



City of Hamilton

CITY COUNCIL REVISED

20-001

Wednesday, January 22, 2020, 5:00 P.M.

Council Chambers, Hamilton City Hall

71 Main Street West

Call to Order

1. **APPROVAL OF AGENDA**

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

2. **DECLARATIONS OF INTEREST**

3. **CEREMONIAL ACTIVITIES**

4. **APPROVAL OF MINUTES OF PREVIOUS MEETING**

4.1 December 11, 2019

5. **COMMUNICATIONS**

5.1 Correspondence from Mayor Eisenberger to Premier Doug Ford respecting the Province's decision to cancel Hamilton's massive LRT investment.

Recommendation: Be received.

- 5.2 Correspondence from the Honourable Minister Todd Smith, Ministry of Children, Community and Social Services respecting the Ministry's current assessment of Ontario's Poverty Reduction Strategy in collaboration with other ministries
- and the launch of consultations to inform the development of a new five-year strategy, in accordance with the *Poverty Reduction Act, 2009* with the posting of an online survey in January 2020 for a period of approximately 60 days.
- Recommendation: Be received and referred to the General Manager, Healthy and Safe Communities for appropriate action.
- 5.3 Correspondence from the Hamilton Transit Alliance respecting the Government of Ontario's unexpected cancellation of the Hamilton Light Rail Transit project.
- Recommendation: Be received.
- 5.4 Correspondence from the City of Woodstock to the Honourable Jeff Yurek, Minister of Environment, Conservation and Parks respecting a Ban of Single-Use Plastic Handled Shopping Bags.
- Recommendation: Be received.
- 5.5 Correspondence from the Honourable Minister Dr. Merrilee Fullerton, Ministry of Long-Term Care in response to the Mayor's letter respecting the High Wage Transition Fund (HWTF) and the Structural Compliance Premium (SCP).
- Recommendation: Be received and referred to the General Manager, Healthy and Safe Communities.
- 5.6 Correspondence from Noor Nazim, Organizer and Coordinator, Support Group Sudan - Hamilton respecting at request for \$8,000 to help send medicines to the vulnerable suffering people of Sudan.
- Recommendation: For Council's consideration.
- 5.7 Correspondence from the Office of the Information and Privacy Commissioner/Ontario (IPC) respecting Alectra Utilities Corporation.
- Recommendation: Be received.
- 5.8 Correspondence from Jessie Malone, Environmental and Regulatory Advisor, Imperial Oil respecting the Waterdown to Finch Project.
- Recommendation: Be received.
- 5.9 Correspondence from Pilar Martinez, Chair, Canadian Urban Libraries Council in appreciation of Council's support in their efforts to increase access to digital publications for library users in Hamilton and across Canada.
- Recommendation: Be received.

- 5.10 Correspondence from the Ministry of Solicitor General's Safety Planning Team respecting the development of a resource document outlining examples of data sources available to support the community and well-being (CSWB) planning process.
- Recommendation: Be received.
- 5.11 Correspondence from the Campaign for Adequate Welfare and Disability Benefits respecting the change to the definition of 'disability'.
- Recommendation: Be received and referred to the consideration of Item 4 of Emergency and Community Services Committee Report 20-001.
- 5.12 Correspondence from the Town of Deep River to the Premier of Ontario requesting support for investment into the research and development of small modular reactor technology as an innovative, safe, low-carbon energy option.
- Recommendation: Be received.
- 5.13 Correspondence from the Township of Stone Mills to the Honourable Jeff Yurek, Minister of Environment, Conservation and Parks and the Honourable Premier Doug Ford respecting support of Conservation Authorities.
- Recommendation: Be received.
- 5.14 Correspondence from Scott Weldon, Lawfield Minor Hockey Association, 3rd Vice President respecting the Mountain Arena Proposal.
- Recommendation: Be received and referred to the consideration of Item 15 of General Issues Committee Report 20-001.
- 5.15 Correspondence from Peter Ivey, Proud resident of Hamilton Centre respecting the cancellation of the LRT and requesting that the properties that were purchased by Metrolinx be retained by the City under the management of DMS.
- Recommendation: Be received.
- 5.16 Correspondence from the Hamilton Naturalists' Club respecting the Discharge of sanitary sewage and stormwater run-off into Chedoke Creek.
- Recommendation: Be received and referred to the General Manager, Public Works.
- 5.17 Correspondence from Martin Keller, Source Protection Program Manager, Lake Erie Source Protection Region requesting support for actions to address over-application of winter maintenance chemicals to protect sources of municipal drinking water.
- Recommendation: Be received.

- 5.18 Correspondence from Lisa Burnside, Chief Administrative Officer, Hamilton Conservation Authority in response to the Council's request for the release of the inventory and summary of all water samples collected and retained related to Chedoke Creek and Cootes Paradise from January 2014 to present
Recommendation: Be received.
- 5.19 Correspondence from the Municipality of Dutton Dunwich requesting support for their resolution in support of the Conservation Authorities in delivering watershed management programs.
Recommendation: Be received.
- 5.20 Correspondence from Lakewood Beach Community Council respecting a purchase will help support Developers and Future Development Applications.
Recommendation: Be received and referred to the General Manager, Planning and Economic Development for appropriate action.
- *5.21 Correspondence from Charles Kamphuis respecting Item 3 of the School Board Properties Sub-Committee Report 19-003, as it relates to Report PED19239 - Hamilton-Wentworth District School Board Property at 65 Frances Avenue, Stoney Creek (Ward 10).
Recommendation: Be received and referred to the consideration of Item 11 of General Issues Committee Report 20-001.
- *5.22 Correspondence from Janette Smith, City Manager, City of Hamilton respecting
Recommendation: Be received and referred to the consideration of Item 14 of General Issues Committee Report 20-001.

6. COMMITTEE REPORTS

- 6.1 Board of Health Report 20-001 - January 13, 2020
- 6.2 Public Works Committee Report 20-001 - January 13, 2020
- 6.3 Planning Committee Report 20-001 - January 14, 2020
- 6.4 General Issues Committee Report 20-001- January 15, 2020
- 6.5 Audit, Finance and Administration Committee Report 20-001 - January 16, 2020
- 6.6 Emergency and Community Services Committee Report 20-001 - January 16, 2020

7. MOTIONS

- 7.1 Recording of In-Camera Meetings
- 7.2 Retaining Wall Repair/Replacement Loan Agreements Between the City of Hamilton and the Property Owners at 126, 130 and 134 Adis Ave, Hamilton
- 7.3 Retaining Wall Repair/Replacement Grant to the Property Owners at 126, 130 and 134 Adis Ave, Hamilton
- 7.4 Amendment to Item 16 of the Audit, Finance & Administration Committee Report 19-022, respecting Report FCS19090 - CityHousing Hamilton Corporation (CHH) Redevelopment Financing Request (City Wide)
- 7.5 Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (PED20042) (Ward 5)
- 7.6 Ward 15 Council Priority Minor Maintenance Projects - REVISED
- 7.7 Naming of a Municipal Property Located at 125 Barton Street, West, Hamilton to the Bridgeworks

8. NOTICES OF MOTIONS

- *8.1 Amendment to Item 8 of the General Issues Committee Report 18-014, respecting Report PED16253(b) – 18-28 King Street East, Extension of Conditional Approval, Hamilton Heritage Property Grant Program and GORE Building Improvement Grant Program

9. STATEMENTS BY MEMBERS

10. PRIVATE AND CONFIDENTIAL

- 10.1 Closed Session Minutes - December 11, 2019 (distributed under separate cover)

Pursuant to Section 8.1, Sub-section (b), (e), (f) and (k) of the City's Procedural By-law 18-270, and Section 239(2), Sub-section (b), (e), (f) and (k) of the Ontario Municipal Act, 2001, as amended, as the subject matter pertains to: personal matters about an identifiable individual, including City employees, litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board; the receiving of advice that is subject to solicitor-client privilege, including communications necessary for that purpose; and, a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of the municipality or local board.

11. BY-LAWS AND CONFIRMING BY-LAW

11.1 001

To Permanently Close and Sell a portion of Hatt Street, Dundas abutting the property municipally known as 118 Hatt Street, Dundas, Ontario, namely Part of Lot 20 on Registrar's Compiled Plan 1442 in the City of Hamilton, designated as Part 3 on Plan 62R-21294, being part of PIN 17481-0436 (LT); City of Hamilton

Ward: 13

11.2 002

To Establish City of Hamilton Land Described as Parts 1 and 2 on Plan 62R-10158 as Part of King Street West

Ward: 10

11.3 003

To Establish City of Hamilton Land Described as Parts 6 and 8 on Plan 62R-4307 as Part of King Street West

Ward: 10

11.4 004

To Establish City of Hamilton Land Described as Part 1 on Plan 62R-9986 as Part of King Street West

Ward: 10

11.5 005

To Establish City of Hamilton Land Described as Part 4 on Plan 62R-9221 as Part of King Street West

Ward: 10

11.6 006

To Establish City of Hamilton Land Described as Block 89 on Plan 62M-1150 as Part of Gowland Drive

Ward: 11

11.7 007

To Authorize the Temporary Borrowing of Monies to Meet Current Expenditures Pending Receipt of Current Revenues for 2020

Ward: City Wide

11.8 008

To Authorize an Interim Tax Levy for 2020

Ward: City Wide

11.9 009

Respecting Removal of Part Lot Control, Blocks 6 and 7, Registered Plan No. 62M-1241, "Foothills of Winona Phases '2' and '3'", municipally known as 37,41, 43, 45, 47, 49 and 51 Sauvignon Crescent and 35, 39, 41, 43, 45, 47 and 49 Foothills Lane

Ward: 10

PLC-19-034

11.10 010

To Amend Zoning By-law No. 05-200, with respect to lands located at 179, 183 and 187 Wilson Street West, Ancaster

Ward: 12

ZAC-19-040

11.11 011

Being a By-law to Expropriate 309-311 Parkside Drive, Hamilton, Being Part of Lot 7, Concession 4, East Flamborough, in the City of Hamilton, as in CD241146, S/T CD21146, S/T EF21993, Designated as Parts 1 and 2, Plan 62R-21243, Being Part of PIN 17514-0071(LT), known municipally as 309-311 Parkside Drive, Hamilton, for the Purposes of Development and Construction of North Waterdown Drive (Waterdown East-West Arterial Road)

Ward: 15

11.12 012

To Confirm the Proceedings of City Council

12. ADJOURNMENT



CITY COUNCIL MINUTES 19-022

9:30 a.m.

December 11, 2019

Council Chamber

Hamilton City Hall

71 Main Street West

Present: Mayor F. Eisenberger
Councillors M. Wilson (Deputy Mayor), B. Clark, C. Collins, J.P. Danko, J. Farr, L. Ferguson, T. Jackson, B. Johnson, S. Merulla, N. Nann, E. Pauls, M. Pearson, A. VanderBeek, and J. Partridge

Absent: Councillor T. Whitehead – Personal

Mayor Eisenberger called the meeting to order and recognized that Council is meeting on the traditional territories of the Erie, Neutral, HuronWendat, 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. It was further acknowledged that this land is covered by the Between the Lakes Purchase, 1792, between the Crown and the Mississaugas of the Credit First Nation. The City of Hamilton is home to many Indigenous people from across Turtle Island (North America) and it was recognized that 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 Mayor called upon Major Pam Goodyear, Officer/Pastor at The Salvation Army Meadowlands Community Church, to provide the invocation.

APPROVAL OF THE AGENDA

The Clerk advised of the following changes to the agenda:

5. COMMUNICATIONS (Item 5)

5.3 Correspondence respecting Application to Amend the City of Hamilton Zoning By-law No. 6593 for Lands Located at 35 Sabrina Boulevard, Hamilton (PED19219) (Ward 8):

- (a) Lisa Ward
- (b) Mark Cornell
- (c) C. Anne Noyes
- (d) June Kinniburgh
- (e) Colleen Burke

Recommendation: Be received and referred to consideration to Item 6 of Planning Committee Report 19-019.

10. PRIVATE AND CONFIDENTIAL (Item 10)

10.3 Contractual Update (LS19048/FCS1905)

11. BY-LAWS AND CONFIRMING BY-LAW (Item 11)

310 To Authorize the signing of the Disaster Mitigation and Adaptation Fund Agreement between Her Majesty the Queen in Right of Canada, as represented by the Minister of Infrastructure and Communities, and the City of Hamilton for funding of City of Hamilton Project Bundle – Extreme Storms – Shoreline Protection Resilience Project
Ward: City Wide

(Pearson/Nann)

That the agenda for the December 11, 2019 meeting of Council be approved, **as amended**.

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

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nringer Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 NOT PRESENT - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

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|---------------------------------|
| DECLARATIONS OF INTEREST |
|---------------------------------|

Councillor Pearson declared an interest to Item 10 of Planning Committee Report 19-019 and Item (e)(i) of the December 9, 2019 meeting of General Issues Committee (Budget) Report 19-026 as they are a landlord of rental properties.

Councillor VanderBeek declared an interest to Item 10 of Planning Committee Report 19-019 and Item (e)(i) of the December 9, 2019 meeting of General Issues Committee (Budget) Report 19-026 and Item 18 of General Issues Committee Report 19-027 as they are a landlord of rental properties.

Councillor Merulla declared an interest to Item 10 of Planning Committee Report 19-019 and Item (e)(i) of the December 9, 2019 meeting of General Issues Committee (Budget) Report 19-026 as they are a landlord of rental properties.

Councillor Clark declared an interest to Item 10 of Planning Committee Report 19-019 as they are a landlord of rental properties.

CEREMONIAL ACTIVITIES

3.1 Business Appreciation Awards (Wards 13, part of Ward 15 & Mayor's Office)

Mayor Eisenberger, on behalf of City Council, recognized and thanked businesses in Wards 13, part of Ward 15 and Mayor's Office, for their continued contribution and sacrifices to the broader community. Each business celebrated has shown outstanding achievement in growth, innovation, or leadership, and has had a positive impact on Hamilton. Many individuals here accepting the awards are residents of Hamilton, and all are outstanding corporate citizens.

Ward 13 - Collins Brewhouse
 - Gord's Service Station

Ward 15 - Remax Escarpment Woolcott Realty Inc.

Mayor's Office - Gowling WLG
 - Stelco

3.2 Cheque Presentation from the Winona Peach Festival for Loan Repayment

Linda Shuker from the Board of Directors of the Winona Peach Festival presented Mayor Eisenberger and Ward Councillor Maria Pearson with a cheque for loan repayment.

APPROVAL OF MINUTES OF PREVIOUS MEETING

4.1 November 27 and 28, 2019

(Pearson/Partridge)

That the Minutes of the November 27 and 28, 2019 meeting of Council be approved, as presented.

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko

YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

COMMUNICATIONS

(Nann/Merulla)

That Council Communications 5.1 to 5.3 be approved, as presented, as follows:

- 5.1 A petition containing 66 signatures declaring their objection to the government who plans to annex Waterdown and Burlington.

Recommendation: Be received and referred to the General Manager of Planning and Economic Development for appropriate action.

- 5.2 Correspondence from Steve Greene respecting Temporary Use By-law to amend certain regulations in Section 19 - Residential Conversion in City of Hamilton Zoning By-law No. 6593 (PED19176(a))

Recommendation: Be received and referred to the consideration of Item 10 of Planning Committee Report 19-019.

- 5.3 Correspondence respecting Application to Amend the City of Hamilton Zoning By-law No. 6593 for Lands Located at 35 Sabrina Boulevard, Hamilton (PED19219) (Ward 8):

- (a) Lisa Ward
- (b) Mark Cornell
- (c) C. Anne Noyes
- (d) June Kinniburgh
- (e) Colleen Burke

Recommendation: Be received and referred to consideration to Item 6 of Planning Committee Report 19-019.

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger

YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

(Wilson/Farr)

That Council move into Committee of the Whole to consider the Committee Reports.

CARRIED
PUBLIC WORKS COMMITTEE REPORT 19-017
1. Appointment of Committee Chair and Vice-Chair for 2020 (Item 1)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

4. Intersection Control List (PW19001(f)) (Wards 2 and 9) (Item 7.3)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

6. Citizen Committee Report from the Hamilton Cycling Committee respecting a Website Domain Transfer (www.cyclehamilton.ca) (Item 7.6)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

7. Friends of the Aviary Business Case Review and Extension of Agreement (PW17080(a)) (City Wide) (Item 9.1)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

8. City of Hamilton Aviary Donation Consideration (PW19108) (City Wide) (Item 10.1)**Result: Motion CARRIED by a vote of 13 to 2, as follows:**

NO - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
NO - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

9. Hamilton Cycling Committee Budget 2020 (PED19194) (City Wide) (Item 10.2)**Result: Motion CARRIED by a vote of 15 to 0, as follows:**

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

10. Delegation of Authority to Staff for Entering Data Exchange Agreement with Geotab Inc. (PED19228) (City Wide) (Item 10.3)**Result: Motion CARRIED by a vote of 15 to 0, as follows:**

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann

YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

11. Bee City Designation for the City of Hamilton (PW19103) (City Wide) (Item 10.4)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

12. Mohawk Road Municipal Class Environmental Assessment (PW19106) (Ward 12) (Item 10.5)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead

YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

13. Ward 1 Multi-Modal Connections Review (Item 11.1)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

14. Transit Shelter Installation at Upper Paradise Road at Wingfield Place (Ward 14) (Item 11.2)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

15. Rosedale Elementary School Play Structure Improvements (Ward 4) (Item 11.3)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

16. Installation of Speed Cushions on Fairleigh Avenue, Emerald Street North, Rosslyn Avenue, Grosvenor Avenue South and William Street, Hamilton (Ward 3) (Item 11.4)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

17. Traffic Calming and Safety Measures through Installation of Bump-Outs on Barton Street East at Barnesdale Avenue North and Lottridge Street, Hamilton (Ward 3) (Item 11.5)

Result: Motion CARRIED by a vote of 14 to 1, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
NO - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

18. Conversion of Sanford Avenue from Delaware Avenue to Barton Street East from One-Way to Two-Way Traffic (Ward 3) (Item 11.6)

Result: Motion CARRIED by a vote of 14 to 1, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
NO - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

19. Installation of Intersection Pedestrian Signals (IPS) in Ward 3 (Item 11.7)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr

YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

20. DARTS Master Operating Agreement Renewal (CONFIDENTIAL PW19110/LS19047) (City Wide) (Item 11.8)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Ferguson/VanderBeek)

That the SEVENTEENTH Report of the Public Works Committee be adopted, as presented, and the information section received.

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko

YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

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| BOARD OF HEALTH REPORT 19-012 |
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1. Municipal Actions to Reduce Harms Associated with Alcohol Use (BOH19032) (City Wide) (Item 9.1)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

3. Alcohol, Drug & Gambling Services and Mental Health and Street Outreach Program Budgets (BOH19025) (City Wide) (Item 10.1)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek

YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Eisenberger/VanderBeek)

That the TWELFTH Report of the Board of Health be adopted, as presented, and the information section received.

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

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| PLANNING COMMITTEE REPORT 19-019 |
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1. Hamilton Municipal Heritage Committee Report 19-009 (Item 7.1)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

3. Expanding Administrative Penalty System (APS) By-law 17-225 to include Section 3(2) of the Yard Maintenance By-law 10-118 (PED19225) (City Wide) (Item 7.3)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

4. Agriculture and Rural Affairs Advisory Committee Report 19-005 (Added Item 7.4)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

5. City Initiative (CI) 19-I – Modifications to the Existing Residential “ER” Zone in the Town of Ancaster Zoning By-law No. 87-57 (PED19203) (Ward 12) (Item 8.1)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

6. Application to Amend the City of Hamilton Zoning By-law No. 6593 for Lands Located at 35 Sabrina Boulevard, Hamilton (PED19219) (Ward 8) (Item 8.2)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

7. Increase to Permit Fees Under the Building By-law (PED19224) (City Wide) (Item 8.3)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

8. Application for Approval of a Draft Plan of Subdivision and Draft Plan of Condominium (Common Element) for Lands Located at 84 and 96 Lakeview Drive (Stoney Creek) (PED19226) (Ward 10) (Item 8.4)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

9. Application for Amendment to Zoning By-law No. 6593 for Lands Located at 112 Springvalley Crescent, Hamilton (PED19232) (Ward 8) (Item 8.5)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

10. Temporary Use By-law to Amend Certain Regulations in Section 19 – Residential Conversion in City of Hamilton Zoning By-law No. 6593 (PED19176(a)) (Wards 1, 8 and Part of 14) (Item 8.6)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
CONFLICT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
CONFLICT - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
CONFLICT - Ward 10 Councillor Maria Pearson
CONFLICT - Ward 9 Councillor Brad Clark

11. Animal Adoption Pilot Program (PED18004(b)) (City Wide) (Item 10.1)**(Clark/Collins)**

That the motion respecting the Animal Adoption Pilot Program (PED18004(b)), be **amended** as follows:

- (a) That the Animal Services Animal Adoption Program, with an enhancement of one FTE, Animal Adoption Program Coordinator, fully funded by adoption revenue, be referred to the 2020 Budget Deliberation process; and,
- (b) ***That the Hamilton Burlington SPCA be invited to attend the General Issues Committee (Budget) meeting when this item is being considered.***

Result: Amendment CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

At the request of Councillor Jackson the recommendations within the Main Motion as **Amended** were voted on separately, as follows:

- (a) That the Animal Services Animal Adoption Program, with an enhancement of one FTE, Animal Adoption Program Coordinator, fully funded by adoption revenue, be referred to the 2020 Budget Deliberation process; and,

Result: Motion CARRIED by a vote of 12 to 3, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 NO - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Mayor Fred Eisenberger
 NO - Ward 15 Councillor Judi Partridge

NOT PRESENT - Ward 14 Councillor Terry Whitehead
NO - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

- (b) That the Hamilton Burlington SPCA be invited to attend the General Issues Committee (Budget) meeting when this item is being considered.**

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

- 12. Request for Access to DC Reserve “110352 Storm – Separated Sewer System” to fund Mewburn Pond (PED19216) (Ward 8) (Item 10.2)**

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

13. Demolition Permit for 758 Beach Boulevard (Item 11.1)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

14. Authorization for 197073 Ontario Inc. to Apply for a Variance to a By-law for Lands Located at 154 Main Street East and 49 Walnut Street South (Added Item 12.1)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

15. Appointments of Planning Committee Chair and Vice Chairs for 2020 (Added Item 13.2)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr

YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

(Pearson/Clark)

That the NINETEENTH Report of the Planning Committee be adopted, ***as amended***, and the information section received.

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

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| GENERAL ISSUES COMMITTEE REPORT 19-027 |
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3. Reappointment of Members of Council to the Board of Directors of City of Hamilton Owned Corporations (LS19046) (City Wide) (item 7.3)

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

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins

YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
NOT PRESENT - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

4. Corporate Goals and Areas of Focus for Climate Change Mitigation and Adaptation (CMO19008/HSC19073) (City Wide) (Item 9.1)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
NOT PRESENT - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

5. Hamilton Light Rail Transit (LRT) Project Update and Other Metrolinx Initiatives (PED19100(a)) (City Wide) (Item 9.2)

Result: Motion CARRIED by a vote of 10 to 4, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
NO - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead

NO - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
NOT PRESENT - Ward 11 Councillor Brenda Johnson
NO - Ward 10 Councillor Maria Pearson
NO - Ward 9 Councillor Brad Clark

6. International Village Business Improvement Area (BIA) Proposed Budget and Schedule of Payment for 2020 (PED19234) (Ward 2) (Item 10.1)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
NOT PRESENT - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Farr/Merulla)

That Items 7 through 12, be voted on together, as follows:

- 7. Downtown Hamilton Business Improvement Area (BIA) Proposed Budget and Schedule of Payment for 2020 (PED19223) (Ward 2) (Item 10.2)**
- 8. Barton Village Business Improvement Area (BIA) Proposed Budget and Schedule of Payments for 2020 (PED19219) (Ward 3) (item 10.3)**
- 9. Concession Street Business Improvement Area (BIA) Proposed Budget and Schedule of Payment for 2020 (PED19222) (Ward 7) (Item 10.4)**
- 10. Ancaster Village Business Improvement Area (BIA) Proposed Budget and Schedule of Payment for 2020 (PED19220) (Ward 12) (Item 10.5)**
- 11. Downtown Dundas Business Improvement Area (BIA) Proposed Budget and Schedule of Payment for 2020 (PED19221) (Ward 13) (Item 10.6)**
- 12. Business Improvement Area Advisory Committee Report 19-011, November 12, 2019 (Item 10.7)**

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
NOT PRESENT - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

13. Arts Advisory Commission 2020 Budget Submission (PED19231) (City Wide) (Item 10.8)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
NOT PRESENT - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

14. 2020 Budget Submission – Advisory Committee for Persons with Disabilities (HUR19025) (City Wide) (Item 10.9)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins

YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
NOT PRESENT - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

15. Advisory Committee for Persons with Disabilities Report 19-010, November 12, 2019 (Item 10.10)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

17. 2020 Tax Supported User Fees (FCS19092) (City Wide) (Item 10.13)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson

YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

18. New Municipal Flexibility for Vacant Unit Rebates and Vacant/Excess Land Subclasses (FCS17021(b)) (City Wide) (Item 10.14)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
CONFLICT - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

19. Donation of a Monument Commemorating the Genocide Against the Tutsi of Rwanda (PED19237) (City Wide) (Item 10.15)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

20. Support of Private Member's Bill to Reverse Pit Bull Ban in Ontario (Item 11.1)**Result: Motion CARRIED by a vote of 10 to 5, as follows:**

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
NO - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
NO - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
NO - Ward 11 Councillor Brenda Johnson
NO - Ward 10 Councillor Maria Pearson
NO - Ward 9 Councillor Brad Clark

21. Acquisition of Land in the Barton-Tiffany Area (PED19233) (Ward 2) (Item 14.2)**Result: Motion CARRIED by a vote of 15 to 0, as follows:**

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

22. Expropriation of 55 Queenston Road (City Motor Hotel) - Proposed Partial Settlement LS12009(e) (Ward 4) (Item 14.3)**Result: Motion CARRIED by a vote of 15 to 0, as follows:**

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla

YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

23. Ontario Nurses' Association, Local 50, Public Health Services, Ratification of Collective Agreement (HUR19029) (City Wide) (Item 14.4)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

24. Proposed Consent and Assignment of Lease Agreement – Lister Block (Ward 2) (Item 14.5)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead

YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

(Eisenberger/Partridge)

That the TWENTY-SEVENTH Report of the General Issues Committee be adopted, as presented, and the information section received.

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

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| AUDIT, FINANCE & ADMINISTRATION COMMITTEE REPORT 19-019 |
|--|

1. Appointment of Committee Chair and Vice-Chair for 2020 (Item 1)

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

YES - Ward 1 Councillor Maureen Wilson
 NOT PRESENT - Ward 2 Councillor Jason Farr
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Mayor Fred Eisenberger
 NOT PRESENT - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson

YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

7. Hamilton Anti-Racism Resource Centre Update (HUR18010(c)) (City Wide) (Item 9.2)

(Clark/Eisenberger)

Whereas the City is committed to ensuring that the voices of racialized members of the community are foundational to the work of Hamilton Anti-Racism Resource Centre (HARRC).

THEREFORE BE IT RESOLVED:

That Sub-section (ii) (a) and (e) of Item 7 of the Audit, Finance and Administration Committee Report 19-019 respecting the Hamilton Anti-Racism Resource Centre Update (HUR18010(c)), be deleted in its entirety and replaced with the following in lieu thereof and the remaining sub-sections be renumbered accordingly:

7. Hamilton Anti-Racism Resource Centre Update (HUR18010(c)) (City Wide) (Item 9.2)

- (ii)** (a) ~~That the City of Hamilton assume full responsibility for the interim operation of a modified model of the Hamilton Anti-Racism Resource Centre (HARRC) for a period of 6-12 months to allow for the following to occur:~~
- ~~(i) An interim operating model consisting of an active website presence, online reporting, phone reporting, and referral service to existing local service providers be developed by staff in Human Resources Talent and Diversity Team no later than the end of February 2020;~~
 - ~~(ii) Staff establish an Independent Board of Directors to have governance and operational oversight of HARRC;~~
 - ~~(iii) Staff continue to seek input from the community to continue to understand current needs and issues; and,~~
 - ~~(iv) Staff to establish appropriate governance model and related Terms of Reference to operate HARRC once the Independent Board of Directors is established;~~
- ~~(e) That City staff report back to Committee and Council to provide a status update in June 2020; and,~~
- (a) *That the City procure a process for securing consulting services for the establishment of an Independent Board of Directors for the operation of HARRC;***

- (b) That the establishment of the composition of both the Advisory Panel and the Independent Board of Directors incorporate Equity, Diversity, and Inclusion (EDI) best practices;**
- (c) That the consultant shall establish a community advisory panel comprised of individuals representative of the diverse and racialized communities of Hamilton to work in this collaborative process to establish HARCC as an independent agency and to set the terms of reference and deliverables to be approved by Audit, Finance and Administration Committee;**
- (d) That the consultant shall collaborate with the Community Advisory Panel and work with staff to facilitate the recruitment and selection process, including the determination of relevant competencies, for the selection of potential candidates for the Independent Board of Directors;**
- (e) That the potential list of candidates for the composition of the Independent Board of Directors shall be presented to Audit, Finance and Administration Committee by the Consultant for Council's approval by June 30, 2020;**
- (f) That the existing funding agreement between the partners McMaster University, Hamilton Centre for Civic Inclusion and the City of Hamilton be dissolved, and the outstanding funds held by McMaster University of approximately \$50,000 be returned to the City of Hamilton;**
- (g) That the Mayor and City Clerk be authorized and directed to execute any documents required to implement subsections (a) and (b), with content acceptable to the and in a form satisfactory to the City Solicitor;**
- (h) That the City continues to fund HARRC as per the original commitment of \$100,000/year from the Tax Stabilization Fund Reserve Account 58300 110046 for the remainder of the three-year pilot project (26 months remaining); and**
- (i) That Appendix 'E' to Report HUR18010(c) remain confidential; and**
- (j) That staff engage the community for the purpose of establishing the evaluation criteria to assess the competency of the consultant.**

Result: Amendment CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nringer Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins

YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

At the request of Councillor Nann Sub-section (f) of the Main Motion as **amended** was voted on separately, as follows:

Main Motion as **amended** without Sub-section (f), to read as follows:

- (a) ***That the City procure a process for securing consulting services for the establishment of an Independent Board of Directors for the operation of HARRC;***
- (b) ***That the establishment of the composition of both the Advisory Panel and the Independent Board of Directors incorporate Equity, Diversity, and Inclusion (EDI) best practices;***
- (c) ***That the consultant shall establish a community advisory panel comprised of individuals representative of the diverse and racialized communities of Hamilton to work in this collaborative process to establish HARCC as an independent agency and to set the terms of reference and deliverables to be approved by Audit, Finance and Administration Committee;***
- (d) ***That the consultant shall collaborate with the Community Advisory Panel and work with staff to facilitate the recruitment and selection process, including the determination of relevant competencies, for the selection of potential candidates for the Independent Board of Directors;***
- (e) ***That the potential list of candidates for the composition of the Independent Board of Directors shall be presented to Audit, Finance and Administration Committee by the Consultant for Council's approval by June 30, 2020;***
- (g) That the Mayor and City Clerk be authorized and directed to execute any documents required to implement subsections (a) and (b), with content acceptable to the and in a form satisfactory to the City Solicitor;

- (h) That the City continues to fund HARRC as per the original commitment of \$100,000/year from the Tax Stabilization Fund Reserve Account 58300 110046 for the remainder of the three-year pilot project (26 months remaining); and
- (i) That Appendix 'E' to Report HUR18010(c) remain confidential; and
- (j) That staff engage the community for the purpose of establishing the evaluation criteria to assess the competency of the consultant.

Result: Main Motion, As Amended without Sub-section (f), CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

Sub-section (f), to read as follows:

- (f) That the existing funding agreement between the partners McMaster University, Hamilton Centre for Civic Inclusion and the City of Hamilton be dissolved, and the outstanding funds held by McMaster University of approximately \$50,000 be returned to the City of Hamilton;

Result: Sub-section (f) of the Main Motion, As Amended, CARRIED by a vote of 13 to 2, as follows:

NO - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
NO - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead

YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

8. Citizen Committee Report - Committee Against Racism - Transitional Model for the Re-opening of HARRC (CAR-19-01) (Added Item 9.3)

(Clark/Pearson)

That '*in February 2020*' be stricken from the motion.

Result: Amendment CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

Main Motion as **amended**, to read as follows:

That the Citizen Committee Report - Committee Against Racism - Transitional Model for the Re-opening of HARRC (CAR-19-01), be received and referred to staff for consideration and report back to the Audit, Finance & Administration Committee *in February 2020*.

Result: Main Motion, As Amended, CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge

NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

9. Supplementary Audit Report - Housing Services Division: Capital (AUD19004(a)) (City Wide) (Item 10.1)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

10. Children's Services Risk Assessment Report (AUD19014) (City Wide) (Item 10.2)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

**11. Children's Services: Office of the City Auditor Consulting Report (AUD19015)
(City Wide) (Item 10.3)**

Result: Motion CARRIED by a vote of 15 to 0, as follows:

- YES - Ward 1 Councillor Maureen Wilson
- YES - Ward 2 Councillor Jason Farr
- YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
- YES - Ward 4 Councillor Sam Merulla
- YES - Ward 5 Councillor Chad Collins
- YES - Ward 6 Councillor Tom Jackson
- YES - Ward 7 Councillor Esther Pauls
- YES - Ward 8 Councillor John-Paul Danko
- YES - Mayor Fred Eisenberger
- YES - Ward 15 Councillor Judi Partridge
- NOT PRESENT - Ward 14 Councillor Terry Whitehead
- YES - Ward 13 Councillor Arlene VanderBeek
- YES - Ward 12 Councillor Lloyd Ferguson
- YES - Ward 11 Councillor Brenda Johnson
- YES - Ward 10 Councillor Maria Pearson
- YES - Ward 9 Councillor Brad Clark

**12. 2020 Budget Submissions Volunteer Advisory Committee (HUR19026) (City
Wide) (Item 10.4)**

Result: Motion CARRIED by a vote of 15 to 0, as follows:

- YES - Ward 1 Councillor Maureen Wilson
- YES - Ward 2 Councillor Jason Farr
- YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
- YES - Ward 4 Councillor Sam Merulla
- YES - Ward 5 Councillor Chad Collins
- YES - Ward 6 Councillor Tom Jackson
- YES - Ward 7 Councillor Esther Pauls
- YES - Ward 8 Councillor John-Paul Danko
- YES - Mayor Fred Eisenberger
- YES - Ward 15 Councillor Judi Partridge
- NOT PRESENT - Ward 14 Councillor Terry Whitehead
- YES - Ward 13 Councillor Arlene VanderBeek
- YES - Ward 12 Councillor Lloyd Ferguson
- YES - Ward 11 Councillor Brenda Johnson
- YES - Ward 10 Councillor Maria Pearson
- YES - Ward 9 Councillor Brad Clark

13. Reserve / Revenue Funds and Trust Accounts Statement of Investment Policies and Procedures Review (FCS19074) (City Wide) (Item 10.5)**Result: Motion CARRIED by a vote of 15 to 0, as follows:**

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

15. Routine Disclosure and Active Dissemination Policy (CL19013) (City Wide) (Item 10.7)**Result: Motion CARRIED by a vote of 15 to 0, as follows:**

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

16. CityHousing Hamilton Corporation (CHH) Redevelopment Financing Request (FCS19090) (City Wide) (Item 10.8)**Result: Motion CARRIED by a vote of 15 to 0, as follows:**

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr

YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

17. Governance Review Sub-Committee Report 19-006 - November 26, 2019 (Item 10.9)

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

18. Commercial Relationship Between the City of Hamilton and Century Group Inc. (FCS18100(a) / LS18060(a)) (City Wide) (Item 14.2)

(VanderBeek/Collins)

That the recommendation (d) of Item 6 of Audit, Finance and Administration Committee Report 19-001 respecting the Commercial Relationship Between the City of Hamilton and Century Group Inc. (FCS18100 / LS18060) be deleted in its entirety and the following be inserted therein:

~~(d) That recommendations (a), (b) and (c) be released publicly following approval by Council;~~

(a) That the interim ban imposed by Council on Century Group Inc. (CGI) or any of its related corporate or individual entities from competing or

being awarded any City of Hamilton (City) contracts be extended to until and including December 31, 2020;

- (b) *That staff be directed to continue to reject any current and future bids, proposals or quotations received from Century Group Inc., or any of its related corporate or individual entities until and including December 31, 2020;***
- (c) *That the City of Hamilton not enter into any contract with Century Group Inc., or any of its related corporate or individual entities, until and including December 31, 2020;***

Result: *Amendment CARRIED by a vote of 15 to 0, as follows:*

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

Result: *Main Motion, As Amended, CARRIED by a vote of 15 to 0, as follows:*

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

19. Negotiation Update for the Continued Supply of Raw Water to 690 Strathearne Avenue North (FCS18049(d) / LS18014(b)) (Ward 4) (Added Item 14.4)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
NOT PRESENT - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Collins/Merulla)

That the NINETEENTH Report of the Audit, Finance & Administration Committee be adopted, **as amended**, and the information section received.

Result: Motion CARRIED by a vote of 15 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Wilson/Farr)

That Section 5.7(2) of the City's Procedural By-law 18-270, which provides that a minimum of 48 hours shall pass before a Standing Committee Report is presented to Council, be waived in order to consider the Emergency and Community Services Committee Report 19-014, Selection Committee Report 19-007 and General Issues Committee (2020 Budget) Report 19-026.

Result: Motion CARRIED by a 2/3's majority vote of 13 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
NOT PRESENT - Ward 11 Councillor Brenda Johnson
NOT PRESENT - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

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|---|
| EMERGENCY AND COMMUNITY SERVICES COMMITTEE REPORT 19-014 |
|---|

1. Appointment of Chair and Vice-Chair for 2020 (Item 1)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
NOT PRESENT - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
NOT PRESENT - Ward 11 Councillor Brenda Johnson
NOT PRESENT - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

6. Wentworth Lodge Heritage Trust Fund Committee Report 19-001 (Item 7.6)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins

YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
NOT PRESENT - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
NOT PRESENT - Ward 11 Councillor Brenda Johnson
NOT PRESENT - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

**9. City of Hamilton Veterans Committee 2020 Budget Submission (PED19229)
(City Wide) (Item 10.2)**

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
NOT PRESENT - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
NOT PRESENT - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
NOT PRESENT - Ward 9 Councillor Brad Clark

**10. 2020 Budget Submissions – Housing and Homelessness Advisory Committee
(HSC19069) (City Wide) (Item 10.3)**

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
NOT PRESENT - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
NOT PRESENT - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead

YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
NOT PRESENT - Ward 9 Councillor Brad Clark

11. 2020 Budget Submissions – Seniors Advisory Committee (HUR19027) (City Wide) (Item 10.4)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
NOT PRESENT - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
NOT PRESENT - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
NOT PRESENT - Ward 9 Councillor Brad Clark

12. CityHousing Hamilton – 191 Main Street West and 200 Jackson Street West, Hamilton Carpet Replacement (Item 11.1)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
NOT PRESENT - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
NOT PRESENT - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
NOT PRESENT - Ward 9 Councillor Brad Clark

(Merulla/Jackson)

That the FOURTEENTH Report of the Emergency and Community Services Committee be adopted, as presented, and the information section received.

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

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Ward 4 Councillor Sam Merulla
 NOT PRESENT - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Mayor Fred Eisenberger
 NOT PRESENT - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 NOT PRESENT - Ward 9 Councillor Brad Clark

SELECTION COMMITTEE REPORT 19-007

(Johnson/Pearson)

That the SEVENTH Report of the Selection Committee be received.

CARRIED

GENERAL ISSUES COMMITTEE (2020 CAPITAL BUDGET) REPORT 19-026

**1. Hamilton Police Services Board Projected Capital Expenditures: 2020-2029
(Item 9.1)**

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

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Ward 4 Councillor Sam Merulla
 NOT PRESENT - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Mayor Fred Eisenberger
 NOT PRESENT - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson

YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

2. Summary of Consolidated Cycling Infrastructure (Item 10.1)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
NOT PRESENT - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
NOT PRESENT - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

4. 2020 Tax Supported Capital Budget (FCS19091) (City Wide) (Item 8.1)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
NOT PRESENT - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
NOT PRESENT - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
NO - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

At the request of Councillor VanderBeek, Item (e)(i) of the December 9, 2019 meeting in General Issues Committee (Budget) Report 19-026 was lifted from the Information Section and voted on separately, as follows:

(e)(i) Feasibility of the Municipality Imposing a Tax Fee or Charge the Owners of Vacant Properties (Item 12.1)

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
CONFLICT - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
NOT PRESENT - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
CONFLICT - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
CONFLICT - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Eisenberger/VanderBeek)

That the balance of the TWENTY-SIXTH Report of the General Issues Committee (2020 Capital Budget) be adopted, as presented, and the information section received.

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Mayor Fred Eisenberger
NOT PRESENT - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Wilson/Farr)

That the Committee of the Whole Rise and Report.

CARRIED

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| MOTIONS |
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7.1 Amendment to Item 10 of the General Issues Committee Report 17-025, respecting Report PW15086(c) - Identified Tobogganing Locations on City Property

(Jackson/Merulla)

WHEREAS, at its meeting of November 27, 2019, Council approved the relocation of the tobogganing hill at Chedoke Golf Course from the Martin Course Hole #10 to the Beddoe Course Hole #1, as an amendment to Item 19 of the General Issues Committee Report 15-025;

WHEREAS, there was as second report that was approved by Council, as Item 10 of the General Issues Committee Report 17-025, which, for housekeeping purposes, also requires an amendment to reflect that same change;

THEREFORE, BE IT RESOLVED:

That sub-section (c)(ii) to Item 10 of the General Issues Committee Report 17-025, respecting Report PW15086(c) - Identified Tobogganing Locations on City Property, be amended by deleting the words "Martin Course, Hole #10" and replacing them with the words "**Beddoe Course, Hole #1**", to read as follows:

10. Identified Tobogganing Locations on City Property (PW15086(c)) (City Wide) (Item 8.1)

- (a) That the designation of tobogganing hills be made a permanent program within the Public Works Department;
- (b) That the estimated annual operating costs of \$110,000 for the tobogganing program be referred to the 2018 budget process;
- (c) That the formalization of the following four (4) current designated tobogganing hills be approved:
 - (i) Garth Street Reservoir (Northeast corner and South side, east of parking lot);
 - (ii) Chedoke Golf Course (~~Martin Course, Hole #10~~ **Beddoe Course Hole #1** - Tee);
 - (iii) Kings Forest Golf Course (Hole #9 – in front of the green); and,
 - (iv) Waterdown Memorial Park (Northeast corner, west of baseball diamond #3); and,
- (d) That no further sites be added as designated tobogganing hills within the city of Hamilton.

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

NO - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
NO - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
NOT PRESENT - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

7.2 Waiving the Fees for the 2020 Allan Cup

(VanderBeek/Ferguson)

WHEREAS, the City of Hamilton will be hosting the Allan Cup- Canadian Men's Senior AAA Hockey Championship from April 6 to April 11, 2020;

WHEREAS, the Canadian Men's Senior AAA Hockey Championship returns to the City of Hamilton since lasted hosted in 2014;

WHEREAS the Dundas Real McCoy's and the Hamilton Steelhawk's Senior Hockey Clubs will be co-hosting the Allan Cup hockey games and events in 2020 and;

WHEREAS a tremendous amount of financial resources and support are required to ensure that the Allan Cup games and events are a success;

THEREFORE, BE IT RESOLVED:

- (a) That the City of Hamilton waive all fees associated with ice rentals at the J.L. Grightmire Memorial Arena and the Dave Andreychuk Mountain Arena, in the amount of \$16,000 to be funded from the Tax Stabilization Reserve, for the purpose of hosting the Allan Cup - Canadian Men's Senior AAA Hockey Championship from April 6 to April 11, 2020; and,
- (b) That staff be directed to prepare all the necessary rental applications and permits to reflect the waiver of all fees for the purpose of hosting the Allan Cup - Canadian Men's Senior AAA Hockey Championship from April 6 to April 11, 2020.

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr

NOT PRESENT - Deputy Mayor - Ward 3 Councillor Nringer Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

7.3 Reconsideration of Sub-Section (a) of Item 8 of General Issues Committee Report 19-024, which was approved by Council on November 27/28, 2019 respecting the Potential Regulatory Litigation Update

(Eisenberger/Clark)

That subsection (a) of Item 8 of General Issues Committee Report 19-024, which was approved by Council on November 27/28, 2019, and reads as follows, be reconsidered:

8. Potential Regulatory Litigation Update (Item 14.3)

- (a) That the direction provided to staff in Closed Session respecting the Potential Regulatory Litigation Update, be approved;

Result: Motion CARRIED by a 2/3's majority vote of 14 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 NOT PRESENT - Deputy Mayor - Ward 3 Councillor Nringer Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

(Eisenberger/Clark)

That Sub-Section (a) of Item 8 of General Issues Committee Report 19-024, which was approved by Council on November 27/28, 2019 respecting the Potential Regulatory Litigation Update, be **amended**, to read as follows:

- (a) That the direction provided to staff in Closed Session respecting the Potential Regulatory Litigation Update, be approved **as amended**;

(Eisenberger/Farr)

That the consideration of the amendment to Sub-section (a) of Item 8 of the General Issues Committee Report 19-024 (above), be deferred until after Council rises from Closed Session.

CARRIED

For further disposition of this matter, refer to Item 7.3 under Private and Confidential.

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| NOTICES OF MOTION |
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Mayor Eisenberger relinquished the Chair to introduce a Notice of Motion.

8.1 Reconsideration of Sub-Section (a) of Item 8 of General Issues Committee Report 19-024, which was approved by Council on November 27/28, 2019 respecting the Potential Regulatory Litigation Update

(Eisenberger/Clark)

That the Rules of Order be waived to allow for the introduction of a Motion respecting Reconsideration of Sub-Section (a) of Item 8 of General Issues Committee Report 19-024, which was approved by Council on November 27/28, 2019 respecting the Potential Regulatory Litigation Update.

Result: Motion CARRIED by a 2/3's majority vote of 14 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 NOT PRESENT - Deputy Mayor - Ward 3 Councillor Ninder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 YES - Ward 13 Councillor Arlene VanderBeek
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

For further disposition of this matter, refer to Item 7.3.

Mayor Eisenberger assumed the Chair.

8.2 Recording of In-Camera Meetings

Councillor Clark introduced the following Notice of Motion:

WHEREAS the Ontario Ombudsman recommends that all municipalities make audio recordings or video recordings of all meetings – both open and closed – to ensure a thorough record;

WHEREAS there are now 23 Ontario municipalities that have implemented either audio or audiovisual recordings of their closed meetings;

WHEREAS an audio or audiovisual recording of in-camera meetings provides a clear and accessible record for closed meeting investigators to review;

WHEREAS such recordings of closed meetings will assist the municipality in quickly demonstrating that Council and staff did not stray from the legislated requirements during closed meetings; and

WHEREAS such recordings of closed meetings will provide a complete record to be used by the municipality and/or Councillors for future references as needed;

THEREFORE, BE IT RESOLVED:

That the City Manager be directed to report back to the Governance Review Sub-Committee within 30 days on the costs and policies to implement an audio or audiovisual recording system to be utilized for the recording of in-camera meetings; and the ways and means for the City Clerk to archive and protect such records.

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| STATEMENTS BY MEMBERS |
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Members of Council used this opportunity to discuss matters of general interest.

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| PRIVATE & CONFIDENTIAL |
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Council determined that discussion of Items 10.1 and 10.2 was not required in Closed Session; therefore, the matter was addressed in Open Session, as follows:

10.1 Closed Session Minutes - November 27 and 28, 2019**(Ferguson/Johnson)**

That the Closed Session Minutes dated November 27 and 28, 2019 be approved, as presented, and remain confidential.

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

NO - Ward 1 Councillor Maureen Wilson
 NOT PRESENT - Ward 2 Councillor Jason Farr
 NO - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla

YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
NOT PRESENT - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

10.2 Appointments to Various City of Hamilton Committees for the 2018-2022 Term

(Johnson/Pearson)

(a) That the following citizens be appointed to the Expanding Housing and Support Services for Women and Transgender Community Sub-Committee for a term commencing December 11, 2019, and until a successor is chosen:

1. Suad Badri
2. Rachel Bouwman
3. Chelsea Kirkby

(b) That the following citizen be appointed to the Advisory Committee for Persons with Disabilities for a term commencing December 11, 2019, and until a successor is chosen:

1. Mary Sinclair

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

YES - Ward 1 Councillor Maureen Wilson
NOT PRESENT - Ward 2 Councillor Jason Farr
NO - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
NOT PRESENT - Ward 13 Councillor Arlene VanderBeek
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Pauls/Pearson)

That Council move into Closed Session to discuss Sub-Section (a) of Item 8 of General Issues Committee Report 19-024 and Item 10.3 Contractual Update (LS1908/FCS19095), Pursuant to Section 8.1, Sub-section (b), (e), (f) and (k) of the City's Procedural By-law 18-270, and Section 239(2), Sub-section (b), (e), (f) and (k) of the Ontario Municipal Act, 2001, as amended, as the subject matter pertains to: personal matters about an identifiable individual, including City employees, litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board; the receiving of advice that is subject to solicitor-client privilege, including communications necessary for that purpose; and, a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of the municipality or local board.

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

YES - Ward 1 Councillor Maureen Wilson
 NOT PRESENT - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 NOT PRESENT - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 NOT PRESENT - Ward 9 Councillor Brad Clark

7.3 Amendment to Sub-Section (a) of Item 8 of General Issues Committee Report 19-024 , which was approved by Council on November 27/28 2019 respecting the Potential Regulatory Litigation Update

(Eisenberger/Clark)

That Sub-Section (a) of Item 8 of General Issues Committee Report 19-024, which was approved by Council on November 27/28, 2019 respecting the Potential Regulatory Litigation Update, be **amended**, to read as follows:

- (a) That the direction provided to staff in Closed Session respecting the Potential Regulatory Litigation Update, be approved **as amended** to direct staff to take no action with respect to the leak of confidential reports related to Chedoke Creek.

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

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann

YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 NOT PRESENT - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger
 YES - Ward 15 Councillor Judi Partridge
 NOT PRESENT - Ward 14 Councillor Terry Whitehead
 NOT PRESENT - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 11 Councillor Brenda Johnson
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 9 Councillor Brad Clark

10.3 Contractual Update (LS19048/FCS19095) (City Wide)

(Clark/Merulla)

Potential Privacy Breach – Alectra Utilities

- (a) That staff be directed to notify the Information and Privacy Commissioner of Ontario (IPC) and members of the public about a potential privacy breach by Alectra Utilities affecting customers receiving water services from the City (involving the names, addresses, billing addresses and roll numbers) in the provision of water meter reading and billing services;
- (b) That staff be directed to forward notification by mail to all affected customers, with the cost of the mailout to be paid by Alectra Utilities; and
- (c) That the Report LS19048/FCS19095 respecting a Contractual Update remain confidential.

At the request of Members of Council the above recommendations were voted on separately, as follows:

- (a) That staff be directed to notify the Information and Privacy Commissioner of Ontario (IPC) and members of the public about a potential privacy breach by Alectra Utilities affecting customers receiving water services from the City (involving the names, addresses, billing addresses and roll numbers) in the provision of water meter reading and billing services;

Result: Motion on Sub-section (a) above, CARRIED by a vote of 12 to 0, as follows:

YES - Ward 1 Councillor Maureen Wilson
 YES - Ward 2 Councillor Jason Farr
 YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Ward 5 Councillor Chad Collins
 YES - Ward 6 Councillor Tom Jackson
 NOT PRESENT - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Mayor Fred Eisenberger

YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
NOT PRESENT - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

- (b) That staff be directed to forward notification by mail to all affected customers, with the cost of the mailout to be paid by Alectra Utilities; and

Result: Motion on Sub-section (b) above, CARRIED by a vote of 12 to 0 as follows:

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
NOT PRESENT - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
NOT PRESENT - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

- (c) That the Report LS19048/FCS19095 respecting a Contractual Update remain confidential.

Result: Motion on Sub-section (c) above, was DEFEATED by a vote of 10 to 2, as follows:

NO - Ward 1 Councillor Maureen Wilson
NO - Ward 2 Councillor Jason Farr
NO - Deputy Mayor - Ward 3 Councillor Nrinder Nann
NO - Ward 4 Councillor Sam Merulla
NO - Ward 5 Councillor Chad Collins
NO - Ward 6 Councillor Tom Jackson
NOT PRESENT - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
NO - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
NOT PRESENT - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
NO - Ward 11 Councillor Brenda Johnson

NO - Ward 10 Councillor Maria Pearson
NO - Ward 9 Councillor Brad Clark

| |
|----------------|
| BY-LAWS |
|----------------|

(Nann/Farr)

That Bills No. 19-293 to No. 19-310, be passed and that the Corporate Seal be affixed thereto, and that the By-laws, be numbered, be signed by the Mayor and the City Clerk to read as follows:

By-law No.

- 19-293** To Amend By-law No. 01-215, Being a By-law to Regulate Traffic
Schedule 5 (Stop Control)
Ward: 2, 9
- 19-294** Respecting Removal of Part Lot Control, Lots 63-67, 79-81, 86, 87, 89 and 90
on Registered Plan No. 62M-1257 "Red Hill Phase 2", municipally known as 8,
12, 24, 28, 48, 49, 52, 53, 56, 57, 61, and 65 Queen Mary Boulevard
PLC-19-015
Ward: 9
- 19-295** Respecting Removal of Part Lot Control, Block 255 within Registered Plan No.
62M-1257, municipally known as 59, 63, and 67 Cuesta Heights
PLC-19-025
Ward: 9
- 19-296** To Amend By-law No. 01-218, as amended, Being a By-law to Regulate On-
Street Parking
Schedule 5 (Parking Meters)
Schedule 8 (No Parking)
Schedule 12 (Permit Parking Zones)
Schedule 13 (No Stopping Zones)
Schedule 20 (School Bus Loading Zones)
Ward: 1, 2, 3, 4, 13, 14
- 19-297** To Designate Land Located at 231 Ferguson Avenue South, City of Hamilton,
as Property of Cultural Heritage Value
Ward: 2
- 19-298** To Adopt Official Plan Amendment No. 129 to the Urban Hamilton Official Plan
Respecting 280 Wilson Street East, Ancaster
Ward: 12
- 19-299** To Amend Zoning By-law No. 05-200 Respecting Lands Located at 280 Wilson
Street East, Ancaster
ZAC-17-051
UHOPA-17-22
Ward: 12
- 19-300** To Adopt Official Plan Amendment No. 128 to the Urban Hamilton Official Plan
Respecting Administrative Amendment
Ward: City Wide

- 19-301** To Adopt Official Plan Amendment No. 23 to the Rural Hamilton Official Plan Respecting Administrative Amendment
Ward: City Wide
- 19-302** To Amend By-law No. 17-225, a By-law to Establish a System of Administrative Penalties
Table 13 – Yard Maintenance By-law No. 10-118
Ward: City Wide
- 19-303** To Amend Zoning By-law No. 87-57 Respecting Section 9.8 Private Garage, and Exceptions ER-380 and ER-393
CI-19-I
Ward: 12
- 19-304** To Amend Zoning By-law No. 6593 Respecting Lands Located at 35 Sabrina Boulevard, Hamilton
ZAC-18-022
Ward: 8
- 19-305** To Amend By-law No. 15-058, a By-law Respecting Building Permits and Related Matters
Ward: City Wide
- 19-306** To Amend Zoning By-law No. 6593 Respecting Lands Located at 112 Springvalley Crescent
ZAC-18-055
Ward: 12
- 19-307** To Amend Zoning By-law No. 6593 Respecting Second Dwelling Units for Certain Lands Bounded by Queen Street, Hamilton Harbour, the former Hamilton/Dundas Municipal boundary, Niagara Escarpment, Upper Wellington Street, the former Ancaster/Hamilton Municipal Boundary, and the former Hamilton/Glanbrook Municipal boundary
CI-19-D
Ward: 1, 8, Part of 14
- 19-308** To Amend By-law No. 18-270, the Council Procedural By-law
Ward: City Wide
- 19-309** Being a By-law to Appoint Fence-Viewers for the City of Hamilton
- 19-310** To Authorize the signing of the Disaster Mitigation and Adaptation Fund Agreement between Her Majesty the Queen in Right of Canada, as represented by the Minister of Infrastructure and Communities, and the City of Hamilton for funding of City of Hamilton Project Bundle – Extreme Storms – Shoreline Protection Resilience Project
Ward: City Wide
- 19-311** To Confirm the Proceedings of City Council

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

YES - Ward 1 Councillor Maureen Wilson
YES - Ward 2 Councillor Jason Farr
YES - Deputy Mayor - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Ward 5 Councillor Chad Collins
YES - Ward 6 Councillor Tom Jackson
NOT PRESENT - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Mayor Fred Eisenberger
YES - Ward 15 Councillor Judi Partridge
NOT PRESENT - Ward 14 Councillor Terry Whitehead
NOT PRESENT - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 12 Councillor Lloyd Ferguson
YES - Ward 11 Councillor Brenda Johnson
YES - Ward 10 Councillor Maria Pearson
YES - Ward 9 Councillor Brad Clark

(Danko/Pearson)

That, there being no further business, City Council be adjourned at 4:28 p.m.

CARRIED

Respectfully submitted,

Mayor F. Eisenberger

Andrea Holland
City Clerk



OFFICE OF THE MAYOR
CITY OF HAMILTON

December 18, 2019

Premier Doug Ford
Queen's Park
Toronto, ON
M7A 1A1

Open Letter

Dear Premier Ford,

Hamilton is reeling from your decision to cancel Hamilton's massive LRT investment.

This investment would have created hundreds of jobs, economic uplift, increased affordable housing, cut CO2 emissions and built a City of Hamilton ready for the future.

Instead, millions of dollars have been wasted doing advance engineering work and preparations. Metrolinx is now one of the largest landlords in the city after acquiring dozens of properties needed for the route.

Your Minister failed to share information and dispensed with engaging in any constructive dialogue. Following repeated requests, we received the preliminary cost estimates late last Thursday, December 12 but were not afforded an opportunity to discuss the estimates prior to the meeting Minister Mulroney on Monday December 17 just prior to her announcement of the cancellation of the project.

I called this a "betrayal" and I stand by that. This is a personal betrayal by you as Premier. You said November 28, 2018: "When people democratically elect someone, if he wants an LRT, he's gonna get an LRT," adding "that's democracy."

Furthermore, you sent your then transportation minister, Jeff Yurek, to Hamilton on April 10, 2019, to confirm to me face-to-face that your government was backing the LRT project.

.../2

I thought you were a man of your word, but I was wrong. That is why I now call this a betrayal.

City staff received preliminary cost estimates from MTO last Thursday, December 12, and were never afforded an opportunity to ask the following questions:

1. What were the design assumptions and costing methodologies used to derive the estimates, and if these have been revised, how so, and to what financial effect?
2. There is a notable increase in capital construction cost, over and above significant allowances for contingency and escalation, what is contributing the increase? Also, what information is the Province drawing upon for adjusting contingency and escalation allowances?
3. What factors are contributing to dissimilar capital construction cost estimates referenced in the information provided?
4. What are the details associated with the costs allocated to Provincial lifecycle and long-term financing and how do these differ from the original estimate?
5. What are the details associated with the costs allocated to "Other Costs" and, similarly, how do these differ from the original estimate?
6. There appears to be a discrepancy, based on the referenced assumptions, in how "City" costs are calculated and escalated on the last page. How were these costs derived and what methodology was used to inflate/escalate the costs from current dollars to future dollars? It should be noted, based on the referenced assumption, and a revised calculation, there doesn't appear to be much change in this cost estimate versus other cost estimates reported publicly.

City Council and the people of Hamilton deserve these answers. I look forward to your prompt reply.

Yours truly,

A handwritten signature in black ink, appearing to read "Fred Eisenberger", with a long horizontal flourish extending to the right.

Fred Eisenberger
Mayor

CC: Hon. Caroline Mulroney, Minister of Transportation
Hon. Andrea Horwath, Leader of the Official Opposition
City of Hamilton Council
City of Hamilton Clerks Office
Joe Mancinelli, International Vice-President, LiUNA!

**Ministry of Children,
Community and Social
Services**

**Ministère des Services à
l'enfance et des Services
sociaux et communautaires**



Minister's Office

Bureau du Ministre

438 University Avenue
7th Floor
Toronto, Ontario
M7A 1N3

438, avenue University
7^e étage
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M7A 1N3

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Tél. : (416) 325-5225
Télec. : (416) 325-5240

127-2019-9359

December 16, 2019

Dear Municipal Partner:

I am writing to let you know that the Ministry of Children, Community and Social Services, in collaboration with other ministries across government, is currently assessing Ontario's Poverty Reduction Strategy and is launching consultations to inform the development of a new five-year strategy, in accordance with the Poverty Reduction Act, 2009.

Our government believes that the people of Ontario are the province's greatest asset, and when they succeed, our economy and province succeed. However, we know that one in seven Ontario residents live in poverty.

Empowering people and supporting them during challenging times is a priority for our government. We also know that we cannot do this work alone. We are committed to listening and working with individuals, communities, organizations, businesses, Indigenous partners and all levels of government. It is our shared responsibility to create the conditions for success. To do so, we need organizations across the province to share their ideas and feedback about how we can work together to tackle poverty.

Our goal is to drive progress and identify solutions to reduce poverty. To inform our new Poverty Reduction Strategy, we will be asking Ontario residents how we can encourage job creation and connect people to employment opportunities; provide people with the right supports and services; and lower the cost of living and make life more affordable.

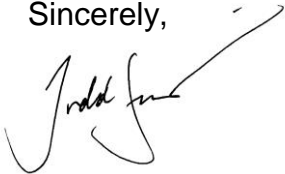
An online survey will be posted in January 2020 for a period of approximately 60 days. I hope that you will respond to the survey and encourage members of your community, including those who have experience living in poverty, to participate. We will share more information about the survey in the new year.

.../cont'd

We are also accepting written submissions and any recommendations for the next strategy as well as feedback on the previous 2014–19 Poverty Reduction Strategy, by e-mail at prso@ontario.ca or by mail at Poverty Reduction Strategy, 3rd Floor, 315 Front Street West, Toronto ON, M7A 0B8. If there are any questions on how identifying information included with a submission will be used, please contact: Manager, Strategic Policy Unit, MCCSS by e-mail at prso@ontario.ca or by telephone at (647) 308-9963.

I look forward to hearing from you.

Sincerely,

A handwritten signature in black ink, appearing to read "Todd Smith", with a long, sweeping flourish extending upwards and to the right.

Todd Smith
Minister



The Hamilton Transit Alliance (HTA) is a coalition of local organisations within the City of Hamilton who all agree on the importance of reliable and accessible public transit, and push for improvements and expansion of public transit within the city to achieve the social, economic and environmental benefits it brings to Hamilton.

FOR IMMEDIATE RELEASE - DECEMBER 20 2019

The Hamilton Transit Alliance (HTA) convened an emergency meeting regarding the Government of Ontario's unexpected cancellation of the Hamilton Light Rail Transit project. This cancellation of the city's first higher order transit project will prevent Hamilton from realizing the many social, economic and environmental benefits that reliable public transit brings to a community.

"It's hard to hear the province's 'Open for Business' mantra without laughing. This decision directly harms business and private investment in our city" - Keanin Loomis, President and CEO of the Hamilton Chamber of Commerce

Members of the Hamilton Transit Alliance are also deeply concerned by the province's announcement that a 'special task force' will be convened to determine how to invest the \$1.3 billion promised to the City of Hamilton. Hamilton has already determined a pathway forward and this has resulted in years of planning and investment for the LRT line. Our community must be empowered to determine what kind of transit infrastructure is built here in our own city.

"For years, two different governments have promised \$1.3 billion in transit infrastructure for Hamilton. We demand this government live up to their promise to transit riders and workers for this investment in transit and transit only." - Eric Tuck, President of ATU 107

Intensification of the downtown core and east-west LRT corridor is vital to ensure suburban sprawl is stemmed, and prioritizing the B-Line to act as the "spine" of Hamilton's public transit system is vital for making the HSR reliable and efficient. The work on the LRT to date, as well as the purchase of properties, and redevelopment investments along the route should not be for nothing.

"Hamilton has been working on this transformational project for years now. We need higher order transit in order to effectively respond to the climate emergency. It will encourage people to get out of their cars and it will facilitate urban intensification, making it easier for us to stop urban sprawl."
- Dr. Lynda Lukasik, Executive Director of Environment Hamilton

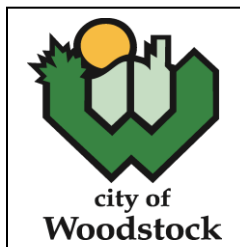
The signing HTA members to this statement are: ACORN Hamilton, ATU 107, Hamilton Centre for Civic Inclusion, Hamilton Chamber of Commerce, Disability Justice Network of Ontario, Hamilton District Labour Council, Environment Hamilton, YWCA Hamilton.

Media Contact: Ian Borsuk, Climate Campaign Coordinator, Environment Hamilton
iborsuk@environmenthamilton.org - 905-549-0900 (office)

The Hamilton Transit Alliance's full membership includes: ATU 107, Hamilton ACORN, Hamilton Centre for Civic Inclusion, Hamilton Chamber of Commerce, Hamilton District Labour Council, Disability Justice Network of Ontario, Environment Hamilton, YWCA Hamilton, McMaster Student Union, Social Planning Research Council, and Immigrants Working Centre.

The HTA is supported by a grant from The Atmospheric Fund, a regional climate agency that invests in low-carbon solutions for the Greater Toronto and Hamilton Area.

The entire membership of the HTA will be issuing recommendations regarding transit and the 2020 municipal budget in January.



Office of the City Clerk
Woodstock City Hall
P.O. Box 1539
500 Dundas Street
Woodstock, ON N4S 0A7
Telephone (519) 539-1291

December 18, 2019

The Honourable Jeff Yurek,
Minister of Environment, Conservation and Parks
College Park 5th Flr, 777 Bay St,
Toronto, ON M7A 2J3

Re: Ban of Single-Use Plastic Handled Shopping Bags

Please be advised that the Council of the Corporation of the City of Woodstock passed the following resolution at its regular Council meeting held on December 12, 2019:

“That Woodstock City Council continue to support the single-use plastic handled shopping bag ban in principle but defer a decision regarding implementation until the Provincial and/or Federal governments have announced their decision and plans for a ban;

And further that Woodstock City Council supports a harmonized ban of single-use plastic shopping bags across the Province of Ontario;

And further that staff be directed to participate in the consultations with the Minister of Environment, Conservation and Parks with respect to the new producer responsibility model for the Blue Box Program, including discussing solutions with respect to single-use plastic shopping bags;

And further that Council pre-approve \$5,000 in the 2020 revenue fund budget in order for the Woodstock Environment Advisory Committee to undertake a public education campaign to educate and encourage Woodstock residents to reduce the use and consumption of single-use plastic shopping bags;

And further that this resolution be circulated to the Minister of Environment, Conservation and Parks and all Ontario municipalities.”

Yours Truly,



Amelia Humphries, B. Math, M.P.A.
City Clerk

c: All Ontario municipalities

Ministry of
Long-Term Care

Office of the Minister

400 University Avenue, 6th Floor
Toronto ON M7A 1N3

Ministère des
Soins de longue durée

Bureau du ministre

400, avenue University, 6^e étage
Toronto ON M7A 1N3



DEC 03 2019

DEC 10 2019

149-2019-251

His Worship Fred Eisenberger
Mayor, City of Hamilton
71 Main Street West, 2nd Floor
Hamilton ON L8P 4Y5

Dear Mayor Eisenberger:

Thank you for your letter regarding the High Wage Transition Fund (HWTF) and the Structural Compliance Premium (SCP). As the Minister of Long-Term Care, I welcome the opportunity to respond.

As you are aware, after extensive consultations with stakeholders our government extended the HWTF until December 31, 2020, and the SCP until March 31, 2020, while we work on developing programs to improve how long-term care is delivered in Ontario.

These streams were introduced more than 20 years ago and were never intended to be permanent. The extension of these funding streams will ensure that gaps in long-term care staffing and funding can be addressed, while the highest quality of care for long-term care residents remains uninterrupted.

Over the summer we worked diligently with the sector to identify the gaps within the system. This is the first step in our plan to create a 21st century long-term care system that meets the needs of Ontario's most vulnerable people. We have a clear view of where things need to improve, and we are acting swiftly to address those gaps.

Thank you again for writing me on this important issue.

Sincerely,

A handwritten signature in cursive script, appearing to read "Merrilee Fullerton".

Dr. Merrilee Fullerton
Minister of Long-Term Care

Carson, Katie

Subject: FW: APPEAL TO THE COUNCIL HAMILTON CITY HALL AND MAYOR FRED EISENBURGER TO DONATE \$. 8000/= TO HELP SEND MEDICINES TO THE VULNERABLE SUFFERING PEOPLE OF SUDAN.

From: Noor Nizam <noornizam7@yahoo.ca>

Sent: January 1, 2020 11:23 AM

To: Office of the Mayor <mayor@hamilton.ca>; clerk@hamilton.ca

Cc: Farr, Jason <Jason.Farr@hamilton.ca>; Eisham Eisham [REDACTED]

Subject: APPEAL TO THE COUNCIL HAMILTON CITY HALL AND MAYOR FRED EISENBURGER TO DONATE \$. 8000/= TO HELP SEND MEDICINES TO THE VULNERABLE SUFFERING PEOPLE OF SUDAN.

SUPPORT GROUP FOR SUDAN - HAMILTON.

Dear Council and Mayor Fred Eisenburger,
Hamilton City Hall
71, Main Street West.

01.01.2020.

Dear Sirs,

APPEAL TO THE COUNCIL HAMILTON CITY HALL AND MAYOR FRED EISENBURGER TO DONATE \$. 8000/= TO HELP SEND MEDICINES TO THE VULNERABLE SUFFERING PEOPLE OF SUDAN.

We are a small group of Hamiltonians (Canadian citizens) comprising of academics, University lecturers, women leaders, students, seniors and clergy of the United Church, Hamilton/Dundas who are very much concerned about the plight of the vulnerable people, especially the women and children of The Republic of Sudan. In organizing support for humanitarian assistance and to bring about awareness about the plight of these vulnerable people, we have been able to harness public support for our cause.

We have also finalized discussions with HPIC - Health Partners International of Canada (<http://www.hpicanada.ca>) a Canadian registered charity operated by the Pharmaceutical Companies of Canada based in Montreal, to provide us donations of medicines and medical supplies to these deserving people in Sudan. Under this medical mission, our medical volunteers, are planning to carry **10 boxes** of Humanitarian Medical kits as accompanied baggage, **donated free of cost** by HPIC - Montreal. Our group only has to pay for the special packaging costs and handling charges. **The special packaging cost for each medical kit box is approximately \$.725/=.** We are very closely liaising with the Patient Support Organization - Khartoum, Sudan, who will receive the medicines in Sudan. The total value of the medicines (10 medical kits) is estimated at approximately **\$. 40 - 50,000/=** and HPIC is giving this as a "DONATION".

We therefore kindly make an appeal to the Council and to you Sir, to **allocate/grant a donation of \$. 8000/=**, the total cost for the special packaging for the 10 humanitarian medical kits to support the Humanitarian medical mission to the needy vulnerable deserving people of Sudan. Your donation will be paid to Health Partners International - HPIC, Montreal **directly** by the City Council on behalf of us. Our volunteers will make these missions mid-January 2020 and onward. We wish to state that with your help, we accomplished a similar mission to Bangladesh (Rohingya refugees at Cox's Bazaar) in June 2018. <https://www.hamiltonnews.com/news-story/8736367-dundas-resident-noor-nizam-helps-deliver-medicine-to-refugees/>

We pray that this donation will be made at the earliest.

Sincerely.

"SUPPORT GROUP SUDAN - HAMILTON"

Noor Nizam.

Organizer and Coordinator.

Team member:

Mr. Eishaam Karim, Phd. Political Science - UoT, Community worker, Add. Coordinator.

| | |
|---------------------------------|------------------|
| OFFICE OF THE CITY CLERK | |
| JAN 0 2 2020 | |
| REF'D TO | _____ |
| REF'D TO | _____ |
| REF'D TO | _____ |
| | J. Pilon |
| ACTION | _____ |
| | _____ |
| | AS |



Information and Privacy
Commissioner of Ontario
Commissaire à l'Information et à la
protection de la vie privée de l'Ontario

| | |
|----------------------|-------------------------------|
| Our File Number: | MI19-00007 |
| Name of Institution: | Alectra Utilities Corporation |

DATE: January 7, 2020

TO: Ms. Lisa Barroso
Manager, Records & Freedom of Information
City of Hamilton
71 Main Street West, 1st Floor
Hamilton, ON L8P 4Y5



Tribunal Services Department
2 Bloor Street East
Suite 1400
Toronto, Ontario
Canada M4W 1A8

Services de tribunal administratif
2, rue Bloor Est
Bureau 1400
Toronto (Ontario)
Canada M4W 1A8

Tel/Tél: (416) 326-3333
1 (800) 387-0073
Fax/Télé: (416) 325-9188
TTY/ATS: (416) 325-7539
Web: www.ipc.on.ca

The Office of the Information and Privacy Commissioner/Ontario (IPC) has received your letter outlining your concerns about Alectra Utilities Corporation. The file has been assigned to **Dave Misir**, Analyst, who can be reached at **(416) 326-3406**. If you are calling from outside Toronto, the toll free number is 1-800-387-0073. During the Intake stage all relevant information and documentation is reviewed in order to determine how to process your concerns. The Analyst will be contacting you to discuss your concerns in more detail.

The *Municipal Freedom of Information and Protection of Privacy Act* (the *Act*) includes provisions which seek to protect an individual's privacy with respect to personal information held by institutions under the *Act*.

While we may be contacting you for further information, as this matter does not directly impact upon your privacy, you will not be considered the "complainant" for this file. However, at the end of our process we will provide you with the results of our work on this matter, in writing.

Suzanne Brocklehurst
Registrar

Pilon, Janet

Subject: Update: Imperial's Waterdown to Finch Project timelines

From: Malone, Jessie M <jessie.m.malone@esso.ca>
Sent: December 20, 2019 11:29 AM
To: clerk@hamilton.ca
Cc: consultation.calgary@woodplc.com
Subject: Update: Imperial's Waterdown to Finch Project timelines

Dear Ms. Caterini,

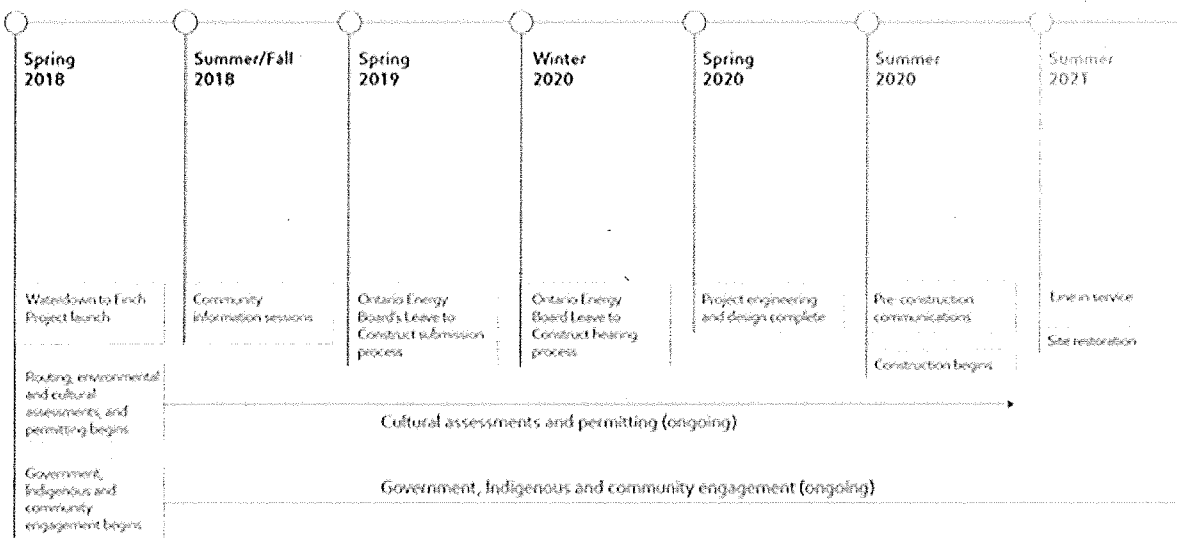
As part of our ongoing commitment to keep our stakeholders, technical partners and communities informed of developments related to Imperial's Waterdown to Finch Project, we wanted to provide a year-end status update on the Project's progression and anticipated construction timelines.

The Waterdown to Finch Project involves the proactive replacement of an important segment of pipeline that supplies gasoline, diesel and jet fuel to the Greater Toronto and Hamilton Area, including Toronto Pearson International Airport.

Although we initially targeted late 2019 to start replacement work along this route, we now anticipate that construction will start in Summer 2020, subject to ongoing regulatory and permitting activities. The revised construction timelines reflect the continued progression of the Ontario Energy Board (OEB) Leave to Construct process and ongoing execution of associated permit-required field work. The OEB hearing process for the Project is anticipated to take place between January and February 2020. The existing pipeline will continue to operate reliably until the Waterdown to Finch Project is complete.

Specific timing for construction locations along the route will be communicated closer to the anticipated start date.

Updated work timeline:*



*Timeline is subject to regulatory and permit approvals.

Project overview:

- The Waterdown to Finch Project will proactively replace approximately 63 km of Imperial's Sarnia Products Pipeline between Hamilton and North York
- The pipeline transports a significant portion of jet fuel to Toronto Pearson, as well as gasoline and diesel that keeps people, goods, and services moving across the region
- The Project will allow Imperial to continue providing the safe and reliable products that have fueled Ontario's economy for more than 50 years
- The Project will contribute to the local and regional economy through private sector investment in infrastructure and jobs
 - Total project investment is anticipated to be approximately \$385 million
 - Approximately 400 direct jobs will be created in Ontario supporting project management and construction activities
- Since the Project launch, Imperial has implemented a robust public engagement process including outreach to landowners, government bodies, Conservation Authorities, First Nations communities, the public and other relevant stakeholders

In addition to providing ongoing Project updates on our website, we will be performing outreach in the right-of-way communities to provide landowners, residents and the broader community information in advance of construction. If at any time you have questions, please do not hesitate to contact me directly or visit imperialoil.ca/waterdowntofinch. We also have an email address (questions@imperialon.ca) and phone number (416.586.1915) that are monitored regularly.

We appreciate the patience and support of our stakeholders, community members and technical partners as we progress this important infrastructure project.

Thank you,

Jessie Malone, P.Eng

Environmental and Regulatory Advisor

Safety Security Health and Environment, Imperial

505 Quarry Park Blvd. SE, Calgary, AB T2C 5N1 | P1C.194

jessie.m.malone@esso.ca P 587.476.4799 | C. 403.826.5491

imperialoil.ca | [Twitter](#) | [YouTube](#)



December 9, 2019

His Worship Fred Eisenberger
Office of the Mayor
Hamilton City Hall
71 Main Street West, 2nd floor
Hamilton, ON L8P 4Y5

DEC 10 2019

Dear Mayor Eisenberger,

Thank you for standing with more than 90 mayors and county leaders across North America against the harmful actions of e-book publishers. By signing CULC/CBUC & ULC's Statement on Equitable Public Access to E-Books, you uphold the highest ideals of Canada – ensuring everyone has the opportunity to learn, grow, and prosper.

In a time when continuous learning and education are more important than ever, publishers are impeding libraries' ability to meet the needs of their communities with exorbitantly inflated e-book and e-audiobook prices, and in some cases denying their ability to buy new releases. These actions severely impact our collections budgets AND our ability to serve those who rely upon us most – children, low-income individuals and families, and those living with vision or motor disabilities.

In the coming months, we will be aggressively working to change the inequitable pricing and purchasing restrictions imposed upon libraries and the communities and people we serve. Your voice will be vital for that work.

Thank you for standing up for democracy. We appreciate your commitment to upholding the values of public libraries and their role in providing access to knowledge for everyone.

Yours sincerely,

Pilar Martinez
Chair, Canadian Urban Libraries Council /
Conseil des Bibliothèques Urbaines du Canada (CULC/CBUC)
CEO, Edmonton Public Library

cc

Paul Takala, Chief Librarian, Hamilton Public Library

Pilon, Janet

Subject: Data Sources to support CSWB Planning – Resource Document

From: Safety Planning (SOLGEN) <SafetyPlanning@ontario.ca>

Sent: December 18, 2019 10:21 AM

To: Safety Planning (SOLGEN) <SafetyPlanning@ontario.ca>

Subject: Data Sources to support CSWB Planning – Resource Document

Good morning,

The Ministry of the Solicitor General (ministry) has developed a resource document, which outlines examples of data sources available to support the community safety and well-being (CSWB) planning process. This resource document was developed in collaboration with the ministry's Inter-Ministerial Community Safety and Well-Being Working Group, which consists of representatives from nine Ontario ministries and the Federal government. Specifically, the document highlights examples of sector-specific data that is available at the provincial, regional or local level, which can be leveraged to assist in the identification of local priority risks in the community.

For your information, please find attached this resource document.

We encourage you to share this document with your staff as well as with your multi-sectoral partners. As we move forward with CSWB planning in Ontario, the ministry is continuing to explore ways to support communities as they undertake the planning process and implement programs and strategies identified in their local plans.

Thank you

Safety Planning Team

Data Sources to Support Community Safety and Well-Being (CSWB) Planning

Provincial Data Sources

- **Ontario Government's Open Data Catalogue** includes various data on existing services and health/wellness indicators available at local, regional and/or provincial levels (e.g., Early Development Instrument, Ontario Victim Services, Crime Severity, Violent/Property Crime, etc.): <https://www.ontario.ca/page/open-government>

Education

- **School Board Progress Reports** with data on ten (10) education indicators available by school board: <https://www.app.edu.gov.on.ca/eng/bpr/index.html>
- **Suspension/Expulsion Rates** available by school board: <http://www.edu.gov.on.ca/eng/safeschools/statistics.html>

Community and Social Services

- **Children's Aid Societies (CAS) data**, including number of children in care, referrals, and families served. Data is available for each CAS site location, regional and provincial level. Contact your Regional Office to obtain local data. For the appropriate Regional Office, please visit: <https://www.mcscs.gov.on.ca/en/mcscs/regionalMap/regional.aspx>
- **CAS data on five performance indicators** that reflect the safety, permanency and well-being of children and youth in care. Data is available for each CAS site location, regional and provincial level: <http://www.children.gov.on.ca/htdocs/English/professionals/childwelfare/societies/publicreporting.aspx>
- **Poverty Reduction Strategy Annual Report (2018)** includes data on eleven (11) poverty indicators at the provincial level: <https://www.ontario.ca/page/poverty-reduction-strategy-annual-report-2018>
- **Towards a Better Understanding of NEET Youth in Ontario Report (2018)** provides an analysis of data to estimate the number, characteristics, and labour market status of youth not in education, employment or training (NEET) available at the provincial and census metropolitan area level: <https://blueprint-ade.ca/wp-content/uploads/2018/12/NEET-Youth-Research-Initiative.pdf>
- **Violence Against Women (VAW) Service Provider Survey** highlights feedback on service delivery in the VAW sector available at the regional and provincial levels. For data, please email REU@ontario.ca
- **Employment Ontario Geo-Hub** contains datasets related to social assistance, including data on Ontario Works (OW) and Ontario Disability Support Program recipients. Some datasets are available by Consolidated Municipal Service Manager or District Social Services Administration Board: <http://www.eo-geohub.com/>

Justice

- **Risk-driven Tracking Database (RTD)**: Communities that have been on-boarded to the RTD have access to their own local data. For a copy of the RTD Annual Reports (which outlines regional and provincial data), please email SafetyPlanning@ontario.ca
- **Ontario Provincial Police (OPP) Community Satisfaction Survey**: Contact your local Detachment Commander for local detachment data. 2018 provincial report available online: http://www.opp.ca/tms/entrydata.php?fnc=3&_id=5afae17aaf4f9348be57b7c4
- **OPP Statistical Crime and Traffic data**: Contact your local Detachment Commander for local detachment data. 2018 provincial report available online: <https://www.opp.ca/index.php?&lng=en&id=115&entryid=5d0bdebf241f6e18586f0913>
- **Ontario Court of Justice Criminal Justice Modernization Committee Dashboard** outlines statistical information for various types of metrics, including offence-based statistics available at local court, regional and provincial levels: <http://www.ontariocourts.ca/ocj/stats-crim-mod/>
- **Ontario Court of Justice Criminal Court Offence-Based Statistics** outlines the number of new criminal cases filed available at local court, regional and provincial levels: <http://www.ontariocourts.ca/ocj/stats-crim/>
- **Inmate Data**, including reviews of inmates in segregation with possible mental health conditions available at the institutional and regional levels: <https://www.mcscs.jus.gov.on.ca/english/Corrections/JahnSettlement/CSDatainmatesOntario.html>

Health

- **Health data**: For regional or provincial level health data/requests, please email IMsupport@ontario.ca

Data Sources to Support Community Safety and Well-Being (CSWB) Planning

Municipal Affairs and Housing

- **Financial Information Return** outlines municipal financial data, including expenses, revenues and debt per municipality: <https://efis.fma.csc.gov.on.ca/fir/Welcome.htm>
- **Homeless Enumeration** outlines data on the number of people experiencing homelessness over a specific time period available at the Service Manager level. Contact your local Service Managers to obtain local data. To determine the appropriate Service Manager, please visit: <http://www.mah.gov.on.ca/page1202.aspx>
- **Affordable House Price and Rent Tables** highlight data on house/rent affordability for different household incomes available at the Service Manager and provincial levels. For data, please email Housing.Research@ontario.ca

Additional Data Sources

Statistics Canada and Other National Sources

- **Census Profile 2016:** <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E>
 - Examples of CSWB indicators include educational attainment, low income and unemployment
 - Canadian Socio-Economic Information Management System (CANSIM) tables (customized data tables by Ontario regions/communities for specific indicators)
- **Crime/Justice related statistics** through various surveys including:
 - Uniform Crime Reporting Survey: <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3302>
 - Homicide Survey: <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3315>
 - Adult Correctional Services Survey: <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3306>
- **Socio-economic/Health statistics** through various surveys including:
 - Labour Force Survey: <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3701>
 - Canadian Community Health Survey: <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3226>
 - Aboriginal Peoples Survey: <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3250>
 - General Social Survey (Canadian's Safety): <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=4504>
- **Visualization tools** such as the Census Program Data Viewer which allows for the visualization of data by provinces/territories, and census metropolitan areas/subdivision: <https://www.statcan.gc.ca/eng/interact/datavis>
- **Government of Canada - Open Government's Portal:** <https://open.canada.ca/en/open-data>
- **Canadian Institute for Health Information**, including Ontario Mental Health Reporting System, Discharge Abstract Database, National Ambulatory Care Reporting System, etc.: <https://www.cihi.ca/en/access-data-and-reports>
- **First Nations Information Governance Centre**, including the First Nations Regional Health Survey and First Nations Regional Early Childhood, Education and Employment Survey: <http://fnigc.ca/dataonline/>
- **First Nation Profiles** (available through Indigenous and Northern Affairs Canada): <https://open.canada.ca/en/suggested-datasets/indigenous-and-northern-affairs-canada-first-nation-profiles>
- **Community Well-being Index** (available through Indigenous Services Canada): <https://open.canada.ca/data/en/dataset/56578f58-a775-44ea-9cc5-9bf7c78410e6>

Local Sector-Specific Data Sources

- Police services (e.g., data on calls for service, offence occurrences)
- Municipal offices (e.g., data on economic development, services available)
- Local non-profit organizations and/or service providers (e.g., Vital Signs Report)
- School boards (e.g., truancy rates, graduation rates, school violence incidences)
- Hospitals (e.g., ER visits, waitlists for mental health/addictions services)
- Community-wide strategies or reports (e.g., Mental Health and Addictions, Drugs, Homelessness)
- Multi-sectoral tables (e.g., Situation Tables, Local Developmental Services System Planning Tables)

Note: This document includes examples of available data sources and does not represent an exhaustive list.

Pilon, Janet

Subject: Defend Disability

From: CAWDBHam . <hamilton.cawdb@gmail.com>

Sent: December 18, 2019 1:53 PM

To: Holland, Andrea <Andrea.Holland@hamilton.ca>; Bates, Tamara <Tamara.Bates@hamilton.ca>

Subject: Defend Disability

To Mayor Fred Eisenberger and Members of Council

Doug Ford's announcement that there is to be a change to the definition of 'disability' has struck fear into the hearts of the vulnerable and cause many doctors, lawyers and academics to "defend disability" There is a mail list google group by that name.

Working to have municipalities and groups to sign the petition are meeting with success.

I've copied and pasted the Toronto motion following::

MOTION Moved by:

Seconded by:

WHEREAS the province of Ontario has announced \$1 billion cuts to social assistance over the next two years, including plans to narrow down the definition of disability used for the Ontario Disability Support Program (ODSP);

WHEREAS, for reference, the new Official Poverty Line published in the 2019 federal Poverty Reduction Strategy has been set at \$1,699 per month for a single person; the maximum ODSP monthly allowance is \$1,169 (32% under the poverty line), the maximum Ontario Works (OW) monthly allowance is \$733 (57% under the poverty line);

WHEREAS narrowing down the definition of disability for ODSP would deny the more enhanced support of ODSP to a portion of future applicants living with disability and also to part of the current 120,000 ODSP recipients living in Toronto, if these recipients are not grand-fathered together with the definition that labelled them as "disabled" in the first place;

WHEREAS a narrowing down of the definition may particularly preclude the thousands of people in our community living with mental health conditions from keeping or accessing disability benefits; WHEREAS the change to the definition of disability may mean other vulnerable people with disabilities that are episodic, including people undergoing cancer treatments, people with Multiple Sclerosis, people suffering from AIDS-related illnesses, and people with arthritis or diabetes, will be denied benefits;

WHEREAS according to the Welfare in Canada Report, 2018, families on social assistance are already living on incomes that are below every measure of low income in Canada and a change in the ODSP definition of disability will only exacerbate the situation since those excluded from the program will have to rely on the lower OW allowances;

WHEREAS living below the poverty line is no adequate standard of living for anybody and that much more visibly for individuals and families who live with the extra stresses, barriers and costs of disability;

WHEREAS the upcoming changes in Employment Services cannot be considered as a replacement for the basic support that ODSP provides to individuals with a disability;

WHEREAS more people with disabilities relying on OW would inevitably increase the demands for Toronto Employment and Social Services, for services from food banks, homeless shelters, public health agencies and increase costs for the City of Toronto;

WHEREAS this city's Manager, in his 2019 Ontario Budget and Legislation Update, released on May 13, and this city's Poverty Reduction Strategy Action Plan for 2019-2022 have recognized that provincial regulatory and funding changes for social assistance will have detrimental consequences for Toronto's poor residents and for Toronto's ability to respond to the effects of poverty;

WHEREAS the Toronto Poverty Reduction Strategy for 2019-2022 specifies in its action plan that it is this city's responsibility to embed financial empowerment in its programs and to respond appropriately to proposed social assistance programs, more specifically to: 10.1. Assess and respond to social assistance rate, policy and program design changes to best support low-income residents 14. Create a seamless social support system 17. Dedicate funding to poverty reduction actions;

WHEREAS the most recent reviews of social assistance by the Income Security Reform Group, the First Nations Income Security Reform Working Group, and the Urban Indigenous Table on Income Security Reform, and by expert policy advisers at Ontario 360, all argue for social assistance reforms that keep the Ontario Disability Support Program and its definition of disability;

THEREFORE BE IT RESOLVED that City Council request the Mayor together with his allies at the Large Urban Mayor's Caucus of Ontario and the Ontario Municipal Association to formally call upon the Honourable Todd Smith, Minister of Children, Community and Social Services to: 1. Reverse the cuts done and planned for the budget of the Ministry of Children, Community and Social Services; 2. Maintain the current ODSP definition of disability; 3. Increase the social assistance rates; and 4. Meaningfully respect the established right of people living with disability to participate in the decisions that affect their lives by creating a meaningful process of co-reviewing and co-designing programs of social assistance and adjudication processes.

December 8th, 2019 This motion is the result of a collaboration between agency, legal workers and ODSP recipients.

