awards featuring performances by the best musical talent from across Ontario. Recorded live and entitled "Road to the Junos", the concerts will both promote the JUNO Awards coming to Hamilton and provide content for CBC Gem (CBC's digital video streaming service) to be broadcast by CBC during the JUNO Awards. The "Road to the Junos" programming would be a collaboration between CBC, The Canadian Academy of Recording Arts and Sciences, and the host committee.

Brier Canadian Men's Curling Championship Overview: The City of Hamilton hosted the Brier in 1991 and 2007.

The Brier is the annual Canadian men's curling championship sanctioned by Curling Canada. It has been held since 1927, traditionally during the month of March. The winner of the Brier goes on to represent Canada at the World Curling Championships of the same year. The Brier is among the best attended curling competitions, often attracting crowds larger than the World Curling Championships.

Event Details:

- February 27 - March 8, 2026, 10 days of competition;
- 108 athletes and coaches, 25 officials, 70 television crew;
- 70 hours of live television coverage;
- 200 room nights required per day (11-12 days) for television crew, athletes, and staff (does not include rooms booked by fans/supporters);
- Attendance - 75,000-120,000 throughout the 10-day event;
- Volunteers – 375; and,
- The total direct economic impact to the host municipality for the event in 2026 is estimated to be \$10,000,000.

Canada Wide Science Fair Overview: 2027 will be the first time Hamilton has hosted the Canada Wide Science Fair.

Hosted annually by Youth Science Canada, this event brings together our nation's brightest young minds, celebrating their passion for science, technology, engineering, mathematics (STEM) and innovation. The fair is a vibrant display of elaborate presentations, engaging demonstrations, and thought-provoking discussions. Rooted in a rich history that dates back to the 1960s, the Canada-Wide Science Fair has evolved into a national platform for the next generation of scientists and innovators.

Event Details:

- May 29 – June 6, 2027 & May 26 - June 2, 2029, 7-day event;
- Attendance – 11,000 unique attendees throughout the 7 days;

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- 548 Overnight attendees;
- 3,836 Estimated room nights;
- 3,595 Day Attendees; and,
- The total direct economic impact to the host municipality for the event is estimated to be \$3,800,000 per year.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

Not Applicable.

RELEVANT CONSULTATION

- Canadian Academy of Recording Arts and Sciences;
- Curling Canada;
- Youth Science Canada;
- Hamilton Tourism Development Investment Group;
- Hamilton Tourism Development Corporation;
- Legal Services, Corporate Services Department; and,
- Finance and Administration, Corporate Services Department.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

JUNO Awards Economic Impact:

Data from the Canadian Academy of Recording Arts and Sciences from the JUNO Awards 2026/2027 Request for Proposals:

- Attendance for JUNO Awards – 20,000 (unique attendees); and,
- Expected Economic Impact for JUNO Awards - \$12,000,000.

Data from London JUNO 2019 Economic Assessment (similar size destination):

- Direct economic impact - \$7,700,000;
- Attendees - 26,000 (unique attendees);
- Tourism spending attributable to the JUNOS - \$2,600,000;
- Wages & salaries supported in London - \$1,700,000;
- Increase to provincial GDP - \$4,700,000; and,
- Taxes supported across Canada - \$1,400,000.

Data from Toronto JUNO 2022 Economic Assessment:

- Direct economic impact - \$15,000,000;
- Attendees - 20,000 (unique attendees);
- Tourism spending attributable to the JUNOS - \$2,700,000;
- Increase to provincial GDP - \$7,900,000; and,

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- Taxes supported across Canada - \$2,300,000.

Pursuing the JUNO Awards in 2026 or 2027 aligns with the completion of the Hamilton Urban Precinct Entertainment Group's new enhancements at the FirstOntario Centre and Hamilton Convention Centre by Carmens, and builds on the City of Hamilton's investments in the creation, development, and promotion of the local music industry. As well as aligning with economic and tourism priorities, the Canadian Academy of Recording Arts and Sciences makes a direct investment in local schools and educational institutions through the program MusiCounts. Since 1997, the MusiCounts Band Aid Program has invested nearly \$13 million to support 1,363 school music programs to sustain existing programs or build entirely new ones. In 2023, the MusiCounts Band Aid Program funded 20 music programs in Ontario schools including at Dundas Valley Secondary School and Viola Desmond Elementary School in Hamilton.

Brier Canadian Men's Curling Championship Economic Impact:

Data from Lethbridge Brier 2022 Economic Assessment:

- Tourism spending attributable to Brier - \$13,200,000;
- 18,500 out-of-town visitors, with the average stay being 5.4 nights in Lethbridge during the event;
- Wages & salaries supported in Lethbridge - \$5,800,000;
- Overall economic activity in Alberta - \$19,700,000;
- Increase to provincial GDP - \$10,300,000; and,
- Taxes supported across Canada - \$3,900,000.

Canada Wide Science Fair Economic Impact:

Data from Edmonton Canada Wide Science Fair 2023 Economic Assessment:

- Direct economic impact - \$3,831,400;
- Tourism spending attributable to the Science Fair - \$2,309,000;
- Total hotel room nights sold - 3,153; and,
- Attendees - 11,393 unique attendees throughout the 7 days.

Next Steps:

Staff will submit the City of Hamilton's JUNO Awards bid proposal by the August 30, 2024 deadline. The Board of CARAS's decision regarding the host city for 2026 and 2027 is expected in October 2024.

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Staff to submit the City of Hamilton's Brier Canadian Men's Curling Championship bid proposal by the September 30, 2024 deadline. Curling Canada's decision regarding the 2026 host city is expected in October 2024.

The successful host city of the 2026 and 2027 JUNO Awards and the 2026 Brier Canadian Men's Curling Championship are expected to be announced in late 2024. When made aware of whether Hamilton's bid to host the JUNO Awards and/or the Brier Canadian Men's Curling Championship was successful, staff will provide a Communication Update to the Council.

The City of Hamilton will enter into agreements with Youth Science Canada to host the 2027 and 2029 Canada Wide Science Fairs and, contingent upon Hamilton being selected as the host city, into agreements with the Canadian Academy of Recording Arts and Sciences to host the 2026 or 2027 JUNO Awards and Curling Canada to host the 2026 Brier, Canadian Men's Curling Championship.

ALTERNATIVES FOR CONSIDERATION

Not Applicable.

APPENDICES AND SCHEDULES ATTACHED

Not Applicable.



CITY OF HAMILTON
PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT
Economic Development Division

TO:	Mayor and Members General Issues Committee
COMMITTEE DATE:	June 19, 2024
SUBJECT/REPORT NO:	Pier 8 Development: Waterfront Shores Development Agreement, Greenway Strata Title, and Delegated Authority (PED23039(a)) (Ward 2)
WARD(S) AFFECTED:	Ward 2
PREPARED BY:	Andrea Smith (905) 546-2424 Ext. 6256 Chris Phillips (905) 546-2424 Ext. 5304 Dave McCullagh (905) 546-2424 Ext. 1647 Paul Lawson (905) 546-2424 Ext. 2628
SUBMITTED BY:	Norm Schleeahn Director, Economic Development Planning and Economic Development Department
SIGNATURE:	
SUBMITTED BY:	Ray Kessler Chief Corporate Real Estate Officer Planning and Economic Development Department
SIGNATURE:	

RECOMMENDATION

- (a) That staff be authorized to negotiate, complete and finalize any disposition, easements, conveyances, interface and other requisite agreements with Waterfront Shores Corporation, in whole or part of Blocks 12, 13 and 14 identified as the Greenway, as shown on Appendix "A" to Report PED23039(a), consistent with the key terms and conditions as outlined in this Report PED23039(a) in order to dispose the sub-strata portion of the Greenway and to preserve the City's ownership of the above grade portion of Blocks 12, 13 and 14 that includes both the surface portion to a defined depth and the air portion, to be more specifically defined and more particularly described in reference plans, and

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**SUBJECT: Pier 8 Development: Waterfront Shores Development Agreement,
Greenway Strata Title, and Delegated Authority (PED23039(a)) (Ward 2)
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- on such terms and conditions satisfactory to the General Manager of the Planning and Economic Development Department or designate, in a form satisfactory to the City Solicitor;
- (b) That staff be directed to credit Account No. 4411806107 with the net disposition proceeds from any sub-strata sale to Waterfront Shores Corporation;
 - (c) That staff be directed and authorized to fund all costs associated with the agreements outlined in Recommendation (a) of Report PED23039(a) including any real estate and legal costs for each transaction from Account No. 4411806107, with real estate and legal costs credited to Account No. 55778-812036 (Real Estate – Admin Recovery);
 - (d) That staff be authorized and directed to complete and finalize any required amending agreements or agreements comprehended within the Development Agreement dated November 1, 2021, between the City of Hamilton and Waterfront Shores Corporation, on such terms and conditions satisfactory to the General Manager of the Planning and Economic Development Department or designate;
 - (e) That the General Manager of the Planning and Economic Development Department or designate be authorized to administer the Development Agreement dated November 1, 2021 between the City of Hamilton and Waterfront Shores Corporation and those other such agreements outlined in Recommendation (a) and Recommendation (d) of Report PED23039(a), provide any requisite consents, approvals, and notices in respect of any Agreements, including reviewing and responding to notices issued by Waterfront Shores Corporation and completing, providing and executing any requisite notices, consents, approvals, confirmations, extensions, or other administrative matters contained within the Development Agreement as may be amended as outlined in Recommendation (d) of Report PED23039(a), with such deemed reasonable and necessary to the satisfaction of the City Solicitor;
 - (f) That the City Solicitor be authorized to amend and waive terms and conditions on such terms as considered reasonable to complete such agreements with Waterfront Shores Corporation as outlined in Recommendation (a) and Recommendation (d) of Report PED23039(a);
 - (g) That the Mayor and the City Clerk be authorized and directed to execute any agreements with Waterfront Shores Corporation required to give effect to the

**SUBJECT: Pier 8 Development: Waterfront Shores Development Agreement,
Greenway Strata Title, and Delegated Authority (PED23039(a)) (Ward 2)
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Recommendations contained in this Report PED23039(a), with all such documents and agreements to be in a form satisfactory to the City Solicitor.