Campaign for Adequate Welfare and Disability Benefits

Campaign for Adequate Welfare and Disability Benefits

THE CORPORATION OF THE TOWN OF DEEP RIVER

P.O. BOX 400 • 100 DEEP RIVER ROAD • DEEP RIVER, ONTARIO K0J 1P0
Tel: (613) 584-2000 • www.deepriver.ca • Fax: (613) 584-3237



January 8, 2020

Hon. Doug Ford, Premier of Ontario
Queen's Park Legislative Building
1 Queen's Park, Room 281
Toronto Ontario
M7A 1A1

Subject: Premiers to Develop Nuclear Reactor Technology

Dear Honourable Doug Ford,

Please be advised that at the Regular Meeting of Council held October 9th, 2019, Council for the Corporation of the Town of Deep River passed the following resolution:

BE IT RESOLVED THAT the CBC News report entitled "**Group of premiers band together to develop nuclear reactor technology**", be received, and

WHEREAS the Premiers of Ontario, Saskatchewan and New Brunswick have announced their intention to work together on the development of small modular reactors to help their provinces reduce carbon emissions and address the challenges of climate change;

WHEREAS Canada has demonstrated excellence and leadership in the nuclear industry on the world stage for more than 70 years;

WHEREAS the Canadian nuclear industry is one of the safest and most well-regulated energy sectors in the world under the oversight of the Canadian Nuclear Safety Commission;

WHEREAS the citizens of Ontario have enjoyed the benefits of safe, clean, low-carbon energy produced by Ontario's nuclear industry for over 50 years;

WHEREAS small modular reactors have the potential to provide municipalities, especially rural and northern municipalities, with an innovative technology that provides a safe, low-carbon alternative to meet energy demands; therefore,

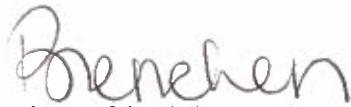
BE IT RESOLVED the Town of Deep River write to the Premiers of Ontario, Saskatchewan and New Brunswick to express support for their decision to work together on the development of small modular reactor technology as a safe, low-carbon energy option;

THAT the Town of Deep River write to the Prime Minister of Canada, Minister of Natural Resources, and the remaining provincial premiers asking that they support investment in the research and development of small modular reactor technology as an innovative, safe, low-carbon energy option; and

THAT this resolution be circulated to all upper and lower-tier municipalities in Ontario, and the Federation of Canadian Municipalities, for their consideration.

CARRIED

Thank you and please contact the writer should you have any additional questions.
Kindest regards,



Bethany McMahon, Administrative Assistant
Town of Deep River

cc: Hon. Scott Moe, Premier of Saskatchewan
Hon. Blaine Higgs, Premier of New Brunswick
Hon. Stephen McNeil, Premier of Nova Scotia
Hon. Brian Pallister, Premier of Manitoba
Hon. John Horgan, British Columbia
Hon. Dennis King, Premier of Prince Edward Island
Hon. Jason Kenney, Premier of Alberta
Hon. Dwight Ball, Premier of Newfoundland and Labrador
Hon. Francois, Premier of Quebec
Hon. Caroline Cochrane, Premier of Northwest Territories
Hon. Sandy Silver, Premier of Yukon
Hon. Joe Savikataaq, Premier of Nunavut
Hon. Justin Trudeau, Premier of Canada
Hon. Seamus O'Regan of Natural Resources
Association of Municipalities of Ontario (AMO)
Federation of Northern Ontario Municipalities (FONOM)
All Upper and Lower Tier- Municipalities



The Corporation Of The Township Of Stone Mills

4504 County Road 4, Centreville, Ontario K0K 1N0
 Tel. (613) 378-2475 Fax. (613) 378-0033
 Website: www.stonemills.com.

December 27, 2019

Honourable Jeff Yurek
 Minister of Environment, Conservation and Parks
 College Park 5th Flr, 777 Bay St.
 Toronto, Ontario
 M7A 2J3

minister.mecp@ontario.ca

Honourable Premier Doug Ford
 Premier of Ontario
 Legislative Building
 Queens Park
 Toronto On M7A 1A1

premier@ontario.ca

Re: Support Resolution of Conservation Authorities – Township of Stone Mills

Dear Premier Ford and Minister Yurek,

At the December 9, 2019 Stone Mills Township Council meeting, Council passed a resolution in support of the continuation of program support for Conservation Authorities in the Province of Ontario.

A copy of the resolution is attached for your consideration. We kindly request your support and endorsement for the continuance of Conservation Authority Support.

Sincerely,

Bryan Brooks
 C.A.O./Clerk
 Township of Stone Mills

Cc: MPP Daryl Kramp
 MP Derek Sloan
 Association of Municipalities on Ontario
 Quinte Conservation

All Ontario Municipalities
 Cataraqui Conservation Authority



The Corporation Of The Township Of Stone Mills

4504 County Road 4, Centreville, Ontario K0K 1N0
Tel. (613) 378-2475 Fax. (613) 378-0033
Website: www.stonemills.com.

RESOLUTION IN SUPPORT OF CONSERVATION AUTHORITIES

WHEREAS the Township of Stone Mills is committed to planning for an protecting the future sustainability of its resources and environment,

AND WHEREAS the Township of Stone Mills is within the Quinte and Cataraqui Conservation Authority areas,

AND WHEREAS the Province of Ontario is currently reviewing the mandate and operation of conservation authorities and;

AND WHEREAS Conservation Authorities provide essential services to municipalities in their watersheds and

AND WHEREAS smaller municipalities do not have capacity or the financial resource to employ staff with the technical expertise that conservation authorities provide and

WHEREAS development near watercourses can have significant effects both upstream and downstream

THEREFORE BE IT RESOLVED THAT The **Township of Stone Mills encourages the province to continue to support the principle of planning on a watershed basis in the on-going review and prioritize the allocation of adequate funding to support the core mandate of conservation authorities.**

AND THAT this resolution be forwarded to Minister of the Environment, Conservation and Parks, Premier Doug Ford, MPP Daryl Kramp, the Association of Municipalities of Ontario, the Cataraqui and Quinte Conservation Authorities and all Ontario Municipalities.

.....
Township of Stone Mills - 4504 County Road 4, Centreville ON K0K 1N0
Attention: C.A.O/Clerk, 613-378-2475 Ext. 225, bbrooks@stonemills.com

Pilon, Janet

Subject: Mountain Arena Proposal

From: Paparella, Stephanie <Stephanie.Paparella@hamilton.ca>
Sent: January-14-20 2:31 PM
To: scott.f.weldon@gmail.com
Cc: Pilon, Janet <Janet.Pilon@hamilton.ca>; Bates, Tamara <Tamara.Bates@hamilton.ca>
Subject: FW: Mountain Arena Proposal

Hello Mr. Weldon,

Unfortunately, the noon deadline for submissions for tomorrow's meeting has passed. Therefore, although your correspondence will not be included in tomorrow's agenda, it will be placed on the January 22nd Council agenda as correspondence to be considered at the same meeting as the GIC report containing this matter.

Thank you.

Stephanie Paparella
Legislative Coordinator
Office of the City Clerk
71 Main Street West, 1st Floor
Hamilton, ON L8P 4Y5

Phone: (905) 546-2424 Ext. 3993
E-mail: stephanie.paparella@hamilton.ca
Fax: (905) 546-2095

Vision:

The Legislative Division is Dedicated to Excellence in the Provision of Service to the Community, Corporation & Council with Integrity, Accuracy and Transparency.

Mission:

The Legislative Division aims to strengthen and promote local government by facilitating the proceedings of City Council and its Committees, fulfilling the requirements of various Provincial statutes and educating the public to make it understandable and accessible.

From: scott.f.weldon@gmail.com <scott.f.weldon@gmail.com>
Sent: January 14, 2020 1:41 PM
To: clerk@hamilton.ca
Subject: Mountain Arena Proposal

I was asked to forward this on to your attention so that it will be included in the January 15th General Issues Committee meeting.

Thanks.

Scott Weldon

----- Forwarded Message -----

From: scott.f.weldon

To: mayor@hamilton.ca <mayor@hamilton.ca>; maureen.wilson@hamilton.ca <maureen.wilson@hamilton.ca>; jason.farr@hamilton.ca <jason.farr@hamilton.ca>; nrinder.nann@hamilton.ca <nrinder.nann@hamilton.ca>; sam.merulla@hamilton.ca <sam.merulla@hamilton.ca>; chad.collins@hamilton.ca <chad.collins@hamilton.ca>; Tom Jackson <tom.jackson@hamilton.ca>; Esther Pauls <esther.pauls@hamilton.ca>; ward8@hamilton.ca <ward8@hamilton.ca>; brad.clark@hamilton.ca <brad.clark@hamilton.ca>; maria.pearson@hamilton.ca <maria.pearson@hamilton.ca>; brenda.johnson@hamilton.ca <brenda.johnson@hamilton.ca>; lloyd.ferguson@hamilton.ca <lloyd.ferguson@hamilton.ca>; arlene.vanderbeek@hamilton.ca <arlene.vanderbeek@hamilton.ca>; terry.whitehead@hamilton.ca <terry.whitehead@hamilton.ca>; judi.partridge@hamilton.ca <judi.partridge@hamilton.ca>

Sent: Tuesday, January 14, 2020, 12:31:50 p.m. EST

Subject: Lawfield Minor Hockey Association

At the monthly Board of Directors meeting held last night the attached was unanimously approved.

I volunteered to forward this on to your attention.

Scott Weldon

Lawfield Minor Hockey Association

3rd Vice-President

Lawfield Minor Hockey Association has been in operation since 1975 providing recreational and competitive programs for Hamilton's youth. Today's program encompasses twenty-six teams across four divisions. Registration is open to all Hamilton residents but membership is primarily drawn from the Hamilton Mountain.

PREAMBLE

Hamilton Minor Hockey Council registrations are heavily weighted towards the Hamilton Mountain and surrounding communities (Glanbrook, Ancaster, Dundas).

Hamilton's competitive youth programs (Huskies and Junior Bulldogs) are based out of Hamilton Mountain arenas.

Hamilton Girls Hockey operates out of Inch Park.

Figure skating operations mirror the experience of youth hockey being focused on the Hamilton Mountain and surrounding communities.

WHEREAS

The Hamilton Bulldogs are looking to secure a new facility.

The owner Michael Andlauer has identified Limeridge Mall as his preferred location.

The property owner Cadillac Fairview has worked in concert with the Hamilton Bulldogs organization.

The Lawfield Minor Hockey Association moves the following:

That Hamilton councilors direct staff to explore the fiscal implications and benefits of a partnership with Michael Andlauer to build a medium sized arena facility on the Hamilton Mountain.

The staff report should provide a detailed comparison of the proposed Hamilton Mountain facility with the existing downtown location. Specifically the report should address the following:

- (a) Identify the location that is most desirable for the potential ticket buyers of the primary tenant.
- (b) Identify revenue generating potential within the community. (contracted and casual ice users)
- (c) Identify which location is better suited to draw the largest number of citizens and visitors to the city to an individual or limited engagement event.

Pilon, Janet

Subject: Correspondence re LRT cancellation

From: Peter Ivey

Sent: January 11, 2020 11:41 AM

To: O'Brien, James <James.O'Brien@hamilton.ca>; Kolar, Loren <Loren.Kolar@hamilton.ca>; Farr, Jason <Jason.Farr@hamilton.ca>; Derbyshire, David <David.Derbyshire@hamilton.ca>; Office of the Mayor <mayor@hamilton.ca>; Matthew.Green@parl.gc.ca

Subject: We're Staying

Dear Metrolinx c/o Hamilton City Hall,

My wife and I live at 621 King Street West here in Hamilton at Dundurn and King. We have lived here for over ten years. For the last three years we have lived under the assumption that there would be affordable housing for us when we wanted to move from this place since it was bought by Metrolinx and managed by DMS. We have had to carry on with our lives under threat of having to move for years, and we are sick of it.

We are declared homeless. We still pay rent. To their credit, DMS have been terrific property managers (much better than our previous landlord by a long shot). However, the efforts from Metrolinx/City Hall have been appallingly lacklustre, and seemed to carry the single message: you're on your own. Kijiji listings, housing lists for affordable housing for which the wait time is nearly a decade, housing lists for most places that are infested with bedbugs, cockroaches, or simply in the most rundown parts of the city. Where is the six million dollars promised for affordable housing? Why was it not built or even considered as homes were bought out, people told to go elsewhere, and meanwhile the city allows large-scale condo projects to be built? Where the hell is your sense of obligation???

I am submitting to all of you right now that the properties that Metrolinx bought with taxpayer money be retained by the city under the management of DMS, and that we continue to pay our rent under the auspices that we are NOT going to be demolished to make way for a wrongheaded transportation project or a condo! We have been good tenants! We pay our rent on time, we take care of the property (now we'll have to do more since your stupid project has made businesses move away and trash has been left behind!) and we give a damn about what happens to people in this neighbourhood, which is more than I can say for the likes of you.

We also want the possibility of people renting the other units in the neighbourhood under the same rents that existed before so that we can be a community again, and not just the poor kid begging for scraps at Toronto's table. We are Hamilton. We are this city, and we want answers. Whatever is decided by the province in February, I can tell you this: we are not moving from this house without a fight.

Good day!

Peter Ivey,

Proud resident of Hamilton Centre,
621 King Street West.



P.O. Box 89052
HAMILTON, ONTARIO L8S 4R5

January 13 2020
Mayor Eisenberger and Members of Council
City Hall, 71 Main Street West,
Hamilton, ON L8P 4Y5

Re: Discharge of sanitary sewage and stormwater run-off into Chedoke Creek

Dear Mayor Eisenberger and Members of City Council:

Like many Hamiltonians, the 600-member Hamilton Naturalists' Club is very disappointed by the discharge of a staggering 24 billion litres of sewage and storm water run-off to Chedoke Creek over a period of four and a half years. The decision by City Council to withhold information about the leak for 11 months has undermined public confidence in the ability of Council to tackle this debacle as an urgent priority.

The apology by the Mayor and Council is a welcome first step. However, it isn't any substitute for an action plan to remediate and mitigate the ecological damage and ensure that another episode of environmental degradation on this scale is never repeated. Chedoke Creek has been greatly abused for far too long. It is time for City Council to finally recognize the importance of the fragile Chedoke watershed in maintaining the health of Cootes Paradise as a critical nature sanctuary and wetland, and enhancing the natural attractiveness and escarpment landscape of West Hamilton.

Improved sewer overflow monitoring and the sharing of public information on discharges are positive steps, as well as expansion of sewage treatment to handle larger flows, but they are not enough. We strongly urge the City to commit to a permanent cleanup and a robust, sustainable ecological remediation plan. The City should request the full participation of the provincial and federal governments, which have a major stake in rehabilitating Chedoke Creek and strengthening the Hamilton Harbour Remedial Action Plan.

An effective strategy should focus on reducing stormwater outflows as much as possible. Stormwater fees with rebates to property owners for cutting flows would certainly be helpful. We share the disappointment of the City's many formal and informal partners --- including the Royal Botanical Gardens, the Bay Area Restoration Council, the City of Burlington and many volunteers --- who appreciate a natural resource like Chedoke Creek. They recognize that a clean creek, thriving flora and fauna and an inviting valley is a valuable asset to a greener city, and have worked hard to make it better.

We strongly support accelerated testing to identify and fix the illegal hookups in the sewer system that have been a persistent problem. We also urge the City to encourage the province to support stronger protection of all existing wetlands, as recommended by former Environmental Commissioner Dianne Saxe.

Hamilton Naturalists' Club is a non-profit organization dedicated to the study, appreciation and conservation of our wild plants and animals.
All work is freely done by Directors, Officers and Members.



As Chris McLaughlin, Executive Director of the Bay Area Restoration Council, wrote in The Hamilton Spectator on Dec. 7, 2019, "In the lamentable events that have further abused this already degraded creek and other downstream environments, there is an opportunity to do much more, and to do much better."

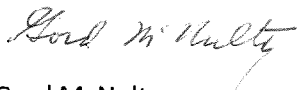
It is equally important for City Council to act in order to lessen the harm to Hamilton's national image and reputation by what Mr. McLaughlin rightly described as this "terrible mess." We urge Council to show leadership and bring all stakeholders together in developing what RBG CEO Mark Runciman has described as a Chedoke recovery plan that will "put our region on the global stage for best practices in waste and stormwater management."

In an unprecedented outcry, the citizens of Hamilton and area have made it abundantly clear they care about the fate of the Chedoke watershed and its importance in our quality of life. They demand that City Council make and execute a plan of which we can all be proud. City Council can count on the full support of the HNC in taking whatever steps are necessary to end the degradation of Chedoke Creek and make it a permanent symbol of urban environmental rehabilitation in Hamilton.

Sincerely,

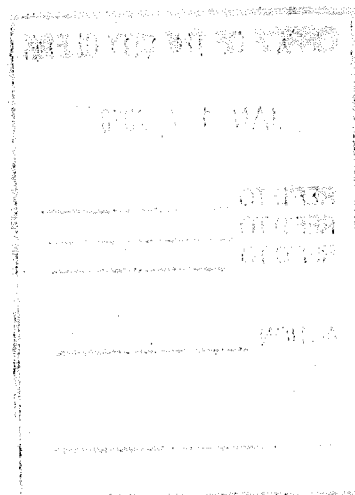


Chris Motherwell,
President



Gord McNulty,
Conservation & Education Director

"Protecting Nature Since 1919"





January 14, 2020

Clerk, City of Hamilton
71 Main Street West, Hamilton ON L8P 4Y5

To Whom It May Concern:

RE: Support for actions to address over-application of winter maintenance chemicals to protect sources of municipal drinking water

On December 12, 2019, the Lake Erie Region Source Protection Committee received report SPC-19-12-02 Winter Maintenance Chemicals: Challenges and Opportunities, and passed the following resolution:

AND THAT the Lake Erie Region Source Protection Committee direct staff to forward report SPC-19-12-02 to the Councils of the single, upper and lower-tier municipalities within the Lake Erie Source Protection Region, all Source Protection Committees, Ontario Good Roads Association, Association of Municipalities of Ontario, and Rural Ontario Municipal Association, to request resolutions in support of the report's recommended actions and forward the resolutions to the Ontario Minister of the Environment, Conservation and Parks, Ontario Minister of Transportation, Ontario Minister of Municipal Affairs and Housing and Attorney General of Ontario.

The report (attached) provides an overview of the ongoing issue and implications of over-application of winter maintenance chemicals, highlighting trends in the Lake Erie Source Protection Region, and includes recommended actions, including changes to the liability framework, increased requirements for winter maintenance of parking lots and changes to the Clean Water Act, 2006 framework to proactively protect municipal drinking water sources.

As per the Source Protection Committee's resolution, I am asking for municipal support of the report's recommended actions. Please forward a copy of any resolution to: Ilona Feldmann, Source Protection Program Assistant, Lake Erie Source Protection Region (ifeldmann@grandriver.ca)

Please contact me if you have any questions or concerns about the report or the request for municipal support.

Regards,

Martin Keller
Source Protection Program Manager, Lake Erie Source Protection Region

LAKE ERIE REGION SOURCE PROTECTION COMMITTEE

REPORT NO. SPC-19-12-02

DATE: December 12, 2019

TO: Members of the Lake Erie Region Source Protection Committee

SUBJECT: **Winter Maintenance Chemicals: Challenges and Opportunities for Change**

RECOMMENDATION:

THAT the Lake Erie Region Source Protection Committee receives report SPC-19-12-02 – Winter Maintenance Chemicals: Challenges and Opportunities for Change – for information.

AND THAT the Lake Erie Region Source Protection Committee receives the Recommended Actions to Address the Over-Application of Winter Maintenance Chemicals for consideration and action.

REPORT:

Summary of Report Contents

- Introduction
- Recommended Actions to Address the Over-Application of Winter Maintenance Chemicals
- Increasing Sodium and Chloride Concentrations within Groundwater Drinking Sources in Lake Erie Source Protection Region
- Liability and Other Factors Influence the Amount of Salt Applied
- Changes Needed to the Source Water Protection Director's Technical Rules

Introduction

At the October 3, 2019 Lake Erie Region Source Protection Committee (SPC) meeting, members discussed the ongoing issue of salt over-application and the increasing number of sodium and chloride Issue Contributing Areas (ICAs) across the Lake Erie Source Protection Region. Following the discussion, the committee directed Lake Erie Region staff to draft a report and recommendation(s) regarding the issue for presentation at the next SPC meeting.

This report has been written in collaboration with staff from the Grand River Conservation Authority (GRCA), City of Guelph, Region of Waterloo and Wellington Source Water Protection.

Recommended Actions to Address the Over-Application of Winter Maintenance Chemicals

To address the above concerns, the following recommendations are provided to the Lake Erie Region Source Protection Committee for consideration:

THAT the Province of Ontario explore ways to reduce the factors that contribute to excess application of winter maintenance chemicals on road ways and parking lots through a review of the liability framework in Ontario.

THAT the Province of Ontario work with municipalities to strengthen training programs for road agencies that apply winter maintenance chemicals on roads and sidewalks to reduce application rates without compromising road safety that would assist with mitigating risks to municipal drinking water systems.

THAT the Province of Ontario require property owners and contractors responsible for maintaining safe parking lots and sidewalks be trained and certified in the application of winter maintenance chemicals.

THAT the Province of Ontario change Prescribed Drinking Water Threats, “the application of road salt” and “the handling and storage of road salt” to “the application of winter maintenance chemicals” and “the handling and storage of winter maintenance chemicals”, and define the term in the regulation.

THAT the Province of Ontario change the Table of Circumstances related to the application of winter maintenance chemicals to differentiate between application on roads, sidewalks and parking lots to reflect the different liability issues and the nature of winter maintenance conducted for each surface type.

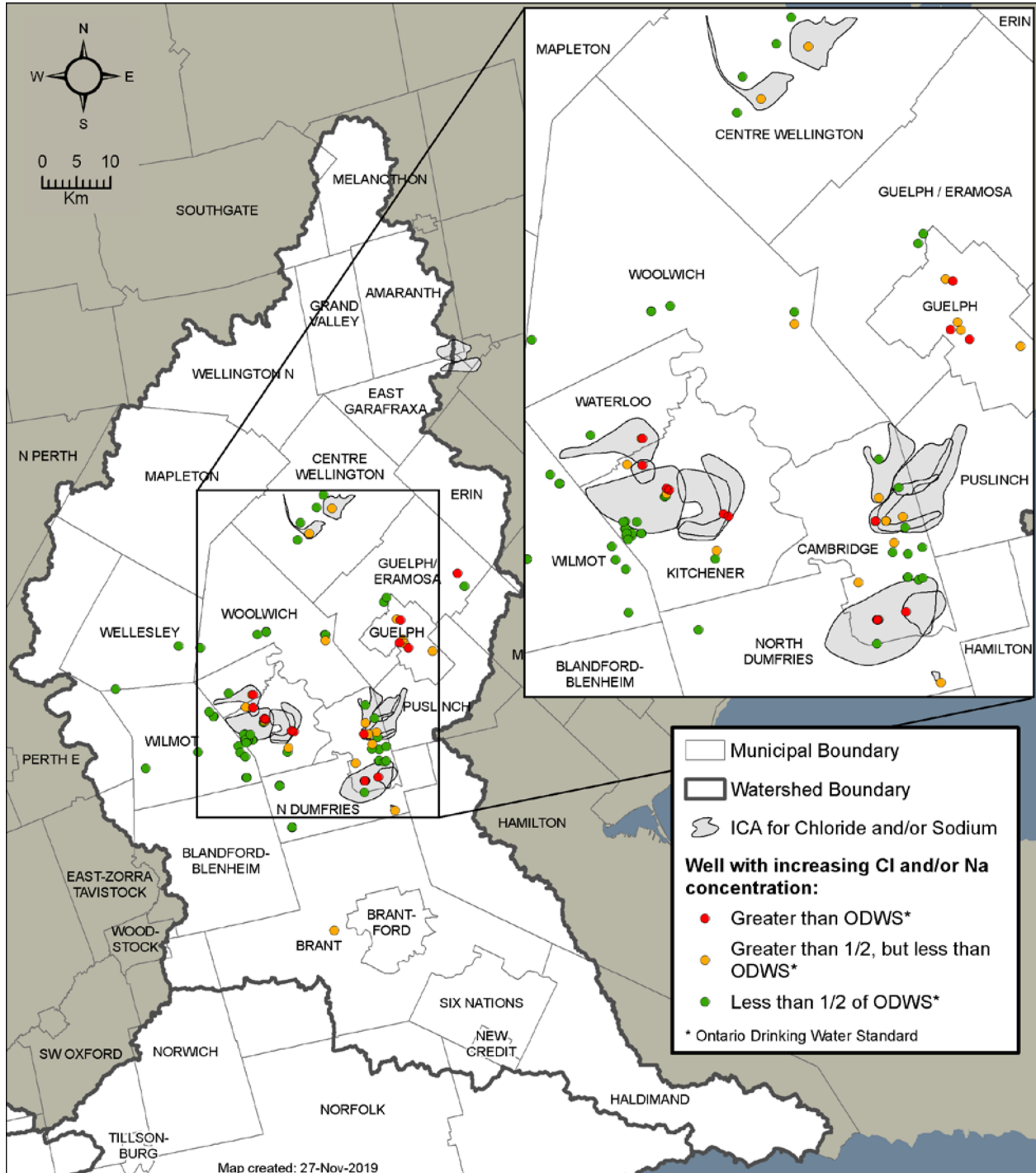
AND THAT the Province of Ontario amend the Clean Water Act’s Director’s Technical Rules to enable municipalities to proactively protect their municipal drinking water supplies from the application and storage of winter maintenance chemicals.

Increasing Sodium and Chloride Concentrations within Groundwater Drinking Sources in Lake Erie Source Protection Region

Municipal water supplies within the Lake Erie Source Protection Region (LESPR) have exhibited increases in chloride and sodium concentrations. **Map 1** identifies all municipal supplies within the LESPR that are impacted by increasing chloride and sodium concentrations. Within LESPR, approximately 150 wells are impacted by increasing concentrations of chloride and/or sodium, where 34 wells have identified chloride and/or sodium as an Issue under the *Clean Water Act, 2006* and Technical Rules. **Map 1** shows the ICAs for chloride and sodium, along with municipal supply wells with increasing concentrations. Issue Contributing Areas are delineated for wells with an Issue and policies apply to address the elevated contaminant concentrations.

The impacted municipal supply wells range from small rural centres (Elora, Fergus – Centre Wellington, Guelph-Eramosa, Paris – County of Brant) to medium cities (City of Guelph, Orangeville) to large urban areas (Region of Waterloo). Examples of increasing chloride and sodium concentrations at municipal supply wells within the LESPR are described below and include Wells E3 in Elora and F1 in Fergus, the City of Guelph Water Supply Wells, William Street Wellfield in Waterloo and Well G5 in Cambridge. The Town of Orangeville Water Supply System is impacted by increasing chloride and sodium concentrations and has defined ICAs that extend into the LESPR.

Map 1: Lake Erie Region Municipal Supply Wells with Elevated Chloride and Sodium Concentrations



Increasing Sodium and Chloride Concentrations at Bedrock Groundwater Wells in Wellington County

The Township of Centre Wellington monitors sodium and chloride concentrations at the nine municipal wells that service Elora and Fergus. Well Fergus F1 is screened within a bedrock aquifer with surrounding land primarily urban. Well Elora E3 is screened within a bedrock aquifer with surrounding land primarily agricultural, with a large manufacturing facility located immediately north of the well.

Figure 1 and **Figure 2** illustrate the increasing and variable trends of chloride and sodium concentrations at Elora Well E3 and Fergus Well F1. Chloride concentrations at Elora Well E3 and Fergus Well F1 are both above and below half of the Ontario Drinking Water Standards (125 mg/L). Maximum chloride concentrations are noted at Elora Well E3 of 165 mg/L. At Elora Well E3 and Fergus Well F1 sodium concentrations are increasing, but remain below half of the Ontario Drinking Water Standards (100 mg/L). Maximum sodium concentrations are noted at Fergus Well F1 of 93 mg/L. A study completed by Golder Associates (2015) concluded that groundwater at well F1 appears to be derived mainly from the overburden and shallow bedrock aquifers, while groundwater at well E3 appears to be derived mainly from the bedrock aquifer. In both cases, the chloride source is likely from the surface (anthropogenic sources). As a result of the increasing chloride concentrations to above half of the Ontario Drinking Water Standards and the anthropogenic origin of the chloride, chloride was identified as an Issue and an ICA was delineated for both Elora Well E3 and Fergus Well F1.

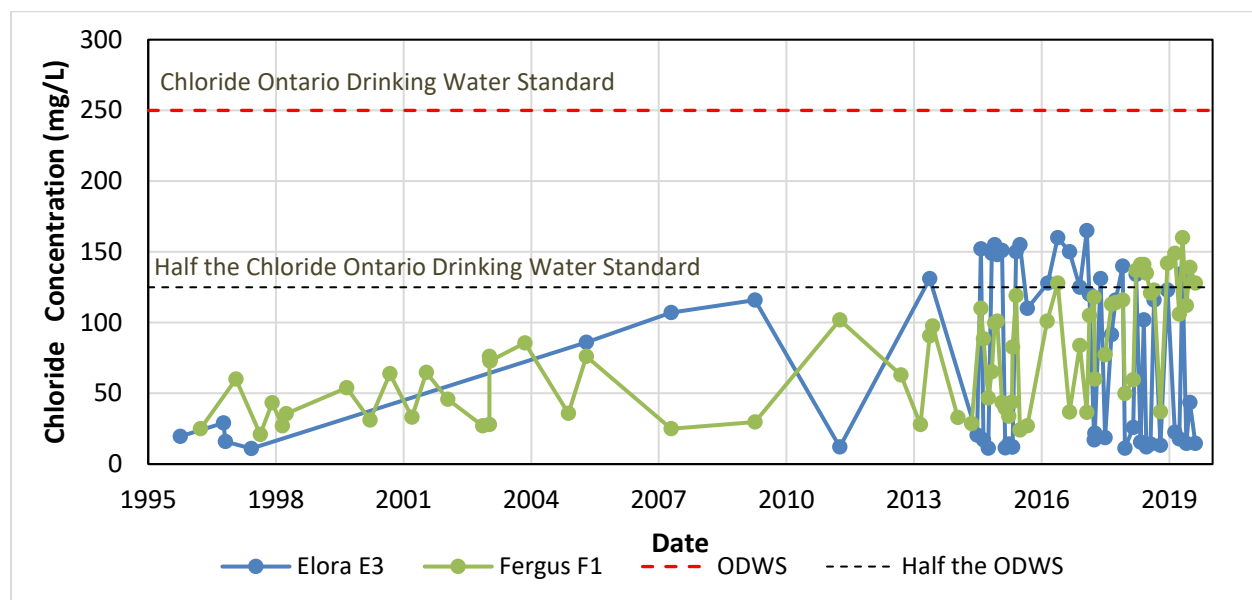


Figure 1: Chloride concentrations at Elora Well E3 and Fergus Well F1

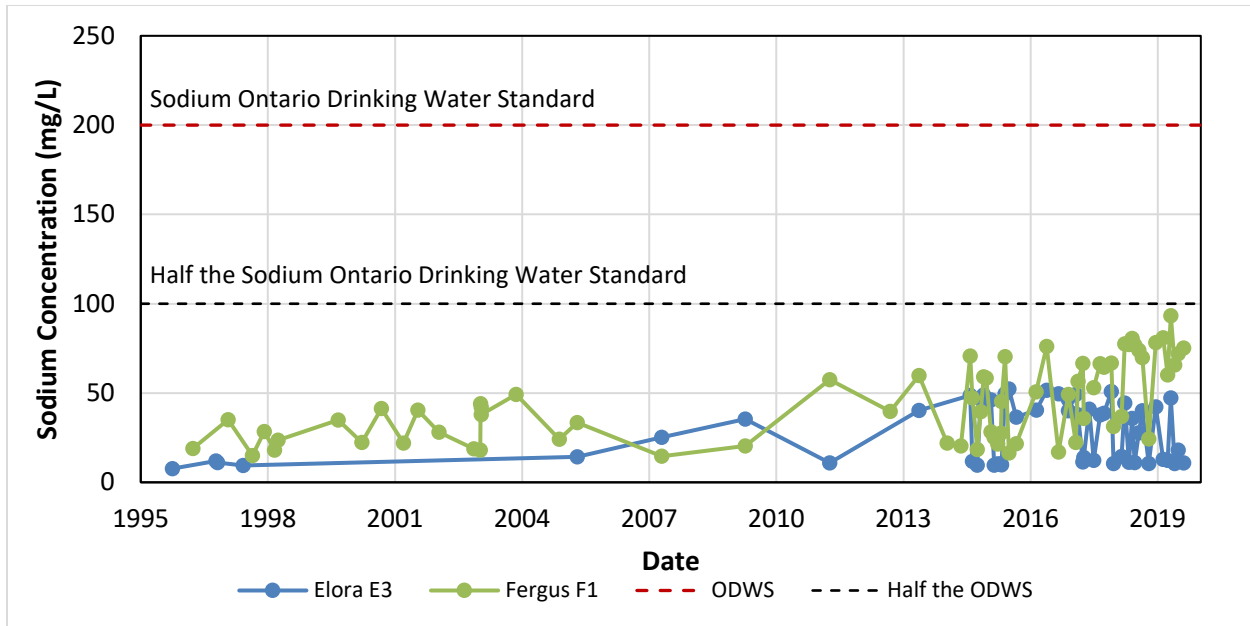


Figure 2: Sodium concentrations at Elora Well E3 and Fergus Well F1

Increasing Sodium and Chloride Concentrations at Bedrock Groundwater Wells in the City of Guelph

Sodium and chloride concentrations are increasing at several bedrock wells within the City of Guelph. **Figure 3** and **Figure 4** below illustrate increasing chloride and sodium trends in select municipal wells within the City of Guelph. **Figure 3** shows chloride concentrations above half the Ontario Drinking Water Standard for chloride (125 mg/L) at almost all wells, with chloride concentrations approaching or at the Ontario Drinking Water Standard for chloride of 250 mg/L. **Figure 4** shows sodium concentrations above half the Ontario Drinking Water Standard for sodium (100 mg/L) at all wells, with sodium concentrations ranging from 120 to 170 mg/L in 2019.

Sodium and chloride are not identified as Drinking Water Issues at City of Guelph wells. The City of Guelph will continue to monitor sodium and chloride concentrations.

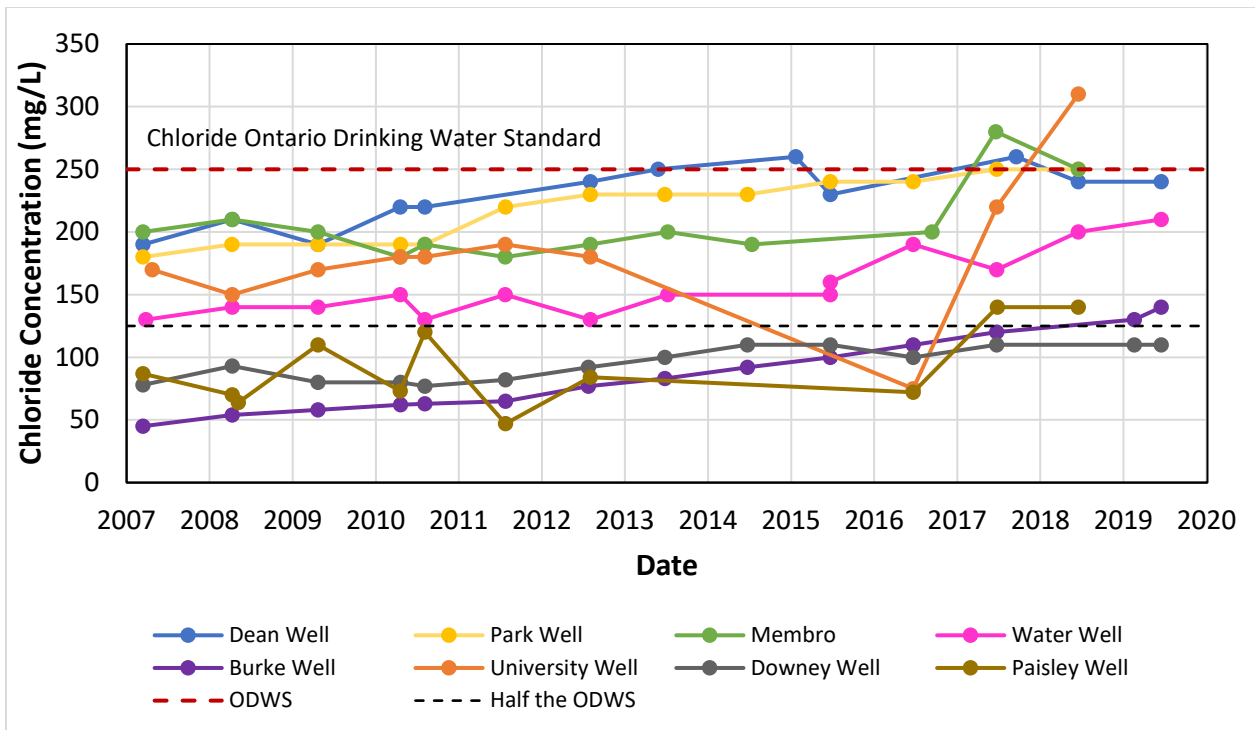


Figure 3: Chloride concentrations at select municipal wells within the City of Guelph

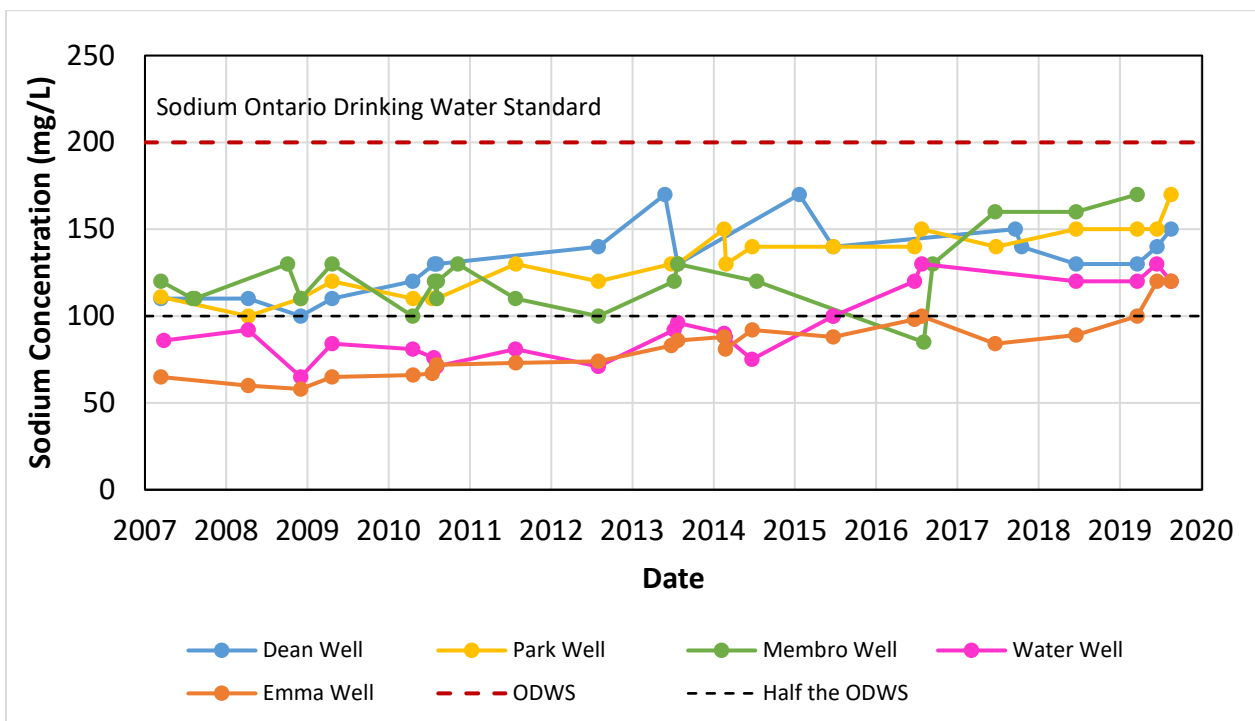


Figure 4: Sodium concentrations at select municipal wells within the City of Guelph

Increasing Sodium and Chloride Concentrations at Groundwater Wells in the Region of Waterloo

The Region of Waterloo has nine wellfields with elevated concentrations of chloride and sodium that resulted in the identification of Issues under the *Clean Water Act, 2006* and Technical Rules and delineation of ICAs. Impacted wellfields are generally within the urban areas of Cambridge, Kitchener and Waterloo. Chloride and sodium concentrations have been measured as high as 750 mg/L and 365 mg/L, respectively, at one municipal wellfield in the Region of Waterloo.

The William Street Wellfield is an example of one of the Waterloo's wellfields that is impacted by increasing chloride and sodium concentrations. **Figures 5** and **6** below illustrate the increasing chloride and sodium concentrations at the three water supply wells in the William Street wellfield. An increasing trend of chloride (**Figure 5**) is observed dating back to 1975. Current chloride concentrations are above the Ontario Drinking Water Standard of 250 mg/L with 2019 chloride concentrations reaching approximately 450 mg/L. An increasing trend of sodium (**Figure 6**) is observed dating back to 1980. Current sodium concentrations at two of the three wells are above the Ontario Drinking Water Standard of 200 mg/L with 2019 sodium concentrations reaching approximately 240 mg/L.

Figures 5 and **6** also present the results from well G5 of the Pinebush system in Cambridge and demonstrates the impacts from application of salt on parking lots. This well also shows increasing chloride and sodium trends from the 1980s. However, the concentrations dramatically increase in the middle to late 1990s, which is coincident with the construction of a large retail centre and associated large parking lots immediately adjacent to the well. Currently, chloride and sodium concentrations are higher than those in the William Street wellfield, being approximately 600 mg/L and 300 mg/L, respectively.

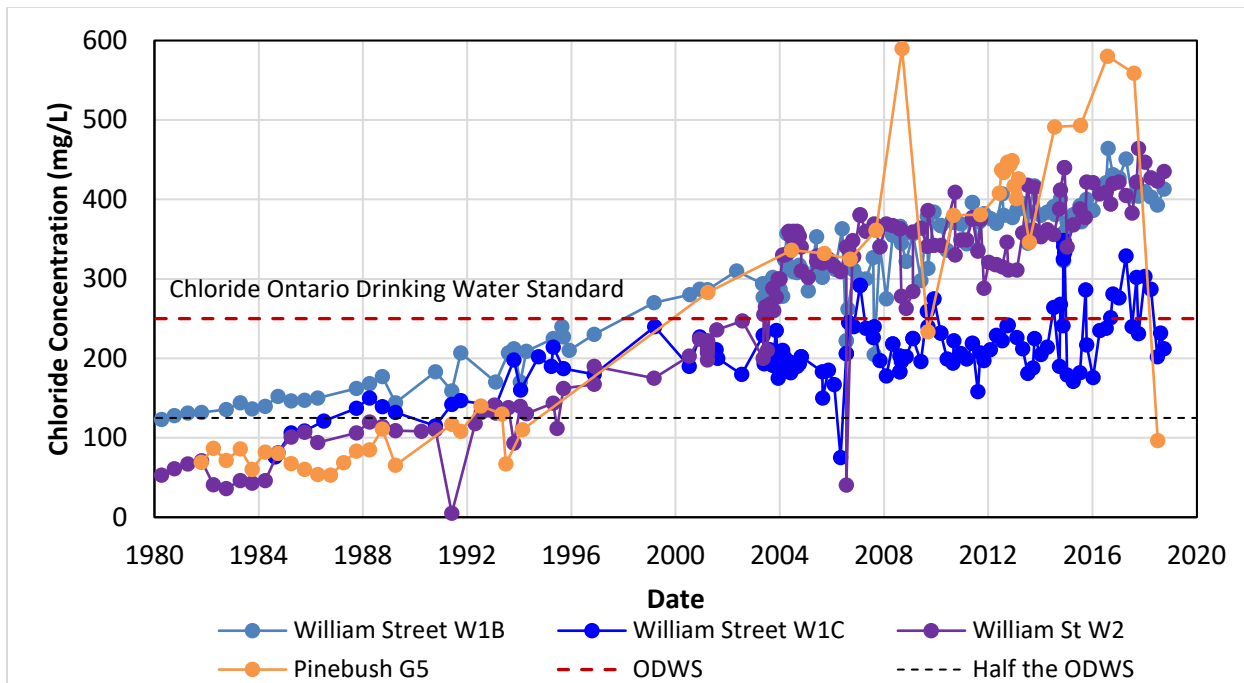


Figure 5: Chloride concentrations at the William Street and Pinebush Wellfields in the Region of Waterloo

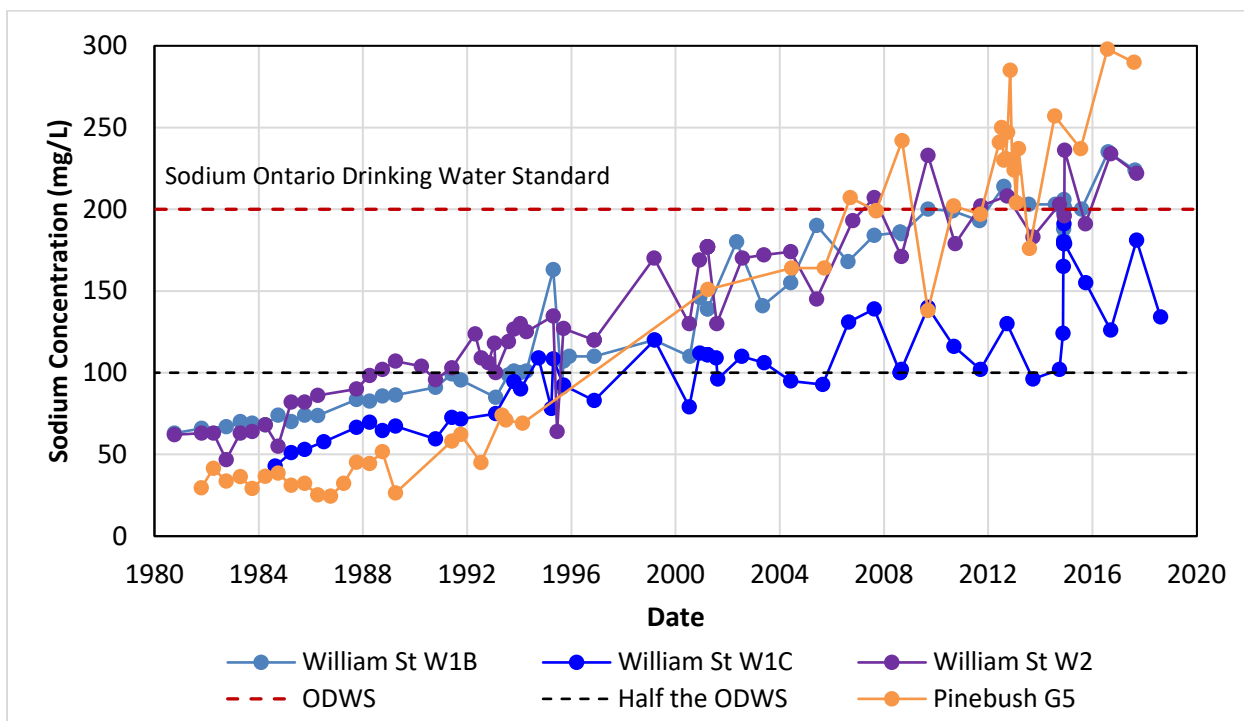


Figure 6: Sodium concentrations at the William Street Wellfield in the Region of Waterloo

Implications of Elevated Sodium and Chloride in the Environment

Elevated and increasing concentrations of chloride and sodium are becoming prevalent in small rural centres, medium sized cities, and large urban areas. The application of road salt (sodium chloride) is a common activity across LESPR given winter road conditions.

The application of salt on roads (and parking lots) enters into the environment in several ways. In many cases, the snow gets plowed onto the road shoulder which either enables it to infiltrate into the groundwater or the meltwater runs off into surface water features and/or into storm water management structures. While the primary purpose of these storm water facilities is to manage wet weather flows, they also receive meltwater during the winter months. If the stormwater structures include infiltration galleries and/or Low Impact Development (LID) infrastructure, some of the salty water conveyed to them during the winter months could infiltrate into the subsurface further exacerbating impacts to groundwater based municipal drinking water systems. Ultimately, all the winter maintenance chemicals eventually enter the natural water system.

Climate change is resulting in more extreme weather patterns with generally milder winters and increased frequencies of precipitation freeze/thaw cycles predicted, resulting in increased use of chemicals for winter road and parking lot maintenance. If left unmanaged, chloride and sodium from road salt will continue to contaminate drinking water sources.

A summary of negative impacts of road salt use for winter maintenance can be described as follows:

- increased concentrations of chloride and sodium in surface water and groundwater drinking water sources impairs the water taste and poses a risk to persons with high blood pressure and sodium restricted diets;
- premature wear to concrete sidewalks and structures (bridge decks, overpasses) which reduces overall life of such infrastructure and results in increased capital costs to maintain them on the order of \$250-\$480 per tonne of salt applied (Environmental Commissioner of Ontario, 218). and,
- damage of animal and plant cells' ability to carry out key ecological processes, changes to the weight of lake water to block the normal mixing process, which is essential for oxygen mixing, and harm to soil, gardens, vegetation and trees, which are necessary for shade as summers get hotter.

The only treatment process available to remove sodium and chloride from water is by reverse osmosis (desalinization) which is very expensive, energy intensive and creates a large volume of concentrate waste brine that must be discharged back into the environment. Accordingly, the only way to minimize the impacts from road salt on water resources and the environment is to reduce the amount being used.

Liability and Other Factors Influence the Amount of Salt Applied

In 2001, Environment and Climate Change Canada (ECCC) completed an assessment of the impacts of road salt and concluded that high releases of road salts were having an adverse effect on freshwater ecosystems, soil vegetation and wildlife. This assessment initiated the risk management process to address the risks posed to the environment by road salt. Subsequently, a Code of Practice was developed by ECCC and a parallel Synthesis of Best Practices document was created by the Transportation Association of Canada. The synthesis is a detailed resource on winter maintenance practices and supplements the recommendations made within the Code.

The two main recommendations of the Code are the development of salt management plans and implementation of best management practices. The Code is voluntary, only applies to road

organizations that use more than 500 tonnes of salt per year, and does not apply to application on parking lots or sidewalks. The ECCC assessment report concluded that application of salt on parking lots represents less than 10% of the total amount of salt being applied across the country. However, the contribution of parking lots in urban areas is much greater due to the increased density of paved surfaces and the higher potential application rates needed to address private property liability concerns. Specifically, in parts of Cambridge, Kitchener and Waterloo, salt loading to groundwater from parking lots is equal to or greater than the loading from roads.

Several pieces of legislation provide the legal context for application of winter maintenance chemicals. For roads, municipal transportation agencies are required under Section 44 of the Municipal Act to maintain roads in a “reasonable state of repair” and to maintain them in accordance with the Minimum Maintenance Standards. For building owners and managers, the Occupier’s Liability Act requires a duty of care to maintain “reasonably” safe conditions for persons while on their premises. However, unlike for roads, the definition of what is reasonably safe is not stipulated and there are no standards. For parking lots, what is reasonable is determined through awareness of legal case studies, which are not too frequent, as most slip and fall claims arising from winter maintenance on parking lots are settled out of court. In addition, for private contractors, a settlement made by their insurance company often results in increases in insurance costs and/or loss of insurance completely. To ensure on-going viability of their businesses, most contractors will err on the side of caution and over apply salt.

These two pieces of legislation provide a framework for over-application of salt that is condoned by the public as necessary to ensure the protection of the travelling public. There is little recognition that this over-application may not be necessary as protection from liability is paramount. This framework is further facilitated by the following:

- the Ontario Environmental Protection Act exempts salt from being considered a contaminant if it is used “... for the purpose of keeping the highway safe ...” meaning that applicators of salt do not have to be concerned about any environmental impacts by the amount they use;
- weather is difficult to predict and the weather that arrives can vary from that forecasted, which means that applications are often higher than needed in case the conditions are worse than forecasted;
- the science behind how salt works is poorly understood (i.e. it is the brine that breaks down ice, not rock salt itself, or that rock salt is not effective in temperatures below -10°C) or is ignored due to liability concerns;
- there is increasing societal demand to maintain black asphalt in southern Ontario at all times and conditions, provide alternate forms of travel with associated high winter maintenance requirements, and addressing accessibility concerns in winter for accessibility-challenged persons; and
- rock salt is on the order of 40% cheaper than the next cheapest winter de-icing chemical, forcing most municipalities and private contractors to default to this chemical even though other chemicals may improve winter maintenance performance with less environmental impact.

All of the above factors contribute to the public's perception that salt does not affect the environment and creates a “laissez-faire” attitude towards the presence of salt on paved surfaces.

Factors Influencing Winter Maintenance on Roads

As noted above, the obligations to maintain roads arise from the Municipal Act and Minimum Maintenance Standards. These provide some level of liability protection against municipalities in

the event of vehicle accidents or slip and fall claims on roads. However, the capacity of each municipal agency to adopt new and/or implement sophisticated practices varies and many municipalities have budget pressures which may limit the introduction of these practices. In addition, the impact of joint-and-several liability often results in municipalities paying the majority of the costs resulting from an accident even if their contribution to the fault is minimal, further exacerbating the financial challenges for municipalities. Finally, most municipalities set a single performance standard for each road class and segment and most if not all municipalities are not willing to change the standard if the road comes in and out of a vulnerable drinking water protection area. These issues coupled with the voluntary nature of the ECCC Code could force municipalities to minimize adoption of practices to meet the Code or not participate at all.

Application on roads also differs from that on parking lots for the following reasons:

- most winter maintenance on roads are performed by municipal staff and/or larger contracted companies (e.g. province of Ontario) which provide stable working conditions that can attract long term employees ensuring consistency in approach reducing the need to train revolving staff;
- there are a relatively modest number of road agencies compared to hundreds and possibly thousands of private contractors; and
- the passage of cars on roads assists in the break down of the solid winter maintenance chemicals into the liquid brine needed to break the bond between snow/ice and the underlying surface, resulting in the need for less salt to be applied.

All of these factors can help reduce the amount of salt applied on roads compared with that applied on parking lots.

Many road authorities have made considerable improvements in technology, operational approaches and training to help improve application and reduce impacts to the environment. However, further changes will be difficult to achieve in part due to the risks associated with liability. In addition, the benefit of these reductions could be off-set by changes in climate, e.g. more freezing rain events, which will necessitate changing the approach to winter maintenance on roads. Further, the expansion of the Minimum Maintenance Standards to sidewalks in 2018 could result in an overall increase in the amount of salt being applied to the road network. This will exacerbate the impact to municipal drinking water supply sources. In Ontario, several organizations are promoting changes to the liability framework including the following:

- the Association of Municipalities of Ontario submitted a letter to the Ontario Attorney General requesting reform of the joint and several liability framework in Ontario as it relates to municipalities;

<https://www.amo.on.ca/AMO-Content/Policy-Updates/2019/AMOSubmitsReporttoAttorneyGeneralonLiabilityandIns>).

- a combined working group representing the Ontario Good Roads Association and Conservation Ontario submitted a letter to the Ontario Attorney General requesting a review of the liability related to application of winter maintenance chemicals (**Appendix A**); and
- the World Wildlife Federation provided comments on the Province of Ontario's Environmental Plan as posted on the Environmental Registry advocating for review of the liability framework in Ontario.

http://assets.wwf.ca/downloads/ero_roadsalt_final_signon.pdf

These letters highlight the challenges with the liability framework in Ontario and support the discussion contained in this report. Undertaking this review in addition to strengthening training programs for road agencies to reduce winter maintenance chemical application rates without compromising road safety would assist with mitigating risks to municipal drinking water systems.

Factors Influencing Winter Maintenance on Parking Lots

As persons responsible for parking lots do not have standards or guidance to follow, the approach to winter maintenance for a particular event is based primarily on their experience which results in inconsistent application rates and/or levels of service for each parking lot. In most cases, building parking lots and sidewalks are maintained by private winter maintenance contractors and the nature of the winter maintenance services is determined by the contract with the property owner. These contracts often contain an unrealistic level of service requirements, e.g. maintain bare pavement at all times, which the contractor addresses through over-application of salt and/or chemical “plowing” which uses excessive amounts of salt to melt all the snow. The contracts often attempt to assign the liability to the contractor, which is very difficult legally, and may have pricing structures that financially incentivize the application of salt on the property.

Much of the private winter maintenance contracting industry is performed by small and medium sized businesses. As a result, and because of the tendering process to compete for clients, they are less likely to invest in best practices/advanced technologies as part of their operation in order to make them profitable. The individual contracting company is also trying to maintain their insurance coverage, have high staff turnover rates which reduces the incentive to invest in staff, and the competition/bid process results in little sharing of management practices within the industry. In addition, as contractors are a for-profit business, they will also attempt to maximize the number of contracts they have which forces them to over apply to meet the contract requirements in recognition that it could be many hours until they are able to service the property again. All of these factors contribute to excess application.

The primary purpose of most buildings and properties is not for winter maintenance but rather for some other manufacturing, service or retail operation. So winter maintenance is seen as a cost of doing business. For most building owners or tenants, the winter maintenance contract is awarded to the lowest cost bid which does not encourage contractors to consider alternate practices as these would require capital investments for new technologies and/or approaches. In addition, even if the owner/operator were interested in reducing application rates, they would be exposed to liability in the event of an injury if they had directed the contractor to apply the salt at a lower rate.

The liability framework and challenges noted above prevent Risk Management Officials from negotiating Risk Management Plans (RMPs) that require reductions in application rates. Some of the ways these barriers present themselves have been observed through the implementation of salt application RMPs in the Region of Waterloo where approximately 1,600 RMPs will need to be negotiated in chloride and/or sodium ICAs in the current approved Source Protection Plan and expanding to over 3,000 existing properties in the October 2019 proposed amended plan. These include the following.

- The approach taken by the Region of Waterloo to negotiate salt application RMPs is to use a collaborative, education approach in order to secure buy-in and achieve a more self-sustainable/self-regulating model of enforcement. This is needed because most persons involved in the negotiation have little to no experience in winter maintenance. This approach necessitates a greater time commitment as part of the negotiation as a level of education is required to raise the general knowledge on the impacts of salting to the point where risk mitigation practices can be implemented effectively.

- Currently, the RMPs for parking lots focus on contractor training and certification, i.e., Smart about Salt program, winter maintenance record keeping, and minimizing ice formation through site assessments. As in many cases these measures do not represent a drastic shift from current practices and because application rates cannot be stipulated in the RMP, only a minor amount of reduction in salt loading is likely to occur from these properties. This is much less than is needed to mitigate the impacts to the Region's wells with chloride impacts. Region of Waterloo staff have assessed the reduction in application rates needed to reduce and or stabilize chloride concentrations based on the amount currently observed in their supply wells. This amount is on the order of a further 10 percent reduction in application on roads above and beyond the 25 percent reduction achieved through advances in technology, and 30 to 50 percent reduction in application rates on parking lots at four of its well systems. This amount does not include the salt already in the groundwater that hasn't made it to the supply wells and will not reach the wells for a further 10 to 20 years.
- Since application rates cannot be specified in the RMP, it is difficult to require changes in operational methods and procedures. Examples of more effective practices may include pre-wetting, liquid application, and/or standardizing application rates. These practices have been adopted by many road agencies and may represent the most effective opportunity to achieve salt reduction targets.

As noted for roads, changes to the liability framework would provide building owners and contractors to consider the impacts to the environment and their assets in addition to liability considerations. However, unlike road agencies that are meeting ECCC's Code of Practice, there is no mechanism to ensure private contractors consider the environment in the determination of winter maintenance chemical application rates. The Smart About Salt Council has created the Smart About Salt program that encourages contractors to take training courses to improve their winter maintenance operations and to become certified demonstrating that they are implementing the program. And while this is helping to educate property owners and contractors, many of the recommended practices in the Smart About Salt program are not implemented by contractors due to the liability issues discussed above.

Opportunities for Liability and Training/Certification Program Changes

Several states in the US including Illinois and New Hampshire have changed the liability framework to help address the impacts to water resources due to the over-application of salt and as noted above several organizations are advocating a review of the liability framework in Ontario. Several other US states including Wisconsin have implemented various training, certification and/or education programs to help changes in the winter maintenance approach.

Specifically, the approach taken in New Hampshire is worth noting because the approach includes a combination of liability reform and training/certification. New Hampshire has introduced changes to the liability framework and developed a training/certification program to address the over-application of salt. This approach was required to gain permission to extend a state highway because a nearby lake had elevated chloride and sodium levels due to winter maintenance chemicals. The legislation requires contractors to undertake a one-day training program and become certified. In exchange, road and parking lot contractors would be provided partial protection against slip and fall and/or traffic accidents. This approach provides the liability relief and knowledge needed to change winter maintenance practices to minimize impact to water resources.

Changes Needed to the Source Water Protection Director's Technical Rules

The current Director's Technical Rules under the *Clean Water Act, 2006* provide significant drinking water threat (SDWT) thresholds based on road density or impervious surfaces. In many parts of the province, the thresholds did not trigger a SDWT for road salt application, despite a number of municipal drinking water wells that have increasing sodium and chloride concentration trends. As such, the original technical approach failed to recognise areas where trends were present that may result in an ICA. This problem was identified by the Region of Waterloo and an alternate approach to assessing the threat of road salt application was prepared and implemented for the Region of Waterloo. These changes were not implemented elsewhere in LESPR.

Similarly, road salt storage thresholds are currently set at 5,000 tonnes outside storage. This volume far exceeds typical storage volumes found at small to medium municipalities or private contractors. As a result, there are no known documented SDWTs for road salt storage outside of an ICA within LESPR. This is despite the fact that there are many municipal and private road salt storage facilities within wellhead protection areas of lesser volumes.

The practical result of these shortcomings in the Technical Rules is that the prescribed threats for road salt application and storage only get flagged as significant drinking water threats (SDWTs) when water quality data for a municipal drinking water system documents an increasing trend in chloride concentrations and the municipality declares the well as having an issue as defined by the Technical Rules. Since ICAs are only identified and delineated when there is a demonstrated water quality concern in a municipal well, this approach to protecting water quality in municipal drinking water systems becomes reactive rather than proactive.

Another concern is that the current Director's Technical Rules and Ontario Regulation 287/07 – General pursuant to the *Clean Water Act, 2006* lists the prescribed drinking water threat as “the application, handling and storage of road salt”. Although road salt is a common term used for winter maintenance chemicals, the term can be misleading. The term road salt is used interchangeably with rock salt. Salt application at parking lots or on walkways can be more of a concern due to over-application than application on roadways. Additionally, road salt commonly refers to sodium chloride; however, there are many alternative products that are also chloride based, for example, calcium chloride or magnesium chloride. Strict interpretation of the wording may lead some readers to consider only salt applied to roads and that is sodium chloride based is a prescribed drinking water threat pursuant to the *Clean Water Act, 2006* and Source Protection Plans. A simple solution could be to rename the prescribed drinking water threats to application, handling and storage of winter maintenance chemicals and then define the term in the regulation.

A complementary change to the above would be to make application of winter maintenance chemicals on roads, parking lots and sidewalks different circumstances in the Table of Circumstances to reflect the different approach to winter maintenance, the legislative and liability framework, and the mitigation measures possible associated with each surface type. This would also help highlight that it is more than just application of winter maintenance chemicals on roads that is affecting drinking water supply sources.

Since 2017, the Province has been considering changes to the Director's Technical Rules to address the shortcomings noted above. Recently, the Province held technical engagement sessions at the end of November 2019 to consult on proposed changes. Details at the time of preparing this report are limited, but we understand that the Province intends to lower the thresholds for the activities and circumstances that result in a significant drinking water threat for the handling and storage of salt and the application of salt. A summary of the proposed changes to road salt storage and application are presented in **Table 1**. Lake Erie Region staff and municipal representatives have participated in the stakeholder engagement sessions and there will be

opportunity for staff to comment on the proposed rule changes directly with Provincial staff and through the more formal Environmental Registry process later on.

| Table 1: Phase II Technical Rules Project: Proposed Amendments to Road Salt Storage and Application | | | | | |
|--|------------------------------|--|--|---|--|
| Topic | | Current Approach | Objective of the Amendment | Proposed Amendment | Notes |
| Prescribed Drinking Water Threats | Road Salt Application | Thresholds for impervious areas that identify significant risks are 80% in WHPAs scored 10 and 8% in IPZs scored 10. | Use an improved scientific approach to better identify areas where the application of road salt and storage of road salt may cause impairments to the quality of drinking water sources. | Thresholds for impervious areas that identify significant risks will be: 30% for WHPAs scored 10; 6% or greater for IPZ scored 10 and; 8% or greater for IPZ scored 9 to 10. | New thresholds were developed based on the analysis conducted in consultation with municipalities and SPAs/SPCs. |
| | Road Salt Storage | Volumes that identify significant risk are: 500 tonnes for IPZs scored 10; 5000 tonnes for IPZs scored 9 or greater, or WHPAs scored 10 for uncovered storages; covered storage can not be a significant risk. | | Using same scores of IPZs and WHPAs, proposed volumes are: (1) Any quantity for uncovered storages; (2) 100 kg or greater for covered storage excluding engineered facilities, (3) 500 tonnes or greater for engineered facility or structure. | Engineered facilities: permanent building anchored to a permanent foundation with an impermeable floor and that is completely roofed and walled. |

Recommended Actions to Address the Over-Application of Winter Maintenance Chemicals Report Recommendations

To address the above concerns, the following recommendations are provided to the Lake Erie Region Source Protection Committee for consideration:

THAT the Province of Ontario explore ways to reduce the factors that contribute to excess application of winter maintenance chemicals on road ways and parking lots through a review of the liability framework in Ontario.

THAT the Province of Ontario work with municipalities to strengthen training programs for road agencies that apply winter maintenance chemicals on roads and sidewalks to reduce application rates without compromising road safety that would assist with mitigating risks to municipal drinking water systems.

THAT the Province of Ontario require property owners and contractors responsible for maintaining safe parking lots and sidewalks be trained and certified in the application of winter maintenance chemicals.

THAT the Province of Ontario change Prescribed Drinking Water Threats, “the application of road salt” and “the handling and storage of road salt” to “the application of winter maintenance chemicals” and “the handling and storage of winter maintenance chemicals”, and define the term in the regulation.

THAT the Province of Ontario change the Table of Circumstances related to the application of winter maintenance chemicals to differentiate between application on roads, sidewalks and parking lots to reflect the different liability issues and the nature of winter maintenance conducted for each surface type.

AND THAT the Province of Ontario amend the Clean Water Act’s Director’s Technical Rules to enable municipalities to proactively protect their municipal drinking water supplies from the application and storage of winter maintenance chemicals.

Appendix A:

Letter from Ontario Good Roads Association and Conservation Ontario to the Ontario Attorney General requesting a review of the liability related to application of winter maintenance chemicals

November 1, 2019
The Honourable Doug Downey
Attorney General of Ontario
McMurtry-Scott Building, 11th Floor
720 Bay Street
Toronto, Ontario
M7A 2S9

Dear Attorney General Downey,

Re: Municipal Liability and Insurance Costs

The excessive use of road salt has been shown to impact our environment including aquatic life and drinking water sources, and also our infrastructure. In Ontario, several drinking water sources are identified under the *Clean Water Act* as being impacted by elevated levels of chloride, a chemical found in road salt.

In 2016, the Ontario Good Roads Association (OGRA) and Conservation Ontario (CO) established a multi-stakeholder 'Salt Vulnerable Areas' working group, that developed a road salt best practices guidance document in 2018 for consideration by municipalities of varying capacities and budgets. In 2019, the OGRA and CO established the 'Ontario Road Salt Management Advisory Committee' in order to further the discussions around the broader policy and legislative framework related to the use of road salt, and to provide recommendations to help find the balance between environmental considerations and road safety.

The following recommendations are provided for the consideration of the Attorney General of Ontario:

Address excessive liability issues for municipalities

Ontario municipalities follow a Council approved Level of Service to ensure the safety of the travelling public, and they proactively work with government agencies and others in order to optimize the amount of road salt usage that balances public road safety with environmental concerns. However, excessive liability issues severely impact municipalities (and other road operation authorities) and in many cases may limit their ability to further adjust the application of road salt in order to meet environmental legislation that protects water resources.

Therefore it is recommended that the applicable liability framework be reviewed, such that road operation authorities can continue to ensure road safety while also supporting a further reduction in the amount of road salt applied.

Establish standards and address excessive liability issues for private contractors

There are many others that also use road salt besides municipalities, such as private contractors maintaining privately or municipally owned parking lots. The private sector often uses excessive amounts of road salt, in order to avoid liability claims. Training programs such as 'Smart about Salt' are available to the private sector to help them optimize road salt usage, but these programs are not mandatory.

Therefore, it is recommended that standards for road salt application and storage be established for the private sector to help reduce road salt reaching our water bodies. Further, it is recommended that the applicable liability framework be reviewed, such that private contractors can continue to ensure safety during the winter while also supporting a significant reduction in the amount of road salt applied.

In summary, steps to address liability, combined with standards (where they do not exist) for road salt application, can help preserve our precious natural resources.

We thank you for the opportunity to provide comments. Please feel free to contact Chitra Gowda (cgowda@conservationontario.ca) at CO or Fahad Shuja (fahad@ogra.org) at OGRA if you have any questions.

Sincerely,

Joe W. Tierney
Executive Director
Ontario Good Roads Association

Kim Gavine
General Manager
Conservation Ontario

Sent via email to: doug.downeyco@pc.ola.org; magpolicy@ontario.ca

BY COURIER

January 13, 2020

Stephanie Paparella
Legislative Coordinator
Office of the City Clerk
City of Hamilton
71 Main Street West, 1st Floor
Hamilton, ON L8P 4Y5

Dear Ms. Paparella:

Re: Item 8 of the General Issues Committee Report 19-024, as amended

The information below is provided in response to your letter dated December 2, 2019, advising HCA of Hamilton City Council approval of Item 8 of the General Issues Committee report 19-024. Item 8(j) of that report noted:

“That staff send a copy of this motion to ask the Hamilton Conservation Authority, and the Ministry of Environment, Conservation and Parks, to release an inventory and summary of all water samples collected and retained related to Chedoke Creek and Cootes Paradise from January 2014 to present.”

This data was collected pursuant to an agreement with the Ministry of the Environment, Conservation, and Parks (MECP) for the purpose of identifying long-term trends in one of the main tributaries entering Cootes Paradise. The focus is on providing this information to support the Hamilton Harbour Remedial Action Plan (HHRAP) in identifying remedial action measures to improve water quality in Cootes Paradise and Hamilton Harbour, with the end goal of delisting the area as an Area of Concern.

Please find enclosed the following regarding the City’s motion to release an inventory and summary of all water samples collected and retained related to Chedoke Creek:

- Chedoke Creek All Data – 2014 to 2019 -The raw lab results from when HCA started the sampling program in the spring of 2014 until now, compiled into a spreadsheet with a separate worksheet for each sampling location (both routine biweekly sites AND temporary sites). Please note that up until April 2018, there was only 1 routine sampling site in Chedoke Creek (CP-11, located at Kay Drage Park pedestrian bridge near where the creek enters Cootes Paradise). In April 2018, HCA started routine sampling of 4 additional upstream locations in Chedoke Creek (CC-3, CC-5, CC-7 & CC-9).

Furthermore, for a short period of time in 2018, 4 temporary sites were added (CP-11 Outlet, CC-2, CC-5a & CC-10). The decision to increase sampling of Chedoke Creek was made between members of the HHRAP Cootes-Grindstone Water Quality Targets Sub-Committee.

- A map showing the location of the 11 routine biweekly year-round sampling sites, including the 5 sites in Chedoke Creek. Descriptions of the temporary sampling sites are provided at the beginning of the lab results.
- The final HHRAP year-end reports for the 2014, 2015, 2016 and 2017 sampling years. The draft 2018 report is currently being reviewed and can be distributed once finalized.

Please do not hesitate to contact me should you have any questions or if any clarification of the information is required.

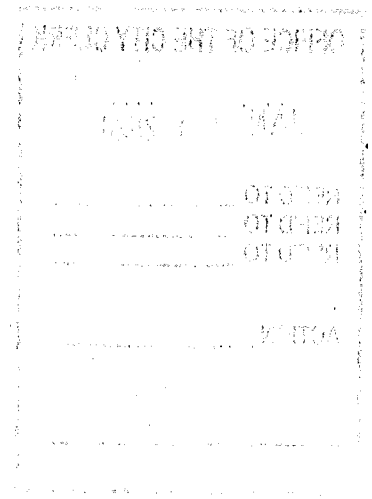
Sincerely,



Lisa Burnside
Chief Administrative Officer

Enclosures:

Chedoke Creek All Data – 2014 to 2019
Cootes Paradise Water Quality Monitoring for HHRAP map
2014 Tributary Monitoring for Cootes Paradise
2015 Tributary Monitoring for Cootes Paradise
2016/2017 Tributary Monitoring for Cootes Paradise
2017/2018 Tributary Monitoring for Cootes Paradise



Chedoke Creek All Data - 2014 to 2019

Sample Locations **Description**

- CP-11 Site CP-11 is located at the downstream end of Chedoke Creek at the Kay Drage Park pedestrian bridge before it drains into Cootes Paradise marsh.
- CC-3 Site CC-3 is located on the main branch of Chedoke Creek downstream of the Aberdeen Combined Sewer Overflow (CSO). This sampling site is located at the opening of an underground section of the channel.
- CC-5 Site CC-5 is located on a branch of Chedoke creek just upstream of the Stroud Park CSO.
- CC-7 Site CC-7 is located near one of the headwater branches of Chedoke Creek. This site is located at Princess Falls where the creek is piped out on the edge of the escarpment.
- CC-9 Site CC-9 is located on the main branch of Chedoke creek downstream of Chedoke Falls.

- CP-11 Outlet TEMPORARY Location during 2018 - Site CP-11 Outlet is located at the downstream end of the Glen Road box culvert.
- CC-2 TEMPORARY Location during 2018 - Site CC-2 is located between Longwood and Glen Road, upstream of where the CC-3 tributary enters the main channel.
- CC-5a TEMPORARY Location during 2018 - Site CC-5a is located downstream of the Royal Ave / Stroud Park CSO.
- CC-10 TEMPORARY Location during 2018 - Site CC-10 is located downstream of Lower Westcliff/ Lower Cliffview Falls in the Chedoke Creek golf course.

| Date | Ammonia + Ammonium as N mg/L | Nitrate as N mg/L | Nitrite as N mg/L | o-Phosphate as P mg/L | Phosphorus Total mg/L | Total Suspended Solids mg/L | Volatile Suspended Solids mg/L | Escherichia coli CFU/100mL | Temperature °C | Conductivity (µS/cm³) | Dissolved Oxygen (mg/L)(% Sat.) | pH | Turbidity (NTU) |
|------------|------------------------------|-------------------|-------------------|-----------------------|-----------------------|-----------------------------|--------------------------------|----------------------------|----------------|-----------------------|---------------------------------|------|-----------------|
| 2014-05-06 | 2.18 | 1.97 | 0.16 | <0.2 | 0.306 | 9.2 | 5.8 | 53000 | 13.5 | 1364 | 7.34 | 8.09 | |
| 2014-05-20 | 0.54 | 1.85 | 0.07 | <0.05 | 0.156 | 9.5 | 4.3 | 2600 | 12.13 | 1705 | 7.95 | 7.65 | |
| 2014-06-04 | 2.45 | 0.08 | 0.2 | <0.2 | 0.508 | 19 | 12.1 | 420000 | 21.5 | 795 | 1.21 | 7.55 | |
| 2014-06-16 | 3.04 | 0.32 | 0.16 | <0.2 | 0.66 | 21.5 | 16.5 | 120000 | 19.5 | 1119 | 4.06 | 7.51 | |
| 2014-07-02 | 0.9 | 0.82 | 0.1 | <0.2 | 0.306 | 29 | 16.6 | 1900 | 24.1 | 1286 | 5.3 | 7.86 | |
| 2014-07-14 | 0.19 | 0.65 | 0.04 | <0.05 | 0.296 | 25.9 | 15.4 | 60000 | 18.8 | 1044 | 7.85 | 7.8 | |
| 2014-07-28 | 3.15 | 1.35 | 0.09 | 0.28 | 0.956 | 89.6 | 30.1 | 1120000 | 18.84 | 739 | 5.57 | 7.55 | |
| 2014-08-11 | 0.41 | 1.06 | 0.18 | <0.2 | 0.642 | 52.4 | 40 | 260000 | 23.61 | 1049 | 16.22 | 8.7 | 26.1 |
| 2014-08-25 | 0.23 | 1.25 | 0.1 | <0.2 | 0.502 | 55.5 | 34.8 | 2900 | 22.64 | 1106 | 17.63 | 8.84 | 30.1 |
| 2014-09-08 | 2.54 | 1 | 0.07 | <0.2 | 0.397 | 7 | 4 | 120000 | 20.77 | 1153 | 2.3 | 7.59 | 9.5 |
| 2014-09-23 | 2.53 | 0.89 | <0.05 | <0.2 | 0.496 | 12.4 | 6.4 | 550000 | 16.18 | 1242 | 9.99 | 7.96 | 12.5 |
| 2015-04-09 | 6.11 | 2.93 | 0.11 | 0.92 | 1.25 | 48.5 | 25.3 | 900000 | 7.6 | 1943 | 12.74 | 7.98 | 63 |
| 2015-04-20 | 4.53 | 1.35 | 0.07 | 0.46 | 1.06 | 58 | 34.4 | 900000 | 9.38 | 1090 | 11.27 | 7.47 | 74.3 |
| 2015-05-04 | 0.55 | 1.89 | 0.07 | <0.2 | 0.113 | <3 | <3 | 5900 | 13.97 | 1891 | 11.97 | 7.41 | 55.6 |
| 2015-05-19 | 0.75 | 1.43 | 0.05 | <0.2 | 0.207 | 10.4 | 6.2 | 420 | 19.18 | 1790 | 7.98 | 7.78 | 41.3 |
| 2015-06-01 | 4.1 | 1.8 | 0.11 | 0.3 | 0.508 | 22.7 | 17.3 | 620000 | 14.18 | 1609 | 5.72 | 7.65 | 43 |
| 2015-06-15 | 2.86 | 0.11 | 0.19 | <0.2 | 0.501 | 28.7 | 10.6 | 650000 | 18.19 | 695 | 0.42 | 7.29 | 51 |
| 2015-06-30 | 2.87 | 1.54 | 0.43 | <0.2 | 0.465 | 5 | 5 | 490000 | 17.53 | 1694 | 1.88 | 7.49 | 41 |
| 2015-07-13 | 0.02 | 0.28 | 0.11 | <0.2 | 0.324 | 34 | 21.2 | 220 | 20.3 | 1420 | 16.14 | 7.92 | |
| 2015-07-27 | 1.05 | 0.17 | 0.15 | <0.2 | 0.475 | 27.6 | 20.4 | 110000 | 23.6 | 1444 | 6.65 | 7.85 | 181.3 |
| 2015-08-10 | 0.27 | 0.55 | 0.1 | <0.2 | 0.369 | 24.8 | 20 | 280 | 19.9 | 1477 | 5.27 | 6.79 | 92 |
| 2015-08-24 | 0.38 | 0.97 | 0.2 | <0.2 | 0.3 | 38.8 | 18.9 | 4700 | 22.42 | 1144 | 5.14 | 8.04 | 48.5 |
| 2015-09-08 | 4.72 | 0.87 | 0.12 | <0.2 | 0.826 | 28.8 | 14.4 | 889000 | 21.96 | 580 | 3.46 | 7.77 | 105 |
| 2015-09-22 | 1.56 | 0.84 | 0.16 | <0.2 | 0.306 | 14.4 | 10.4 | 1790 | 20.27 | 1283 | 9.26 | 7.28 | 221 |
| 2015-10-15 | 0.84 | 1.83 | 0.06 | <0.2 | 0.34 | 5.8 | 3.8 | 640 | 12.73 | 1482 | 10.33 | 7.65 | 104 |
| 2015-10-22 | 0.92 | 1.9 | 0.06 | <0.2 | 0.379 | 10.9 | 7 | 4800 | | | | | |
| 2015-11-03 | 0.51 | 2.12 | <0.05 | <0.2 | 0.299 | 15.2 | 2.6 | 4800 | 13.57 | 1610 | 8.73 | 7.57 | 30 |
| 2015-11-18 | 0.61 | 2.59 | <0.05 | <0.2 | 0.229 | 2.2 | 1.6 | 750 | 10.78 | 1643 | -- | 7.7 | -- |
| 2016-04-12 | 2.33 | 2.68 | <0.05 | <0.2 | 0.386 | 10.4 | 6.2 | 80000 | 8.47 | 2188 | 12.36 | -- | -- |
| 2016-04-28 | 4.4500 | 1.37 | <0.05 | 0.2 | 0.518 | 9.4 | 6.6 | 162000 | 10.1 | 1291 | | 7.5 | 9.7 |
| 2016-05-11 | 0.02 | 1.46 | 0.05 | <0.2 | 0.62 | 47.2 | 35.2 | 150 | | | | | |
| 2016-05-25 | 0.0200 | 0.59 | <0.05 | <0.2 | 0.762 | 70 | 45 | 10 | 22 | 1498 | | 8.42 | 31.2 |
| 2016-06-16 | 4.0600 | 0.8 | 0.28 | <0.2 | 0.716 | 29.8 | 22.2 | 1350000 | 17.7 | 600 | 1.93 | 7.28 | 21.1 |
| 2016-06-22 | 1.9800 | 0.28 | 0.08 | <0.2 | 0.521 | 18.8 | 12 | 12300 | 25.6 | 1179 | 6.93 | 7.71 | 12.3 |
| 2016-07-06 | 0.1600 | 0.59 | <0.05 | <0.2 | 0.632 | 57.5 | 45.5 | 150 | 26.8 | 1459 | 16.75 | 8.09 | 15.5 |
| 2016-07-19 | 0.4300 | 0.79 | 0.17 | <0.2 | 0.421 | 33.2 | 25.6 | 510 | 24.1 | 1372 | 17.31 | 8.19 | 17.3 |
| 2016-08-04 | 0.0400 | 0.67 | <0.05 | <0.2 | 1.04 | 104 | 89.6 | 130 | 27.9 | 1267 | 22.18 | 8.5 | 41.1 |
| 2016-08-17 | 3.2000 | 0.9 | <0.05 | <0.2 | 0.433 | 3.8 | 2.6 | 34000 | 24.9 | 683 | 0.94 | 7.44 | |
| 2016-08-31 | 0.7500 | 1.67 | <0.05 | <0.2 | 0.36 | 19.6 | 10.6 | 2200 | 23.4 | 1491 | 6.25 | 7.74 | 8.7 |
| 2016-09-14 | 0.8300 | 1.41 | 0.2 | <0.2 | 0.828 | 38 | 38 | 3400 | 21.8 | 1346 | 9.4 | 7.82 | 17.6 |
| 2016-09-28 | 2.1400 | 1.66 | 0.06 | <0.2 | 0.375 | 3.4 | 2.8 | 39000 | 17.4 | 982 | 4.92 | 7.43 | 6.1 |
| 2016-10-12 | 0.8100 | 2.49 | 0.19 | <0.2 | 0.232 | 4.4 | 1.6 | 600 | 14 | 1337 | 8.19 | 7.62 | 5.1 |
| 2016-10-26 | 0.5000 | 2.37 | <0.05 | <0.2 | 0.232 | 3.8 | 1.8 | 3500 | 7.6 | 1120 | 9.15 | 7.54 | 4.2 |
| 2016-11-09 | 2.4800 | 2.01 | 0.1 | <0.2 | 0.506 | 11.1 | 4.7 | 640000 | 11.5 | 1031 | 5.2 | 7.39 | 15.5 |
| 2016-11-24 | 1.2100 | 1.61 | <0.05 | <0.2 | 0.393 | 17.8 | 4.8 | 132000 | 7.8 | 566 | 10.9 | 7.82 | 20.6 |
| 2016-12-07 | 0.2300 | 1.82 | <0.05 | <0.2 | 0.226 | 8.9 | 3.3 | 21600 | 6.8 | 627 | 10.9 | 7.84 | 8.8 |
| 2016-12-21 | 0.1500 | 2.83 | <0.05 | <0.2 | 0.237 | 4.8 | 0.8 | 1100 | 0.9 | 1599 | 13.33 | 7.64 | 6.8 |
| 2017-01-04 | 0.0015 | 3.36 | <0.05 | | 0.189 | 15.5 | 5.9 | 5100 | 4.5 | 1780 | 12.47 | 7.88 | 11 |
| 2017-01-18 | 0.4700 | 2.84 | <0.05 | <0.2 | 0.171 | 11.6 | 3.6 | 13000 | 5.4 | 1248 | 10.96 | 7.68 | 13.7 |
| 2017-02-01 | 0.1200 | 2.22 | <0.05 | <0.2 | 0.158 | <4 | <4 | 600 | 3.4 | 3218 | 10.48 | 7.73 | 7.4 |
| 2017-02-15 | 0.3400 | 2.2 | <0.05 | <0.2 | 0.137 | 8 | 3.5 | 7000 | 4.9 | 1030 | 11.05 | 7.31 | 8.1 |
| 2017-03-01 | 2.8200 | 3.28 | <0.05 | <0.2 | 0.713 | 52 | 19 | 480000 | 10 | 946 | 10 | 7.82 | 35 |
| 2017-03-15 | 0.07 | 2.47 | <0.05 | 0.1 | 0.109 | <3 | <3 | 80 | 1.4 | 1187 | 12.85 | 7.89 | 4.6 |
| 2017-03-29 | 0.37 | 3.06 | <0.05 | 0.12 | 0.162 | 4.2 | 2.7 | 1500 | 9 | 1387 | 12.74 | 7.54 | 5.4 |
| 2017-04-12 | 8.02 | <0.05 | 0.9 | | 1.050 | 13.5 | 10.7 | 660000 | 11.8 | 1276 | 11.58 | 7.28 | 21 |
| 2017-04-27 | 0.52 | 1.48 | <0.05 | | 0.130 | 9.1 | 4.1 | 420 | 10.6 | 1314 | 12.08 | 7.55 | 7.4 |
| 2017-05-11 | 2.10 | 1.27 | 0.11 | | 0.294 | 5.0 | 4.5 | 5000 | 12.7 | | 10.93 | 7.27 | 4.6 |
| 2017-05-24 | 0.97 | 0.76 | 0.26 | | 0.283 | 10.2 | 9.3 | 41000 | 14.7 | 1062 | 10.64 | 7.01 | 9.4 |
| 2017-06-07 | 1.84 | 0.68 | 0.16 | | 0.454 | 12.0 | 11.7 | 440000 | 14.4 | 766 | 10.79 | 7.13 | 25.5 |
| 2017-06-21 | 0.83 | <0.1 | <0.1 | | 0.293 | 18.7 | 9.3 | 40000 | 20.5 | 611 | 9.55 | 7.3 | 21.5 |
| 2017-07-05 | 0.46 | 0.22 | 0.16 | | 0.466 | 41.3 | 27.3 | 4000 | 22.4 | 1035 | 8.55 | 7.25 | 16 |
| 2017-07-19 | 0.10 | 0.17 | 0.07 | | 0.359 | 28.9 | 21.2 | 800 | 22.4 | 1145 | 8.7 | 7.01 | 23.2 |
| 2017-07-27 | 0.75 | 0.77 | 0.12 | | 0.484 | 24.4 | 18.5 | 2680 | 19.9 | 1021 | 9.3 | 7.54 | 19.2 |
| 2017-08-16 | 0.28 | 0.84 | <0.1 | | 0.540 | 42.0 | 34.0 | 3400 | 21.2 | 1086 | 9.22 | 7.77 | 13.4 |
| 2017-08-30 | 0.87 | 0.99 | 0.13 | | 0.630 | 42.8 | 32.8 | 670 | 19.9 | 1290 | 9.22 | 7.85 | 16.9 |
| 2017-09-15 | 0.99 | 1.36 | 0.11 | | 0.740 | 29.0 | 22.0 | 1120 | 20.4 | 1259 | 9.15 | 7.59 | 13.5 |
| 2017-09-27 | 1.86 | 0.99 | 0.12 | | 0.709 | 32.3 | 24.3 | 200 | 23.6 | 1368 | 8.27 | 7.49 | 17.7 |
| 2017-10-11 | 3.02 | <0.1 | <0.1 | | 0.742 | 10.5 | 7.7 | 1540000 | 17.2 | 893 | 9.23 | 7.56 | 9.8 |

| Date | Ammonia + Ammonium as N mg/L | Nitrate as N mg/L | Nitrite as N mg/L | o-Phosphate as P mg/L | Phosphorus Total mg/L | Total Suspended Solids mg/L | Volatile Suspended Solids mg/L | Escherichia coli CFU/100mL | Temperature °C | Conductivity (µS/cm³) | Dissolved Oxygen (mg/L)(% Sat.) | pH | Turbidity (NTU) |
|------------|------------------------------|-------------------|-------------------|-----------------------|-----------------------|-----------------------------|--------------------------------|----------------------------|----------------|-----------------------|---------------------------------|------|-----------------|
| 2017-10-25 | 1.28 | 1.56 | <0.05 | | 0.485 | 8.8 | 5.0 | 210000 | 12.4 | 738 | 10.41 | 7.74 | 10.6 |
| 2017-11-08 | 0.38 | 2.50 | <0.1 | | 0.278 | 5.9 | 3.9 | 6400 | 8.1 | 885 | 12.21 | 7.46 | 9 |
| 2017-11-22 | 2.09 | 2.36 | <0.05 | | 0.495 | 11.5 | 7.0 | 1810000 | 7.7 | 844 | 11.52 | 7.69 | 11.2 |
| 2017-12-06 | 1.36 | 2.31 | <0.05 | | 0.377 | 8.8 | 5.2 | 83000 | 4.3 | 704 | 15.21 | 7.5 | 9.2 |
| 2017-12-20 | 0.71 | 2.58 | <0.05 | | 0.276 | 13.2 | 5.4 | 2600 | 4.6 | 1531 | 13.74 | 7.35 | 10.2 |
| 2018-01-03 | | | | | | | | | ice | | | | |
| 2018-01-17 | 0.37 | 2.96 | <0.05 | 0.16 | 0.202 | 6.0 | 3.0 | 12400 | 1.1 | 1162 | 16.17 | | 9 |
| 2018-02-13 | 3.45 | 0.86 | 0.06 | 0.46 | 0.708 | 19.2 | 12.4 | 11000 | | | | | |
| 2018-02-14 | 2.58 | 2.05 | 0.07 | 0.22 | 0.496 | 13.6 | 10.8 | 109000 | | | | | |
| 2018-02-28 | 1.23 | 2.68 | 0.05 | 0.22 | 0.276 | 9.7 | 5.1 | 37000 | | | | | |
| 2018-03-14 | 3.06 | 1.69 | 0.1 | 0.39 | 0.696 | 12.7 | 8.1 | 210000 | 3.7 | 1686 | 7.57 | 6.94 | 382.6 |
| 2018-03-28 | 6.62 | 1.48 | 0.15 | 0.39 | 0.951 | 20.6 | 15.9 | 420000 | 7.4 | 1075 | 6.97 | 7.16 | 16.2 |
| 2018-04-11 | 3.63 | 2.05 | <0.1 | | 0.582 | 13.1 | 9.5 | 290000 | 5.7 | 1091 | 9.58 | 7.57 | 10.5 |
| 2018-04-25 | 3.36 | 1.17 | <0.1 | | 0.801 | 26.4 | 14.8 | 580000 | 9.7 | 978 | 8.93 | 7.54 | 27.1 |
| 2018-05-09 | 8.65 | 0.48 | 0.17 | | 1.22 | 21.0 | 18.0 | 650000 | 12.8 | 1190 | 2.23 | 6.49 | 12.3 |
| 2018-05-23 | 5.36 | <0.1 | <0.1 | | 1.040 | 25.8 | 16.5 | 660000 | 13.7 | 1103 | 0.78 | 6.68 | 87.1 |
| 2018-06-07 | 13.10 | <0.05 | 0.12 | | 2.030 | 23.9 | 21.3 | 3600000 | 15.7 | 1155 | 0.68 | 6.74 | 59 |
| 2018-06-20 | 6.54 | <0.05 | <0.05 | | 1.390 | 36.3 | 28.4 | 2500000 | 16.6 | 1060 | 0.43 | 6.97 | 14.6 |
| 2018-07-04 | 5.88 | <0.05 | <0.05 | | 1.560 | 47.4 | 42.1 | 1160000 | 19.2 | 1194 | 0.54 | 6.89 | 67.4 |
| 2018-07-18 | 5.49 | <0.05 | <0.05 | | 1.610 | 60.8 | 55.7 | 1800000 | 21.1 | 1204 | 0.59 | 7.09 | 16.6 |
| 2018-08-01 | 1.39 | 1.48 | 0.37 | | 0.423 | 28.9 | 12.9 | 1000 | 22.6 | 1340 | 8.16 | 7.26 | 33.1 |
| 2018-08-15 | 1.16 | 1.05 | 0.11 | | 0.935 | 47.4 | 39.2 | 7300 | 25.7 | 1366 | 0.65 | 8.02 | 29.1 |
| 2018-08-29 | 1.15 | 1.35 | 0.1 | | 0.312 | 8.1 | 2.3 | 190 | 25.1 | 1311 | 1.97 | 7.42 | 24.7 |
| 2018-09-11 | 0.49 | 1.83 | <0.05 | | 0.24 | 14.4 | 4.4 | 12300 | 16.7 | 820 | 5.54 | 7.7 | 31.7 |
| 2018-09-27 | 0.69 | 1.53 | 0.43 | | 0.262 | 23.2 | 6 | 7200 | 16.1 | 860 | 5.48 | 7.66 | 30.1 |
| 2018-10-10 | 0.74 | 2.21 | 0.08 | | 0.24 | 7.6 | 2 | 830 | 19.4 | 1253 | 5.43 | 7.38 | 15.1 |
| 2018-10-31 | 0.21 | 0.77 | 0.06 | | 0.181 | 24.6 | 5.6 | 35000 | 11.8 | 227.1 | 10.3 | 8 | 42.6 |
| 2018-11-07 | 0.24 | 2.38 | <0.05 | | 0.186 | 6.4 | 2 | 900 | 9.6 | 877 | 10.45 | 8.11 | 11.5 |
| 2018-11-20 | 0.32 | 2.38 | <0.05 | | 0.28 | 6.2 | 1 | 1500 | 7.2 | 919 | 11.79 | 8.02 | 26.6 |
| 2018-12-05 | 0.28 | 2.2 | <0.05 | 0.26 | 0.282 | 7.9 | <0.8 | 11400 | 4.3 | 870 | 12.49 | 8.13 | 11.7 |
| 2018-12-19 | 0.22 | 2.44 | <0.05 | 0.3 | 0.3 | 3.6 | 1.4 | 100 | 3.5 | 755 | 12.42 | 7.92 | 9 |
| 2019-01-02 | 0.17 | 3.05 | <0.05 | 0.2 | 0.217 | 3.7 | 1.7 | 1900 | 3.6 | 811 | 12.92 | 8.07 | 10.8 |
| 2019-01-18 | | | | | | | | | ice | | | | |
| 2019-02-19 | 0.14 | 2.42 | <0.1 | | 0.257 | 2.9 | 1.4 | <10 | 1 | 1210 | 14.15 | 8.15 | 7.3 |
| 2019-03-01 | 0.11 | 2.39 | <0.05 | | 0.278 | 6.4 | 2.4 | <10 | 0.1 | 1232 | 14.71 | 8.12 | 15.7 |
| 2019-03-08 | | | | | | | | | ice | | | | |
| 2019-03-13 | 0.36 | 1.96 | <0.05 | | 0.252 | 11.2 | 2.2 | 3300 | 2.8 | 1053 | 12.59 | 8.04 | 25.4 |
| 2019-03-27 | 0.28 | 2.17 | <0.05 | 0.22 | 0.28 | 3.3 | 2 | <10 | 4.9 | 1117 | 12.4 | 8.18 | 5.8 |
| 2019-04-15 | 0.19 | 2.43 | <0.05 | 0.12 | 0.196 | 18.6 | 2.6 | 3700 | 7.2 | 758 | 11.98 | 8.09 | 27.7 |
| 2019-04-24 | 0.46 | 2.65 | 0.06 | 0.13 | 0.218 | 19.9 | 3.4 | 330 | 9.1 | 1136 | 9.74 | 8.27 | 8.5 |
| 2019-05-08 | 0.24 | 1.49 | <0.05 | 0.08 | 0.161 | 13.3 | 3.3 | 920 | 12.2 | 732 | 10.43 | 8.09 | 27.2 |
| 2019-05-22 | 0.02 | 0.78 | 0.05 | <0.05 | 0.214 | 42.2 | 15 | 80 | 15 | 934 | 22.05 | 8.28 | 22.3 |
| 2019-06-05 | 0.21 | 1.16 | <0.05 | 0.12 | 0.422 | 143 | 17.2 | 13300 | 15.2 | 771 | 12.31 | 8.06 | 105.2 |
| 2019-06-19 | 0.02 | 0.49 | 0.07 | <0.05 | 0.216 | 16.8 | 10.8 | 20 | 20.2 | 931 | 9.08 | 8.29 | 12.7 |
| 2019-07-03 | 0.11 | 0.25 | <0.05 | <0.05 | 0.135 | 12 | 5.6 | 1500 | 19.8 | 688 | 3.15 | 8.52 | 64.2 |
| 2019-07-17 | 0.08 | 0.6 | <0.05 | <0.05 | 0.264 | 23 | 11.5 | 1600 | 21.2 | 640 | 8.31 | 8.4 | 87 |
| 2019-07-31 | <0.01 | <0.05 | <0.05 | <0.05 | 0.137 | 23.4 | 10.6 | 900 | 22.3 | 748 | 4.76 | 8.11 | 37.6 |
| 2019-08-15 | 0.01 | 0.06 | <0.05 | <0.05 | 0.21 | 27.7 | 17.1 | 200 | 21.8 | 1008 | 10.31 | | 23.7 |
| 2019-08-28 | 0.15 | 0.97 | <0.05 | 0.14 | 0.284 | 19 | 8.3 | 8500 | 23 | 700 | 8.75 | | 18.5 |
| 2019-09-13 | 0.44 | 1.12 | <0.05 | 0.23 | 0.252 | 30.8 | 6.8 | 8000 | 16.8 | 666 | 6.31 | 7.5 | 60.2 |
| 2019-09-26 | 0.78 | 1.84 | 0.06 | 0.2 | 0.357 | 20 | 5.4 | 440 | 18.9 | 1017 | 5.91 | 7.59 | 38.2 |
| 2019-10-09 | 0.59 | 2.02 | 0.07 | 0.21 | 0.363 | 17.4 | 3.6 | 780 | 14.4 | 985 | 7.77 | 7.64 | 35.4 |
| 2019-10-23 | 0.39 | 1.32 | <0.05 | 0.25 | 0.35 | 28.3 | 5.4 | 8200 | 12.7 | 524 | 8.42 | 7.68 | 32.1 |
| 2019-11-06 | 0.46 | 2.73 | 0.09 | 0.32 | 0.389 | 8.5 | 2 | 690 | 8 | 840 | 10.22 | 7.89 | 10.1 |
| 2019-11-20 | 0.16 | 2.39 | 0.05 | 0.25 | 0.275 | 6.4 | 2 | 4700 | 8.4 | 1152 | 11 | 8 | 14.4 |
| 2019-12-04 | 0.2 | 2.55 | <0.05 | 0.2 | 0.261 | 13.2 | 3 | 4500 | 5.9 | 1815 | 11.79 | 8.05 | 9.5 |
| 2019-12-18 | 0.4 | 2.58 | <0.05 | 0.18 | 0.249 | 3.2 | <0.8 | 370 | 3 | 1342 | 13.09 | 6.44 | 6.5 |

| Date | Ammonia + Ammonium as N mg/L | Nitrate as N mg/L | Nitrite as N mg/L | o-Phosphate as P mg/L | Phosphorus Total mg/L | Total Suspended Solids mg/L | Volatile Suspended Solids mg/L | Escherichia coli CFU/100mL | Temperature °C | Conductivity (µS/cm³) | Dissolved Oxygen (mg/L)(% Sat.) | pH | Turbidity (NTU) |
|------------|------------------------------|-------------------|-------------------|-----------------------|-----------------------|-----------------------------|--------------------------------|----------------------------|----------------|-----------------------|---------------------------------|------|-----------------|
| 2018-04-11 | 0.34 | 2.37 | <0.1 | | 0.163 | 4 | 4 | 21900 | 4.8 | 879 | 11.21 | 7.79 | 4 |
| 2018-04-25 | 0.11 | 2.44 | <0.1 | | 0.123 | 10.6 | 5.6 | 16000 | 7.2 | 742 | 10.79 | 7.71 | 11.6 |
| 2018-05-09 | 0.24 | 2.58 | 0.06 | | 0.152 | 4.4 | 2.9 | 4800 | 9.5 | 970 | 9.22 | 7.78 | 1.4 |
| 2018-05-23 | 0.39 | 2.39 | 0.1 | | 0.193 | 6.7 | 3.6 | 590 | 10.5 | 955 | 8.85 | 7.8 | 3.2 |
| 2018-06-07 | 0.52 | 1.85 | 0.11 | | 0.267 | 2.9 | 2.9 | 15800 | 12.4 | 1016 | 7.78 | 7.55 | 1.9 |
| 2018-06-20 | 0.02 | 2.08 | <0.05 | | 0.223 | 10 | 3.4 | 3000 | 15.2 | 1069 | 9.3 | 7.96 | 7 |
| 2018-07-04 | 0.15 | 2.32 | 0.05 | | 0.26 | 8.5 | 4 | 81000 | 17.6 | 1182 | 8.41 | 7.86 | 6.6 |
| 2018-07-18 | 0.15 | 2.03 | 0.07 | | 0.264 | 14.1 | 6.1 | 104000 | 16.9 | 1071 | 8.29 | 7.85 | 7.3 |
| 2018-08-01 | 0.18 | 2.43 | 0.26 | | 0.246 | 9.6 | 4.7 | 610000 | 18.3 | 1113 | 8.16 | 7.91 | 7.1 |
| 2018-08-15 | 0.02 | 2.24 | <0.05 | | 0.271 | 16 | 4.4 | 5000 | 19 | 1052 | 8.78 | 8 | 8.2 |
| 2018-08-29 | 0.04 | 1.55 | <0.05 | | 0.167 | 10.5 | 3.3 | 110000 | 19.5 | 1026 | 8.53 | 8.09 | 5.1 |
| 2018-09-11 | <0.01 | 2.23 | <0.05 | | 0.208 | 12 | 3.2 | 6400 | 16.1 | 960 | 9.7 | 8.07 | 8.7 |
| 2018-09-27 | <0.01 | 2.44 | 0.11 | | 0.248 | 8.6 | 1.8 | 800 | 15 | 1013 | 9.91 | 7.64 | 5.5 |
| 2018-10-10 | 0.01 | 2.6 | 0.16 | | 0.23 | 6.4 | 3.2 | 810 | 17.1 | 1129 | 9.28 | 7.76 | 5.2 |
| 2018-10-31 | 0.01 | 1.32 | <0.05 | | 0.291 | 24.2 | 8.1 | 7000 | 11.1 | 464 | 10.61 | 7.87 | 37.6 |
| 2018-11-07 | 0.06 | 2.32 | <0.05 | | 0.123 | <3 | <3 | 4100 | 10.1 | 969 | 10.85 | 7.98 | 2.2 |
| 2018-11-20 | 0.08 | 2.03 | <0.05 | | 0.152 | <2 | <2 | 11000 | 6.9 | 868 | 11.79 | 8.01 | 2.2 |
| 2018-12-05 | <0.01 | 3.13 | <0.05 | 0.12 | 0.126 | <3 | <3 | 1070 | 5.9 | 866 | 12.24 | 8.02 | 1.5 |
| 2018-12-19 | 0.02 | 2.79 | <0.05 | 0.19 | 0.192 | 2.4 | 1.8 | 1790 | 4.8 | 797 | 12.31 | 7.92 | 2.6 |
| 2019-01-02 | 0.01 | 3.73 | <0.05 | 0.13 | 0.129 | 2.9 | 1.8 | 1300 | 4.6 | 780 | 12.62 | 8 | 2 |
| 2019-01-18 | 0.06 | 2.96 | <0.05 | | 0.177 | <2 | <2 | 1890 | 2.5 | 818 | 13.17 | 8 | 1.3 |
| 2019-02-19 | 0.11 | 3.3 | <0.1 | | 0.118 | 3 | 2.1 | 4100 | 1.9 | 1326 | 13.42 | 8 | 4.9 |
| 2019-03-01 | 0.04 | 3.19 | <0.05 | | 0.117 | 4.2 | 1.6 | 200 | 2.1 | 1500 | 13.08 | 7.95 | 6.1 |
| 2019-03-08 | 0.02 | 3.02 | <0.05 | | 0.159 | 5.6 | 1.4 | 600 | 1.2 | 870 | 13.41 | 8 | 5.8 |
| 2019-03-13 | 0.08 | 3.36 | <0.05 | | 0.099 | 2.7 | 1.6 | 1500 | 2.9 | 1500 | 13.02 | 7.94 | 1.2 |
| 2019-03-27 | 0.02 | 3.29 | <0.05 | <0.05 | 0.084 | 24.7 | 5.2 | 670 | 3.5 | 970 | 12.59 | 8.12 | 28.1 |
| 2019-04-15 | 0.01 | 3.35 | <0.05 | 0.07 | 0.093 | 4.6 | 1.6 | 990 | 5.5 | 787 | 11.96 | 7.88 | 3.2 |
| 2019-04-24 | | | | | | | | | | | | | |
| 2019-05-08 | <0.01 | 3.38 | <0.05 | 0.06 | 0.07 | <3 | <3 | 120 | 8 | 814 | 11.47 | 7.95 | 2.1 |
| 2019-05-22 | 0.01 | 3.06 | <0.05 | 0.13 | 0.151 | 1.6 | 1.2 | 1700 | 11.7 | 630 | 11.41 | 8.12 | 2.1 |
| 2019-06-05 | 0.28 | 0.66 | <0.05 | 0.09 | 0.407 | 136 | 32.1 | 19000 | 16.4 | 258 | 9.19 | 8.09 | 85.7 |
| 2019-06-19 | 0.01 | 2.15 | <0.05 | 0.16 | 0.18 | 8 | 3 | 640 | 13 | 967 | 9.53 | 8.16 | 6.4 |
| 2019-07-03 | 0.3 | 1.91 | <0.05 | 0.29 | 0.37 | 15.6 | 7.6 | 60000 | 16.5 | 964 | 7.96 | 8.07 | 11.8 |
| 2019-07-17 | 0.05 | 1.41 | <0.05 | 0.21 | 0.319 | 59.6 | 15.2 | 32000 | 17.7 | 534 | 9 | 8.05 | 42.4 |
| 2019-07-31 | 0.28 | 2.38 | 0.27 | 0.41 | 0.447 | 8.7 | 4.2 | 36000 | 17.4 | 817 | 8.91 | 8.84 | 6.7 |
| 2019-08-15 | 0.18 | 2.22 | <0.05 | 0.41 | 0.439 | 14.1 | 5.1 | 8800 | 16.5 | 880 | 9.11 | | 8.7 |
| 2019-08-28 | 0.15 | 2.02 | <0.05 | 0.37 | 0.417 | 6.3 | 3.5 | 42000 | 17.8 | 910 | 8.54 | | 5.1 |
| 2019-09-13 | 0.06 | 2.24 | <0.05 | 0.36 | 0.36 | 8.2 | 4 | 23000 | 15.9 | 866 | 9.62 | 8.03 | 7.5 |
| 2019-09-26 | 0.07 | 2.78 | <0.05 | 0.42 | 0.469 | 7.3 | 3.7 | 11000 | 16.3 | 851 | 8.88 | 7.99 | 6.4 |
| 2019-10-09 | 0.15 | 2.45 | <0.05 | 0.46 | 0.479 | 7.3 | 3.2 | 35000 | 13.1 | 790 | 9.97 | 8.06 | 5 |
| 2019-10-23 | <0.01 | 2.07 | <0.05 | 0.39 | 0.409 | 5.6 | 2.8 | 740 | 11.4 | 739 | 10.7 | 8.11 | 5.3 |
| 2019-11-06 | <0.01 | 3.12 | <0.05 | 0.38 | 0.414 | 3.4 | 2.1 | 560 | 9.2 | 842 | 11.34 | 8.03 | 3.8 |
| 2019-11-20 | <0.01 | 2.88 | <0.05 | 0.27 | 0.286 | 3.1 | 1.3 | 4100 | 8.6 | 1014 | 11.38 | 8.09 | 2.8 |
| 2019-12-04 | 0.01 | 3.01 | <0.05 | 0.25 | 0.315 | 48.2 | 7.9 | 2600 | 7.2 | 1255 | 11.52 | 8.05 | 28.2 |
| 2019-12-18 | 0.04 | 3.26 | <0.05 | 0.27 | 0.303 | 5.1 | 2.4 | 32700 | 4.2 | 1010 | 12.8 | 6.47 | 4.8 |

| Date | Ammonia + Ammonium as N mg/L | Nitrate as N mg/L | Nitrite as N mg/L | o-Phosphate as P mg/L | Phosphorus Total mg/L | Total Suspended Solids mg/L | Volatile Suspended Solids mg/L | Escherichia coli CFU/100mL | Temperature °C | Conductivity (µS/cm) | Dissolved Oxygen (mg/L)(% Sat.) | pH | Turbidity (NTU) |
|------------|------------------------------|-------------------|-------------------|-----------------------|-----------------------|-----------------------------|--------------------------------|----------------------------|----------------|----------------------|---------------------------------|------|-----------------|
| 2018-04-11 | <0.1 | 1.61 | <0.1 | | 0.16 | <2 | <2 | 130 | 5.3 | 863 | 14.35 | 8.28 | 3.7 |
| 2018-04-25 | 0.03 | 1.45 | <0.1 | | 0.128 | 17.3 | 4.3 | 2800 | 7.8 | 697 | 11.62 | 8.06 | 21.9 |
| 2018-05-09 | <0.1 | 1.92 | <0.05 | | 0.154 | 4 | 1.4 | 440 | 13.3 | 845 | 14.41 | 8.51 | 6.9 |
| 2018-05-23 | <0.01 | 2.33 | <0.1 | | 0.202 | 10 | 1.7 | 820 | 14.1 | 798 | 11.87 | 8.32 | 8.3 |
| 2018-06-07 | 0.04 | 2.59 | <0.05 | | 0.341 | 15.7 | 3.1 | 600 | 15.9 | 853 | 9.91 | 7.94 | 18.5 |
| 2018-06-20 | 0.02 | 2.79 | <0.05 | | 0.436 | 12.9 | 2.3 | 3600 | 15.9 | 790 | 9.52 | 7.99 | 20.3 |
| 2018-07-04 | 0.03 | 2.65 | <0.05 | | 0.398 | 13.7 | 3.4 | 3200 | 20 | 846 | 9.88 | 8.08 | 18.5 |
| 2018-07-18 | 0.09 | 1.95 | <0.05 | | 0.361 | 12.3 | 1.8 | 580 | 18.5 | 655 | 9.76 | 8.2 | 15.3 |
| 2018-08-01 | 0.1 | 2.44 | <0.05 | | 0.351 | 8.5 | 1.3 | 330 | 19 | 709 | 9.09 | 8.13 | 6.5 |
| 2018-08-15 | 0.01 | 2.53 | 0.16 | | 0.396 | 7 | 1.6 | 500 | 19.7 | 750 | 9.75 | 8.23 | 6.4 |
| 2018-08-29 | 0.01 | 2.96 | 0.11 | | 0.397 | 6.2 | 1.8 | 520 | 20.6 | 811 | 8.88 | 8.07 | 5.4 |
| 2018-09-11 | 0.01 | 1.77 | 0.72 | | 0.196 | 8.4 | 2.8 | 250 | 16.8 | 781 | 9.62 | 8.01 | 9.6 |
| 2018-09-27 | <0.01 | 2.22 | <0.05 | | 0.357 | 5.2 | 1 | 650 | 15.9 | 693 | 10.13 | 8.01 | 6.5 |
| 2018-10-10 | <0.01 | 3.08 | <0.05 | | 0.393 | 7.2 | 2 | 700 | 18.1 | 767 | 9.4 | 7.86 | 12.2 |
| 2018-10-31 | 0.02 | 1.36 | <0.05 | | 0.206 | 23.5 | 4.6 | 6200 | 11.2 | 349 | 10.71 | 8 | 47 |
| 2018-11-07 | <0.01 | 2.26 | <0.05 | | 0.18 | 4 | 2 | 900 | 10.2 | 698 | 11.2 | 8.13 | 18 |
| 2018-11-20 | <0.01 | 2.35 | <0.05 | | 0.362 | 27.1 | 2.9 | 600 | 7 | 721 | 12 | 8.1 | 33 |
| 2018-12-05 | <0.01 | 2.59 | <0.05 | 0.26 | 0.271 | 4.8 | 0.8 | 170 | 5.9 | 770 | 12.48 | 8.03 | 8.3 |
| 2018-12-19 | <0.01 | 2.6 | <0.05 | 0.46 | 0.471 | 8.9 | 1.4 | 950 | 5.9 | 548 | 12.53 | 8.1 | 11.4 |
| 2019-01-02 | <0.01 | 2.37 | <0.05 | 0.16 | 0.167 | 8.3 | 2.2 | 630 | 4.2 | 738 | 13.09 | 8.08 | 9.2 |
| 2019-01-18 | 0.04 | 2.51 | <0.05 | 0.67 | 0.753 | 87.2 | 11.6 | 850 | 4 | 653 | 13.07 | 8.09 | 70 |
| 2019-02-19 | 0.02 | 2.09 | <0.1 | | 0.302 | 2.6 | 1.4 | 1400 | 2.5 | 842 | 14.25 | 8.25 | 5.3 |
| 2019-03-01 | 0.01 | 2.21 | <0.05 | | 0.306 | 3.6 | 1.4 | 180 | 3 | 970 | 13.08 | 8.19 | 5 |
| 2019-03-08 | 0.01 | 2.1 | <0.05 | | 0.436 | 5.8 | 1.6 | 210 | 1.5 | 490 | 14.58 | 8.27 | 5.2 |
| 2019-03-13 | <0.01 | 1.8 | <0.05 | | 0.209 | 11.8 | 2.4 | 740 | 2.9 | 905 | 13.54 | 8.01 | 12.7 |
| 2019-03-27 | 0.08 | 1.59 | <0.05 | 0.4 | 0.513 | 22.2 | 4.9 | 1160 | 5.2 | 616 | 14.4 | 8.44 | 31.8 |
| 2019-04-15 | 0.01 | 1.88 | <0.05 | 0.1 | 0.153 | 21.2 | 3.6 | 1710 | 5.9 | 737 | 12.4 | 7.99 | 36.1 |
| 2019-04-24 | <0.01 | 2.25 | <0.05 | 0.13 | 0.16 | 5.6 | 1.8 | 170 | 9.2 | 1049 | 11.45 | 8.2 | 6.9 |
| 2019-05-08 | <0.01 | 1.74 | <0.05 | 0.1 | 0.135 | 3 | 1 | 670 | 10.8 | 810 | 12.04 | 8.15 | 9 |
| 2019-05-22 | <0.01 | 3.06 | <0.05 | 0.19 | 0.225 | 1.8 | <0.8 | 250 | 10 | 870 | 12.19 | 8.19 | 3.2 |
| 2019-06-05 | 0.51 | 1.48 | 0.05 | 0.22 | 3.66 | 3660 | 337 | 78000 | 14.4 | 257 | 9.69 | 8.29 | 1037 |
| 2019-06-19 | 0.02 | 2.88 | <0.05 | 0.38 | 0.447 | 13.1 | 3.3 | 1720 | 15.4 | 788 | 9.3 | 8.46 | 26.8 |
| 2019-07-03 | 0.03 | 2.04 | <0.05 | 0.27 | 0.311 | 8.4 | 2.8 | 3700 | 17.4 | 969 | 8.73 | 8.08 | 15.2 |
| 2019-07-17 | 0.02 | 1.15 | <0.05 | 0.17 | 0.327 | 79.6 | 13.3 | 22000 | 17.9 | 526 | 9.16 | 8.1 | 95.4 |
| 2019-07-31 | 0.02 | 1.76 | <0.05 | 0.19 | 0.306 | 64.2 | 6 | 3800 | 19.7 | 720 | 8.96 | 9.53 | 70.4 |
| 2019-08-15 | 0.02 | 2.56 | <0.05 | 0.4 | 0.428 | 7 | 2.3 | 1390 | 17.5 | 824 | 9.08 | | 12.2 |
| 2019-08-28 | <0.01 | 1.94 | <0.05 | 0.31 | 0.347 | 9.3 | 2.8 | 1000 | 17.9 | 917 | 8.86 | | 16.7 |
| 2019-09-13 | 0.01 | 1.75 | <0.05 | 0.24 | 0.236 | 7.8 | 2 | 1800 | 16.1 | 885 | 9.68 | 8.13 | 13.5 |
| 2019-09-26 | 0.02 | 3.45 | <0.05 | 0.52 | 0.606 | 16.7 | 4.8 | 2100 | 16 | 835 | 9.2 | 8.29 | 27 |
| 2019-10-09 | 0.02 | 2.93 | 0.29 | 0.44 | 0.457 | 14.3 | 4 | 970 | 11.6 | 817 | 10.7 | 8.16 | 10.8 |
| 2019-10-23 | 0.02 | 1.75 | <0.05 | 0.27 | 0.284 | 7.4 | 1.6 | 930 | 10.9 | 754 | 10.84 | 8.24 | 12.9 |
| 2019-11-06 | <0.01 | 2.35 | <0.05 | 0.24 | 0.26 | 3.6 | 1.9 | 1700 | 7.5 | 789 | 12.04 | 8.18 | 7.8 |
| 2019-11-20 | <0.01 | 2.25 | <0.05 | 0.19 | 0.22 | 9.1 | 1.8 | 920 | 8 | 1022 | 11.76 | 8.2 | 10.1 |
| 2019-12-04 | <0.01 | 2.35 | <0.05 | 0.17 | 0.222 | 17.1 | 4.5 | 3500 | 6.2 | 1495 | 12.11 | 8.14 | 19.2 |
| 2019-12-18 | <0.01 | 2.5 | <0.05 | 0.18 | 0.205 | 8.2 | 1.1 | 620 | 2.4 | 1045 | 13.69 | 6.45 | 17.5 |

Site change from upstream of Stround CSO to Downstream of CSO (CC-5a). All Subsequent Data is at Site CC-5a

| Date | Ammonia + Ammonium as N mg/L | Nitrate as N mg/L | Nitrite as N mg/L | o-Phosphate as P mg/L | Phosphorus Total mg/L | Total Suspended Solids mg/L | Volatile Suspended Solids mg/L | Escherichia coli CFU/100mL | Temperature °C | Conductivity (µS/cm³) | Dissolved Oxygen (mg/L)(% Sat.) | pH | Turbidity (NTU) |
|------------|------------------------------|-------------------|-------------------|-----------------------|-----------------------|-----------------------------|--------------------------------|----------------------------|----------------|-----------------------|---------------------------------|------|-----------------|
| 2018-04-11 | 0.02 | 1.59 | <0.1 | | 0.075 | 2.2 | 1.6 | 650 | 5.7 | 1094 | 12.59 | 8.44 | 3.6 |
| 2018-04-25 | 0.09 | 0.82 | <0.1 | | 0.101 | 27 | 5 | 6600 | 8.3 | 508 | 11.72 | 7.73 | 31 |
| 2018-05-09 | 0.01 | 1.79 | 0.06 | | 0.076 | 3 | 2.2 | 1020 | 11.3 | 1316 | 10.99 | 8.26 | 1.8 |
| 2018-05-23 | 0.09 | 1.65 | <0.1 | | 0.119 | 9.8 | 1.6 | 4200 | 14.2 | 1311 | 10.2 | 8.24 | 5.2 |
| 2018-06-07 | 0.16 | 1.91 | 0.16 | | 0.207 | 5.9 | 2.3 | 570 | 13.7 | 1513 | 10.16 | 8.07 | 6.8 |
| 2018-06-20 | 0.05 | 2.07 | 0.28 | | 0.25 | 8 | 2.8 | 4600 | 16.9 | 1478 | 9.41 | 8.07 | 9.6 |
| 2018-07-04 | 0.02 | 2.26 | <0.05 | | 0.18 | 4.9 | 3.7 | 6100 | 15.6 | 1564 | 9.11 | 8.2 | 6.1 |
| 2018-07-18 | 0.04 | 0.56 | <0.05 | | 0.034 | 11.3 | 2.5 | 1400 | 17.4 | 1485 | 9.43 | 8.19 | 6.7 |
| 2018-08-01 | 0.02 | 2.66 | 0.76 | | 0.172 | 10.6 | 1.7 | 950 | 20.2 | 1638 | 9.38 | 8.08 | 2.3 |
| 2018-08-15 | 0.01 | 2.29 | <0.05 | | 0.191 | 4.2 | 1.4 | 1600 | 20.2 | 1635 | 9.08 | 8.27 | 2.3 |
| 2018-08-29 | 0.01 | 2.43 | <0.05 | | 0.195 | 2.5 | 1.2 | 440 | 22.4 | 1621 | 10.46 | 7.93 | 10.3 |
| 2018-09-11 | 0.04 | 1.68 | 0.16 | | 0.146 | <2 | <2 | 6000 | 15.9 | 641 | 10.38 | 7.62 | 3.7 |
| 2018-09-27 | 0.07 | 2.21 | 0.1 | | 0.243 | 8.8 | 2.2 | 4700 | 14.3 | 1047 | 10.36 | 7.27 | 11.2 |
| 2018-10-10 | 0.02 | 2.63 | <0.05 | | 0.263 | 1.6 | 1.6 | 3800 | 17.5 | 1449 | 8.23 | 6.95 | 4.3 |
| 2018-10-31 | 0.2 | 0.5 | <0.05 | | 0.19 | 42.8 | 7.2 | 11100 | 10.6 | 132.2 | 10.96 | 8.47 | 38.8 |
| 2018-11-07 | 0.14 | 2.43 | 0.77 | | 0.177 | <3 | <3 | 600 | 8.2 | 1007 | 11.47 | 8.19 | 4.1 |
| 2018-11-20 | 0.27 | 2.01 | <0.05 | | 0.217 | <2 | <2 | 30 | 5.3 | 1025 | 12.07 | 7.46 | 2.6 |
| 2018-12-05 | 0.12 | 2.34 | <0.05 | 0.12 | 0.129 | <2 | <2 | 840 | 2.8 | 1045 | 12.85 | 8.51 | 2.5 |
| 2018-12-19 | 0.15 | 2.18 | <0.05 | 0.15 | 0.159 | <2 | <2 | 2100 | 3.6 | 1148 | 12.06 | 8.75 | 5.5 |
| 2019-01-02 | 0.13 | 2.45 | <0.05 | 0.07 | 0.09 | 1.6 | 0.8 | 9400 | 2.3 | 917 | 13.52 | 8.37 | 3.7 |
| 2019-01-18 | | | | | | | | 11700 | 1.4 | 1029 | 13.08 | 8.23 | 3.2 |
| 2019-02-19 | 0.26 | 1.8 | <0.1 | | 0.106 | <2 | <2 | 3500 | -0.1 | 1260 | 14.69 | 8.17 | 20.9 |
| 2019-03-01 | 0.17 | 2.06 | <0.05 | | 0.094 | 2.2 | 0.8 | 7000 | -0.3 | 1473 | 14.08 | 8.11 | 3.3 |
| 2019-03-08 | 0.71 | 1.97 | 0.07 | | 0.215 | 23.4 | 4 | 39000 | 0.5 | 1261 | 13.8 | 8.32 | 13.3 |
| 2019-03-13 | 0.18 | 0.92 | <0.05 | | 0.1 | 20.9 | 2.4 | 190 | 1.8 | 1112 | 13.39 | 8.11 | 5.1 |
| 2019-03-27 | 0.02 | 1.79 | <0.05 | <0.05 | 0.062 | 2.6 | 2.1 | 930 | 1.9 | 1342 | 12.86 | 8.77 | 3.1 |
| 2019-04-15 | 0.06 | 1.86 | <0.05 | <0.05 | 0.083 | 15.5 | 2 | 26100 | 5.5 | 677 | 12.2 | 8.2 | 24.3 |
| 2019-04-24 | <0.01 | 1.82 | <0.05 | <0.05 | 0.053 | <2 | <2 | 3200 | 7.3 | 1057 | 11.91 | 8.1 | 2.3 |
| 2019-05-08 | 0.02 | 1.82 | <0.05 | <0.05 | 0.057 | <3 | <3 | 4000 | 11.2 | 1010 | 11.34 | 8.01 | 3.9 |
| 2019-05-22 | <0.01 | 1.44 | 0.07 | <0.05 | 0.041 | 3.6 | 1.6 | 7000 | 10.5 | 1231 | 11.96 | 8.16 | 1.6 |
| 2019-06-05 | 0.05 | 1.92 | 0.08 | 0.06 | 0.084 | <4 | <4 | 1120 | 14.4 | 1324 | 10.3 | 8.28 | 2.1 |
| 2019-06-19 | 0.1 | 1.95 | 0.09 | 0.1 | 0.151 | 22.3 | 3 | 1260 | 15.2 | 1432 | 9.22 | 8.39 | 9.2 |
| 2019-07-03 | 0.11 | 1.46 | 2.02 | 0.12 | 0.176 | 12 | 3.6 | 12000 | 18.6 | 753 | 8.67 | 7.87 | 15 |
| 2019-07-17 | 0.17 | 0.38 | <0.05 | 0.11 | 0.85 | 625 | 54.7 | 90000 | 19.9 | 146.8 | 9.1 | 8.47 | 300.4 |
| 2019-07-31 | 0.07 | 2.24 | 1.67 | 0.18 | 0.205 | 5.3 | 1.6 | 3400 | 18.4 | 1030 | 9.52 | 7.82 | 4.4 |
| 2019-08-15 | 0.02 | 1.78 | <0.05 | 0.13 | 0.166 | 13.3 | 1.9 | 5700 | 17.6 | 1464 | 9.51 | | 5.5 |
| 2019-08-28 | <0.01 | 1.06 | <0.05 | 0.12 | 0.151 | <3 | <3 | 2100 | 18.3 | 771 | 9.17 | | 5.9 |
| 2019-09-13 | 0.03 | 1.75 | <0.05 | 0.14 | 0.144 | <2 | <2 | 2500 | 15.2 | 955 | 10.23 | 8.21 | 4.5 |
| 2019-09-26 | 0.6 | 1.32 | 0.18 | 0.29 | 0.38 | 10.3 | 3.8 | 43000 | 16.1 | 1342 | 9.59 | 8.23 | 9.4 |
| 2019-10-09 | 0.05 | 2.07 | 4.09 | 0.17 | 0.186 | 3 | 1.4 | 3400 | 10.4 | 1114 | 11.12 | 8.31 | 4 |
| 2019-10-23 | 0.04 | 1.34 | 0.08 | 0.19 | 0.214 | <3 | <3 | 4100 | 9.5 | 855 | 11.19 | 7.7 | 8.3 |
| 2019-11-06 | 0.1 | 2 | 0.06 | 0.12 | 0.154 | <2 | <2 | 3500 | 4.6 | 973 | 12.96 | 8.05 | 5.7 |
| 2019-11-20 | 0.14 | 1.68 | 0.05 | 0.1 | 0.113 | <2 | <2 | 1700 | 7.3 | 1193 | 11.96 | 8.33 | 4 |
| 2019-12-04 | 0.26 | 1.74 | 0.06 | 0.11 | 0.135 | 7.3 | 2.7 | 5000 | 5.5 | 1525 | 12.23 | 8.26 | 5.8 |
| 2019-12-18 | 0.18 | 1.88 | <0.05 | 0.11 | 0.118 | 1.8 | 0.9 | 1040 | 2.2 | 1124 | 13.27 | 6.47 | 3.3 |

| Date | Ammonia + Ammonium as N mg/L | Nitrate as N mg/L | Nitrite as N mg/L | o-Phosphate as P mg/L | Phosphorus Total mg/L | Total Suspended Solids mg/L | Volatile Suspended Solids mg/L | Escherichia coli CFU/100mL | Temperature °C | Conductivity (µS/cm²) | Dissolved Oxygen (mg/L)(% Sat.) | pH | Turbidity (NTU) |
|------------|------------------------------|-------------------|-------------------|-----------------------|-----------------------|-----------------------------|--------------------------------|----------------------------|----------------|-----------------------|---------------------------------|------|-----------------|
| 2018-04-11 | 0.15 | 2.99 | 0.23 | | 0.175 | 25.2 | 8 | 8000 | 7 | 1193 | 11.59 | 8.09 | 19.7 |
| 2018-04-25 | 0.25 | 1.59 | <0.1 | | 0.162 | 26 | 7.1 | 18000 | 9.1 | 620 | 11.28 | 8.04 | 26.1 |
| 2018-05-09 | 0.15 | 3.07 | 0.08 | | 0.264 | 8.5 | 3.3 | 3200 | 12.4 | 1197 | 10.3 | 8.1 | 7.3 |
| 2018-05-23 | 0.14 | 3.25 | <0.1 | | 0.258 | 4.4 | 1.3 | 3200 | 13.2 | 1160 | 10.01 | 8.13 | 4.1 |
| 2018-06-07 | 0.16 | 3.45 | 0.05 | | 0.327 | <2 | <2 | 5900 | 13.9 | 1143 | 9.5 | 7.86 | 2.9 |
| 2018-06-20 | <0.01 | 2.89 | 0.12 | | 0.253 | 3.1 | 1.4 | 1700 | 15.4 | 1104 | 9.48 | 8.06 | 2.5 |
| 2018-07-04 | <0.01 | 3.2 | 0.09 | | 0.288 | 7.6 | 1.8 | 1170 | 19.2 | 1246 | 9.4 | 8.19 | 8.7 |
| 2018-07-18 | <0.01 | 2.66 | <0.05 | | 0.263 | 3.2 | <0.8 | 590 | 17.2 | 1087 | 8.78 | 8.03 | 2.9 |
| 2018-08-01 | <0.01 | 3.15 | <0.05 | | 0.271 | 5.7 | 2.3 | 1630 | 18.1 | 1128 | 8.57 | 8.05 | 2.7 |
| 2018-08-15 | 0.01 | 3.05 | <0.05 | | 0.291 | 3.2 | 2.4 | 9000 | 19.5 | 1100 | 8.58 | 8.08 | 2.8 |
| 2018-08-29 | <0.01 | 2.92 | <0.05 | | 0.262 | 4.5 | 1.6 | 2200 | 20.7 | 1138 | 8.35 | 8.12 | 2.2 |
| 2018-09-11 | 0.02 | 3.23 | 0.54 | | 0.248 | 2.7 | 1 | 7200 | 16.6 | 977 | 9.23 | 8.08 | 2.7 |
| 2018-09-27 | 0.02 | 3.51 | 0.42 | | 0.326 | 3.8 | 1.8 | 7100 | 16 | 1045 | 9.31 | 7.94 | 3.6 |
| 2018-10-10 | 0.01 | 3.61 | 0.2 | | 0.338 | 5.6 | 1.8 | 2900 | 18 | 1135 | 8.75 | 7.77 | 5.7 |
| 2018-10-31 | 0.16 | 0.96 | 0.09 | | 0.172 | 14.6 | 3.7 | 34000 | 12.2 | 206.3 | 10.31 | 8.07 | 41.1 |
| 2018-11-07 | 0.1 | 3.58 | 0.72 | | 0.251 | 3.6 | 2.4 | 6300 | 11.2 | 967 | 10.64 | 8.11 | 4.7 |
| 2018-11-20 | 0.1 | 2.14 | <0.05 | | 0.446 | 7.8 | 2.2 | 20000 | 8.3 | 1023 | 11.59 | 8.04 | 5.9 |
| 2018-12-05 | 0.08 | 3.28 | <0.05 | 0.39 | 0.416 | 3.6 | 1.6 | 17700 | 7.6 | 941 | 11.9 | 8.16 | 5.8 |
| 2018-12-19 | 0.03 | 2.83 | <0.05 | 0.39 | 0.41 | 12.6 | 2.6 | 2000 | 7.2 | 797 | 11.64 | 7.99 | 10.8 |
| 2019-01-02 | 0.11 | 3.54 | 0.06 | 0.32 | 0.347 | 10.1 | 2 | 199900 | 6.2 | 880 | 12.16 | 8.07 | 7.8 |
| 2019-01-18 | 0.04 | 2.56 | <0.05 | 0.45 | 0.5 | 8.2 | 2 | 1380 | 5.3 | 818 | 13.17 | 8 | 1.3 |
| 2019-02-19 | 0.21 | 2.36 | <0.1 | | 0.398 | 4.1 | 1.8 | 12000 | 3.9 | 1560 | 12.93 | 8.09 | 4.8 |
| 2019-03-01 | 0.2 | 2.4 | 0.09 | | 0.384 | 7.6 | 2.8 | 3400 | 4.5 | 1818 | 12.41 | 8.02 | 7.5 |
| 2019-03-08 | 0.14 | 2.25 | 0.07 | | 0.442 | 6.8 | 1.8 | 200 | 3.9 | 804 | 12.73 | 8.13 | 5.2 |
| 2019-03-13 | 0.17 | 2.73 | 0.05 | | 0.349 | 5.6 | 1.6 | 7000 | 5.1 | 1148 | 12.42 | 7.97 | 4.8 |
| 2019-03-27 | 0.13 | 2.51 | 0.06 | 0.4 | 0.45 | 23.8 | 3.1 | 730 | 6.9 | 1050 | 11.78 | 8.2 | 18.7 |
| 2019-04-15 | 0.16 | 3.44 | 0.07 | 0.2 | 0.247 | 9.4 | 2.4 | 13500 | 7.5 | 954 | 11.62 | 8.03 | 7.6 |
| 2019-04-24 | 0.15 | 3.22 | 0.06 | 0.31 | 0.37 | 7 | 1.8 | 2800 | 9.6 | 1130 | 10.62 | 8.21 | 6.2 |
| 2019-05-08 | 0.1 | 3.15 | 0.1 | 0.27 | 0.322 | 3.7 | 3 | 1000 | 10.3 | 1062 | 11.06 | 8.04 | 5.4 |
| 2019-05-22 | 0.11 | 3.03 | 0.1 | 0.41 | 0.474 | 4.8 | 1.6 | 5100 | 9.8 | 1000 | 11.45 | 8.08 | 5.5 |
| 2019-06-05 | 0.53 | 0.44 | <0.05 | 0.08 | 0.566 | 231 | 37.8 | 37000 | 17.3 | 119 | 9.46 | 8.18 | 149.1 |
| 2019-06-19 | 0.03 | 2.7 | 0.07 | 0.43 | 0.457 | 4.8 | 1.8 | 1100 | 14.4 | 995 | 10.17 | 8.43 | 4.8 |
| 2019-07-03 | 0.11 | 2.63 | 0.08 | 0.44 | 0.475 | 2.7 | 2 | 4000 | 17.6 | 909 | 8.81 | 8.29 | 2.3 |
| 2019-07-17 | 0.04 | 1.32 | <0.05 | 0.21 | 0.263 | 8.2 | 1.8 | 29000 | 19.3 | 419.3 | 8.62 | 8.13 | 13.7 |
| 2019-07-31 | 0.02 | 2.6 | <0.05 | 0.46 | 0.493 | 2.4 | <0.8 | 2000 | 17.1 | 819 | 8.97 | 8.59 | 2.5 |
| 2019-08-15 | <0.01 | 2.69 | <0.05 | 0.5 | 0.541 | 4 | 1.5 | 2400 | 16.1 | 846 | 9.22 | | 5.3 |
| 2019-08-28 | <0.01 | 2.64 | <0.05 | 0.47 | 0.505 | <3 | <3 | 1700 | 18.7 | 932 | 8.38 | | 3.6 |
| 2019-09-13 | 0.02 | 2.9 | 0.06 | 0.46 | 0.464 | 2.2 | 1.5 | 5800 | 16.2 | 914 | 9.22 | 8.05 | 3.1 |
| 2019-09-26 | 0.02 | 3.35 | 0.16 | 0.44 | 0.547 | 5.7 | 2.7 | 10800 | 17.4 | 754 | 8.7 | 8.08 | 6.7 |
| 2019-10-09 | 0.09 | 3.07 | 0.06 | 0.61 | 0.606 | 8.7 | 2 | 1600 | 14.3 | 795 | 10.09 | 8.15 | 8.2 |
| 2019-10-23 | 0.01 | 2.75 | <0.05 | 0.52 | 0.523 | 4.1 | 2.4 | 3500 | 13.2 | 756 | 10 | 8.11 | 4.6 |
| 2019-11-06 | 0.49 | 3.42 | 0.17 | 0.62 | 0.665 | 4 | 2 | 740 | 10.4 | 822 | 10.56 | 8.05 | 4 |
| 2019-11-20 | 0.1 | 2.71 | 0.15 | 0.35 | 0.387 | 13.1 | 3.3 | 40000 | 10.3 | 1034 | 10.89 | 8.17 | 9.8 |
| 2019-12-04 | 0.23 | 2.63 | 0.09 | 0.34 | 0.404 | 22.3 | 5.8 | 27000 | 9 | 2087 | 11.03 | 8.14 | 15.3 |
| 2019-12-18 | 0.06 | 3.12 | <0.05 | 0.38 | 0.431 | 3.5 | 1.1 | 10300 | 5.9 | 1078 | 12.44 | 6.45 | 4.4 |

CP-11 Outlet

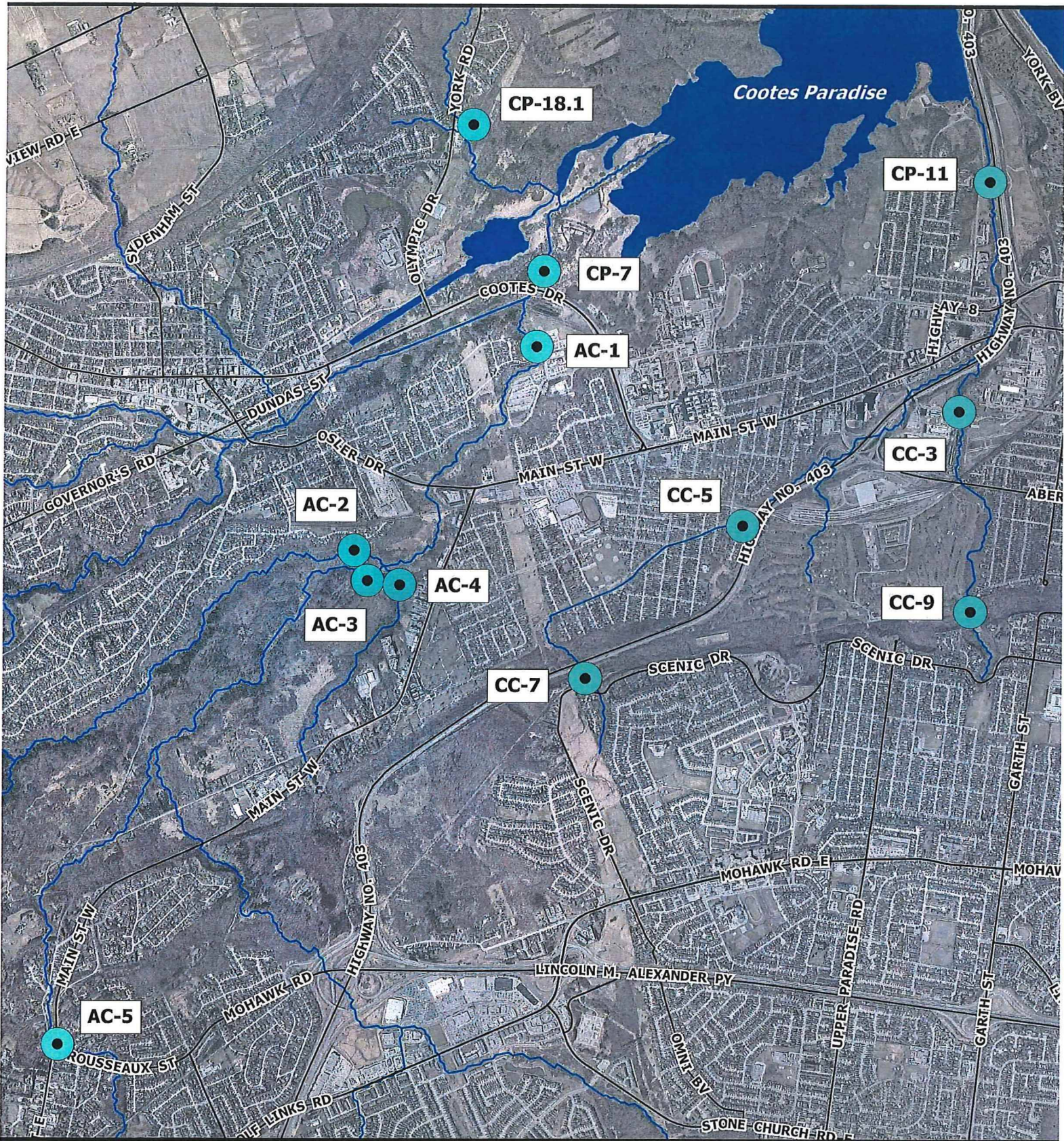
| Date | Ammonia + Ammonium as N mg/L | Nitrate as N mg/L | Nitrite as N mg/L | o-Phosphate as P mg/L | Phosphorus Total mg/L | Total Suspended Solids mg/L | Volatile Suspended Solids mg/L | Escherichia coli CFU/100mL | Temperature °C | Conductivity (µS/cm³) | Dissolved Oxygen (mg/L)(% Sat.) | pH | Turbidity (NTU) |
|------------|------------------------------|-------------------|-------------------|-----------------------|-----------------------|-----------------------------|--------------------------------|----------------------------|----------------|-----------------------|---------------------------------|------|-----------------|
| 2018-06-20 | 14.20 | 0.83 | 0.19 | | 2.690 | 46.8 | 45.6 | 3400000 | 16.9 | 1045 | 4.64 | 7.33 | 28.4 |
| 2018-07-04 | 13.80 | 0.53 | 0.1 | | 2.780 | 58.0 | 51.6 | 4900000 | 19.4 | 1063 | 3.51 | 7.28 | 45.1 |
| 2018-07-18 | 6.7 | 1.17 | 0.07 | | 1.330 | 31.6 | 27.6 | 3800000 | 19.6 | 1077 | 7.03 | 7.61 | 22.1 |
| 2018-08-01 | 0.07 | 2.32 | 0.2 | | 0.213 | 5.7 | 1.2 | 20000 | 20.3 | 1174 | 9.97 | 8.3 | 8.2 |
| 2018-08-15 | 0.07 | 2.27 | <0.05 | | 0.215 | 10.2 | 1.6 | 1400 | 21.1 | 1363 | 8.61 | 8.22 | 22.8 |
| 2018-08-29 | 0.03 | 2.12 | <0.05 | | 0.195 | 6.2 | 1.5 | 460 | 23.4 | 1178 | 9.97 | 8.46 | 8.1 |
| 2018-09-11 | 0.02 | 2.08 | <0.05 | | 0.187 | 8.4 | 2.4 | 3300 | 17.3 | 918 | 10.81 | 8.29 | 11.9 |
| 2018-09-27 | 0.02 | 2.31 | 0.1 | | 0.226 | 4 | 3.6 | 9100 | 16.7 | 1057 | 10.48 | 8.13 | 6.1 |

| Date | Temperature °C | Conductivity ($\mu\text{S}/\text{cm}^3$) | Dissolved Oxygen (mg/L)(% Sat.) | Dissolved Oxygen(% Sat.) | pH | Turbidity (NTU) | Escherichia coli CFU/100mL |
|------------|----------------|--|---------------------------------|--------------------------|------|-----------------|----------------------------|
| 2018-07-18 | 22.2 | 1150 | 20.34 | 236.4 | 8.85 | 4.1 | 420 |
| 2018-08-01 | 21.6 | 1249 | 16.22 | 185 | 8.71 | 3.6 | 470 |
| 2018-08-15 | 27.1 | 1197 | 19.34 | 244 | 9.09 | 2.4 | 60 |
| 2018-08-29 | 24.2 | 1227 | 14.42 | 172.5 | 8.61 | 16.2 | 720 |

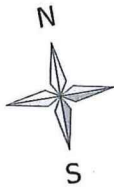
CC-5a

| Date | Temperature °C | Conductivity ($\mu\text{S}/\text{cm}^3$) | Dissolved Oxygen (mg/L)(% Sat.) | Dissolved Oxygen(% Sat.) | pH | Turbidity (NTU) | Escherichia coli CFU/100mL |
|------------|----------------|--|---------------------------------|--------------------------|------|-----------------|----------------------------|
| 2018-08-15 | 19.8 | 787 | 10.04 | 110.2 | 8.22 | 5.1 | 530 |
| 2018-08-29 | 20.3 | 896 | 8.51 | 94.5 | 8.07 | 4.3 | 730 |

| Date | Ammonia + Ammonium as N mg/L | Nitrate as N mg/L | Nitrite as N mg/L | o-Phosphate as P mg/L | Phosphorus Total mg/L | Total Suspended Solids mg/L | Volatile Suspended Solids mg/L | Escherichia coli CFU/100mL | Temperature °C | Conductivity ($\mu\text{S}/\text{cm}^3$) | Dissolved Oxygen (mg/L)(% Sat.) | pH | Turbidity (NTU) |
|------------|------------------------------|-------------------|-------------------|-----------------------|-----------------------|-----------------------------|--------------------------------|----------------------------|----------------|--|---------------------------------|------|-----------------|
| 2018-08-15 | <0.01 | 1.89 | <0.05 | | 0.19 | 10.1 | 2.4 | 960 | 19.7 | 850 | 9.25 | 8.19 | 9.7 |
| 2018-08-29 | <0.01 | 1.68 | <0.05 | | 0.16 | 6.1 | 1.3 | 590 | 20.8 | 825 | 9.07 | 8.17 | 8.1 |
| 2018-09-11 | | | | | | | | | 16.3 | 691 | 9.76 | 8.18 | 7.3 |



**Cootes Paradise Water Quality Monitoring
for HHRAP**



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2014

Tributary Monitoring for Cootes Paradise to Support the Hamilton Harbour Remedial Action Plan



Watershed Planning & Engineering

March 31, 2015

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2. Background

In spring of 2014, the Hamilton Conservation Authority (HCA) and the Royal Botanical Gardens (RBG) began discussions for a plan to divide and expand a monitoring protocol aimed at understanding water quality contributions from creeks flowing into Cootes Paradise Marsh and ultimately, Hamilton Harbour. It was determined that the HCA would assume sampling responsibilities for three existing creek sampling sites within the Cootes Paradise study area previously sampled by RBG staff. These sites are known as CP-7, CP-11 and CP-18.1 (See figure 2) and their respective locations are on Spencer Creek, Chedoke Creek and Borers Creek upstream of the locations where they drain into the Cootes Paradise Marsh. The protocol was expanded to include four new sites to help characterize the water quality contributions coming from the Ancaster Creek sub-watershed, which has relatively little water quality and flow data near the lower reaches of the sub-watershed boundaries.

A proposal submitted by the HCA was approved by the Ministry of the Environment and Climate Change (MOECC) to assist in the acquisition of equipment required for this expanded sampling protocol. The proposal outlined the need for more water quality and quantity data for Ancaster Creek, as well as the continuation of water quality monitoring at the three established locations noted above. An addition of four sample locations (AC-1, AC-2, AC-3 & AC-4) along Ancaster Creek and its tributaries for the 2014 sampling season was agreed upon between HCA and RBG staff. Sampling commenced on May 6, 2014 and ended on September 23, 2014 at a bi-weekly sampling frequency.

The proposal also outlined plans to further expand the monitoring program in 2015. HCA and MOECC staff installed equipment in Ancaster Creek (at site AC-1) to continuously monitor water levels during the sampling period as well as remotely collect water samples throughout the duration of select storm events. Using water level information collected from the sampling equipment, HCA staff can make a level-weighted composite sample of the entire storm event to help understand water quality conditions during high flow events. A total of six storm events per sampling season (2 events in each of spring, summer and fall) will be sampled and analyzed. A rating curve will also be established at site AC-1 in 2015, to allow for the determination of flow rates and loading volumes. The sampling period is to commence in April 2015 and end in November 2015, extending the period by 3 months from the previous season for a total of 17 water quality grab sample days and 6 storm event capture days.

It is beneficial to undertake an enhanced surface water monitoring program on lower Ancaster Creek to help identify important contributors and sources of inputs as well as provide information to support where mitigation activities can be best applied to benefit the overall water quality within Cootes Paradise. Currently, there is a nutrient loadings model being developed for Cootes Paradise by the University of Toronto. This model could benefit greatly by utilizing the data from non-defined inputs being collected by this monitoring program and the HCA would welcome the opportunity to share this information to help better the understanding of the inputs into Cootes Paradise. Overall, several years of measurements will be required to establish

trends and determine baseline and wet event conditions. This program covers the 2014 and 2015 sample seasons but will look to continue for the next 3-5 years.

Figure 1: Hamilton Conservation Authority Sub-watersheds

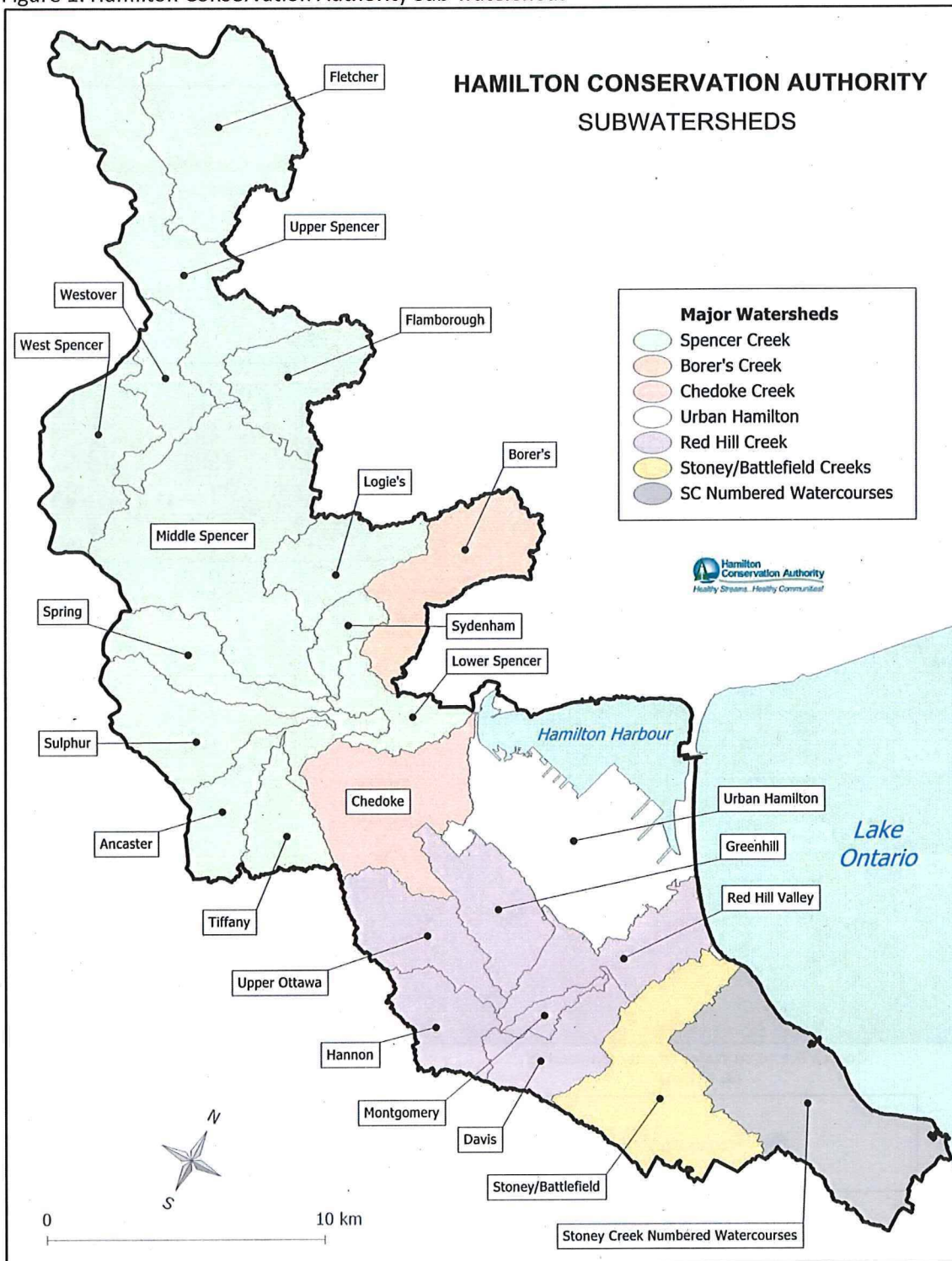


Figure 2: Study Area and Sampling Locations

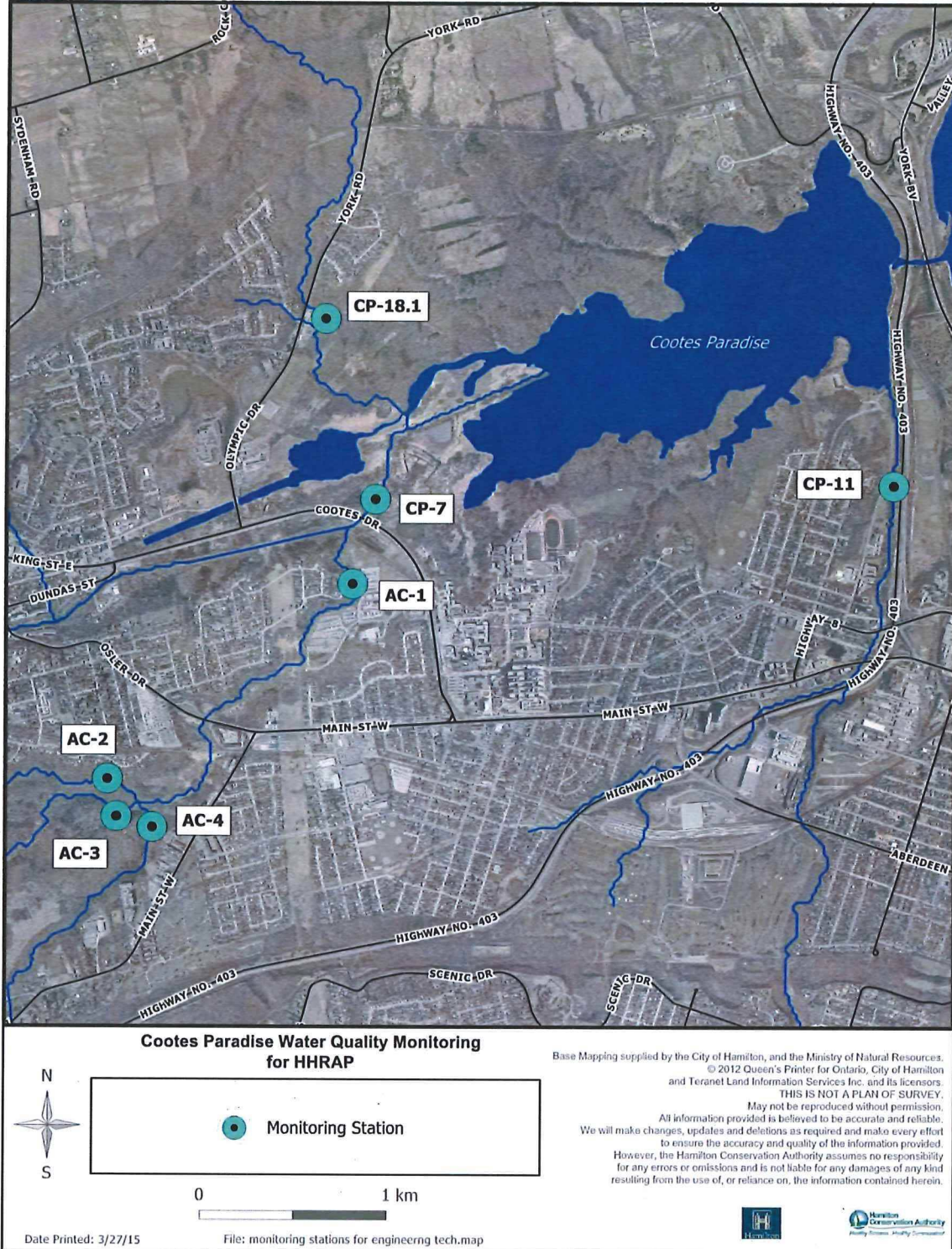


Table 1: Sampling Stations Identified by Location and Sub-watershed

| Station | Location | Sub-watershed |
|----------------|--|----------------------|
| CP-7 | Downstream of Cootes Drive | Lower Spencer Creek |
| CP-11 | Downstream of King Street | Chedoke Creek |
| CP-18.1 | Downstream of York Road | Borers Creek |
| AC-1* | Upstream of Spencer Creek | Ancaster Creek |
| AC-2* | Upstream of confluence with Ancaster Creek | Sulphur Creek |
| AC-3* | Upstream of confluence with Sulphur Creek | Ancaster Creek |
| AC-4* | Downstream of Wilson Street | Ancaster Creek |

* indicates new sampling location for 2014

3. Water Quality Monitoring

3.1 Methodology

Water quality grab samples were taken during daylight hours with same day drop off for analysis at the City of Hamilton Regional Environmental Lab. Sampling frequency was every other week to coincide with RBG and Conservation Halton staff sampling programs, see table 2 for sampling dates. Measurements of temperature, pH, conductivity, turbidity, and dissolved oxygen were measured on site by HCA staff for each sample site using a YSI 6600. Chlorophyll-a is measured in an ac-credited laboratory once every three years (samples in 2013 were analyzed for Chlorophyll-a, so the next year would be 2016). Sampling events were classified as wet or dry by viewing and confirming rain data recorded at Environment Canada precipitation monitoring station at Hamilton Airport Climate ID 6153193, if 4mm of rain occurred in the previous 24 hours it was considered a wet event. Wet and dry events are classified in Table 2. A visual inspection of storm water outfalls in the area was also completed if storm water conditions were suspected.

Table 2: Rainfall Events for Corresponding Sampling Dates

| Sampling Date | Previous 24 Hour Rainfall (mm) | Classification |
|-----------------------|--------------------------------|----------------|
| 5/6/2014 | 0.0 | Dry |
| 5/20/2014 | 0.2 | Dry |
| 6/4/2014 | 0.0 | Dry |
| 6/16/2014 | 0.0 | Dry |
| 7/2/2014 | 0.0 | Dry |
| 7/14/2014 | 0.0 | Dry |
| 7/28/2014 & 7/29/2014 | 67.5 | Wet |
| 8/11/2014 | 0.0 | Dry |
| 8/25/2014 | 0.0 | Dry |
| 9/8/2014 | 0.0 | Dry |
| 9/23/2014 | 0.0 | Dry |

3.2 Water Quality Targets / Objectives

Samples were analyzed for the parameters listed in Table 3. Each station was sampled 11 times throughout the 2014 sampling season. Objectives to ensure that water quality is satisfactory for aquatic life were based on Provincial Water Quality Objectives (MOE 1999), federal guidelines outlined by the Canadian Council of Ministers of the Environment (2001) and Cootes – Grindstone Water Quality Targets (RAP office 2012). The target objective is to apply to 9 out of the 11 samples taken in 2014.

Table 3: Water Quality Parameters and their Desired Target/Objective

| Parameter | Units | Target/Objective | Reference |
|---------------------------|-----------|------------------|-----------|
| Unionized Ammonia | mg/L | 0.02 mg/L | HHRAP |
| Nitrate as N | mg/L | 3 mg/L | HHRAP |
| Nitrite as N | mg/L | 0.06 mg/L | CWQG |
| o-Phosphate as P | mg/L | n/a | |
| Total Phosphorous | mg/L | 0.03 mg/L | PWQO |
| Total Suspended Solids | mg/L | 25 mg/L | HHRAP |
| Volatile Suspended Solids | mg/L | n/a | |
| Escherichia coli | CFU/100mL | 1000 CFU/100mL | PWQO |

Although the sampling locations span several watersheds, indices from Conservation Ontario's guide to developing Watershed Report Cards was applied to some analysis to provide tools in data analysis and context in examining the water quality data from site to site. Table 3 outlines our desired targets for water quality for each of the parameters analyzed.

Total Phosphorus

Table 4: Conservation Ontario Total Phosphorus Range System

| | |
|---|-------------|
| A | <0.03 |
| B | 0.03 - 0.10 |
| C | 0.11 - 0.17 |
| D | 0.18 - 0.24 |
| F | >0.24 |

Using Conservation Ontario's guide to developing Watershed Report Cards, Table 4 can be used to define a letter grade for the average concentration of Total Phosphorus (TP) for each location. Using the PWQO of 0.03mg/L, we can categorize each location according to their average TP concentrations throughout the sampling season.

Unionized Ammonia

Ammonia is the preferred nitrogen containing nutrient for plant growth, yet it can also cause algal blooms and stress to fish in high concentrations. In water, ammonia occurs in two forms; ionized and unionized ammonia. This difference is important to know because NH₃, un-ionized ammonia, is the form more toxic to fish. Both water temperature and pH affect which form of ammonia is predominant at any given time in an aquatic system.

Ortho-Phosphate

There is no current target set for ortho-Phosphate for the HHRAP or PWQO's.

Nitrate

Nitrates are an essential nutrient for regulating plant life but can cause degraded water quality in excess concentrations. The target concentration for nitrates in this study is based on the Canadian Water Quality Guideline (CWQG) of 3.0mg/L. Typically nitrate concentrations tend to be low during base-flow conditions; however runoff from fertilizer, waste water treatment plants and storm sewer outfalls can bring the concentration of nitrates up to and beyond the target for water quality.

Nitrite

For this study, we've adopted the CWQG target of 0.06mg/L as N.

Total Suspended Solids

Targeted concentrations of Total Suspended Solids (TSS) vary depending on the system being monitored. TSS thresholds are established by understanding the underlying background levels of a site which may or may not have clear flow during base-flow conditions. Storm events move sediment downstream and therefore TSS values are expected to be much higher during these events. Since background levels of TSS is unavailable for the majority of the sites sampled, the Hamilton Harbour Remedial Action Plan interim target of 25 mg/L was used as the target for TSS (RAP office 2012). This target is derived from the Canadian Water Quality Guideline (CWQG) for total suspended sediment.

Escherichia coli

E.coli is well known to have harmful effects on human health when found in the environment at certain concentrations. There are strict guidelines for *E.coli* targets for drinking and recreational purposes. Since there is little to no background data for the majority of the sites, we will be comparing the geometric mean concentrations from each site to Health Canadas recommended target for secondary contact of 1000CFU/100mL

4. Results and Discussion

4.1 Total Phosphorus

As seen in Table 6, a large majority of the samples taken exceeded the PWQO of 0.03mg/L. Total phosphorus exceedances were common throughout the sample season at all locations, with only 19 of the 77 samples taken at or below the PWQO. The highest individual sample and highest average TP concentrations were from Chedoke Creek (CP-11). Concentrations are well above the PWQO in each sample taken at this location, especially during wet events as seen in Table 5. These poor results have given site CP-11 a letter grade of F according to Conservation Ontario's guide for developing Watershed Report Cards. All other locations received a letter grade B. Table 5 shows that during the one wet event sampled, total phosphorus concentrations were notably higher at all sample locations. Results indicate that most of the total phosphorus loadings are likely received during storm events.

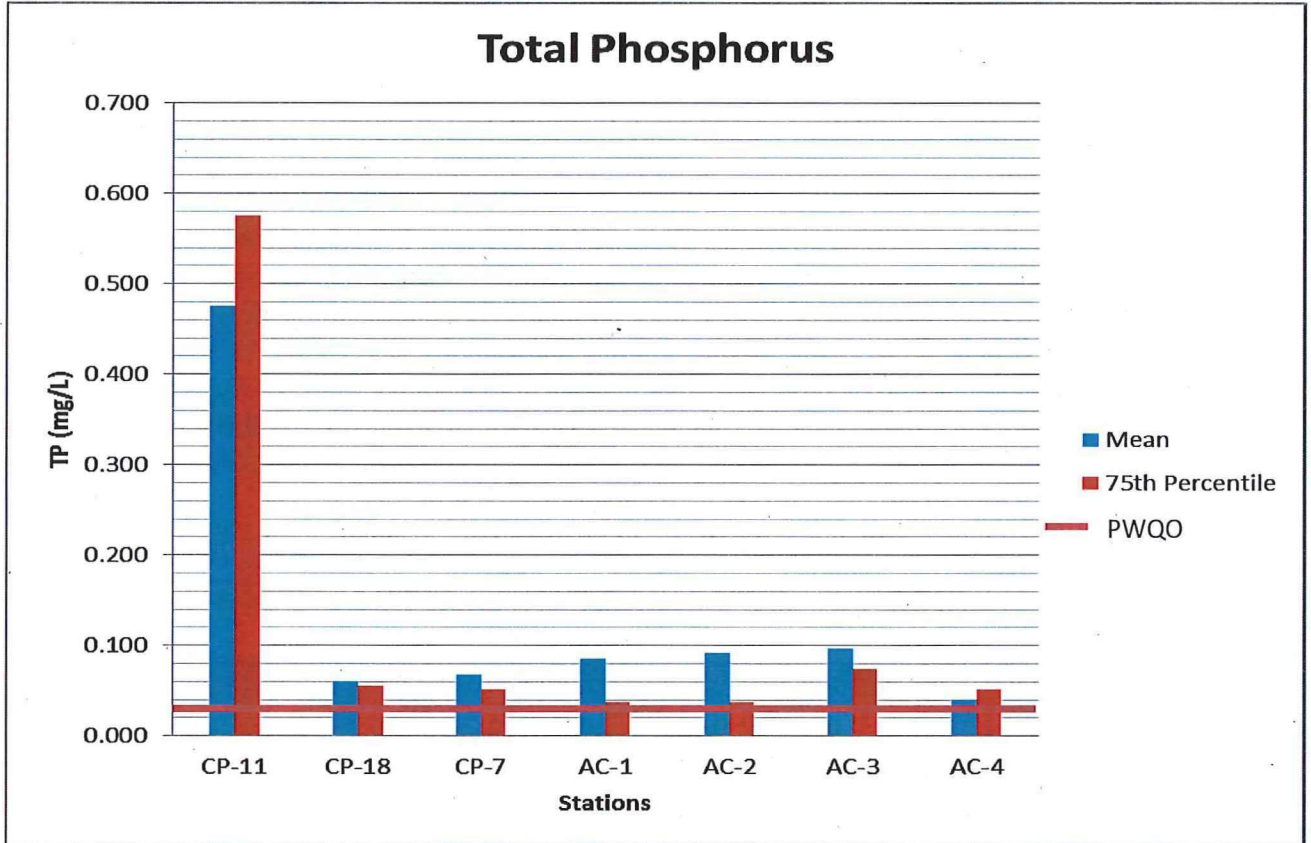
The Ancaster Creek locations (AC-1 → AC-4) all exceeded the PWQO for the seasonal average TP. Ancaster Creek TP values for dry events are relatively low compared to the wet event on July 28, 2014. AC-3 TP concentration is generally higher than at other sites. This may be a result of land usages in the upper Ancaster Creek subwatershed compared to Sulphur Creek subwatershed (AC-2) and the lower reaches of Ancaster Creek (AC-4). Land uses in the upper reaches of Ancaster Creek, such as agriculture and a golf course, could be the reason for higher TP levels in AC-3 (it should be noted that site AC-4 was sampled on July 29, 2014 due to an unpassable channel).

Table 5: Total Phosphorus values in mg/L

| Date | Event Type | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|-------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 5/6/2014 | D | 0.306 | 0.023 | 0.027 | 0.032 | 0.038 | 0.033 | 0.031 |
| 5/20/2014 | D | 0.156 | 0.024 | 0.056 | 0.035 | 0.03 | 0.038 | 0.063 |
| 6/4/2014 | D | 0.508 | 0.057 | 0.038 | 0.041 | 0.028 | 0.084 | 0.033 |
| 6/16/2014 | D | 0.66 | 0.053 | 0.034 | 0.025 | 0.038 | 0.049 | 0.022 |
| 7/2/2014 | D | 0.306 | 0.076 | 0.047 | 0.045 | 0.033 | 0.078 | 0.033 |
| 7/14/2014 | D | 0.296 | 0.042 | 0.04 | 0.035 | 0.031 | 0.071 | 0.032 |
| 7/28/2014 | W | 0.956 | 0.222 | 0.321 | 0.65 | 0.689 | 0.627 | 0.074 |
| 8/11/2014 | D | 0.642 | 0.045 | 0.045 | 0.015 | 0.027 | 0.014 | 0.07 |
| 8/25/2014 | D | 0.502 | 0.038 | 0.041 | 0.017 | 0.015 | 0.013 | 0.027 |
| 9/8/2014 | D | 0.397 | 0.036 | 0.066 | 0.027 | 0.074 | 0.04 | 0.041 |
| 9/23/2014 | D | 0.496 | 0.044 | 0.034 | 0.017 | 0.014 | 0.018 | 0.022 |
| Mean | | 0.475 | 0.060 | 0.068 | 0.085 | 0.092 | 0.097 | 0.041 |

| | |
|---|-------------|
| A | <0.03 |
| B | 0.03 - 0.10 |
| C | 0.11 - 0.17 |
| D | 0.18 - 0.24 |
| F | >0.24 |

Figure 3: TP concentrations at sample locations



4.2 Ortho-Phosphate

As shown in Table 6, ortho-Phosphate concentrations were below detection limits in 76 of 77 sample events. This water quality parameter does not appear to be of concern at this time.

Table 6: ortho-Phosphate in mg/L

| Date | Event Type | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|-----------|------------|-------|-------|------|------|------|------|------|
| 5/6/2014 | D | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| 5/20/2014 | D | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| 6/4/2014 | D | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| 6/16/2014 | D | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| 7/2/2014 | D | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| 7/14/2014 | D | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| 7/28/2014 | W | 0.28 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| 8/11/2014 | D | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| 8/25/2014 | D | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| 9/8/2014 | D | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| 9/23/2014 | D | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |

4.3 Nitrate/Nitrite/Ammonia

The nitrate target of 3.0mg/L as N is based on the Canadian Water Quality Guideline (CWQG). As shown in Table 7, nitrate concentrations were consistently above the target objective at CP-11 and AC-3 throughout the sampling period. All other sites had a mean value below that of the target objective. The wet event on July 28, 2014 did not seem to have a large effect on nitrate concentrations on any of the sample locations. Site CP-11 had the highest average concentration value while site CP-7 had the lowest. Ancaster Creek locations were relatively consistent throughout the sampling season.

Table 7: Nitrate as N values in mg/L

| Date | Event Type | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|-------------|------------|-------|-------|------|------|------|------|------|
| 5/6/2014 | D | 8.73 | 1.24 | 1.51 | 2.08 | 1.37 | 2.26 | 0.97 |
| 5/20/2014 | D | 8.20 | 1.55 | 1.86 | 2.30 | 1.59 | 2.75 | 1.46 |
| 6/4/2014 | D | 0.35 | 1.73 | 1.95 | 2.48 | 1.42 | 3.54 | 1.86 |
| 6/16/2014 | D | 1.42 | 3.54 | 2.84 | 3.15 | 2.17 | 4.56 | 2.35 |
| 7/2/2014 | D | 3.63 | 1.24 | 2.48 | 3.15 | 2.30 | 3.94 | 2.26 |
| 7/14/2014 | D | 2.88 | 1.42 | 2.35 | 3.32 | 2.53 | 4.25 | 1.95 |
| 7/28/2014 | W | 5.98 | 1.55 | 2.35 | 2.08 | 1.64 | 2.22 | 3.99 |
| 8/11/2014 | D | 4.70 | 0.53 | 0.89 | 2.53 | 2.17 | 3.54 | 0.71 |
| 8/25/2014 | D | 5.54 | 1.20 | 1.55 | 2.70 | 2.30 | 3.41 | 1.02 |
| 9/8/2014 | D | 4.43 | 1.33 | 1.42 | 2.84 | 1.99 | 3.85 | 2.44 |
| 9/23/2014 | D | 3.94 | 0.80 | 1.33 | 2.70 | 2.22 | 3.90 | 1.90 |
| Mean | | 4.53 | 1.47 | 1.86 | 2.67 | 1.97 | 3.48 | 1.90 |

Nitrite concentrations can be seen in Table 8. The overwhelming majority of samples tested below detection limits (BDL), with only 13 of 77 registering a value above BDL. Site CP-11 was the only site to have some consistency in recording Nitrite concentrations. Using the target of 0.06 mg/L from CWQG we can see that site CP-11 regularly exceeds the target objective. Wet events did not seem to play a major role in altering Nitrite concentrations at any site.

Table 8: Nitrite as N values in mg/L

| | Event Type | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|-------------|------------|-------|-------|-------|-------|-------|-------|-------|
| 5/6/2014 | D | 0.16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| 5/20/2014 | D | 0.07 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 6/4/2014 | D | 0.2 | <0.05 | <0.05 | <0.05 | <0.05 | 0.07 | 0.12 |
| 6/16/2014 | D | 0.16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| 7/2/2014 | D | 0.1 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| 7/14/2014 | D | 0.04 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 7/28/2014 | W | 0.09 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| 8/11/2014 | D | 0.18 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| 8/25/2014 | D | 0.1 | <0.05 | <0.05 | 0.09 | <0.05 | <0.05 | <0.05 |
| 9/8/2014 | D | 0.07 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| 9/23/2014 | D | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Mean | | 0.117 | | | | | | |

Total ammonia concentrations are listed in Table 9. Site CP-11 was regularly above the target objective of 0.02mg/l, with a mean value above the target at 0.043mg/l. all other sites did not experience any exceedances of the target objective at any time during the sampling period.

Table 9: Unionized Ammonia values in mg/L

| | Event Type | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|-------------|------------|-------|-------|-------|-------|-------|-------|-------|
| 5/6/2014 | D | 0.064 | 0.004 | 0.002 | BDL | BDL | 0.001 | BDL |
| 5/20/2014 | D | 0.005 | BDL | 0.000 | BDL | BDL | BDL | BDL |
| 6/4/2014 | D | 0.038 | BDL | 0.002 | 0.001 | BDL | 0.001 | 0.000 |
| 6/16/2014 | D | 0.037 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| 7/2/2014 | D | 0.033 | 0.000 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 |
| 7/14/2014 | D | 0.004 | BDL | 0.001 | 0.001 | 0.000 | 0.000 | 0.001 |
| 7/28/2014 | W | 0.04 | 0.001 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 |
| 8/11/2014 | D | 0.084 | 0.001 | 0.001 | 0.001 | BDL | BDL | BDL |
| 8/25/2014 | D | 0.057 | 0.001 | 0.002 | 0.001 | BDL | BDL | 0.001 |
| 9/8/2014 | D | 0.041 | BDL | 0.002 | 0.001 | BDL | BDL | 0.001 |
| 9/23/2014 | D | 0.067 | BDL | 0.001 | BDL | BDL | BDL | 0.001 |
| Mean | | 0.043 | 0.001 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 |

4.4 Total Suspended Solids



As Table 10 shows, the majority of sample locations were lower than the interim target of 25 mg/L. Of the 77 samples taken, 62 were below the RAP objective. The Ancaster Creek locations had some of the highest recorded values for TSS. However, the lowest values were observed in AC-4, upstream of the confluence with Ancaster Creek main channel. Although AC-4 is within the Ancaster Creek subwatershed, the catchment area is quite small in comparison to AC-3 and AC-4 as the channel forms about 2 kilometers upstream of the sample location and consists

of mostly forested and some urban residential land uses. The small catchment area consisting of mostly undeveloped floodplain/forest area is the likely reason for lower TSS values seen at AC-4. The highest values recorded were after the wet event, specifically at sites AC-1, AC-2 and AC-3. The origins of the creeks represented by AC-1, AC-2 and AC-3 are within agricultural areas about 8 kilometers upstream. AC-2 watershed (Sulphur Creek) is in mostly protected floodplain area or conservation areas and thus has little to no impact from typical

urban influences. Site AC-1 and AC-3 (Ancaster Creek) go from agriculture in the upper watershed, through a golf course and then into urban residential areas before entering the forested/floodplain area below the escarpment. Site CP-7 and CP-11 saw a gradual increase in TSS concentrations over the season compared to the Ancaster Creek sites up until the wet event and then began to decrease nearing the end of the summer season.

Table 10: Total Suspended Solids in mg/L

| Date | Event Type | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|-------------|------------|-------|-------|-------|-------|-------|-------|------|
| 5/6/2014 | D | 9.2 | 1.8 | 6.1 | 16.2 | 18.6 | 20.6 | 13.5 |
| 5/20/2014 | D | 9.5 | 3.4 | 12.3 | 22.6 | 20.8 | 38.3 | 12.1 |
| 6/4/2014 | D | 19 | 4.2 | 17.5 | 23.8 | 17.9 | 49.5 | 4 |
| 6/16/2014 | D | 21.5 | 5.4 | 12.9 | 12.5 | 12.3 | 24 | 6 |
| 7/2/2014 | D | 29 | 12 | 23.1 | 21.8 | 25.9 | 70.4 | 6 |
| 7/14/2014 | D | 25.9 | 8.1 | 22.5 | 19 | 22.3 | 51.5 | 6.4 |
| 7/28/2014 | W | 89.6 | 109 | 250 | 335 | 645 | 353 | 16.6 |
| 8/11/2014 | D | 52.4 | 8.1 | 13.4 | 2.5 | 7.5 | 4.7 | 17.5 |
| 8/25/2014 | D | 55.5 | 3.8 | 9.6 | 1.6 | 5.4 | 3.4 | 1.8 |
| 9/8/2014 | D | 7 | 4.2 | 20.4 | 4.4 | 7.8 | 8 | 2.4 |
| 9/23/2014 | D | 12.4 | 4 | 9 | 2.7 | 3.6 | 2.7 | 2 |
| Mean | | 30.09 | 14.91 | 36.07 | 42.01 | 71.55 | 56.92 | 8.03 |

4.6 Escherichia coli (E. coli)

As with most other parameters, *E. coli* levels increased in concentration during the wet event at all locations. In some cases such as CP-11, the levels are high – indicating possible sewage contamination. All locations can be considered to be in urban locations or under urban stormwater conditions. Although sites AC-2 → AC-4 are within a forested floodplain area, they still experienced a high *E. coli* concentration throughout the sample season and especially during the wet event. The high exceedances at site CP-11 may be a result of combined sewers and cross connections upstream, as the seasonal geometric mean for this location was calculated to be 61,077 CFU/100mL which is much higher than other locations. Site AC-1 had the second highest concentrations of *E. coli* recorded. This site captures the combination of contaminants from AC-2, AC-3 and AC-4, plus a stretch of about 1.5 km of forested floodplain area in which it can gather more bacteria from wildlife and urban runoff.

Table 11: *E. coli* in CFU/100mL

| Date | Event Type | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|-----------------------|------------|---------|-------|------|------|------|-------|------|
| 5/6/2014 | D | 53000 | <10 | 30 | 20 | <10 | <10 | 10 |
| 5/20/2014 | D | 2600 | 30 | 100 | 210 | 50 | 250 | 180 |
| 6/4/2014 | D | 420000 | 390 | 900 | 1390 | 440 | 680 | 670 |
| 6/16/2014 | D | 120000 | 100 | 470 | 520 | 130 | 310 | 280 |
| 7/2/2014 | D | 1900 | 1900 | 420 | 570 | 430 | 300 | 810 |
| 7/14/2014 | D | 60000 | 120 | 420 | 460 | 440 | 360 | 490 |
| 7/28/2014 | W | 1120000 | 8700 | 8400 | 9700 | 6000 | 12600 | 1200 |
| 8/11/2014 | D | 260000 | 500 | 300 | 700 | 600 | 170 | 100 |
| 8/25/2014 | D | 2900 | 190 | 270 | 360 | 240 | 120 | 170 |
| 9/8/2014 | D | 120000 | 210 | 270 | 490 | 300 | 210 | 390 |
| 9/23/2014 | D | 550000 | 120 | 250 | 980 | 150 | 510 | 790 |
| Geometric Mean | | 61077 | 298 | 352 | 530 | 340 | 416 | 280 |

5. Discussion Summary

The water quality data collected over the 2014 sampling season provides valuable insight into which creeks and tributaries are contributing poor water quality to the Cootes Paradise Marsh. The water quality issues identified in 2014 will need to be verified by samples obtained from additional monitoring seasons. Once trends have been further established and input sources have been identified, water quality issues can be more definitively stated and remedial activities designed and implemented.

Of all the parameters measured for this monitoring, ortho-phosphate and Nitrite were found to be of the least concern at most locations and therefore will only be mentioned briefly. Nitrite and ortho-Phosphate analysis consistently tested below detection limits throughout the sample season. However, nitrite at CP-11 received an average of 0.117 mg/L which is higher than the CWQG of 0.06 mg/L, and is consistent with the abnormally high nutrient concentrations associated with this site. Site CP-11 seems to be heavily impacted by nutrients whether its under wet or dry conditions.

Discuss nitrate and unionized ammonia

Total suspended solids during base flow conditions were of relatively good quality and regularly resulted in concentrations below the target of 25 mg/L at all locations. The one storm event captured suggests that the largest loads likely happen during wet events. Sites AC-1 → AC-3 appear to be more susceptible to sediment loading during wet events, as their concentrations during the July 28, 2014 event were relatively quite high. There appears to be a significant amount of erosion taking place within the floodplain near the sample locations. Heavily eroded

banks, fallen trees and loose soils are a common sight within the floodplain (visual evidence to follow on further reports). Stream and bank restoration efforts through these stretches may assist in decreasing the amount of sediments being eroded from the stream bank during storm events.

Total phosphorus concentrations regularly exceeded the PWQO of 0.03 mg/L at all locations. Site CP-11 was once again associated with a very high nutrient concentration. All sites recorded elevated levels of TP during the wet event as total phosphorus is known to adsorb to sediments. Erosion and runoff reducing mitigations could be applied to help reduce nutrient rich sediments from entering the watercourse.

Site CP-11 was severely impacted by *E.coli*, especially after the wet event. The abnormally high results indicate possible sewage contamination from an upstream combined sewer outfall, cross connections or aging infrastructure. Ancaster Creek sampling locations also tested high for *E.coli*, which may be indicative of the land uses across the sub-watershed. Ancaster Creek headwaters begin in agricultural fields south of Garner Rd. and Hwy 6 in Ancaster and move through residential areas and a golf course before flowing into a forested floodplain. Surface waters can pick-up bacteria from organic fertilizer and pet waste associated with these types of land uses during wet events. More information and monitoring is required to identify any possible point-source contributors of *E.coli* in Ancaster Creek.

Due to the limited data set for this monitoring program, it is difficult to draw any final conclusions about the state of water quality for the sampling locations. It can, however, point us in the right direction for future monitoring opportunities as well as allow us to begin to establish water quality trends in areas where there was no data previously. By continuing this program, we can begin to develop strategies that will identify, target and remediate potential water quality issues affecting the Cootes Paradise Marsh and Hamilton Harbour. Data from this program can also be used amongst monitoring partners to supplement future studies in the area, such as the nutrient loading model currently being developed by the University of Toronto.

6. Future Planned Monitoring Activities As Part of the Cootes Paradise Tributary Water Quality Monitoring Program

In order to estimate loadings coming from Ancaster Creek into Spencer Creek and the Harbour, HCA and MOECC staff set-up a temporary flow monitoring and remote sample collection station on Ancaster Creek just upstream of the confluence with Spencer Creek at site AC-1 (see Figure 4) to sample six storm events per sample season starting in April 2015 (2 events in each of spring, summer and fall). Continuous flow monitoring will be conducted from April to October using a pressure transducer (730 Bubbler Flow Module) attached to an ISCO automated remote sampler. This will provide accurate flow data by establishing a level-to-flow relationship using a Marsh McBirney flow meter to develop a rating curve at site AC-1. Rating curve points will be taken once a month throughout the study period while paying close attention to capture both high and low flow conditions. With 24 sample bottles in the ISCO carousel, we will be able to capture a 24 hour time period of the storm and its effect on the creek (this sample timeframe

may change depending on expected storm durations). Using the water level data collected by the 730 Bubbler Flow Module, a level weighted composite sample can be made from the 24 bottles and submitted for analysis.