EXECUTIVE SUMMARY

In the spring of 2023, as Waterfront Shores Corporation, the City's development partner for Pier 8, advanced detailed designs of the various development blocks, an opportunity emerged to enhance the Pier 8 vision. This opportunity consists of permitting the consolidation of underground parking beneath the lands referred to as the "Greenway" while retaining the surface portion of the Greenway as an east-west pedestrian corridor across nine development blocks on Pier 8 (refer to Appendix "A" to Report PED23039(a)).

In April 2023 staff prepared Report PED23039 to update Council about this opportunity to: enhance the development form; outline the planning and real estate processes required to facilitate underground parking; and, to seek authorization on next steps.

On April 26, 2023, Council approved Report PED23039 recommendations which generally authorized and directed staff to: proceed with various planning and real estate processes; to facilitate the inclusion of underground parking below the "Greenway", while retaining public ownership and access to the at-grade portion of the "Greenway"; to negotiate an agreement with Waterfront Shores Corporation; and, to report back to General Issues Committee upon completion.

In October 2023, Council approved a zoning by-law amendment to permit underground parking within the Greenway. The zoning is now in force and effect.

Following approval of the rezoning application, staff commenced negotiations with Waterfront Shores Corporation to define the terms and conditions of the Greenway disposition agreement, including the terms and conditions outlined in this Report.

Recognizing that the "Greenway" and underground parking will be built in phases as part of the Pier 8 development, the purpose of this Report PED23039(a) is to complete the authority to implement the intention of the April 26, 2023, Council approvals. In general, the Report and its recommendations have been prepared consistent with the City's standard real estate and legal practices, and simply enact previously approval directions.

The Report recommendations seek delegated authority enabling any required revision to the Pier 8 Development Agreement, and the execution of all relevant agreements and instruments to complete the required real estate processes and legal agreements enabling underground parking within the Greenway, the stratification of the Greenway land, while enabling the continuation of the publicly accessible pedestrian-corridor to remain in the City's ownership.

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Alternatives for Consideration – Not Applicable.

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: The costs relating to the preparation and implementation of any required agreements and contracts related to the Greenway disposition process, including required external consulting services, for the recommendations up to \$200K were previously authorized for payment funded from West Harbour Capital Project Account No. 4411806107 through April 2023 staff Report PED23039. This approved capital account is funded by the proceeds of sale for the Pier 8 lands.

According to the terms and conditions outlined in this Report, the City will receive fair market valuation consideration for the disposition of the below-grade strata lands, based on the appraisal process as detailed in the Council approved Pier 8 Development Agreement. Disposition proceeds from any sub-strata sale to Waterfront Shores Corporation will be credited to Account No. 4411806107.

All costs associated with the agreements outlined in Recommendation (a) of Report PED23039(a) including any real estate and legal costs for each transaction be authorized and be funded from Account No. 4411806107 and with real estate and legal costs credited to Account No. 55778- 812036.

Staffing: There are no staffing implications associated with this Report. Existing staffing resources will be used to manage legal, administration and real estate processes outlined in this Report PED23039(a). External consulting services will be required to support this process, as noted above.

Legal: Legal Services will be required to assist in the preparation of the necessary documents required to complete the requisite agreements to facilitate the Recommendations of this Report PED2309(a) as well as assessing the legal implications related to these agreements.

HISTORICAL BACKGROUND

The following staff Reports and Council decisions provide background references to the Council-approved Pier 8 Development Agreement and the Greenway disposition process currently underway:

**SUBJECT: Pier 8 Development: Waterfront Shores Development Agreement,
Greenway Strata Title, and Delegated Authority (PED23039(a)) (Ward 2)
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- On September 11, 2019, Council approved Confidential Report PED14002(i), titled “Pier 8 Development Agreement between the City of Hamilton and Waterfront Shores Corporation”, identifying the framework to be used within the negotiated Development Agreement;
- On April 26, 2024, Council approved staff Report PED23039 titled, “Potential Parking Layout Improvements and Greenway for the Pier 8 Development” with the following directions:
 - (a) That staff of the Municipal Land Development Office be authorized and directed to submit a City-initiated Zoning By-law Amendment application to permit underground parking within the below-grade strata land within the Pier 8 “Greenway” defined by Blocks 12, 13, and 14 as shown on Appendix “A” to Report PED23039;
 - (b) That, subject to Council’s future approval of the Zoning By-law Amendment outlined in Recommendation (a) to Report PED23039, the below-grade strata land within the Pier 8 “Greenway” defined by Blocks 12, 13 and 14 as shown on Appendix “A” to Report PED23039 be deemed surplus for the purposes of disposition, and staff of the Corporate Real Estate Office be authorized and directed to negotiate agreements with Waterfront Shores Corporation for the disposition of the subject below-grade strata land, while retaining full public ownership of the above grade Greenway, on terms and conditions that align and are consistent with the Pier 8 Development Agreement between the City of Hamilton and Waterfront Shores Corporation, and such other terms and conditions deemed appropriate by the General Manager of the Planning and Economic Development Department, and report back to General Issues Committee for approval;
 - (c) That staff be directed to explore the opportunity to accommodate public parking spaces within the Pier 8 development blocks, including consideration of how it could fit within a transaction structure of the proposed disposition of below-grade strata land within the Pier 8 “Greenway” defined by Blocks 12, 13 and 14 as shown on Appendix “A” to Report PED23039, and report back to General Issues Committee; and,
 - (d) That funding of all costs associated with the rezoning and potential disposition of below-grade strata land within the Pier 8 “Greenway” defined by Blocks 12, 13 and 14 as shown on Appendix “A” to Report PED23039, up to \$200K, through the West Harbour Capital Project Account No. 4411806107, be approved.

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- On October 11, 2023, Council approved staff Report PED23201 titled “Application for a Zoning By-law Amendment for Lands Located at 65 Guise Street East, Hamilton” which recommended approval of rezoning the Greenway lands from P5 to P5-Exception to permit underground required parking, subject to a Holding Provision.
- On November 22, 2023, Council approved staff Report PED22031(a) titled “Applications for an Official Plan Amendment and Zoning By-law Amendment for Lans Located at 65 Guise Street East (Pier 8, Block 16), Hamilton” which recommended approval of redesignating and rezoning lands to permit a maximum 45 storey mixed use building, subject to a Holding Provision. This application was appealed to the Ontario Land Tribunal, however, was subsequently withdrawn resulting in the amendments coming into effect on April 15, 2024.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

City Council, at its meeting of November 24, 2004, adopted the City’s Portfolio Management Strategy Plan, which established a formalized process to be consistently applied across all areas of the City to guide the management of the City’s real property. In accordance with the City’s Portfolio Management Strategy, By-law 14-202, property no longer required for municipal programs is declared surplus by Council and is disposed of in accordance with this policy.

RELEVANT CONSULTATION

- Planning and Economic Development Department:
 - Economic Development Division;
 - Planning Division;
 - Corporate Real Estate Office;
- Public Works Department:
 - Environmental Services (Parks and Cemeteries, Landscape Architectural Services);
 - Engineering Services (Waterfront Development Office); and,
- Corporate Services Department:
 - Legal and Risk Management Services Division.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

In the spring of 2023, as Waterfront Shores Corporation, the City’s development partner for Pier 8, advanced detailed designs of the various development blocks, an opportunity

SUBJECT: Pier 8 Development: Waterfront Shores Development Agreement, Greenway Strata Title, and Delegated Authority (PED23039(a)) (Ward 2)
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emerged to enhance the Pier 8 vision. This opportunity consists of permitting the consolidation of underground parking beneath the lands referred to as the “Greenway” while retaining the surface portion of the Greenway as an east-west pedestrian corridor across nine development blocks on Pier 8, as illustrated in Appendix “A” to Report PED23039(a).

A number of benefits would be achieved by consolidating underground parking between the development blocks under the Greenway, including:

- Fewer driveway accesses and diversion of traffic away from public park amenity areas and associated park users on Pier 8 (e.g. Coppins Pier);
- More efficient use of developable land; and,
- Reduction of surface parking and associated surface vehicular circulation shifting parking area from the public realm.

On April 26, 2023, Council approved Report PED23039 which in summary:

- Authorized and directed staff to submit a City-Initiated Zoning By-law Amendment application to permit underground parking within the below-grade portion of lands under the Greenway;
- Deemed the below-grade portion of lands under the Greenway surplus for the purposes of disposition, subject to Council approval of the rezoning;
- Authorized and directed staff to negotiate agreements with Waterfront Shores Corporation to permit underground parking, on the terms and conditions that are consistent with the Pier 8 Development Agreement between the City and Waterfront Shores Corporation, dated Nov. 2021; and,
- Directed staff to explore the opportunity to accommodate public parking spaces within the Pier 8 development blocks.

In October 2023, Council approved the zoning by-law amendment and Report PED23201 to permit underground parking within the Greenway (File: ZAC-23-035). The zoning is now in force and effect.

Following approval of the rezoning application, staff commenced negotiations with Waterfront Shores Corporation to define the terms and conditions of a disposition agreement(s) towards the sale of the below-grade portion of lands under the Greenway. These discussions have progressed substantially and are close to being finalized.