Figure 4: AC-1 equipment installation



7. References

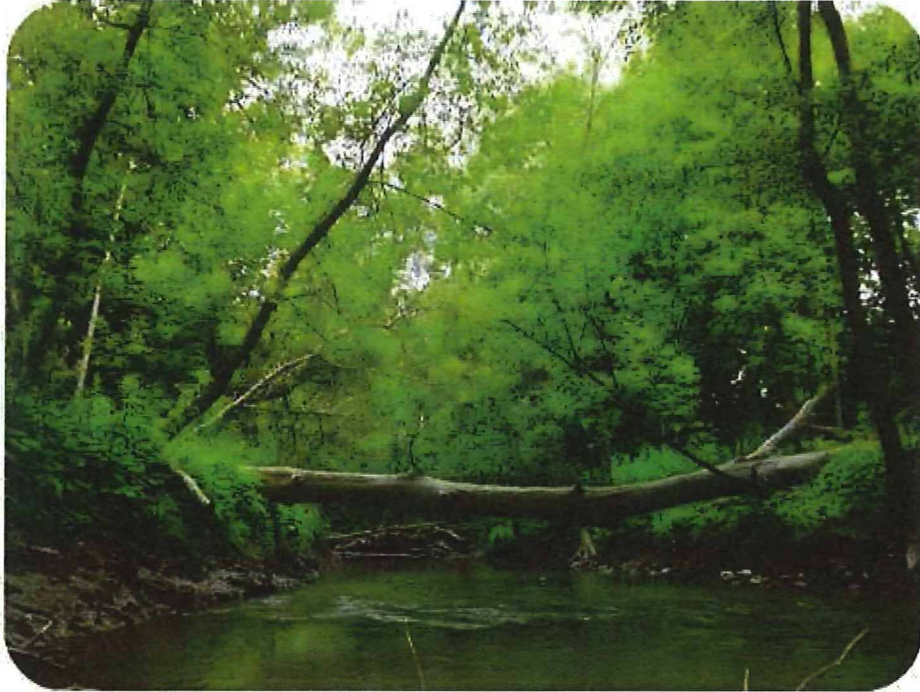
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Watershed Planning &
Engineering
March 31, 2016

2015 TRIBUTARY MONITORING FOR COOTES PARADISE

To support the Hamilton Harbour Remedial Action Plan

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Background

In spring of 2014, the Hamilton Conservation Authority (HCA) and the Royal Botanical Gardens (RBG) began discussions for a plan to divide and expand a monitoring program aimed at understanding water quality contributions from creeks flowing into Cootes Paradise Marsh and ultimately, Hamilton Harbour. With the assistance of the Ministry Of Environment and Climate Change and the City of Hamilton, this program aims to explore water quality conditions in the sub-watersheds of Ancaster Creek, Sulphur Creek, Borers Creek, Lower Spencer Creek and Chedoke Creek; their drainage areas can be seen on Figure 1. It was determined that the HCA would assume sampling responsibilities for three existing creek sampling sites within the Cootes Paradise study area previously sampled by RBG staff. These sites are known as CP-7, CP-11 and CP-18.1 (See Figure 2) and their respective locations are on Spencer Creek, Chedoke Creek and Borers Creek upstream of the locations where they drain into the Cootes Paradise Marsh. The monitoring program was expanded to include four new sites to help characterize the water quality contributions coming from the Ancaster Creek sub-watershed (AC-1, AC-2, AC-3 and AC-4), which has relatively little water quality and flow data near the lower reaches of the sub-watershed boundaries.

The new expanded monitoring program began on May 6, 2014 and the annual sampling period ended on September 23, 2014. With the addition of the four sampling locations on Ancaster Creek there are now a total of seven surface water sampling locations.

Changes to Water Quality Monitoring Program in 2015

In 2015 the sampling period was lengthened to begin in April and end in November. In addition to the extended sampling period in 2015, storm event samples were taken at site AC-1 using an ISCO automated composite sampler. Once the targeted storm event was captured and sampled into the 24 bottle drum of the ISCO, a composite sample was made using a level weighted average to calculate volumes from each bottle. Thus giving a snapshot of the storm event, from beginning to end, in a single sample submission. At various points throughout the sample season, flows were measured at site AC-1 using a Marsh McBirney flow meter to establish a rating curve (See Figure 3), and estimate loadings coming from Ancaster Creek before the confluence with Spencer Creek.

It is beneficial to undertake an enhanced surface water monitoring program on lower Ancaster Creek to help identify important contributors and sources of nutrients and sediment as well as provide information to support where mitigation activities can be best applied to benefit the overall water quality within Cootes Paradise. Currently, there is a nutrient loadings model being developed for Cootes Paradise by the University of Toronto. This model could benefit greatly by utilizing the data from non-defined inputs being collected by this monitoring program and the HCA would welcome the opportunity to share this information to help better the understanding of the inputs into Cootes Paradise. Overall, several years of measurements will be required to establish trends and determine baseline and wet event conditions. This program covers the 2014 and 2015 sample seasons but is planned to continue for the next 3-5 years.

Figure 1: Sub-watersheds within the Hamilton Conservation Authority watershed

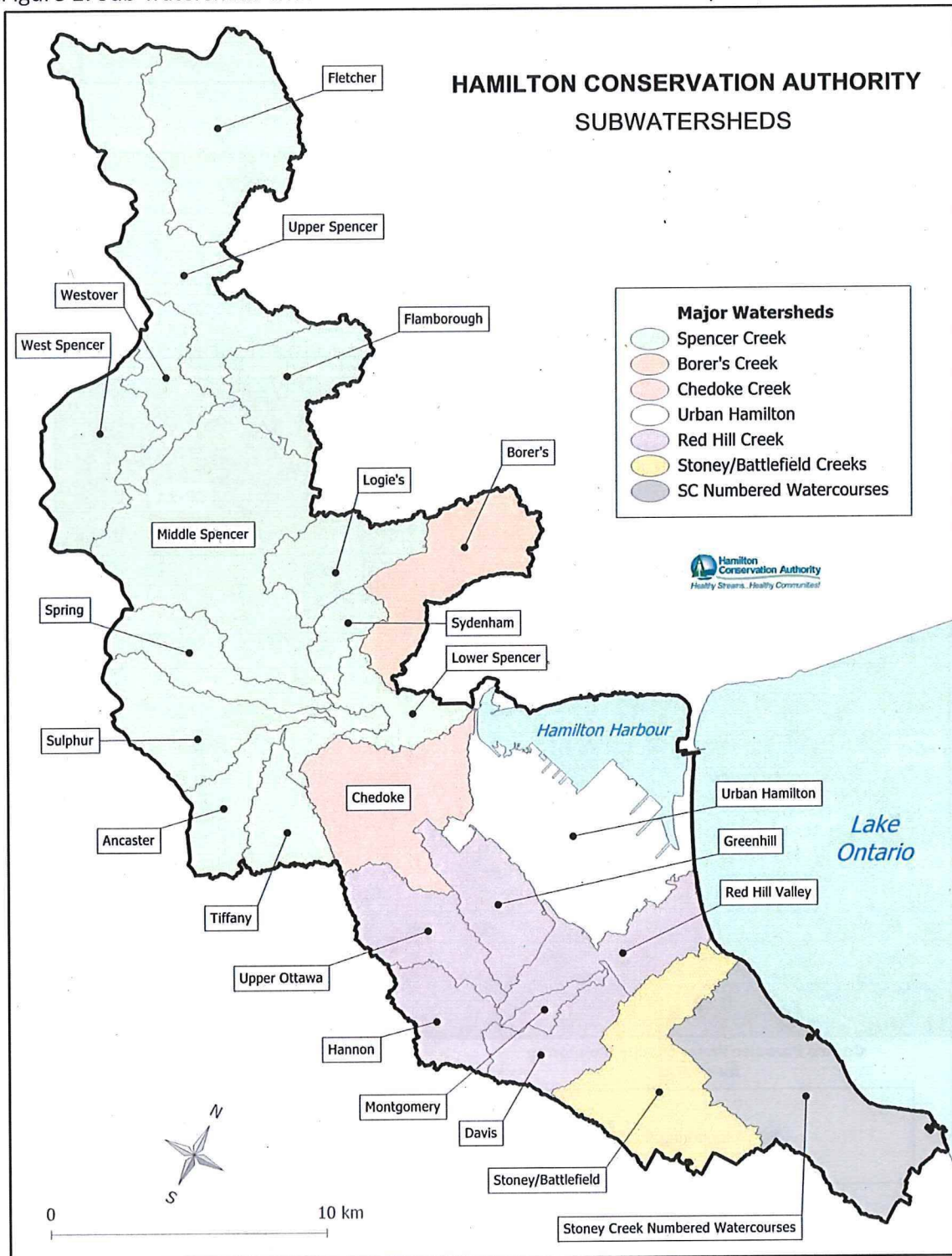


Figure 2: Study area and sample locations.

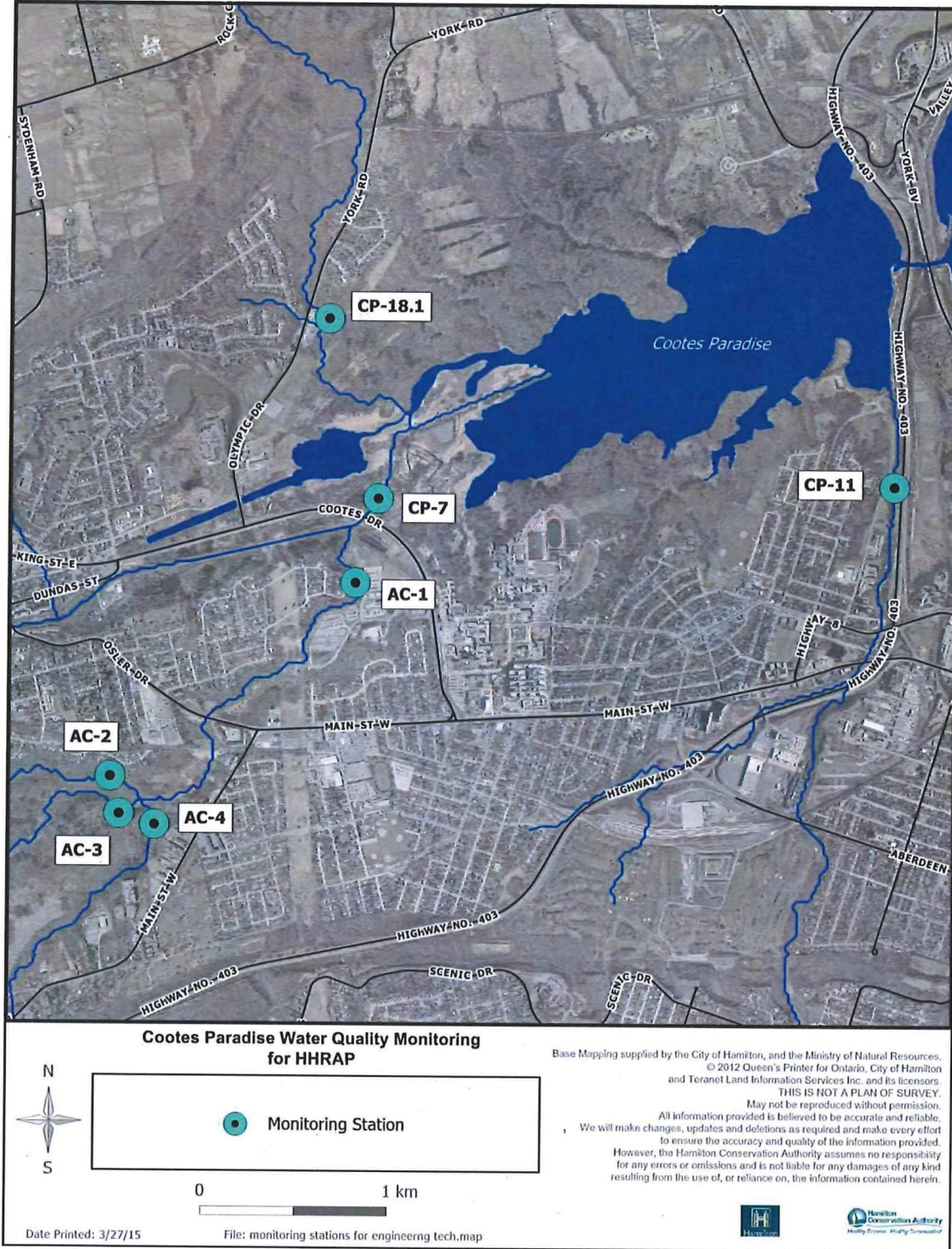


Table 1: Sampling Stations Identified by Location and Sub-watershed

| Station | Location | Sub-watershed |
|---------|--|---------------------|
| CP-7 | Downstream of Cootes Drive | Lower Spencer Creek |
| CP-11 | Downstream of King Street | Chedoke Creek |
| CP-18.1 | Downstream of York Road | Borers Creek |
| AC-1* | Upstream of Spencer Creek | Ancaster Creek |
| AC-2 | Upstream of confluence with Ancaster Creek | Sulphur Creek |
| AC-3 | Upstream of confluence with Sulphur Creek | Ancaster Creek |
| AC-4 | Downstream of Wilson Street | Ancaster Creek |

*Indicates location where storm event sampling is taking place

Methodology

Water quality grab samples were taken during daylight hours with same day drop off for analysis at the City of Hamilton Regional Environmental Lab. Sampling frequency was every other week to coincide with RBG sampling programs, see Table 2 for sampling dates. Each station was sampled 17 times throughout the 2015 sampling season. Measurements of temperature, pH, conductivity, turbidity, and dissolved oxygen were measured on site by HCA staff for each sample site using a YSI 6600. Chlorophyll-a is measured in an accredited laboratory once every three years (samples in 2013 were analyzed for Chlorophyll-a, next scheduled sampling is 2016). Sampling events were classified as wet or dry by viewing and confirming rain data recorded at Environment Canada precipitation monitoring station at Hamilton Airport Climate ID 6153193; if 4mm of rain occurred in the previous 24 hours it was considered a wet event. Wet and dry events are classified in Table 2. A visual inspection of storm water outfalls in the area was also completed if storm event conditions were suspected.

Table 2: Rainfall totals for corresponding sample dates

| Sampling Date | Previous 24 Hour Rainfall (mm) | Classification |
|--------------------|--------------------------------|----------------|
| April 9, 2015 | 12 | Wet |
| April 20, 2015 | 19.2 | Wet |
| May 4, 2015 | 0 | Dry |
| May 19, 2015 | 0 | Dry |
| June 1, 2015 | 52.2 | Wet |
| June 15, 2015 | 20.2 | Wet |
| June 30, 2015 | 0 | Dry |
| July 13, 2015 | 0 | Dry |
| July 27, 2015 | 0 | Dry |
| August 10, 2015 | 0 | Dry |
| August 24, 2015 | 0 | Dry |
| September 8, 2015 | 7.8 | Wet |
| September 22, 2015 | 0 | Dry |
| October 15, 2015 | 0.4 | Dry |
| October 22, 2015 | 2.8 | Dry |
| November 3, 2015 | 0 | Dry |
| November 18, 2015 | 0 | Dry |

Storm event samples were targeted at sample site AC-1 in 2015. An ISCO automated sampler was put in place under a bridge that overpasses Ancaster Creek in fall of 2014 (at site AC-1). Level-weighted samples were made using water level data taken on-site. During spring melt, there were several attempts to capture storm events. However due to suction issues along the intake line, there was not a sufficient amount of surface water to make a composite sample. Repairs were made and the ISCO was brought back on-line. Overall, two storm events were sampled. The dates for these events are August 21 and October 28. Rainfall amounts for the storm events can be seen on Table 3. Flows were measured five times throughout the sampling period, these dates can be seen on Table 4 along with the total discharge amounts in cubic meters per second.

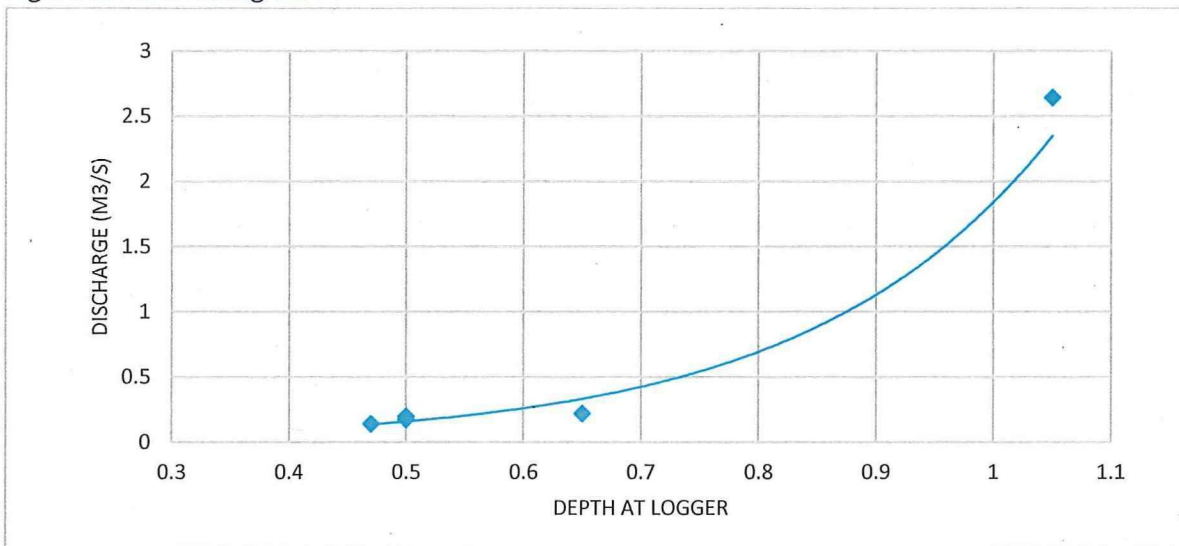
Table 3: Rainfall totals for storm event sample dates

| Date | Previous 24 Hour Rainfall (mm) |
|------------------|--------------------------------|
| August 21, 2015 | 9.2 |
| October 28, 2015 | 40.4 |

Table 4: Flow measuring dates

| Date | Discharge (m ³ /s) |
|-----------------|-------------------------------|
| June 9, 2015 | 2.64 |
| July 8, 2015 | 0.218 |
| July 22, 2015 | 0.173 |
| August 11, 2015 | 0.198 |
| August 18, 2015 | 0.142 |

Figure 3: AC-1 Rating Curve



Water Quality Targets/Objectives

Samples were analyzed for the parameters listed in Table 5. Objectives to ensure that water quality is satisfactory for aquatic life were based on Provincial Water Quality Objectives (MOE 1999), federal guidelines outlined by the Canadian Council of Ministers of the Environment (2001) and Cootes – Grindstone Water Quality Targets (RAP office 2012). The target objective is to apply to 14 out of the 17 samples taken in 2014. A description of each parameter is provided below.

Table 5: Water Quality Parameters and their Desired Target/Objective

| Parameter | Units | Target/Objective | Reference |
|---------------------------|-----------|------------------|-----------|
| Unionized Ammonia | mg/L | 0.02 mg/L | HHRAP |
| Nitrate as N | mg/L | 3 mg/L | HHRAP |
| Nitrite as N | mg/L | 0.06 mg/L | CWQG |
| o-Phosphate as P | mg/L | n/a | |
| Total Phosphorous | mg/L | 0.03 mg/L | PWQO |
| Total Suspended Solids | mg/L | 25 mg/L | HHRAP |
| Volatile Suspended Solids | mg/L | n/a | |
| Escherichia coli | CFU/100mL | 100 CFU/100mL | PWQO |

Total Phosphorous

Total Phosphorous (TP) is commonly found in fertilizers, manure and organic wastes in sewage and industrial effluent. It is an essential nutrient to aquatic life, but in excess can cause eutrophication and algae blooms. Soil erosion is a main contributor of TP in surface waters, as phosphorous particles tend to attach to soil particles.

Unionized Ammonia

Ammonia is the preferred nitrogen containing nutrient for plant growth, yet it can also cause algal blooms and stress to fish in high concentrations. In water, ammonia occurs in two forms; ionized and unionized ammonia. This difference is important to know because NH_3 , un-ionized ammonia, is the form more toxic to fish. Both water temperature and pH affect which form of ammonia is predominant at any given time in an aquatic system.

Nitrate

Nitrates are an essential nutrient for regulating plant life but can cause degraded water quality in excess concentrations. The target concentration for nitrates in this study is based on the Canadian Water Quality Guideline (CWQG) of 3.0mg/L. Typically nitrate concentrations tend to be low during base-flow conditions; however runoff from fertilizer, waste water treatment plants and storm sewer outfalls can bring the concentration of nitrates up to and beyond the target for water quality.

Nitrite

For this study, we've adopted the Canadian Water Quality Guideline (CWQG) target of 0.06mg/L as N.

Total Suspended Solids

Targeted concentrations of Total Suspended Solids (TSS) vary depending on the system being monitored. TSS thresholds are established by understanding the underlying background levels of a site

which may or may not have clear flow during base-flow conditions. Storm events move sediment downstream and therefore TSS values are expected to be much higher during these events. Since background levels of TSS is unavailable for the majority of the sites sampled, the Hamilton Harbour Remedial Action Plan interim target of 25 mg/L was used as the target for TSS (RAP office 2012). This target is derived from the Canadian Water Quality Guideline (CWQG) for total suspended sediment.

Volatile Suspended Solids

Volatile Suspended Solids represent the organic portion of Total Suspended Solids. There is no current target set for Volatile Suspended Solids for the HHRAP or PWQO's.

Escherichia coli

E.coli is well known to have harmful effects on human health when found in the environment at certain concentrations. There are strict guidelines for *E.coli* targets for drinking and recreational purposes. Since there is little to no background data for the majority of the sites, we will be comparing the geometric mean concentrations from each site to the PWQO of 100CFU/100mL (MOE 1999), the target for recreational purposes.

Results and Discussion

Total Phosphorous

As seen in Table 6, the majority of Total Phosphorous (TP) samples taken in 2015 exceeded the Provincial Water Quality Objective (PWQO) of 0.03 mg/L. Elevated TP values were observed at all sites, indicating TP impairment throughout the watershed. Site CP-11 exceeded the target objective on every sample event, while sites CP-7, CP-18.1 & AC-4 exceeded 53% – 65% of the sample events. Sites AC-2 and AC-3 exceeded only 35% and AC-1 exceeded 47% of the time. As seen on Figure 4, exceedances were strongly related to wet sample events, with only one sample taken during a wet event that tested below the objective. The wet sample events in the spring (April 9th and April 20th) saw the highest TP values at every site. As seen on Figure 5, seasonal average TP values at all locations declined as the seasons advanced.

Site CP-11 at the mouth of Chedoke Creek had the greatest TP impairment throughout the sample period. Sites CP-7 & CP-18.1 exceeded the target in most sample events, yet the mean values throughout the entire period are the lowest. This indicates that although TP impairment is common at these locations, they are less susceptible to higher TP spikes in storm runoff events. Although the AC sample sites had the fewest exceedances (with the exception of AC-4), the mean values for the sampling period were among the highest. This indicates that these locations are susceptible to high increases of TP during storm runoff events. Site AC-4 exceeded the target 65% of sample events, with some of the exceedances coming on dry events. AC-4 has a relatively small drainage area compared to AC-2 and AC-3 that originates about 2.5 kilometers upstream of the sample location and the land use is mostly urban residential.

Observation of 2014 total phosphorous results for sites CP-7, CP-11 & CP-18.1 are relatively consistent with results obtained in 2015 as seen on Table 7, however sites AC-1, AC-2, AC-3 & AC-4 all had noticeable increases in the past year. This may be explained by the extended sampling period. Most of the greatest exceedances came within the early extension of the sample period in April. Also, a greater number of wet sample events were captured in 2015 (5 in 2015 vs. 1 in 2014). Further years of consistent sampling protocol should give a better indication TP levels and concerns at these locations.

Historical records for sites CP-7, CP-11 & CP-18.1 obtained from the Royal Botanical Gardens (RBG) can be seen on Figure 6. Site CP-7 has an overall downward trend, while CP-11 is stable and CP-18.1 seems to be experiencing an upward trend. Site CP-11 is badly impacted by TP since the historical records began in 1999. The last 2 years of sampling has seen a sharp increase in TP values at both CP-7 & CP-18.1, this could be due to the extended sampling period beginning in 2015. Site CP-18.1 has a fairly short historical record, beginning in 2012. More samples taken on a consistent protocol will give better indication of seasonal distribution and annual averages of TP at these locations.

Figure 4: Total phosphorous in 2015

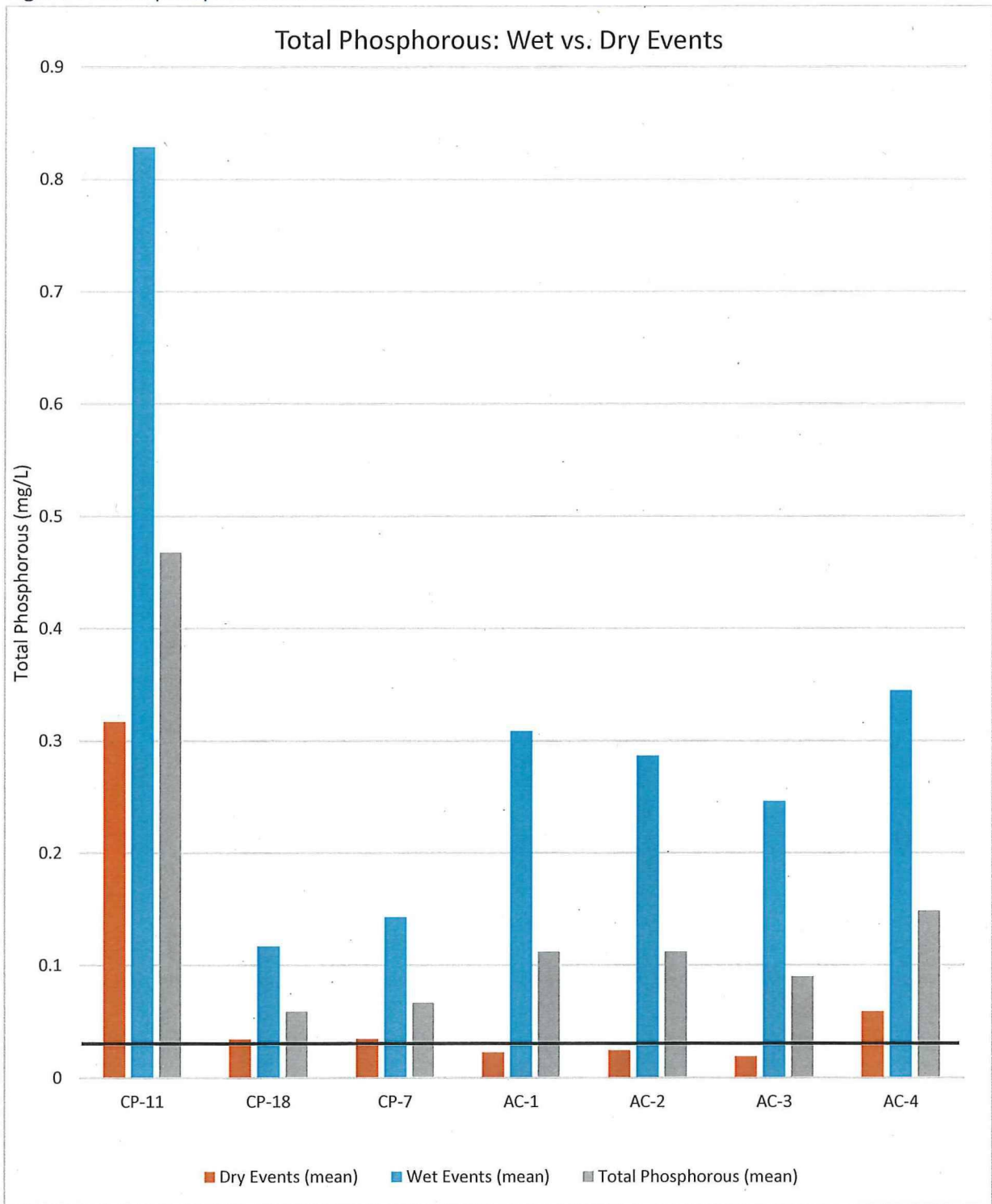


Figure 5: seasonal distribution of TP in 2015 for all stations

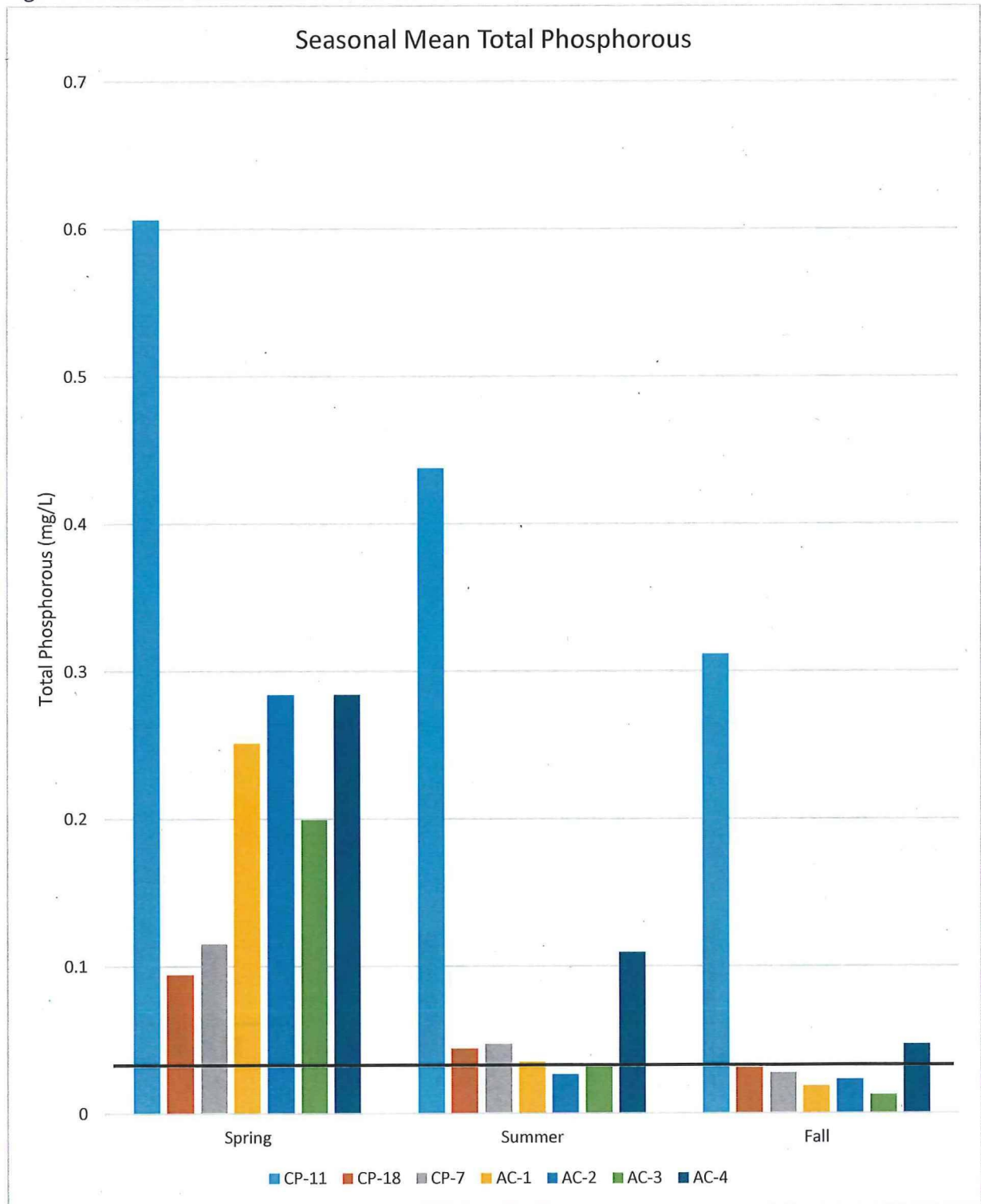


Figure 6: Historical Total Phosphorous at sites CP-7, CP-11 & CP-18.1

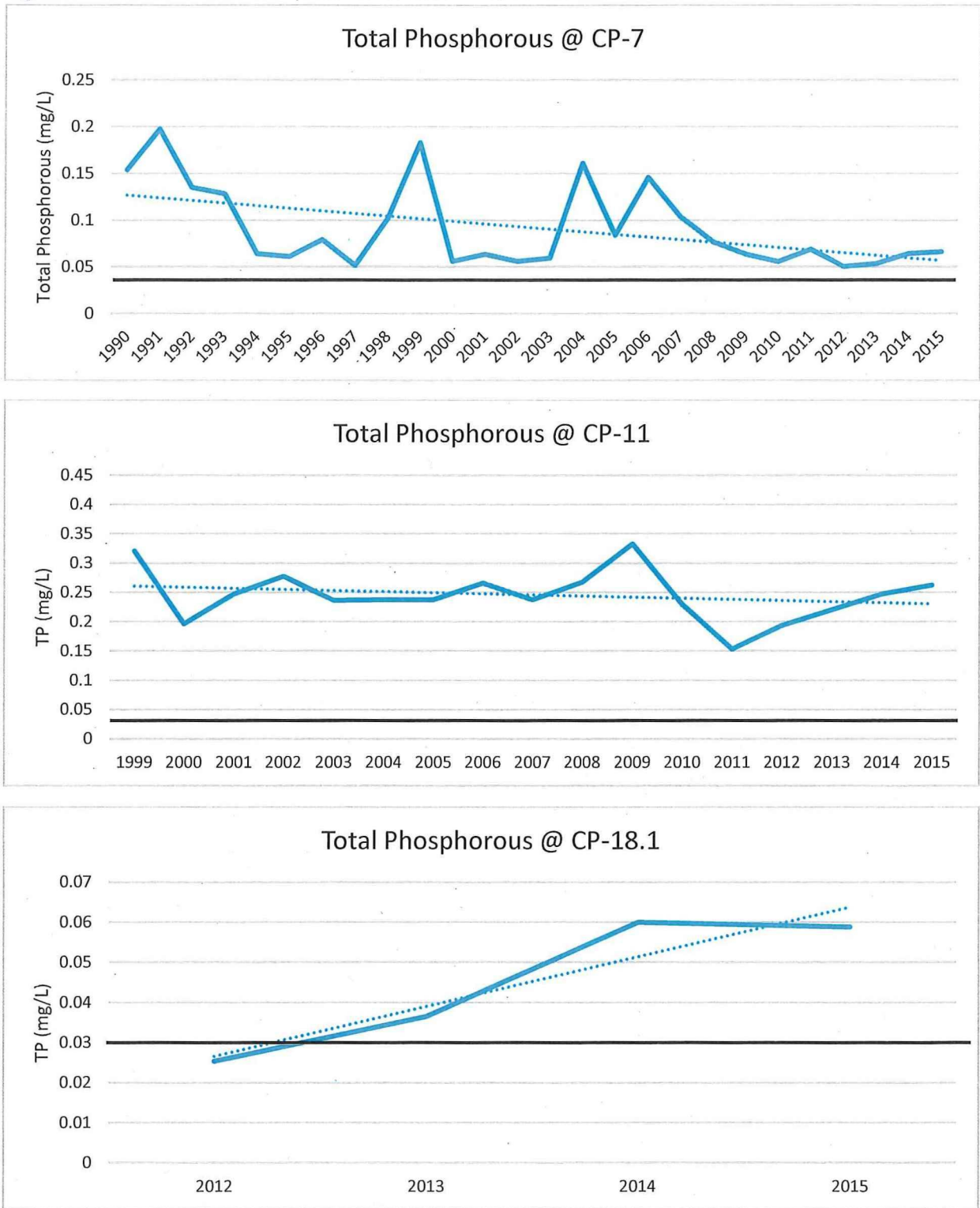


Table 6: Total Phosphorous Values for Stations Sampled in 2015

| Date | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | Wet/Dry |
|----------|------------------|-----------------|----------------|----------------|----------------|----------------|---------------|---------|
| 4/09/15 | 1.25 | 0.108 | 0.114 | 0.226 | 0.325 | 0.126 | 0.168 | Wet |
| 4/20/15 | 1.06 | 0.287 | 0.41 | 1.1 | 0.95 | 0.901 | 1.1 | Wet |
| 5/04/15 | 0.113 | 0.014 | 0.017 | 0.015 | 0.012 | 0.024 | <0.01 | Dry |
| 5/19/15 | 0.207 | 0.021 | 0.024 | 0.017 | <0.01 | 0.013 | 0.022 | Dry |
| 6/01/15 | 0.508 | 0.057 | 0.039 | 0.053 | 0.059 | 0.053 | 0.05 | Wet |
| 6/15/15 | 0.501 | 0.08 | 0.088 | 0.097 | 0.076 | 0.08 | 0.082 | Wet |
| 6/30/15 | 0.465 | 0.07 | 0.094 | 0.061 | 0.066 | 0.045 | 0.143 | Dry |
| 7/13/15 | 0.324 | 0.039 | 0.029 | 0.015 | 0.018 | 0.02 | 0.029 | Dry |
| 7/27/15 | 0.475 | 0.057 | 0.043 | 0.019 | 0.024 | 0.023 | 0.174 | Dry |
| 8/10/15 | 0.369 | 0.025 | 0.021 | <0.01 | 0.025 | <0.01 | 0.027 | Dry |
| 8/24/15 | 0.3 | 0.033 | 0.056 | 0.037 | 0.02 | 0.015 | 0.044 | Dry |
| 9/08/15 | 0.826 | 0.054 | 0.064 | 0.068 | 0.024 | 0.072 | 0.325 | Wet |
| 9/22/15 | 0.306 | 0.031 | 0.023 | 0.011 | 0.01 | 0.019 | 0.024 | Dry |
| 10/15/15 | 0.34 | 0.029 | 0.025 | 0.012 | 0.01 | 0.011 | 0.049 | Dry |
| 10/22/15 | 0.379 | 0.04 | 0.036 | 0.02 | <0.01 | 0.013 | 0.082 | Dry |
| 11/03/15 | 0.299 | 0.029 | 0.029 | 0.031 | 0.029 | 0.016 | 0.03 | Dry |
| 11/18/15 | 0.229 | 0.027 | 0.02 | 0.012 | 0.031 | 0.011 | 0.027 | Dry |
| Mean | 0.4677058 | 0.058882 | 0.06658 | 0.11212 | 0.11193 | 0.09012 | 0.1485 | |

Table 7: 2014 total phosphorous results (mean)

| CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|-------|-------|-------|-------|-------|-------|-------|
| 0.475 | 0.060 | 0.068 | 0.085 | 0.092 | 0.097 | 0.041 |

Unionized Ammonia

As seen in Table 8, the only site to exceed unionized ammonia target level of 0.02 mg/L is site CP-11, which exceeded the target 6 out of 17 sample events. Four of those six exceedances occurred on wet events. Every other sample location tested well below the target objective in every sampling event. On the October 22 sample event, the pH probe on the YSI multi-meter malfunctioned in the field and would not give a dependable result, therefore unionized ammonia was not able to be calculated for this day. When comparing 2015 results to 2014 averages in Table 9, annual averages for unionized ammonia are on the decline at all locations.

Figure 7 displays the up and down nature of unionized ammonia at site CP-11 in 2015, while all other sites are well below the target marked on the graph.

Figure 7: Unionized ammonia at all sites in 2015

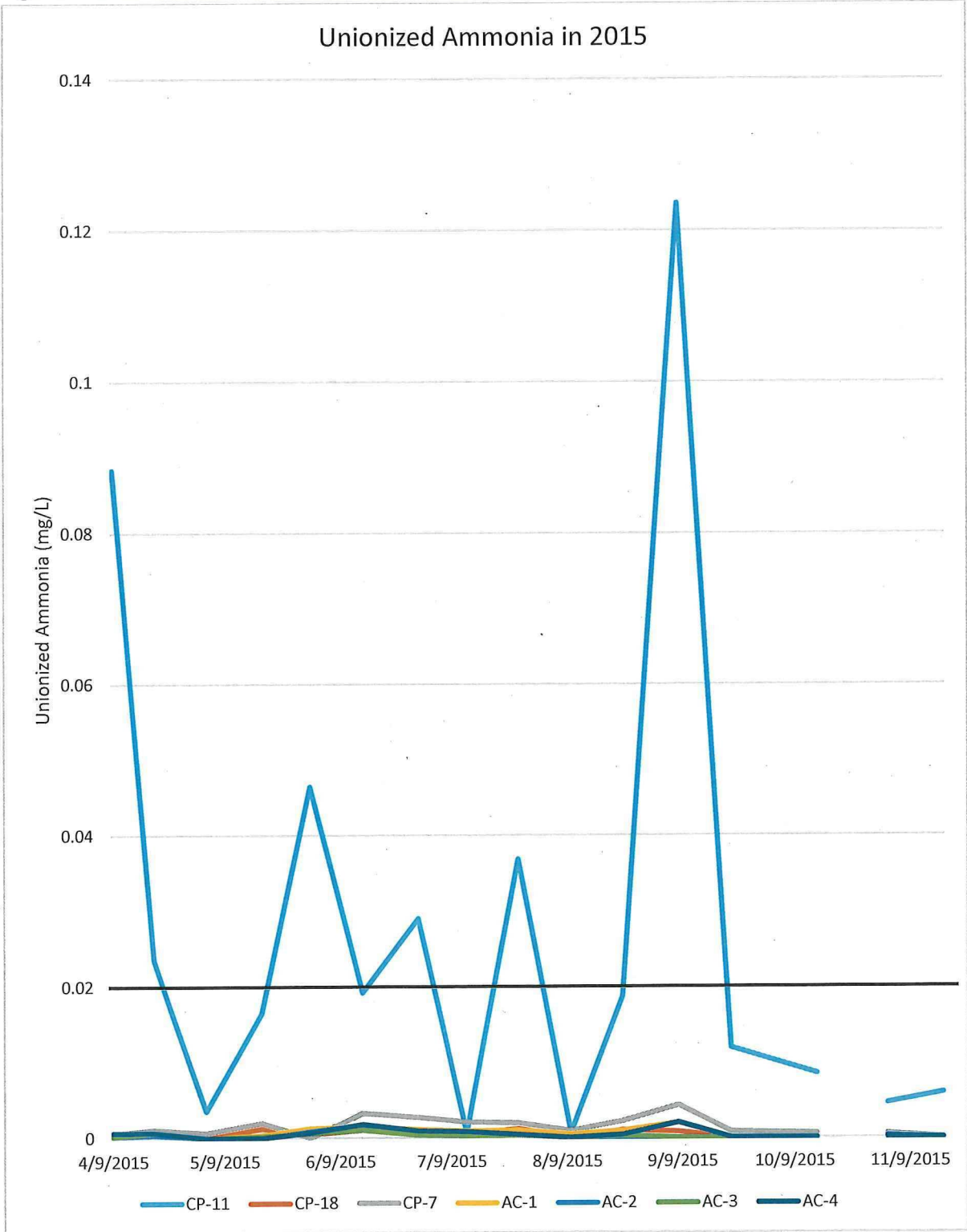


Table 8: Unionized Ammonia Values for Stations Sampled in 2015

| Date | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | Wet/Dry |
|----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|
| 4/09/15 | 0.08835 1 | 0.00045 2 | 0.00058 | 0.00049 | 0.00026 4 | 0.00021 5 | 0.00067 1 | Wet |
| 4/20/15 | 0.02352 8 | 0.00085 8 | 0.00109 5 | 0.00065 1 | 0.00042 1 | 0.00072 8 | 0.00073 4 | Wet |
| 5/04/15 | 0.00354 6 | --- | 0.00066 5 | --- | --- | --- | --- | Dry |
| 5/19/15 | 0.01648 4 | 0.00126 9 | 0.00198 9 | 0.00040 3 | --- | 0.00023 6 | --- | Dry |
| 6/01/15 | 0.04645 1 | 0.00052 9 | --- | 0.00130 9 | 0.00089 1 | 0.00064 1 | 0.00071 2 | Wet |
| 6/15/15 | 0.01920 3 | 0.00108 8 | 0.00327 | 0.00146 6 | 0.00176 1 | 0.00105 6 | 0.00183 6 | Wet |
| 6/30/15 | 0.02898 2 | 0.00050 8 | 0.00271 7 | 0.00115 8 | 0.00073 3 | 0.00040 3 | 0.00093 4 | Dry |
| 7/13/15 | 0.00065 2 | 0.00047 9 | 0.00207 5 | 0.00089 9 | 0.00029 1 | 0.00030 9 | 0.00083 1 | Dry |
| 7/27/15 | 0.03684 8 | 0.00120 6 | 0.00197 3 | 0.00103 1 | 0.00039 4 | 0.00035 9 | 0.00043 6 | Dry |
| 8/10/15 | 0.00065 3 | --- | 0.00092 2 | 0.00045 5 | --- | --- | --- | Dry |
| 8/24/15 | 0.01870 2 | 0.00104 2 | 0.0022 | 0.00096 9 | --- | 0.00030 1 | 0.00038 9 | Dry |
| 9/08/15 | 0.12360 4 | 0.00079 6 | 0.00429 2 | 0.00199 | --- | --- | 0.00202 9 | Wet |
| 9/22/15 | 0.01191 6 | --- | 0.00073 9 | --- | --- | --- | --- | Dry |
| 10/15/15 | 0.00852 7 | --- | 0.00055 9 | --- | --- | --- | --- | Dry |
| 10/22/15 | | | | | | | | Dry |
| 11/03/15 | 0.00459 8 | --- | 0.00048 7 | --- | 0.00024 9 | --- | 0.00010 6 | Dry |
| 11/18/15 | 0.00597 7 | --- | --- | --- | --- | --- | --- | Dry |
| Mean | 0.02737 | 0.00082 | 0.00168 | 0.00098 | 0.00062 | 0.00047 | 0.00086 | |

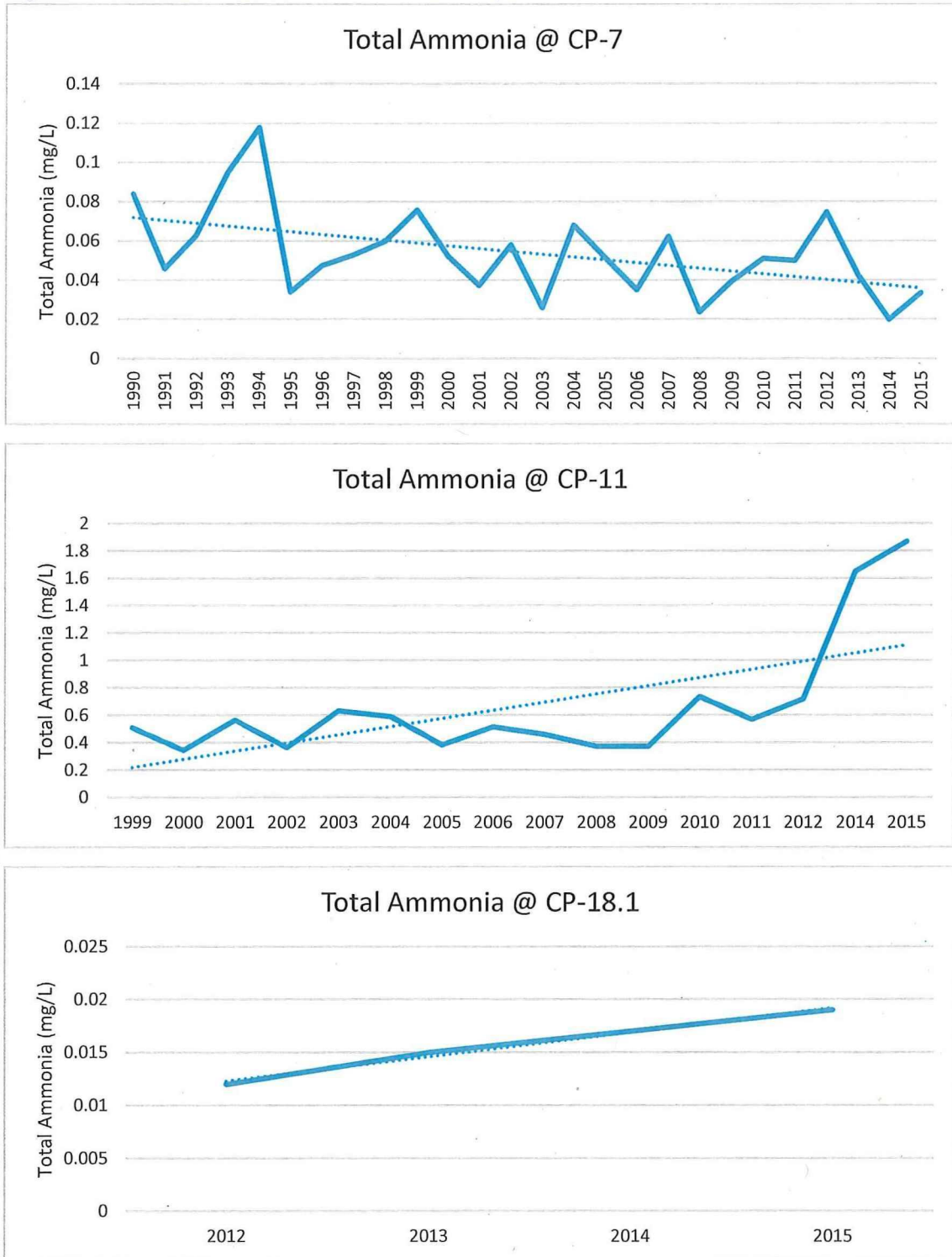
Table 9: 2014 unionized ammonia results (mean)

| CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|-------|---------|-------|-------|-------|-------|-------|
| 0.043 | 0.001 | 0.002 | 0.001 | 0.001 | 0.001 | 0.001 |

Total Ammonia

When compared to historical total ammonia results for sites CP-7, CP-11 & CP-18.1, site CP-7 has an overall downward trend while CP-11 and CP-18.1 are experiencing an overall increase in total ammonia concentration. CP-7 located in Lower Spencer Creek is downstream of 4 out of other 6 sample locations AC-1, AC-1, AC-3 & AC-4), and accounts for the most discharge of all the other sub-watersheds draining into Cootes Paradise. Site CP-11 in Chedoke Creek has risen in total ammonia concentration in the past three years. This may be due to the increase of sampling on heavy rain events, as a majority of the exceedances occur during wet sampling days. More sampling will have to be done in future years to determine the overall trend of total ammonia for the sample sites.

Figure 8: Historical Total Ammonia at sites CP-7, CP-11 & CP-18.1.



Nitrate

As seen in Figure 9, nitrate concentrations did not exceed the target objective of 3 mg/L at any location during the sampling season. Site CP-11 had the highest average concentration at 1.36 mg/L. Water quality impairment from nitrate does not seem to be a concern at this time. Nitrate concentration results can be seen in Table 10.

The historical trends for nitrate concentrations in CP-7 and CP-11 are decreasing. CP-18.1 has four years of historical data that suggest nitrite is on the rise, however still far below the target objective. When comparing 2014 data in Table 11 to the 2015 results, some locations (particularly the CP sample locations) are experiencing a rise in average concentrations while others (AC sample locations) are experiencing a slight decrease. More data will have to be collected to gain a clearer understanding of which direction nitrate concentrations are actually trending.

Figure 9: Nitrate concentrations in 2015

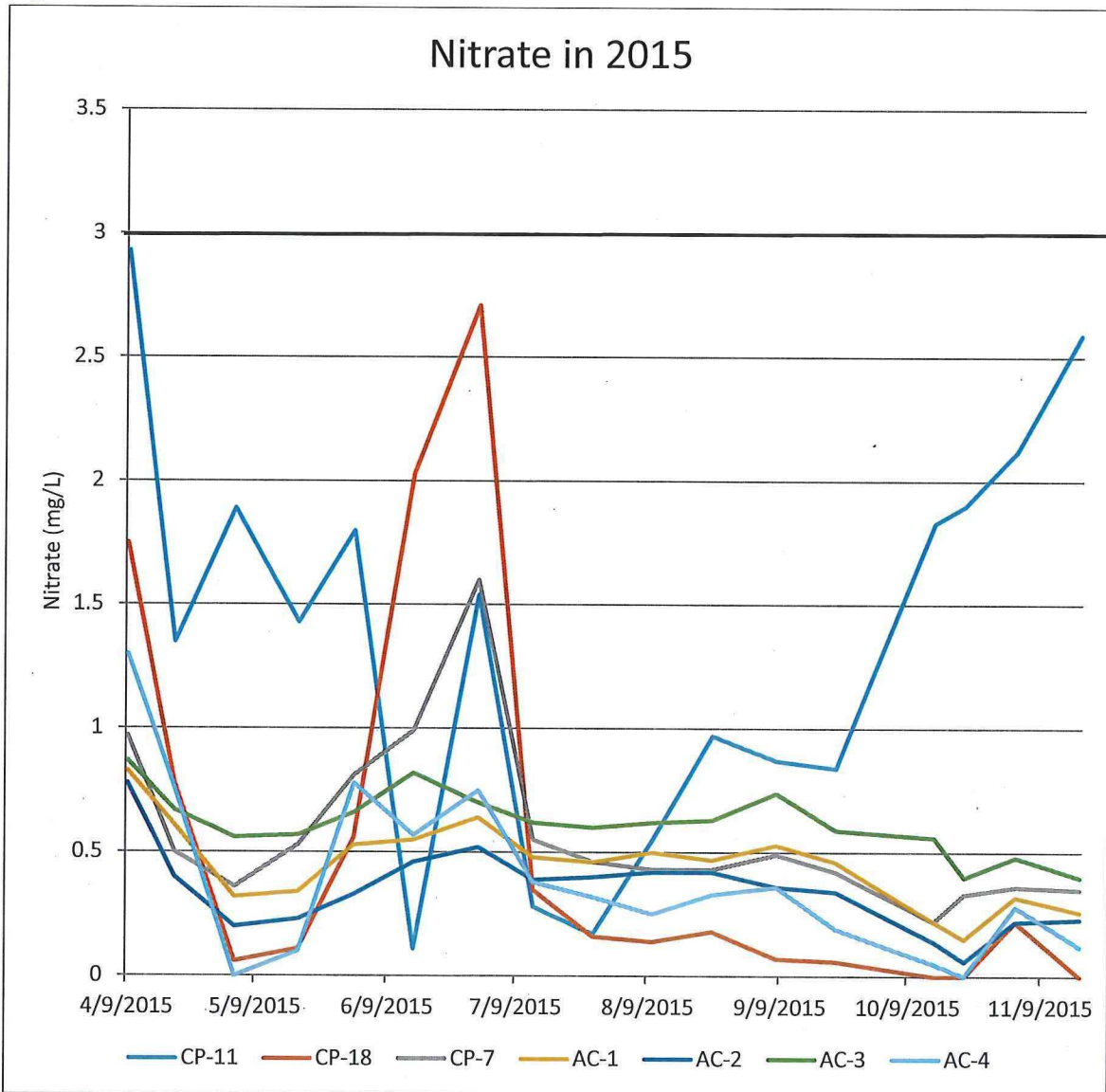


Figure 10: Historical nitrate at sites CP-7, CP-11 & CP-18.1

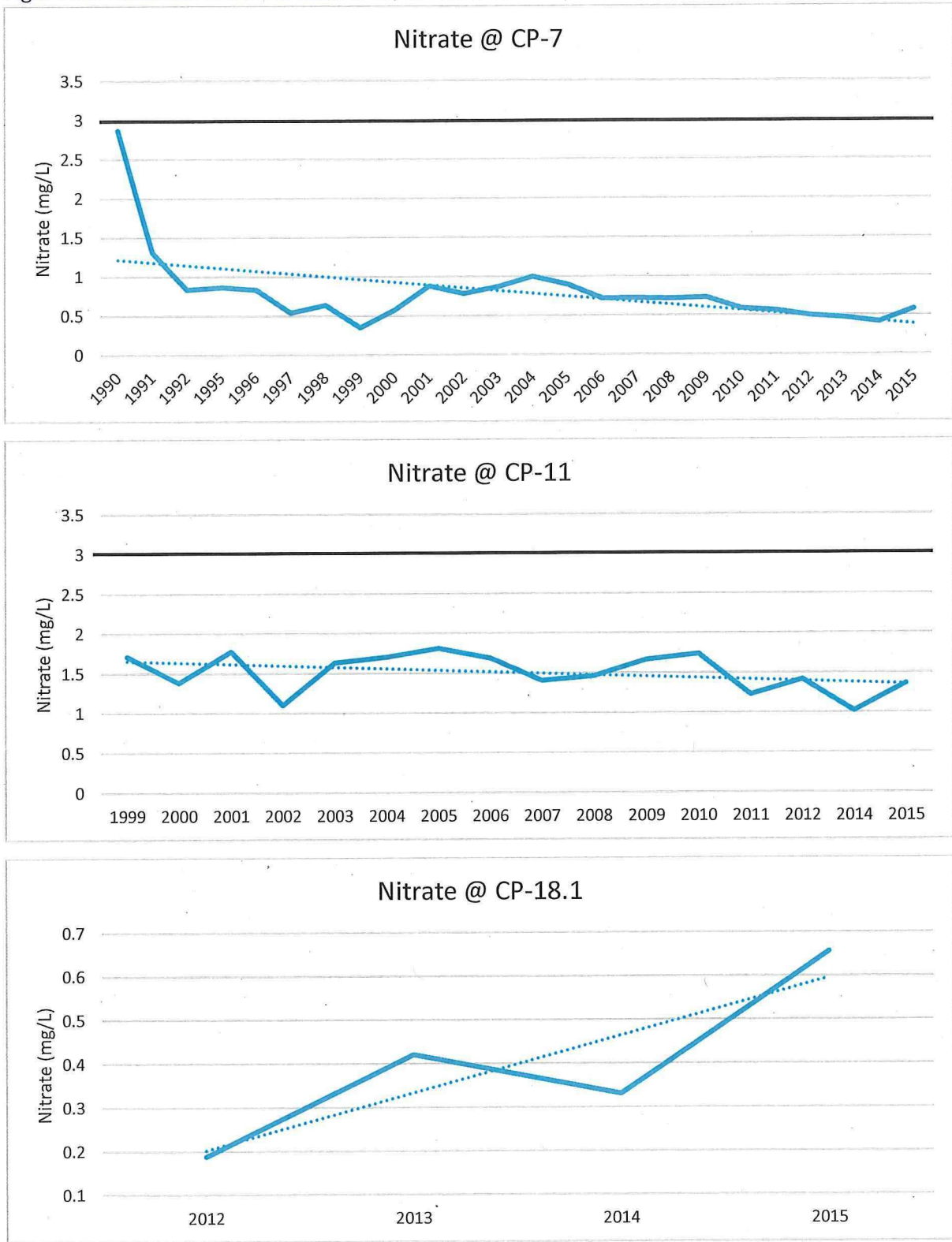


Table 10: Nitrate values for stations sampled in 2015

| Dates | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | Wet/Dry |
|----------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|---------|
| 4/09/15 | 2.93 | 1.75 | 0.97 | 0.83 | 0.78 | 0.87 | 1.3 | Wet |
| 4/20/15 | 1.35 | 0.78 | 0.5 | 0.61 | 0.4 | 0.67 | 0.76 | Wet |
| 5/04/15 | 1.89 | 0.06 | 0.36 | 0.32 | 0.2 | 0.56 | <0.05 | Dry |
| 5/19/15 | 1.43 | 0.11 | 0.53 | 0.34 | 0.23 | 0.57 | 0.1 | Dry |
| 6/01/15 | 1.8 | 0.56 | 0.81 | 0.53 | 0.33 | 0.66 | 0.78 | Wet |
| 6/15/15 | 0.11 | 2.03 | 0.99 | 0.55 | 0.46 | 0.82 | 0.57 | Wet |
| 6/30/15 | 1.54 | 2.71 | 1.6 | 0.64 | 0.52 | 0.7 | 0.75 | Dry |
| 7/13/15 | 0.28 | 0.35 | 0.55 | 0.48 | 0.39 | 0.62 | 0.38 | Dry |
| 7/27/15 | 0.17 | 0.16 | 0.46 | 0.46 | 0.4 | 0.6 | 0.32 | Dry |
| 8/10/15 | 0.55 | 0.14 | 0.43 | 0.5 | 0.42 | 0.62 | 0.25 | Dry |
| 8/24/15 | 0.97 | 0.18 | 0.43 | 0.47 | 0.42 | 0.63 | 0.33 | Dry |
| 9/08/15 | 0.87 | 0.07 | 0.49 | 0.53 | 0.36 | 0.74 | 0.36 | Wet |
| 9/22/15 | 0.84 | 0.06 | 0.42 | 0.46 | 0.34 | 0.59 | 0.19 | Dry |
| 10/15/15 | 1.83 | <0.05 | 0.22 | 0.22 | 0.14 | 0.56 | 0.05 | Dry |
| 10/22/15 | 1.9 | <0.05 | 0.33 | 0.15 | 0.06 | 0.4 | <0.05 | Dry |
| 11/03/15 | 2.12 | 0.22 | 0.36 | 0.32 | 0.22 | 0.48 | 0.28 | Dry |
| 11/18/15 | 2.59 | <0.05 | 0.35 | 0.26 | 0.23 | 0.4 | 0.12 | Dry |
| Mean | 1.36294 | 0.65571 | 0.57647 | 0.45117 | 0.34705 | 0.61705 | 0.436 | |

Table 11: 2014 nitrate results (mean)

| CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|--------|---------|--------|--------|--------|--------|--------|
| 1.0218 | 0.3309 | 0.4209 | 0.6018 | 0.4455 | 0.7845 | 0.4291 |

Nitrite

The target objective for nitrite for the purpose of this report is based on the Canadian Water Quality Guideline of 0.06 mg/L. As seen in Table 12 and Figure 11, the majority of samples taken tested below the detection limits of the laboratory instrumentation. Site CP-11 exceeded the target for 12 of the 17 sampling events. Every other site was regularly below the target on both wet and dry sampling events. The sampling event on August 24 was peculiar because all sites tested above the target and it was not classified as a wet event.

Historical data seen in Figure 12 suggests that sites CP-7 and CP-11 are experiencing an increase in annual nitrite concentrations. CP-18.1 in Borers Creek regularly tests below detection limits for nitrite throughout the sampling season therefore a graph was not constructed. Site CP-11 is the only site being routinely impaired by excess nitrite at this time. Concentrations are slightly up this year at CP-11 compared to 2014 (Table 13).

Figure 11: Nitrite concentrations in 2015

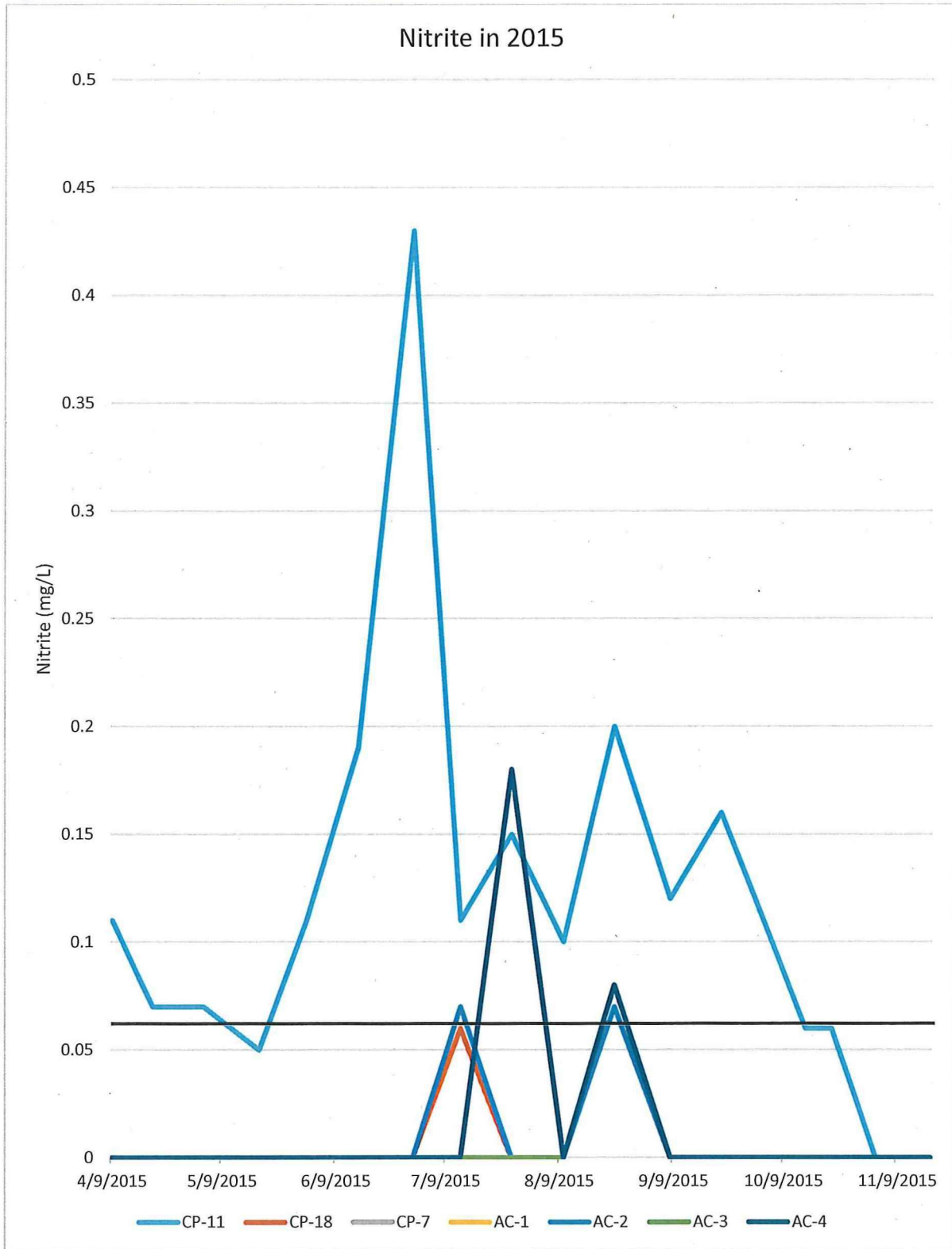


Figure 12: Historical Nitrate at sites CP-7 & CP-11

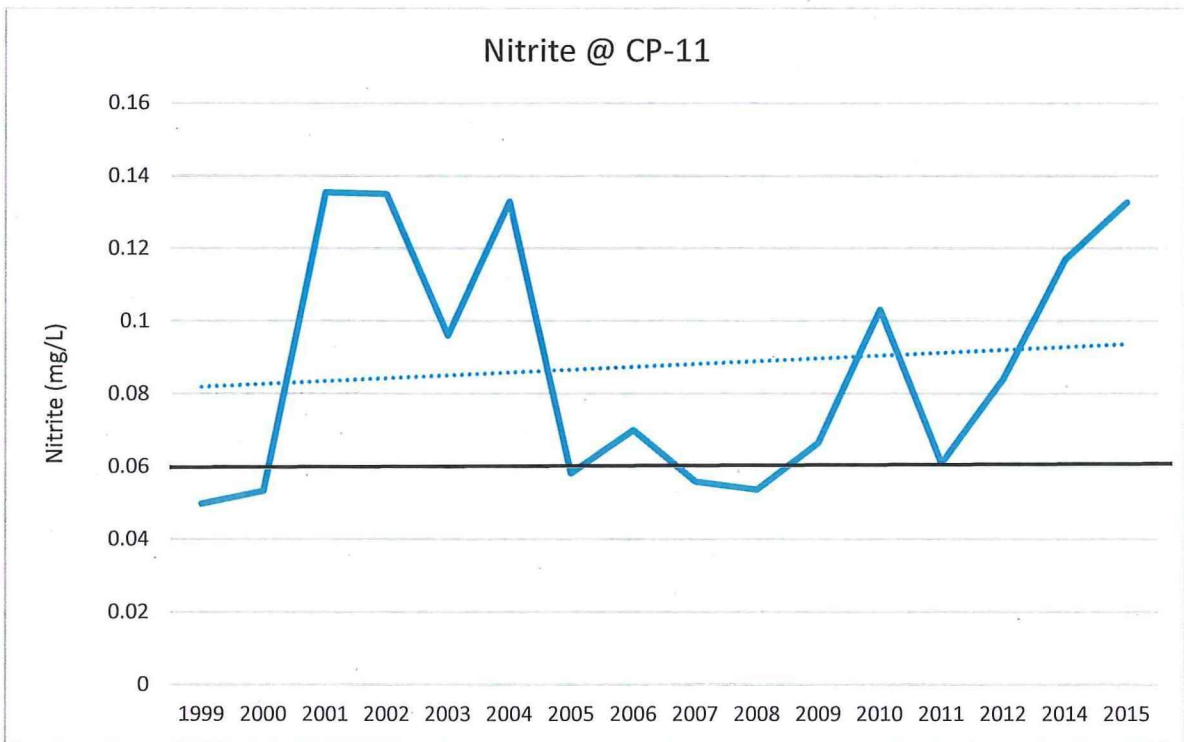
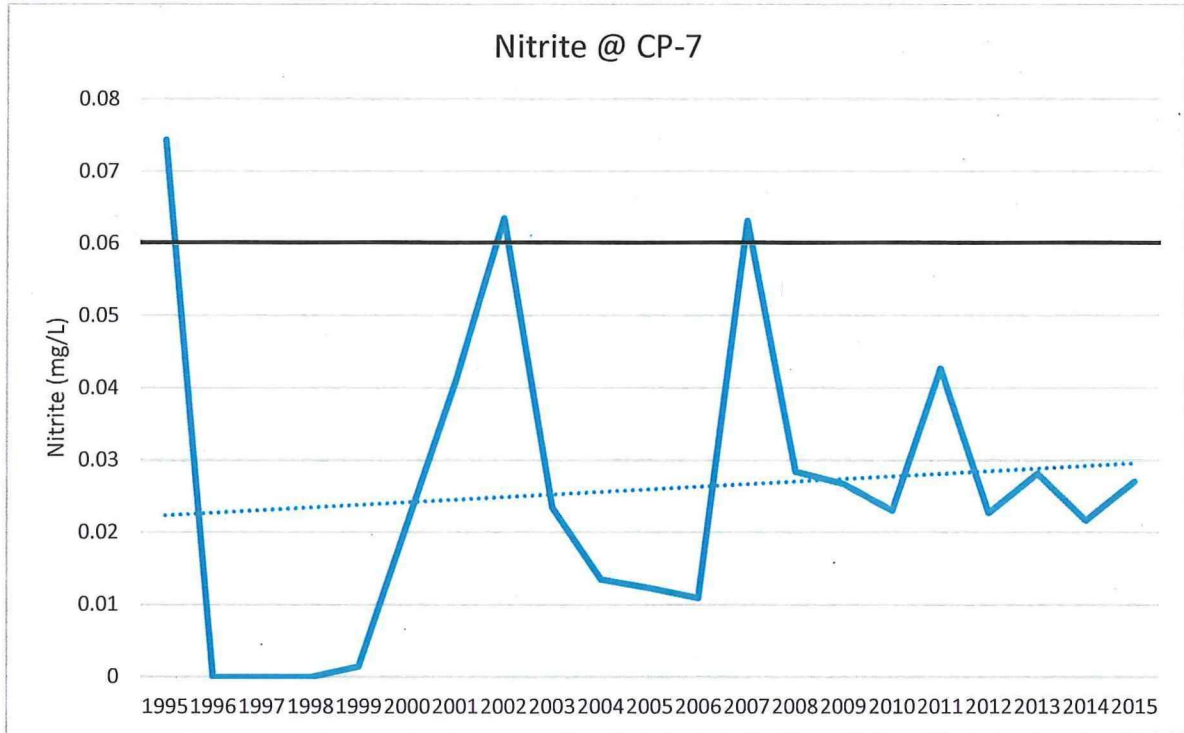


Table 12: Nitrite values for stations sampled in 2015

| Dates | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | Wet/Dry |
|----------|---------|-------|-------|-------|-------|-------|-------|---------|
| 4/09/15 | 0.11 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | Wet |
| 4/20/15 | 0.07 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | Wet |
| 5/04/15 | 0.07 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | Dry |
| 5/19/15 | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | Dry |
| 6/01/15 | 0.11 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | Wet |
| 6/15/15 | 0.19 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | Wet |
| 6/30/15 | 0.43 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | Dry |
| 7/13/15 | 0.11 | 0.06 | <0.05 | 0.07 | 0.07 | <0.05 | <0.05 | Dry |
| 7/27/15 | 0.15 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.18 | Dry |
| 8/10/15 | 0.1 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | Dry |
| 8/24/15 | 0.2 | 0.07 | 0.08 | 0.07 | 0.07 | 0.08 | 0.08 | Dry |
| 9/08/15 | 0.12 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | Wet |
| 9/22/15 | 0.16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | Dry |
| 10/15/15 | 0.06 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | Dry |
| 10/22/15 | 0.06 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | Dry |
| 11/03/15 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | Dry |
| 11/18/15 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | Dry |
| Mean | 0.13267 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | |

Table 13: 2014 nitrite results (mean)

| CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|-------|---------|-------|-------|-------|-------|-------|
| 0.117 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

Total Suspended Solids

As Table 14 shows, the majority of samples taken in 2015 tested below the target objective of 25 mg/L. The Ancaster Creek locations had some of the highest exceedances in 2015. The lowest values were seen in site CP sample locations. The highest exceedances occurred during wet sampling events and in the spring. The Ancaster Creek sites seem to be more susceptible to increased sediment loading during storm events. Figure 13 illustrates how much higher TSS values are during wet events, particularly in the Ancaster Creek sub-watershed.

Historical data for the CP sites suggest that TSS is in an overall decreasing trend for sites CP-7 in Spencer Creek and CP-11 in Chedoke Creek. Annual averages for AC sites from 2015 is much higher than 2014 as seen in Table 15, however very high TSS values in the spring and the fact that more wet events were captured in 2015 might account for the change in results. The AC site locations seem to be easily impacted by wet events and sediment loads increase greatly during these times. The CP sites do not experience much in the way of change between 2014 and 2015.

Figure 13: Average TSS for wet events, dry events and the entire sample period.

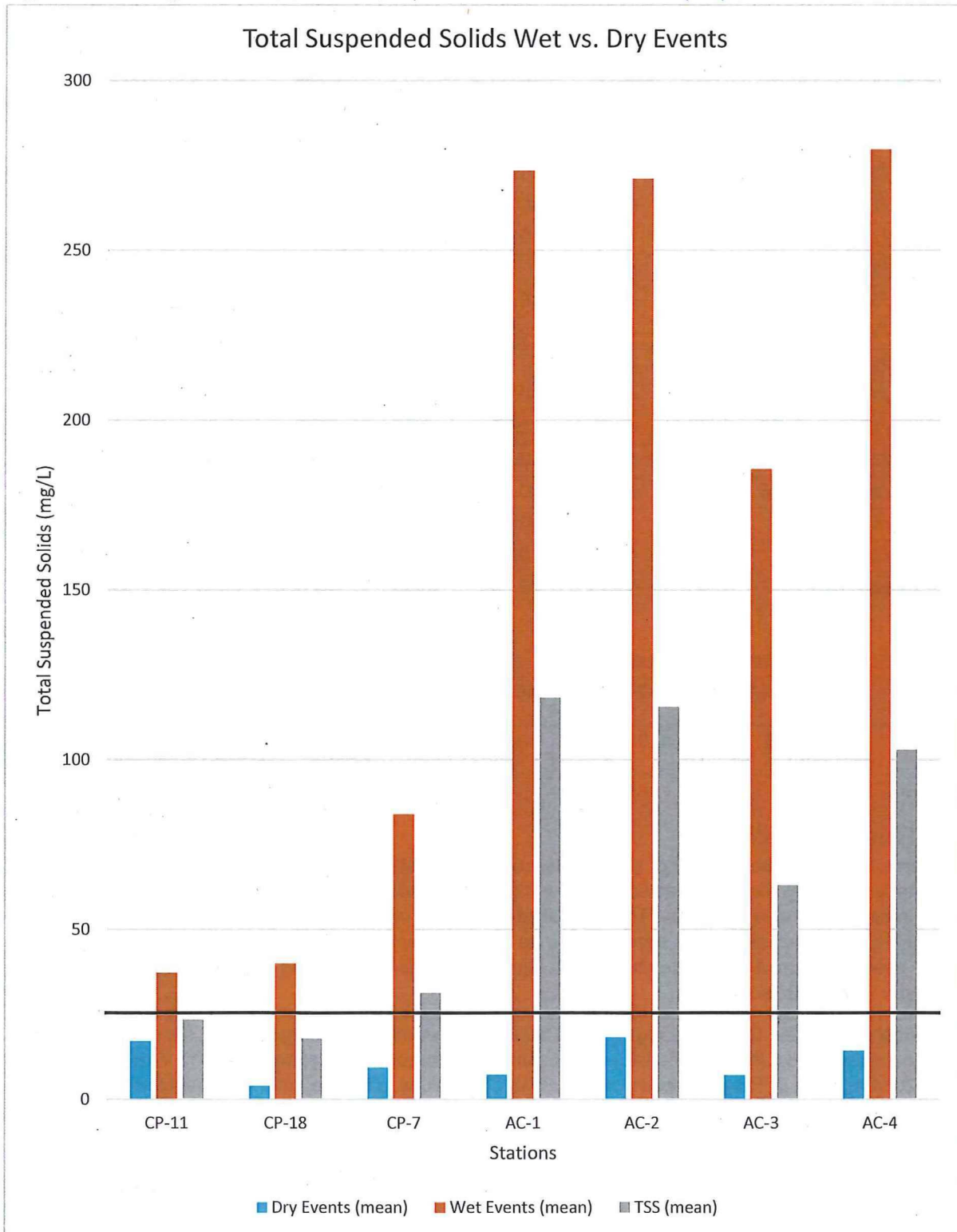


Figure 14: Historical TSS at sites CP-7, CP-11 and CP-18.1

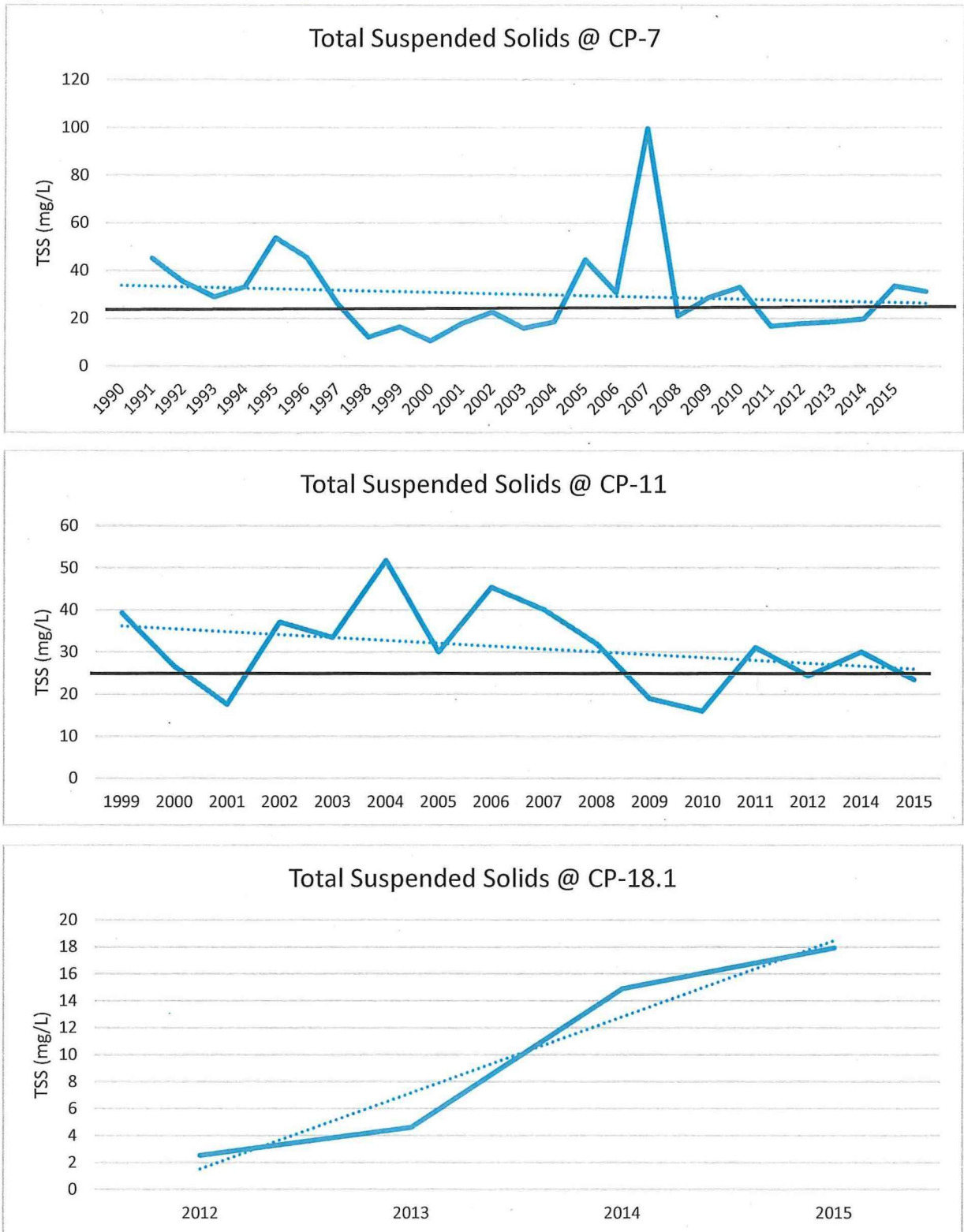


Table 14: Total Suspended Solids values for stations sampled in 2015

| Dates | CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | Wet/Dry |
|-------------------|----------|----------|----------|----------|----------|----------|----------|---------|
| 4/09/15 | 48.5 | 28.1 | 55.2 | 207 | 315 | 111 | 152 | Wet |
| 4/20/15 | 58 | 132 | 296 | 1050 | 927 | 739 | 1060 | Wet |
| 5/04/15 | <3 | <3 | 3.6 | <3 | <3 | 22.8 | <3 | Dry |
| 5/19/15 | 10.4 | 5.4 | 10.2 | 3.6 | 4.8 | 10.6 | 10.2 | Dry |
| 6/01/15 | 22.7 | 11.5 | 6.7 | 29 | 50 | 19.2 | 22.8 | Wet |
| 6/15/15 | 28.7 | 24.2 | 43.7 | 57 | 58 | 32 | 28.7 | Wet |
| 6/30/15 | 5 | 7.9 | 29.8 | 31.7 | 55.3 | 13.9 | 38.8 | Dry |
| 7/13/15 | 34 | 4 | 6 | 4.4 | 13.6 | 9.6 | 9.6 | Dry |
| 7/27/15 | 27.6 | 6.4 | 6.9 | 3.4 | 12.4 | 4 | 40.6 | Dry |
| 8/10/15 | 24.8 | 2.4 | 8.6 | 3.8 | 38.4 | 5 | 18.8 | Dry |
| 8/24/15 | 38.8 | <3 | 22.4 | 3.2 | 17.2 | 4.8 | 11.2 | Dry |
| 9/08/15 | 28.8 | 4.8 | 18.4 | 25 | 6.2 | 27.6 | 136 | Wet |
| 9/22/15 | 14.4 | 2.2 | 1.8 | <2 | 1.6 | 3.2 | 4.2 | Dry |
| 10/15/15 | 5.8 | 2.4 | 5.4 | <2 | <2 | 1.6 | 1.6 | Dry |
| 10/22/15 | 10.9 | 1.8 | 9.4 | 1.6 | <2 | <2 | 7.8 | Dry |
| 11/03/15 | 15.2 | <2 | 5 | <2 | 3.4 | 2.2 | 1.6 | Dry |
| 11/18/15 | 2.2 | <2 | 4.4 | <2 | <2 | 2 | <2 | Dry |
| Mean | 23.4875 | 17.93077 | 31.38235 | 118.3083 | 115.6077 | 63.03125 | 102.9267 | |
| Dry Events (mean) | 17.19091 | 4.0625 | 9.458333 | 7.385714 | 18.3375 | 7.245455 | 14.44 | |
| Wet Events (mean) | 37.34 | 40.12 | 84 | 273.6 | 271.24 | 185.76 | 279.9 | |

Table 15: 2014 TSS results (mg/L) (mean)

| CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|-------|---------|------|------|------|------|------|
| 30.1 | 14.9 | 36.1 | 42 | 71.5 | 56.9 | 8.02 |

Volatile Suspended Solids

Volatile suspended solids do not have a target objective outlined for this report. Figure 15 displays the make-up of the suspended solids at each location. All locations except CP-11 consist of mostly fixed suspended solids, which are inorganic materials. Site CP-11 is made up of mostly volatile suspended solids, meaning that the majority of suspended material is organic. This is consistent with the high nutrient values we are seeing in site CP-11.

Figure 15: Suspended Solids breakdown of Volatile vs. Fixed substances

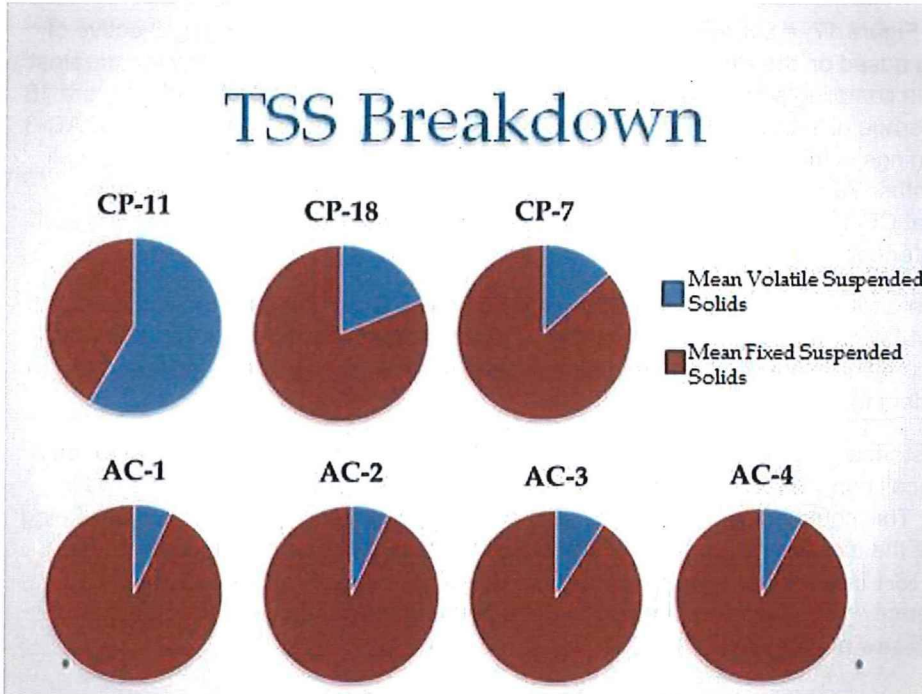


Table 16: Volatile Suspended Solids for stations sampled in 2015 (mg/L)

| Date | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | Wet/Dry |
|----------|----------|----------|---------|----------|----------|------|----------|---------|
| 4/09/15 | 25.3 | 3.9 | 6.2 | 12.1 | 17.7 | 6.6 | 11 | Wet |
| 4/20/15 | 34.4 | 18 | 22.2 | 61.2 | 52.3 | 52.1 | 68.3 | Wet |
| 5/04/15 | <3 | <3 | 2.8 | <3 | <3 | 3.2 | <3 | Dry |
| 5/19/15 | 6.2 | 3 | 2.6 | <0.8 | 2.2 | 3 | 3.6 | Dry |
| 6/01/15 | 17.3 | 2.5 | 2 | 3.1 | 4.5 | 4.8 | 3.3 | Wet |
| 6/15/15 | 10.6 | 5 | 8.2 | 7.3 | 6.2 | 4.8 | 4.6 | Wet |
| 6/30/15 | 5 | 1.7 | 5.1 | 3.4 | 4.3 | 1.4 | 3.8 | Dry |
| 7/13/15 | 21.2 | 1.6 | 2.4 | 1.2 | 2.8 | 2 | 0.8 | Dry |
| 7/27/15 | 20.4 | 1.6 | 2 | 1 | 1.8 | 1 | 3.6 | Dry |
| 8/10/15 | 20 | 1.6 | 2.8 | 1.8 | 4.4 | 1.6 | 3 | Dry |
| 8/24/15 | 18.9 | <3 | 4.8 | 2.4 | 5.2 | 3.6 | 2.8 | Dry |
| 9/08/15 | 14.4 | 1.2 | 3.2 | 2.8 | 1.2 | 2.8 | 10.8 | Wet |
| 9/22/15 | 10.4 | 1 | <0.8 | <2 | 1.2 | 1.6 | 1.2 | Dry |
| 10/15/15 | 3.8 | 1.6 | 2.2 | <2 | <2 | 1.2 | 1 | Dry |
| 10/22/15 | 7 | 1.4 | 2 | 1.4 | <2 | <2 | 1.8 | Dry |
| 11/03/15 | 2.6 | <2 | 1 | <2 | 0.8 | <0.8 | 1.4 | Dry |
| 11/18/15 | 1.6 | <2 | 1 | <2 | <2 | 1.2 | <2 | Dry |
| Mean | 13.69375 | 3.392308 | 4.40625 | 8.881818 | 8.046154 | 6.06 | 8.066667 | |

Escherichia coli

As seen in Table 17 and Figure 17, e.coli levels at every site regularly exceeded the target objective of 100CFU/100mL, which is based on the Provincial Water Quality Objective. Site CP-11 saw the greatest impairment throughout the sampling season, with a geometric mean of 15,734.8 CFU/100mL. Figure 16 displays the seasonal average distribution of e.coli at each sample site. Sites CP-11, CP-18.1 and AC-3 have very high e.coli readings in the spring. Sites CP-7, AC-1, AC-2 and AC-4 saw most of their e.coli occur in the summer months. As with most other parameters, e.coli levels increase on wet sample events. The high levels at CP-11 in Chedoke Creek will have to be explored by continual sampling and investigation of storm water conditions in the area.

When comparing 2015 data to 2014 data we find that most sites have a lower geometric mean result, while only CP-7 and AC-4 have only slightly higher values. This is perhaps explained by the extended sampling period. E.coli concentrations tapered off in the fall season at all locations, this reduces the overall geometric mean data for all sites.

Figure 17 displays the historical data for sites CP-7, CP-11 and CP-18.1. At site CP-7 there has been a consistent decrease in e.coli concentrations, while CP-11 has had a fairly drastic increase in the past couple sample seasons. This could be due to the extended sampling protocol or perhaps samples being taken at different times of the day, keeping an eye in this recent upward trend will be a focus in future sampling seasons. Site 18.1 indicates an overall upward trend in e.coli concentrations in the past 4 years. However more sampling seasons are required to get a better idea of which way the trend is actually heading, as 2015 saw a decrease from 2014.

Figure 16: Seasonal distribution of e.coli

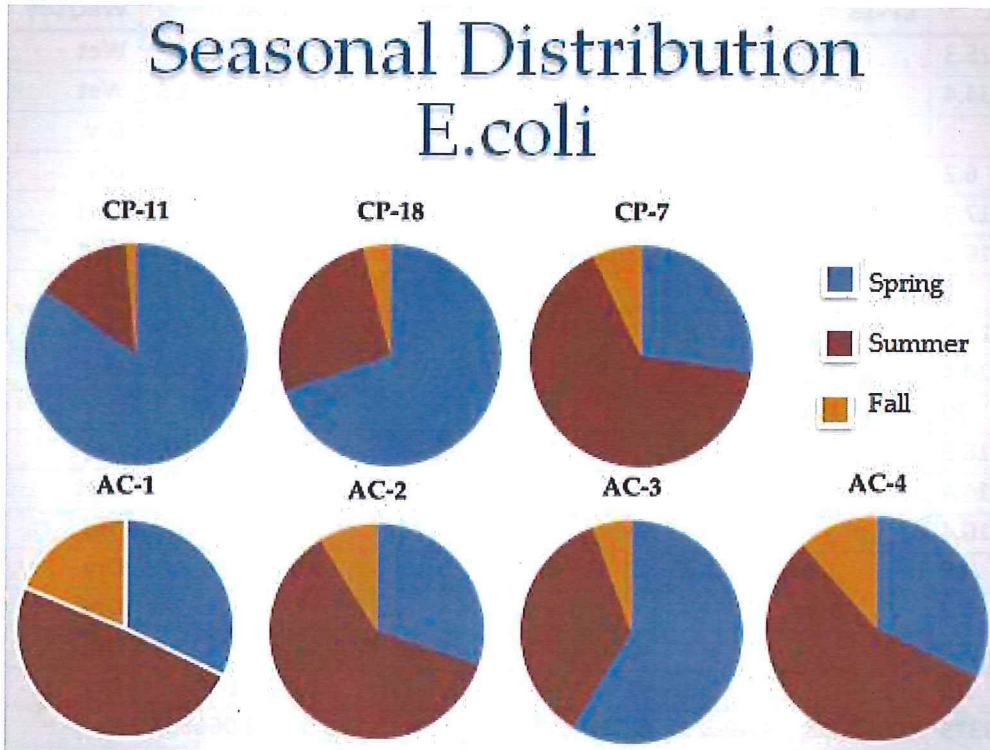


Figure 17: Geometric mean e.coli concentrations for wet and dry events

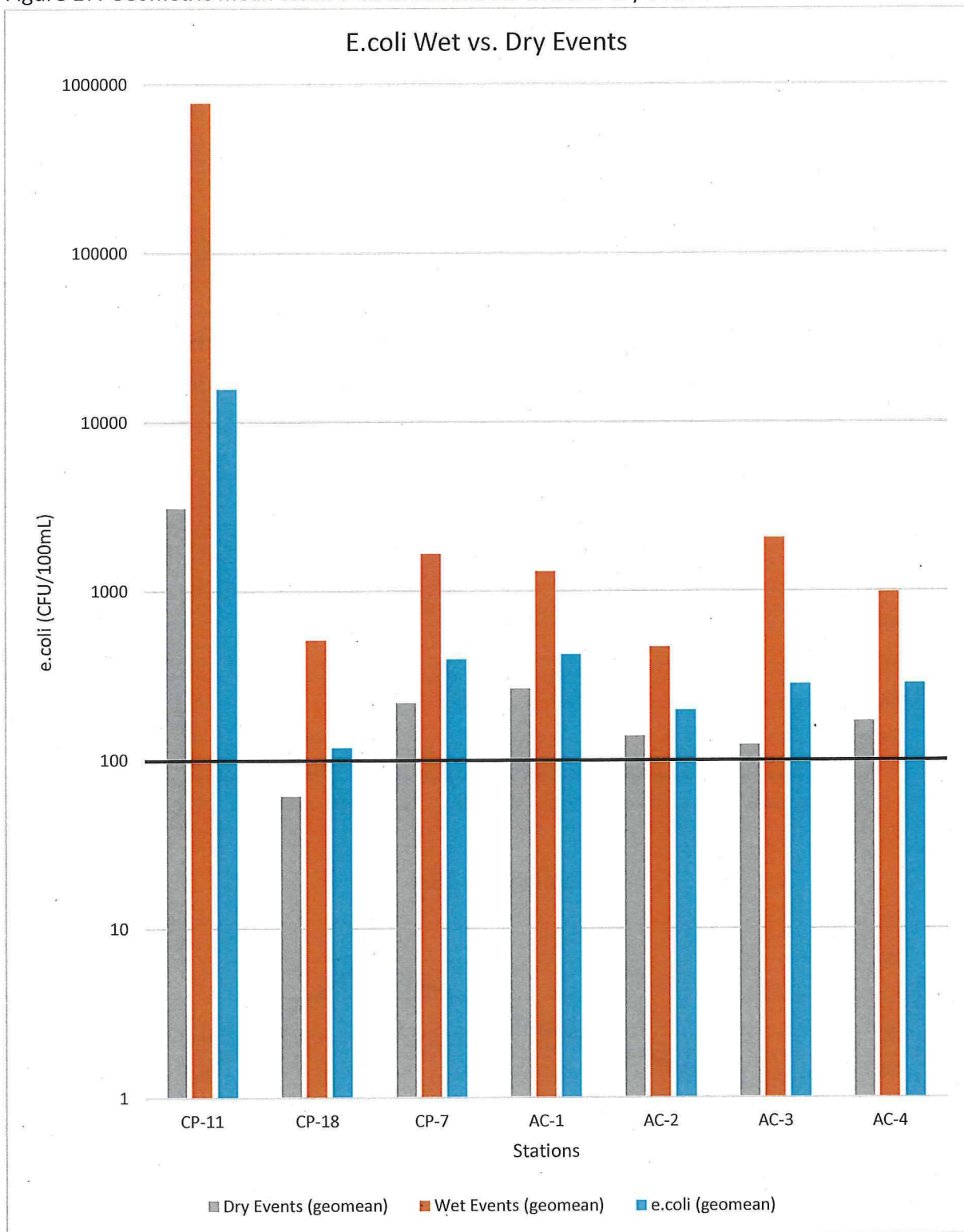


Figure 18: Historical e.coli at sites CP-7, CP-11 and CP-18.1

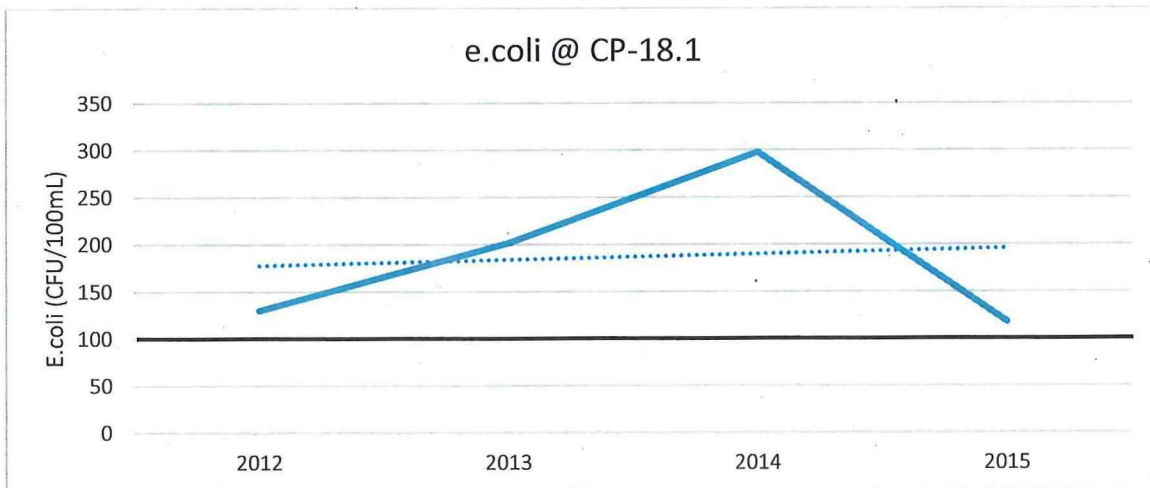
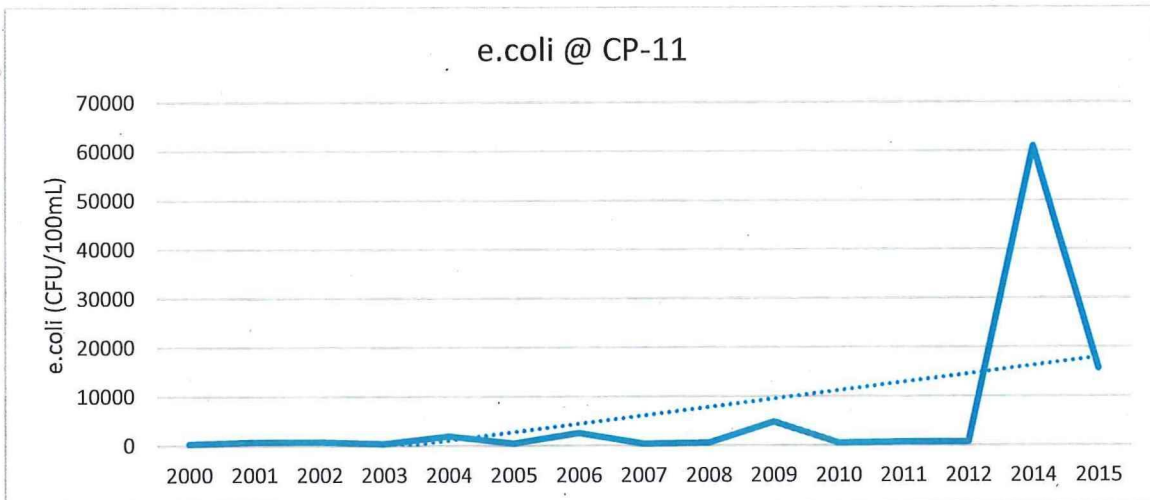
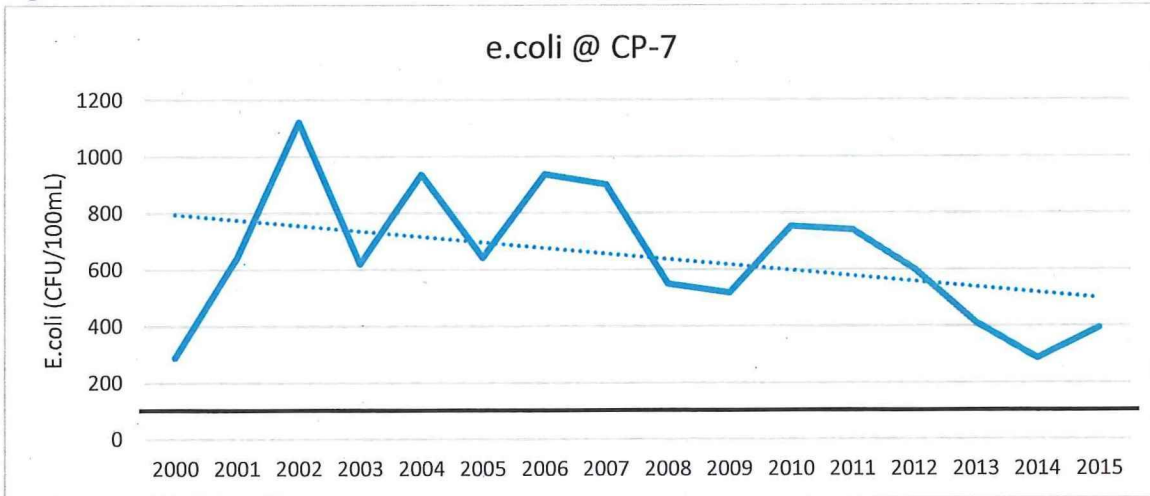


Table 17: E.coli for stations sampled in 2015 (CFU/100mL)

| Dates | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | Wet/Dry |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------|
| 4/09/15 | 900000 | 150 | 210 | 240 | 80 | 380 | 500 | Wet |
| 4/20/15 | 900000 | 1800 | 970 | 1000 | 410 | 3700 | 1280 | Wet |
| 5/04/15 | 5900 | 60 | 20 | 20 | 90 | 60 | 40 | Dry |
| 5/19/15 | 420 | <10 | 210 | 180 | 40 | 100 | 70 | Dry |
| 6/01/15 | 620000 | 1900 | 10100 | 3700 | 1380 | 5100 | 650 | Wet |
| 6/15/15 | 650000 | 400 | 710 | 1800 | 680 | 2000 | 810 | Wet |
| 6/30/15 | 490000 | 430 | 450 | 760 | 460 | 540 | 640 | Dry |
| 7/13/15 | 220 | 130 | 370 | 520 | 490 | 190 | 140 | Dry |
| 7/27/15 | 110000 | 190 | 290 | 360 | 280 | 220 | 320 | Dry |
| 8/10/15 | 280 | 100 | 300 | 450 | 230 | 200 | 500 | Dry |
| 8/24/15 | 4700 | 80 | 9500 | 480 | 760 | 360 | 680 | Dry |
| 9/08/15 | 889000 | 170 | 8700 | 2400 | 710 | 2600 | 2700 | Wet |
| 9/22/15 | 1790 | 100 | 440 | 230 | 210 | 130 | 150 | Dry |
| 10/15/15 | 640 | 10 | 240 | 570 | 40 | 90 | 240 | Dry |
| 10/22/15 | 4800 | 20 | 210 | 370 | 70 | 10 | 80 | Dry |
| 11/03/15 | 4800 | 40 | 40 | 110 | 40 | 120 | 80 | Dry |
| 11/18/15 | 750 | 10 | 20 | 180 | 50 | 80 | 80 | Dry |
| Geomean | 15734.8 | 118.051 | 393.548 | 420.854 | 197.078 | 280.356 | 282.243 | |

Table 18: 2014 e.coli results (CFU/100mL) (geometric mean)

| CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|-----------|---------|---------|---------|---------|---------|---------|
| 61077.809 | 298.179 | 352.004 | 530.384 | 340.644 | 416.392 | 280.397 |

Storm Sample Events

In 2015, the HCA began targeting storm events to get an idea of the impairment to water quality during these events. Storm events were only captured at site AC-1. Due to technical difficulties with the equipment early in the sample season, and a lack of rain events, only two storm events were successfully captured during the sampling period. The laboratory results from the storm events can be seen in Table 19.

When comparing the initial results from the storm event samples in 2015 to the yearly averages from AC-1, there does not seem to be much of a difference in most parameters. All parameters saw a general increase in concentration during storm events, which is expected. However Figure 18, 19 and 20 illustrate the significant differences in concentrations during storm events for TP and e.coli and TSS. More storm events captured in 2016 will provide additional data to provide a better indication of water quality impairment during these storm events.

Table 19: Results from storm event sampling at AC-1.

| Parameter | 21-Aug-15 | 28-Oct-15 | Storm Event Average | Grab Event Average |
|--------------------------------|-----------|-----------|---------------------|--------------------|
| Ammonia + Ammonium as N mg/L | 0.03 | 0.02 | 0.025 | 0.0188 |
| Nitrate as N mg/L | 0.54 | 0.42 | 0.48 | 0.4512 |
| Nitrite as N mg/L | <0.05 | <0.05 | <0.05 | <0.05 |
| o-Phosphate as P mg/L | <0.2 | <0.2 | <0.2 | <0.2 |
| Phosphorus Total mg/L | 0.26 | 0.322 | 0.291 | 0.1121 |
| Total Suspended Solids mg/L | 176 | 209 | 192.5 | 118.308 |
| Volatile Suspended Solids mg/L | 15.2 | 19 | 17.1 | 8.8818 |
| Escherichia coli CFU/100mL | 11200 | 800 | 2993.326 | 420.85 |

Figure 19: TP in AC-1 storm events mean vs. annual mean

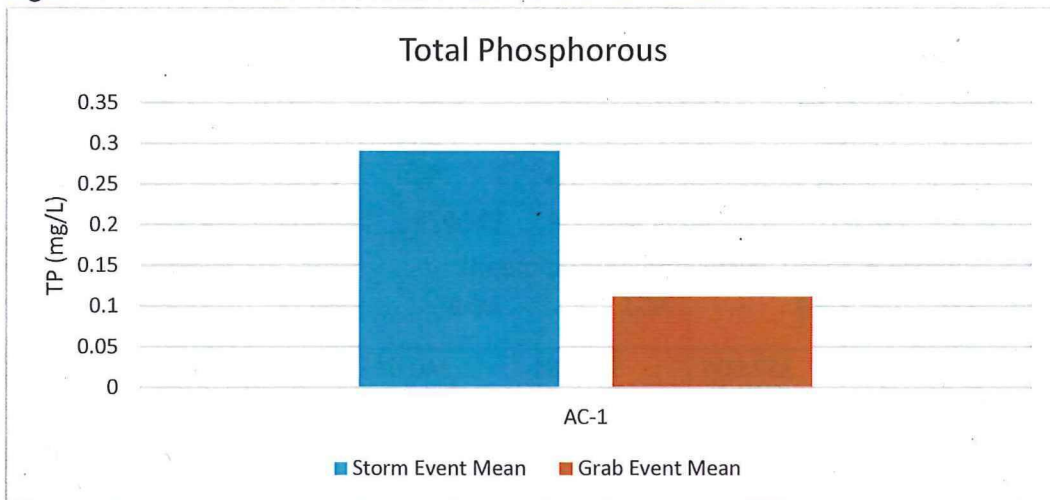


Figure 20: e.coli in AC-1 storm events mean vs. annual mean

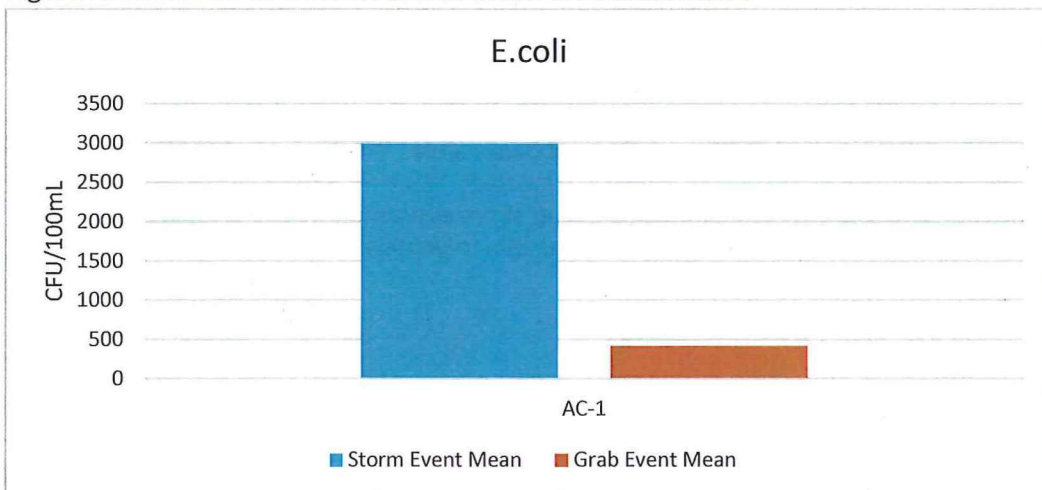
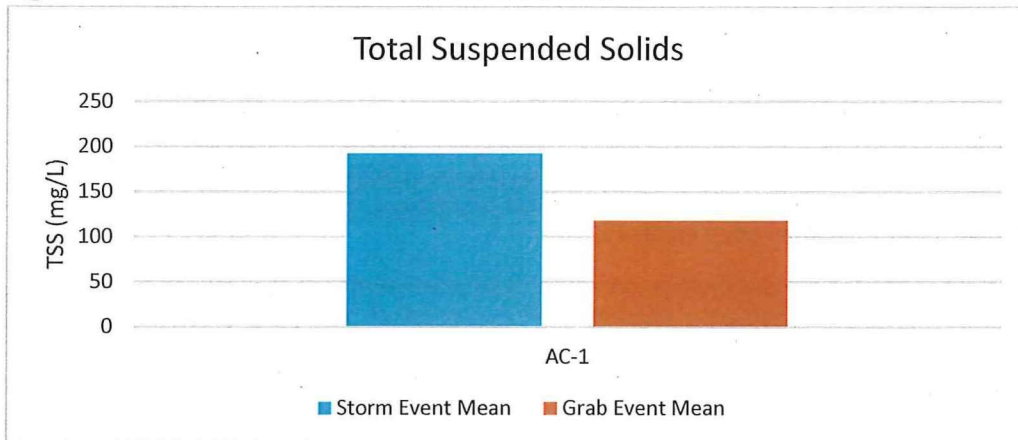


Figure 21: TSS in AC-1 storm events vs. annual mean



Discussion Summary

Water quality data collected over the past two years has provided valuable insight into the overall water quality contributions from tributaries entering Cootes Paradise. Expanding the sampling season in 2015 to include April gave further evidence that sediment, e.coli and nutrient loading during wet events are typically significantly higher than for dry events. Of all the stations sampled, site CP-11 at the mouth of Chedoke Creek was the most impaired by far, with the highest mean concentrations for all parameters except TSS. Also, CP-11 concentrations exceeded targets, often substantially, for TP (wet & dry events), unionized ammonia (most wet events), nitrite (all wet & ½ dry events), TSS (wet events only) and e.coli (wet & dry events). AC sites in the Ancaster Creek watershed had substantially higher TSS mean concentrations than the other sites. The AC sample sites experience a lot of sediment displacement during spring runoff and heavy wet events, which brings with it elevated phosphorous and bacteria. AC sites also had concentrations that exceeded targets for TP (wet events), nitrite (2x dry events only) and e.coli (most wet events & majority of dry events). For CP-7 in Spencer Creek, mean concentrations of TP exceeded targets, with concentrations well above targets for wet events. TSS (mean) concentrations exceeded targets for wet events and for overall mean concentration values. The majority of e.coli concentrations exceeded targets, including for all wet events. For CP-18.1 in Borer's Creek, similar findings to CP-7 were found, except that TSS (mean) concentrations were exceeded only for wet events. Ortho-phosphate and nitrate were found to be negligible in terms of water quality. This is similar to results from 2014, therefore nitrate and ortho-phosphate discussion will not take place in this summary.

An important change in the sampling protocol made in 2015 was to expand the sampling season from May – September (as it was in 2014) to April – November. This allowed for the capture of more samples while water levels were still elevated from spring runoff and also resulted in more “wet” sample days throughout the whole season. The samples taken in April had very high levels of total phosphorous, total suspended solids and e.coli at every sample location. Wet sample days throughout the year had the same effect on water impairment on these key parameters. For dry events, 9/67 samples submitted for all locations tested above target for total suspended solids, compared to 25/35 exceedances for wet sample events. As the sampling season progressed into summer and fall, nearly all parameters experienced a drop-off in overall concentration. Also for summer and fall, dry event samples were predominant. The fall season experienced the best overall water quality at every sample location.

Exceedances of total phosphorous, total suspended solids and even e.coli were not common in the fall at all sample sites, with the exception of CP-11 for total phosphorous and e.coli which is an issue during the entire sample season at this location.

Site CP-11 in Chedoke Creek is by far the most impaired of the sample locations. The downstream proximity to a combined sewer overflow location, which discharges raw sewage into the creek during some high flow events, as well as the concrete and culverted nature of the creek are likely reasons that this location is experiencing poor water quality. E.coli, total phosphorous, unionized ammonia and nitrite were much higher at CP-11 than at all other locations.

Total phosphorous exceeded the target objective on >50% of sample events for all locations except AC-1, AC-2 and AC-3. These three locations saw a drop-off in TP exceedances beginning in July, after which most sample events were dry. 2015 TP (mean) concentrations were similar to 2014 for Cp-11, CP-18.1 and CP-7, while 2015 concentrations were increased for AC-1, AC-2 and AC-4.

The sites experiencing the most issues with TSS are AC-1, AC-2, AC-3 and AC-4. When analyzing the data results from the different seasons, it becomes clear that a disproportional amount of high TSS concentrations is taking place in spring which has a large amount of rain and spring runoff sample events. On the April 20th sample event, the AC sites experienced severely high TSS concentrations (highest of 1060 mg/L @ AC-4 and lowest of 739 mg/L at AC-3). These concentrations are much higher when compared to any other TSS result taken in 2015. It would seem a large portion of the sediment being moved downstream and deposited in the marsh from Ancaster Creek is happening early in the year, and during wet events.

Although site CP-18.1 in Borers Creek had TP exceedances 11/17 sample events, it still had the lowest average concentration at the end of the sample season. It also had the fewest amount of e.coli exceedances (8/17) as well as the lowest annual mean concentration.

Site CP-7 in Spencer Creek just downstream of Cootes Drive had 9 exceedances for TP in the 17 sample events, the highest concentrations taking place in April. Site AC-1 has a higher average TP and TSS concentrations than CP-7, and is about 500 meters upstream. This may imply that the TP concentration coming from Ancaster Creek is being diluted once it merges with Spencer Creek. Data from 2014 supports this finding as well. CP-7 also seems to be contributing high concentrations of e.coli in the summer months on dry sampling events.

2015 was the first year storm event sampling was added to the protocol. In fall of 2014 an automated sampler was installed at the AC-1 sample location for the purpose of collecting 24 surface water samples throughout the duration of the storm event. Once all the bottles have been filled with sample water, a water level logger attached to the intake pipe is used to determine water levels during the storm event. Using this data, a level-weighted sample is prepared and submitted for analysis. Due to technical difficulties with the equipment and early in the season, two storm events were captured in 2015. The data collected infers that water quality impairment during storm events is more severe than in baseflow conditions. Due to the lack of storm events captured, more data is required to begin analysis the magnitude to which Ancaster Creek is being impaired and the amount of sediments and nutrients that are being displaced during storm events.

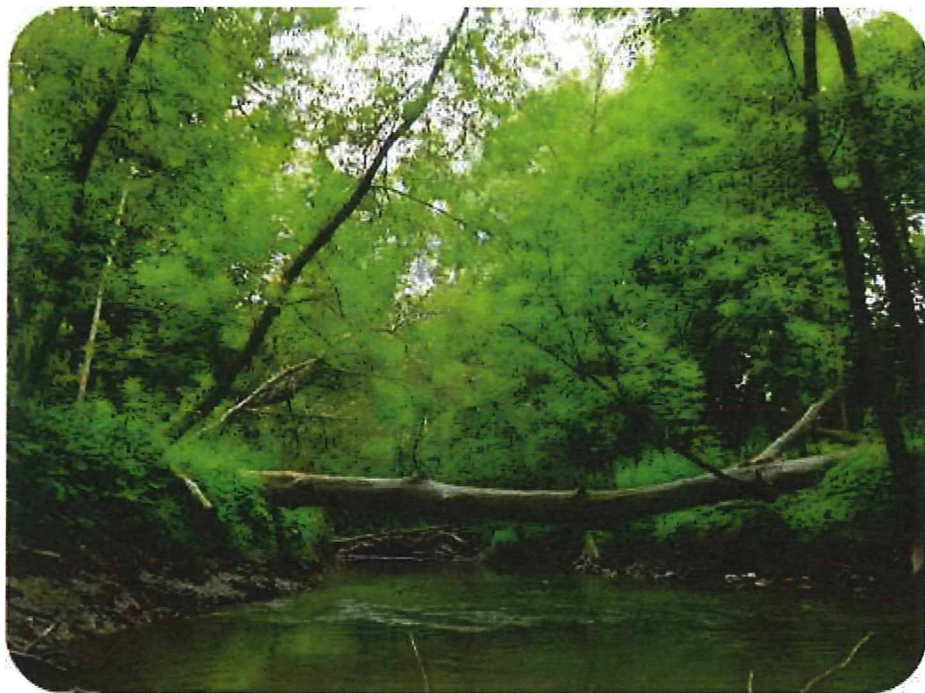
Changes in sampling protocol from 2014 to 2015 could account for some of the changes we are seeing in water quality. It is clear that samples captured in the spring are higher in concentration for most parameters, but on the other hand water quality improved for the fall sampling season in most cases. However the concentrations were so high in the spring that the overall annual mean concentrations were still generally higher. In 2014 there was only one sample event classified at 'wet', whereas in 2015 we managed to capture 5 wet events (not including storm event samples). As pointed out earlier in this

report, wet sample events resulted in much higher TSS and TP concentrations. Subsequently, it is important to note that there were 5 times as many wet sampling events this year compared to 2014.

Future Planned Monitoring Activities

For the 2016 sampling period, the HCA is looking to expand the sampling season to the full year (26 bi-weekly samples) as well as install two additional automated samplers in Spencer Creek. Interest in full-year sampling arose out of the large discrepancies in seasonal data gathered in 2015. It is in the best interest of the HCA and its partners to collect water quality data throughout the entire year to gain a better understanding of nutrient and sediment inputs during different climate conditions. All locations are proposed to be upgraded to a year-round grab sample protocol.

The addition of two automated samplers in Spencer Creek, one at the intersection with Market Street and one at the intersection of Highway 5, will provide us with a better understanding of storm water conditions in Spencer Creek as it passed from agricultural land use (Highway 5) to urban residential land use (Market Street). It will be interesting to discover what water chemistry characteristics are exhibited between the two sites. The data would be beneficial to local stewardship activities and would help to identify what sort of initiatives can be taken to improve water quality in the area.



WATERSHED PLANNING &
ENGINEERING

May 31, 2017



2016/2017 TRIBUTARY MONITORING FOR COOTES PARADISE

To support the Hamilton Harbour Remedial Action Plan

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Background

This monitoring program aims to understand water quality contributions from creeks flowing into Cootes Paradise Marsh and ultimately, Hamilton Harbour. Establishing non-point sources of water quality inputs to the marsh, such as contributions from creeks and tributaries, is an important step in reaching the delisting objectives for site CP1 located in the marsh. Once the relative sources of inputs are assessed, any needed remedial efforts in these tributaries that support delisting Hamilton Harbour can be determined.

The Hamilton Conservation Authority has been involved with this water quality monitoring program in partnership with the Hamilton Harbour Remedial Action Plan (HHRAP), Ministry of Environment and Climate Change, and the City of Hamilton since spring of 2014. The monitoring program has been adapted from a previous sampling program undertaken by the Royal Botanical Gardens (RBG).

This program aims to explore water quality conditions in the sub-watersheds of Lower Spencer Creek, Chedoke Creek, Borers Creek, Ancaster Creek and Sulphur Creek; their drainage areas can be seen on Figure 1. HCA assumed sampling responsibilities from RBG for the Lower Spencer Creek, Chedoke Creek and Borers Creek sampling sites, to continue long term data analysis for these locations. These sites are known as CP-7, CP-11 and CP-18.1 (See Figure 2) and are located immediately upstream of the locations where they drain into the Cootes Paradise Marsh.

In addition, in 2014 the monitoring program was expanded to include four new sites to help characterize the water quality contributions coming from the Ancaster Creek sub-watershed (AC-1, AC-2, AC-3 and AC-4), which has relatively little water quality and flow data near the lower reaches of the sub-watershed boundaries.

In 2015, the monitoring program was further expanded in that storm event samples were taken at site AC-1 using an ISCO automated composite sampler.

Changes to Water Quality Monitoring Program in 2016

In 2016 the sampling period was lengthened to be year-round at all seven stations. Year round monitoring will allow us to develop an all-encompassing view of water quality conditions throughout a wide variety of climate conditions.

However, storm event sampling at AC-1 was not undertaken in the winter months. Furthermore, equipment for the installation of two new storm event sampling locations arrived in October 2016, and was installed by April 2017 in Spencer Creek at Highway 5 and Spencer Creek at Market Street. These sites will capture storm event samples during the 2017 program. Expanding storm event sampling will deepen our understanding of how land uses and conditions affect water quality during heavy wet events.

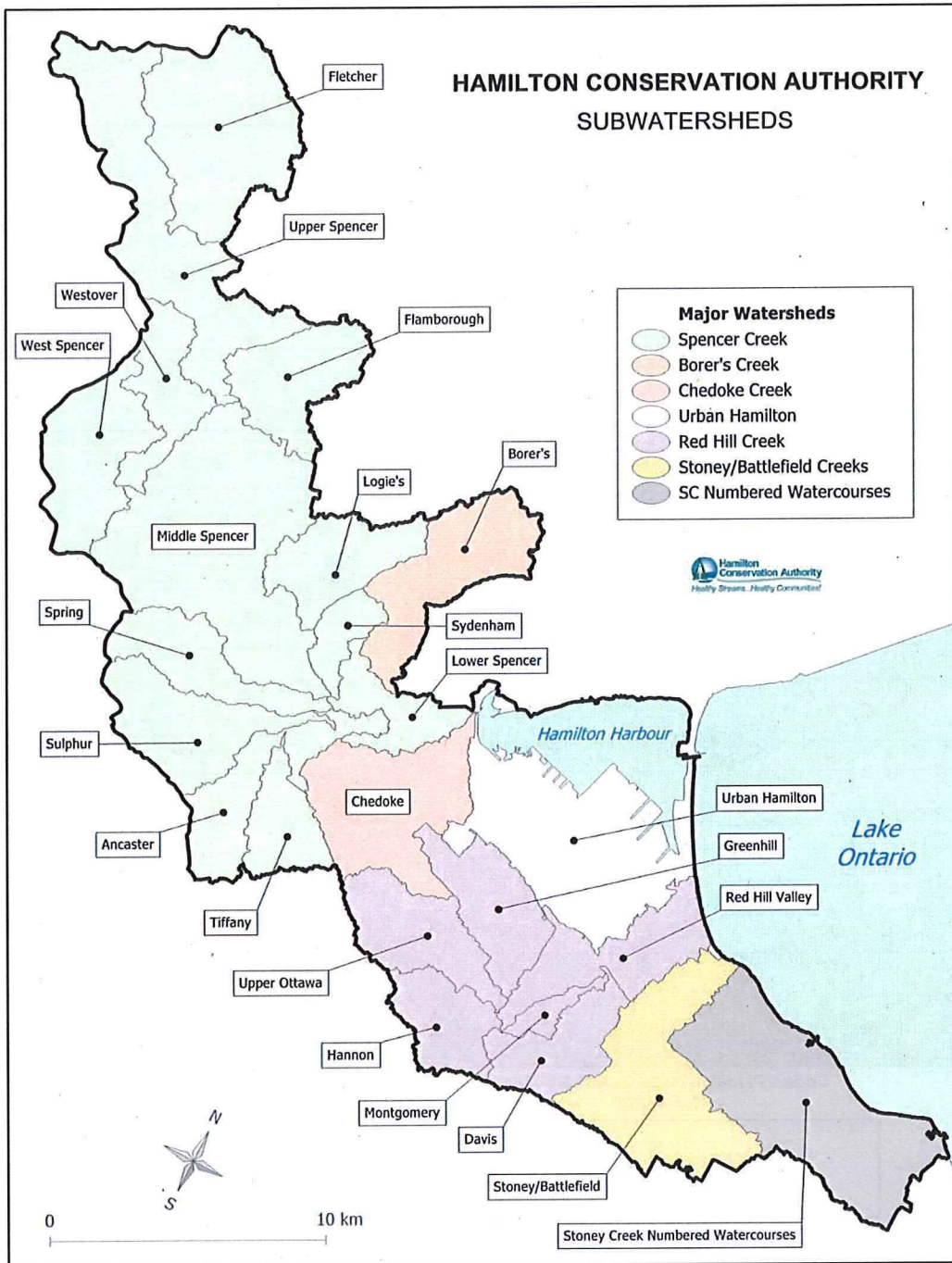


Figure 1: Hamilton subwatersheds surrounding the Harbour

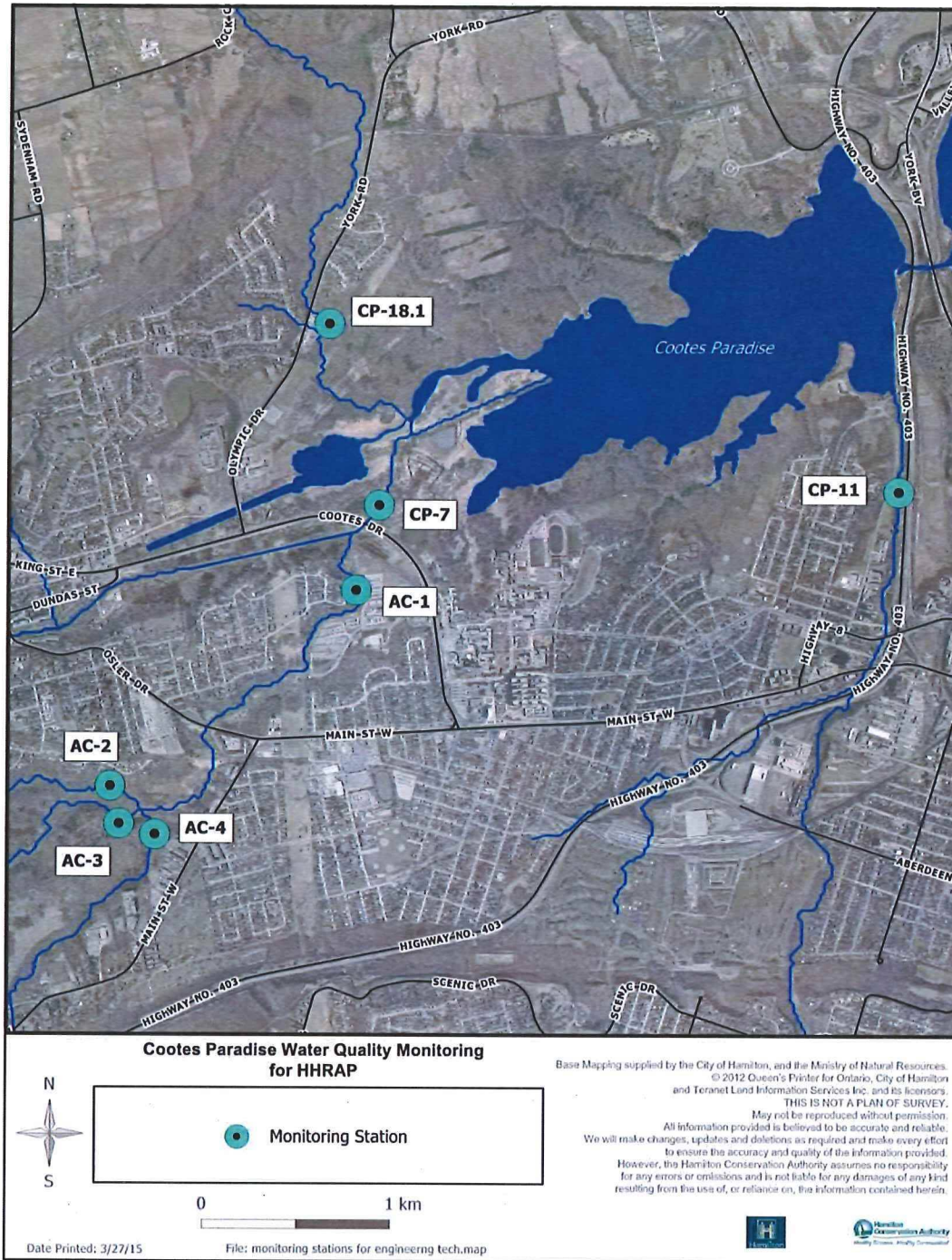


Figure 2: Water Quality Sampling Locations

Project Objective

The project objective is to identify important contributions to Cootes Paradise water quality from the creeks discharging to the marsh. This will also provide information to support where mitigation activities can best be applied to benefit the overall water quality within Cootes Paradise. As well, as part of a separate project for the Hamilton Harbour Remedial Action Plan (HHRAP), a nutrient loadings model is being developed for Cootes Paradise by the University of Toronto. This model could benefit from data collected by this monitoring program. The data will be shared with the Hamilton Harbour Remedial Action Plan office and/or one of the technical committees associated with the HHRAP.

Sample Locations

Site AC-1 is on the main branch of Ancaster Creek just upstream of the confluence with Spencer Creek. This location is ideal to capture the nutrient and sediment contributions from the Ancaster Creek subwatershed and its tributaries before entering Spencer Creek. Predominant land uses for the Ancaster Creek subwatershed are residential, woodland with some light agricultural in the headwaters.

Site AC-2 is located on Sulphur Creek before the confluence with Ancaster Creek. Main land uses for the Sulphur Creek subwatershed are woodland and residential with some agricultural in the upper headwaters.

Site AC-3 is located on the main branch of Ancaster Creek upstream of the confluence with Sulphur Creek.

Site AC-4 is located on an unnamed watercourse just upstream of the confluence with Ancaster Creek and has a relatively small drainage area which is mainly residential.

Site CP-7 located on Lower Spencer Creek and is aimed at capturing inputs from the entire Spencer Creek Watershed and its tributaries including Ancaster Creek. Its dominant land uses are agricultural in the upper and middle reaches and residential in the lower reach below the escarpment.

Site CP-11 is located on Chedoke Creek before it drains in to Cootes Paradise marsh. Chedoke Creek subwatershed is mostly residential land use with some industrial and a municipal golf course. Long reaches of the creek are piped and culverted with virtually no naturalized habitat.

Site CP-18.1 is located on Borers Creek just downstream of York Road in Dundas upstream of the confluence with Spencer Creek. Borers Creek subwatershed dominant land uses are agricultural and residential.

Sampling Methodology

The 2016 water quality monitoring program occurred on alternate weeks from April 2016 to March, 2017. Surface grab samples were taken during daylight hours with same day drop off for analysis at the City of Hamilton Regional Environmental Lab. Levels of phosphorus, e.coli, various nitrogen compounds, and suspended solids were measured. In addition, temperature, pH, conductivity, turbidity and dissolved oxygen are measured on site by HCA staff for each sample site using a YSI 6600.

Chlorophyll-a is measured in an accredited laboratory once every three years (samples in 2013 were analyzed for Chlorophyll-a, thus sampling was undertaken as part of the 2016 program).

It was determined if samples were impacted by storm water conditions (wet events) by confirming rain data recorded at the Environment Canada precipitation monitoring station at Hamilton Airport Climate ID 6153193. If more than 4 mm rainfall had occurred within the 24 hours prior to sampling it is considered that the samples are storm water impacted. A visual inspection of storm water outfalls in the area will also be completed if storm water conditions are suspected.

In order to estimate loadings from Ancaster Creek into Spencer Creek and the Harbour, the HCA has set-up a temporary flow monitoring and remote sample collection station on Ancaster Creek just upstream of the confluence with Spencer Creek to sample storm events starting in 2015. The ISCO automated sampler will be triggered prior to an incoming storm event to take a 1 L sample every hour from the time of initiation. With 24 sample bottles in the ISCO carousel, it will be possible to capture a 24 hour time period of the storm and its effect on the creek. A level weighted composite sample was made using a depth logger attached to the intake of the ISCO sampler. At various points throughout the sample season, flows were manually measured at site AC-1 using a Marsh McBirney flow meter in order to establish a rating curve to estimate flows and thus loadings coming from Ancaster Creek before the confluence with Spencer Creek.

Spencer Creek has three upstream Provincial Water Quality Monitoring Network sample locations that have been undertaken since 2002 and three Water Survey of Canada hydrometric gauging stations, the closest being less than 3 kilometers upstream. This will make it possible to compare relative input contributions of Ancaster Creek to Spencer Creek and provide an understanding of relative inputs to Cootes Paradise and the Hamilton Harbour from the individual tributaries. It is projected that several years of measurements will be required to establish trends and determine baseline, dry weather and event conditions.

2016 Sampling Program Details

The sampling period reported in this document covers April 2016 – March 2017. A total of 26 biweekly samples were taken at each location. Due to the unusually dry year experienced in 2016, 8 out of 26 samples (30%) were taken during wet conditions, and four heavy rain events were captured with the automated sampler at AC-1. Table 1 displays the 2016/2017 routine sample days, the previous 24 hour rainfall amounts and whether or not the sample day was classified as wet or dry. Table 2 shows the rainfall totals for the four heavy rain events captured in 2016 at the automated sampler at AC-1.

Rainfall Data

Table 1: Rainfall totals on routine sample dates at all sampling locations in 2016/17

| Date | Previous 24 Hour Rainfall (mm) | Classification |
|-----------------|--------------------------------|----------------|
| April-12-16 | 3.8 | Dry |
| April-28-16 | 0 | Dry |
| May-11-16 | 0 | Dry |
| May-25-16 | 0 | Dry |
| June-16-16 | 10.4 | Wet |
| June-22-16 | 0.8 | Dry |
| July-06-16 | 0 | Dry |
| July-19-16 | 0 | Dry |
| August-04-16 | 0 | Dry |
| August-17-16 | 16 | Wet |
| August-31-16 | 4.6 | Dry |
| September-14-16 | 1.2 | Dry |
| September-28-16 | 3.2 | Dry |
| October-12-16 | 0.8 | Dry |
| October-26-16 | 8 | Dry |
| November-09-16 | 3 | Dry |
| November-24-16 | 6.4 | Wet |
| December-07-16 | 3 | Dry |
| December-21-16 | 1.8 | Dry |
| January-04-17 | 12.4 | Wet |
| January-18-17 | 14.2 | Wet |
| February-01-17 | 2.6 | Dry |
| February-15-17 | 0 | Dry |
| March-01-17 | 29 | Wet |
| March-15-17 | 25.9 | Wet |
| March-29-17 | 12.6 | Wet |

Table 2: Rainfall totals on storm event sample dates at the AC-1 automated sampler

| Date | Previous 24 Hour Rainfall (mm) |
|-----------------|--------------------------------|
| August-17-16 | 16 |
| August-25-16 | 23.8 |
| September-10-16 | 10.6 |
| November-03-16 | 21 |

Flow Monitoring at AC-1

In order to estimate nutrient and sediment loading coming from the Ancaster Creek watershed, a rating curve is maintained along with a water level meter during non-ice periods. Capturing high flow days was difficult in 2016, as baseflow was observed for most of the year. Results from flow monitoring can be seen below.

Table 3: Flow measuring results

| Date | Discharge (m ³ /s) | Depth (m) |
|--------------|-------------------------------|-----------|
| May-25-16 | 0.20841 | 0.45 |
| June-22-16 | 0.14219 | 0.41 |
| July-06-16 | 0.10797 | 0.40 |
| August-17-16 | 0.20151 | 0.43 |

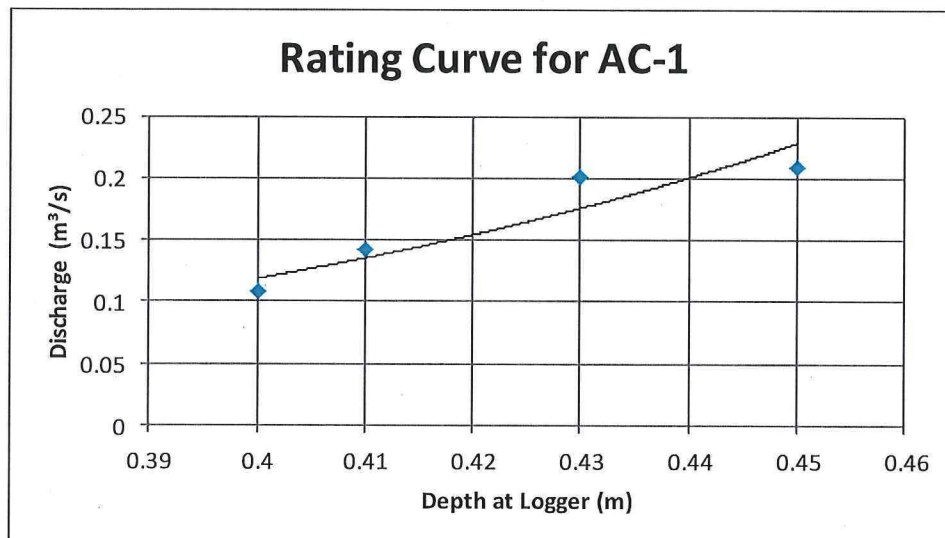


Figure 3: 2016 Rating Curve

Difficulties obtaining reliable data from the ISCO Bubbler Flow Module prevented the continuous monitoring of flows throughout the sample period, however a depth logger was installed at the intake in place of the bubbler. Maintenance will be conducted to the intake and Bubbler unit in 2017 in order to ensure the quality and accuracy of data and samples collected.

Water Quality Objectives

Samples were analyzed for the parameters listed in Table 4. Objectives to ensure that water quality is satisfactory for aquatic life were based on Provincial Water Quality Objectives (MOE 1999), federal guidelines outlined by the Canadian Council of Ministers of the Environment (2001) and Cootes – Grindstone Water Quality Targets (RAP office 2012). A description of each parameter is provided below.

Table 4: Water quality parameters and their desired objective

| Parameter | Units | Target/Objective | Reference |
|---------------------------|-----------|------------------|-----------|
| Unionized Ammonia | mg/L | 0.02 mg/L | HHRAP |
| Nitrate as N | mg/L | 3 mg/L | HHRAP |
| Nitrite as N | mg/L | 0.06 mg/L | CWQG |
| o-Phosphate as P | mg/L | n/a | |
| Total Phosphorous | mg/L | 0.03 mg/L | PWQO |
| Total Suspended Solids | mg/L | 25 mg/L | HHRAP |
| Volatile Suspended Solids | mg/L | n/a | |
| Escherichia coli | CFU/100mL | 100 CFU/100mL | PWQO |

Total Phosphorous

Total Phosphorous (TP) is commonly found in fertilizers, manure and organic wastes in sewage and industrial effluent. It is an essential nutrient to aquatic life, but in excess can cause eutrophication and algae blooms. Soil erosion is a main contributor of TP in surface waters, as phosphorous particles tend to attach to soil particles.

Unionized Ammonia

Ammonia is the preferred nitrogen containing nutrient for plant growth, yet it can also cause algal blooms and stress to fish in high concentrations. In water, ammonia occurs in two forms; ionized and unionized ammonia. This difference is important to know because NH_3 , un-ionized ammonia, is the form more toxic to fish. Both water temperature and pH affect which form of ammonia is predominant at any given time in an aquatic system.

Nitrate

Nitrates are an essential nutrient for regulating plant life but can cause degraded water quality in excess concentrations. The target concentration for nitrates in this study is based on the Canadian Water Quality Guideline (CWQG) of 3.0mg/L. Typically nitrate concentrations tend to be low during base-flow conditions; however runoff from fertilizer, waste water treatment plants and storm sewer outfalls can bring the concentration of nitrates up to and beyond the target for water quality.

Nitrite

For this study, we've adopted the Canadian Water Quality Guideline (CWQG) target of 0.06mg/L as N.

Total Suspended Solids

Targeted concentrations of Total Suspended Solids (TSS) vary depending on the system being monitored. TSS thresholds are established by understanding the underlying background levels of a site which may or may not have clear flow during base-flow conditions. Storm events move sediment downstream and therefore TSS values are expected to be much higher during these events. Since background levels of TSS is unavailable for the majority of the sites sampled, the Hamilton Harbour Remedial Action Plan interim target of 25 mg/L was used as the target for TSS (RAP office 2012). This target is derived from the Canadian Water Quality Guideline (CWQG) for total suspended sediment.

Volatile Suspended Solids

Volatile Suspended Solids represent the organic portion of Total Suspended Solids. There is no current target set for Volatile Suspended Solids for the HHRAP or PWQO's. However understanding the make-up of solids (organic vs. inorganic) can help us in understanding the individual stresses occurring.

Escherichia coli

E.coli is well known to have harmful effects on human health when found in the environment at certain concentrations. There are strict guidelines for *E.coli* targets for drinking and recreational purposes. Since there is little to no background data for the majority of the sites, we will be comparing the geometric mean concentrations from each site to the PWQO of 100CFU/100mL (MOE 1999), the target for recreational purposes.

Results and Discussion

Total Phosphorous

Table 5: Results for Total Phosphorous in mg/L

| Date | CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | |
|-----------|-------|---------|-------|-------|-------|-------|-------|-----|
| 12-Apr-16 | 0.386 | 0.047 | 0.024 | 0.063 | 0.059 | 0.026 | 0.04 | DRY |
| 28-Apr-16 | 0.518 | 0.016 | 0.023 | 0.015 | 0.014 | 0.012 | 0.018 | DRY |
| 11-May-16 | 0.62 | 0.012 | 0.012 | 0.012 | 0.014 | 0.018 | 0.013 | DRY |
| 25-May-16 | 0.762 | <0.01 | 0.028 | 0.018 | 0.015 | 0.026 | 0.027 | DRY |
| 16-Jun-16 | 0.716 | 0.057 | 0.039 | 0.064 | 0.076 | 0.053 | 0.041 | WET |
| 22-Jun-16 | 0.521 | 0.078 | 0.03 | 0.034 | 0.029 | 0.058 | 0.039 | DRY |
| 06-Jul-16 | 0.632 | 0.05 | 0.037 | 0.039 | 0.023 | 0.024 | 0.05 | DRY |
| 19-Jul-16 | 0.421 | 0.045 | 0.044 | 0.038 | 0.012 | 0.026 | 0.029 | DRY |
| 04-Aug-16 | 1.04 | 0.258 | 0.044 | 0.037 | 0.016 | 0.035 | 0.039 | DRY |
| 17-Aug-16 | 0.433 | 0.031 | 0.042 | 0.024 | 0.01 | 0.019 | 0.05 | WET |
| 31-Aug-16 | 0.36 | 0.03 | 0.044 | 0.049 | 0.033 | 0.034 | 0.054 | DRY |
| 14-Sep-16 | 0.828 | 0.027 | 0.046 | 0.025 | 0.029 | 0.022 | 0.044 | DRY |
| 28-Sep-16 | 0.375 | 0.03 | 0.024 | 0.018 | <0.01 | <0.01 | 0.025 | DRY |
| 12-Oct-16 | 0.232 | 0.043 | 0.038 | 0.014 | <0.01 | 0.013 | 0.051 | DRY |
| 26-Oct-16 | 0.232 | 0.017 | 0.012 | <0.01 | <0.01 | <0.01 | 0.039 | DRY |
| 09-Nov-16 | 0.506 | 0.02 | 0.025 | 0.017 | 0.012 | 0.02 | 0.05 | DRY |
| 24-Nov-16 | 0.393 | 0.012 | 0.025 | 0.016 | 0.011 | 0.022 | 0.054 | WET |
| 07-Dec-16 | 0.226 | 0.017 | 0.019 | 0.011 | <0.01 | 0.017 | 0.031 | DRY |
| 21-Dec-16 | 0.237 | <0.01 | 0.013 | <0.01 | 0.011 | <0.01 | 0.042 | DRY |
| 04-Jan-17 | 0.189 | 0.12 | 0.066 | 0.051 | 0.058 | 0.039 | 0.051 | WET |
| 18-Jan-17 | 0.171 | 0.183 | 0.241 | 0.078 | 0.099 | 0.073 | 0.061 | WET |
| 01-Feb-17 | 0.158 | 0.023 | 0.025 | 0.018 | 0.027 | 0.021 | 0.03 | DRY |
| 15-Feb-17 | 0.137 | 0.025 | 0.024 | 0.021 | 0.027 | 0.018 | 0.032 | DRY |
| 01-Mar-17 | 0.713 | 0.755 | 0.303 | 0.67 | 1.04 | 0.216 | --- | WET |
| 15-Mar-17 | 0.109 | 0.017 | 0.022 | 0.017 | 0.048 | 0.021 | 0.028 | WET |
| 29-Mar-17 | 0.162 | 0.025 | 0.028 | 0.021 | 0.024 | 0.027 | 0.018 | WET |

| | | | | | | | |
|-------------------|-------|-------|-------|-------|-------|-------|-------|
| Mean | 0.426 | 0.075 | 0.049 | 0.053 | 0.065 | 0.032 | 0.038 |
| Dry Events (mean) | 0.455 | 0.041 | 0.028 | 0.024 | 0.018 | 0.021 | 0.036 |
| Wet Events (mean) | 0.361 | 0.150 | 0.096 | 0.118 | 0.171 | 0.059 | 0.043 |

Table 6

| Site | Total Exceedances | Dry Exceedances | Wet Exceedances |
|---------|-------------------|-----------------|-----------------|
| AC-1 | 38% | 33% | 50% |
| AC-2 | 27% | 11% | 63% |
| AC-3 | 27% | 17% | 67% |
| AC-4 | 73% | 67% | 88% |
| CP-7 | 42% | 33% | 63% |
| CP-11 | 100% | 100% | 100% |
| CP-18.1 | 42% | 33% | 63% |

Table 7

| Classification | Samples | Exceedances | Percent |
|----------------|---------|-------------|---------|
| Dry | 126 | 54 | 43% |
| Wet | 56 | 37 | 66% |

Total Phosphorous (TP) results for routine sample days in the 2016/17 season can be seen in Table 5. Results in red text indicate an exceedance of the water quality objective of 0.03mg/L. Table 6 lists the sites and their exceedances by percent and Table 7 lists exceedances on wet vs. dry sampling days.

Elevated TP values were observed at all sites, indicating TP impairment throughout the watershed. Also, exceedances occurred throughout the sampling year, however the majority of exceedances occurred during the summer months. In addition, exceedances were strongly related to wet sample events with 66% of all samples collected during wet conditions exceeded the water quality objective. In comparison, 43% of all samples collected during dry conditions exceeded the objective.

Site CP-11 in Chedoke Creek stands out as a location experiencing high TP concentrations. Site CP-11 exceeded the target objective on every sample event. Site AC-4, which has far less flow than other locations, routinely exceeds the objective. AC-1 in Ancaster Creek, CP-7 in Spencer Creek and CP-18.1 in Borers Creek experienced similar total exceedances, with approximately 40% of samples exceeding the TP objective at each of these sampling sites. Sites AC-2 in Sulphur Creek and AC-3 in Ancaster Creek has the best water quality out of all locations. These sample locations happen to be located within a vegetated floodplain.

Figure 4 further illustrates the relationship between wet event sample days and higher concentrations of TP. Most locations experience concentrations near the water quality objective of 0.03 mg/L for dry sample days, however annual averages for wet events are well above the desired objective at nearly all

locations. All locations are susceptible to high TP concentrations during wet events. In addition, although AC-2 has the lowest number of total exceedances (27%), the mean values for the sampling period were among the highest of all the sites. This indicates that this location is susceptible to high increases of TP during storm runoff events. Furthermore, site AC-4 exceeded the water quality objective for 73% of sample events, with a large amount of exceedances occurring on dry events, and with a similar average wet and dry event concentration. AC-4 has a relatively small drainage area compared to AC-2 and AC-3 that originates about 2.5 kilometers upstream of the sample location and the land use is mostly urban residential. Lastly, CP-18.1 had a relatively large mean concentration and average wet event concentration, due largely to two sampling dates with significant elevated values (January 18 and March 1), compared to other sampling dates.

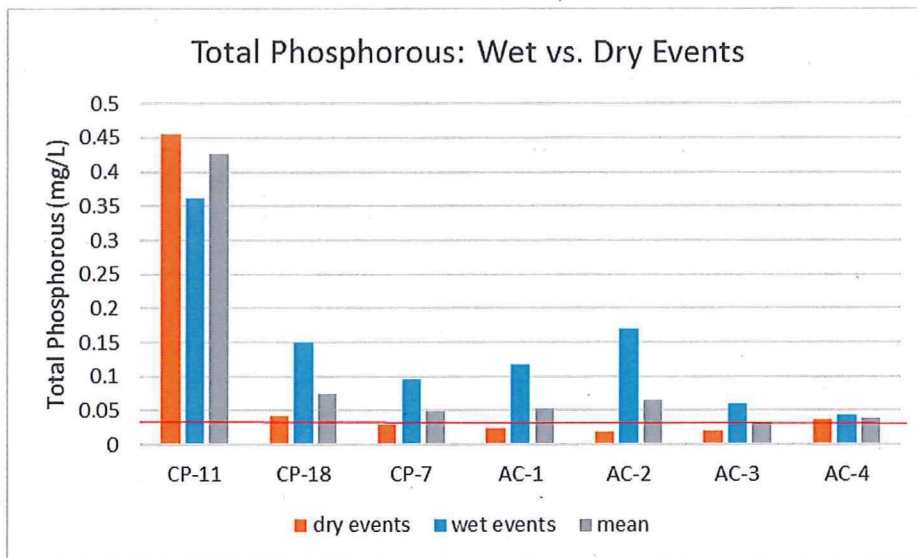


Figure 4: Total Phosphorous at each site wet vs. dry events.

Figure 5 shows the distribution of TP throughout the four seasons. In the first full year of sampling, it appears that winter experienced heavy TP contributions to the marsh, although this is at least partially the result of the number high proportion of wet events sampled during this season. Also, it should be noted that the samples taken on March 1, 2017 were remarkably high in TP, and corresponded with a significant storm event.

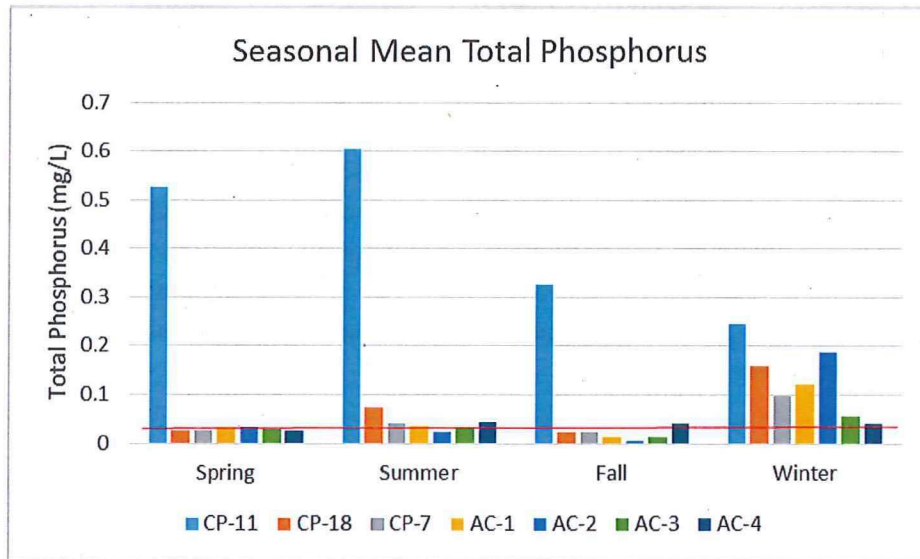


Figure 5: Total Phosphorous shown in seasonal averages

Total Suspended Solids

Total Suspended Solids (TSS) results for routine sample days in the 2016/17 season can be seen in Table 8. Results in red text indicate an exceedance of the objective of 25 mg/L. Table 9 lists the sites and their exceedances by percent.

Exceedances were relatively uncommon throughout the sample year, as 2016 was relatively dry throughout. It is of interest to note that 62% (15/24) of TSS exceedances occurred on wet sample days. The highest exceedances occurred during the March 1 wet sampling event in the spring, and corresponded with a significant storm event.

The Ancaster Creek locations AC-1 and AC-2 had some of the highest exceedances in 2016. These Ancaster Creek sites seem to be more susceptible to increased sediment loading during storm events.

Site CP-11 experiences exceedances at the same rate whether it was dry or wet conditions while sampling. All other sites had a very low exceedance rate during dry conditions. AC-3 in Ancaster Creek and CP-18.1 in Borers Creek experience similar exceedance rates in wet conditions, however it is low at 13%. Site AC-1 in Ancaster Creek experienced slightly higher exceedances during wet conditions than site CP-7 in Spencer Creek. Site AC-4 had no TSS exceedances during the annual sampling program.

Table 8: Results for Total Suspended Solids in mg/L

| Date | CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | |
|-----------|-------|---------|-------|-------|-------|-------|------|-----|
| 12-Apr-16 | 10.4 | 7 | 10.6 | 40.2 | 59.8 | 16.8 | 14.2 | DRY |
| 28-Apr-16 | 9.4 | <2 | 2.8 | <2 | 2.8 | 4 | 2.6 | DRY |
| 11-May-16 | 47.2 | <2 | 2.2 | 2.8 | 4.6 | 12 | 3 | DRY |
| 25-May-16 | 70 | 2.2 | 5.6 | 4.4 | 5.2 | 11.6 | 6.7 | DRY |
| 16-Jun-16 | 29.8 | 11.8 | 8.9 | 31 | 48 | 18 | 10 | WET |
| 22-Jun-16 | 18.8 | 6.2 | 9 | 10.8 | 14.2 | 22.6 | 10 | DRY |
| 6-Jul-16 | 57.5 | 16.8 | 10 | 11.8 | 8.8 | 12.2 | 13.4 | DRY |
| 19-Jul-16 | 33.2 | 7.2 | 11.4 | 8.4 | 5.6 | 6.6 | 4.8 | DRY |
| 4-Aug-16 | 104 | 59.8 | 11.3 | 4 | 4.2 | 10.6 | 9.7 | DRY |
| 17-Aug-16 | 3.8 | 3.6 | 20 | 9.6 | 9.8 | 7.4 | 15 | WET |
| 31-Aug-16 | 19.6 | <2 | 12.4 | 3 | 7 | 6.1 | 2.4 | DRY |
| 14-Sep-16 | 38 | <2 | 15.2 | <2 | 2.2 | 7.4 | 4.2 | DRY |
| 28-Sep-16 | 3.4 | <2 | 4.2 | <2 | 4.6 | <2 | <2 | DRY |
| 12-Oct-16 | 4.4 | <2 | 16 | <2 | <2 | 2.2 | 8.2 | DRY |
| 26-Oct-16 | 3.8 | <2 | 1.8 | <2 | <2 | <2 | 3.4 | DRY |
| 9-Nov-16 | 11.1 | <2 | 2 | <2 | <2 | <2 | <2 | DRY |
| 24-Nov-16 | 17.8 | <2 | 3.5 | <2 | <2 | 2.5 | 2 | WET |
| 7-Dec-16 | 8.9 | 2.2 | 2.8 | <2 | 3 | 2.7 | 2 | DRY |
| 21-Dec-16 | 4.8 | <2 | <2 | <2 | <2 | 1.6 | 9.8 | DRY |
| 4-Jan-17 | 15.5 | 9.5 | 13.8 | 19.3 | 35.7 | 6.9 | 8.9 | WET |
| 18-Jan-17 | 11.6 | 20 | 35.6 | 34.5 | 76.4 | 23.2 | 18.8 | WET |
| 1-Feb-17 | <4 | <4 | <4 | 5.5 | 21.5 | 8 | <4 | DRY |
| 15-Feb-17 | 8 | <2 | 5.7 | 8.1 | 19 | 6.7 | 8.8 | DRY |
| 1-Mar-17 | 52 | 359 | 214 | 703 | 1160 | 191 | --- | WET |
| 15-Mar-17 | <3 | <3 | 3.6 | 7.4 | 35.6 | 8.8 | 6.4 | WET |
| 29-Mar-17 | 4.2 | 3.3 | 5.3 | 10.7 | 14.5 | 18 | 6 | WET |
| Mean | 23.49 | 20.98 | 16.45 | 35.17 | 59.32 | 15.65 | 6.81 | |

| | | | | | | | | |
|-------------------|-------|-------|-------|--------|-------|-------|------|--|
| Dry Events (mean) | 25.13 | 6.51 | 6.83 | 5.5 | 9.03 | 7.28 | 5.73 | |
| Wet Events (mean) | 19.24 | 58.17 | 38.09 | 101.93 | 172.5 | 34.48 | 9.59 | |

Table 9

| Site | Total Exceedances | Dry Exceedances | Wet Exceedances |
|---------|-------------------|-----------------|-----------------|
| AC-1 | 15% | 6% | 38% |
| AC-2 | 23% | 6% | 63% |
| AC-3 | 4% | 0% | 13% |
| AC-4 | 0% | 0% | 0% |
| CP-7 | 8% | 0% | 25% |
| CP-11 | 27% | 22% | 25% |
| CP-18.1 | 8% | 6% | 13% |

Figure 6 shows the relationship between wet event sample days and higher concentrations of TSS experienced at most locations. Most locations experience concentrations below the water quality objective of 25 mg/L for dry sample days, however annual averages for wet events are higher than the desired objective at nearly all locations. All locations are susceptible to high TSS concentrations during wet events.

Figure 7 shows the distribution of TP throughout the four seasons. In the first full year of sampling, it appears that winter experiences heavy TSS contributions to the marsh, or this could be due to the occurrence of four wet events in winter. It should be noted that the samples taken on March 1, 2017 were noticeably high in TSS, and corresponded with a significant storm event and sampling during intense rain.

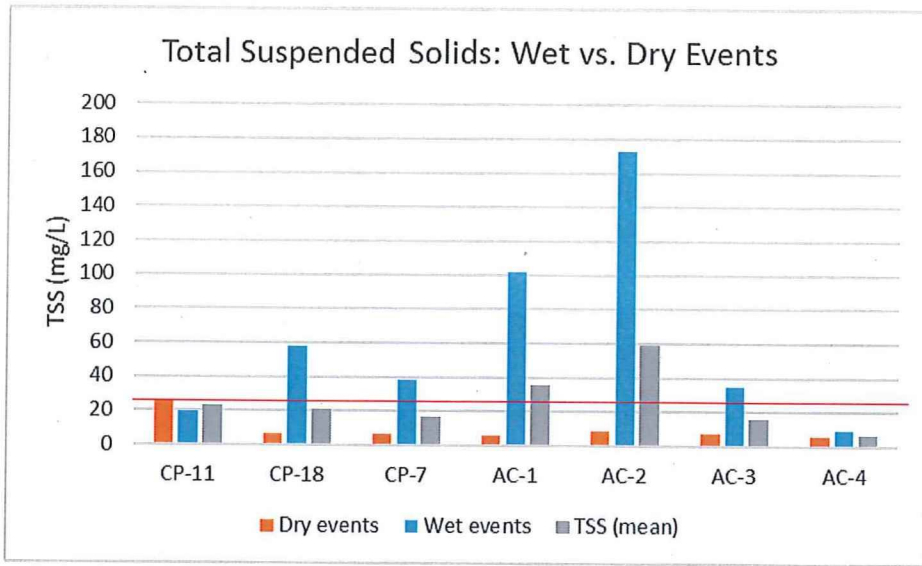


Figure 6: Total Suspended Solids at each site wet vs. dry events

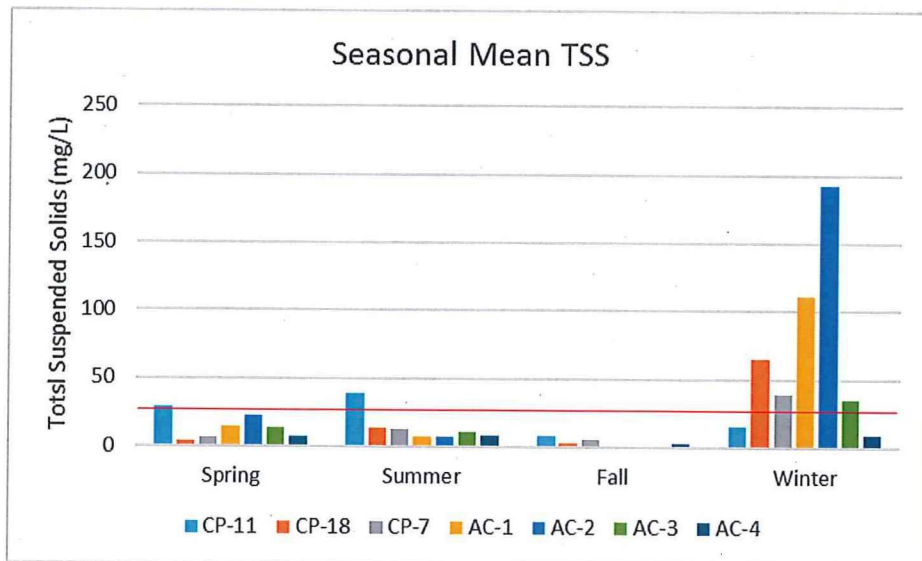


Figure 7: Total Suspended Solids in seasonal averages

Volatile Suspended Solids

Volatile Suspended Solids (VSS) results from routine sample days in the 2016/17 season can be seen in Table 10. VSS represents the organic portion of TSS, such as plant matter and animal waste. Volatile suspended solids do not have a target objective outlined for this report.

Table 10: Results for Volatile Suspended Solids in mg/L

| Dates | CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | |
|-----------|-------|---------|------|------|------|------|------|-----|
| 12-Apr-16 | 6.2 | 1.6 | 1.8 | 3.2 | 4.2 | 2.2 | 1.6 | DRY |
| 28-Apr-16 | 6.6 | <2 | 1.6 | <2 | 0.8 | 4 | <2 | DRY |
| 11-May-16 | 35.2 | <2 | 1.6 | 1.8 | 1.6 | 2.8 | 1.6 | DRY |
| 25-May-16 | 45 | 0.8 | 1.8 | 1.1 | 1.4 | 1.6 | 1.8 | DRY |
| 16-Jun-16 | 22.2 | 3.2 | 2.2 | 4 | 5.7 | 2.8 | 2.7 | WET |
| 22-Jun-16 | 12 | 1.6 | 1.8 | 2 | 2 | 2.6 | 2.2 | DRY |
| 6-Jul-16 | 45.5 | 4.6 | 2.8 | 2.4 | 2 | 2.2 | 2.8 | DRY |
| 19-Jul-16 | 25.6 | 1.6 | 1.4 | 1.2 | 1.6 | 1.8 | 1 | DRY |
| 4-Aug-16 | 89.6 | 28.4 | 2.6 | 1.2 | 1.2 | 1.4 | 2 | DRY |
| 17-Aug-16 | 2.6 | 1.2 | 2.8 | 1.6 | 1.6 | 1.2 | 2.2 | WET |
| 31-Aug-16 | 10.6 | <2 | 2.2 | 0.8 | 1.2 | 1.2 | 1.2 | DRY |
| 14-Sep-16 | 38 | <2 | 2.8 | <2 | 1 | 1.4 | 1.6 | DRY |
| 28-Sep-16 | 2.8 | <2 | 1 | <2 | 1 | <2 | <2 | DRY |
| 12-Oct-16 | 1.6 | 3.4 | 2.8 | <2 | <2 | <2 | 1.2 | DRY |
| 26-Oct-16 | 1.8 | 1 | 1.4 | <2 | <2 | <2 | 1.2 | DRY |
| 9-Nov-16 | 4.7 | <2 | 0.9 | <2 | <2 | <2 | <2 | DRY |
| 24-Nov-16 | 4.8 | <2 | 2.5 | <2 | <2 | 1.5 | 2 | WET |
| 7-Dec-16 | 3.3 | 1.6 | 1.1 | <2 | 1.4 | 1.1 | 1.3 | DRY |
| 21-Dec-16 | 0.8 | <2 | <2 | <2 | <2 | <2 | 1.2 | DRY |
| 4-Jan-17 | 5.9 | 2.5 | 4.2 | 2.3 | 3.4 | 1.4 | 2.3 | WET |
| 18-Jan-17 | 3.6 | 3.6 | 7.2 | 5 | 6.4 | 2.8 | 2 | WET |
| 1-Feb-17 | <4 | <4 | <4 | 2.5 | 3.5 | 2.5 | <4 | DRY |

| | | | | | | | | |
|-------------------|-------|------|------|------|-------|------|------|-----|
| 15-Feb-17 | 3.5 | <4 | 2.4 | 2.4 | 3.4 | 1.9 | 3.4 | DRY |
| 1-Mar-17 | 19 | 37 | 21 | 41 | 64 | 14 | --- | WET |
| 15-Mar-17 | <3 | <3 | 1.3 | 1.3 | 2.5 | 1.3 | 1.6 | WET |
| 29-Mar-17 | 2.7 | 1.6 | 2.3 | 2 | 1.9 | 2.3 | 2.5 | WET |
| Mean | 17 | 6.58 | 3.1 | 4.61 | 5.5 | 2.59 | 1.85 | |
| Dry Events (mean) | 19.58 | 4.96 | 1.88 | 1.86 | 1.88 | 2.05 | 1.72 | |
| Wet Events (mean) | 8.68 | 8.18 | 5.44 | 8.17 | 12.21 | 3.41 | 2.19 | |

As seen in Figure 8, all locations except CP-11 consist of mostly fixed suspended solids, which are inorganic materials. Site CP-11 is made up of mostly volatile suspended solids, meaning that the majority of suspended material is organic. This is consistent with the high nutrient values we are seeing in site CP-11.

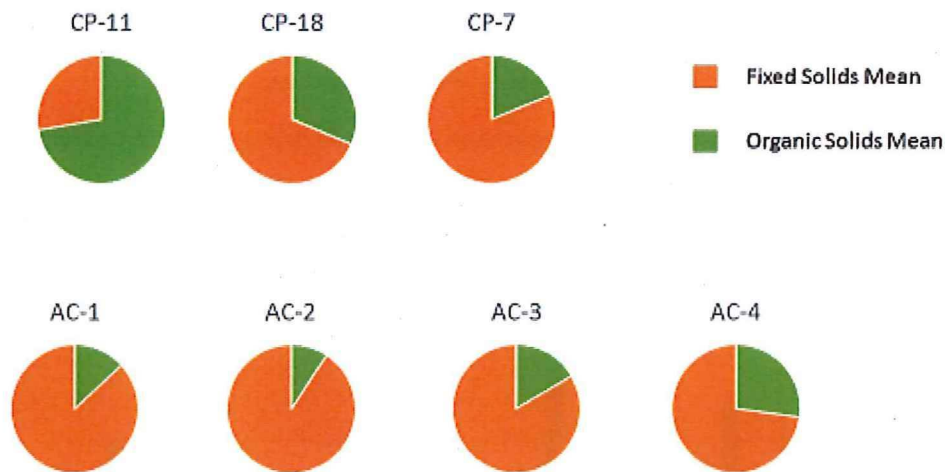


Figure 8: TSS breakdown at each sample site

Figure 9 shows the relationship between wet event sample days and higher concentrations of VSS experienced at most locations. All locations are susceptible to higher VSS concentrations during wet events except CP-11, which has higher VSS concentrations during dry events. Site CP-11 had higher

concentrations during spring and summer seasons and there does not appear to be a strong correlation between wet sample days and higher concentrations of VSS at this site.

Figure 10 shows the distribution of VSS throughout the four seasons. In the first full year of sampling, it appears that winter experiences heavy VSS contributions to the marsh, this could be due to the fact that 4/7 sample days in winter were classified as wet events – a much higher ratio than other seasons. It should be noted that the samples taken on March 1, 2017 were much higher in VSS. and corresponded with a significant storm event.

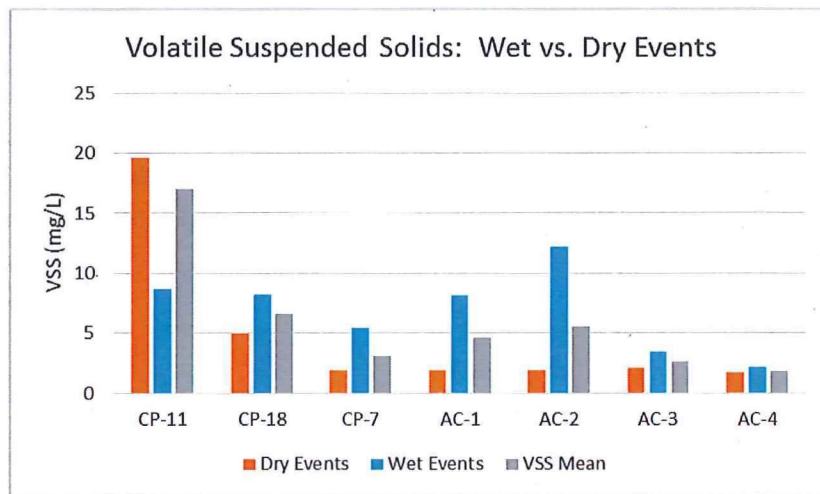


Figure 9: Volatile Suspended Solids at each site wet vs. dry events

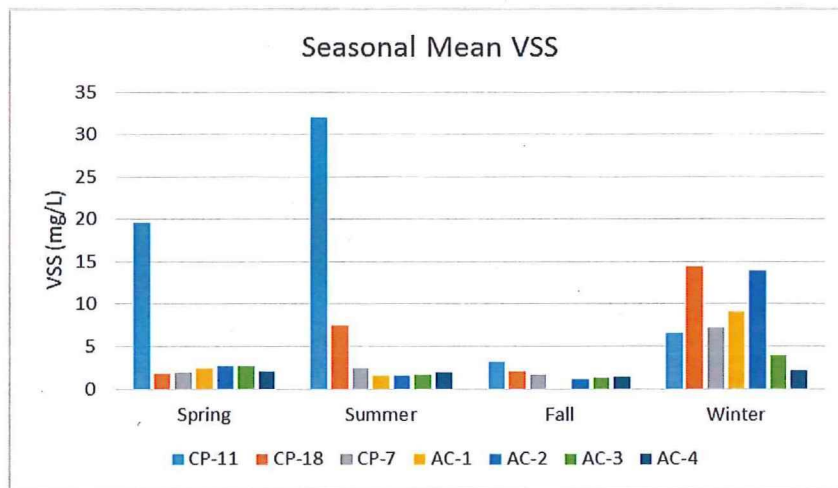


Figure 10: Volatile Suspended Solids seasonal averages

Unionized Ammonia

The results in Table 11 were found by using a formula to derive unionized ammonia using temperature, pH and total ammonia concentration. The only exceedances that occurred during the sample season were at CP-11. 8/24 (or 33%) of samples exceeded the objective of 0.02 mg/L at this location. All other locations are consistently below the objective. Based on the results consistently reporting below the target objective, unionized ammonia does not appear to be a contaminant of concern at most locations.

Table 11: Results for Unionized Ammonia in mg/L

| Dates | CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | |
|-----------|--------|---------|--------|--------|--------|--------|--------|-----|
| 12-Apr-16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | DRY |
| 28-Apr-16 | 0.0262 | 0.0010 | 0.0010 | 0.0002 | 0.0003 | 0.0000 | 0.0003 | DRY |
| 11-May-16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | DRY |
| 25-May-16 | 0.0022 | 0.0000 | 0.0011 | 0.0007 | 0.0004 | 0.0005 | 0.0004 | DRY |
| 16-Jun-16 | 0.0257 | 0.0010 | 0.0027 | 0.0022 | 0.0023 | 0.0016 | 0.0013 | WET |
| 22-Jun-16 | 0.0583 | 0.0003 | 0.0031 | 0.0034 | 0.0024 | 0.0020 | 0.0031 | DRY |
| 6-Jul-16 | 0.0117 | 0.0002 | 0.0017 | 0.0013 | 0.0006 | 0.0006 | 0.0010 | DRY |
| 19-Jul-16 | 0.0328 | 0.0001 | 0.0010 | 0.0008 | 0.0005 | 0.0004 | 0.0004 | DRY |
| 4-Aug-16 | 0.0072 | 0 | 0.0014 | 0.0008 | 0.0003 | 0.0005 | 0.0002 | DRY |
| 17-Aug-16 | 0.0489 | 0.0019 | 0.0030 | 0.0015 | 0.0018 | 0.0007 | 0.0015 | WET |
| 31-Aug-16 | 0.0203 | 0 | 0.0014 | 0.0006 | 0.0003 | 0.0003 | 0.0008 | DRY |
| 14-Sep-16 | 0.0240 | 0.0003 | 0.0022 | 0.0007 | 0 | 0 | 0.0005 | DRY |
| 28-Sep-16 | 0.0187 | 0 | 0.0013 | 0.0005 | 0 | 0 | 0.0002 | DRY |
| 12-Oct-16 | 0.0085 | 0.0001 | 0.0004 | 0.0001 | 0 | 0 | 0.0003 | DRY |
| 26-Oct-16 | 0.0026 | 0 | 0.0003 | 0 | 0 | 0 | 0 | DRY |
| 9-Nov-16 | 0.0126 | 0 | 0.0004 | 0 | 0 | 0 | 0 | DRY |
| 24-Nov-16 | 0.0124 | 0 | 0.0003 | 0.0001 | 0 | 0 | 0.0003 | WET |
| 7-Dec-16 | 0.0023 | 0 | 0.0004 | 0 | 0 | 0 | 0.0003 | DRY |
| 21-Dec-16 | 0.0006 | 0 | 0.0007 | 0.0001 | 0.0001 | 0 | 0.0006 | DRY |
| 4-Jan-17 | 0.0015 | 0.0002 | 0.0004 | 0.0003 | 0.0003 | 0.0000 | 0.0006 | WET |
| 18-Jan-17 | 0.0029 | 0.0003 | 0.0006 | 0.0003 | 0.0002 | 0.0001 | 0.0007 | WET |

| | | | | | | | | |
|-------------------|---------|----------|----------|----------|----------|------------|----------|-----|
| 1-Feb-17 | 0.0007 | 0.0000 | 0.0004 | 0.0002 | 0.0002 | 0.0000 | 0.0011 | DRY |
| 15-Feb-17 | 0.0006 | 0.0000 | 0.0000 | 0.0002 | 0.0001 | 0.0000 | 0.0010 | DRY |
| 1-Mar-17 | 0.0342 | 0.0007 | 0.0006 | 0.0005 | 0.0005 | 0.0005 | --- | WET |
| 15-Mar-17 | 0.0005 | 0 | 0.000376 | 0.000244 | 0.000069 | 0.00016968 | 0.000658 | WET |
| 29-Mar-17 | 0.00219 | 0 | 0.000406 | 0.000184 | 0 | 0.000084 | 0.000292 | WET |
| Mean | 0.014 | 0.000243 | 0.000991 | 0.000592 | 0.000426 | 0.000295 | 0.000618 | |
| Dry Events (mean) | 0.0127 | 0.0001 | 0.0009 | 0.0005 | 0.0003 | 0.0002 | 0.0006 | |
| Wet Events (mean) | 0.016 | 0.0005 | 0.001 | 0.0007 | 0.0007 | 0.0004 | 0.0007 | |

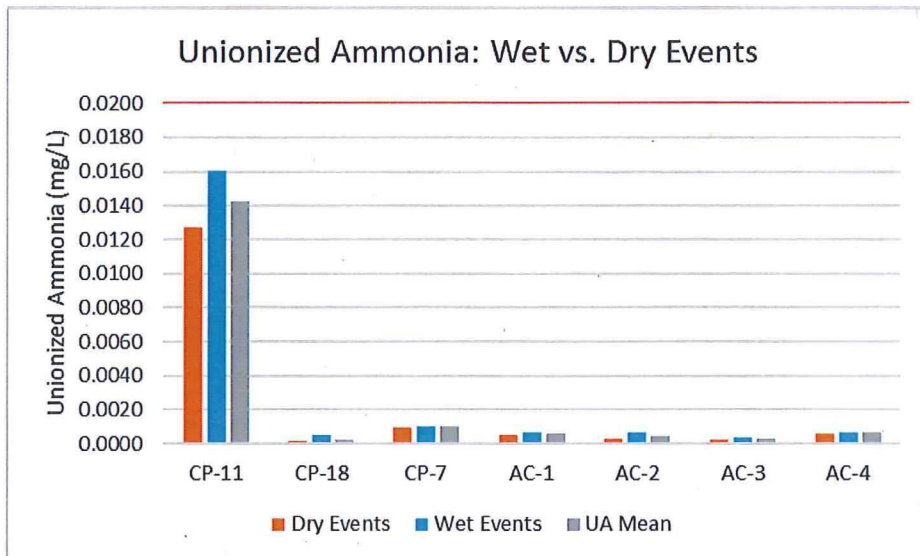


Figure 11: Unionized Ammonia at each site wet vs. dry events

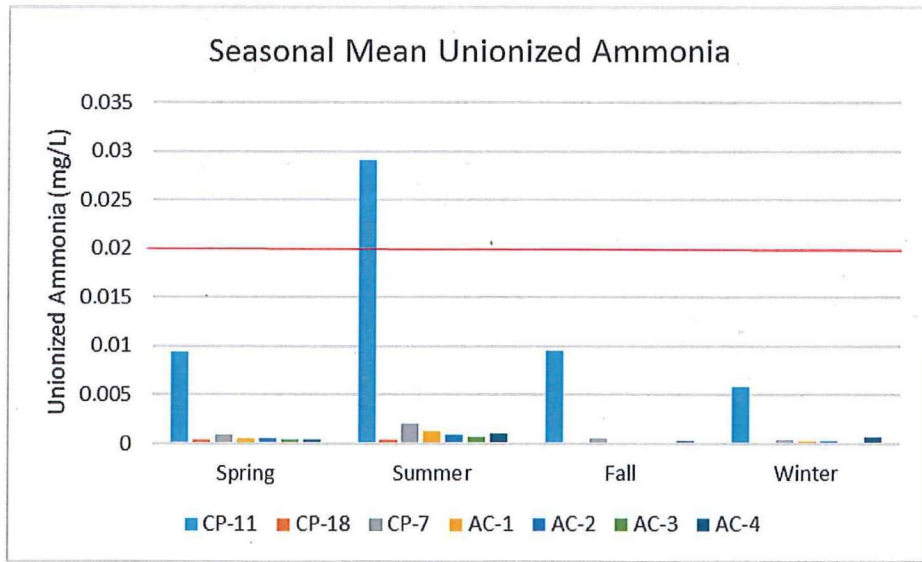


Figure 12: Unionized Ammonia seasonal averages

Total Ammonia

Table 12: Total ammonia concentrations

| Dates | CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
|-----------|-------|---------|------|-------|-------|-------|------|
| 12-Apr-16 | 2.33 | 0.03 | 0.02 | <0.01 | <0.01 | <0.01 | 0.03 |
| 28-Apr-16 | 4.45 | 0.02 | 0.02 | 0.01 | 0.01 | <0.01 | 0.01 |
| 11-May-16 | 0.02 | <0.01 | 0.02 | 0.01 | <0.01 | 0.01 | 0.02 |
| 25-May-16 | 0.02 | <0.01 | 0.02 | 0.02 | 0.01 | 0.02 | 0.01 |
| 16-Jun-16 | 4.06 | 0.02 | 0.07 | 0.06 | 0.05 | 0.04 | 0.03 |
| 22-Jun-16 | 1.98 | 0.01 | 0.05 | 0.07 | 0.04 | 0.04 | 0.07 |
| 6-Jul-16 | 0.16 | 0.01 | 0.06 | 0.04 | 0.02 | 0.02 | 0.03 |
| 19-Jul-16 | 0.43 | 0.01 | 0.04 | 0.03 | 0.02 | 0.02 | 0.02 |
| 4-Aug-16 | 0.04 | <0.01 | 0.06 | 0.03 | 0.01 | 0.02 | 0.01 |
| 17-Aug-16 | 3.20 | 0.02 | 0.04 | 0.02 | 0.02 | 0.01 | 0.02 |
| 31-Aug-16 | 0.75 | <0.01 | 0.04 | 0.02 | 0.01 | 0.01 | 0.03 |
| 14-Sep-16 | 0.83 | 0.01 | 0.04 | 0.02 | <0.01 | <0.01 | 0.02 |

| | | | | | | | |
|-----------|------|-------|-------|-------|-------|-------|-------|
| 28-Sep-16 | 2.14 | <0.01 | 0.04 | 0.02 | <0.01 | <0.01 | 0.01 |
| 12-Oct-16 | 0.81 | 0.01 | 0.03 | 0.01 | <0.01 | <0.01 | 0.04 |
| 26-Oct-16 | 0.50 | <0.01 | 0.02 | <0.01 | <0.01 | <0.01 | <0.01 |
| 9-Nov-16 | 2.48 | <0.01 | 0.02 | <0.01 | <0.01 | <0.01 | <0.01 |
| 24-Nov-16 | 1.21 | <0.01 | 0.02 | 0.01 | <0.01 | <0.01 | 0.04 |
| 7-Dec-16 | 0.23 | <0.01 | 0.02 | <0.01 | <0.01 | <0.01 | 0.03 |
| 21-Dec-16 | 0.15 | <0.01 | 0.05 | 0.02 | 0.01 | <0.01 | 0.13 |
| 4-Jan-17 | 0.17 | 0.02 | 0.03 | 0.03 | 0.02 | <0.01 | 0.06 |
| 18-Jan-17 | 0.47 | 0.03 | 0.06 | 0.04 | 0.04 | 0.01 | 0.07 |
| 1-Feb-17 | 0.12 | <0.01 | 0.02 | 0.02 | 0.02 | <0.01 | 0.11 |
| 15-Feb-17 | 0.24 | <0.01 | <0.01 | 0.02 | 0.01 | <0.01 | 0.10 |
| 1-Mar-17 | 2.82 | 0.04 | 0.03 | 0.04 | 0.04 | 0.03 | --- |
| 15-Mar-17 | 0.07 | <0.01 | 0.02 | 0.02 | 0.01 | 0.02 | 0.08 |
| 29-Mar-17 | 0.37 | <0.01 | 0.02 | 0.02 | <0.01 | 0.01 | 0.03 |

Ortho-Phosphate

Table 13: ortho-phosphate concentrations

| Dates | CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | |
|-----------|-------|---------|------|------|------|------|------|-----|
| 12-Apr-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 28-Apr-16 | 0.20 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 11-May-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 25-May-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 16-Jun-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | WET |
| 22-Jun-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 6-Jul-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |

| | | | | | | | | |
|-----------|------|-------|-------|-------|-------|-------|-------|-----|
| 19-Jul-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 4-Aug-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 17-Aug-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | WET |
| 31-Aug-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 14-Sep-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 28-Sep-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 12-Oct-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 26-Oct-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 9-Nov-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 24-Nov-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | WET |
| 7-Dec-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 21-Dec-16 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 4-Jan-17 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | WET |
| 18-Jan-17 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | WET |
| 1-Feb-17 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 15-Feb-17 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | DRY |
| 1-Mar-17 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | --- | WET |
| 15-Mar-17 | 0.10 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | WET |
| 29-Mar-17 | 0.12 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | WET |

Nitrate

Nitrate results for routine sample days can be seen in Table 14. Results in red text indicate an exceedance of the objective of 3 mg/L. There were only 4 exceedances during the sampling year, and they all fell upon wet days at various locations. All locations consistently reported under the target objective throughout all four seasons. Based on the lack of exceedances and test results routinely below the target objective, nitrate does not appear to be a parameter of concern at this point.