**SUBJECT: Pier 8 Development: Waterfront Shores Development Agreement,
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The agreement(s) as contemplated in this Report PED23090(a) pertaining to Blocks 12, 13 and 14 of the Registered Plan of Subdivision (62M-1287) address and detail the:

- i. Relationship between the Greenway disposition agreement with the Pier 8 Development Agreement between the City and Waterfront Shores, November 2021, including the alignment to the development schedule and phasing plan;
- ii. Intention to stratify the Greenway, with below grade portions to be part of the parking garage forming part of the buildings to be constructed by Waterfront Shores, and the above grade portions to be owned by the City and used as a pedestrian corridor, stormwater management feature and public space;
- iii. Conveyance process, appraisal considerations and encumbrances to be registered on title;
- iv. Responsibilities associated with the design and construction of the parking structure;
- v. Responsibilities associated with the design and construction of the Greenway;;
- vi. Responsibilities associated with the relocation of existing infrastructure, services or utilities as a result of the construction of the parking garage;
- vii. Easements over the parking garage and over the Greenway (e.g. easements related to structural support, access, maintenance and repair);
- viii. Maintenance and repair of the support elements and waterproofing systems that forms part of the parking garage;
- ix. Maintenance and repair of the Greenway;
- x. Insurance obligations; and,
- xi. Administrative and general terms and conditions.

Concurrent to the Greenway Strata agreement process, discussions have also begun between the City and Waterfront Shores to explore potential partnership options whereby some element of public parking could be incorporated within the underground parking structures as part of the planned development across Pier 8. Currently, the supply of public parking is primarily served on temporary surface lots (e.g., across from Williams Cafe on Blocks 16, 1 and 4). As development progresses on Pier 8, there will be a loss of

**SUBJECT: Pier 8 Development: Waterfront Shores Development Agreement,
Greenway Strata Title, and Delegated Authority (PED23039(a)) (Ward 2)
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public parking spaces, and as such, future supply of public parking remains an outstanding issue. Staff will report back on potential partnership options and recommendations on additional terms and conditions when appropriate.

Subject to Council approval of this Report PED230939(a) recommendations, staff would proceed in accordance with the applicable planning framework, Council-approved corporate policies, legislation and regulations, and consistent with contractual obligations set out in the Council-approved Development Agreement between the City and Waterfront Shores Corporation which contains terms and conditions pertaining to:

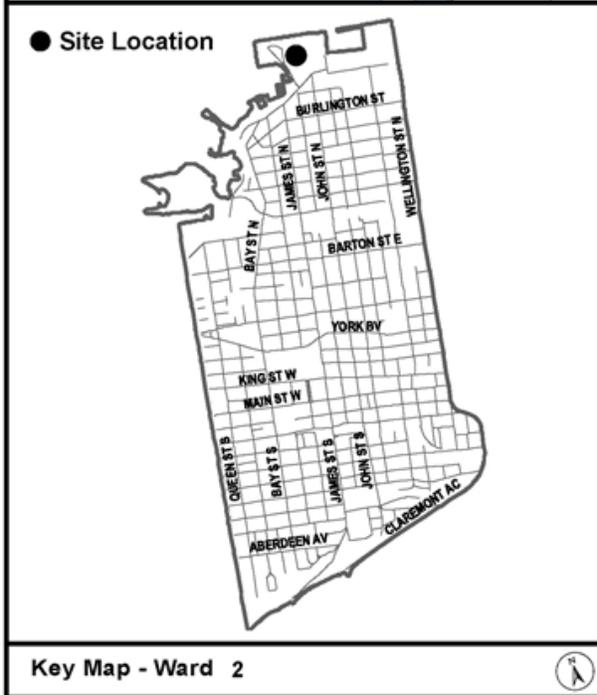
- Dates and milestones of the development blocks;
- Financial payment structure, schedule and timing;
- Control and ownership rights to the lands;
- Relationship governance over the course of the relations between the Parties;
- Defined obligations of both Parties;
- Affordable Housing obligations of the development;
- Environmental and energy consumption obligations of the development;
- Indemnity and Insurance obligations; and,
- Contingency, default, termination, and alternative dispute resolution rights.

ALTERNATIVES FOR CONSIDERATION

Reject the Recommendations of this Report PED23093(a), thereby declining the stratified ownership structure of the “Greenway” lands to facilitate consolidated underground parking. Waterfront Shores Corporation would proceed to develop the Pier 8 site within the terms and conditions of previous approvals and agreements.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report PED23039(a) – Location and Key Map



Location Map

PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT

File Name/Number:
The "Greenway", comprised of Blocks 12, 13 and 14

Date:
February 15, 2023

Appendix "A"	Scale: N.T.S	Planner/Technician: AS/NB
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Subject Property

- The "Greenway", comprised of Blocks 12, 13 and 14, Hamilton (Ward 2)
- Lands Subject to City of Hamilton and Waterfront Shores Corporation (WSC) Development Agreement, comprised of Blocks 1, 2, 3, 4, 5, 6, 7, 8 and 16
- Pier 8 Plan of Subdivision



CITY OF HAMILTON
Healthy and Safe Communities Department
Housing Services Division

TO:	Chair and Members General Issues Committee
COMMITTEE DATE:	June 19, 2023
SUBJECT/REPORT NO:	Reducing Homelessness and Managing Encampments (HSC24027) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Shannon Honsberger Danielle Blake Rob Mastroianni
SUBMITTED BY:	Michelle Baird Director, Housing Services Division Healthy and Safe Communities Department
SIGNATURE:	

RECOMMENDATIONS

- (a) That staff report back with the results of a call for information on the feasibility and costs associated with creating new shelter beds with 25% being pet friendly, in the following bed numbers: Men's singles: 110, Women's singles: 50, Couple's: 55.
- (b) That Council approve enhancements to the homeless-serving system for an approximate cost of \$1,556,000 between August 1 and December 31, 2024, to be funded first from any available government funding, then from any 2024 Housing Services Division surplus, then from any 2024, Healthy and Safe Communities Departmental Surplus, and lastly from any 2024, Corporate Surplus or any source deemed appropriate by the General Manager of Corporate Services; and that those enhancements are as follows:
- (i) approximately \$940,000 be added to enhance existing shelter operator contracts by 25% to rectify historic underfunding;
- (ii) approximately \$266,000 in additional funding to enhance the Hamilton Regional Indian Centre's indigenous drop-in program;

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**SUBJECT: Reducing Homelessness and Managing Encampments (HSC24027)
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- (iii) approximately \$210,000 to enhance Rapid Rehousing and Intensive Case Management supports to improve outflow from shelters into permanent housing;
 - (iv) approximately \$40,000 be approved for one full-time equivalent for Housing Service Division to provide tax filing support for those experiencing homelessness; and
 - (v) approximately \$100,000 to be provided to housing landlords for exceptional unit damage as a result of housing an individual from City-funded case management programs.
- (c) That staff be directed to prepare a motion to amend the Encampment Protocol to mitigate impacts on those living in and around encampments as outlined in Appendix "A", which was approved by Council on August 18, 2023, including:
- (i) removing the following provision from Section D, indicating the removal of encampments, temporary shelters, or tents "on or within 50 metres of the Hamilton Alliance for Tiny Shelters model site. For the purpose of this site the full length of the Strachan Linear Park, Bay Street North to Ferguson Street North, will be considered the site.";
 - (ii) adding an exclusion from allowing encampments, temporary shelters, or tents for the full length of the Strachan Linear Park, Bay Street North to Ferguson Street North until further park development options can be explored;
 - (iii) Establishing a minimum distance of 100m for additional sensitive uses, specifically around funeral homes and long-term care residencies as well as spaces that are designed and programmed for children as an amendment to the encampment protocol;
 - (iv) Amending the requirement to keep 5 metres from sidewalks during the winter months to be a full year requirement, and to include walkways and pathways in this requirement; and
 - (v) Establishing a minimum 25m distance from active construction sites
- (d) That Council approve additional investments into encampment management, for an approximate cost of \$286,000 between August 1 and December 31, 2024, to be funded first from any available government funding, then from any 2024, Housing Services Division surplus, then from any 2024, Healthy and Safe Communities Departmental Surplus, and lastly from any 2024, Corporate Surplus or any source deemed appropriate by the General Manager of

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Corporate Services; and that those enhancements are as follows:

- (i) approximately \$108,000 be approved to increase Housing-Focused Street Outreach support;
 - (ii) One permanent FTE to provide program coordination, at an approximate cost of \$48,000;
 - (iii) Make permanent one Community Services Program Analyst FTE supporting the Housing Focused Outreach Team, at an approximate cost of \$42,500;
 - (iv) approximately \$130,000 to provide two Social Navigator Paramedic by Hamilton Paramedic Service; and
- (e) That the following items be referred to the 2025 municipal tax operating budget for an annual cost of \$4,186,000
- (i) approximately \$2,255,000 be added to enhance existing shelter operator contracts by 25% to rectify historic underfunding;
 - (ii) approximately \$400,000 for ongoing operations of the Hamilton Regional Indian Centre's indigenous drop-in program;
 - (iii) approximately \$500,000 for enhanced Rapid Rehousing and Intensive Case Management supports to improve outflow from shelters into permanent housing;
 - (iv) approximately \$90,000 for one permanent full-time equivalent for Housing Service Division to provide tax filing support for those experiencing homelessness;
 - (v) approximately \$250,000 for exceptional unit damage because of housing an individual from City-funded case management programs;
 - (vi) approximately \$266,000 for increased Housing-Focused Outreach support;
 - (vii) One permanent FTE to provide program coordination, at an approximate cost of \$115,000;
 - (viii) Make permanent one Community Services Program Analyst FTE supporting the Housing Focused Outreach Team, at an approximate cost of \$100,000;
 - (ix) approximately \$310,000 to provide enhancements for two Social Navigator Paramedics by Hamilton Paramedic Service; and

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- (f) That the appropriate General Managers of Public Works and the Healthy and Safe Communities Department or their designate be directed and authorized, on behalf of the City of Hamilton, to enter into, execute and administer all agreements and documents necessary to implement recommendations (a) and (b), inclusive of all sub-sections, outlined above on terms and conditions satisfactory to the respective General Manager or their designate and in a form satisfactory to the City Solicitor.
- (g) That two Outstanding Business items be removed from the list including:
- (i) A 2023 OBL item respecting increasing beds in Residential Care Facilities
 - (ii) A 2023 OBL Item respecting reporting back on a proposed investment ratio for Housing Services Division

EXECUTIVE SUMMARY

This report follows Report HSC240020/PED24080/PW24030, Encampment Observation Report, to provide recommendations on how the City may reduce instances of acute and chronic homelessness in the community and reduce impacts of encampments on neighbourhoods. This work is rooted within the housing continuum, with recommendations to better connect those covered under the encampment protocol to emergency shelter and outflow supports, and subsequently into more permanent housing solutions as governed by the Housing and Homelessness Action Plan and Housing Sustainability Investment Roadmap.

The high rates of homelessness in Hamilton are a shared issue influenced and intensified by the failure to increase Ontario Works and Ontario Disability Support Program rates; rising inflation, interest rates, and the cost of living; an influx of refugee claimants and asylum seekers; and an extreme shortage of affordable and deeply affordable housing options exacerbated by bad faith renovations. As the Service Manager for Hamilton, staff continue to assess whether enhancements are needed to manage demand, but also advocate with government partners and prioritize investment into homelessness prevention and outflow supports.

That said, Hamilton's response to the homelessness crisis is improving. The most recent data shows that vacancy in CityHousing Hamilton units decreased from 9% in March 2023 to 5.5% in April 2024, and is on track to a target of 2% vacancy by the end of the year. CityHousing Hamilton has also completed 66% of repairs that were funded by Council, and is on track to complete these repairs by November. There has also been successes in homelessness services, like the reduction of family hotel stays from 400 in 2023 to 87 days in 2024. This is largely due to the concerted efforts of community partners, City investments, and forward-thinking policy decisions. Work

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continues to implement the interventions approved as part of Report HSC23041: Addressing the Needs of Unsheltered Individuals and those Relying on Hamilton's Emergency Shelter System (HSC23041), and those approved in Budget 2024. Despite some successes, the demand for services continues to be larger than the available or approved resources and the number of encampments in Hamilton continues to be high. We know that the shelter system is consistently at 99-100% occupancy with many individuals and families being turned away each night. While we continue to provide 52 hotels rooms (or 208 beds) as overflow, this paired with the current capacity of 345 permanent and 20 temporary shelter beds does not come close to meeting the needs of the roughly 1592 people experiencing homelessness in the City. The need for shelter spaces is not easily quantifiable, as there is no accepted model of need per capita, and Hamilton has several social and economic factors that increase our need compared to other similar sized cities. Also contributing to a lack of shelter outflow is a shortage in available Long Term Care beds, limiting options for seniors experiencing homelessness. To improve our sector's ability to respond to the continued homelessness crisis and reduce the resulting impacts on other areas of the City, staff are recommending a variety of investments into encampment management, the shelter system, and outflow supports. This is intended to improve the rate at which individuals and families can be served within the emergency system and enter permanent housing, thereby reducing the prevalence of encampments in Hamilton.

Recommendations to reduce instances of homelessness include:

- Conducting a Call for Information to assess the costs associated with expanding the shelter system.
 - This recommendation would seek information from shelter operators the costs associated with adding 110 single men, 50 single women, and 55 couple spaces with 25% being pet friendly, to right-size the shelter capacity and close known service gaps for pet owners and couples. Staff will return with this information, as well as any additional resources needed to support that expansion including staff resources as well as potential investments into outflow supports like rent supplements.
- Approving a one-time adjustment of shelter operating costs by 25%
 - This is in recognition of historic underfunding across the last two decades and is intended to bring operations to a more appropriate baseline. The 2023 approval for cost-of-living adjustments would continue and better support funding adjustments.
- Enhance funding for Indigenous drop-in spaces, an important support for connecting individuals with culturally appropriate programs
 - funding for a portion of this program expired in March 31, 2024 despite this program being a critical support and entry point for unhoused indigenous people in Hamilton.

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**SUBJECT: Reducing Homelessness and Managing Encampments (HSC24027)
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- A 10% funding increase to case management programs to expand caseloads as well as improve the quality of supports provided.
- Improving access to and prioritization of unhoused individuals on the Access to Housing Waitlist
 - Staff are recommending one Housing Services Clerk to help clients file their taxes, an identified barrier to completing an Access to Housing application.
 - Within current complement, staff will be reviewing the prioritization of homeless individuals on the waitlist to increase the rate of offers being provided to individuals on the By-Name-List. Any changes to the process would be brought to Council for approval.
- Beginning a Landlord Engagement program whereby staff can support landlords that house individuals out of homelessness.
 - As part of this program, staff are recommending providing up to \$250,000 in financial aid to landlords experiencing excessive unit damage.

Recommendations to minimize unintentional consequences of encampments include:

- A variety of updates to the Encampment Protocol, as shown in Appendix “A” to Report HSC24027, including
 - Including a minimum distance of 100 metres around funeral homes, long-term care facilities and spaces that are designed and programmed for children as an amendment to the encampment protocol; in recognition of family members attending these locations, as well as a minimum distance around construction sites of 25m for the safety of those living encamped.
 - Extending the requirement of a minimum distance from sidewalks of 5m during winter to accommodate snow clearance to be a full year requirement to address concerns around walkways and sidewalks.
- Increased resourcing for the Housing-Focused Outreach Team to
 - better resource winter response programs and address rising encampment numbers in the warmer months.
 - Create a permanent program coordinator to coordinate inquiries from the public, internal stakeholders and members of Council.
- Increase services to those living in encampments and those around encampments through:
 - Enhancing the Social Navigation Program provided by Hamilton Paramedic Services and Hamilton Police Services. This program provides short-term intensive case management, including assessments, connection to experts,

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point-of-care testing and wound care to improve the health outcomes of those living unsheltered.

Recommendations to remove items from the Outstanding Business List include:

- Expanding Residential Care Facilities
 - Residential Care Facility subsidies are funded through provincial funding which is currently fully expended with no anticipated increase. Further, there are consistently vacancies in the program based on low demand. Staff do not recommend spending further funding on a program that may not get utilized
- Housing Investment Ratio
 - Staff researched this area further and have not found reliable data to inform a recommendation to Council. Without reliable data, staff are not able to recommend an evidence-based approach and recommend continuing efforts to promote prevention of homelessness and outflow supports with the eventual goal of reducing funds directed towards emergency supports in accordance with decreasing demand in the community.

In addition, staff are recommending one confidential item to be considered in closed session. The closed session recommendation pertains to staff recommendation to make the Community Services Program Analyst a permanent position. This position supports data collection and analysis for the encamped population to inform management of encampments and improving services for those living unsheltered.

With these investments, as well as continued quality improvement work within the Division, we can create capacity within shelter and housing supports to accommodate more of those living in encampments, accelerate and improve housing outcomes for those already in receipt of emergency supports, and reduce the impacts of encampments on those living or working nearby.

Alternatives for Consideration – Page 14

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: There are financial implications to recommendations (c) and (e). Most are prorated in 2024 to begin funding in August 2024, however the Hamilton Regional Indian Centre is prorated to April, as there was previously available funding that concluded March 31, 2024.

Recommendation	2024 Cost (approximate)	Annualized Cost (approximate)
Closed session recommendation (a)	\$42,000	\$100,000

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Recommendation	2024 Cost (approximate)	Annualized Cost (approximate)
(c)(ii) Shelter operating costs	\$940,000	\$2,255,000
(c)(iii) HRIC Drop-In	\$266,000	\$400,000
(c)(iv) Case management	\$210,000	\$500,000
(c)(v) Tax Filing Resourcing	\$40,000	\$90,000
(c)(vi) Unit Repairs	\$100,000	\$250,000
(e)(i) Housing Focused Outreach Resourcing	\$108,000	\$266,000
(e)(ii) Program Coordination	\$48,000	\$115,000
(e)(iv) Social Navigators	\$130,000	\$310,000
Total	\$1,884,000	\$4,286,000

Staffing: Staff recommend 3 additional permanent FTEs, one each for data collection, tax filing, and program coordination. The remaining work would be completed within existing complement or as an enhancement to an existing contract.

Legal: support is needed to develop and review contracts.

HISTORICAL BACKGROUND

On March 23, 2023, the Ending Chronic Homelessness Report (HSC23021) was received by Council. The report provides an outline of the comprehensive approach and investments required to end chronic homelessness in Hamilton. A performance update on Q1 and Q2 was provided to council on November 16, 2023 (HSC23076).

The Housing Sustainability and Investment Roadmap (HSIR) was published in April 2023 and updated in November 2023. This roadmap builds upon the Housing and Homelessness Action Plan. On April 19, 2023, the General Issues committee approved report HSC23028/FCS23055/PED23099 Housing Sustainability and Investment Roadmap to guide affordable housing issues cross-departmentally.

August 14, 2023, the report Addressing the Needs of Unsheltered Individuals and those Relying on Hamilton's Emergency Shelter System (HSC23041) was presented to Council. The report identified that the number of individuals living unsheltered and the number of individuals who are homeless continues to rise in Hamilton and the shelter system continues to be over capacity. This report included recommendations to continue funding shelter overflow beds for families and make investments into shelter bed expansion and homelessness prevention.