Table 14: Results for Nitrate in mg/L

| Dates | CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | |
|-----------|-------|---------|------|------|------|------|------|-----|
| 12-Apr-16 | 2.68 | 0.82 | 0.91 | 0.58 | 0.57 | 0.57 | 0.75 | DRY |
| 28-Apr-16 | 1.37 | 0.25 | 0.5 | 0.41 | 0.31 | 0.56 | 0.24 | DRY |
| 11-May-16 | 1.46 | 0 | 0.51 | 0.36 | 0.25 | 0.47 | 0.16 | DRY |
| 25-May-16 | 0.59 | 0 | 0.38 | 0.41 | 0.28 | 0.63 | 0.14 | DRY |
| 16-Jun-16 | 0.8 | 0.14 | 0.57 | 0.6 | 0.49 | 4.03 | 0.42 | WET |
| 22-Jun-16 | 0.28 | 0.08 | 0.53 | 0.56 | 0.51 | 0.7 | 0.41 | DRY |
| 6-Jul-16 | 0.59 | 0 | 0.48 | 0.42 | 0.42 | 0.5 | 0.24 | DRY |
| 19-Jul-16 | 0.79 | 0.1 | 0.45 | 0.4 | 0.44 | 0.5 | 0.25 | DRY |
| 4-Aug-16 | 0.67 | 0 | 0.46 | 0.4 | 0.4 | 0.51 | 0.2 | DRY |
| 17-Aug-16 | 0.9 | 0.22 | 0.5 | 0.44 | 0.36 | 0.47 | 0.37 | WET |
| 31-Aug-16 | 1.67 | 0.1 | 0.72 | 0.48 | 0.43 | 0.57 | 0.61 | DRY |
| 14-Sep-16 | 1.41 | 0 | 0.67 | 0.41 | 0.38 | 0.62 | 0.43 | DRY |
| 28-Sep-16 | 1.66 | 0.16 | 0.63 | 0.52 | 0.44 | 0.71 | 0.36 | DRY |
| 12-Oct-16 | 2.49 | 0 | 0.71 | 0.45 | 0.36 | 0.72 | 0.26 | DRY |
| 26-Oct-16 | 2.37 | 0 | 0.5 | 0.27 | 0.18 | 0.59 | 0.32 | DRY |
| 9-Nov-16 | 2.01 | 0 | 0.39 | 0.26 | 0.18 | 0.39 | 0.23 | DRY |
| 24-Nov-16 | 1.61 | 0 | 0.4 | 0.46 | 0.42 | 0.41 | 0.65 | WET |
| 7-Dec-16 | 1.82 | 0.25 | 0.45 | 0.43 | 0.44 | 0.56 | 0.56 | DRY |
| 21-Dec-16 | 2.83 | 0.31 | 0.89 | 0.69 | 0.63 | 0.79 | 0.52 | DRY |
| 4-Jan-17 | 3.36 | 3.67 | 1.88 | 0.99 | 0.87 | 1.13 | 1.13 | WET |

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|-----|
| 18-Jan-17 | 2.84 | 1.3 | 1.12 | 0.75 | 0.76 | 0.77 | 1.02 | WET |
| 1-Feb-17 | 2.22 | 1.77 | 1.26 | 0.78 | 0.71 | 0.89 | 0.79 | DRY |
| 15-Feb-17 | 2.2 | 1.49 | 1.36 | 0.75 | 0.67 | 0.82 | 0.75 | DRY |
| 1-Mar-17 | 3.28 | 1.45 | 1.27 | 0.75 | 0.71 | 0.78 | --- | WET |
| 15-Mar-17 | 2.47 | 1.16 | 1.15 | 0.79 | 0.65 | 0.95 | 0.85 | WET |
| 29-Mar-17 | 3.06 | 0.8 | 1.13 | 0.58 | 0.41 | 0.72 | 0.79 | WET |
| Mean | 1.77 | 0.53 | 0.75 | 0.53 | 0.47 | 0.79 | 0.47 | |
| Dry Events (mean) | 1.62 | 0.30 | 0.66 | 0.48 | 0.42 | 0.62 | 0.40 | |
| Wet Events (mean) | 2.29 | 1.09 | 1.00 | 0.67 | 0.58 | 1.16 | 0.75 | |

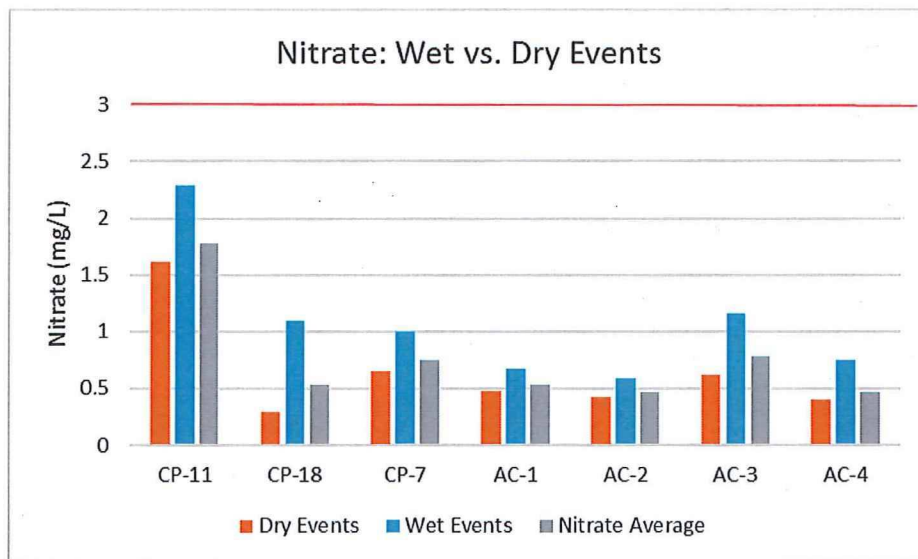


Figure 13: Nitrate at each site wet vs. dry events

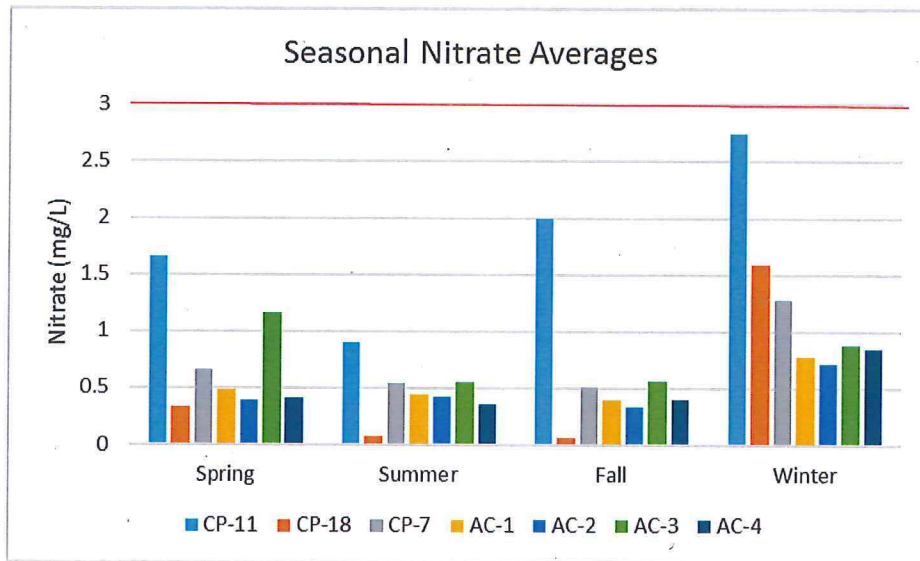


Figure 14: Nitrate Seasonal Averages

Nitrite

Table 15: Results for Nitrite in mg/L

| Dates | CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | |
|-----------|-------|---------|-------|-------|-------|-------|-------|-----|
| 12-Apr-16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY |
| 28-Apr-16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY |
| 11-May-16 | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY |
| 25-May-16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY |
| 16-Jun-16 | 0.28 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | WET |
| 22-Jun-16 | 0.08 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY |
| 6-Jul-16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY |
| 19-Jul-16 | 0.17 | <0.05 | 0.1 | <0.05 | <0.05 | <0.05 | <0.05 | DRY |
| 4-Aug-16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY |
| 17-Aug-16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | WET |
| 31-Aug-16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY |
| 14-Sep-16 | 0.2 | <0.05 | <0.05 | 0.07 | <0.05 | 0.12 | 0.39 | DRY |
| 28-Sep-16 | 0.06 | <0.05 | <0.05 | 0.1 | 0.09 | 0.23 | <0.05 | DRY |
| 12-Oct-16 | 0.19 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY |

| | | | | | | | | |
|-----------|-------|-------|-------|-------|-------|-------|-------|-----|
| 26-Oct-16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.11 | <0.05 | WET |
| 9-Nov-16 | 0.1 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | WET |
| 24-Nov-16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY |
| 7-Dec-16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | WET |
| 21-Dec-16 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | WET |
| 4-Jan-17 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | WET |
| 18-Jan-17 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | WET |
| 1-Feb-17 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY |
| 15-Feb-17 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY |
| 1-Mar-17 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | WET |
| 15-Mar-17 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | WET |
| 29-Mar-17 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | WET |

Nitrite results for routine sample days can be seen in Table 15. Results in red text indicate an exceedance of the objective of 0.06 mg/L. There were fourteen exceedances during the sampling year, falling upon dry days mostly. Six of the fourteen exceedances were in CP-11. All locations routinely reported under the detection limits of equipment used at the Woodward Laboratory. Nitrite does not appear to be a parameter of concern at any location.

Escherichia coli

E.coli results from routine sample days can be seen in Table 16. Results in red text indicate an exceedance of the objective of 100 CFU/100mL. Exceedances were common throughout the sample year. Wet events experienced much higher concentrations at all locations. Site CP-11 once again stands out as the highest contributor of e.coli.

Table 16: results for e.coli in CFU/100mL

| Dates | CP-11 | CP-18.1 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 | |
|-----------|--------|---------|------|------|------|------|------|-----|
| 12-Apr-16 | 80000 | 70 | 10 | 100 | 40 | 160 | 370 | DRY |
| 28-Apr-16 | 162000 | 40 | 20 | 60 | 80 | 50 | 120 | DRY |
| 11-May-16 | 150 | 20 | 390 | 110 | 20 | 100 | 80 | DRY |

| | | | | | | | | |
|-------------------|---------|------|------|------|------|------|------|-----|
| 25-May-16 | 10 | 130 | 240 | 110 | 60 | 80 | 90 | DRY |
| 16-Jun-16 | 1350000 | 170 | 1800 | 3100 | 3300 | 2100 | 880 | WET |
| 22-Jun-16 | 12300 | 320 | 280 | 600 | 370 | 320 | 410 | DRY |
| 6-Jul-16 | 150 | 480 | 440 | 560 | 220 | 110 | 410 | DRY |
| 19-Jul-16 | 510 | 170 | 430 | 820 | 210 | 180 | 430 | DRY |
| 4-Aug-16 | 130 | 550 | 740 | 1300 | 790 | 140 | 110 | DRY |
| 17-Aug-16 | 34000 | 110 | 1200 | 790 | 710 | 520 | 430 | WET |
| 31-Aug-16 | 2200 | 120 | 260 | 420 | 440 | 90 | 560 | DRY |
| 14-Sep-16 | 3400 | 30 | 500 | 390 | 190 | 180 | 1400 | DRY |
| 28-Sep-16 | 39000 | 210 | 1270 | 890 | 680 | 350 | 660 | DRY |
| 12-Oct-16 | 600 | <10 | 210 | 230 | 60 | 570 | 270 | DRY |
| 26-Oct-16 | 3500 | 70 | 580 | 140 | 240 | 180 | 50 | DRY |
| 9-Nov-16 | 640000 | 10 | 380 | 140 | 70 | 30 | 220 | DRY |
| 24-Nov-16 | 132000 | 20 | 330 | 240 | 390 | 80 | 100 | WET |
| 7-Dec-16 | 21600 | 60 | 50 | 90 | 30 | 120 | 60 | DRY |
| 21-Dec-16 | 1100 | <10 | 1100 | 170 | 10 | 370 | 320 | DRY |
| 4-Jan-17 | 5100 | 1900 | 510 | 220 | 120 | 300 | 670 | WET |
| 18-Jan-17 | 13000 | 770 | 230 | 260 | 170 | 340 | 540 | WET |
| 1-Feb-17 | 600 | <10 | 40 | 60 | <10 | 60 | 1610 | DRY |
| 15-Feb-17 | 7000 | <10 | 50 | 90 | 40 | 30 | <10 | DRY |
| 1-Mar-17 | 480000 | 410 | 510 | 520 | 910 | 480 | --- | WET |
| 15-Mar-17 | 80 | <10 | 40 | 20 | <10 | 40 | 120 | WET |
| 29-Mar-17 | 1500 | <10 | 20 | 10 | 10 | 30 | <10 | WET |
| Mean | 5324 | 56 | 252 | 244 | 131 | 160 | 222 | |
| Dry Events (mean) | 3227 | 34 | 228 | 227 | 85 | 141 | 189 | |
| Wet Events (mean) | 19748 | 246 | 276 | 207 | 289 | 218 | 344 | |

Figure 15 attempts to show the relationship between wet event sample days and e.coli concentrations. Most locations experience concentrations above the water quality objective of 100 CFU/100mL for dry and wet sample days. Sites CP-7 in Spencer Creek and AC-1 in Ancaster Creek don't seem to experience much of a difference in concentration between wet and dry events. Sites AC-2, AC-3, AC-4 and CP-18.1 all experience notably higher e.coli concentrations during wet events. Site CP-11 is not shown on figures 15 and 16 due to its much higher concentrations; however it experiences much higher concentrations during wet events. Figure 16 shows the distribution of e.coli throughout the four seasons. Summer appears to be when e.coli concentrations are at their highest at all locations.

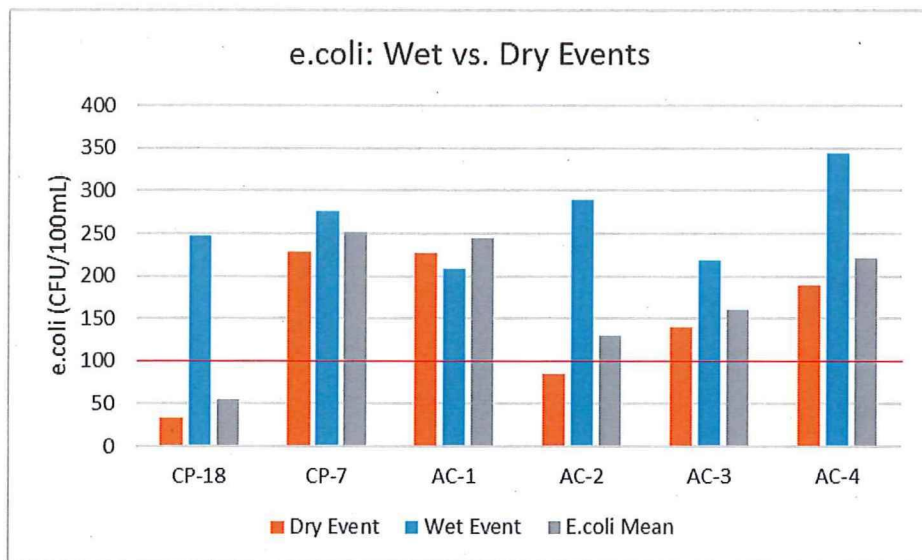


Figure 15: e.coli at each site wet vs. dry events

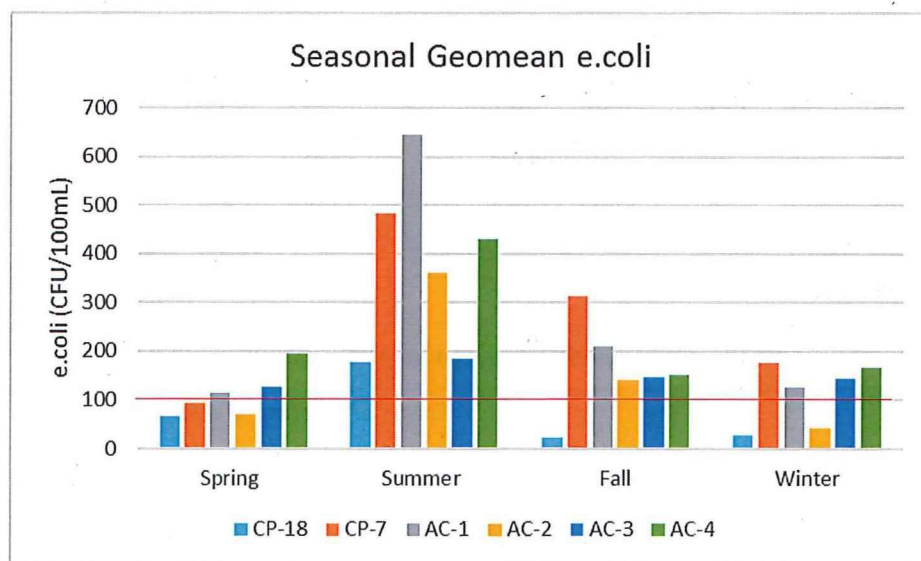


Figure 16: E.coli seasonal average (geomean)

Historical Trends at Locations with Long Term Data Records

Site CP-7 in Spencer Creek

Using a historical record of data obtained from the RBG for sites CP-7, CP-11 and CP-18.1 we are able to plot long-term data to see how TP, TSS and e.coli are trending. Site CP-7 in Spencer Creek is seeing a general downward trend in the three parameters. From 1989 – 2014 the sample season was May – September. In 2015 it was expanded to cover April – November and in 2016, year-round sampling began. The flux in sampling seasons will have an effect on the yearly averages; however it is still beneficial to compare the data in order to determine whether or not we are seeing an overall improvement towards water quality objectives. In the coming years of year-round data recording, we will be able to define with greater confidence which direction the trend is moving. Based on the data available to us today, Figure 17, Figure 18, and Figure 19 indicate that the trend for TP, TSS and e.coli are moving towards objectives.

TOTAL PHOSPHOROUS

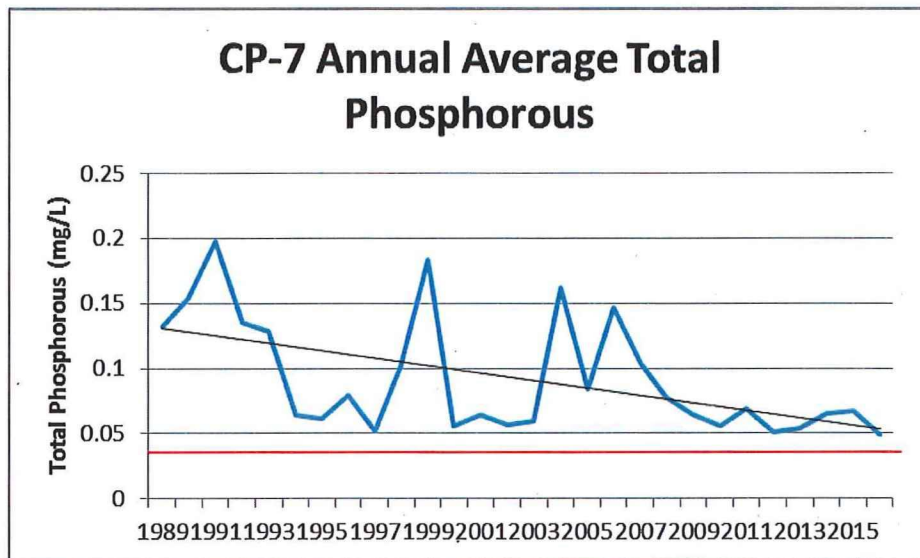


Figure 17: Historical averages for CP-7

TOTAL SUSPENDED SOLIDS

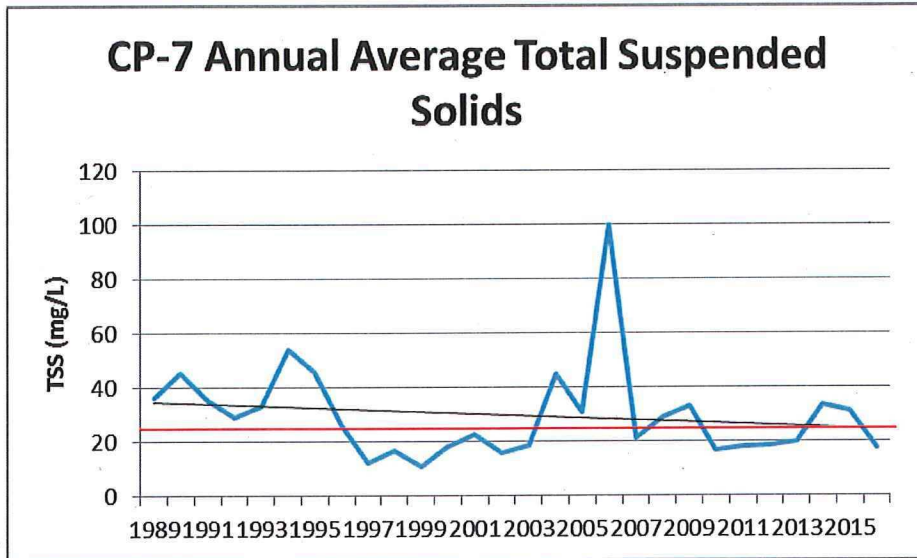


Figure 18: Historical average TSS for CP-7

ESCHERICHIA COLI

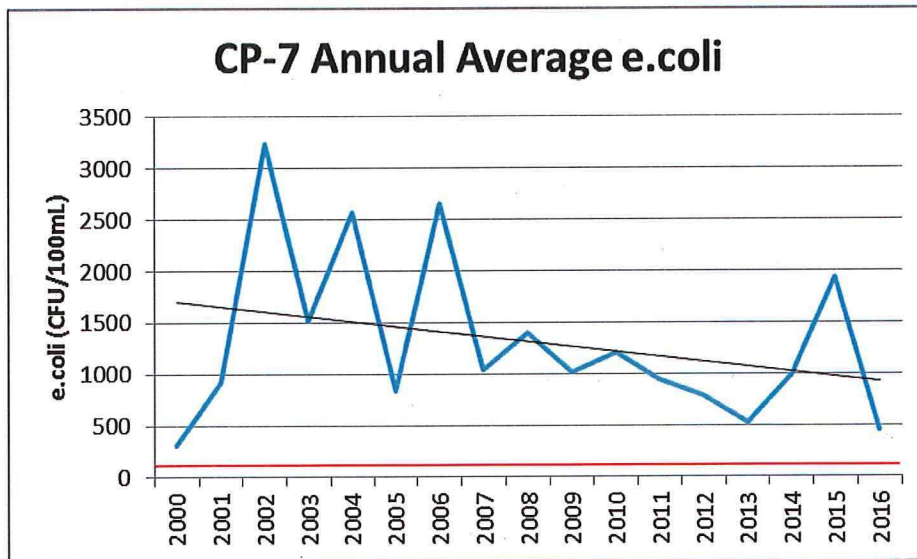


Figure 19: historical average e.coli for CP-7

Site CP-11 in Chedoke Creek

The historical record in site CP-11 in Chedoke Creek for TP and e.coli in Figure 20 and Figure 22 indicate that it is trending further away from the desired objectives. Concentrations of TP and e.coli appear to have risen in 2014, which coincides with the year HCA took over sampling duties for CP-11. Consultation with RBG field staff to confirm sample protocol symmetry will be completed in 2017 to ensure consistency throughout the years. TSS at CP-11 has been trending downwards since 1999, approaching the water quality target of 25 mg/L. TSS at this location are mostly composed of organic solids. The decrease of TSS at CP-11 will contribute to reducing unwanted organic matter entering Cootes Paradise Marsh from Chedoke Creek.

TOTAL PHOSPHOROUS

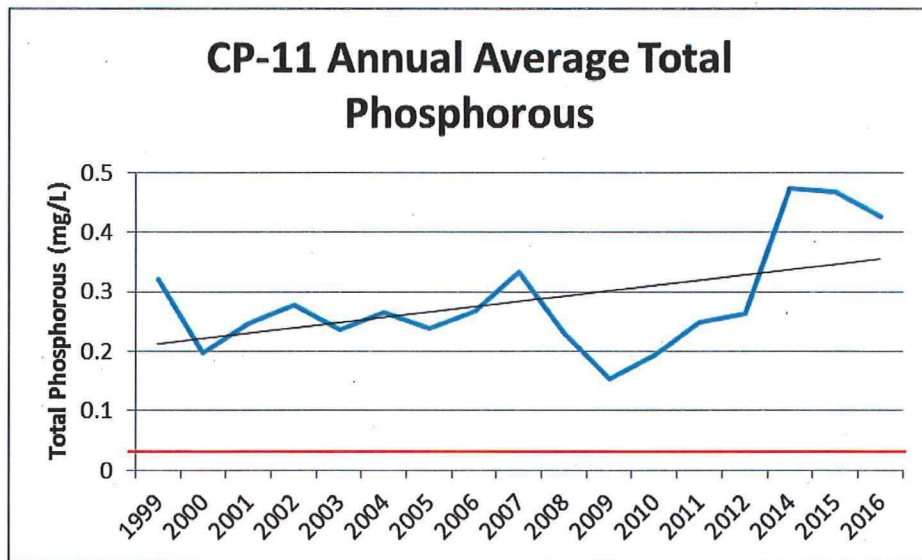


Figure 20: historical average TP for CP-11

TOTAL SUSPENDED SOLIDS

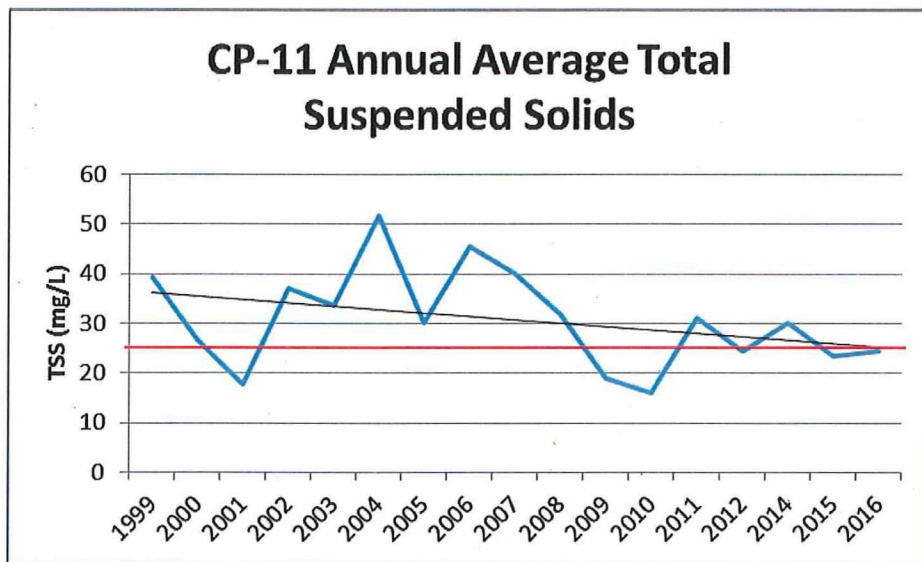


Figure 21: historical average TSS for CP-11

ESCHERICHIA COLI

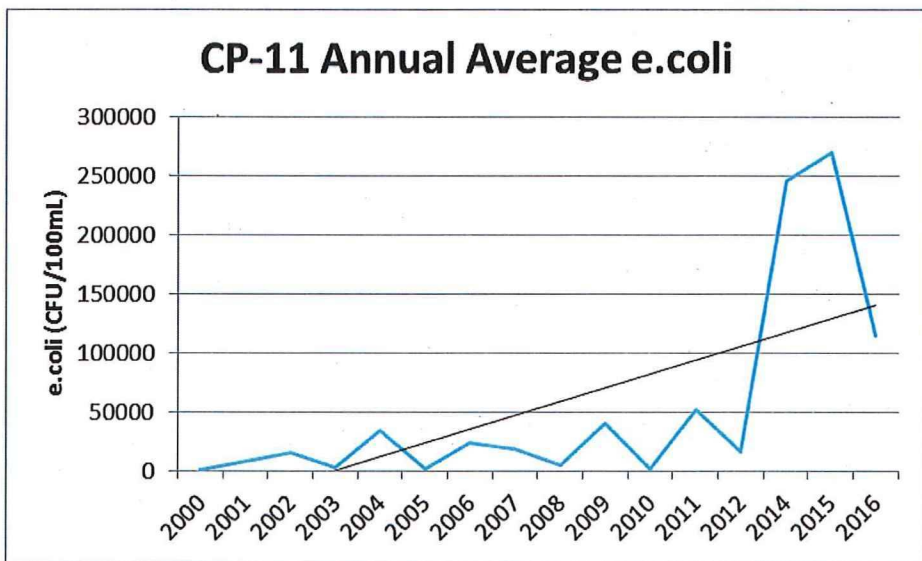


Figure 22: historical average e.coli for CP-11

Site CP-18.1 in Borers Creek

There is a general downward trend for TP, TSS and e.coli at site CP-18.1 in Borers Creek. TP and TSS have risen since sampling season expansion began in 2014, which reflects the higher winter/wet event concentrations discussed earlier in this report. Additional years of sampling through four seasons will give more accurate annual average concentration for TP, TSS and e.coli in Borers Creek.

TOTAL PHOSPHOROUS

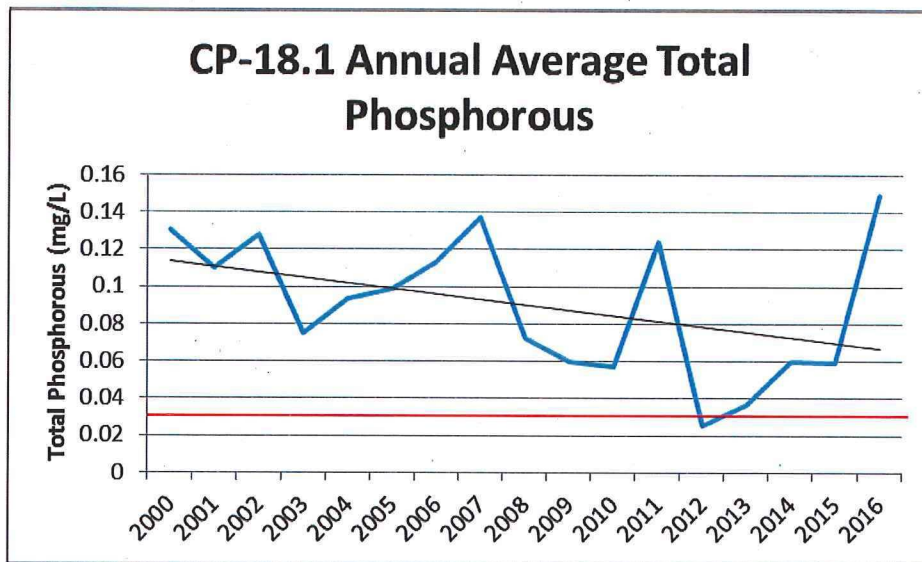


Figure 23: historical average TP in CP-18.1

TOTAL SUSPENDED SOLIDS

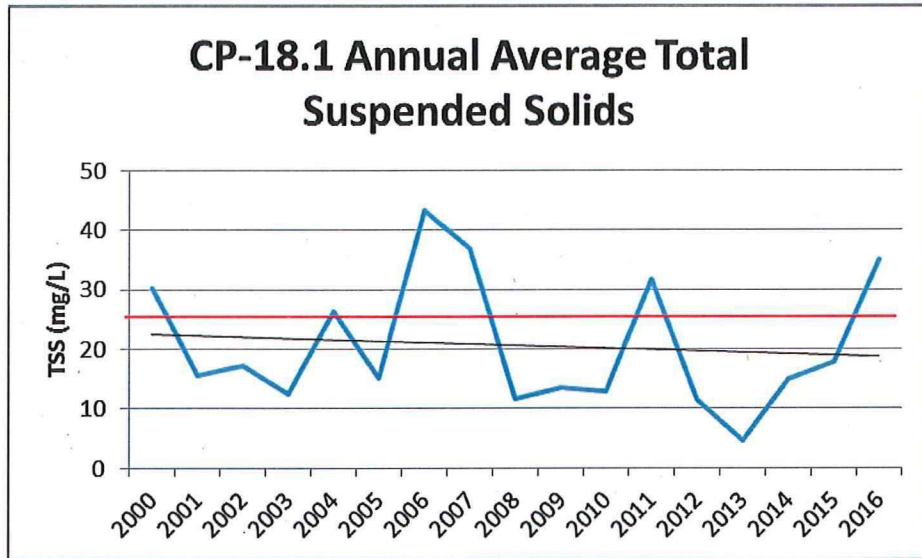


Figure 24: historical average TSS in CP-18.1

ESCHERICHIA COLI

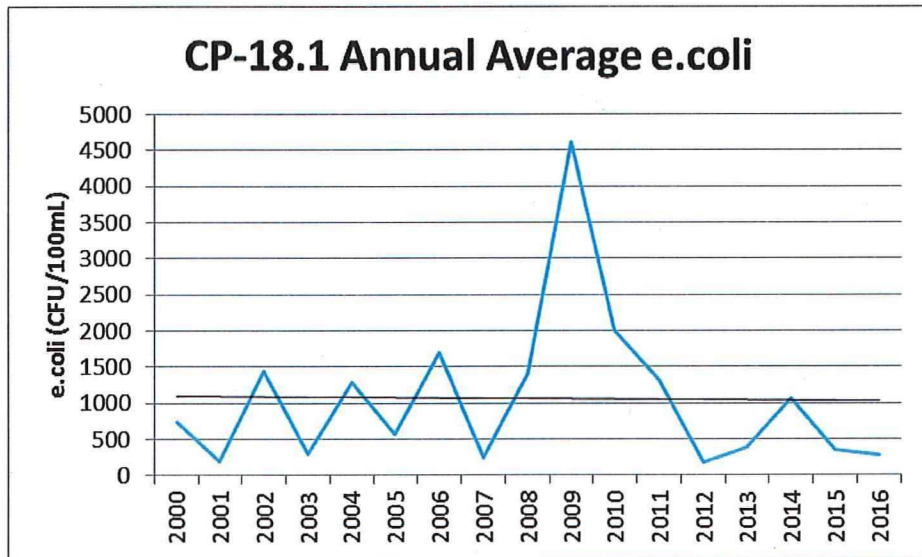


Figure 25: historical average e.coli for CP-18.1

Storm Sample Events

In addition to the routine grab samples detailed above, the sampling program also includes automatic sampling (using an ISCO sampler) of additional significant storm events to get an idea of the impairment to water quality during these events. In 2016, such storm events were sampled at site AC-1.

Most parameters saw a significant increase in average concentrations during the four storm events compared to the annual average; Nitrate is the only parameter to have decreased during storm events. Even when compared to the averages for wet sample days, storm sample events show much higher concentrations in all but Nitrate.

Table 17: Storm event concentrations

| Parameter | 8/17/16 | 8/25/16 | 9/10/16 | 11/03/16 | Storm Event Average | Annual Average (All Samples) | Annual Average (Wet Events) |
|--------------------------------|---------|---------|---------|----------|---------------------|------------------------------|-----------------------------|
| Escherichia coli CFU/100mL | 9200 | 12900 | --- | 1980 | 6170.89 | 244.20 | 207.95 |
| Nitrate as N mg/L | 0.53 | 0.53 | 0.55 | 0.37 | 0.495 | 0.534 | 0.67 |
| Phosphorus Total mg/L | 0.276 | 0.573 | 0.24 | 0.136 | 0.306 | 0.053 | 0.118 |
| Total Suspended Solids mg/L | 212 | 506 | 228 | 114 | 265 | 35.17 | 101.94 |
| Volatile Suspended Solids mg/L | 20.9 | 51.3 | 22 | 9.6 | 25.95 | 4.61 | 8.17 |

Discussion Summary

Data collected for this report in the 2016/2017 year-round sampling program has provided more insight into the overall water quality contributions entering Cootes Paradise. Expanding the sampling season to year-round has shown that sediment, e.coli and nutrient loading during winter and wet events is possibly quite elevated compared to other seasons and dry events.

Site CP-11 in Chedoke Creek is still the most impaired site. Interestingly, wet events at CP-11 seemed to have a dilution effect to TP, TSS and VSS. Background concentrations during normal, dry conditions are above target objectives for all parameters except for Nitrogen compounds.

All sample locations had an overall mean TP concentration higher than the target of 0.03mg/L. Apart from CP-11, all sample locations experienced higher TP during wet events. This correlates with higher TSS concentrations at these locations during wet events. Sites AC-1 and AC-2 in Ancaster and Sulphur Creek have substantially higher concentrations of TSS than the other locations. AC-1 and AC-2

experience a lot of sediment displacement during wet events. During dry conditions, the AC sites are in generally good water quality in terms of nutrients, sediment and bacteria.

Site CP-7 in Spencer Creek has fairly good water quality during dry conditions with all parameters except e.coli reporting below target objectives. This site shows significant impairment to TP and TSS during wet events. E.coli is above the target objective, yet is not high enough to be concerned with sewage contamination at this location.

Site CP-18.1 in Borers Creek was similar to CP-7 in terms of seeing the same exceedances during wet and dry events. Under dry conditions, this location is regularly reports under target objectives for all parameters sampled.

Unionized ammonia, nitrate, nitrite and ortho-phosphate were all found to have a low impact on water quality at all sample locations. Site CP-11 did experience a 33% exceedance rate for unionized ammonia, however mean concentrations for wet and dry events are below the target objective of 0.02 mg/L.

Site CP-11 in Chedoke Creek is by far the most impacted of the sample locations. The downstream proximity to a combined sewer overflow location, which discharges raw sewage into the creek during some high flow events, as well as the concrete and culverted nature of the creek are likely reasons that this location is experiencing poor water quality. E.coli, total phosphorous, unionized ammonia and nitrite were much higher at CP-11 than at all other locations.

Total phosphorous at the AC locations in the Ancaster Creek watershed have been at or just below the target objective of 0.03 mg/L during dry events since sampling began in 2014. Site AC-4 experiences some higher concentrations, however the discharge compared to all other locations is much smaller. These locations have shown to be more susceptible to high TP and TSS concentrations during wet events since sampling began.

Site AC-1 has a higher average TP and TSS concentrations than CP-7 for dry and wet event days, and is about 500 meters upstream. This may imply that the TP concentration coming from Ancaster Creek is being diluted once it merges with Spencer Creek. Data from 2014 & 2015 supports this finding as well.

Some wet events had a greater impact on water quality than others, and storm events had an even greater impact than most wet events. This seems to indicate that storm intensity can greatly affect the amount of sediments and nutrients being transported downstream. The sample event on March 1, 2017 took place during heavy rain and results seem to indicate that water quality is most affected during the higher intensity periods of a storm.

Historical data depicted in Figures 17 – 25 seem to indicate we are headed in the right direction to obtaining our target objectives at CP-7 and CP-18.1. More year-round sampling and delineation between wet and dry sample events will give a better idea as to where and when the water quality is most affected.

An important change in sampling protocol made in 2016 was to expand the sampling season from April – November (as it was in 2015) to year-round sampling, covering from April 2016 – March 2017. This allowed for a full year spectrum of water quality data to be obtained for the first time, as well as have a look at how winter conditions can affect the marsh. Winter sampling ended up resulting in more wet sample days, which came along with elevated concentrations of all water quality parameters tested (except CP-11 as mentioned earlier).

2016 was a drought year with very little rainfall during spring, summer and fall. This made capturing storm events difficult. The automated sampler at AC-1 only captured four storm event samples successfully. Problems with suction in the early stages of the sample season negated some sampling attempts. The four storm event samples collected at this location indicate that Total Phosphorous, Total Suspended Solids and e.coli concentrations are much higher during storm events. More data is essential to be able to analyze the magnitude in which Ancaster Creek is being impaired and the amount of sediments and nutrients that are being displaced during storm events.

Changes in sampling period over the past 3 years could account for some of the changes we are seeing in water quality. It is clear that wet sample days are higher in concentration at most locations (CP-11 aside), and samples taken during wet events has steadily gone up over the years (one in 2014, five in 2015 and eight in 2016/17). It is important to distinguish between wet and dry sample events, as wet conditions impairs water quality to a much higher degree than dry conditions. More year-round data and comparison of wet vs. wet and dry vs. dry events over the years will give a better idea as to how the overall water quality is doing, and which way it is actually trending.

Table 18 depicts the average concentrations for dry, wet and annual average concentration for TP, TSS, Nitrate and e.coli at all locations. This is comparing data on defined wet and dry events is an important comparison, giving better insight to the overall water quality and impacts of wet conditions to different locations.

Table 18: Dry, wet, and annual average concentrations at all locations

| Parameter | Dry or Wet Event | Average Concentration | | | | | | |
|----------------|-------------------|-----------------------|-------|-------|--------|-------|-------|-------|
| | | CP-11 | CP-18 | CP-7 | AC-1 | AC-2 | AC-3 | AC-4 |
| TP (mg/L) | Dry (18 events) | 0.455 | 0.041 | 0.028 | 0.024 | 0.018 | 0.021 | 0.036 |
| | Wet (8 events) | 0.361 | 0.15 | 0.096 | 0.118 | 0.171 | 0.059 | 0.043 |
| | Total (26 Events) | 0.426 | 0.075 | 0.049 | 0.053 | 0.065 | 0.032 | 0.038 |
| TSS (mg/L) | Dry (18 events) | 25.14 | 6.51 | 6.83 | 5.5 | 9.03 | 7.28 | 5.73 |
| | Wet (8 events) | 19.24 | 58.17 | 38.09 | 101.94 | 172.5 | 34.48 | 9.59 |
| | Total (26 Events) | 23.49 | 20.98 | 16.45 | 35.17 | 59.33 | 15.65 | 6.81 |
| Nitrate (mg/L) | Dry (18 events) | 1.62 | 0.296 | 0.656 | 0.477 | 0.422 | 0.617 | 0.401 |
| | Wet (8 events) | 2.29 | 1.09 | 1.00 | 0.670 | 0.584 | 1.16 | 0.747 |
| | Total (26 Events) | 1.77 | 0.531 | 0.748 | 0.534 | 0.467 | 0.786 | 0.470 |

| | | | | | | | | |
|-------------------------|-------------------|----------|--------|--------|--------|--------|--------|--------|
| E Coli (CFU / 100mL) | Dry (18 events) | 3226.73 | 33.64 | 228.34 | 227.46 | 85.33 | 140.54 | 188.78 |
| | Wet (8 events) | 19748.78 | 246.50 | 276.45 | 207.95 | 289.31 | 218.17 | 343.51 |
| | Total (26 Events) | 5324.47 | 55.55 | 251.70 | 244.20 | 130.59 | 160.43 | 221.68 |

Future Planned Monitoring Activities

For the 2017/2018 sample season, year-round monitoring is to continue as well as storm event sampling. Two new storm event sampling stations have been installed for 2017/18 on Spencer Creek. ISCO automated samplers have been set-up on Spencer Creek at Highway 5 in Greensville and further downstream on Market Street in Dundas. These locations will operate in the same way that the AC-1 sample location operated in 2015, with the added benefit of being located close to Water Survey of Canada hydrological monitoring stations. The samplers being located in proximity to these gauging stations will make it easier to prepare flow-weighted composite samples using the data obtained from the loggers within the gauge. The HCA will attempt to capture ten storm events this upcoming sample season at each of the three storm sampling locations. The data obtained from these storm events will provide insight to the storm event contributions coming from Spencer Creek in different land use areas. Spencer Creek at Highway 5 is mostly agricultural land use, whereas Spencer Creek at Market Street is residential. Further to these locations, the HCA expects to install a fourth storm event sampling location further upstream on Ancaster Creek at Rosseau Street. This location is upstream of the floodplain/valley lands in which AC-2, AC-3 and AC-4 are located. This will provide valuable insight as to the water quality conditions before Ancaster Creek flows down the escarpment and into the forested floodplain. The area is mostly residential land use, with some agricultural in the head waters as well as a golf course. It will be interesting to see if the water quality is improved or impaired by the floodplain and the erosion that happens therein.

Further breakdown of analysis on wet and dry days is to be completed for the 2017/2018 report. Categorizing historical data into wet and dry days, then comparing those days to one another over the years will give a better idea of water quality during different conditions. Data suggests that water quality on dry days and wet days is quite different, therefore it would be beneficial to separate the two event classifications for better comparison and understanding of historical trends. In addition to this, wet event and storm event intensity will be defined to better understand how higher intensity events affect water quality impairment. A 5 mm rainfall event vs. a 50 mm rainfall event may have very different outcomes on water quality, and understanding how rainfall intensity/duration may affect different watercourses will give better insight as to when and how sediments and nutrients are being transported through the creeks and tributaries into Cootes Paradise Marsh.



WATERSHED PLANNING
& ENGINEERING

January 2019

2017/2018 TRIBUTARY MONITORING FOR COOTES PARADISE

To support the Hamilton Harbour Remedial Action
Plan



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1. Background

This monitoring program aims to understand water quality contributions from creeks flowing into Cootes Paradise Marsh and ultimately, Hamilton Harbour. Establishing non-point sources of water quality inputs to the marsh, such as contributions from creeks and tributaries, is an important step in reaching the delisting objectives at a representative station located in the marsh. Once the relative sources of inputs are assessed, any needed remedial efforts in these tributaries that support delisting Hamilton Harbour can be determined.

The Hamilton Conservation Authority (HCA) has been involved with this water quality monitoring program in partnership with the Hamilton Harbour Remedial Action Plan (HHRAP), Ministry of the Environment, Conservation and Parks (MECP), and the City of Hamilton since spring of 2014. The monitoring program has been adapted from a previous sampling program undertaken by the Royal Botanical Gardens (RBG).

This program aims to explore water quality conditions in the sub-watersheds of Lower Spencer Creek, Chedoke Creek, Borers Creek, Ancaster Creek, and Sulphur Creek; their drainage areas can be seen on Figure 1-1.

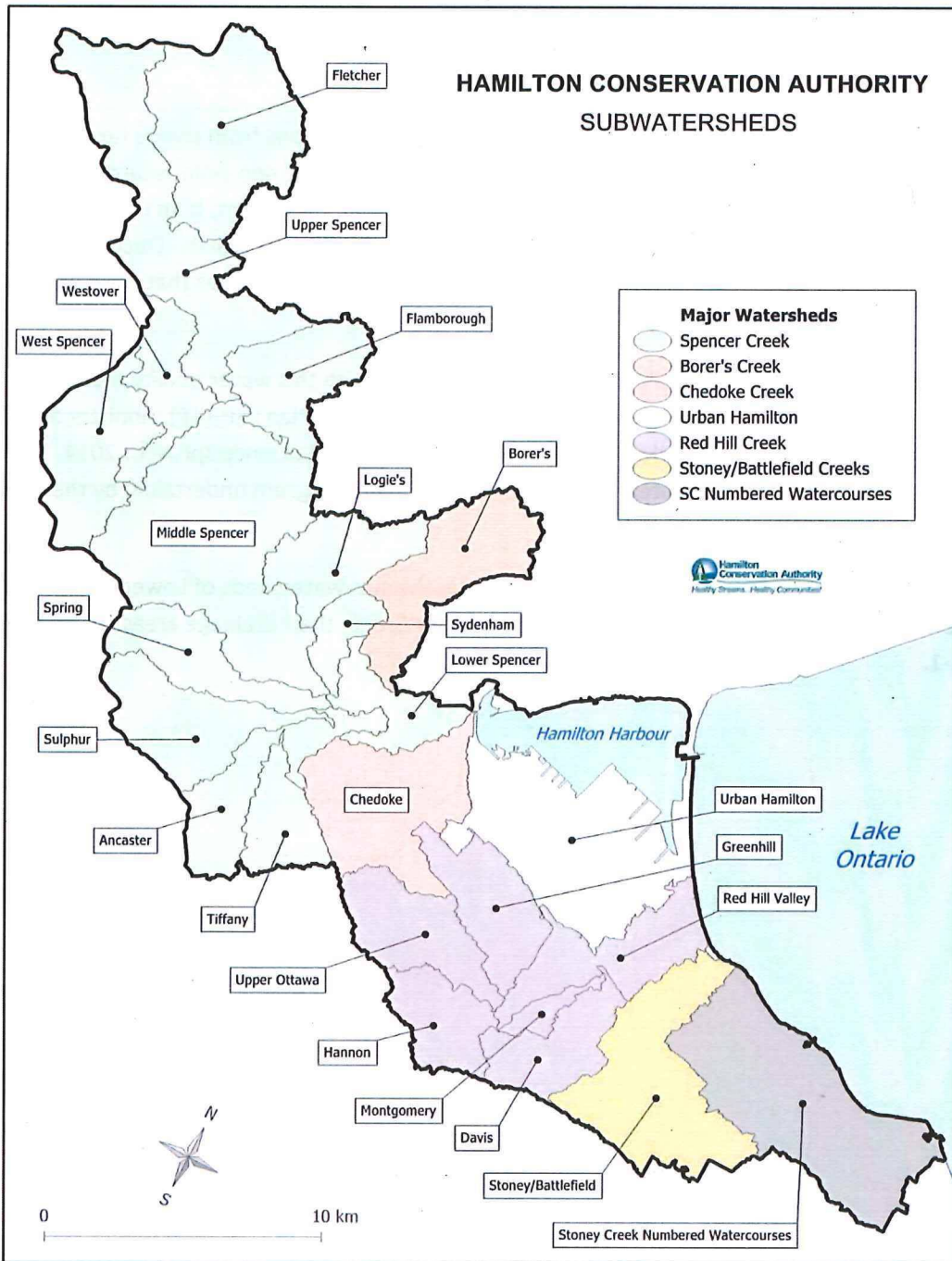


Figure 1-1: Hamilton Subwatersheds Surrounding Hamilton Harbour

2. Water Quality Monitoring Program

2.1 Program Objective

The project objective is to identify important contributions, as well as trends in contributions, to Cootes Paradise water quality from the creeks discharging into the marsh. This will also provide information to support where mitigation activities can best be applied to benefit the overall water quality within Cootes Paradise. As well, as part of a separate project for the Hamilton Harbour Remedial Action Plan (HHRAP), a nutrient loadings model is being developed for Cootes Paradise by the University of Toronto. This model could benefit from data collected by this monitoring program. The data will be shared with the Hamilton Harbour Remedial Action Plan office and/or technical committees associated with the HHRAP.

2.2 Previous Program Development

HCA assumed sampling responsibilities from RBG for the Lower Spencer Creek, Chedoke Creek, and Borers Creek grab sampling sites, to continue long term data analysis for these locations. These sites are known as CP-7, CP-11, and CP-18.1 (See Figure 2-1) and are located immediately upstream of the locations where they drain into the Cootes Paradise Marsh.

In addition, in 2014 the monitoring program was expanded to include four new grab sample sites to help characterize the water quality contributions coming from the Ancaster Creek sub-watershed (AC-1, AC-2, AC-3, and AC-4), which has relatively little water quality and flow data near the lower reaches of the sub-watershed boundaries.

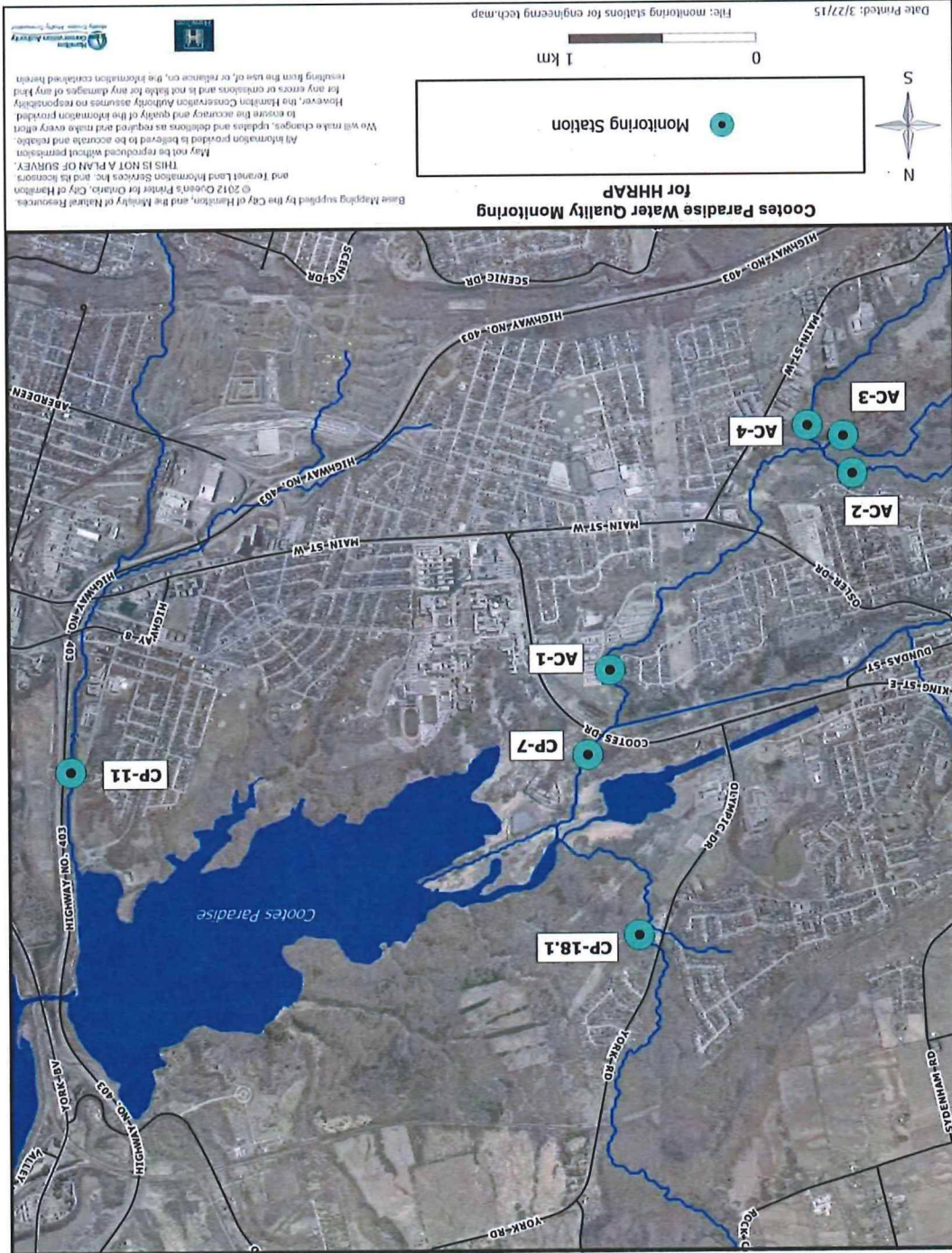
In 2015, the monitoring program was further expanded to include an automated storm event sample site AC-1, using an ISCO automated composite sampler. However, storm event sampling at AC-1 was not undertaken in the winter months.

In 2016 the sampling period was lengthened to be year-round at all seven stations. Year round monitoring allowed for an enhanced view of water quality conditions throughout a wide variety of climate conditions.

2.3 Changes to the Water Quality Monitoring Program in 2017/18

Two more automated storm event sample sites were added by April 2017 (in Spencer Creek at Highway 5 and Spencer Creek at Market Street). In addition, a fourth automated storm event sample site was installed in November 2017 (in Ancaster Creek at Rousseaux Street). See Figure 2-2 for locations of the four automated storm event sample sites. Expanding storm event sampling will deepen the understanding of how land uses and conditions affect water quality during storm events.

Figure 2-1: Water Quality Sampling Locations



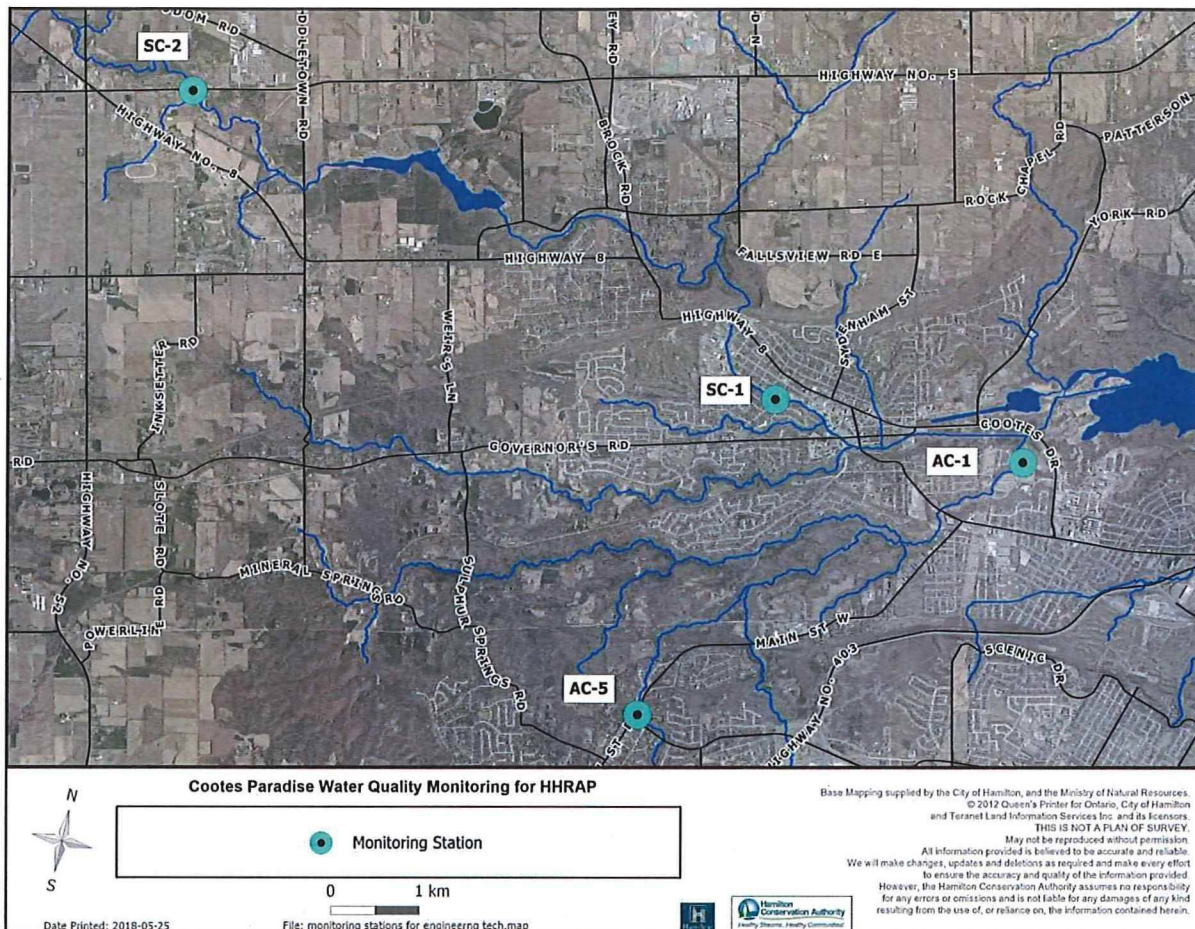


Figure 2-2: Automated Sampler Sites.

2.4 Description of Grab Sample Locations

Site AC-1 is on the main branch of Ancaster Creek just upstream of the confluence with Spencer Creek. This location is ideal to capture the nutrient and sediment contributions from the Ancaster Creek sub-watershed and its tributaries before entering Spencer Creek. Predominant land uses for the Ancaster Creek sub-watershed are residential, woodland with some light agricultural in the headwaters.

Site AC-2 is located on Sulphur Creek before the confluence with Ancaster Creek. Main land uses for the Sulphur Creek sub-watershed are woodland and residential with some agricultural in the upper headwaters.

Site AC-3 is located on the main branch of Ancaster Creek upstream of the confluence with Sulphur Creek.

Site AC-4 is located on an unnamed watercourse just upstream of the confluence with Ancaster Creek and has a relatively small drainage area which is mainly residential.

Site CP-7 is located on Lower Spencer Creek and is aimed at capturing inputs from the entire Spencer Creek Watershed and its tributaries including Ancaster Creek. Its dominant land uses are agricultural in the upper and middle reaches and residential in the lower reach below the escarpment.

Site CP-11 is located on Chedoke Creek before it drains in-to Cootes Paradise marsh. The Chedoke Creek sub-watershed is mostly residential land use with some industrial and a municipal golf course. Long reaches of the creek are piped and culverted with virtually no naturalized habitat.

Site CP-18.1 is located on Borers Creek just downstream of York Road in Dundas, upstream of the confluence with Spencer Creek. The Borers Creek sub-watershed dominant land uses are agricultural and residential.

2.5 Description of Automated Storm Event Sample Locations

Site AC-1 is on the main branch of Ancaster Creek just upstream of the confluence with Spencer Creek. This site is located at the same place bi-weekly grab samples are retrieved. Level weighted composite samples are made using a depth logger attached to the intake of the ISCO sampler. Difficulties obtaining reliable data from the ISCO Bubbler Flow Module prevented the continuous monitoring of flows throughout the sample period; however a depth logger was installed at the intake in place of the bubbler. Maintenance will be conducted to the intake and bubbler unit in 2018 in order to ensure the quality and accuracy of data and samples collected. At various points throughout the sample season, flows are manually measured at site AC-1 using a Marsh McBirney flow meter in order to establish a rating curve to estimate flows and thus loadings coming from Ancaster Creek before the confluence with Spencer Creek.

Site AC-5 is located on Ancaster Creek at the corner of Rousseaux Street and Wilson Street and is the furthest upstream site on Ancaster Creek. Land uses upstream of this site are residential, woodland, a golf course, and some light agricultural at the headwaters. Discharge weighted composite samples are made using data obtained from the Water Survey of Canada (WSC) gauge located at this site which provides water level data and a rating curve to determine discharge. This site is ideal to capture nutrients and sediments near the headwaters of Ancaster Creek, before other tributaries enter further downstream.

Site SC-1 is located on Spencer Creek at Market Street, downstream of the escarpment. Land uses upstream of this site include residential, industrial – aggregate mining, agricultural, and natural conservation land. This site is beneficial in capturing nutrient and sediment data from Spencer Creek downstream of the various tributaries which combine with the creek as it flows down the escarpment and before it receives inputs from the more urban tributaries that enter further downstream. Discharge

weighted composite samples are made using data obtained for the WSC gauge that is also located at this site.

Site SC-2 is located on Spencer Creek at Highway 5 above the escarpment and upstream of SC-1. A WSC gauge is also located at this site and is used to develop discharge weighted composite samples for each event. The main land uses upstream of this site are rural residential, agricultural, and natural forested and wetland areas. Samples obtained at this site are beneficial in capturing runoff inputs from mainly agricultural land uses before the creek enters more urban development downstream.

2.6 Sampling Methodology

The 2017 water quality grab sample monitoring program occurred on alternate weeks from April 2017 to March 2018. Surface grab samples were taken during daylight hours with same day drop off for analysis at the City of Hamilton Regional Environmental Lab. Levels of phosphorus, *E. coli*, various nitrogen compounds, and suspended solids were measured. In addition, temperature, pH, conductivity, turbidity, and dissolved oxygen are measured on site by HCA staff at each sample site using a YSI 6600. A visual inspection of storm water outfalls in the area will also be completed if storm water conditions are suspected.

Chlorophyll-a is measured in an accredited laboratory once every three years (samples in 2013 and 2016 were analyzed for Chlorophyll-a). Chlorophyll-a is next scheduled to be measured in 2019.

Once lab analysis results are provided and reviewed, all individual grab samples with concentrations exceeding the water quality objectives are identified (for each sample location and each water quality parameter). Grab samples impacted by storm water conditions (wet events) are determined by reviewing precipitation data recorded at the Environment Canada precipitation monitoring station at Hamilton Airport Climate ID 6153193. If more than 4 mm of rainfall occurs within the 24 hours prior to sampling, that sample is classified as a wet event sample, while all other samples are classified as a dry event or baseflow sample.

Annual and seasonal average overall grab sample concentrations are identified (for each sample location and each water quality parameter). Also, these average concentrations are further analyzed to determine the annual and seasonal average sample concentrations for wet events and dry events.

Furthermore, long-term trends in the overall, wet event and baseflow (dry) average grab sample concentration are determined (for each sample location and each water quality parameter).

The four automated storm event sample locations capture water quality information specifically during storm events. The ISCO automated sampler is triggered prior to a storm event to take a 1 L sample every hour from the time of initiation. With 24 sample bottles in the ISCO carousel, it will be possible to capture a 24 hour time period of the storm and its effect on the water quality at each watercourse site. A level or discharge weighted composite sample is obtained.

2.7 Water Quality Objectives

Samples were analyzed for the water quality parameters listed in Table 2-1. Objectives to ensure that water quality is satisfactory for aquatic life were based on Provincial Water Quality Objectives (PWQO, MOE 1999), Canadian Water Quality Guidelines (CWQG) outlined by the Canadian Council of Ministers of the Environment (2001) and HHRAP interim water quality objective (RAP office 2012). A description of each parameter is provided below.

Table 2-1: Water quality parameters and their desired objective

| Parameter | Units | Target/Objective | Reference |
|---------------------------|-----------|------------------|------------|
| Unionized Ammonia | mg/L | 0.02 mg/L | HHRAP/PWQO |
| Nitrate as N | mg/L | 3 mg/L | CWQG |
| Nitrite as N | mg/L | 0.06 mg/L | CWQG |
| o-Phosphate as P | mg/L | n/a | |
| Total Phosphorous | mg/L | 0.03 mg/L | PWQO |
| Total Suspended Solids | mg/L | 25 mg/L | HHRAP |
| Volatile Suspended Solids | mg/L | n/a | |
| Escherichia coli | CFU/100mL | 100 CFU/100mL | PWQO |

Total Phosphorous

Total Phosphorous (TP) is commonly found in fertilizers, manure and organic wastes in sewage and industrial effluent. It is an essential nutrient for aquatic plants, but in excess can cause eutrophication and algae blooms. Soil erosion is a main contributor of TP in surface waters, as phosphorous tends to attach to soil particles.

Unionized Ammonia

Ammonia is the preferred nitrogen containing nutrient for plant growth, yet it can also cause algal blooms and can be acutely toxic to fish in high concentrations. In water, ammonia occurs in two forms; ionized and unionized ammonia. This difference is important to know because NH_3 , un-ionized ammonia, is the form more toxic to fish. Both water temperature and pH control which form of ammonia is predominant at any given time in an aquatic system.

Nitrate

Nitrates are an essential nutrient for regulating plant life but can cause degraded water quality in excess concentrations. The target concentration for nitrates in this study is based on the Canadian Water

Quality Guideline (CWQG) of 3.0_mg/L of nitrate as N. Typically nitrate concentrations tend to be low during base-flow conditions; however runoff from fertilizer, waste water treatment plants, and storm sewer outfalls can bring the concentration of nitrates up to and beyond the target for water quality.

Nitrite

For this study, we've adopted the Canadian Water Quality Guideline (CWQG) target of 0.06_mg/L as N.

Total Suspended Solids

Targeted concentrations of Total Suspended Solids (TSS) vary depending on the system being monitored. TSS thresholds are established by understanding the underlying background levels of a site which may or may not have clear flow during base-flow conditions. Storm events move sediment downstream and therefore TSS values are expected to be much higher during these events. Since background levels of TSS is unavailable for the majority of the sites sampled, the Hamilton Harbour Remedial Action Plan interim target of 25 mg/L was used as the target for TSS (RAP office 2012).

Volatile Suspended Solids

Volatile Suspended Solids (VSS) represent the organic portion of TSS. There is no current target set for Volatile Suspended Solids for the HHRAP or PWQO's. However understanding the make-up of solids (organic vs. inorganic) can help us in determining appropriate remedial actions.

Escherichia coli

E. coli is well known to have harmful effects on human health when found in the environment at certain concentrations. There are strict guidelines for *E. coli* targets for drinking and recreational purposes. Since there is little to no background data for the majority of the sites, we will be comparing the geometric mean concentration from each site to the PWQO of 100_CFU/100_mL (MOE 1999), the target for recreational purposes.

2.8 Adopted Analysis Seasons

For analysis, HCA has adopted the following start and end dates for the four seasons.

Table 2-2: HCA Adopted Seasons

| Season | Start Date | End Date |
|--------|----------------------|---------------------|
| Spring | Middle of March | End of June |
| Summer | Beginning of July | Middle of September |
| Fall | Middle of September | End of December |
| Winter | Beginning of January | Middle of March |

3. 2017-2018 Water Quality Results – Grab Samples

The sampling period reported in this document covers April 2017 – March 2018. A total of 26 biweekly grab samples were taken at each location. Due to the timing of rain events and the set schedule, 5 out of 26 samples (19%) were taken during wet event conditions.

3.1 Rainfall Data

Table 3.1-1 displays the 2017/2018 grab sample days, the previous 24 hour rainfall amounts, and whether or not the grab sample was classified as wet event or dry event (baseflows).

Table 3.1-1: Rainfall totals on grab sample dates at all sampling locations in 2017/18

| Dates | Previous 24 hr. Rainfall (mm) | Classification |
|--------------------|-------------------------------|----------------|
| April 12, 2017 | 2.2 | DRY |
| April 27, 2017 | 2.2 | DRY |
| May 11, 2017 | 0 | DRY |
| May 24, 2017 | 7.4 | WET |
| June 7, 2017 | 11.4 | WET |
| June 21, 2017 | 2.4 | DRY |
| July 5, 2017 | 0 | DRY |
| July 19, 2017 | 0 | DRY |
| July 27, 2017 | 15.2 | WET |
| August 16, 2017 | 2.2 | DRY |
| August 30, 2017 | 0 | DRY |
| September 15, 2017 | 0 | DRY |
| September 27, 2017 | 1 | DRY |
| October 11, 2017 | 7.4 | WET |
| October 25, 2017 | 6.2 | WET |
| November 8, 2017 | 0 | DRY |
| November 22, 2017 | 0 | DRY |
| December 6, 2017 | 0 | DRY |
| December 20, 2017 | 0 | DRY |
| January 3, 2018 | 0 | DRY |
| January 17, 2018 | 0.2 | DRY |
| February 13, 2018 | 0 | DRY |
| February 14, 2018 | 0 | DRY |
| February 28, 2018 | 0 | DRY |
| March 14, 2018 | 0 | DRY |
| March 28, 2018 | 3.6 | DRY |

3.2 Total Phosphorus

Total Phosphorus (TP) grab sample concentrations for the 2017/18 season are summarized in Table 3.2-1. Results in red text indicate an exceedance of the PWQO of 0.03 mg/L.

Table 3.2-2 lists the proportion of the grab samples that exceeded the PWQO for each site, broken down individually for wet event samples, dry event samples, and all samples. For example, for AC-2, 19.0% of dry event grab samples exceeded 0.03 mg/L.

Elevated TP concentrations were observed at all sites, indicating TP impairment throughout the watershed. Exceedances were common throughout the sampling year. CP-11 experienced very high TP concentrations, with all of the grab samples significantly exceeding the PWQO. Site AC-4, a creek with less flow than the other locations which feeds into Ancaster Creek, routinely exceeds the PWQO as well. The other Ancaster sites, AC-1, AC-2, and AC-3 experience lower TP concentrations and exceedances, with total exceedances of 31%, 23.1%, and 38.5% respectively. CP-7 and CP-18.1 had TP concentrations that exceed the objective for over half of the total grab samples collected (64% and 73% respectively). Site AC-2 had the best water quality out of all locations; this particular sample site is located within a vegetated floodplain.

At individual sites, samples taken during wet events tended to have concentrations exceeding the PWQO more often than dry event (baseflow) samples. This is expected to be due to increased surface runoff and surface / channel erosion during wet events contributing to elevated amounts of TP in the creeks. The exceptions were CP-11 and CP-18.1, where the wet event and dry event exceedances of the PWQO were similar. The greatest difference in the proportion of wet event versus dry event grab samples that exceeded the objective was at AC-1 and AC-3, where 80% of wet event samples exceeded but only 19 to 29 % of dry event samples exceeded the objective. Also, of the total samples collected across all the sites during the 5 wet events, 82.9% exceeded the PWQO; whereas of all the samples collected at all the sites during the 21 dry events, 47.2% exceeded the objective.

Table 3.2-1: Total Phosphorus Concentrations (mg/L) for Grab Samples

| Dates | AC-1 Ancaster Ck upstream of Spencer Ck | AC-2 Sulphur Ck | AC-3 Ancaster Ck upstream of Sulphur Ck | AC-4 unnamed trib. of Ancaster Ck | CP-7 Spencer Ck | CP-11 Chedoke Ck | CP-18.1 Borers Ck | Classification | 24 hr. Precip. (mm) |
|----------------------|--|-----------------------|--|---|-----------------------|------------------------|----------------------|----------------|---------------------------|
| 4/12/2017 | 0.023 | 0.026 | 0.021 | 0.025 | 0.042 | 1.050 | 0.035 | DRY | 2.2 |
| 4/27/2017 | 0.015 | 0.021 | 0.015 | 0.024 | 0.029 | 0.130 | 0.023 | DRY | 2.2 |
| 5/11/2017 | 0.018 | 0.029 | 0.016 | 0.021 | 0.028 | 0.294 | 0.022 | DRY | 0 |
| 5/24/2017 | 0.014 | 0.028 | 0.024 | 0.047 | 0.024 | 0.283 | 0.028 | WET | 7.4 |
| 6/7/2017 | 0.032 | 0.025 | 0.040 | 0.032 | 0.040 | 0.454 | 0.063 | WET | 11.4 |
| 6/21/2017 | 0.121 | 0.130 | 0.064 | 0.063 | 0.069 | 0.293 | 0.074 | DRY | 2.4 |
| 7/5/2017 | 0.040 | 0.048 | 0.049 | 0.046 | 0.044 | 0.466 | 0.042 | DRY | 0 |
| 7/19/2017 | 0.045 | 0.044 | 0.038 | 0.065 | 0.057 | 0.359 | 0.037 | DRY | 0 |
| 7/27/2017 | 0.047 | 0.040 | 0.039 | 0.044 | 0.054 | 0.484 | 0.040 | WET | 15.2 |
| 8/16/2017 | 0.025 | 0.015 | 0.028 | 0.028 | 0.057 | 0.540 | 0.044 | DRY | 2.2 |
| 8/30/2017 | 0.016 | 0.022 | 0.024 | 0.032 | 0.036 | 0.630 | 0.046 | DRY | 0 |
| 9/15/2017 | 0.024 | 0.020 | 0.028 | 0.042 | 0.050 | 0.740 | 0.047 | DRY | 0 |
| 9/27/2017 | 0.029 | 0.016 | 0.046 | 0.059 | 0.045 | 0.709 | 0.054 | DRY | 1 |
| 10/11/2017 | 0.044 | 0.030 | 0.046 | 0.080 | 0.054 | 0.742 | 0.052 | WET | 7.4 |
| 10/25/2017 | 0.033 | 0.024 | 0.042 | 0.069 | 0.050 | 0.485 | 0.050 | WET | 6.2 |
| 11/8/2017 | 0.025 | 0.020 | 0.028 | 0.047 | 0.035 | 0.278 | 0.040 | DRY | 0 |
| 11/22/2017 | 0.022 | 0.020 | 0.020 | 0.043 | 0.041 | 0.495 | 0.041 | DRY | 0 |
| 12/6/2017 | 0.018 | 0.013 | 0.018 | 0.039 | 0.026 | 0.377 | 0.026 | DRY | 0 |
| 12/20/2017 | 0.018 | 0.017 | 0.017 | 0.033 | 0.023 | 0.276 | 0.025 | DRY | 0 |
| 1/3/2018 | 0.016 | 0.017 | 0.018 | --- | --- | --- | 0.023 | DRY | 0 |
| 1/17/2018 | 0.029 | 0.022 | 0.039 | 0.050 | 0.053 | 0.202 | 0.059 | DRY | 0.2 |
| 2/13/2018 | 0.025 | 0.029 | 0.032 | 0.052 | 0.028 | 0.708 | 0.032 | DRY | 0 |
| 2/14/2018 | 0.024 | 0.025 | 0.023 | 0.046 | 0.021 | 0.496 | 0.031 | DRY | 0 |
| 2/28/2018 | 0.067 | 0.089 | 0.047 | 0.066 | 0.041 | 0.276 | 0.063 | DRY | 0 |
| 3/14/2018 | 0.026 | 0.028 | 0.026 | 0.043 | 0.029 | 0.696 | 0.025 | DRY | 0 |
| 3/28/2018 | 0.020 | 0.025 | 0.018 | 0.031 | 0.016 | 0.951 | 0.054 | DRY | 3.6 |
| Dry Events (mean) | 0.030 | 0.032 | 0.029 | 0.042 | 0.038 | 0.506 | 0.0403 | | |
| Wet Events (mean) | 0.034 | 0.029 | 0.038 | 0.054 | 0.044 | 0.490 | 0.0466 | | |
| Total Mean | 0.031 | 0.032 | 0.031 | 0.045 | 0.040 | 0.497 | 0.0414 | | |

Table 3.2-2: Proportion of Grab Samples that Exceeded the PWQO

| Site | Total Exceedance | Dry Exceedance | Wet Exceedance |
|---|------------------|----------------|----------------|
| AC-1 Ancaster Ck upstream of Spencer Ck | 30.8% | 19.0% | 80.0% |
| AC-2 Sulphur Ck | 23.1% | 19.0% | 40.0% |
| AC-3 Ancaster Ck upstream of Sulphur Ck | 38.5% | 28.6% | 80.0% |
| AC-4 unnamed trib. of Ancaster Ck | 84% | 80% | 100.0% |
| CP-7 Spencer Ck | 64% | 60% | 80.0% |
| CP-11 Chedoke Ck | 100.0% | 100.0% | 100.0% |
| CP-18.1 Borers Ck | 73.1% | 71.4% | 80.0% |

An analysis of average TP concentrations was also conducted. Figure 3.2-1 shows the TP average concentrations for wet event, baseflow (dry) event, and total grab samples. Figure 3.2-2 shows the same information for site CP-11. The separation of this data was done due to the large difference in TP values between CP-11 and the other sites.

Each site experienced total average TP concentrations above the PWQO of 0.03 mg/L. That said, AC-1, AC-2, and AC-3 also have wet, dry, and total averages that are near the PWQO. Sites AC-1 and AC-3 are the only sites with dry day sample averages at or below the target objective.

Site CP-11 has the highest TP averages, by a significant margin. Site AC-4 has the second highest total TP average. AC-4 has a relatively small drainage area compared to AC-2 and AC-3 that originates about 2.5 kilometers upstream of the sample location and the land use is mostly urban residential, in particular a number of apartment buildings.

CP-7 and CP-18.1 average TP concentrations exceed the objective for dry event, wet event, and total samples.

Based on these figures it can be seen that on average TP is typically higher for wet event samples, with the exception of sites AC-2 and CP-11 which experienced lower average TP concentrations during wet events.

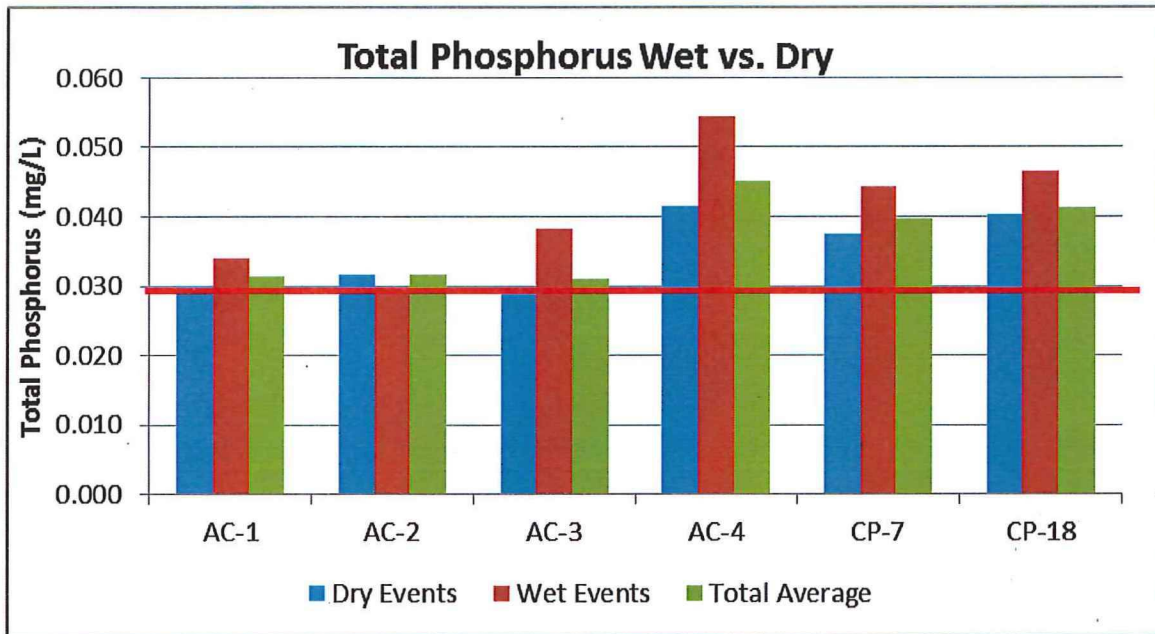


Figure 3.2-1: Total Phosphorus Average Concentration at each site for wet event, dry event, and total grab samples

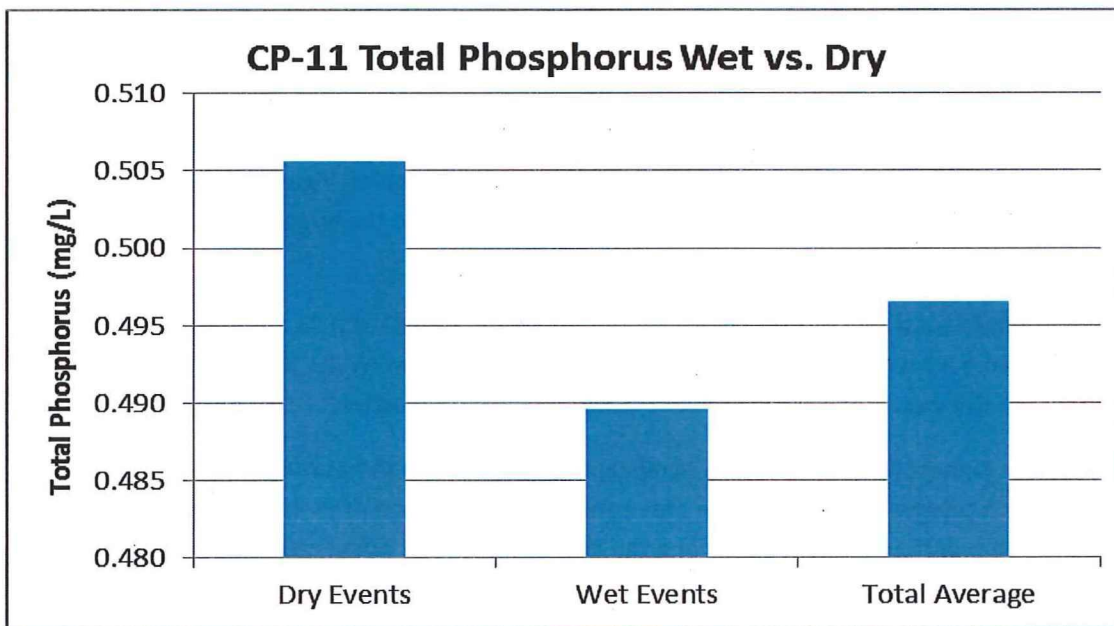


Figure 3.2-2: CP-11 Total Phosphorus Average Concentration for wet event, dry event, and total grab samples

Figure 3.2-3 below shows the seasonal relationship of grab samples taken on wet versus dry events (baseflows) for each site (except CP-11). No winter wet event samples were obtained due to timing of sampling days.

It was expected that for all seasons the TP average concentrations would typically be higher for wet events, due to increased runoff and erosion contributing to elevated amounts of TP in the creeks; however for some creeks, some seasonal TP average concentrations were lower for wet events.

Sites AC-1, AC-2, and CP-7 experienced higher averages for dry event samples in spring than wet event averages, while sites AC-3, AC-4, and CP-18.1 experienced higher spring wet event averages than spring dry event averages. This may have been a result of grab samples being collected during snowmelt events, which were wrongly identified as dry event samples due to the lack of rainfall.

For the summer season, the only site to have a higher baseflow average TP concentration was CP-18.1, all the other sites had a greater wet event average. The average concentration for wet event samples in summer exceeded the PWQO at all sites. The summer months also had the highest occurrence of exceedances.

For the fall season, all sites experienced higher TP average concentrations for wet event samples.

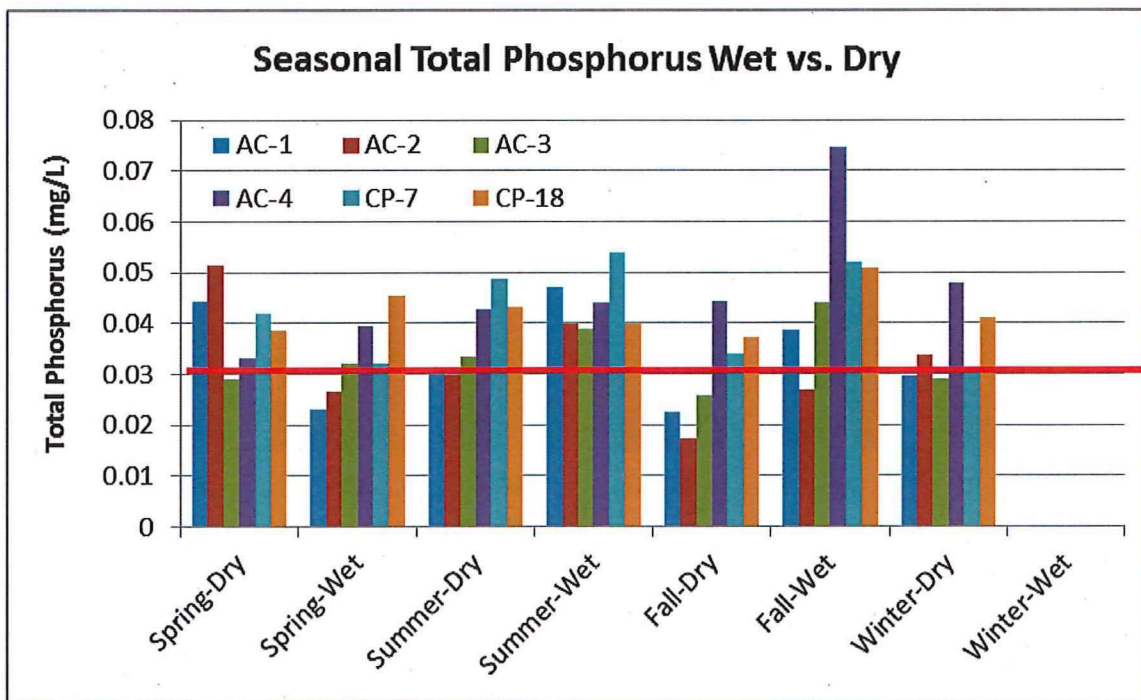


Figure 3.2-3: Total Phosphorus Seasonal Average Concentrations at each site for wet and dry event grab samples

For individual sites, the average TP concentrations for wet event samples in the fall were predominantly the highest of any seasonal average (wet or dry event), with the major exception being AC-1 and AC-2. The spring wet event average TP concentrations were predominantly the lowest of any seasonal wet event average. Dry event (baseflow) seasonal average TP concentrations were predominantly the highest in the spring or summer and lowest in the fall.

Interestingly, the fall season produced both the highest wet event average concentrations as well as the lowest dry event concentrations, typically. Also, the spring season often produced both the highest dry event average concentrations as well as the lowest wet event concentrations.

Figure 3.2-4 shows the TP seasonal average concentration for each site (except CP-11), when considering all samples. Sites AC-1, AC-2, AC-4, and CP-7 all experience considerable variability in TP averages over the seasons. Sites CP-18.1 and AC-3 do not experience much variation. AC-4, CP-7, and CP-18.1 all have TP seasonal averages that exceed the objective for all seasons. AC-1, AC-2, and AC-3 seasonal average TP concentrations are generally near the PWQO.

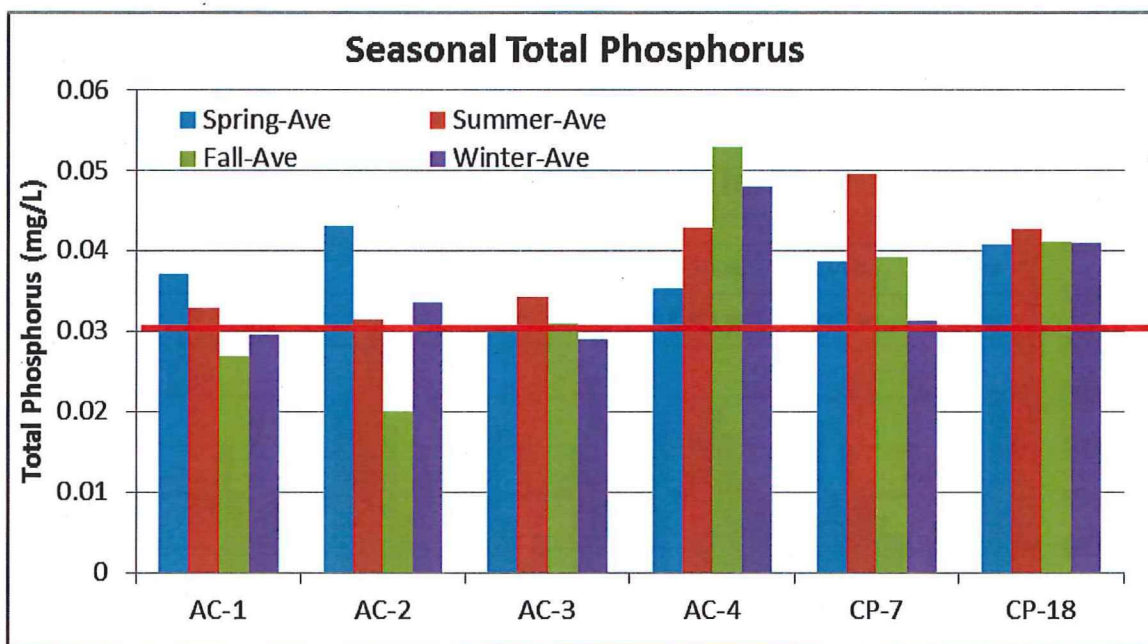


Figure 3.2-4: Total Phosphorus Seasonal Average Concentrations at each site for total grab samples

Figure 3.2-5 shows site CP-11 seasonal TP averages for wet and dry samples. This site is displayed on its own graph due to the order of magnitude difference in TP values compared to the other sites. During the spring and summer, dry event (baseflow) averages were higher than wet event averages. During the fall season the wet event averages were higher. There were no wet winter samples captured during this sampling period.

TP seasonal average concentrations, when considering all samples, were highest in the summer and winter.

For CP-11, as for the other sites, the fall wet event average TP concentrations were the highest of any seasonal average (wet or dry event). Again, the average TP concentrations for wet event samples in the spring were the lowest of any seasonal wet event average. Baseflow average TP concentrations were predominantly the highest of any seasonal dry event average in the winter or summer but again lowest in the fall.

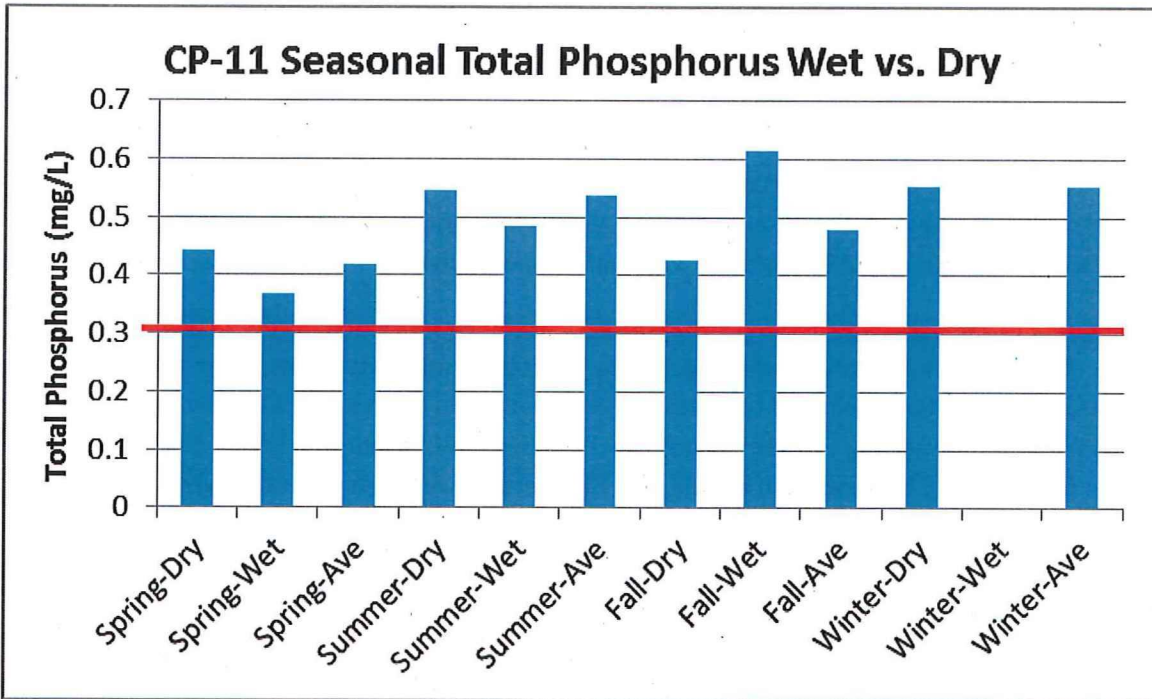


Figure 3.2-5: CP-11 Total Phosphorus Seasonal Average Concentrations for wet and dry event grab samples

3.3 Total Suspended Solids

Total Suspended Solids (TSS) grab sample concentrations for the 2017/18 season are summarized in Table 3.3-1. Results in red text indicate an exceedance of the water quality objective of 25 mg/L. Table 3.3-2 lists the proportion of the grab samples that exceeded the water quality objective for each site, broken down individually for wet event samples, dry event (baseflow) samples, and all samples.

A relatively small proportion of TSS grab samples had concentrations exceeding the HHRAP interim water quality objective for the sample year. For sites AC-3, CP-7, and CP-18.1, no grab samples exceeded the interim objective. Site CP-11 had the highest number of exceedances (6, representing less than 25% of samples), all of which were classified as baseflow (dry) samples and which typically occurred in the summer season. Site AC-2 had 5 exceedances (representing less than 20% of samples), and were also predominantly dry event, summer season grab samples.