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On August 18, 2023, Council adopted and ratified an Encampment Protocol in Encampment Response Update – August 2023 (HSC23066), identifying approaches, processes, and service levels associated with responding to encampments in the City. In addition, Council provided necessary resources in staffing and equipment to support the implementation of the Protocol. While a broad approach involving sanctioned sites was not recommended by Staff due to its prohibitive costs better utilized in prevention efforts and/or housing, Council also approved a two-year Hamilton Alliance for Tiny Shelters pilot for up to 25 tiny homes on City lands at no cost to the City. The City was asked to provide a location, and while the City continues to work with HATS to secure a location, none has yet been agreed upon.

The Annual Winter Response Strategy (HSC23012) was approved by Council in September 2023 and an amendment was made in March 2024 (HSC23012(a)) to extend the response from April 2024 until December 1, 2024, as it has been demonstrated that the need for services in the community continues beyond the winter season.

The Encampment Observation Report (HSC24020 / PED24080 / PW24030) was presented to General issues Committee on May 17, 2024 which detailed information around the first eight months of using the Encampment Protocol. It also recommended returning to Council with recommendations on how to reduce homelessness, and staff were directed to include recommendations on reducing the impact of encampments on neighbourhoods.

The Housing and Homelessness Action Plan (HHAP) was published in 2013 and updated in 2020 demonstrating Hamilton's commitment to ending homelessness. In 2019, the Coming Together to End Homelessness report was published, which provides an outline of Hamilton's strategy to end homelessness.

RELEVANT CONSULTATION

In July 2022, The Social Planning and Research Council of Hamilton released a key findings report, *Hamilton Post-Pandemic Emergency Shelter Size Review* for the City of Hamilton. This was included as Appendix "A" to Report HSC23041. The preparation of this report included interviews and focus groups with agencies providing shelter services, outreach, diversion, and prevention, and/or drop-in services. Qualitative data was also gathered in consultation with partners from Indigenous-led agencies, youth, women's, men's and family services as well as service providers that provide outreach services to shelter clients and unsheltered populations. This report includes recommendations for prioritization of additional supports in the shelter system including prioritizing the Indigenous community, safe and deeply affordable housing with supports, staff recruitment and retention, and an increase in emergency shelter responses particularly for the Indigenous, women's and family sectors.

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The November 2023 Report HSC23076, Ending Chronic Homelessness Performance Update, included performance results that had been provided, reviewed, or confirmed by representatives from the individual reporting programs through multiple engagement sessions and data collection points. At that time a full list of the reporting and engagement opportunities was included as Appendix “B” to Report HSC23076.

In November 2023, the Homelessness Policy and Programs team from the City of Hamilton’s Housing Services Division hosted an event entitled *Coming Back Together to End Homelessness*, bringing together community partners from across the homeless-serving sector, healthcare, settlement services, social housing providers, and people with living experience to learn from each other, collaborate, and to discuss opportunities for greater impact in ending homelessness. Discussions highlighted strengths of the sector, areas for improvement and acknowledgement of the existing challenges and limitations experienced in the sector.

Since the establishment of the Encampment Protocol in August 2023, the operation of a centralized inbox allows staff to respond quickly to community correspondence and monitor community perspectives. Concerned citizens make up 31% of the correspondence with the Housing Focused Street Outreach team, the other categories include Municipal Law Enforcement (15%), Public Works (12%), Councillor’s Offices (11%), the City’s Contact Centre (10%), as well as other groups in less significant numbers such as Hamilton Police, Business Improvement Areas, schools and hospitals.

Staff also worked closely across Planning and Economic Development, Public Works, and Healthy and Safe Communities to determine areas for improvement.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

While the data availability has been hampered by the cyber-security incident, staff do have trend-level data up until January, as well as informal data collected through weekly visits to encampments that has informed the recommendations within this report. Figure 1 shows population count across the last two years, divided by length of homelessness.

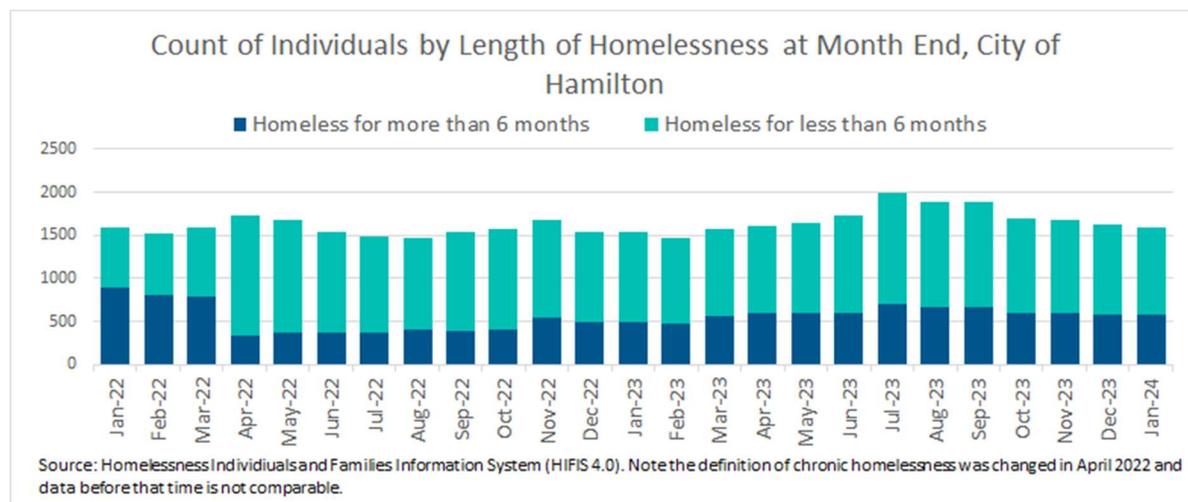
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Figure 1: Count of Individuals by Length of Homelessness at Months End¹



An important factor in this graph is the proportion of individuals experiencing homelessness for more than 6 months. These individuals are often of higher acuity, and in need of more services to become “rent-ready” and successful in maintaining their housing. As such, they are often clients within the Rapid Rehousing and Intensive Case Management programs. There has been between 500 and 700 individuals in that category across 2023. To ensure that more individuals gain access to these supports, staff recommend increasing funding to these programs to increase the caseload capacity and improve service.

Figure 2: Approximate Demographics of Those Living Unsheltered

Current Approximate Total Number of Individuals Living Unsheltered in Hamilton: 205					
Demographic Breakdown:					
Couples		Singles (Males)		Singles (Females)	
41 (82 individuals)		84		39	
Couples with Pets	Couples without Pets	Single Males with Pets	Single Males w/o pets	Single Females with Pets	Single Females without Pets

¹ Note: the increase in the total count of individuals increasing in the summer of 2023 was a result of changes in data reporting. The count of individuals is consistently approximately 1600.

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11 <i>16 dogs total</i>	30	19 <i>20 dogs total</i>	65	9 <i>18 dogs total 6 cats total</i>	30
Total People with Pets: 50 (18 individuals, 11 couples) Total Pets: 60 (54 dogs, 6 cats)					

Further, Housing-Focused Outreach staff maintain an informal count of individuals living in encampments. There are currently over 90 encampment sites with over 200 individuals. While there will always be individuals who prefer to live outside, there are individuals who would shelter within City-funded programs if there were appropriate spaces. However, city-funded shelters are consistently at, or over, capacity (Figure 3). In addition to these capacity pressures, there are gaps in service for individuals with pets and couples without children. Because there is no space for those who are unwilling to access shelter separately from their partners, these individuals often chose to live in encampments. Without additional resources in these targeted areas, encampments are likely to persist. As such, staff used peak encampment population numbers, plus 10%, from last summer to develop the number of new shelter beds to consider funding through the recommended Call for Information.

Drop-in programs are funded, in part, to capture individuals who are not otherwise sheltered. However, a critical drop-in program serving the indigenous population recently lost some of their funding and had to downsize their program. To rectify this, for an already over-represented group within the homeless population, staff recommend the City fund the gap.

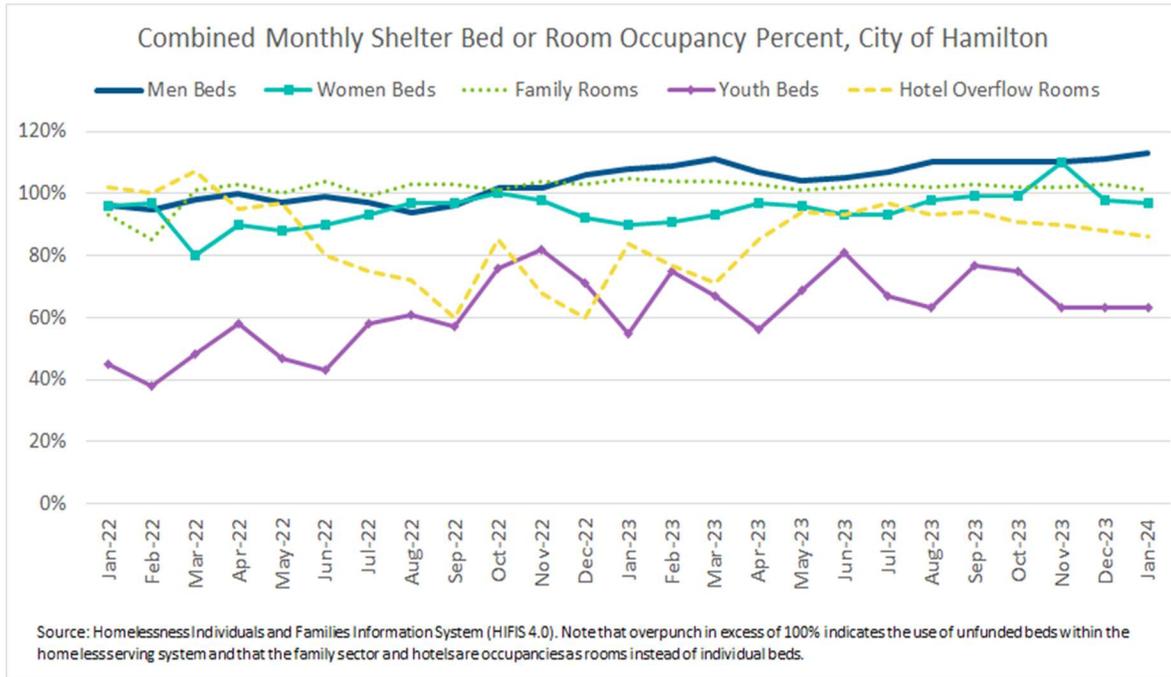
Figure 3: Combined Monthly Shelter Bed or Room Occupancy Percent

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**SUBJECT: Reducing Homelessness and Managing Encampments (HSC24027)
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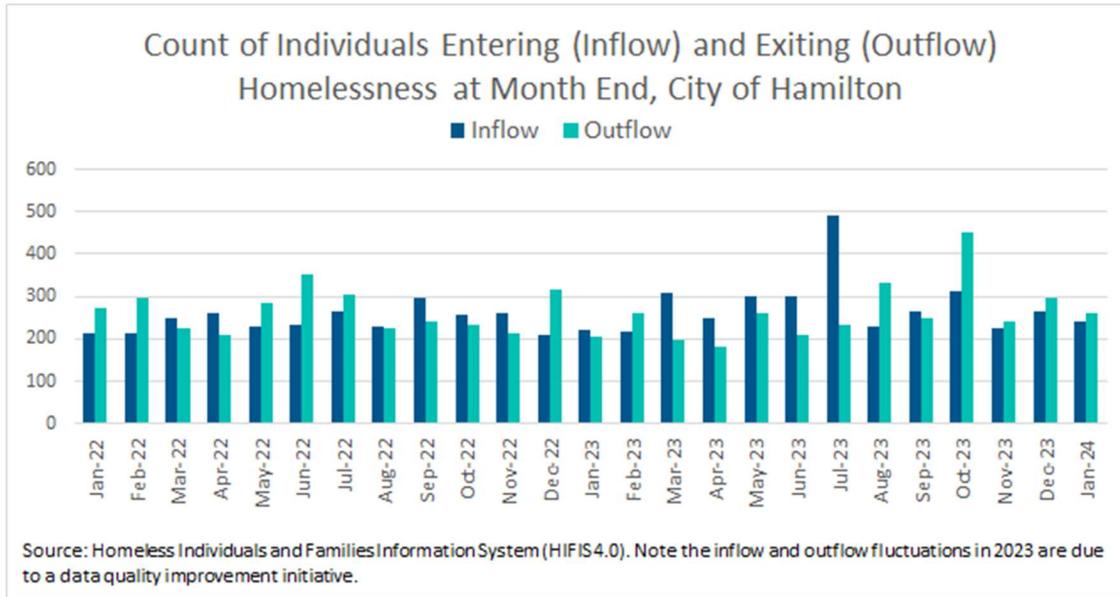


In tandem with the high demand for services, shelter operators are being chronically underfunded. As part of Budget 2023, Council approved an ongoing cost-of-living adjustment for all City-Funded shelters. While this assuages issues of continued underfunding, it does not resolve the cumulative effect over the past several years. Staff are recommending a percentage increase to all shelter contracts to reestablish more appropriate funding levels. This percentage rate is based on the percentage of total operating costs that operators augment through other funding sources such as donations. This other funding ranges between approximately 12 and 35% of their total operating costs.

Inflow and Outflow are the terms used to describe those entering and exiting the emergency support system. Figure 4 depicts the rate of inflow and outflow, including an increase to inflow between February and July 2023. This aligns with the observed increase in encampments over last summer. However, outflow numbers improve from August onward as population numbers decreased. Investments into prevention of inflow and accelerated outflow is how the City can reduce overall reliance on the emergency system. Some factors which influence inflow remain outside of the City's control, however, including the rate of asylum seekers and refugee claimants that choose to settle in Hamilton.

Figure 4: Count of Individuals Entering and Exiting Homelessness at Month End

**SUBJECT: Reducing Homelessness and Managing Encampments (HSC24027)
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In addition, Hamilton is improving the rate at which individuals are housed through City-funded programs. Figure 5 shows the number of individuals moved into housing that was facilitated by City programs. In 2022, the City averaged 28.75 ‘move-in’s’ per month and increased that to an average of 38.9 in 2023. This may be attributed, in part, to the opening of Dorothy Day Place in May 2023. However, removing outlier months of 60 move-ins or more, the averages still show an increase to outflow in 2023 (25.9 and 36.4, respectively).

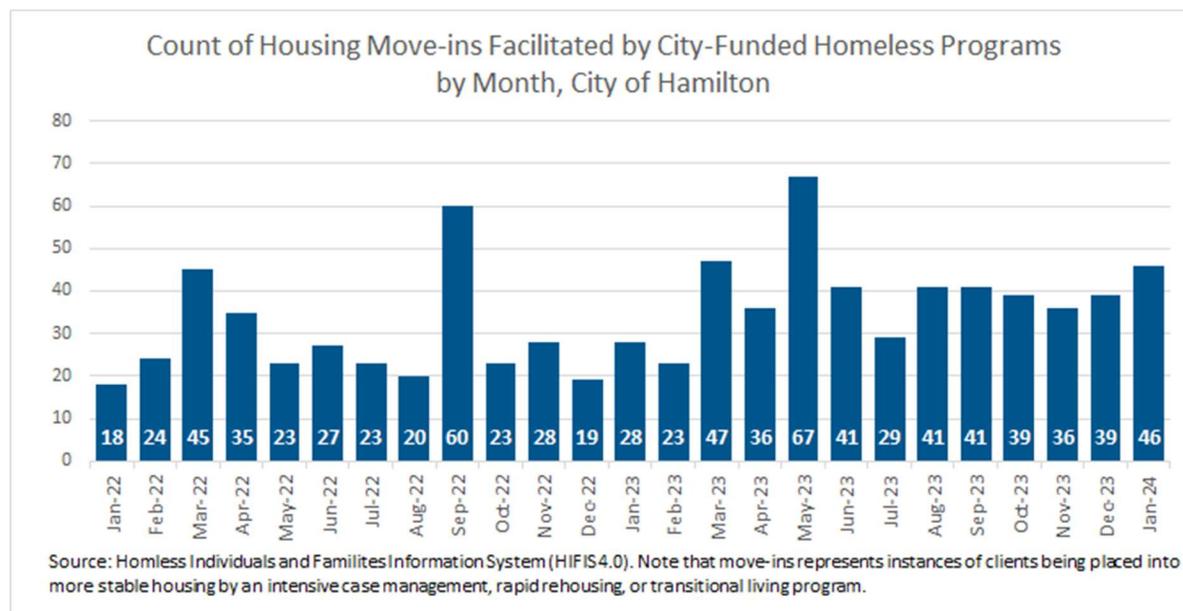
Figure 5: Count of Housing Move-Ins Facilitated by City-Funded Homeless Programs by Month

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Despite these improvements at the population level, the effects of further investment will take time to realize. During that time, encampments will continue across the City. To better manage any impacts to those living in or around encampments and those working nearby, staff recommend several improvements in alignment with program design needs and community concerns.

Inquiry	Mitigation
Reporting an encampment (27% of inquiries)	Increase the Housing Focused Street Outreach complement to support anticipated increased encampment numbers during the summer, and support winter response programs during the winter months.
Feelings of intimidation and lack of safety (25%)	Implementing minimum distances from walkways and pathways, and maintaining a minimum distance from roads throughout the year (instead of only during snow plowing season). Establishing a minimum distance from funeral homes, long-term care homes and spaces that are designed and programmed for children.
Requesting Enforcement (19%)	Staff do not recommend changing the enforcement approach
Waste & Debris (15% of inquiries)	Collection of waste is already in place and occurring daily in some places. Staff do not recommend a change to this process.
Healthy and Safety of those living unsheltered	Increase the Social Navigator Program with two additional Paramedics to better connect those living

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(11%)	<p>unsheltered with healthcare, and provide onsite supports like wound care, point-in-care assessments, and harm reduction supplies.</p> <p>Establishing a minimum distance from construction sites to ensure individuals are a safe distance from active work</p>
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The Community Services Program Analyst supports analysis of encampment correspondence, as well as data collection from encampment residents. This enables Housing Services to continue to optimize the application of the Encampment Protocol and better connect individuals to emergency supports. Due to the prevalence of encampments, and the anticipated continuation of encampments, staff recommend making this position permanent. In addition, staff recommend an additional permanent FTE in Housing Services Division to coordinate responses to community inquiries.

ALTERNATIVES FOR CONSIDERATION

Additional amendments may be considered for the Encampment Protocol including:

1. A setback from private property line. While staff recognize the need to limit impacts to private property, increasing the setback beyond 5m would restrict smaller downtown compliant sites.
2. Limiting to five tents in parks, regardless of size. Staff do not recommend this approach as it would be very limiting and not an equitable approach across the city.
3. Exclude tents from all parks with construction. This is also not recommended as it would close all parks for any type of construction and reduce the number of compliant sites.