Figure 3.3-1 shows the average concentrations for TSS for wet event, dry event, and all samples. There were no sites where the average concentration (wet event, dry event, or total) exceeded the objective. CP-18.1 had the lowest average TSS concentrations. Sites CP-11 and AC-2 both have the highest total average TSS concentrations (17.99 mg/L and 16.9 mg/L respectively).

At the majority of sites, average TSS concentrations for baseflow events were higher than wet event averages. This finding is contrary to what is generally expected during wet events, when runoff and channel erosion would be anticipated to increase TSS concentrations. This sampling year the largest wet event rainfall amount was only 15.2 mm, which may have been insufficient to produce much runoff into or erosion of the creeks. This may help explain why TSS averages were higher for dry events.

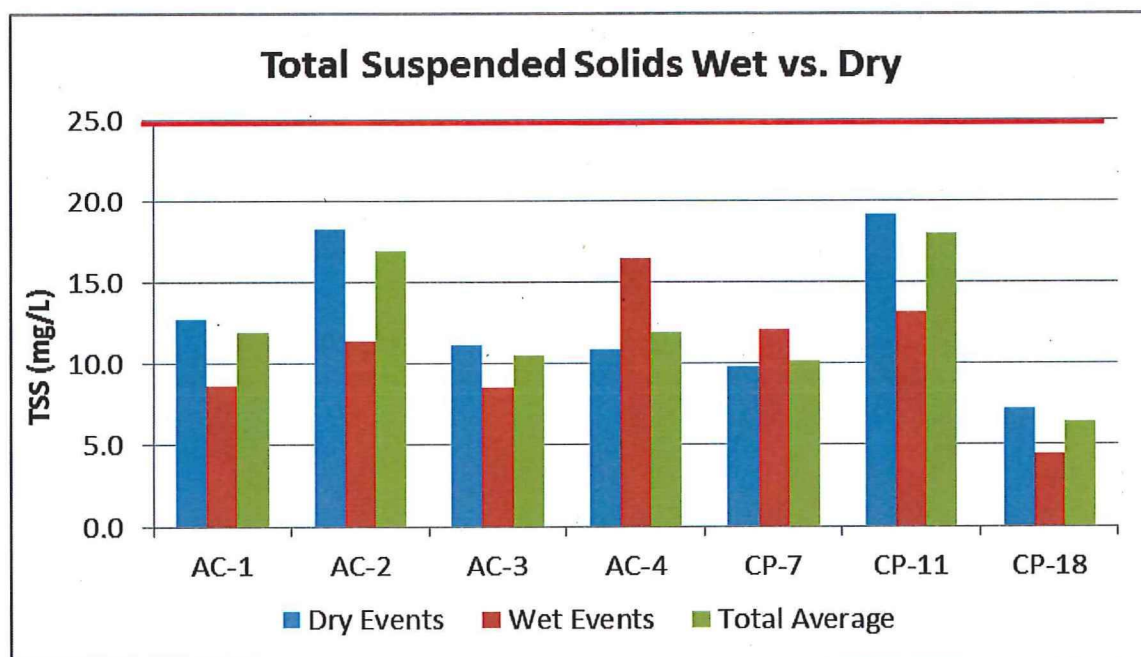


Figure 3.3-1: Total Suspended Solids Average Concentration at each site for wet event, dry event, & total grab samples

Table 3.3-1: Total Suspended Solids Concentrations (mg/L) for Grab Samples

| Dates | AC-1 Ancaster Ck upstream of Spencer Ck | AC-2 Sulphur Ck | AC-3 Ancaster Ck upstream of Sulphur Ck | AC-4 unnamed trib. of Ancaster Ck | CP-7 Spencer Ck | CP-11 Chedoke Ck | CP-18.1 Borers Ck | Classification | 24 hr. Precip. (mm) |
|----------------------|--|-----------------------|--|--|-----------------------|------------------------|-------------------------|----------------|---------------------------|
| 4/12/2017 | 8.2 | 14.9 | 6.7 | <4 | 11.2 | 13.5 | <4 | DRY | 2.2 |
| 4/27/2017 | 5.7 | 14.7 | 3.9 | 5.9 | 5.0 | 9.1 | <4 | DRY | 2.2 |
| 5/11/2017 | 7.0 | 19.3 | 5.4 | 9.7 | 5.6 | 5.0 | <4 | DRY | 0 |
| 5/24/2017 | 3 | 5.3 | 7.4 | 42.8 | <4 | 10.2 | <4 | WET | 7.4 |
| 6/7/2017 | 4.3 | 7.9 | 4.6 | 2.4 | 9.6 | 12.0 | 9.6 | WET | 11.4 |
| 6/21/2017 | 60.0 | 74.7 | 16.0 | 14.8 | 22.5 | 18.7 | 12.0 | DRY | 2.4 |
| 7/5/2017 | 17.1 | 25.8 | 18.7 | 12.3 | 10.4 | 41.3 | 4.4 | DRY | 0 |
| 7/19/2017 | 27.1 | 35.7 | 13.1 | 26.8 | 19.2 | 28.9 | 3.2 | DRY | 0 |
| 7/27/2017 | 23.0 | 25.7 | 11.3 | 6.0 | 17.8 | 24.4 | 2.6 | WET | 15.2 |
| 8/16/2017 | 6.2 | 4.2 | 8.0 | 5.1 | 13.8 | 42.0 | 4.4 | DRY | 2.2 |
| 8/30/2017 | 3.6 | 8.2 | 8.4 | 4.4 | 11.6 | 42.8 | 5.8 | DRY | 0 |
| 9/15/2017 | 4.9 | 4.6 | 5.4 | 2.9 | 16.0 | 29.0 | 4.7 | DRY | 0 |
| 9/27/2017 | 5.0 | 3.2 | 16.5 | 3.8 | 15.8 | 32.3 | 10.2 | DRY | 1 |
| 10/11/2017 | 8.3 | 10.2 | 8.8 | 14.8 | 10.9 | 10.5 | 3.1 | WET | 7.4 |
| 10/25/2017 | 4.4 | 7.9 | 10.6 | <3 | 10.0 | 8.8 | 2.4 | WET | 6.2 |
| 11/8/2017 | <4 | 5.2 | <4 | <4 | 6.7 | 5.9 | <4 | DRY | 0 |
| 11/22/2017 | 5.0 | 11.1 | <3 | 5.5 | 4.6 | 11.5 | 2.9 | DRY | 0 |
| 12/6/2017 | 3.6 | 5.2 | <3 | 3.2 | <4 | 8.8 | <3 | DRY | 0 |
| 12/20/2017 | 6.0 | 9.9 | 4.4 | 6.0 | 3.9 | 13.2 | <3 | DRY | 0 |
| 1/3/2018 | <3 | 9.6 | <3 | --- | --- | --- | <3 | DRY | 0 |
| 1/17/2018 | 5.9 | 11.2 | 15.2 | 11.2 | 8.0 | 6.0 | <4 | DRY | 0.2 |
| 2/13/2018 | 11.6 | 21.6 | 20.8 | 21.6 | 9.6 | 19.2 | <3 | DRY | 0 |
| 2/14/2018 | 10.0 | 12.4 | 6.4 | 8.4 | 4.8 | 13.6 | <3 | DRY | 0 |
| 2/28/2018 | 41.0 | 69.2 | 24.1 | 30.3 | 7.1 | 9.7 | 12.0 | DRY | 0 |
| 3/14/2018 | 9.2 | 10.7 | 11.1 | 12.7 | 6.6 | 12.7 | <4 | DRY | 0 |
| 3/28/2018 | 5.6 | 12.2 | 5.2 | 11.1 | 3.2 | 20.6 | 12.6 | DRY | 3.6 |
| Dry Events (mean) | 12.8 | 18.3 | 11.1 | 10.9 | 9.8 | 19.2 | 7.2 | | |
| Wet Events (mean) | 8.6 | 11.4 | 8.5 | 16.5 | 12.1 | 13.2 | 4.4 | | |
| Total Mean | 11.90 | 16.9 | 10.54 | 11.90 | 10.17 | 17.99 | 6.42 | | |

Table 3.3-2: Proportion of Grab Samples that Exceeded the Total Suspended Solids Objective

| Site | Total Exceedance | Dry Exceedance | Wet Exceedance |
|---|------------------|----------------|----------------|
| AC-1 Ancaster Ck upstream of Spencer Ck | 11.5 | 14.3 | 0.0 |
| AC-2 Sulphur Ck | 19.2 | 19.0 | 20.0 |
| AC-3 Ancaster Ck upstream of Sulphur Ck | 0.0 | 0.0 | 0.0 |
| AC-4 unnamed trib. of Ancaster Ck | 11.5 | 9.5 | 20.0 |
| CP-7 Spencer Ck | 0.0 | 0.0 | 0.0 |
| CP-11 Chedoke Ck | 23.1 | 28.6 | 0.0 |
| CP-18.1 Borers Ck | 0.0 | 0.0 | 0.0 |

Figure 3.3-2 shows the seasonal average TSS concentrations for the wet and dry event (baseflow) grab samples. Figure 3.3-3 shows the seasonal average TSS concentration for all grab samples, for each site.

At the majority of sites, the seasonal average TSS concentrations (wet event, dry event, and total) were below the objective of 25mg/L. Only two sites had average seasonal concentrations exceeding the objective (for CP-11 baseflow samples in the summer and total samples in the summer, as well as AC-2 dry event samples in the spring, summer dry events, and wet event samples in the summer). In contrast, the lowest total sample seasonal average was at CP-18.1 in the summer.

For some sites, the TSS average concentrations were consistently higher for dry events (AC-2, AC-3, CP-11, and CP-18.1). For other sites, some seasons had TSS average concentrations that were higher for wet events, while other seasons had TSS averages that were lower for wet events.

For individual sites, there was no consistent season of highest or lowest average TSS concentrations.

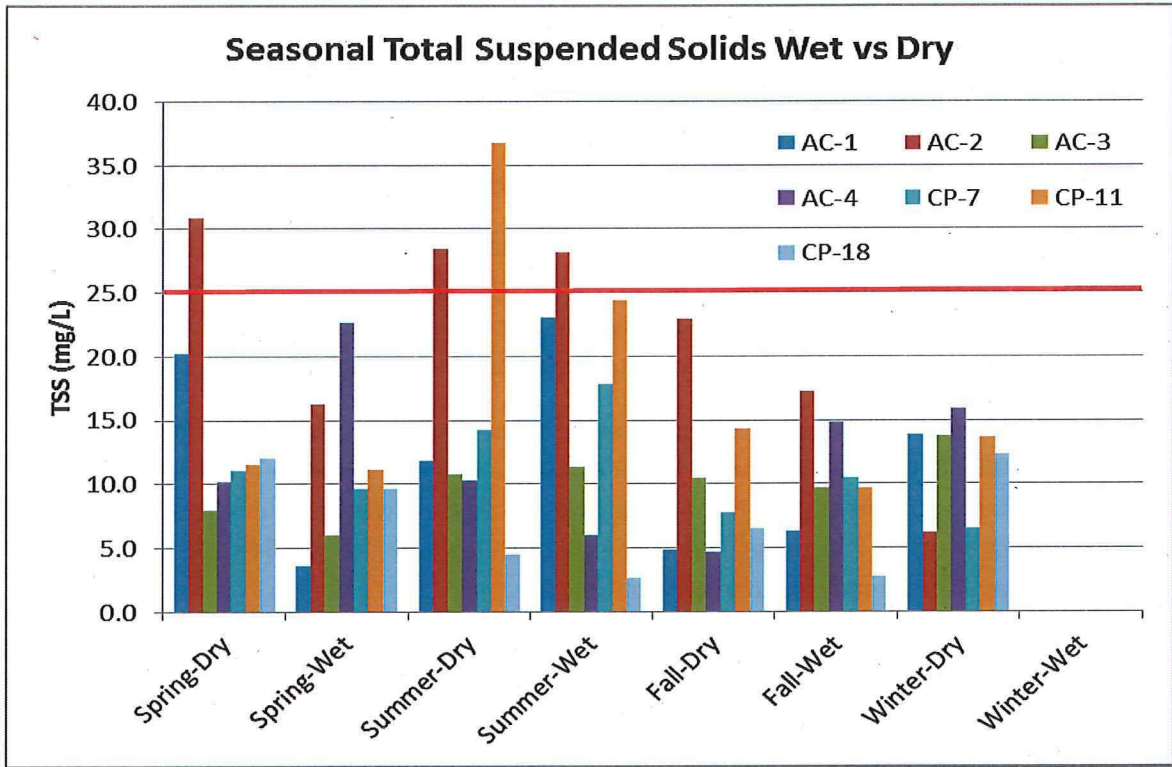


Figure 3.3-2: Total Suspended Solids Seasonal Average Concentrations at each site for wet and dry event grab samples

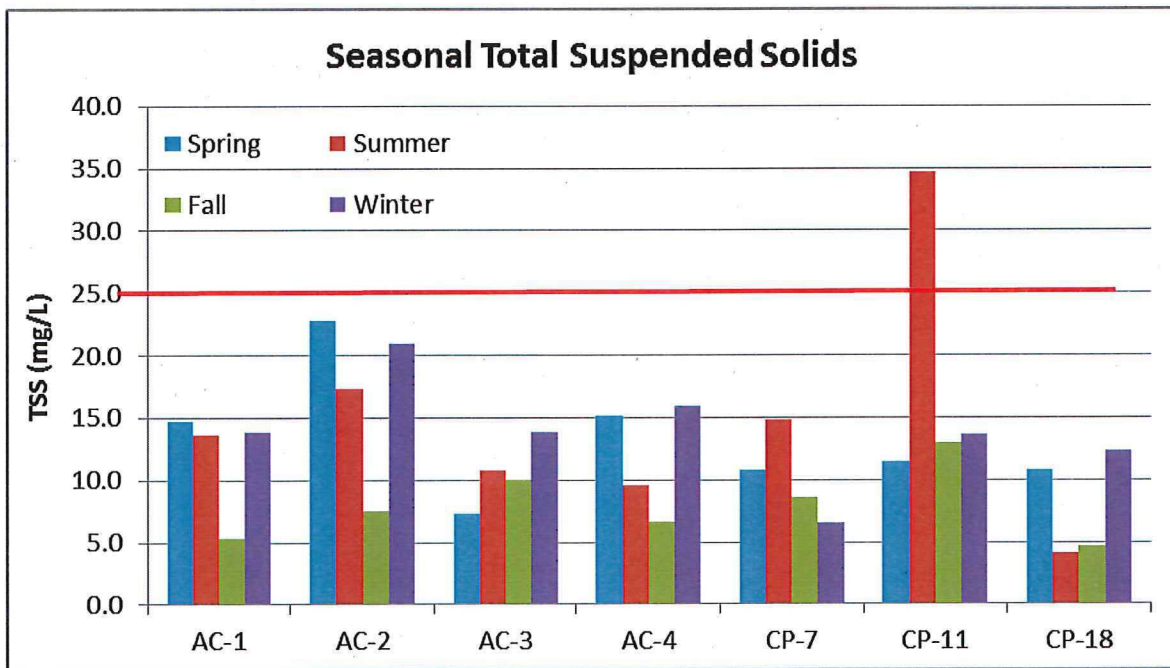


Figure 3.3-3: Total Suspended Solids Seasonal Average Concentrations at each site for total grab samples

3.4 Volatile Suspended Solids

Volatile Suspended Solids (VSS) concentrations from grab samples collected in the 2017/18 season can be seen in Table 3.4-1. VSS represents the organic portion of TSS, such as plant matter and animal waste. There is no VSS HHRAP interim water quality objective for this parameter at this time.

Figure 3.4-1 shows the breakdown of TSS into inorganic and organic solids for each site. For the majority of sites, with the exception of CP-11 and CP-18.1, TSS is predominantly inorganic suspended solids. However, at site CP-11 TSS is mostly VSS. CP-18.1 has an almost even split of organic and inorganic suspended material, while site AC-2 has the lowest concentration of organic suspended solids.

Figure 3.4-2 summarizes the average VSS concentrations for wet event, dry event (baseflow), and total samples, at each site. CP-11 had significantly higher concentrations of VSS and therefore organic materials, compared to the other sites. For this sampling season there was not much variability in the average concentrations for wet event and dry event samples. However, the baseflow average concentrations were consistently found to be slightly higher.

Figure 3.4-3 shows the seasonal average VSS concentrations for the wet and dry event grab samples. Figure 3.4-4 shows the seasonal average VSS concentration for the total grab samples.

Site CP-11 was left off of Figure 3.4-3 in order to better show the relationships at the other sites due to CP-11's higher VSS concentrations. CP-11 had the highest VSS concentrations for dry event samples in the summer and the lowest averages for dry events in the spring as well as wet event samples in the fall. For the other sites, CP-18.1 average concentrations for dry event or baseflows in winter are the highest and AC-1 average concentrations for wet events in the spring are the lowest. For individual sites, the average VSS concentrations were highest for wet events in the summer or dry events in the winter.

For this sampling season there was not much variability in the average concentrations for total samples between the seasons, except for CP-11.

Table.3.4-1: Volatile Suspended Solids Concentrations (mg/L) for Grab Samples

| Dates | AC-1 Ancaster Ck upstream of Spencer Ck | AC-2 Sulphur Ck | AC-3 Ancaster Ck upstream of Sulphur Ck | AC-4 unnamed trib. of Ancaster Ck | CP-7 Spencer Ck | CP-11 Chedoke Ck | CP-18.1 Borers Ck | Classification | 24 hr. Precip. (mm) |
|----------------------|--|-----------------------|--|---|-----------------------|------------------------|-------------------------|----------------|---------------------------|
| 4/12/2017 | 1.4 | 2.3 | 1.8 | <4 | 2.8 | 10.7 | <4 | DRY | 2.2 |
| 4/27/2017 | 1.3 | 1.6 | 1.3 | 2.3 | 2.3 | 4.1 | <4 | DRY | 2.2 |
| 5/11/2017 | 2.3 | 2.0 | 1.3 | 2.3 | 2.3 | 4.5 | <4 | DRY | 0 |
| 5/24/2017 | <3 | 1.6 | 1.6 | 4.2 | <4 | 9.3 | <4 | WET | 7.4 |
| 6/7/2017 | 1.3 | 2.0 | 1.7 | 1.4 | 3.2 | 11.7 | 3.6 | WET | 11.4 |
| 6/21/2017 | 7.2 | 7.3 | 3.0 | 2.0 | 3.2 | 9.3 | 2.9 | DRY | 2.4 |
| 7/5/2017 | 3.2 | 3.4 | 3.4 | 3.3 | 2.9 | 27.3 | 1.9 | DRY | 0 |
| 7/19/2017 | 3.5 | 4.1 | 2.9 | 4.3 | 4.3 | 21.2 | 2.0 | DRY | 0 |
| 7/27/2017 | 4.0 | 3.4 | 2.7 | 1.7 | 3.2 | 18.5 | 1.4 | WET | 15.2 |
| 8/16/2017 | 3.3 | 2.3 | 2.7 | 2.9 | 4.8 | 34.0 | 2.9 | DRY | 2.2 |
| 8/30/2017 | 1.2 | 1.4 | 1.6 | 1.4 | 1.4 | 32.8 | 1.8 | DRY | 0 |
| 9/15/2017 | 1.4 | 1.1 | 1.1 | 1.1 | 2.3 | 22.0 | 1.4 | DRY | 0 |
| 9/27/2017 | 1.5 | 1.8 | 2.8 | <0.8 | 3.5 | 24.3 | 2.4 | DRY | 1 |
| 10/11/2017 | 1.3 | 2.0 | 2.0 | 2.0 | 2.6 | 7.7 | 1.5 | WET | 7.4 |
| 10/25/2017 | 1.6 | <0.8 | 3.4 | <3 | 1.6 | 5.0 | 1.6 | WET | 6.2 |
| 11/8/2017 | <4 | 1.4 | <4 | <4 | 4.4 | 3.9 | <4 | DRY | 0 |
| 11/22/2017 | 2.2 | 2.2 | <3 | 2.5 | 2.2 | 7.0 | 1.7 | DRY | 0 |
| 12/6/2017 | 1.6 | 1.2 | <3 | 0.8 | <4 | 5.2 | <3 | DRY | 0 |
| 12/20/2017 | 2.6 | 2.9 | 2.2 | 2.0 | 2.2 | 5.4 | <3 | DRY | 0 |
| 1/3/2018 | <3 | 4.0 | <3 | --- | --- | --- | <3 | DRY | 0 |
| 1/17/2018 | 2.5 | 2.4 | 2.8 | 2.4 | 2.5 | 3.0 | <4 | DRY | 0.2 |
| 2/13/2018 | 2.4 | 2.8 | 3.6 | 4.4 | 2.0 | 12.4 | <3 | DRY | 0 |
| 2/14/2018 | 3.2 | 2.8 | 2.4 | 3.2 | 2.0 | 10.8 | <3 | DRY | 0 |
| 2/28/2018 | 4.5 | 5.6 | 5.6 | 4.6 | <0.8 | 5.1 | 3.3 | DRY | 0 |
| 3/14/2018 | 3.6 | 3.0 | 4.5 | 3.4 | 3.5 | 8.1 | <4 | DRY | 0 |
| 3/28/2018 | 2.4 | 2.3 | 2.0 | 2.5 | 1.4 | 15.9 | 5.7 | DRY | 3.6 |
| Dry Events (mean) | 2.7 | 2.8 | 2.6 | 2.7 | 2.8 | 13.4 | 2.6 | | |
| Wet Events (mean) | 2 | 2 | 2 | 2 | 3 | 10 | 2 | | |
| Total Mean | 2.6 | 2.7 | 2.6 | 2.6 | 2.8 | 12.8 | 2.4 | | |

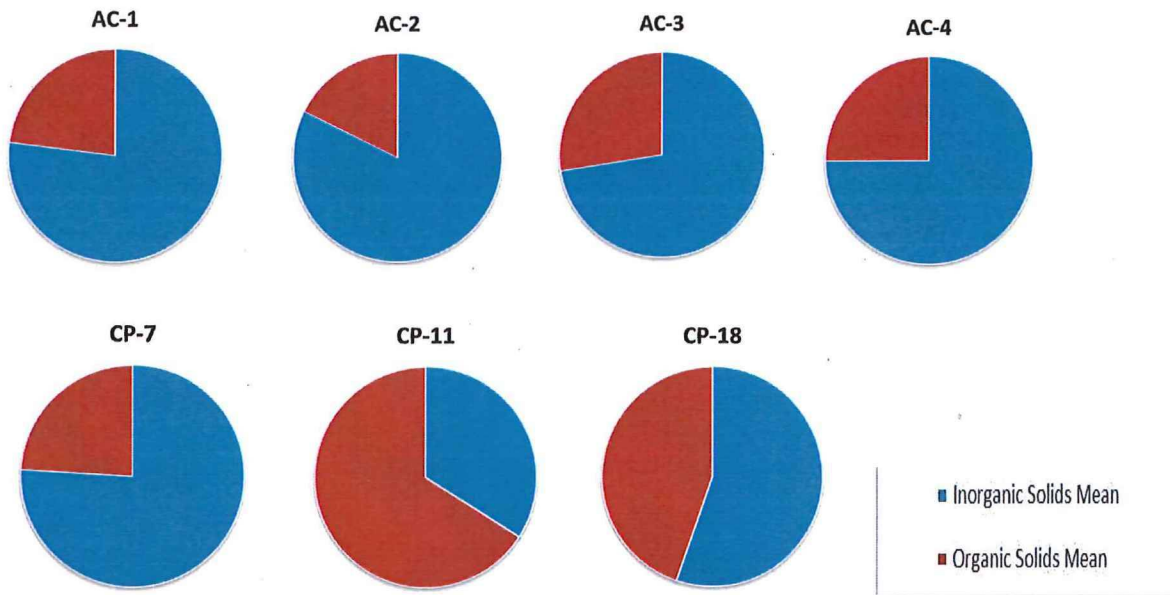


Figure 3.4-1: TSS Breakdown into Inorganic and Organic Solids at each site.

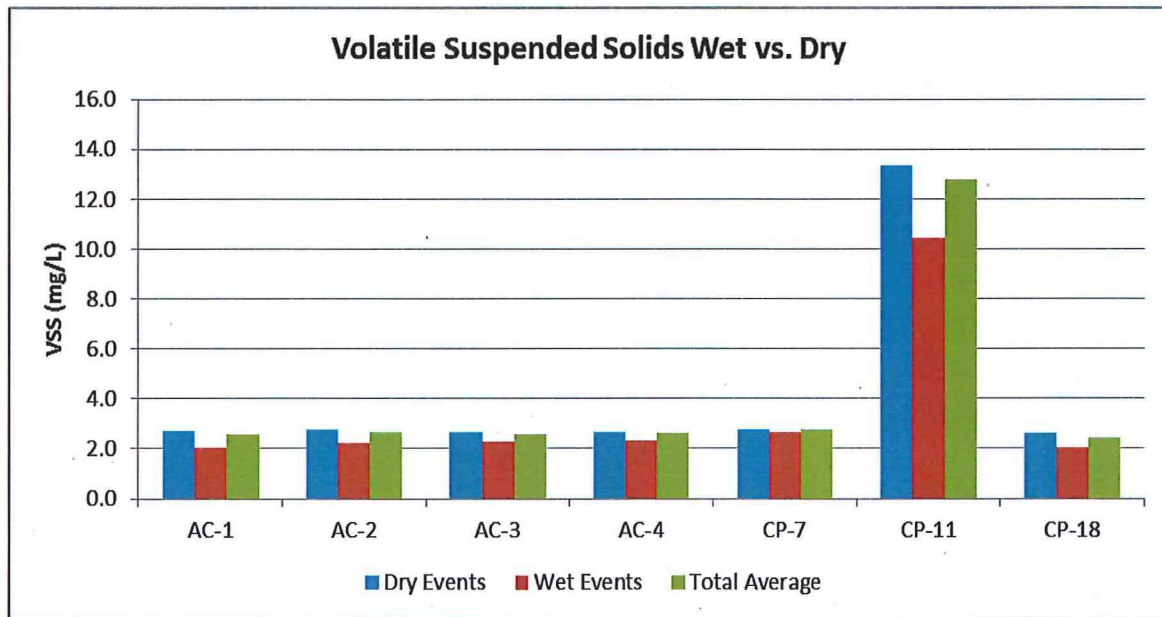


Figure 3.4-2: Volatile Suspended Solids Average Concentration at each site for wet event, dry event, & total grab samples

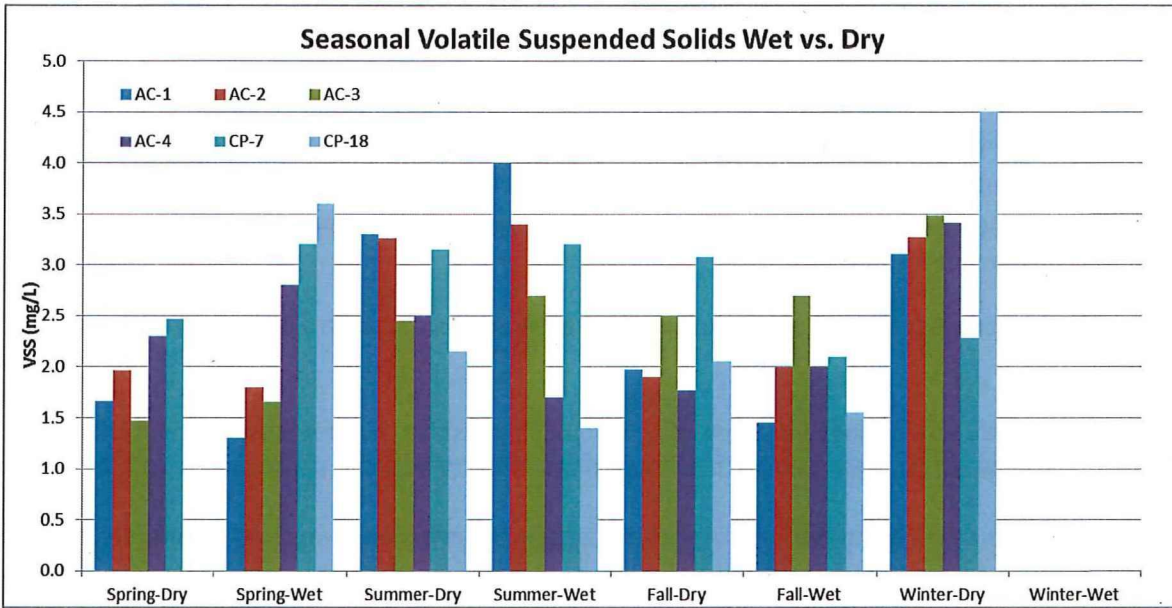


Figure 3.4-3: Volatile Suspended Solids Seasonal Average Concentrations at each site for wet and dry event grab samples

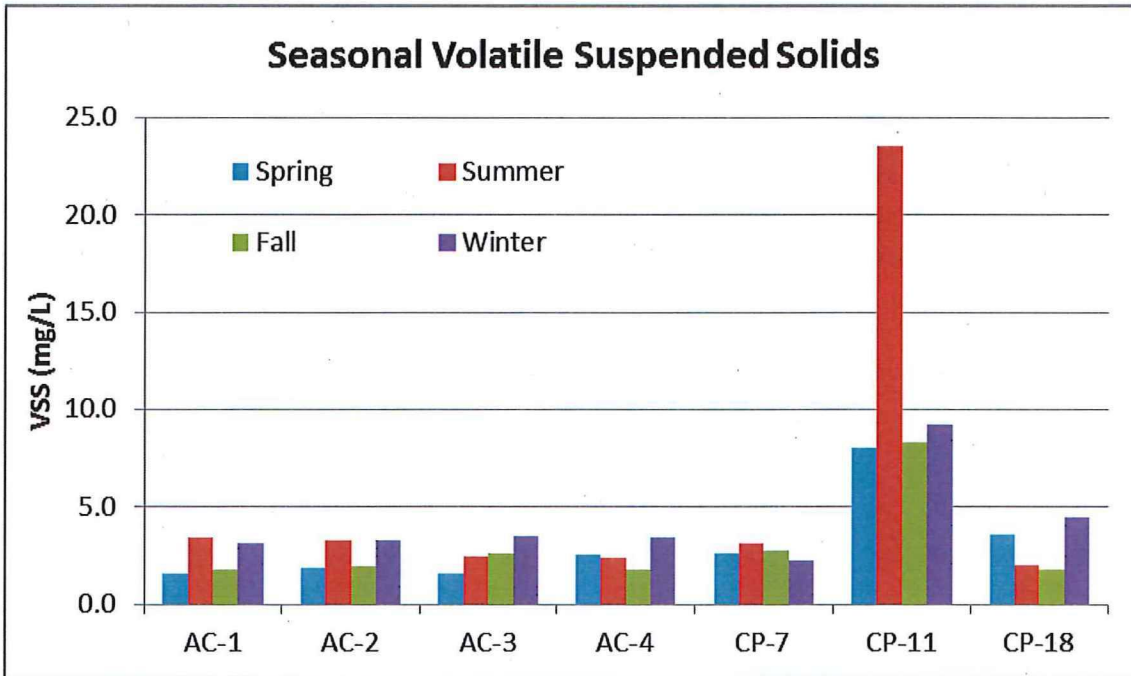


Figure 3.4-4: Volatile Suspended Solids Seasonal Average Concentrations at each site for total grab samples

3.5 Unionized Ammonia

Unionized ammonia grab sample concentrations for the 2017/18 season are summarized in Table 3.5-1. The concentrations were estimated using a formula to derive unionized ammonia from temperature, pH, and total ammonia concentration. Results marked in red reflect exceedances of the HHRAP water quality objective and PWQO of 0.02 mg/L. Blanks occurred when total ammonia concentrations were below the minimum detection limit.

For the 2017/18 sampling season, unionized ammonia does not appear to be a parameter of concern at most sites.

The majority of grab sample concentrations were below the objective. Grab sample concentrations only exceeded the water quality objective at CP-11, with three of the 26 samples exceeding 0.02 mg/L.

Figure 3.5-1 shows the average unionized ammonia concentration for wet event, dry events, and total samples. There were no sites where the average concentration (wet event, dry event, or total) exceeded the objective. For this sampling season there was not much variability in the average concentrations for wet event and dry event (baseflow) samples, except for CP-11. CP-11 has the highest concentration of unionized ammonia (by a significant margin) with the highest average occurring for wet event samples.

At individual sites, the average concentration for dry events tended to be higher than for wet event samples. The exceptions were CP-11 and CP-7, where the wet event average concentrations were higher.

Figure 3.5-2 shows the seasonal average concentrations for total grab samples. There were no sites where any season had an average concentration for total samples that exceeded the objective. For the majority of sites, summer consistently had the highest average concentrations of unionized ammonia, while for CP-11 and CP-18.1 the fall had the greatest seasonal average concentrations.

Table 3.5-1: Unionized Ammonia Concentrations (mg/L) for Grab Samples

| Dates | AC-1 Ancaster Ck upstream of Spencer Ck | AC-2 Sulphur Ck | AC-3 Ancaster Ck upstream of Sulphur Ck | AC-4 unnamed trib. of Ancaster Ck | CP-7 Spencer Ck | CP-11 Chedoke Ck | CP-18.1 Borers Ck | Classification | 24 hr. Precip. (mm) |
|----------------------|---|-----------------------|---|---|-----------------------|------------------------|-------------------------|----------------|---------------------------|
| 4/12/2017 | >0.00014 | >0.00017 | 0.00016 | 0.0001 | >0.00026 | 0.03253 | 0.00332 | DRY | 2.2 |
| 4/27/2017 | >0.00020 | >0.00019 | >0.00017 | >0.00021 | 0.0007 | 0.0036 | 0.0004 | DRY | 2.2 |
| 5/11/2017 | >0.00015 | >0.00014 | >0.00014 | >0.00019 | 0.0006 | 0.0089 | >0.00041 | DRY | 0 |
| 5/24/2017 | 0.0003 | >0.0002 | 0.0002 | >0.00024 | 0.0006 | 0.0026 | 0.0003 | WET | 7.4 |
| 6/7/2017 | >0.00024 | >0.00025 | >0.00022 | >0.0002 | >0.00034 | 0.0065 | >0.00039 | WET | 11.4 |
| 6/21/2017 | 0.0027 | 0.0024 | 0.0014 | 0.0012 | 0.0027 | 0.0067 | 0.0013 | DRY | 2.4 |
| 7/5/2017 | 0.0016 | 0.0008 | 0.0008 | 0.0006 | 0.0020 | 0.0038 | 0.0010 | DRY | 0 |
| 7/19/2017 | 0.00086 | 0.00035 | 0.00042 | 0.00049 | 0.00134 | 0.00048 | 0.00034 | DRY | 0 |
| 7/27/2017 | 0.0010 | 0.0004 | 0.0005 | 0.0006 | 0.00135 | 0.0101 | 0.0008 | WET | 15.2 |
| 8/16/2017 | 0.0005 | 0.0005 | 0.0007 | >0.00036 | 0.0009 | 0.0069 | >0.00015 | DRY | 2.2 |
| 8/30/2017 | 0.0007 | >0.00009 | 0.0001 | 0.0002 | 0.0013 | 0.0236 | 0.0003 | DRY | 0 |
| 9/15/2017 | 0.0066 | >0.00029 | 0.0004 | 0.0002 | 0.0024 | 0.0155 | 0.0007 | DRY | 0 |
| 9/27/2017 | 0.0009 | >0.00042 | 0.0007 | >0.0002 | 0.0022 | 0.0291 | 0.0034 | DRY | 1 |
| 10/11/2017 | 0.0011 | >0.00038 | 0.0006 | 0.0003 | 0.0022 | 0.0349 | >0.0003 | WET | 7.4 |
| 10/25/201 | 0.0002 | >0.00007 | 0.0001 | 0.0001 | 0.0013 | 0.0156 | >0.00029 | WET | 6.2 |
| 11/8/2017 | 0.0001 | 0.00003 | 0.0000 | 0.0001 | 0.0001 | 0.0017 | >0.00008 | DRY | 0 |
| 11/22/2017 | 0.0002 | 0.0001 | 0.0002 | 0.0003 | 0.0004 | 0.0157 | >0.0002 | DRY | 0 |
| 12/6/2017 | 0.0000 | 0.0001 | >0.00006 | 0.0001 | 0.0001 | 0.0050 | >0.00008 | DRY | 0 |
| 12/20/2017 | 0.0003 | 0.0002 | >0.00005 | 0.0003 | 0.0010 | 0.0019 | >0.00032 | DRY | 0 |
| 1/3/2018 | 0.00003 | 0.00003 | 0.00002 | n/a | n/a | n/a | n/a | DRY | 0 |
| 1/17/2018 | n/a | 0.00000 | n/a | n/a | n/a | n/a | n/a | DRY | 0.2 |
| 2/13/2018 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | DRY | 0 |
| 2/14/2018 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | DRY | 0 |
| 2/28/2018 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | DRY | 0 |
| 3/14/2018 | 0.00187 | 0.0002 | >0.00009 | 0.0006 | 0.0002 | 0.0030 | >0.00018 | DRY | 0 |
| 3/28/2018 | >0.00011 | >0.00011 | >0.00008 | 0.0004 | 0.00016 | 0.0144 | 0.00026 | DRY | 3.6 |
| Dry Events (mean) | 0.0013 | 0.0005 | 0.0005 | 0.0004 | 0.0011 | 0.0100 | 0.0010 | | |
| Wet Events (mean) | 0.0006 | 0.0004 | 0.0003 | 0.0004 | 0.0014 | 0.0139 | 0.0006 | | |
| Total Mean | 0.0011 | 0.0005 | 0.0005 | 0.0004 | 0.0012 | 0.0110 | 0.0009 | | |

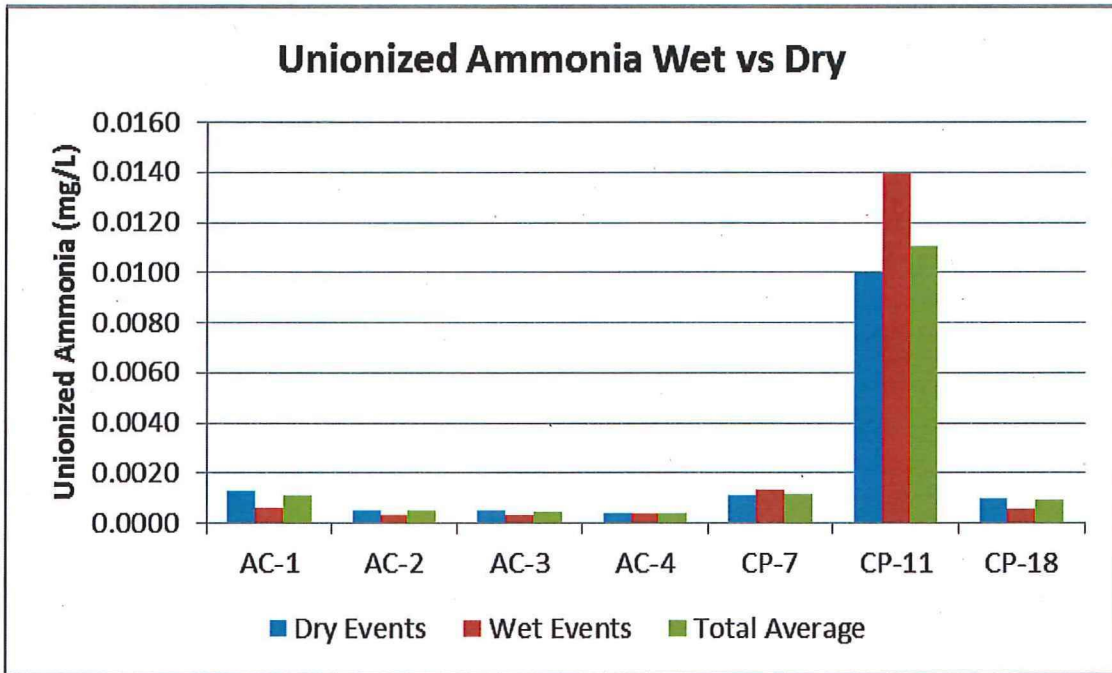


Figure 3.5-1: Unionized Ammonia Average Concentration at each site for wet event, dry event, & total grab samples

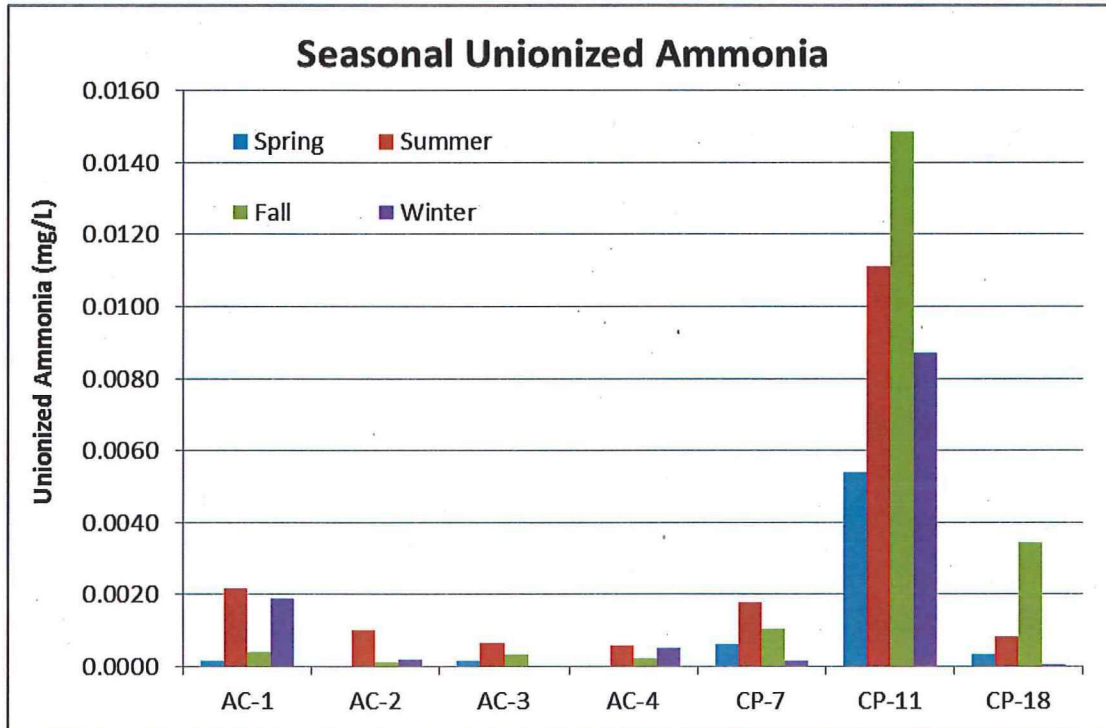


Figure 3.5-2: Unionized Ammonia Seasonal Average Concentrations at each site for total grab samples

3.6 Nitrate

Nitrate grab sample concentrations for the 2017/18 season are summarized in Table 3.6-1. Results marked in red reflect exceedances of the CWQG of 3 mg/L as N.

For the 2017/18 sampling season, nitrate does not appear to be a parameter of concern, as no samples at any sites exceeded the objective.

Figure 3.6-1 shows the average nitrate concentration for wet event, dry event (baseflow), and total samples. There were no sites where the average concentration (wet event, dry event, or total) exceeded the objective. CP-11 had the highest nitrate concentrations (by a significant margin), followed by AC-3. AC-2 reported the lowest average nitrate concentrations. Nitrate average concentrations were consistently higher for baseflow samples than for wet events.

Figure 3.6-2 shows the seasonal average nitrate concentrations for wet events and dry events, while Figure 3.6.3 shows the average concentrations for total grab samples at each site. There were no sites where any season had an average concentration (dry event, wet event, or total samples) that exceeded the objective. For the majority of sites, winter consistently had the highest average concentrations. Of interest to note is that at site CP-7 and CP-18.1, the winter nitrate concentrations are significantly greater when compared to the other seasons.

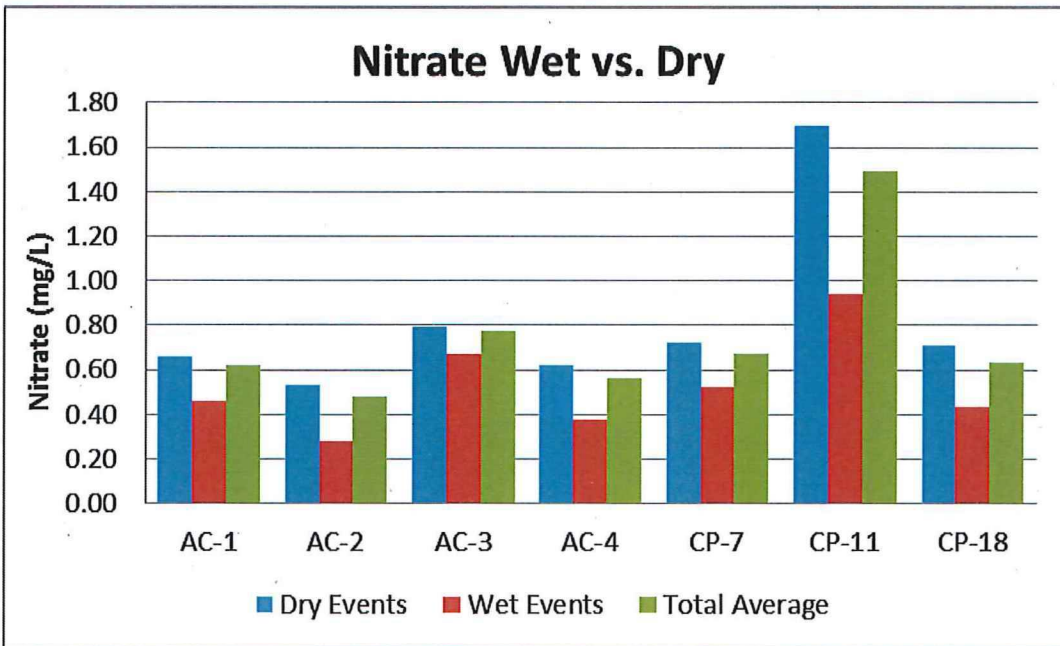


Figure 3.6-1: Nitrate Average Concentration at each site for wet event, dry event, & total grab samples

Table 3.6-1: Nitrate Concentrations (mg/L) for Grab Samples

| Dates | AC-1 Ancaster Ck upstream of Spencer Ck | AC-2 Sulphur Ck | AC-3 Ancaster Ck upstream of Sulphur Ck | AC-4 unnamed trib. of Ancaster Ck | CP-7 Spencer Ck | CP-11 Chedoke Ck | CP-18.1 Borers Ck | Classification | 24 hr. Precip. (mm) |
|----------------------|--|-----------------------|--|--|-----------------------|------------------------|-------------------------|----------------|---------------------------|
| 4/12/2017 | 0.52 | 0.37 | 0.66 | 0.8 | 0.57 | <0.05 | 0.79 | DRY | 2.2 |
| 4/27/2017 | 0.44 | 0.30 | 0.63 | 0.48 | 0.58 | 1.48 | 0.38 | DRY | 2.2 |
| 5/11/2017 | 0.50 | 0.29 | 0.70 | 0.49 | 0.47 | 1.27 | 0.32 | DRY | 0 |
| 5/24/2017 | 0.41 | 0.15 | 0.67 | 0.25 | 0.53 | 0.76 | 0.28 | WET | 7.4 |
| 6/7/2017 | 0.52 | 0.26 | 0.69 | <0.05 | 0.79 | 0.68 | 1.10 | WET | 11.4 |
| 6/21/2017 | 1.81 | 1.53 | 0.91 | 0.69 | 0.76 | <0.1 | 0.18 | DRY | 2.4 |
| 7/5/2017 | 0.63 | 0.41 | 0.89 | <0.05 | 0.54 | 0.22 | 0.46 | DRY | 0 |
| 7/19/2017 | 0.6 | 0.44 | 0.83 | 0.41 | 0.51 | 0.17 | 0.18 | DRY | 0 |
| 7/27/2017 | 0.62 | 0.45 | 0.84 | 0.57 | 0.56 | 0.77 | 0.22 | WET | 15.2 |
| 8/16/2017 | 0.56 | 0.42 | 0.70 | <0.1 | 0.39 | 0.84 | 0.19 | DRY | 2.2 |
| 8/30/2017 | 0.48 | 0.35 | 0.72 | <0.1 | 0.41 | 0.99 | <0.1 | DRY | 0 |
| 9/15/2017 | 0.51 | 0.44 | 0.72 | 0.1 | 0.4 | 1.36 | <0.1 | DRY | 0 |
| 9/27/2017 | 0.26 | 0.26 | 0.53 | <0.1 | 0.42 | 0.99 | <0.1 | DRY | 1 |
| 10/11/2017 | 0.42 | 0.31 | 0.66 | 0.32 | 0.50 | <0.1 | 0.13 | WET | 7.4 |
| 10/25/2017 | 0.32 | 0.24 | 0.49 | 0.36 | 0.24 | 1.56 | <0.05 | WET | 6.2 |
| 11/8/2017 | 0.38 | 0.22 | 0.55 | 0.4 | 0.35 | 2.50 | 0.11 | DRY | 0 |
| 11/22/2017 | 0.54 | 0.42 | 0.75 | 0.58 | 0.72 | 2.36 | 0.57 | DRY | 0 |
| 12/6/2017 | 0.48 | 0.37 | 0.60 | 0.55 | 0.79 | 2.31 | 0.49 | DRY | 0 |
| 12/20/2017 | 0.61 | 0.46 | 0.76 | 0.65 | 0.86 | 2.58 | 0.79 | DRY | 0 |
| 1/3/2018 | 0.74 | 0.65 | 0.88 | --- | --- | --- | 0.59 | DRY | 0 |
| 1/17/2017 | 1.04 | 0.86 | 1.31 | 1.03 | 2.08 | 2.96 | 2.03 | DRY | 0.2 |
| 2/13/2018 | 0.74 | 0.68 | 1.03 | 0.76 | 0.54 | 0.86 | 0.71 | DRY | 0 |
| 2/14/2018 | 0.80 | 0.68 | 0.97 | 0.76 | 1.08 | 2.05 | 1.47 | DRY | 0 |
| 2/28/2018 | 0.88 | 0.75 | 0.99 | 1.00 | 1.03 | 2.68 | 1.7 | DRY | 0 |
| 3/14/2018 | 0.66 | 0.58 | 0.81 | 0.67 | 0.89 | 1.96 | 0.92 | DRY | 0 |
| 3/28/2018 | 0.63 | 0.51 | 0.79 | 0.32 | 0.80 | 1.48 | 0.37 | DRY | 3.6 |
| Dry Events (mean) | 0.63 | 0.49 | 0.75 | 0.58 | 0.67 | 1.66 | 0.58 | | |
| Wet Events (mean) | 0.46 | 0.28 | 0.67 | 0.38 | 0.52 | 0.94 | 0.43 | | |
| Total Mean | 0.59 | 0.44 | 0.74 | 0.51 | 0.62 | 1.40 | 0.52 | | |

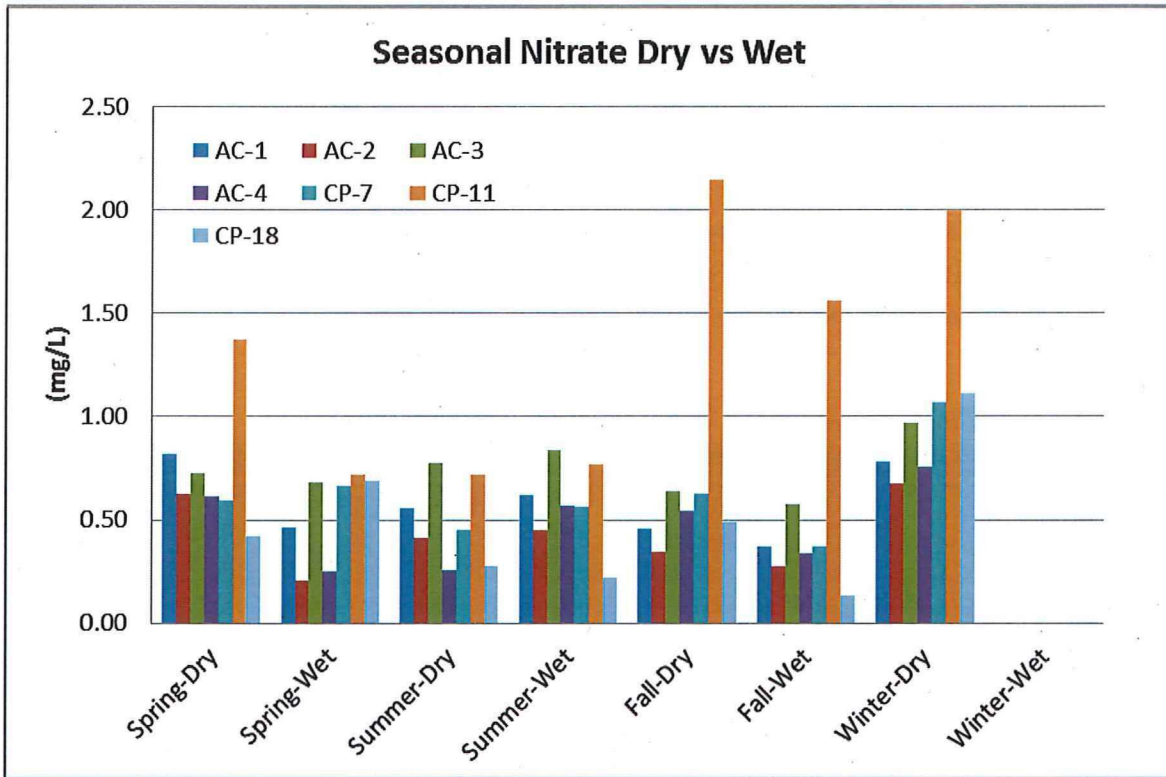


Figure 3.6-2: Nitrate Seasonal Average Concentrations at each site for wet and dry event grab samples

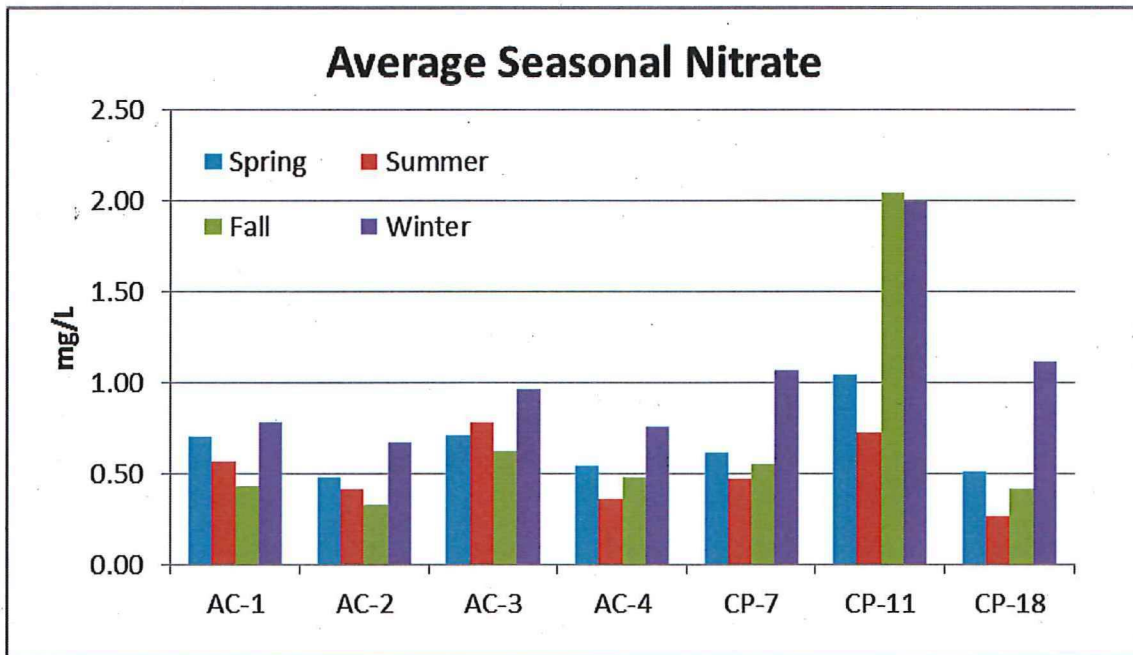


Figure 3.6-3: Nitrate Seasonal Average Concentrations at each site for total grab samples

3.7 Nitrite

Nitrite grab sample concentrations for the 2017/18 season are summarized in Table 3.7-1. Results marked in red reflect exceedances of the CWQG of 0.06 mg/L. For most sites, nitrite concentrations were predominantly below the laboratory minimum detection limit. Due to this fact, average and seasonal breakdowns were not completed. Nitrite does not appear to be a parameter of concern at most sites, except CP-11. Site CP-11 was the only site with any considerable amount of exceedances, with the majority of elevated levels occurring in the spring, summer, and winter. Again, due to the number of samples below the minimum detection limit, CP-11 average and seasonal breakdowns were not completed.

Table 3.7-1: Nitrite Concentrations (mg/L) for Grab Samples

| Dates | AC-1 Ancaster Ck upstream of Spencer Ck | AC-2 Sulphur Ck | AC-3 Ancaster Ck upstream of Sulphur Ck | AC-4 unnamed trib. of Ancaster Ck | CP-7 Spencer Ck | CP-11 Chedoke Ck | CP-18.1 Borers Ck | Classification | 24 hr. Precip. (mm) |
|------------|--|-----------------------|--|---|-----------------------|------------------------|-------------------------|----------------|---------------------------|
| 4/12/2017 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.9 | <0.05 | DRY | 2.2 |
| 4/27/2017 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY | 2.2 |
| 5/11/2017 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.11 | <0.05 | DRY | 0 |
| 5/24/2017 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.26 | <0.05 | WET | 7.4 |
| 6/7/2017 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.16 | <0.05 | WET | 11.4 |
| 6/21/2017 | <0.1 | 0.23 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | DRY | 2.4 |
| 7/5/2017 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.16 | <0.05 | DRY | 0 |
| 7/19/2017 | 0.05 | <0.05 | 0.08 | <0.05 | <0.05 | 0.07 | <0.05 | DRY | 0 |
| 7/27/2017 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.12 | <0.05 | WET | 15.2 |
| 8/16/2017 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | DRY | 2.2 |
| 8/30/2017 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.13 | <0.1 | DRY | 0 |
| 9/15/2017 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.11 | <0.1 | DRY | 0 |
| 9/27/2017 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.12 | <0.1 | DRY | 1 |
| 10/11/2017 | <0.1 | <0.1 | 0.32 | <0.1 | <0.1 | <0.1 | <0.1 | WET | 7.4 |
| 10/25/2017 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | WET | 6.2 |
| 11/8/2017 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | DRY | 0 |
| 11/22/2017 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY | 0 |
| 12/6/2017 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY | 0 |
| 12/20/2017 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY | 0 |
| 1/3/2018 | <0.05 | <0.05 | <0.05 | --- | --- | --- | <0.05 | DRY | 0 |
| 1/17/2018 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | DRY | 0.2 |
| 2/13/2018 | <0.01 | <0.05 | <0.05 | <0.05 | <0.05 | 0.06 | <0.06 | DRY | 0 |
| 2/14/2018 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.07 | <0.05 | DRY | 0 |
| 2/28/2018 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.12 | <0.05 | DRY | 0 |
| 3/14/2018 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.1 | <0.05 | DRY | 0 |
| 3/28/2018 | 0.32 | <0.05 | <0.05 | <0.05 | <0.05 | 0.15 | <0.05 | DRY | 3.6 |

3.8 Escherichia coli

E. coli grab sample concentrations for the 2017/18 season are summarized in Table 3.8-1. Results in red text indicate an exceedance of the water quality objective of 100 CFU/100 mL. Table 3.8-2 lists the proportion of the grab samples that exceeded the objective for each site, broken down individually for wet event samples, dry event (baseflow) samples, and all samples.

Elevated *E. coli* concentrations were observed at all sites, indicating impairment throughout the watershed. CP-11 experienced very high *E. coli* concentrations, with all the grab samples significantly exceeding the PWQO. At sites AC-1, AC-3, and AC-4, all, to almost all, samples collected outside of the mid-April to end of May period exceeded the objective, with over 70% of all grab samples exceeding the objective. At sites AC-2, CP-7, and CP-18.1 the majority of the exceedances occurred in the summer and fall seasons, with 40 to 55% of all samples exceeding the objective.

At all sites, 80 to 100% of wet event samples were above the objective. Grab sample concentrations for wet events generally exceeded the PWQO more often than dry event samples. This is expected to be due to increased surface runoff during wet events contributing to elevated amounts of *E. coli* in the creeks. The exception was AC-4, where a higher number of dry day exceedances occurred.

For baseflow (dry) event samples, the proportion of samples exceeding the objective varied considerably by site. For AC-1, AC-4, and CP-11 over 75% of dry event samples exceeded 100 CFU/100 mL, for AC-3 and CP-7, 50 to 70% exceeded, and for AC-2 and CP-18.1, less than 33% of dry event samples exceeded.

The greatest difference in the proportion of wet event versus baseflow (dry) grab samples that exceeded the objective was at the CP-18.1 and AC-2, where 100 and 80% of wet event samples exceeded the objective, but only 29 and 33 % of dry event samples exceeded.

Table 3.8-1: *Escherichia coli* Concentrations (CFU/100mL.) for Grab Samples

| Dates | AC-1 Ancaster Ck upstream of Spencer Ck | AC-2 Sulphur Ck | AC-3 Ancaster Ck upstream of Sulphur Ck | AC-4 unnamed trib. of Ancaster Ck | CP-7 Spencer Ck | CP-11 Chedoke Ck | CP-18.1 Borers Ck | Classifi- cation | 24 hr. Precip. (mm) |
|-------------------------|--|--------------------|--|--|-----------------------|------------------------|-------------------------|---------------------|---------------------------|
| 4/12/2017 | 40 | 10 | 20 | 70 | 50 | 660000 | 10 | DRY | 2.2 |
| 4/27/2017 | 20 | 20 | 30 | 50 | 70 | 420 | 40 | DRY | 2.2 |
| 5/11/2017 | 30 | 50 | 30 | 30 | 40 | 5000 | 20 | DRY | 0 |
| 5/24/2017 | 90 | 20 | 210 | 50 | 80 | 41000 | 330 | WET | 7.4 |
| 6/7/2017 | 760 | 230 | 620 | 200 | 630 | 440000 | 630 | WET | 11.4 |
| 6/21/2017 | 2900 | 2180 | 3000 | 1250 | 2100 | 40000 | 750 | DRY | 2.4 |
| 7/5/2017 | 290 | 220 | 390 | 160 | 300 | 4000 | 160 | DRY | 0 |
| 7/19/2017 | 560 | 250 | 410 | 290 | 320 | 800 | 50 | WET | 0 |
| 7/27/2017 | 520 | 340 | 530 | 450 | 930 | 2680 | 120 | WET | 15.2 |
| 8/16/2017 | 1300 | 330 | 360 | 740 | 400 | 3400 | 110 | DRY | 2.2 |
| 8/30/2017 | 510 | 240 | 450 | 330 | 310 | 670 | 150 | DRY | 0 |
| 9/15/2017 | 420 | 120 | 300 | 550 | 280 | 1120 | 40 | DRY | 0 |
| 9/27/2017 | 180 | 970 | 590 | 1600 | 850 | 200 | <10 | DRY | 1 |
| 10/11/2017 | 740 | 260 | 670 | 470 | 720 | 1540000 | 100 | WET | 7.4 |
| 10/25/2017 | 270 | 170 | 280 | 330 | 470 | 210000 | 210 | WET | 6.2 |
| 11/8/2017 | 2400 | <100 | 100 | 100 | 100 | 6400 | 100 | DRY | 0 |
| 11/22/2017 | 460 | 30 | 170 | 120 | 80 | 1810000 | 20 | DRY | 0 |
| 12/6/2017 | 130 | 50 | 120 | 230 | 1070 | 83000 | 20 | DRY | 0 |
| 12/20/2017 | 480 | 30 | 440 | 110 | 90 | 2600 | 100 | DRY | 0 |
| 1/3/2018 | 400 | <10 | 540 | --- | --- | --- | 40 | DRY | 0 |
| 1/17/2018 | 150 | 30 | 480 | 120 | 140 | 12400 | 10 | DRY | 0.2 |
| 2/13/2018 | 160 | 30 | 90 | 340 | <10 | 11000 | 60 | DRY | 0 |
| 2/14/2018 | 70 | 30 | 80 | 420 | 40 | 109000 | 50 | DRY | 0 |
| 2/28/2018 | 30 | 20 | 20 | 170 | 20 | 37000 | 10 | DRY | 0 |
| 3/14/2018 | 120 | 20 | 70 | 560 | 10 | 210000 | 10 | DRY | 0 |
| 3/28/2018 | 180 | 20 | 310 | 260 | 60 | 420000 | 170 | DRY | 3.6 |
| Dry Events (Geomean) | 211 | 65 | 171 | 227 | 131 | 14626 | 47 | | |
| Wet Events (Geomean) | 476 | 204 | 462 | 300 | 566 | 446736 | 278 | | |
| Total Geomean | 244 | 82 | 210 | 231 | 175 | 19471 | 64 | | |

Table 3.8-2: Proportion of Grab Samples that Exceeded the *E. coli* Objective

| Site | Total Exceedance | Dry Exceedance | Wet Exceedance |
|---|------------------|----------------|----------------|
| AC-1 Ancaster Ck upstream of Spencer Ck | 76.9 | 76.2 | 80.0 |
| AC-2 Sulphur Ck | 42.3 | 33.3 | 80.0 |
| AC-3 Ancaster Ck upstream of Sulphur Ck | 73.1 | 66.7 | 100.0 |
| AC-4 unnamed trib. of Ancaster Ck | 84.0 | 85.0 | 80.0 |
| CP-7 Spencer Ck | 56.0 | 47.6 | 80.0 |
| CP-11 Chedoke Ck | 100.0 | 100.0 | 100.0 |
| CP-18.1 Borers Ck | 46.2 | 28.6 | 100.0 |

An analysis of the geometric mean *E. coli* concentration was also completed. Figure 3.8-1 below shows the *E. coli* geometric mean concentration for wet event, dry event, and total samples. Figure 3.8-2 shows the same information for site CP-11. This is done due to the large difference in values of CP-11 compared to the other sites.

The majority of sites had geometric mean *E. coli* concentrations for wet event, dry event (baseflow), and total samples that were all above the target of 100 CFU/100 mL. That said, at AC-2, and CP-18.1 only the average concentration for wet event samples exceeded the objective, with dry event and overall averages being below the objective.

The average concentration for wet event samples was typically considerably greater than that for baseflow samples.

Site CP-11 again had the highest average concentrations (by a significant margin). Sites AC-2 and CP-18.1 are the only sites with an average concentration for total samples below the objective of 100 CFU/100 mL.

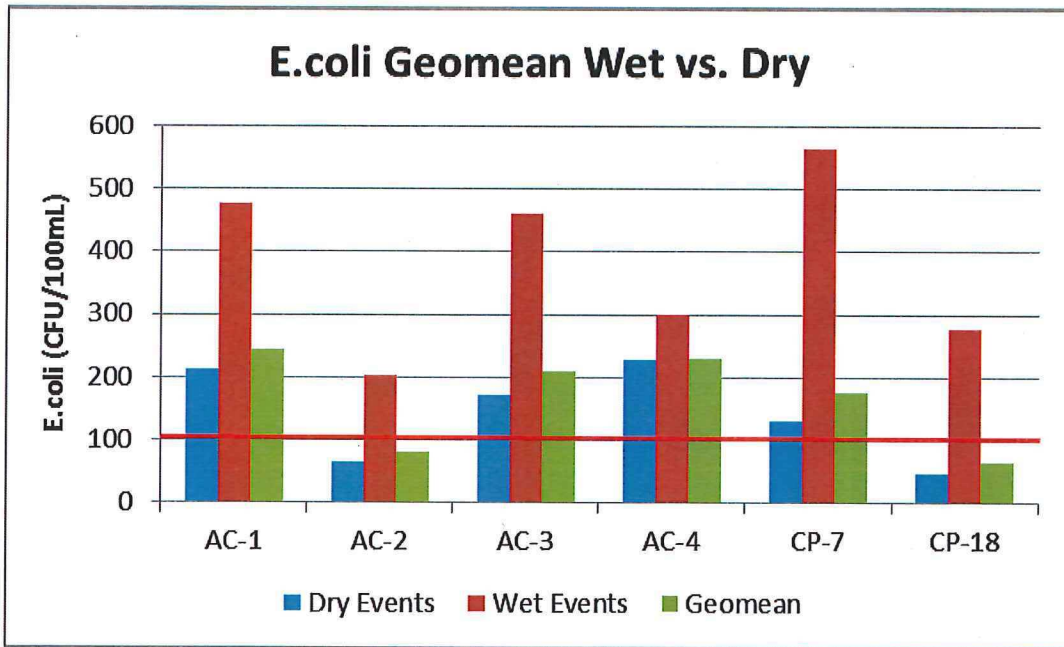


Figure 3.8-1: E. coli geometric mean concentration at each site for wet event, dry event, and total grab samples.

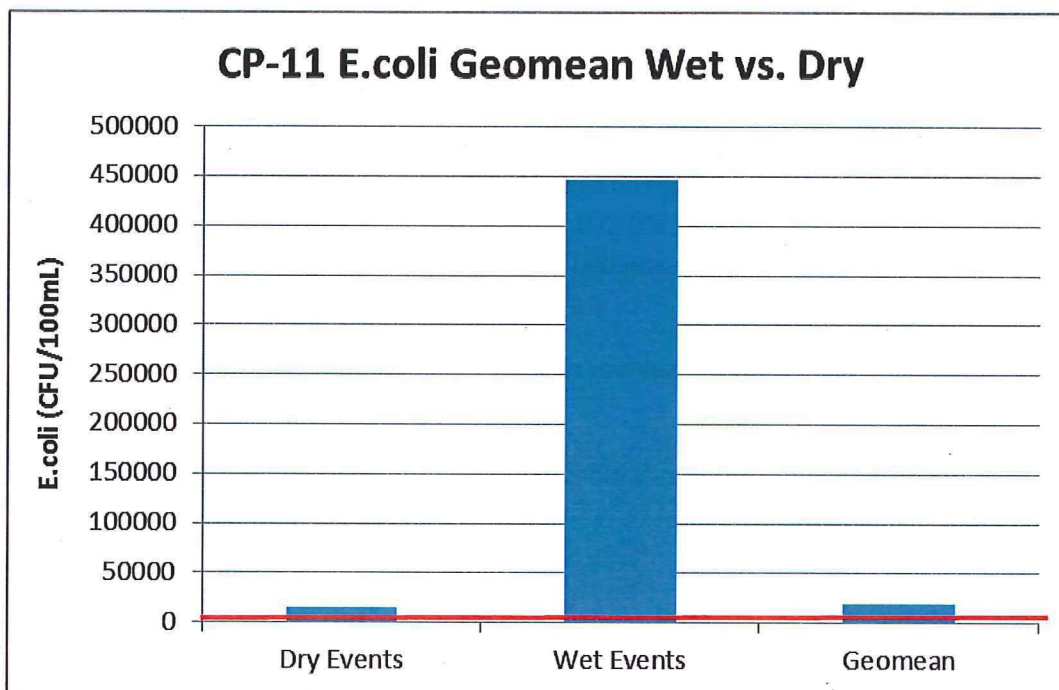


Figure 3.8-2: CP-11 E. coli geometric mean concentration for wet event, dry event, and total grab samples

Figure 3.8-3 below shows the seasonal relationship of grab samples taken on wet versus dry events for each site (except CP-11). No winter wet event samples were obtained due to timing of sampling days.

The average concentrations for wet event samples in the summer were the highest of any season at most sites. CP-11 had the highest value, followed by CP-7.

The lowest average concentrations typically occurred for dry events in the spring and winter. For dry event (baseflow) samples in the winter, sites AC-1, AC-3, and AC-4, are the only sites to exceed the objective. For dry event samples in the spring, only sites AC-4 and CP-7 exceeded (slightly) the PWQO. Interestingly, for wet event samples in the spring, many sites had an average concentration much greater than the objective (except for AC-2 and AC-4).

As expected, in the majority of instances the seasonal averages for wet events were greater than the corresponding seasonal average for baseflow samples.

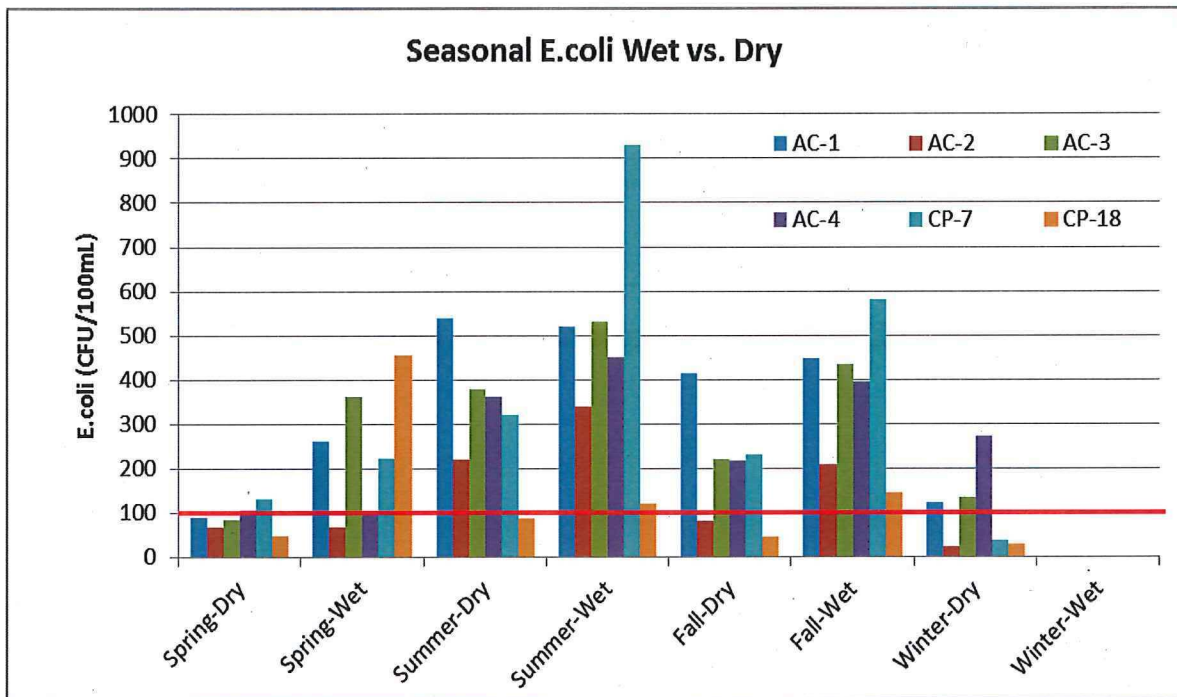


Figure 3.8-3: *E. coli* seasonal geometric mean concentration at each site for wet and dry event grab samples

Figure 3.8-4 shows the *E. coli* seasonal average concentrations for each site (except CP-11), when considering all samples. Figure 3.8-5 shows the *E. coli* seasonal average concentrations for CP-11, when considering all samples. In general, at most sites the seasonal average concentration when considering all samples was significantly greater in the summer and fall, and considerably less in the spring and even more so in the winter. The figure also indicates that summer had the highest grab sample overall concentrations at the majority of sites. Interestingly, for site CP-11 it was the winter and fall seasons with the highest total average *E. coli* concentrations, and the summer season with the lowest value.

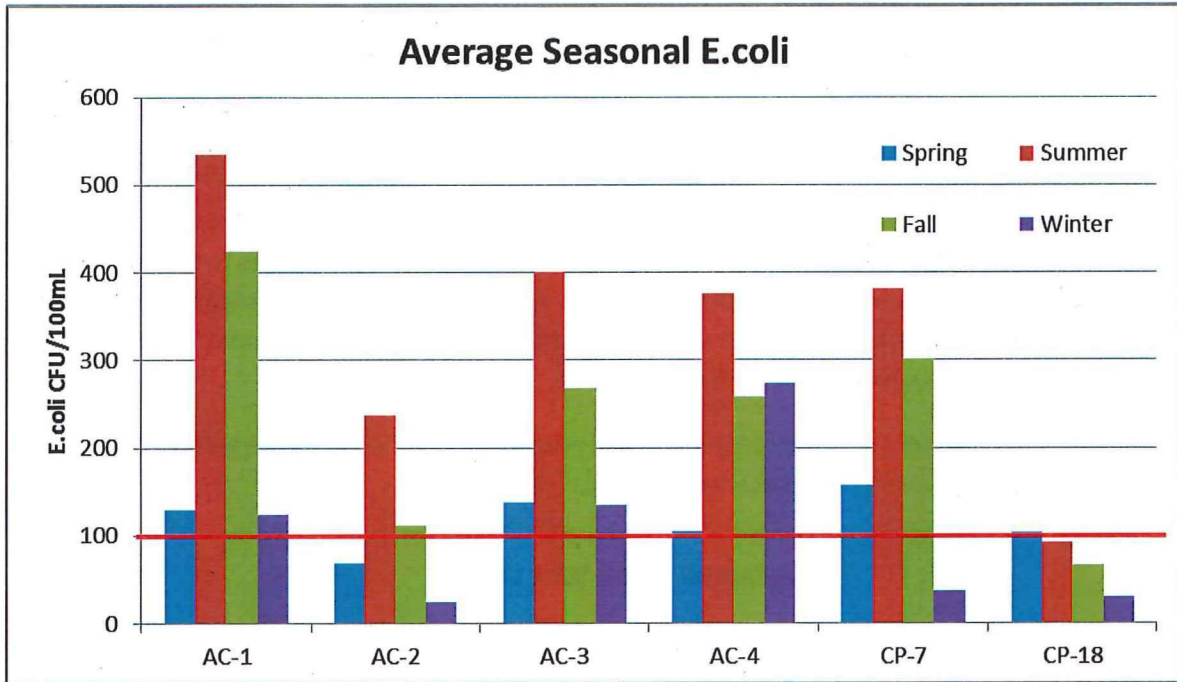


Figure 3.8-4: E. coli seasonal geometric mean concentration at each site for total grab samples

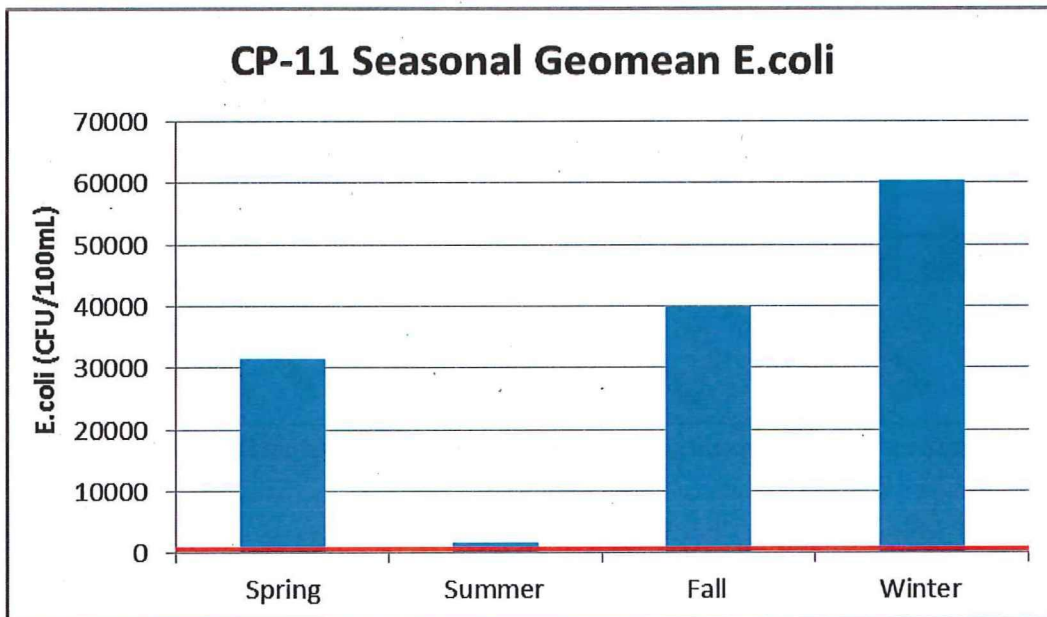


Figure 3.8-5: CP-11 E. coli Seasonal geometric mean concentration for total grab samples

4. 2017-2018 Water Quality Results – Automated Storm Event Samples

In addition to the grab samples detailed above, the sampling program also includes automatic storm event sampling (using an ISCO sampler) to determine the impairment to water quality during significant storm events. Eight storm events were targeted by the automated samplers. For some storm events, particular sites did not obtain samples, typically due to a technical difficulty relating to power supply or blockages in the intake line.

4.1 Storm Event Sample Results

Table 4.2-1 shows the concentrations for key water quality parameters for the eight storm events captured in 2017/2018 using the automated samplers at AC-1, AC-5, SC-1, and SC-2. The table also summarizes the rainfall totals associated with each storm event. Text in red indicates concentrations which exceed the guidelines/objectives.

For TP and *E. coli*, all storm event samples collected at the available stations exceeded the PWQO. For TSS, roughly half of the samples collected across all the storm events and stations exceeded the HHRAP objective. For nitrate, there were no exceedances, suggesting that it is not a parameter of concern during large storm runoff events.

Of the stations, AC-1 (at the downstream end of Ancaster Creek) had the greatest concentrations (by a significant margin) of TP, *E. coli*, and TSS for the majority of storm events collected. SC-2 (Spencer Creek above the Escarpment) typically had the lowest concentrations of *E. coli* and TSS for the storm events collected. SC-1 (Spencer Creek below the Escarpment and located within the town of Dundas) typically had the lowest concentrations of TP for the storm events collected.

A review was made with regards to changes in water quality within Spencer Creek between SC-2 (above the Escarpment) and SC-1 (below the Escarpment). In general, there was no significant change in TP moving downstream in Spencer Creek, except for the largest two storm events. For these events (April 21 and Aug 12), there was a decrease in TP concentrations moving downstream in Spencer Creek. Contrastingly, there was an increase in *E. coli* concentrations, as well as a small increase in TSS concentrations, moving downstream in Spencer Creek for many of the storm events.

Also of interest, the storm event concentrations for TP, *E. coli*, and TSS generated from Ancaster Creek were all significantly greater than that from Spencer Creek.

Table 4.2-1: Storm Event Sample Concentrations for Key Parameters.

| Date | Site | Parameter | | | | |
|----------------------|------|--------------|-------------------|------------------------|---------------|---------------|
| | | TP (mg/L) | Nitrate (mg/L) | E. coli (CFU/100mL) | TSS (mg/L) | VSS (mg/L) |
| 4/4/2017 18.2 mm | AC-1 | --- | --- | --- | --- | --- |
| | SC-1 | 0.048 | 1.08 | 0 | 16.5 | 4.2 |
| | SC-2 | --- | --- | --- | --- | --- |
| 4/21/2017 51 mm | AC-1 | --- | --- | --- | --- | --- |
| | SC-1 | 0.347 | 0.68 | 1200 | 196 | 21.8 |
| | SC-2 | 0.403 | 0.72 | 900 | 106 | 17 |
| 5/5/2017 21.6 mm | AC-1 | 2.49 | 0.5 | 1080 | 2510 | 118 |
| | SC-1 | 0.115 | 0.63 | 490 | 45 | 9 |
| | SC-2 | 0.1 | 0.55 | 310 | 22 | 6 |
| 8/12/2017 33.8 | AC-1 | 0.352 | 0.5 | --- | 335 | 30 |
| | SC-1 | 0.078 | 0.44 | --- | 26 | 7.2 |
| | SC-2 | 0.109 | 0.52 | --- | 25.3 | 6.3 |
| 10/24/2017 16.4 m | AC-1 | --- | --- | --- | --- | --- |
| | SC-1 | 0.046 | 0.46 | 1850 | 4.1 | 3.4 |
| | SC-2 | 0.049 | 0.53 | 450 | 4.9 | 4.3 |
| 11/2/2017 23 mm | AC-1 | 0.174 | 0.53 | 2200 | 123 | 14 |
| | SC-1 | 0.047 | 0.41 | 380 | 13 | 4 |
| | SC-2 | 0.052 | 0.61 | 250 | 5 | 2.5 |
| 11/18/2017 21 mm | AC-1 | 0.12 | 0.44 | 300 | 82.1 | 9.2 |
| | SC-1 | 0.048 | 0.53 | 200 | 12 | 4.7 |
| | SC-2 | 0.046 | 0.62 | 100 | 9.4 | 3.3 |
| 2/20/2018 15.6 mm | AC-5 | 0.132 | 0.74 | 700 | 24.4 | 8.5 |
| | AC-1 | --- | --- | --- | --- | --- |
| | SC-1 | 0.201 | 1.26 | 200 | 96.8 | 14.1 |
| 2/21/2018 21.4 mm | SC-2 | 0.224 | 1.03 | 100 | 34.5 | 7.2 |
| | AC-5 | --- | --- | --- | --- | --- |
| | AC-1 | --- | --- | --- | --- | --- |
| 2/21/2018 21.4 mm | SC-1 | --- | --- | --- | --- | --- |
| | SC-2 | --- | --- | --- | --- | --- |
| | AC-5 | 0.247 | 0.72 | 640 | 89.4 | 17.5 |

Table 4.2-2 compares the routine grab sample averages (wet event and total samples) to the storm event sample averages at site AC-1. This is the only site that currently has both types of sampling.

For key water quality parameters (TP, *E. coli*, TSS), average concentrations for storm events were substantially greater than grab sample average concentrations (either for wet events or total samples). In addition, for TP, the storm event average at AC-1 was significantly greater than the PWQO while the grab sample averages only slightly exceeded the objective. For *E. coli*, both the storm event and grab sample averages considerably exceeded the PWQO. For TSS, the average for storm events significantly exceeded the HHRAP objective however the routine grab sample averages were below the objective.

These findings may indicate that, at AC-1 at least, significant storm events can greatly increase the amount of sediments, nutrients, and bacteria being transported downstream. However, additional years of sampling of intense rain events, as well as possible large snowmelt events is needed to gain a further understanding of how intensity affects water quality in the creeks. It also shows the difference in the ability of the two methods to provide information on the actual amount of nutrients being measured. Consistent with previous MECP monitoring of the tributaries, continuous measurements have been shown to provide better estimates of the event given the ability to measure peak flows and concentrations.

Table 4.2-2: Site AC-1 Routine Grab versus Event Sample Comparison.

| AC-1 Routine Grab vs. Event Sample Comparison | | | | | |
|---|--------------|-------------------|------------------------|---------------|---------------|
| | TP (mg/L) | Nitrate (mg/L) | E. coli (CFU/100mL) | TSS (mg/L) | VSS (mg/L) |
| Storm Event Average | 0.784 | 0.493 | 893.3 | 762.5 | 42.8 |
| Routine Grab Wet Event Average | 0.034 | 0.46 | 476 | 8.6 | 2 |
| Routine Grab Total Samples Average | 0.031 | 0.619 | 244.2 | 11.9 | 2.6 |

5. Discussion Summary

The data collected during the 2017/2018 year-round sampling program has provided further insight into the overall water quality contributions from creeks entering Cootes Paradise.

5.1 Overall Findings by Water Quality Parameter

Table 5.1-1 summarizes the average concentrations for key water quality parameters at each site, separately considering the average for all dry event samples, wet event samples and all samples collected. Red text indicates exceedance of the PWQO, CWQG or HHRAP objective for that water quality parameter. The site locations are re-iterated in Section 5.2 below for reference.

Table 5.1-1: Average Concentrations (for Dry Events, Wet Events, and Total Samples) for Key Water Quality Parameters at All Sites.

| Parameter | Dry or Wet Event | Average Concentration | | | | | | |
|---------------------|-------------------|-----------------------|-------|-------|-------|-------|-------|----------|
| | | AC-1 | AC-2 | AC-3 | AC-4 | CP-7 | CP-18 | CP-11 |
| TP (mg/L) | Dry (21 events) | 0.030 | 0.032 | 0.029 | 0.042 | 0.038 | 0.040 | 0.506 |
| | Wet (5 events) | 0.034 | 0.029 | 0.038 | 0.054 | 0.044 | 0.047 | 0.490 |
| | Total (26 events) | 0.031 | 0.032 | 0.031 | 0.045 | 0.040 | 0.041 | 0.497 |
| TSS (mg/L) | Dry Events | 12.77 | 18.27 | 11.14 | 10.87 | 9.77 | 7.22 | 19.19 |
| | Wet Events | 8.60 | 11.40 | 8.54 | 16.50 | 12.08 | 4.44 | 13.18 |
| | Total Average | 11.90 | 16.95 | 10.55 | 11.90 | 10.17 | 6.42 | 17.99 |
| Nitrate (mg/L) | Dry (21 events) | 0.66 | 0.53 | 0.80 | 0.62 | 0.72 | 0.71 | 1.70 |
| | Wet (5 events) | 0.46 | 0.28 | 0.67 | 0.38 | 0.52 | 0.433 | 0.943 |
| | Total (26 events) | 0.619 | 0.477 | 0.772 | 0.560 | 0.672 | 0.635 | 1.492 |
| E. coli (CFU/100mL) | Dry (21 events) | 210.9 | 65.0 | 170.7 | 227.0 | 131.3 | 46.7 | 14626.2 |
| | Wet (5 events) | 476.0 | 204.0 | 462.0 | 300.0 | 566.0 | 278.0 | 446736.0 |
| | Total (26 events) | 244.2 | 81.5 | 209.8 | 230.6 | 175.0 | 63.9 | 19471.0 |

All sites had samples exceeding the TP objective, with the proportion of exceedances varying from about 25% (AC-2) to 100% (CP-11). In addition, at the sites the average TP concentrations for dry events, wet events, and total samples typically exceeded the objective. All sites had an average total sample TP concentration higher than the target of 0.03 mg/L, although AC-1, AC-2, and AC-3 averages were just above the objective. All sites except for AC-2 had an average wet event concentration greater than the objective. Site AC-3 was the only site that did not exceed the objective for dry event (baseflow) samples. In general, wet event samples had significantly higher average concentrations than dry event samples, except at AC-2 and CP-11.

For *E. coli*, all sites had samples exceeding the objective, with the proportion of exceedances varying from about 40% (AC-2) to 100% (CP-11). In addition, as for TP, the average *E. coli* concentrations for dry events, wet events, and total samples typically exceeded the objective. All sites had an average wet event concentration higher than 100 CFU/100mL. Most sites also had an average *E. coli* concentration for total samples and dry event samples that was higher than the objective, with the exceptions being AC-2 and CP-18.1. At all sites, wet event samples had significantly higher average concentrations than dry event samples.

In general, TSS was not a water quality parameter of concern. Only a small number of samples at a few sites exceeded the objective (at AC-1, AC-2, CP-11, and AC-4). Also, at all sites the average concentrations were all below 25 mg/L. For the majority of sites (except AC-4 and CP-7), TSS concentrations were higher for dry event (baseflow) samples. This trend is interesting as TSS has been typically observed to be higher during wet events, due to increased runoff and erosion contributing increased sediments into the watercourses.

In addition, nitrate, unionized ammonia, and nitrite were also not generally found to be of concern. The exception was nitrite at CP-11. Site CP-11 was the only site with any considerable amount of exceedances in nitrite, with the majority of elevated levels occurring in the spring, summer, and winter.

Samples were also analyzed for concentrations of orthophosphate. Results were not provided above because all samples have routinely reported concentrations below the minimum detection limit.

5.2 Overall Findings by Sampling Site

The beginning of 2017 sampling seasons was marked by high water levels in Lake Ontario, and as a result higher water levels in Cootes Paradise. These higher water levels were observed in Chedoke and Spencer Creeks via backflow, where the mouth of these creeks could not properly flow into the marsh. This has the potential to have impacted some of the sample concentrations found at sites CP-11, CP-7, and AC-1. However, the magnitude of this impact could not be quantified, and as such the sampled concentrations have been presented unaltered.

Site CP-11 (at the downstream end of Chedoke Creek) continues to be the most impaired location. This site is located downstream of a number of combined sewer overflow (CSO) locations, which can discharge raw sewage into the creek during some high flow events. The proximity to CSO's, combined with the urban nature of this watershed are possible reasons why this location is experiencing poor water quality. CP-11 had average concentrations that were significantly higher than any other site for each water quality parameters, with the exception of TSS average for wet events (where CP-11 was second highest). That said, the main parameters of concern for CP-11 were determined to be TP and *E. coli*, due to the number of exceedances of the objectives and the large amount by which these objectives were exceeded. The average concentrations for TP and *E. coli* were all significantly above the objectives (for dry events, wet events, and total samples). In addition, CP-11 experienced routine exceedances for nitrite (most exceedances occurred during the winter and spring), while all other sites

predominantly had concentrations below lab detection limits. Contrastingly, for TSS, concentrations were predominantly below the HHRAP objective (6 exceedances of 26 samples). Of interest to note, wet event grab samples for TP, TSS, and VSS indicated a possible dilution effect, as dry event samples tended to have higher concentrations.