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" to Report HSC24027 – Proposed Updates to the Encampment Protocol

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Encampment Protocol – with Amendments

A) Shared Principles

When engaging in encampment response, all staff in a frontline capacity will use the same philosophical approach. In all interactions with people who are living unsheltered, staff will engage utilizing a human-centered, housing first, health-focused, rights-based approach. All actions will be guided by a commitment to upholding the human rights and human dignity of all individuals living in encampments, temporary shelters, or tents. Staff will also work to build rapport through mutual respect, effective communication, empathy, and by maintaining transparency around the expectations of individuals living in encampments, temporary shelters, or tents and City staff.

It is vital that all actions taken in the Protocol are grounded in the understanding that housing is a fundamental human need, and that people in our community deserve housing and homelessness responses that are based on intentional planning and good evidence and that have measurable positive impacts and outcomes. Working to provide permanent housing for all is critical and will require an ongoing commitment from the City, community, and other levels of government to find innovative, meaningful solutions.

B) Complaints and Service Request Information:

Individuals in the community who encounter an active or abandoned encampment, temporary shelter, or tent, or someone who is living unsheltered, and/or have questions or concerns about an encampment, should contact the Coordinated Response Team led by Housing Focused Street Outreach by email at unsheltered@hamilton.ca or by phone at 905-546-2828.

Any contacts made with other internal City divisions or through other City channels regarding encampments, temporary shelters, or tents will also be forwarded to Housing Focused Street Outreach for first response.

C) Alignment to Housing Resources and Supports

In establishing a housing-focused approach to interacting with individuals living unsheltered and/or in encampments, all individuals will be given an opportunity to complete a Vulnerability Index – Service Prioritization Decision Assistance Tool (VI-SPDAT)

In the context of individuals living in encampments, temporary shelters, or tents, the Vulnerability Index – Service Prioritization Decision Assistance Tool is a triage tool, with a series of questions asked by Housing Focused Street Outreach staff to individuals who are experiencing homelessness. The assessment tool is used to support conversations where staff learn about an individual’s housing situation, needs, and strengths to help build a plan to achieve stable housing. It is also used to inform additional supports that may be needed and/or help prioritize housing interventions

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within Hamilton’s Homeless-serving System likely to be most beneficial to support an individual’s needs, preferences, and long-term housing outcomes.

There is no requirement for anyone who is living in an encampment, temporary shelter, or tent to complete the Vulnerability Index – Service Prioritization Decision Assistance Tool and it will have no bearing on whether they are able to stay in a particular location or for a specific duration of time. The assessment tool will only be used to help connect individuals experiencing homelessness to housing resources and supports.

D) Prohibited Areas for Erecting Encampments, Temporary Shelters, or Tents

In order to provide for the availability of space for temporary shelter in parks, persons without shelter or being homeless will be able to establish an encampment through erecting a temporary shelter for themselves and also be able group together with other such persons’ temporary shelters. However, the encampment or cluster of shelters must not exceed five tents or similar temporary shelters, and there must be at least 50 meters separating the encampment or cluster from other encampments or clusters of shelters. Further, the balancing of public and private interests while allowing for temporary shelter will require encampments or clusters not be located:

- On or within 100 meters of a school or children daycare centre
- On or within 100 meters of a playground, pool, waterpark, or any spray pad
- On or within 50 metres of any lake, beach, pond, watercourse or other body of water, or a dock
- Within 10 meters of any private property line
- Within 100 meters of a funeral home
- Within 100 meters of a long-term care facility
- Within 25 meters of an active construction site
- On or within 5 meters of any transit stop or a highway and specifically including a sidewalk, boulevard, or bridge or tunnel being part of such highway.
- On or within 5 meters of any property with an environmental or heritage designation
- On or within 50 meters of any sports fields, inclusive of but not limited to, skateboard parks, fitness amenities, golf courses, ball diamonds, soccer pitches, tennis courts, or any other sports or multi-use courts, as well as stadiums, dugouts, stages, and bleachers.
- On any fenced-in, off-leash dog area
- On any cemetery, including its roads, lanes and paths for travel within the cemetery
- On any community garden and including any garden shed or greenhouse
- On or within 5 metres of any pathway, walkway, sidewalk, or parking lot or on or under any bridge, including pedestrian access points to such areas and structures
- On or within any designated fire route, or the entrance to or exit from a designated fire route, or located so as the block any fire hydrant

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- On or within any entrance, exit or a doorway to a building or structure, and including, without limiting the generality of the foregoing, an area adjacent to such entrances or exits required in the event of fire or emergency
- On or within any accessibility entrance or ramp or located in a way that blocks access to such entrances or ramps.
- On or within any area identified susceptible to flooding, erosion, slope instability, or other environmental hazards that presents a risk to health and safety.
- Further no temporary shelter or tent will be placed against, or under, or be attached or tied to any building or permanent structure. All shelters or tents must be freestanding.

E) Campfire and Barbecue Use

Section 14 of By-Law 01-219, the Parks By-Law, which regulates campfires and barbecues in City Parks; as well as By-Law No. 02-283, the Open Air Burning By-Law, which regulates open-air burning within the City, shall be complied with and will be enforced.

F) Maximum Personal Space Allotment(s)

The total area for a single tent and all its associated belongings cannot exceed beyond a 3-metre-by-3-metre area, or 9-metres-squared, and the total area for five tents within a cluster cannot exceed beyond a total area of 45-metres-squared. The following chart identifies space limits by number of temporary shelters or tents:

Number of Temporary Shelters/Tents within Encampment Cluster	Maximum Total Space Allotment (metres)
One	9m ²
Two	18m ²
Three	27m ²
Four	36m ²
Five	45m ²

Any items located outside of the allotted personal space area will be subject to removal by City staff.

G) Encampment Response Processes

Given that there are several circumstances that require a unique response from the Coordinated Response Team, the following guidelines have been established to direct responses to people living in encampments, and their temporary shelters, or tents:

- A) When an encampment, temporary shelter, or tent is located on public property, and not within a prohibited area, as defined by this Protocol:

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1. Within 72 hours after receiving a complaint or request for service (unless exceptional circumstances exist), Housing Focused Street Outreach staff will engage with the individual(s) living within an encampment, temporary shelter, or tent to better understand their needs and connect them with internal and community supports, including housing-focused case management; referral into the emergency shelter system; referrals to health agencies, social assistance supports, and specialized outreach supports; and any other relevant supports available that would improve an individual’s health and wellbeing.
 2. If no health and safety issues are observed by Housing Focused Street Outreach (see Section J, ‘Health and Safety’ for further detail on specific circumstances or factors), and the encampment, temporary shelter, or tent complies with the prohibitions and locations outlined in this Protocol, individuals will be allowed to maintain and occupy temporary such shelter for the duration of the Protocol, as defined by City Council. Housing Focused Street Outreach will continue to engage with the individual(s) on an ongoing basis to provide supports and referrals as needed and work towards goals in individualized housing plans.
 3. Only if a substantial change in circumstances is observed by Housing Focused Street Outreach in subsequent visits to the encampment, temporary shelter, or tent, such as new significant health or safety issues, will Hamilton Police Services be asked to attend to support any response. Hamilton Police Services will attend encampments within the normal course of responding to emergencies and other policing duties, and Housing Focused Street Outreach and other City partners will work cooperatively with Hamilton Police Services if a concern related to health and safety is identified at an encampment.
 4. Any items or circumstances that are of clear and immediate risk to the individuals living in an encampment or neighbouring encampments or the broader public will result in a call for immediate emergency response. Hamilton Police Service Encampment Engagement Officers will attend the location and conduct a risk assessment when requested and as required.
- B) When an encampment, temporary shelter, or tent is located on public property, within a prohibited area, as defined by this Protocol:
1. Within 72 hours after receiving a complaint or request for service (unless exceptional circumstances exist), Housing Focused Street Outreach staff will engage with individual(s) living within an encampment, temporary shelter, or tent to better understand their needs and connect them with internal and community supports, including housing-focused case management; referral into the emergency shelter system; referrals to health agencies, social assistance

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supports, and specialized outreach supports; and any other relevant supports available that would improve an individual’s health and wellbeing. Housing Focused Street Outreach will have available information about possible suitable and compliant sites and will consider the needs and choices of the individual and collaborate with the individual(s) living within an encampment, temporary shelter, or tent, to identify a more suitable area that meets the conditions noted within this Protocol.

2. If after visiting an encampment, temporary shelter, or tent, Housing Focused Street Outreach staff observe the encampment, temporary shelter, or tent to be in a prohibited area, as defined by this Protocol, Housing Focused Street Outreach will contact Municipal Law Enforcement within 72 hours of receiving the initial complaint, and Municipal Law Enforcement will respond to the within four (4) business days.
3. Municipal Law Enforcement Officers will visit the site within four business days and confirm whether the encampment, temporary shelter, or tent is in a prohibited area. If so, Municipal Law Enforcement Officers will notify the individual(s) living at the location via a Notice of Trespass and verbally, if possible, that they are in a prohibited area, and that they will be required to move from the existing location.
4. Municipal Law Enforcement Officers will determine compliance timelines depending on the presenting circumstances, for the issuance of notices or actions to be taken in respect to the encampment, temporary shelter, or tent, within a maximum of four (4) total days from the issuance of notice, unless exceptional circumstances exist. For example, if the Municipal Law Enforcement Officers observes a significant health or safety issue for the individual due to placing a shelter on a highway the Municipal Law Enforcement Officers will take more urgent action to require compliance or remediate the concern and may seek Hamilton Police Services support. If there are few or no immediate health, safety, or other concerns due to encampment or its location within a prohibited area, Municipal Law Enforcement Officers will allow for more time, up to a maximum of four (4) total days, unless exceptional circumstances exist, to engage with the individuals in an encampment, temporary shelter, or tent around supports and next steps.
5. After a Trespass Notice has been served and prior to an area being cleared, Housing Focused Street Outreach’s will continue to engage with individual(s) at the location to identify alternate sheltering options and attempt to address any barriers to shelter or housing, such as lack of identification or item storage.
6. If the duration of time provided by a Trespass Notice expires and individual(s) at the site has not moved voluntarily and are unwilling to move, Municipal Law Enforcement Officers will notify Hamilton Police Services Encampment

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Engagement Officers. Hamilton Police Services will be available to support and assist the Municipal Law Enforcement Officers, operational plan, and/or the individual(s) living at the encampment, temporary shelter, or tent to vacate the prohibited area.

7. Hamilton Police Services Encampment Engagement Officers will interact with individuals in encampments, temporary shelters, or tents at the request of Housing Focused Street Outreach and/or Municipal Law Enforcement, in a supportive capacity. Otherwise, their level of intervention will be dictated by their own internal policies and the circumstances at a given encampment, temporary shelter, or tent site.
 8. Parks staff will coordinate the clean-up, to be completed either by Parks staff, Roads staff, or the contractor, depending on the location, within 72 hours, with discretion for extenuating circumstances such as inclement weather.
- C) When an encampment, temporary shelter, or tent is located on public property, is not located in a prohibited area, but health and safety concerns are identified:
1. If Housing Focused Street Outreach identify or confirm a health or safety issue at an encampment, temporary shelter, or tent, and depending on circumstances, will address or may collaborate with appropriate partners to address the health and safety concerns identified.
 2. If the health and safety concern is considered serious and/or imminent (e.g., exposed electrical wiring, accumulation of discarded needles, use of propane tanks and other combustible materials, possession of weapons) as identified by Housing Focused Street Outreach or Hamilton Police Services Encampment Engagement Officers, Hamilton Police Services will follow appropriate policing responses required in the circumstances. In addition, they will communicate with the Coordinated Response Team and prioritize working with community partners to address any remaining safety concern. These partners may include Hamilton Fire Department, Hamilton Public Health’s Community Points program, Hamilton Parks, or any other parties deemed necessary to address the observed health and safety concerns.
 3. All items determined by Hamilton Police Services and/or partners to be a serious risk to the health and safety of individual(s) living at the encampment, temporary shelter, or tent, as well as the public will be removed at the earliest opportunity.
 4. If the encampment, temporary shelter, or tent is also in an area deemed to be prohibited based upon the provisions identified in Section D of this Protocol, and after health and/or safety issues placing Municipal Law Enforcement Officers at

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risk have been removed, Municipal Law Enforcement Officers will initiate steps 4-9 in Encampment Response Process B – *“If an encampment is located on public property, in a prohibited area.”*

5. If all serious health and/or safety issues have been removed or otherwise corrected, and the encampment, temporary shelter, or tent is not located in a prohibited area as designated in Section D of this Protocol, then the individual(s) will be permitted to remain where they are, in accordance with Encampment Response Process A.

H) Encampments on Private Property

Encampments, temporary shelters, or tents identified on private property are primarily the responsibility of the property owner. Where the owner has not provided consent, concerns of the owner are within Hamilton Police Services’ jurisdiction and will be subject to ordinary enforcement procedures in accordance with applicable laws.

Hamilton Police Services may seek the assistance of Municipal Law Enforcement Officers as appropriate or required in the circumstances.

Provided the property owner permits, Housing Focused Street Outreach will engage with encampment, temporary shelter, or tent residents to identify alternate sheltering options and attempt to address any barriers to shelter or housing. Additionally, Housing Focused Street Outreach will work with individuals at the encampment, temporary shelter, or tent to provide supports and referrals as needed and work towards goals in individualized housing plans.

I) Process for Designating an Encampment, Temporary Shelter, or Tent as Abandoned

While Housing Focused Street Outreach is aware of many encampments, temporary shelters, and tents in the community, people living in encampments, temporary shelters, and tents may move to new locations and/or may abandon a previous site without Housing Focused Street Outreach’s or other Coordinated Response Team partners’ knowledge. Given that maintaining one’s possessions while experiencing homelessness is vital to a human-rights based approach, staff will be cautious when deeming a site to be abandoned.

The following process will be followed regarding potentially abandoned sites on public property:

1. If Housing Focused Street Outreach have not interacted with anyone at a particular site and/or there has been observed inactivity for at least three (3) days, they will review the site with the Coordinated Response Team partners at

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the nearest opportunity to confirm there has been no recent activity witnessed at the site.

2. If Coordinated Response Team partners (i.e., Municipal Law Enforcement, Hamilton Police Services, Parks) have not witnessed anyone at the site and/or can confirm that the former inhabitants of the site have moved elsewhere, Housing Focused Street Outreach will place a notice at the site in a conspicuous area informing potential residents that the site is due to be cleaned in three (3) days from the time of the notice being placed.
3. Within the three-day timeline, all reasonable attempts will be made by Housing Focused Street Outreach and/or other Coordinated Response Team partners to ensure that individuals known to be previously staying at a site have been made aware that their former site will be deemed abandoned and cleaned.
4. If no interaction has been made by Housing Focused Street Outreach with the former inhabitants at the site, no attempts have been made by the former inhabitants of the site to contact Housing Focused Street Outreach, and/or no other changes are observed at the site by the end of the allotted time, Housing Focused Street Outreach will provide approval to Parks Section to clean the site.
5. Parks staff will coordinate the clean-up, to be completed either by Parks staff, Roads staff, or the contractor, within 72 hours of approval, with discretion for extenuating circumstances such as inclement weather.

Clean-up and maintenance of encampments, temporary shelters, or tents previously on private property are the responsibility of the property owner.

J) Health and Safety

Defining specific health and safety issues is difficult and can be based upon several factors unique to a particular site or circumstance. Some examples include, exposed electrical wiring, accumulation of discarded needles, illegal activity, abuse, threats or violence against staff, HPS or other persons, improper use or storage of propane tanks and other flammable materials, and acts involving weapons. Health and safety issues may also be identified via complaints from the public and/or businesses in relation to the encampment, temporary shelter, or tent; for example regarding harassment, vandalism, and/or stolen personal property.

Housing Focused Street Outreach staff will notify Animal Services when a pet is encountered at an encampment site. Housing Focused Street Outreach staff will collaborate with appropriate parties including the pet owner to identify how to best support the pet and pet owner, including implementing strategies to reduce any potential harms to the pet owner, public, City staff and the animal.

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Health and safety concerns existing for those living within or adjacent to an encampment, temporary shelter, or tent will be addressed in a reasonable and timely fashion, in good faith, on a case-by-case basis, prioritizing the seriousness of the concern and recognizing that there is a need to balance the needs of both the individual living in an encampment, temporary shelter, or tent and community members.

In situations where the need to intervene is less acute, the City may consult with additional internal and external partners to determine how to best balance the needs of individuals living encamped and community members.

If at any time City staff encounter someone in medical distress requiring immediate attention, witness violence, or believe violence to be imminent to people living in encampments, temporary shelters, or tents, staff, or community members, they will notify emergency medical, Hamilton Fire Department, or Hamilton Police Services, including members of the Hamilton Police Crisis Response Branch), to have the appropriate services dispatched. Additionally, City staff will leave the site irrespective of all procedures above, if their health and safety is currently being, or at risk of being threatened. To ensure safety of staff, the presence of Hamilton Police Services may be required while visiting the site.

K) Reporting

To provide ongoing accountability and transparency to the City’s encampment response program and the implementation of its encampment protocol, communication with Council and Ward Councillors regarding the Encampment Protocol will be through monthly, ongoing Information Reports to General Issues Committee and include data and trends, operational updates, and any continuous improvement measures implemented to further efforts toward providing ongoing accountability and transparency to the City’s encampment response program and the implementation of its encampment protocol. Where a Ward Councillor requests information regarding a specific encampment site within their ward, Housing Focused Street Outreach will provide an update as to whether the encampment has been deemed to be within a prohibited area. Reporting on the status of outreach or enforcement activities will be limited to the monthly Council reports.

L) Communicating Protocol to Residents of Encampments

An engagement strategy has been developed to update unsheltered individuals living in encampments about the Protocol as well as to communicate expectations of places within the City where encampments, temporary shelters, or tents can be erected.

The following approaches will be taken to build understanding of the Protocol:

- Housing Focused Street Outreach workers will have an information sheet outlining expectations of the Protocol, to be shared with unsheltered individuals when staff visit an encampment. Additionally, outreach staff will collaborate with individuals to understand their needs and choices in order to

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identify suitable locations (compliant sites) within the City where the individual can set up a temporary shelter or tent.

- Information sheets will also be shared with external frontline service providers who manage drop-ins, emergency shelters, and other related services and programs providers in the community, which can be posted in their locations and also communicated to staff throughout these organizations.
- City partners who also engage in frontline response, i.e., Parks Section and Municipal Law Enforcement, will also be provided information sheets to share with unsheltered individuals within the City, and community partners upon request.
- The City will post the Encampment Protocol and information sheet on the City’s website for public access.

CITY OF HAMILTON MOTION

General Issues Committee: June 19, 2024

MOVED BY COUCILLOR M. WILSON

SECONDED BY COUNCILLOR.....

Dishwasher for the Community Room at 120 Strathcona Avenue North

WHEREAS, residents of CityHousing Hamilton properties deserve dignified and safe, affordable housing; and,

WHEREAS, improvements to the interiors of CityHousing Hamilton community room helps prevent the negative impact of social isolation and promotes a healthy and engaged community;

THEREFORE, BE IT RESOLVED:

That the purchase and installation of a new dishwasher in the Community Room at 120 Strathcona Avenue North by CityHousing be funded from the Ward 1 Capital Discretionary Account#3302309100 at an upset limit, including contingency , not to exceed \$1,250.