Site AC-4 (a small unnamed tributary of Ancaster Creek) had water quality of concern primarily for TP and *E. coli*. That said, it should be noted that this creek contributes considerably less flow than the other locations, which is expected to result in limited relative loading amounts to Cootes Paradise. The average concentrations for TP and *E. coli* were all above the PWQOs (for dry events, wet events, and total samples). AC-4 routinely exceeded the TP objective, and almost 85% of all grab samples exceeded the *E. coli* objective.

For Site CP-7 (at the downstream end of Spencer Creek, and including the contributions from Ancaster Creek) the main parameters of concern were TP and *E. coli*. The average concentrations (for dry events, wet events, and total samples) for TP and *E. coli* were all higher than the PWQOs. About 65% of samples exceeded the TP objective, including 80% of wet event samples. For *E. coli*, 55% of samples exceeded 100 CFU/100 mL, including 80% of wet event samples. Wet events produced greater values in terms of TP and *E. coli*. CP-7 had the highest *E. coli* average concentration for wet events, compared to sites other than CP-11. Of interest, CP-7 had no samples exceeding the TSS HHRAP objective.

Site AC-1 (at the downstream end of Ancaster Creek, before the confluence with Spencer Creek) showed water quality concerns primarily for *E. coli*. The average concentrations for *E. coli* were all above the 100 CFU/100 mL (for dry events, wet events, and total samples). About 75% of samples exceeded the *E. coli* objective, including 80% of wet event samples. Also, almost all samples outside of the mid-April to end of May period exceeded 100 CFU/100 mL. Wet events produced considerably greater *E. coli* values, compared to dry event (baseflow) samples. AC-1 had the highest *E. coli* average concentration when considering all samples, compared to sites other than CP-11. For TP, the average concentrations (for wet events and total samples) were just above 0.03 mg/L, while the dry event average was at the objective. This site had the greatest difference in the proportion of wet event versus dry event grab samples that exceeded the TP objective, where 80% of wet event samples exceeded but only 19% of dry event samples exceeded the objective.

For this sampling year CP-7 had higher TP and nitrate concentrations and AC-1 had higher TSS and *E. coli* concentrations. This may imply that TSS and *E. coli* are being diluted once they enter Spencer Creek, while upstream of the confluence with Ancaster Creek, Spencer could be experiencing considerably higher loadings of TP and nitrate.

For Site AC-2 (at the downstream end of Sulphur Creek before the confluence with Ancaster Creek) the water quality results were fairly good, with *E. coli* during wet events being the only concern. AC-2 was one of only two sites (along with CP-18.1) with an average *E. coli* concentration for total samples below 100 CFU/100 mL. That said, the average concentration for wet events was twice the objective. Interestingly, about 40% of the total samples exceeded the objective. Also of interest to note, one of the greatest differences in the proportion of wet event versus baseflow grab samples that exceeded the *E.*

coli objective was at the AC-2, where 80% of wet event samples exceeded the objective, but only 33 % of dry event samples exceeded. The average TP concentrations were all near the objective, with the total sample average being the only one just above 0.03 mg/L. Only about 25% of samples exceeded the TP objective, including 40% of wet event samples. AC-2 was one of two sites (along with CP-11) where the average TP concentration for dry events was greater than for wet events. Regarding TSS, although the number of exceedances were relatively low and the average concentrations were all well below the objective, AC-2 had the second highest average TSS concentration for total samples (the highest was CP-11). AC-2 had 5 exceedances (representing less than 20% of samples), that were predominantly dry event, summer season grab samples.

Site AC-3 (in the main branch of Ancaster Creek, before the confluence with Sulphur Creek) showed water quality concerns primarily regarding *E.coli*. The average concentrations for *E. coli* were all above 100 CFU/100 mL (for dry events, wet events, and total samples). Interestingly all samples outside of the periods of mid-February to mid-March and mid-April to end of May exceeded the *E. coli* objective. In all, about 75% of samples exceeded the *E. coli* objective, including 100% of wet event samples. The average TP concentrations were all near 0.03 mg/L, with the total sample and wet events averages being just above the objective. AC-3 was the only site with a dry event TP average below 0.03 mg/L. Approximately 40% of samples exceeded the TP objective, including 80% of wet event samples. This site has the second largest difference in the proportion of wet event versus dry event grab samples that exceeded the TP objective, where 80% of wet event samples exceeded but only 29 % of dry event samples exceeded the objective. For TSS, AC-3 had no exceedances of the objective.

Site CP-18.1 (at the downstream end of Borers Creek) showed water quality concerns primarily regarding TP and *E. coli* during wet events. The average concentrations (for dry events, wet events, and total samples) for TP were all slightly above the objective. In all, about 75% of samples exceeded the TP objective, including 80% of wet event samples. Interestingly, the average TP concentrations were similar when considering only dry events or only wet events. For *E. coli*, CP-18.1 had the lowest average concentration for dry event and total samples of any site, and was one of only two sites (along with AC-2) below the objective of 100 CFU/100 mL. That said, the average concentration for wet events exceeded the objective. Interestingly, about 45% of the total samples exceeded the objective, while 100% of wet event samples exceeded. The greatest difference in the proportion of wet event versus baseflow grab samples that exceeded the *E. coli* objective was at the CP-18.1. CP-18.1 had no samples exceed the TSS objective, and had the lowest average TSS concentration.

5.3 Overall Findings by Season

From a seasonal perspective, some water quality parameters showed clear seasonality across the sites, while for other parameters seasonal concentration trends varied amongst the sites. For *E. coli*, the summer season predominantly had the highest average concentrations at the sites, except for CP-11 (winter). In addition, winter season predominantly had the lowest *E. coli* seasonal average concentrations at the sites, except for CP-11 (summer) and AC-4 (spring). For TP and TSS, no clear highest or lowest season was consistently observed at the majority of sites.

The season with the highest average concentration(s) for the key water quality parameter(s) of concern was determined for each site. At CP-11, the highest seasonal average concentrations for TP and *E. coli* when considering all samples occurred in the winter season. At AC-4, the highest total average concentrations for TP and *E. coli* occurred in the fall and summer (respectively). At CP-7, AC-1, AC-2, and AC-3 the highest averages for *E. coli* always occurred in the summer. At CP-18.1, all the seasons had similar average TP concentrations.

6. Long Term Trends

Using HCA data as well as historical records obtained from the RBG for sites CP-7, CP-11, and CP-18.1 long-term trends were reviewed for total phosphorus, total suspended solids, nitrate, and *E. coli*.

The figures provide each monitoring year's average concentrations for *E. coli*, nitrate, TSS, and TP. Red lines on each graph indicate the PWQO/CWQG/HHRAP objective. For recent monitoring years (2016 – 2017), samples were collected April to March, therefore, for example the 2016 annual average concentration was calculated from samples collected April 2016 to March 2017. The Green vertical bar represents the delineation between RBG and HCA sampling.

It should be noted that the number of wet event samples collected each year varied considerably. Furthermore, there is significant variability in the magnitude of wet events collected each year, which as per the storm event automated sample results previously presented, can result in significant changes in average concentrations (wet event and total samples). Also, as the monitoring program has evolved, the total number of samples collected each year has increased, including the fact that in 2016 the monitoring program was extended to year-round, increasing the number of samples collected for each monitoring year. Winter sampling may have an effect on average concentrations, as initial data indicates that winter season concentrations are sometimes significantly different from other seasons.

As a result of all of the above, caution is recommended regarding the suggested trends in total sample annual average concentrations. Furthermore, although data is presented, trends for wet events were not assessed. This is due to the significant fluctuations in wet event annual averages and a relatively low number of wet event grab samples often collected in a given monitoring year.

That said, there is a higher level of confidence on the suggested trends regarding dry event (baseflow) average concentrations.

6.1 Site CP-7 (Spencer Creek)

Historical data is available for site CP-7, located in Spencer Creek near the outlet to Cootes Paradise (and including the contributions from Ancaster Creek). Figure 6.1-1 show each year's average concentration (considering all samples collected), for *E. coli*, nitrate, TSS, and TP. Figure 6.1-2 show each year's average concentration (for dry event and wet event samples), for *E. coli*, nitrate, TSS, and TP.

An improving trend over time, or no trend, is suggested for the parameters of interest for dry event and total samples average concentrations. *E. coli* annual average concentrations (dry event and total samples) suggest a decreasing trend over time. For TP, TSS, and nitrate, annual average concentrations (dry event and total samples) suggest slight decreasing trends.

For *E. coli* and TP almost all of the annual average concentrations are well above the PWQOs (for dry event, wet event, and total samples).

For TSS, some of the annual average concentrations are above the HHRAP objective, while some are below. A larger proportion of the annual average concentrations for wet events are above the objective while more annual dry event averages are below the objective.

For nitrate, the annual average concentrations are all well below the CWQG.

For TP, TSS, and *E. coli*, wet event annual averages experience more variation than dry events. This is likely due to the variation in intensity and number of wet event samples that are collected each year. In addition, wet event annual average concentrations are typically higher than for dry event averages. Nitrate concentrations do not appear to vary significantly between dry and wet event averages.

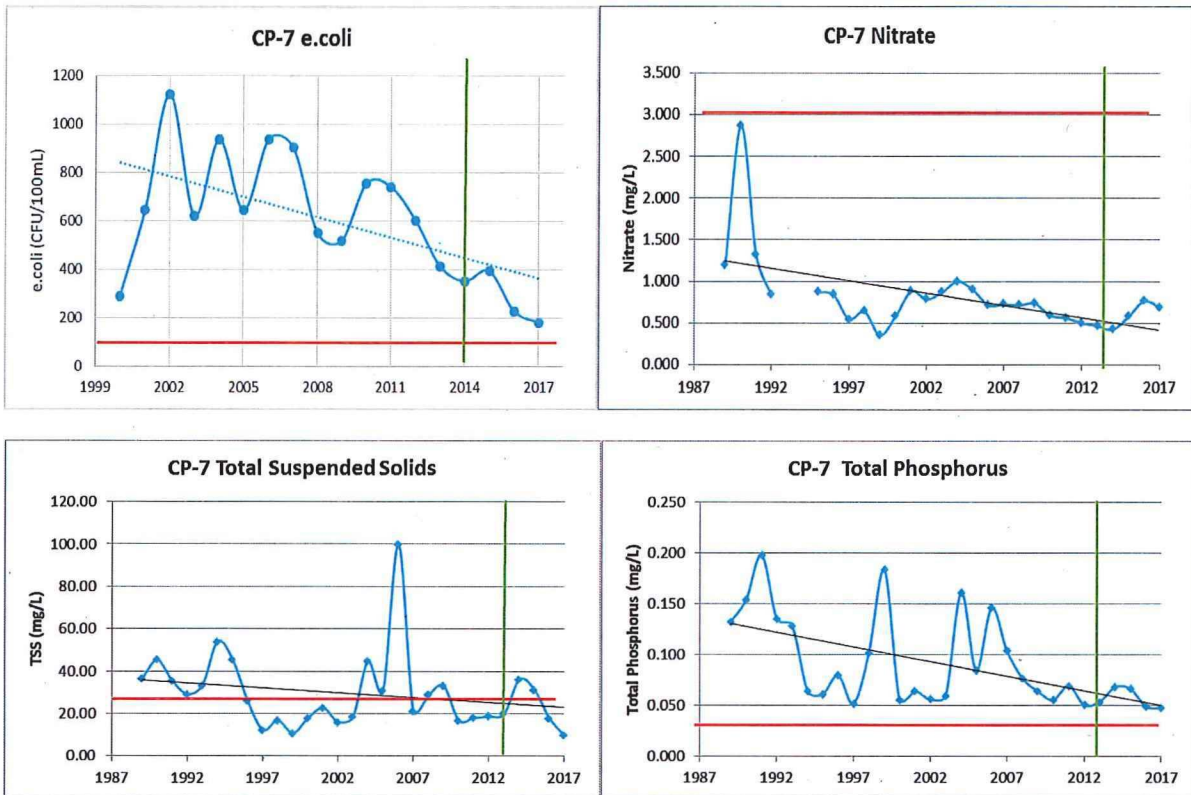


Figure 6.1-1: CP-7 Annual Total Average Concentrations

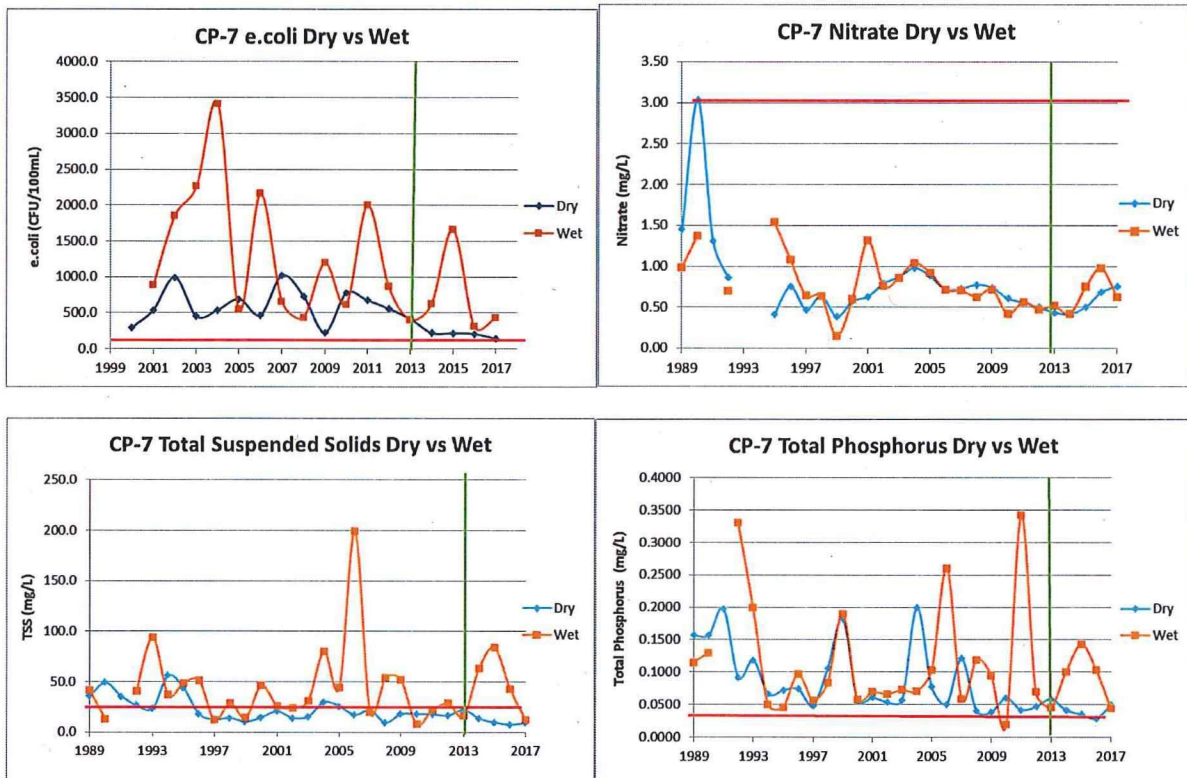


Figure 6.1-2: CP-7 Annual Wet Event and Dry Event Average Concentrations

6.2 CP-11 (Chedoke Creek)

Historical data is available for site CP-11, located in Chedoke Creek near the outlet to Cootes Paradise. Figure 6.2-1 show each year's average concentration (considering all samples collected), for *E. coli*, nitrate, TSS, and TP. Figure 6.2-2 show each year's average concentration (for dry event and wet event samples), for *E. coli*, nitrate, TSS, and TP.

Trends in annual average concentration were assessed separately for the period prior to 2014 and the period after 2014 due to a significant increase in average TP and *E. coli* concentrations starting in 2014. Potential reasons for this considerable increase in average concentrations continue to be reviewed.

For the period after 2014, it is acknowledged that additional data is required to confirm the suggested trends, due to the limited number of data points currently available.

For monitoring years prior to 2014, it is suggested that there has been a slight improving trend over time for most parameters of interest (dry event and total samples). However, *E. coli* annual average concentrations (for total samples) appear to have a slight increasing trend in concentration over time.

For monitoring years after 2014, it is suggested that *E. coli* annual average concentrations (for total samples) has an improving trend over time. For TP, annual average concentrations (for total samples) seems to have no definitive trend over time, while a slight increasing trend is suggested for dry event averages. For TSS, annual average concentrations (for total samples) there appears to be a decreasing trend over time, however it is suggested that for dry event averages there is no definitive trend. Nitrate annual average concentrations (total samples and dry event) seem to have an increasing trend over time.

For monitoring years prior to 2014, TSS annual average concentrations were sometimes above and sometimes below the objectives. The majority of years with TSS averages below the objective have occurred in recent years. For *E. coli* and TP, annual average concentrations were consistently above the objective. For nitrate, the annual average concentrations are all well below the objective.

For monitoring years after 2014, the same findings as prior to 2014 were observed.

For all parameters, wet event annual average concentrations vary more year to year than dry event averages. In addition, wet event annual average concentrations are typically higher than dry event averages for all water quality parameters except nitrate. For nitrate, dry event averages are typically higher than wet event averages.

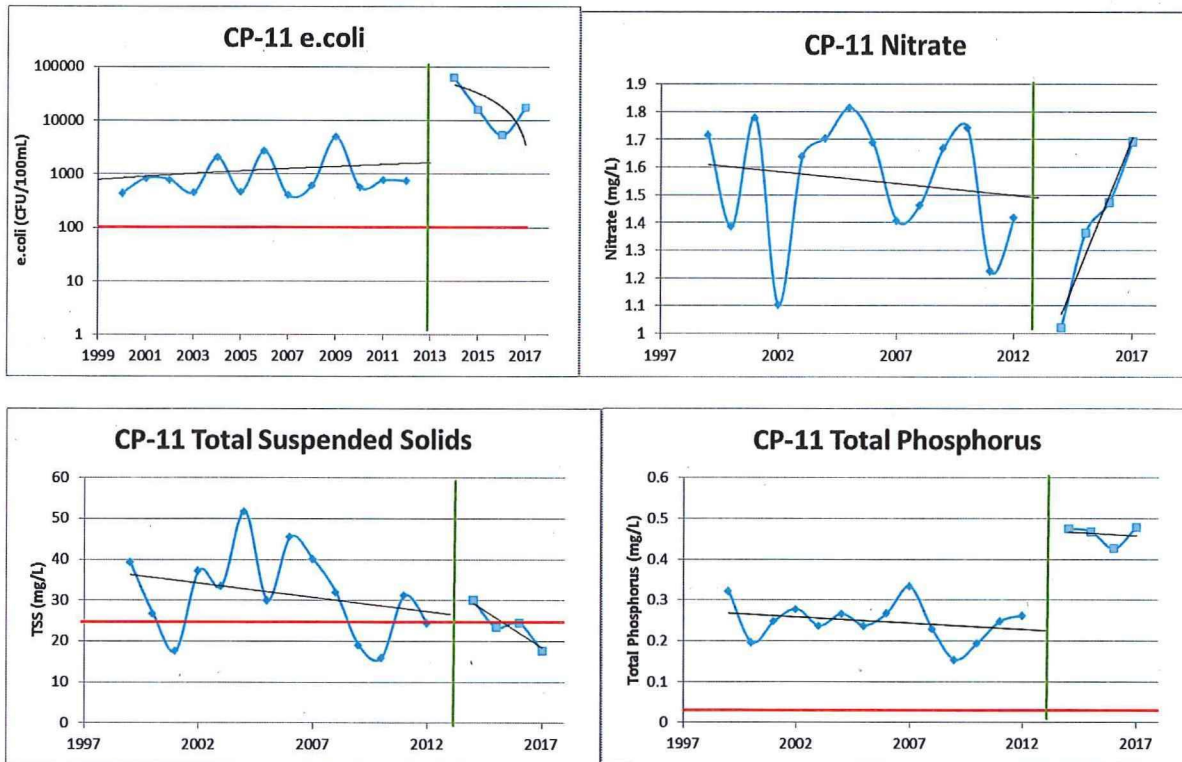


Figure 6.2-1: CP-11 Annual Total Average Concentrations

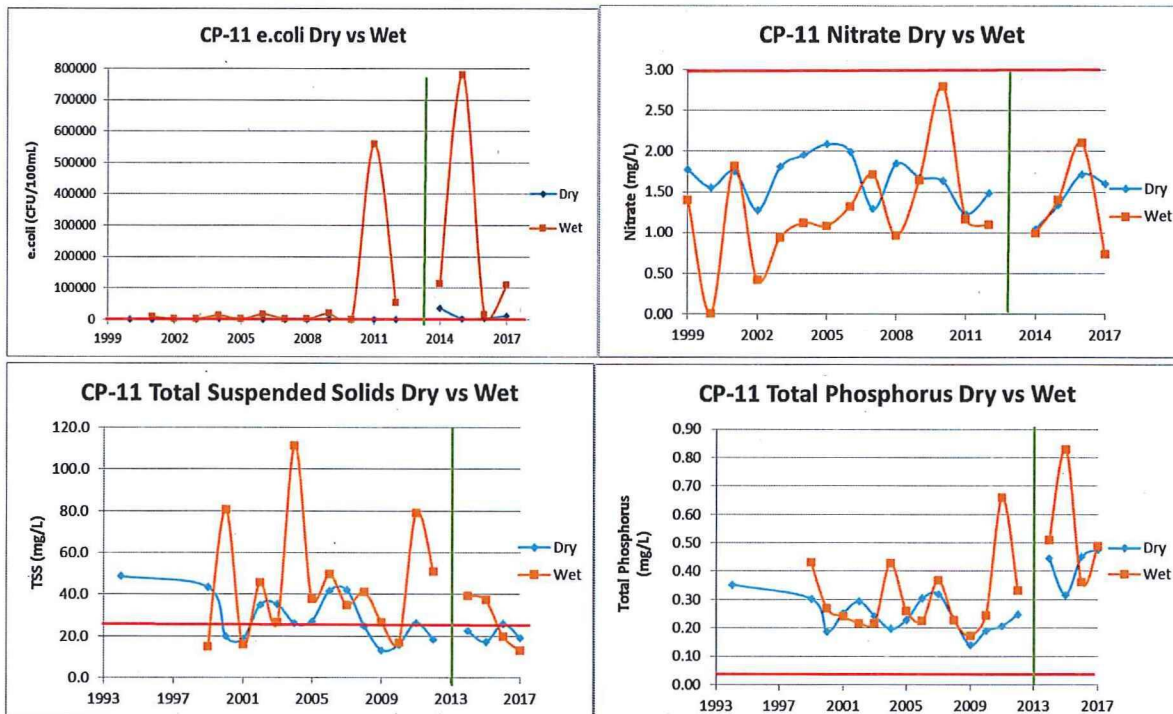


Figure 6.2-2: CP-11 Annual Wet Event and Dry Event Average Concentrations

6.3 CP-18.1 (Borers Creek)

Annual average concentrations (total samples and dry events) suggest a downward trend over time for all four key parameters.

For *E. coli* and TP the majority of the annual average concentrations have been well above the objectives (for dry event, wet event, and total samples).

For TSS, some of the annual average concentrations are above the objective, while some are below. An equal proportion of the annual average concentrations for wet events are above the objective compared to below the target, while most annual dry event averages are below the objective.

For nitrate, the annual average concentrations are almost entirely well below the objective.

For all parameters, wet event annual average concentrations vary more year to year than dry event averages. In addition, wet event annual average concentrations are typically higher than dry event averages, for all water quality parameters except nitrate. For nitrate, dry event averages are more often higher than wet event averages.

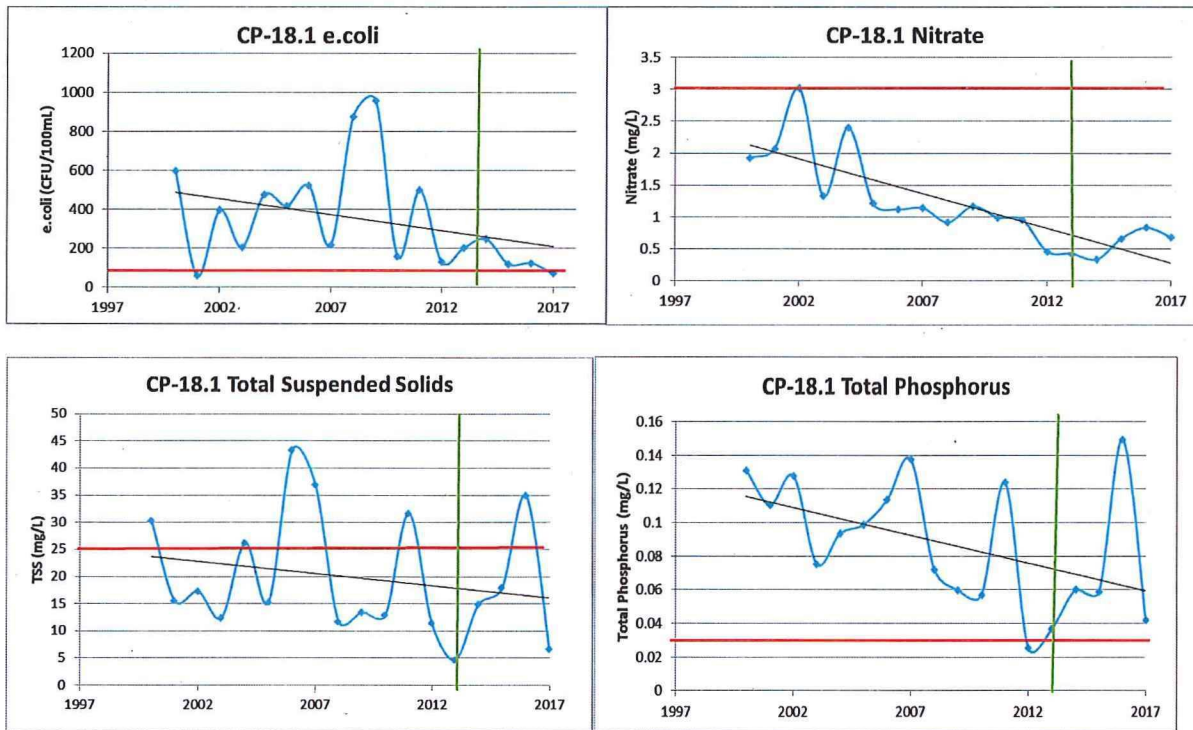


Figure 6.3-1: CP-18.1 Annual Total Average Concentrations.

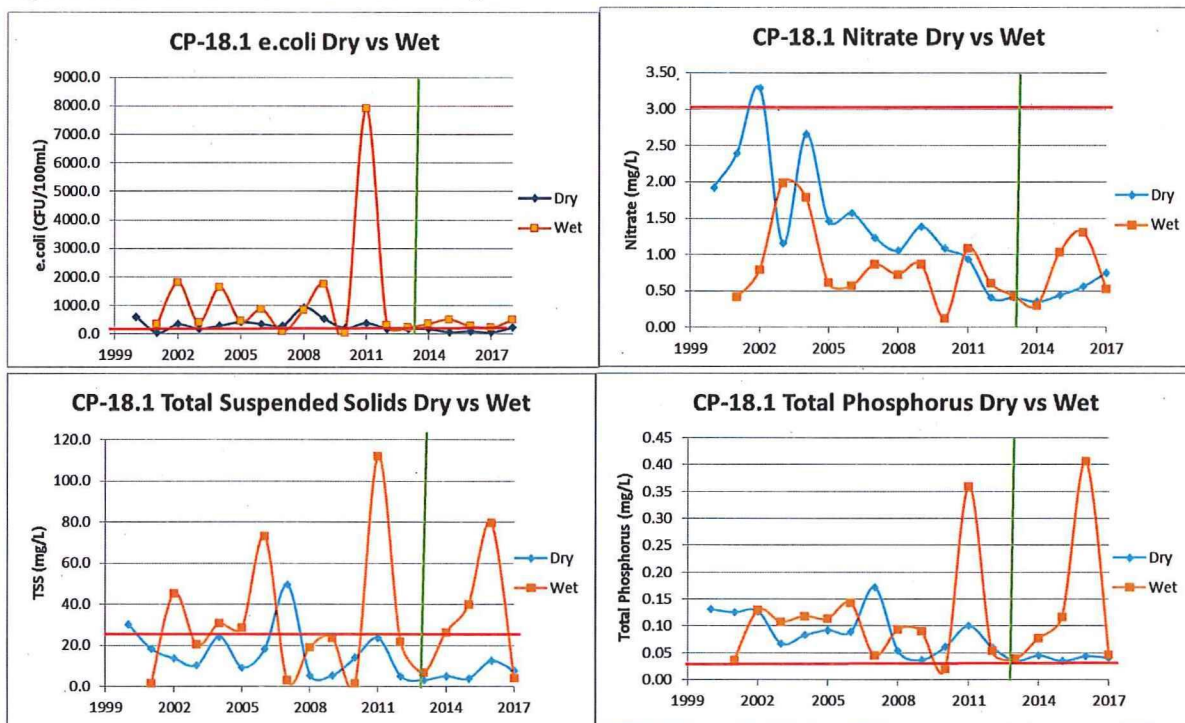


Figure 6.3-2: CP-18.1 Annual Wet Event and Dry Event Average Concentrations.

7. Conclusions

The 2017-2018 monitoring year resulted in expanded understanding of the overall water quality contributions from creeks entering Cootes Paradise Marsh. This second season of year-round monitoring has also provided more insight into the effects winter, early spring, and larger wet events have on water quality.

Site CP-11 (at the downstream end of Chedoke Creek) continues to be the most impacted location.

Regarding grab sample water quality, *E. coli* and TP were determined to be the key water quality concerns. Average TP and *E. coli* concentrations (dry event, wet event, and total samples) typically exceeded the objectives, at all to most of the sites. However, AC-1, AC-2, and AC-3 averages were just above the TP objective, and AC-2 and CP-18.1 had *E. coli* average concentrations for total samples and dry event samples that were below the objective.

In general, TSS was not a water quality parameter of concern. Only a small number of grab samples at a few sites exceeded the objective (at AC-1, AC-2, CP-11, and AC-4). In addition, nitrate, unionized ammonia (UA), and nitrite were also not generally found to be of concern. The exception was nitrite at CP-11.

With respect to wet event versus dry event grab sample concentrations, *E. coli* wet event concentrations were considerably higher than dry event averages at all sites. For TP, wet event concentrations were generally slightly higher than for dry events, with the exceptions being AC-2 and CP-11. Conversely, average nitrate, TSS, and UA concentrations for baseflow events were typically higher than wet event averages at the majority of sites, however there were some exceptions.

That said, storm events resulted in substantially greater average concentrations than grab samples, for key water quality parameters (TP, *E. coli*, TSS). These findings may indicate that significant storm events can greatly increase the amount of sediments, nutrients, and bacteria being transported downstream. However, additional years of sampling of intense rain events, as well as possible large snowmelt events is needed to gain further understanding of how intensity and other pre-post precipitation events and their frequency affects water quality in the creeks.

From a seasonal perspective, some water quality parameters showed clear seasonality across the sites, while for other parameters seasonal concentration trends varied amongst the sites.

Historical data suggests that for most locations water quality is improving. At CP-7, an improving trend over time, or no trend, is suggested. At CP-11 for monitoring years prior to 2014, it is suggested that there has been a slight improving trend over time however; *E. coli* appears to have a slight increasing trend in concentrations over time. For monitoring years after 2014, decreasing, increasing, and no trends were all suggested, dependent on water quality parameter and whether all samples were considered or only dry event samples. At CP-18.1, there appears to be an improving trend over time for all four key parameters.

There is a higher level of confidence on the suggested historical trends regarding dry event (baseflow) average concentrations. Caution is recommended regarding the suggested trends in total sample annual average concentrations. Furthermore, although data is presented, trends for wet events were not assessed. This is due to the significant fluctuations in wet event annual averages and relatively low number of wet event grab samples often collected in a given monitoring year.

The continued monitoring of these sites year-round is important not only to the continuing knowledge of the water quality entering the marsh but also provides revised background levels in the creeks to help direct improvement targets for parameters, as well as to measure the relative effects of future mitigation actions.

8. Future Planned Monitoring

For the 2018-2019 sampling season year-round routine grab sample monitoring will continue along with storm event sampling. There is a target of capturing 8 storm events at all four automated sampling stations.

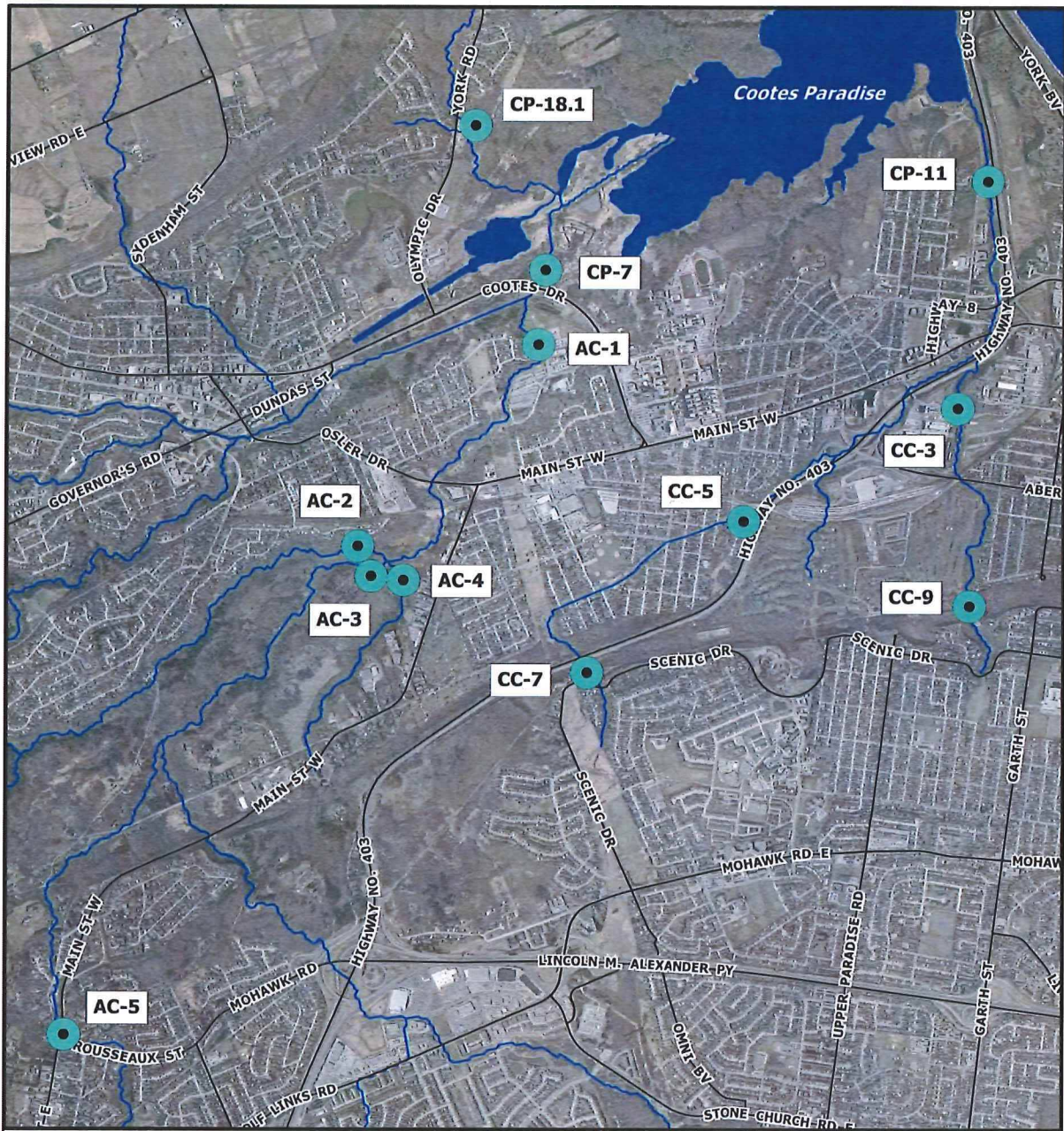
Five new routine grab sampling locations have been added for the 2018/19 season. One is located in Ancaster Creek (AC-5) at Wilson Street where automated storm event sampling already occurs. This will allow for comparison of baseline, wet event grab sample, and storm event samples.

The other four new sites are located in various branches of Chedoke Creek as seen in Figure 8-1 (CC-3, CC-5, CC-7, and CC-9). Lower reaches of Chedoke Creek (site CP-11) have exhibited very poor water quality making it beneficial to explore upstream reaches of Chedoke Creek to identify areas of concern and non-point sources of nutrients and bacteria. The addition of these 4 new grab sample locations are to further investigate areas that have shown to be contributing to the net negative water quality entering Cootes Paradise Marsh and to identify certain reaches that may be contributing more nutrients and bacteria than others.

Additionally, flow measuring devices are planned to be installed in Chedoke Creek and in Lower Spencer Creek, to continually monitor flows at these locations. This flow data will allow discharge and improved loadings calculations to be completed for the mouths of Spencer Creek and Chedoke Creek as they flow into Cootes Paradise Marsh. This information will provide a more accurate understanding of water quality in the watershed and possible remediation efforts from the various sources.

Greater data analysis will also be conducted for the next monitoring season. Further classification of wet days based on the amount of precipitation received will be conducted. In addition, available flow data will be reviewed on each creek to better classify baseflow and wet events. With the incorporation of flow data and year-round sampling it will be possible to identify snow-melt events and the impact they have on water quality. The HCA monitors flow in Spencer Creek at Market Street in Dundas, and Ancaster Creek at Rousseaux Street in Ancaster, with the addition of flow monitoring devices to be installed further down Spencer Creek and on Chedoke Creek it will be possible to better quantify

loadings into the marsh, and classify various runoff events and their intensity. For example a 5 mm rainfall event vs. a 50 mm rainfall event may have very different influences on water quality, and understanding how rainfall intensity and duration may affect different watercourses will give further insight as to when and how sediments and nutrients are being transported through the creeks and tributaries into Cootes Paradise Marsh.



Cootes Paradise Water Quality Monitoring for HHRAP



● Monitoring Station

0 1 km



Base Mapping supplied by the City of Hamilton, and the Ministry of Natural Resources.
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 All information provided is believed to be accurate and reliable.
 We will make changes, updates and deletions as required and make every effort to ensure the accuracy and quality of the information provided.
 However, the Hamilton Conservation Authority assumes no responsibility for any errors or omissions and is not liable for any damages of any kind resulting from the use of, or reliance on, the information contained herein.

Date Printed: 2018-05-11

File: monitoring stations for engineering tech.map



Figure 8-1: Cootes Paradise HCA Monitoring Locations



COUNCIL RESOLUTION

22

Res: 2020.01. 23

Wednesday, January 15, 2020

Moved by: Mike Hentz

Seconded by: Patricia Corneil

THAT Conservation Authorities have been protecting people and conserving and restoring watersheds with local communities for over 50 years; and

THAT Municipalities must work together to ensure resilient and healthy watersheds for residents; and

THAT Conservation Authorities will be important partners in concrete and cost-effective initiatives to address climate change.

THEREFORE IT BE RESOLVED THAT the Council of the Municipality of Dutton Dunwich supports the important role Conservation Authorities provide to local communities in delivering watershed management programs

AND THAT this resolution be circulated to all upper and lower-tier municipalities, Conservation Authorities and the Provincial Government (Minister of Environment, Conservation and Parks) in Ontario

| <u>Recorded Vote</u> | <u>Yeas</u> | <u>Nays</u> |
|----------------------|-------------|-------------|
| P. Corneil | _____ | _____ |
| A. Drouillard | _____ | _____ |
| K. Loveland | _____ | _____ |
| M. Hentz | _____ | _____ |
| B. Purcell – Mayor | _____ | _____ |

CARRIED:


 Mayor

DEFEATED:

 Mayor

Pilon, Janet

Subject: Purchase will help support Developers & Future Development Applications.

From: Lakewood Beach Community Council <LakewoodBeachCC@hotmail.com>

Sent: January 16, 2020 10:06 AM

To: DL - Council Only <dlcouncilonly@hamilton.ca>

Cc: clerk@hamilton.ca

Subject: Purchase will help support Developers & Future Development Applications.

A sidewalk is needed for the future residents of the 3 Triple Towers, as well as the most recent residents living in Green-Millen Shores development.

A safe off-road walkway has been needed in fact **for over 25 years** for citizens wishing to go to our local neighbourhood park. With the increase in development and vehicle traffic, walking, strolling and tri-cycling to the park has put our most vulnerable road users at increased risk.

Most of you have experienced disconnected sidewalks in your wards. Sidewalks that you tell your residents won't be connected until development occurs on those middle vacant lands. But what obligation do you have to provide safe passage to a local neighbourhood park on land that you are being told is undevelopable?

The grassed area, within the road allowance of 65 Francs Avenue school board property, is long overdue for a permeable sidewalk as a continuation of the existing sidewalk from the '90s built high density area as well as the vacant land at 310 Francs where the 3 skyscrapers are going. (see pic below)

The city can buy the property, and put in a sidewalk for @ the same cost as rezoning to Open Space with still no safe passage to the park.

In our opinions, it is financially, environmentally, and socially irresponsible to neglect the needs of the thousands of citizens who live in this area as well as not plan for the needs of additional citizens.

Respectfully,

Lakewood Beach Community Council

As you can see from the pic below, residents from the east currently walk/roll between parked cars/cars parking and moving vehicles at the northside, 65 Francs Ave



Forest Cut Down

Hello, my name is Charles and I am here to discuss the matter with the forest behind my house, also known as edge lake park/forest. I have had many good memories in this forest, and I don't want to lose it, especially because my dead hamster, Thunder is buried in that forest. I will now discuss the reasons that I don't want to lose this amazing piece of land that god gave to us. 1: It will destroy the ecosystem. Many plants and animals live in that forest and they matter just as much as we do. And we are destroying their ecosystems just for the money to destroy more ecosystems. 2: one day if we do build these buildings we will look back and regret our actions towards these beautiful creatures because you are stopping kids like me to explore and discover these creatures. And for a school board, I don't think that's what you want to do. 3: My house has been getting a lot of flooding recently, that is because the pipes aren't big enough to hold all the water that is being produced, so more building = more water, more water = more flooded houses. And those are my reasons that we shouldn't destroy the forest. Thank you for listening to my speech.



Memorandum

City Manager's Office

Date: January 22, 2020
To: Mayor Eisenberger and Members of Council
From: Janette Smith, City Manager
Subject: **Hamilton Transportation Task Force**

Please find attached some additional information that was received yesterday that relates to the Province's Hamilton Transportation Task Force, and which is therefore relevant to Council's consideration of Item 14 (PED20033) of GIC report 20-001.

The first item is a letter from the Minister of Transportation appointing me, subject to certain conditions being met, to sit as a member of the Hamilton Transportation Task Force. Provincial staff have confirmed that I will not need to sign a Non Disclosure Agreement but the specifics around the confidentiality provisions will not be confirmed until after a discussion at the first Task Force meeting. Ministry staff have acknowledged that the conflict of interest statement on page 2 "you cannot promote solutions or strategies that would directly or indirectly benefit your employer and/or business interests" cannot apply to me and will send a follow up letter confirming that.

The second item is referred to by the Minister as the draft Terms of Reference that will govern the work of the Task Force. The draft Terms of Reference will be discussed at the first Task Force and then will be finalized.

Council will note that the draft Terms of Reference anticipate the Task Force preparing a preliminary list of transportation projects. City staff have begun to inventory the major, existing council-approved plans and strategies that address potential transportation-related capital projects. The following is a preliminary list of previously Council-approved plans and strategies, and staff will be continuing to refine this list in anticipation of this information being requested by the Province:

- 2018 Transportation Master Plan (includes planned cycling network, road network improvements, strategic goods movement network, two-way conversions, support for provincial highway network and GO network improvements)
- 10-Year Transit Strategy
- 2019 Development Charges Background Study
- 2016 Recreational Trails Master Plan (and 2018 Mountain Brow Multi-Use Trail Master Plan)
- B-Line LRT Transit Project Assessment Process (TPAP) report

- Staff report on LINC / Red Hill Functional Review
- Staff report on gaps in the city-wide sidewalk network
- Council motion with respect to Highway 403 Environmental Assessment
- 2013 Rapid Ready

**Ministry of
Transportation**

Office of the Minister

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**Ministère des
Transports**

Bureau de la ministre

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107-2020-213

January 20, 2020

Ms. Janette Smith
City Manager
City of Hamilton
71 Main Street West
Hamilton ON L8P 4Y5

Dear Ms. Smith:

I am writing to appoint you as a member of the Hamilton Transportation Task Force.

On December 16, 2019, the Province of Ontario announced that the procurement for the Hamilton Light Rail Transit project would not be moving forward, in keeping with our thoughtful and prudent approach to fiscal management.

This government remains committed to improving the transportation network across the province to reduce congestion and get people moving and will honour the \$1 billion-dollar capital commitment to transportation infrastructure investments in the City of Hamilton.

To ensure the full \$1 billion is dedicated to meaningful transportation projects, the Province of Ontario has created the Hamilton Transportation Task Force. The purpose of this Task Force will be to provide the Ministry of Transportation with analytical support and advice, through an evaluation of potential transportation projects that meet the goals and objectives of municipal and provincial plans and policies.

I am pleased to appoint you as a member of the Hamilton Transportation Task Force. I believe that as someone who represents the interests of the City of Hamilton, you can provide the perspective and advice needed on potential transportation projects that can best meet the needs of the City's residents.

Your appointment to serve will begin as of the date of this letter and will expire no later than January 15, 2021. Remuneration for participation will not be provided, however, reimbursement of reasonable expenses will be granted in accordance with the Management Board of Cabinet's Travel, Meal and Hospitality Expenses Directive.

In addition, please note that this appointment is conditional based upon clearance of the required Personal Disclosure, Conflict of Interest and criminal background checks (related forms for your completion are also attached). A Confidentiality Agreement will also be required to be executed as a condition of your appointment.

.../2

The draft Terms of Reference (ToR), which will govern your work is also attached. As you will notice from the ToR, the Task Force will be tasked with:

- Assessing alternative transportation projects in accordance with guiding principles to be established by the Ministry of Transportation.
- Maintaining regular contact with Ministry representatives and providing status updates to the Minister, as requested.
- Providing advice to the Minister of Transportation before the end of February 2020 on preliminary alternative transportation project(s).

Furthermore, as a provincial government appointee, you are required to avoid any real or perceived conflict of interest. Accordingly, you cannot use or disclose any information obtained as a result of your appointment for any purpose unrelated to your work as a Member of the Hamilton Transportation Task Force. In addition, you cannot promote solutions or strategies that would directly or indirectly benefit your employer and/or business interests. In the event of any situation in which your personal or professional interests, relationships or obligations could conflict with your duties as member of the Task Force, you must declare it to Deputy Minister Shelley Tapp at your earliest opportunity.

In addition, Part 2 of the Management Board of Cabinet's Agencies & Appointments Directive specifies that appointees to short-term advisory bodies shall, for a period of 12 months following the end of the appointment, notify any ministry or agency of their previous appointment before they apply for, accept employment, seek or enter into a contract with a ministry or agency they provided advice to, or if the employment or contract may relate to the advice or services they provided.

The Government of Ontario is committed to openness, transparency and collaboration to promote an efficient, effective and modern public service. Should you have any questions, please reach out to myself or Ryan Amato, Director of Stakeholders Relations (416-327-9200).

Thank you for accepting this appointment. I look forward to your contribution as part of the Hamilton Transportation Task Force.

Sincerely,



Caroline Mulroney
Minister of Transportation

**Ministry of
Transportation**

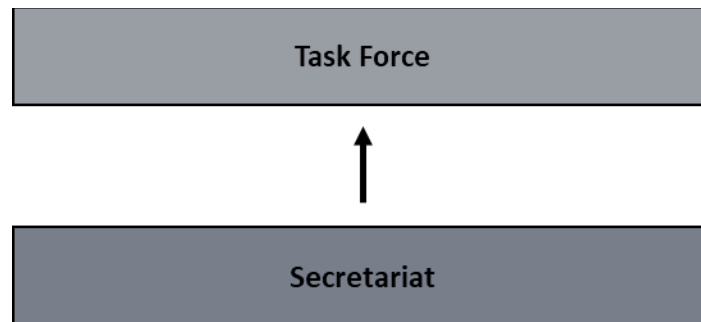
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Task Force – Proposed Governance Structure:



Mandate

The Hamilton Transportation Task Force (also referred to as the ‘Task Force’ or ‘HTTF’) will prepare a preliminary list of transportation projects that will allow the Government of Ontario to maintain its commitment of \$1 billion in capital funding for transportation and transit projects in Hamilton.

Deliverables

The Task Force will report to the Minister of Transportation (also referred to as ‘MTO’ or the ‘Ministry’) before the end of February 2020 with advice on preliminary alternative transportation project(s).

- Projects can be either fully funded or supported through the \$1 billion in funding committed by the Province.
- Projects should reflect the interests and needs of the residents and businesses of Hamilton.
- Projects may include public transit projects (including LRT) or highway projects.
- Projects must be of substantial benefit to the residents or economy of Hamilton.

Resourcing

The Task Force will be supported by a Secretariat which will provide advice, planning, coordination and other administrative support, as required.

The Task Force will also be supported by provincial agency bodies, as required, to address technical needs.

Membership

Hamilton Transportation Task Force

The HTTF will include up to seven (7) members appointed by the Minister of Transportation to achieve its stated purpose.

A Chair will be selected from amongst the members of the HTTF and appointed by the Minister of Transportation through a Minister's letter.

Members of the HTTF will bring a breadth and depth of expertise to the project that is not available in MTO, including experience in transportation policy, programs, and/or needs in the City of Hamilton and users' perspective in the City of Hamilton.

Representatives will not be elected officials.

Secretariat

The Secretariat will be led by the Executive Director of the Transit Policy & Programs Group in the Policy and Planning Division of MTO.

The Secretariat will be resourced through relevant areas of the Ministry of Transportation. Other relevant support from within the organization or from relevant Ontario agencies such as Metrolinx may be sought.

Roles and Responsibilities

Hamilton Transportation Task Force

- The Task Force will be responsible for:
 - Assessing alternative transportation projects in accordance with guiding principles to be established by the Ministry of Transportation.
 - Maintaining regular contact with Ministry representatives and providing status updates to the Minister, as requested.
 - Providing advice to the Minister of Transportation before the end of February 2020 on preliminary alternative transportation project(s).

- The Chair of the Task Force will be responsible for:
 - Managing the activities of the members of the Task Force for the purpose of achieving its mandate.
 - Liaising with the Secretariat on behalf of the Task Force.

Secretariat

- The secretariat will be responsible for:
 - Developing work plans and maintaining record of ongoing activities.
 - Providing advice and analysis on behalf of MTO.
 - Liaising with other relevant areas of MTO, other ministries and/or provincial agencies on behalf of the Task Force.
 - Integrating advice and analysis from Metrolinx and Infrastructure Ontario (as relevant).
 - Developing and coordinating meeting materials and providing logistical support.
 - Ensuring compliance with all applicable government directives and policies.

Duration

The term of HTTF would be for a period not exceeding one year.

Appointments and Accountability

The Task Force shall be appointed by, and report to, the Minister of Transportation.

Meetings

The Task Force will conduct an initial meeting in January 2020 to discuss the purpose and roles of the group, in advance of subsequent meetings which may focus on specific project areas.

After the initial meeting, Task Force members are expected to participate in weekly meetings, for a total of two to three business days per month. However, Task Force members shall discuss and agree upon the number of meetings required to meet the deliverables.

Meetings are anticipated to be no more than one-half day in length.

Remuneration

Task Force members will not be paid for the advice provided to the Government of Ontario.

Reasonable work-related expenses may be reimbursed in accordance with the Travel, Meal and Hospitality Expenses Directive.

Ethical Framework and Conflict of Interest

Task Force members must complete a Public Appointment Secretariat (PAS) candidate profile and submit all necessary documentation including the Personal Disclosure and Conflict of Interest Form for Public Appointment Candidates.

Task Force members will also be required to complete a criminal record check.

Communications

All press releases, statements and communications by the Task Force shall be made through the Ministry of Transportation.

Material Produced

All material produced by the Task Force, including records, documents, reports, advice, and recommendations, shall become the property of the Government of Ontario.

Dispute Resolution

The Secretariat will work with the Chair to establish a dispute resolution process.

Confidentiality

The Task Force shall keep all records, documents, reports, advice, recommendations and research (the "Review Information") confidential, except as approved by the Minister of Transportation.

Information Retention

The Review Information shall be retained in accordance with the *Common Records Series for Ministers' Public Records* approved under the *Archives and Recordkeeping Act, 2006*.



BOARD OF HEALTH REPORT 20-001

9:30 a.m.

Monday, January 13, 2020

Council Chambers

Hamilton City Hall

Present: Councillor B. Clark (Chair)
Councillors M. Wilson (Vice-Chair), J. Farr, N. Nann, S. Merulla, C. Collins, T. Jackson, E. Pauls, J.P. Danko, M. Pearson, B. Johnson L. Ferguson, A. VanderBeek, T. Whitehead and J. Partridge

**Absent with
Regrets:** Mayor F. Eisenberger - Personal

THE BOARD OF HEALTH PRESENTS REPORT 20-001 AND RESPECTFULLY RECOMMENDS:

1. Communications (Items 5.1 to 5.5)

That the following Communications be endorsed:

- (a) Correspondence from the Haliburton, Kawartha, Pine Ridge District Health Unit respecting More Stringent Vaping Regulations to Address the Rise in Vapour Products Use in Youth and Other Vulnerable Populations (Item 5.1)
- (b) Correspondence from the Middlesex-London Health Unit respecting Strengthened Measures to Limit Youth Access, Appeal and Advertising of Vaping Products (Item 5.2)
- (c) Correspondence from the Medical Officer of Health and the Board of Health, Peterborough Public Health, respecting Vaping and Youth (Item 5.3)
- (d) Correspondence from the Medical Officer of Health and Board of Health, Leeds, Grenville and Lanark District Health Unit, respecting Vapour Product Use Among Youth (Item 5.4)
- (e) Correspondence from the Medical Officer of Health and Secretary to the Board of Health, Public Health Sudbury & Districts, respecting E-Cigarettes and Aerosolized Products Prevention and Cessation (Item 5.5)

2. Correspondence from the Honourable Christine Elliott, Deputy Premier and Minister of Health, and Dr. David Williams, Chief Medical Officer of Health respecting Capital One-Time Funding for Seniors Dental Care (Added Item 5.8)

- (a) That the Correspondence be received; and;
- (b) That the Medical Officer of Health be authorized and directed to receive, utilize, and report on the one-time funding from the Ministry of Health to support the delivery of services related to the Seniors Dental Care Program.

3. 2020 Public Health Services Risk Management Plan (BOH20003) (City Wide) (Item 10.1)

That Appendix “A” being the 2020 Public Health Services Organizational Risk Management Action Plan, to Report BOH20003 respecting 2020 Public Health Services Organizational Risk Management Plan, be approved by the Board of Health.

4. Food Advisory Committee 2020 Budget Request (BOH20001) (City Wide) (Item 10.2)

- (a) That the Food Advisory Committee 2020 base budget submission attached as Appendix “A” to Report BOH20001 in the amount of \$1,500, be approved and referred to the 2020 budget process for consideration; and,
- (b) That, in addition to the base funding, a one-time budget allocation for 2020 of \$1,000, funded by the Food Advisory Committee Reserve, be approved and referred to the 2020 budget process for consideration.

5. Public Health Modernization (BOH20004) (Item 10.3)

- (a) That the Board of Health submit the attached letter (Appendix “A” to Report BOH20004) to the Minister of Health in response to the Discussion Paper on Public Health Modernization (Appendix “B” to Report BOH20004); and,
- (b) That the Chair and Vice-Chair of the Board of Health participate in the in-person consultation with the Ministry on February 11, 2020 to further discuss public health modernization.

6. Public Health Services’ Procurement and Purchase of a Dental Services Bus (Added Item 11.1)

WHEREAS, in April 2019, the Provincial government announced the Ontario Seniors Dental Care Program for low-income seniors;

WHEREAS, in June 2019, the Board of Health received a letter from the Ministry of Health (the Ministry) announcing Hamilton’s annual base funding increase of

\$2,248,100.00 to support the new dental program that is 100% provincially funded (i.e., not cost shared with municipalities);

WHEREAS, in August 2019, Public Health Services (PHS) submitted a capital funds application to the Ministry for one-time funding that supports implementation of the locally developed seniors dental care service delivery plan;

WHEREAS, in October of 2019, the Board of Health reviewed the plan for a Senior's Oral Health Program in Hamilton including the prioritized capital investments submitted to the province;

WHEREAS, in December 2019, Public Health received approval from the Ministry that the Board of Health will be provided up to \$687,700 in one-time funding to fund a subset of Hamilton's capital investment recommendations including: a Dental Bus and Dental Clinics at Centre de Santé Communautaire;

WHEREAS, the estimated cost of a new Dental Bus is greater than \$500,000;

WHEREAS, ADI Mobile Health was previously contracted for Hamilton's current Dental Health Bus and has been contracted by other Health Units that have Dental Health Buses; and,

WHEREAS, the Ministry aims to have approved expenditure for a dental bus spent by the end of March 2020.

THEREFORE BE IT RESOLVED:

- (a) That the single source procurement, pursuant to Procurement Policy #11 – Non-competitive Procurements, for the purchase of a Dental Health bus by Public Health Services, at the upset limit of \$550,000, be approved;
- (b) That the Medical Officer of Health, Public Health Services, Healthy and Safe Communities Department, or their designate be authorized and directed to negotiate, enter into and execute a contract and any ancillary documents required to give effect thereto with ADI Mobile Health, in a form satisfactory to the City Solicitor for the purchase of a Dental Health bus; and,
- (c) That Public Health Services report back to the Board of Health by June 15, 2020 on the implications of the Ministry's approval of a subset of the capital investment plan and outline alternatives for consideration for implementation of the Ontario Seniors Dental Care Program in Hamilton.

7. City of Hamilton Licensing (No. 07-170) By-law Schedule 20 Residential Care Facilities Inspections (BOH20005) (City Wide) (Item 14.1)

- (a) That Public Health Services and Legal Services staff be directed to revise the definitions and designations identified within Schedule 20 of the City of Hamilton's Licensing By-law effective May 1, 2020 to support Residential Care Facilities inspections being executed by a Public Health Inspector; and

- (c) That the direction provided to Staff in Closed Session respecting the City of Hamilton Licensing (No. 07-170) By-law Schedule 20 Residential Care Facilities Inspections (BOH20005), and the report, remain confidential.

FOR INFORMATION:

(a) CEREMONIAL ACTIVITIES (Item 1)

There were no ceremonial activities.

(b) CHANGES TO THE AGENDA (Item 2)

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

5. COMMUNICATIONS

- 5.8 Correspondence from the Honourable Christine Elliott, Deputy Premier and Minister of Health, and Dr. David Williams, Chief Medical Officer of Health respecting Capital One-Time Funding for Seniors Dental Care

Recommendation: Be received, and that the Medical Officer of Health be authorized and directed to receive, utilize, and report on the one-time funding from the Ministry of Health to support the delivery of services related to the Seniors Dental Care Program.

12. NOTICES OF MOTION

- 12.1 Public Health Services' Procurement and Purchase of a Dental Services Bus

The agenda for the January 13, 2020 Board of Health was approved, as amended.

(c) DECLARATIONS OF INTEREST (Item 3)

There were no declarations of interest.

(d) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 4)

(i) December 2, 2019 (Item 4.1)

The Minutes of the December 2, 2019 meeting of the Board of Health were approved, as presented.

(e) COMMUNICATIONS (Item 5)

(i) Correspondence from the Association of Local Public Health Agencies, respecting the Proceedings of the 2019 Fall Symposium (Item 5.6)

The Correspondence from the Association of Local Public Health Agencies, respecting the Proceedings of the 2019 Fall Symposium, was received.

(ii) Correspondence from the Chief Medical Officer of Health respecting a Provincial Immunization Registry (Item 5.7)

The Correspondence from the Chief Medical Officer of Health respecting a Provincial Immunization Registry, was received.

(f) CONSENT (Item 7)

(i) Food Advisory Committee Minutes - October 8, 2019 (Item 7.1)

The Food Advisory Committee Minutes of October 8, 2019 were received.

CARRIED

(g) NOTICE OF MOTION (Item 12)

(i) Public Health Services' Procurement and Purchase of a Dental Services Bus (Added Item 12.1)

Councillor Jackson introduced a Notice of Motion respecting a Public Health Services' Procurement and Purchase of a Dental Services Bus.

The Rules of Order were waived to allow for the introduction of a Motion respecting a Public Health Services' Procurement and Purchase of a Dental Services Bus.

For further disposition of this matter, refer to Item 6.

(h) PRIVATE AND CONFIDENTIAL (Item 14)

The Board of Health moved into Closed Session, respecting Item 14.1, Pursuant to Section 8.1, Sub-section (b) of the City's Procedural By-law 18-270, and Section 239(2), Sub-section (b) of the Ontario Municipal Act, 2001, as amended, as the subject matter pertains to personal information about an identifiable individual, including municipal or local board employees.

(i) City of Hamilton Licensing (No. 07-170) By-law Schedule 20 Residential Care Facilities Inspections (BOH20005) (City Wide) (Item 14.1)

For disposition of this matter, refer to Item 7.

(i) **ADJOURNMENT (Item 15)**

There being no further business, the Board of Health adjourned at 10:34 a.m.

CARRIED

Respectfully submitted,

Councillor Brad Clark
Chair, Board of Health

Loren Kolar
Legislative Coordinator
Office of the City Clerk



PUBLIC WORKS COMMITTEE REPORT 20-001

1:30 p.m.

Monday, January 13, 2020

Council Chambers

Hamilton City Hall

71 Main Street West

Present: Councillors J.P. Danko (Chair), S. Merulla (Vice-Chair), C. Collins, J. Farr, L. Ferguson, T. Jackson, N. Nann, E. Pauls, M. Pearson, A. VanderBeek and T. Whitehead

Also Present: Councillors B. Clark and M. Wilson

THE PUBLIC WORKS COMMITTEE PRESENTS REPORT 20-001 AND RESPECTFULLY RECOMMENDS:

1. Cycling Infrastructure 2020 (PED20021) (City Wide) (Item 7.2)

That Report PED20021, respecting Cycling Infrastructure 2020, be received.

2. Joint Jurisdiction Highway Routine Maintenance and Repair Agreements (PW07089(a)) (City Wide) (Item 10.1)

- (a) That the General Manager of Public Works, or their designate, be authorized and directed to negotiate/renegotiate, enter into, and execute separate Joint Jurisdiction Highway Routine Maintenance and Repair Agreements, and all amendments and ancillary documents, with bordering municipalities (as attached to Public Works Committee Report 20-001 as Appendices "A" and "B") for the purpose of the repair and routine maintenance of shared highways, in accordance with the principles contained in this report PW07089(a), all in a form satisfactory to the City Solicitor;
- (b) That the authorization and direction hereby granted to the General Manager of Public Works supersedes and replaces any previous authorization and direction granted by Council with respect to the negotiation and execution of Joint Jurisdiction Highway Routine Maintenance and Repair Agreements with bordering municipalities; and,

- (c) That the following By-laws are hereby repealed:
 - (i) Flamborough By-law No. 91-114-A, By-law No. 91-29-R, By-law No. 94-05-A, By-law No. 92-17-A;
 - (ii) Ancaster By-law No. 89-64, By-law 1829, By-law No. 84-78, By-law No. 90-79;
 - (iii) Glanbrook By-law No. 528-95, By-law No. 429-90; and,
 - (iv) Stoney Creek By-law No. 3860-93.

3. Transit Passenger Shelter Advertising Agreement (PW15071(c)) (City Wide) (Item 10.2)

That the General Manager of Public Works, or their designate, be authorized and directed to negotiate a one-year contract extension (new expiration date of December 31, 2020) with a single source, Outfront Media, for the Hamilton Street Railway (HSR) Transit Passenger Shelter Agreement and to execute any required agreement(s) and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

4. Automated Speed Enforcement (PW20002) (City Wide) (Item 10.4)

- (a) That automated speed enforcement technology be authorized for use for a one-year limited use pilot in designated school zones and community safety zones, utilizing two mobile automated speed enforcement units, to assess the technology and impacts on the City and Provincial Offences Court system;
- (b) That the General Manager of Public Works, or their designate, be authorized and directed to enter into the appropriate agreements with the Ministry of Transportation, City of Toronto and Redflex Traffic Systems (Canada) Limited to operate and provide services for the use of automated speed enforcement for the purposes of the pilot;
- (c) That Legal staff be directed to prepare all necessary By-Law(s) to authorize and implement the use of automated speed enforcement for the purposes of the pilot, in the form satisfactory to the City Solicitor;
- (d) That the cost of implementing and operating the automated speed enforcement pilot be funded from the Red Light Camera Reserve #112203;
- (e) That staff be directed to monitor the piloting of automated speed enforcement to determine the impacts on Transportation Operations and

Maintenance and the Provincial Offences Court system and report these findings back to the Public Works Committee in Q1 of 2021; and,

- (f) That the Mayor submit a letter to the Minister of Transportation Ontario, on behalf of City Council, seeking amendments to the Automated Speed Enforcement Guidelines and MTO Agreement for Automated Speed Enforcement with municipalities to reduce or remove the 90 day requirement related to signage used for the purpose of advising the public of the implementation of the system, at or in advance of every location where cameras are deployed or intended to be deployed.

**5. Telecommunications Industry Investments in the City (PW20003/LS20001)
(City Wide) (Item 10.5)**

- (a) That the General Manager of Public Works, or their designate, be authorized to execute, on behalf of the City, an agreement with Bell Canada (“Bell”) to facilitate Bell’s expansion of its fibre optic network throughout the City of Hamilton (the “Project”), in a form acceptable to the City Solicitor;
- (b) That, in accordance with the City’s Budgeted Complement Control Policy, the addition of temporary FTEs to the complement of the Engineering Services Division, for up to 60 months, all at Bell’s cost, be approved to facilitate the completion of the Bell’s Project such that there is no impact on the tax levy;
- (c) That, where appropriate, the General Manager of Public Works, or their designate, be authorized to execute, on behalf of the City, similar agreements based on this Bell agreement with other providers of telecommunication services to facilitate the expansion of fibre optic networks throughout the City of Hamilton, each such agreement being in a form acceptable to the City Solicitor; and,
- (d) That, for all such agreements with the providers of telecommunications services, the addition of temporary FTEs to the complement of the Engineering Services Division, for up to 60 months, in accordance with the City’s Budgeted Complement Control Policy, all at cost to the appropriate telecommunications services provider, be approved such that there is no impact on the tax levy.

**6. Birch Avenue Municipal Class Environmental Assessment (PW20004)
(Ward 3) (Item 10.6)**

- (a) That the General Manager, Public Works, be authorized and directed to file the Birch Avenue (Barton Street to Burlington Street) Schedule B Municipal Class Environmental Assessment Project File Report (PFR) with the Municipal Clerk for a minimum thirty (30) day public review period; and,

- (b) That upon completion of the minimum thirty (30) day public review period, the General Manager, Public Works, be authorized and directed to proceed with the implementation of the preferred alternative (attached as Appendix “C” to Public Works Committee Report 20-001), to be funded through the proposed Investing in Canada Infrastructure Program: Public Transit Stream Process for 2022 with construction scheduled for 2022.

7. Feasibility of Implementation of a Digital Automated Information System on the Lincoln Alexander Parkway and Red Hill Valley Parkway (City Wide) (Item 11.1)

WHEREAS, a request respecting the conversion of Sanford Avenue from Delaware Avenue to Barton Street East, from one-way to two-way traffic was received; and,

WHEREAS, Sanford Avenue was identified in the Council approved Transportation Master Plan for two-way traffic consideration and ranked number five for conversion;

THEREFORE, BE IT RESOLVED:

- (a) That Transportation, Operations and Maintenance staff be directed to undertake a feasibility study for the implementation of a digital automated information system that provides incident and travel time information to road users on the Lincoln Alexander Parkway and Red Hill Valley Parkway and report back to the Public Works Committee in September 2020 with a proposal for funding and implementation; and,
- (b) That staff be directed to consult with the Ministry of Transportation Ontario on co-ordinating incident management messaging as part of a digital automated information system.

8. Standardization of Enterprise Asset Management Systems - Phase 3 (CONFIDENTIAL PW19035(b)/FCS19040(b)) (City Wide) REVISED (Item 14.1)

- (a) That the single source procurement, pursuant to Procurement Policy #11 – Non-Competitive Procurements and Procurement Policy #14 – Standardization – to the recommended vendor, as identified in Revised Report PW19035(b)/FCS19040(b), to consolidate the existing 11 Enterprise Asset Management Systems into a single Enterprise Asset Management System, as outlined in Appendix “C” to Revised Report (PW19035(b)/FCS19040(b)), for the Public Works Department, be approved;
- (b) That the total capital cost, as outlined in Appendix “D” to Revised Report PW19035(b)/FCS19040(b), be increased from \$7,000,000 to \$12,700,000

under the existing Capital Project ID# 4031957944, cash flowed over the next 4-years and to be split-funded 50% from Rate Capital and 50% from Tax Capital as follows:

- (i) 2020, \$3,000,000 (funded from \$1,000,000 WIP's and \$2,000,000 2020 Approved Capital Project 4031957944, Tax Supported Funding = contribution, Rate Capital Funding = contribution);
 - (ii) 2021, \$3,600,000;
 - (iii) 2022, \$3,100,000;
 - (iv) 2023, \$3,000,000;
- (c) That the General Manager, Public Works, or their designate be directed to provide semi-annual status updates to the Public Works Committee on benefits progress post implementation;
- (d) That the single source procurement, pursuant to Procurement Policy #11 - Non-Competitive Procurement to the recommended vendor, as identified in Revised Report PW19035(b)/FCS19040(b), for Project Management services, to be funded from Capital Project ID #4031957944, be approved;
- (e) That the General Manager, Public Works, or their designate be authorized and directed to execute on behalf of the City all agreements and ancillary documents required to standardize enterprise processes and consolidate the existing 11 Enterprise Asset Management Systems into a single Enterprise Asset Management System for the Public Works Department, with contents acceptable to the General Manager of Finance and Corporate Services and in a form satisfactory to the City Solicitor; and,
- (f) That the contents and appendices of Revised Report PW19035(b)/FCS19040(b), respecting the Standardization of Enterprise Asset Management Systems - Phase 3, remain confidential and not be released as a public document except as necessary to implement Council's directions at the discretion of the City Solicitor.

FOR INFORMATION:

(a) CHANGES TO THE AGENDA (Item 2)

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

12. NOTICES OF MOTION (Item 12)

- 12.1 Installation of Intersection Pedestrian Signal at the Intersection of Mohawk Road East and Moxley Drive, Hamilton (Ward 6)

14. PRIVATE AND CONFIDENTIAL (Item 14)

- 14.1 Standardization of Enterprise Asset Management Systems - Phase 3 (PW19035(b)/FCS19040(b)) (City Wide) **REVISED**

The agenda for the January 13, 2020 Public Works Committee meeting was approved, as amended.

(b) DECLARATIONS OF INTEREST (Item 3)

Councillor L. Ferguson declared an interest to Item 7.3, respecting Hunter Street Bicycle Lanes at Downtown GO Centre (PED20020), as he owns taxi plates.

(c) APPROVAL OF MINUTES OF THE PREVIOUS MEETING (Item 4)

(i) December 2, 2019 (Item 4.1)

The Minutes of the December 2, 2019 meeting of the Public Works Committee were approved, as presented.

(d) DELEGATION REQUESTS (Item 6)

The following delegation requests were approved:

- (i) Jay Krause, Cycle Hamilton, respecting a Review of 2019 Cycling Infrastructure Projects (for today's meeting) (Item 6.1)
- (ii) Jim Perdikoulis, Corktown Pub and Fare Inc., respecting a Patio Encroachment Application at 175 Young Street, Hamilton (Ward 2) (for a future meeting) (Item 6.2)

(e) CONSENT ITEMS (Item 7)

(i) Various Advisory Committee Minutes (Item 7.1)

- (a) The minutes of the following Advisory Committees, were received:
 - (i) Waste Management Advisory Committee - September 26, 2019 (Item 7.1(a))
 - (ii) Hamilton Cycling Committee - November 6, 2019 (Item 7.1(b))

(ii) **Hunter Street Bicycle Lanes at Downtown GO Centre (PED20020)
(Ward 2) (Item 7.3)**

The following Motion was DEFEATED:

That Report PED20020, respecting Hunter Street Bicycle Lanes at Downtown GO Centre, be received.

(f) **PUBLIC HEARINGS / DELEGATIONS (Item 8)**

(i) **Jay Krause, Cycle Hamilton, respecting a Review of 2019 Cycling Infrastructure Projects (Added Item 8.1)**

Jay Krause, Cycle Hamilton, addressed the Committee respecting a Review of 2019 Cycling Infrastructure Projects, with the aid of a presentation.

The delegation by Jay Krause, Cycle Hamilton, respecting a Review of 2019 Cycling Infrastructure Projects, was received.

A copy of the handout and presentation is available on the City's website at www.hamilton.ca or through the Office of the City Clerk.

(g) **DISCUSSION ITEMS (Item 10)**

(i) **City of Hamilton Vision Zero Action Plan 2019 - 2025 Update (PW19015(a)) (City Wide) (Item 10.3)**

Report PW19015(a), respecting a City of Hamilton Vision Zero Action Plan 2019 - 2025 Update, was DEFERRED to the February 3, 2020 Public Works Committee meeting, after the Hamilton Police Services Board budget has been presented.

(ii) **Automated Speed Enforcement (PW20002) (City Wide) (Item 10.4)**

The recommendation in Report PW20002, respecting Automated Speed Enforcement, was deleted in its entirety and replaced with the following:

~~That staff report back in Q4 2020 on the implications and feasibility of Automated Speed Enforcement following the Ontario Ministry of Transportation review and report.~~

- (a) ***That automated speed enforcement technology be authorized for use for a one-year limited use pilot in designated school zones utilizing two mobile automated speed enforcement units, to assess the technology and impacts on the City and Provincial Offences Court system;***

- (b) *That the General Manager of Public Works, or their designate, be authorized and directed to enter into the appropriate agreements with the Ministry of Transportation, City of Toronto and Redflex Traffic Systems (Canada) Limited to operate and provide services for the use of automated speed enforcement for the purposes of the pilot;*
- (c) *That Legal staff be directed to prepare all necessary By-Law(s) to authorize and implement the use of automated speed enforcement for the purposes of the pilot, in the form satisfactory to the City Solicitor;*
- (d) *That the cost of implementing and operating the automated speed enforcement pilot be funded from the Red Light Camera Reserve #112203;*
- (e) *That staff be directed to monitor the piloting of automated speed enforcement to determine the impacts on Transportation Operations and Maintenance and the Provincial Offences Court system and report these findings back to the Public Works Committee in Q1 of 2021; and,*
- (f) *That the Mayor submit a letter to the Minister of Transportation Ontario, on behalf of City Council, seeking amendments to the Automated Speed Enforcement Guidelines and MTO Agreement for Automated Speed Enforcement with municipalities to reduce or remove the 90 day requirement related to signage used for the purpose of advising the public of the implementation of the system, at or in advance of every location where cameras are deployed or intended to be deployed.*

Recommendation (a) of the amendment was amended, as follows:

- (a) That automated speed enforcement technology be authorized for use for a one-year limited use pilot in designated school zones **and community safety zones**, utilizing two mobile automated speed enforcement units, to assess the technology and impacts on the City and Provincial Offences Court system;

For further disposition on this matter, refer to Item 4.

(h) **NOTICES OF MOTION (Item 12)**

Councillor Jackson introduced the following Notice of Motion:

(i) Installation of Intersection Pedestrian Signal at the Intersection of Mohawk Road East and Moxley Drive, Hamilton (Ward 6) (Added Item 12.1)

WHEREAS, residents in the area of Mohawk Road and Moxley Drive are concerned about pedestrian safety when crossing at this busy intersection; and,

WHEREAS, community leaders are requesting the installation of a traffic control device at this intersection to assist pedestrians in safely crossing the roadway;

THEREFORE, BE IT RESOLVED:

- (a) That Public Works staff be authorized and directed to install and activate an Intersection Pedestrian Signal at the intersection of Mohawk Road East and Moxley Drive, Hamilton, in 2021;
- (b) That funding for the installation, to an upset limit of \$175,000, come from the Road Maintenance Program (Project ID 4031611606); 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.

Councillor Collins introduced the following Notice of Motion:

(ii) Removal of Norway Maple Tree at 11 Star Avenue, Hamilton (Ward 5) (Added Item 12.2)

WHEREAS, a recent survey of a tree at 11 Star Avenue, Hamilton, confirms the 60 cm Norway Maple is located on both public and private property;

WHEREAS, the same tree at 11 Star Avenue, Hamilton, has historically been maintained by City Forestry staff; and,

WHEREAS, the Norway Maple tree at 11 Star Avenue, Hamilton, has died;

THEREFORE, BE IT RESOLVED:

That Forestry staff be directed to remove the Norway Maple tree at 11 Star Avenue, Hamilton.

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

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

The following amendments to the Public Works Committee's Outstanding Business List, were approved:

- (a) Items Considered Complete and Needing to be Removed:
 - (i) Red Hill Valley Project Integrated Environmental Monitoring Program
Addressed as Item 3 of Public Works Committee Report 19-017(PW18087(a))
Item on OBL: Z
 - (ii) Summary of Consolidated Cycling Infrastructure
Addressed as Item 7.2 on today's agenda - Report PED20021
Item on OBL: AAS
- (b) Items Requiring a New Due Date:
 - (i) Waste Management System Development – Public Engagement Strategy Results and Preliminary Waste Management System Alternatives
Item on OBL: I
Current Due Date: February 2020
Proposed New Due Date: April 6, 2020
 - (ii) PRESTO Operating Agreement
Item on OBL: N
Current Due Date: November 18, 2019
Proposed New Due Date: February 3, 2020
 - (iii) Review of Cycle Hamilton Recommendations Respecting the Cannon Street Resurfacing Project
Item on OBL: AAD
Current Due Date: February 2020
Proposed New Due Date: July 2020
 - (iv) Waste Audits and Recycling in City of Hamilton Public Locations
Item on OBL: AAF
Current Due Date: January 13, 2020
Proposed New Due Date: February 21, 2020

(j) PRIVATE AND CONFIDENTIAL (Item 14)

The Committee moved into Closed Session for Item 14.1, pursuant to Section 8.1, Sub-sections (f) and (k) of the City's Procedural By-law 18-270, and Section 239(2), Sub-sections (f) and (k) of the *Ontario Municipal Act, 2001*, as amended,

as the subject matter pertains to the receiving of advice that is subject to solicitor-client privilege, including communications necessary for that purpose; and, a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of the municipality or local board.

(i) Standardization of Enterprise Asset Management Systems - Phase 3 (PW19035(b)/FCS19040(b)) (City Wide) REVISED (Item 14.1)

Recommendation (c) in Revised Report PW19035(b)/FCS19040(b), respecting Standardization of Enterprise Asset Management Systems - Phase 3, was amended to read as follows:

- (c) That the General Manager, Public Works, or their designate be directed to provide ~~yearly~~ **semi-annual** status updates to the Public Works Committee on benefits progress post implementation;

For further disposition of this matter, refer to Item 8.

(k) ADJOURNMENT (Item 15)

There being no further business, the Public Works Committee was adjourned at 6:05 p.m.

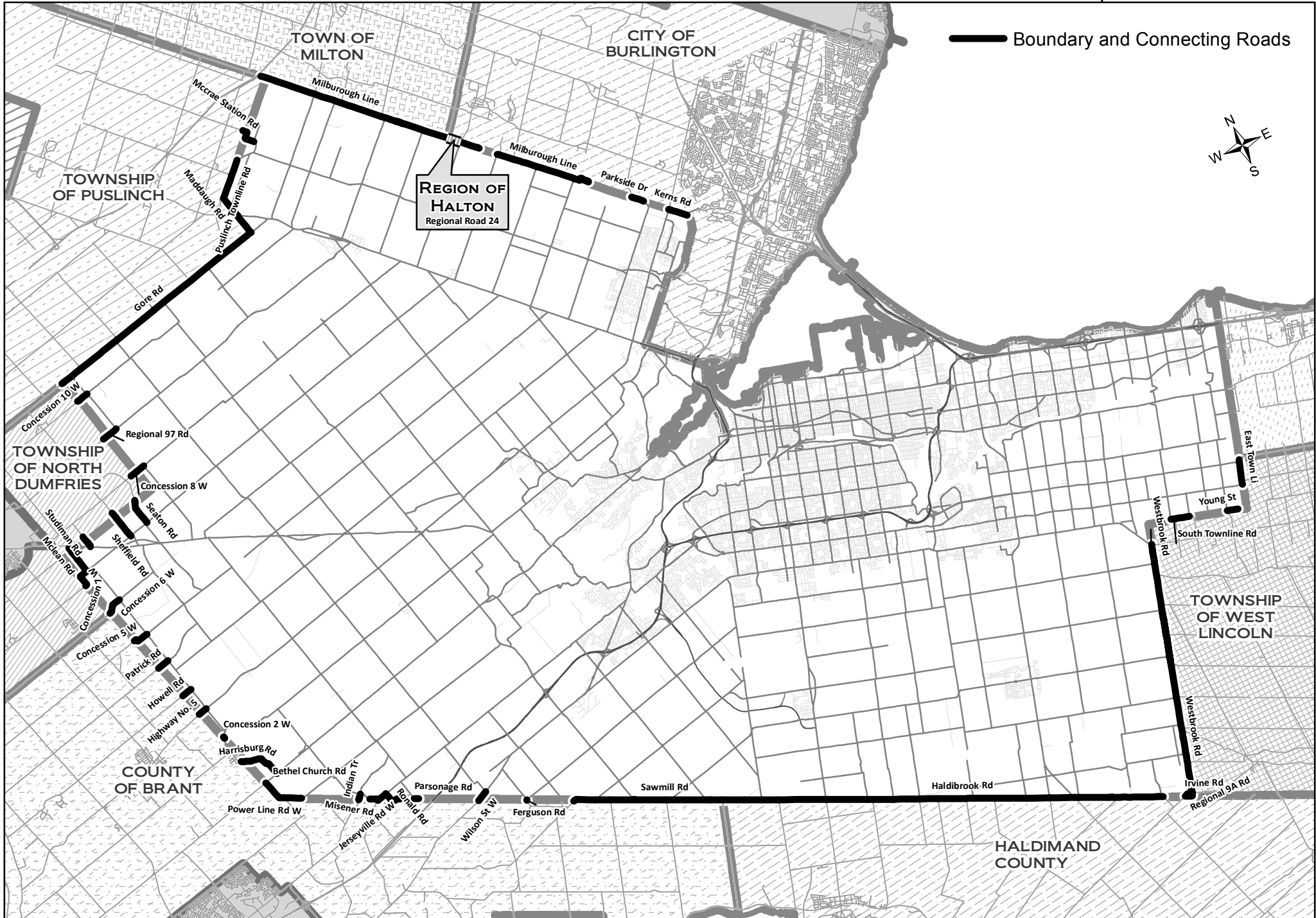
Respectfully submitted,

Councillor J.P. Danko
Chair, Public Works Committee

Alicia Davenport
Legislative Coordinator
Office of the City Clerk

Boundary & Connecting Roads Summary Table

| Jurisdiction | Total Shared Lane Kilometres |
|----------------------------|---|
| County of Brant | 18.07 |
| City of Burlington | 13.37 |
| County of Haldimand | 35.27 |
| Region of Halton | 1.22 |
| Town of Milton | 16.95 |
| Township of North Dumfries | 10.61 |
| Township of Puslinch | 29.21 |
| Township of West Lincoln | 28.40 |
| TOTAL | 153.10 |



Evaluation of Alternative Solutions

| |
|---|
| Option 1: Do Nothing |
| Description: <ul style="list-style-type: none">• Does not address drainage issues.• Removed from consideration. |
| Option 2: Maintain Existing Storm Relief System |
| Description: <ul style="list-style-type: none">• Requires two pumping stations (one north, one south).• Can use existing outlet to the Harbour.• Has high pumping rates (280 litres per second and 780 litres per second).• No secondary benefits in terms of drainage remedial measures.• No capital cost to change stormwater system (uses existing infrastructure).• Cost to construct two pumping stations is higher than constructing one larger station.• Higher annual operating costs than having one larger pumping station.• No impacts to surface water or aquatic habitat.• Not within a regulation area.• No impacts to significant wildlife/vegetation.• No species at risk identified in the area.• No impacts to cultural heritage resources.• No impacts to archaeological sites.• No impacts during construction.• Property will be required for two pumping stations. Would impact either the dog park or parking at the Public Works Facility.• Viable but not selected. |
| Option 3: Low Impact Development Measures |
| Description: <ul style="list-style-type: none">• Construction of a storm relief line/ infiltration chambers within the hydro corridor.• As Hydro One requires a 15-metre buffer zone around hydro corridors, this option is not feasible and is removed from consideration. |

Option 4: Increase Capacity Along Existing Alignment

Description:

- Requires two pumping stations (one north, one south).
- Can use existing outlet to the Harbour.
- Provides 5-year level of service to Birch Avenue.
- Reduces pumping at underpasses.
- Capital costs associated with constructing an upgraded 2.4 m by 1.8 metre relief sewer (~810 metres).
- Cost to construct two pumping stations is higher than constructing one larger station.
- Higher annual operating costs than having one larger pumping station.
- No impacts to surface water or aquatic habitat.
- Not within a regulation area.
- Possible impacts to trees located on the east side of Birch Avenue to provide for the wider sewers.
- No species at risk identified in the area.
- No impacts to cultural heritage resources.
- No impacts to archaeological sites.
- Lane closures and/or road closures likely along Birch Avenue in order to allow for construction of the upgrade sewer.
- Property will be required for two pumping stations. Would impact either the dog park or parking at the Public Works Facility.
- Viable but not selected.

Option 5: Diversion to New Sherman Relief Sewer at Princess Street - Preferred Solution

Description:

- Requires one pumping station (north).
- Requires new outlet to the harbour.
- Benefits study area but does not provide 5-year level of service due to additional flows from upstream areas.
- Reduces pumping at underpasses.
- Provides relief to upstream areas.
- Force main to pumping station can be turned into gravity sewer.
- Capital costs associated with constructing the 1.8 x by 1.8 metre Princess Street diversion (~ 1 km).
- Cost to construct one larger pumping station is less than constructing two smaller pumping stations.
- Lower operating costs than that required for two pumping stations.
- No impacts to surface water or aquatic habitat.
- Additional outlet would be within the Hamilton Conservation Authority regulated areas.
- No impacts to significant wildlife/vegetation.
- No species at risk identified in the area.
- No impacts to cultural heritage resources. Mitigation may be required to the building located at 241 Gibson.
- No impacts to archaeological sites.
- Lane closures and/or road closures likely along Princess Street in order to allow for construction of the diversion.
- Property only required for one pumping station to the north. Removes impact associated with south station (e.g. dog park).
- This option has been identified as the preferred solution.



PLANNING COMMITTEE REPORT

20-001

January 14, 2020

9:30 a.m.

**Council Chambers, Hamilton City Hall
71 Main Street West**

Present: Councillors J. Farr (Chair), B. Clark (1st Vice Chair), C. Collins, J.P. Danko, B. Johnson (2nd Vice Chair), J. Partridge, M. Pearson, T. Whitehead and M. Wilson

Also in Attendance: Councillor L. Ferguson

THE PLANNING COMMITTEE PRESENTS REPORT 20-001 AND RESPECTFULLY RECOMMENDS:

1. Active Official Plan Amendment, Zoning By-law Amendment and Plan of Subdivision Applications (PED20007) (City Wide) (Item 7.1)

That Report PED20007 respecting Active Official Plan Amendment, Zoning By-law Amendment and Plan of Subdivision Applications, be received.

2. Payday Loan Licences (PED20010) (City Wide) (Item 7.2)

That Report PED20010 respecting Payday Loan Licences, be received.

3. Appeal to the Local Planning Appeal Tribunal (LPAT) for Lack of Decision on Zoning By-law Amendment Application ZAA-18-053 for Lands Located at 2282 Westbrook Road (PED20002) (Glanbrook) (Ward 11) (Item 7.3)

That Report PED20002 respecting Appeal to the Local Planning Appeal Tribunal (LPAT) for Lack of Decision on Zoning By-law Amendment Application ZAA-18-053 for Lands Located at 2282 Westbrook Road (PED20002) (Glanbrook) (Ward 11), be received.

4. Agriculture and Rural Affairs Advisory Committee Minutes 19-003 (Item 7.4)

That the Agriculture and Rural Affairs Advisory Committee Minutes 19-003, be received.

5. Roof Top Amenity Area for 600 North Service Road, Stoney Creek (PED20037) (Ward 10) (Item 7.5)

That Report PED20037 respecting Roof Top Amenity Area for 600 North Service Road, Stoney Creek, be received.

6. Application for Approval of a Draft Plan of Condominium (Common Element) for Lands Located at 185 Bedrock Drive, Stoney Creek (PED20001) (Ward 9) (Item 8.1)

That Draft Plan of Condominium Application 25CDM-201905, by Armstrong Planning & Project Management on behalf of Empire (Red Hill) Ltd., owner to establish a Draft Plan of Condominium (Common Element) to create a private road, sidewalks, landscaped areas and visitor parking for 83 townhouse units on lands located at 185 Bedrock Drive (Stoney Creek), as shown on Appendix "A", attached to Report PED20001, be APPROVED subject to the following conditions:

- (a) That the approval for Draft Plan of Condominium (Common Element) application 25CDM-201905 applies to the plan prepared by A.T. McLaren Limited, certified by S.D. McLaren, and dated April 10, 2019, consisting of a private road, sidewalks, landscaped areas and visitor parking for 83 townhouse units, attached as Appendix "B" to Report PED20001;
- (b) That the conditions of Draft Plan of Condominium Approval 25CDM-201905, attached as Appendix "C" to Report PED20001, be received and endorsed by City Council;
- (c) That a warning clause be added to any sale, lease or rental agreement that the property is within 500 metres of an operational industrial, commercial, institutional landfill; and,
- (d) That there were no public submissions received regarding this matter.

7. Applications for Official Plan Amendment and Zoning By-law Amendment for Lands Located at 125 and 129 Robert Street, Hamilton (PED20015) (Ward 2) (Item 8.2)

- (a) That Official Plan Amendment Application UHOPA-17-033 by Vision Hamilton Inc, Owner, for a change in designation on Schedule "M-2" of the West Harbour (Setting Sail) Secondary Plan in the former City of Hamilton Official Plan to add a Site Specific Policy Area to permit the development of a six unit, three storey multiple dwelling with a maximum residential density of 143.0 units per gross hectare, for lands located at 125 and 129 Robert Street, as shown on Appendix "A" to Report PED20015, be APPROVED;

- (b) That Zoning By-law Amendment Application ZAC-17-073 by Vision Hamilton Inc., Owner, for a change in zoning from the “D/S-378” (Urban Protected Residential – One and Two Family Dwellings) District, Modified to a site specific “DE-2” (Low Density Multiple Dwellings) District, Modified to permit a six unit, three storey multiple dwelling with no on-site parking on lands located at 125 and 129 Robert Street, Hamilton, as shown on Appendix “A” to Report PED20015, be APPROVED;
- (c) That staff be directed to prepare the Official Plan Amendment and Zoning By-law Amendment consistent with the concept plans presented at Planning Committee on this day (January 14, 2020), and ensure implementation through the future site plan application, and any other necessary agreements to implement Council’s direction, with a warning clause in purchase or rental agreements that owners/tenants are not eligible for on street parking permits, and owners/tenants cannot petition the City for changes to on-street parking; and,
- (d) That the public submissions received on this matter did not affect the decision.

8. Application for a Zoning By-law Amendment for Lands Located at 179, 183 and 187 Wilson Street West (Ancaster) (PED20022) (Ward 12) (Item 8.3)

- (a) That Zoning By-law Amendment Application ZAC-19-040 by T. Johns Consulting Group on behalf of Sunrise Senior Living, Owner, for a change in zoning from the Residential “R2” Zone in Town of Ancaster Zoning By-law No. 87-57, to the Community Institutional (I2, 694) Zone, in the City of Hamilton Zoning By-law No. 05-200, to permit a three storey retirement home for lands located at 179, 183, and 187 Wilson Street West (Ancaster), as shown on Appendix “A” to Report PED20022 be APPROVED, on the following basis:
 - (i) That the draft By-law, attached as Appendix “B” to Report PED20022, which has been prepared in a form satisfactory to the City Solicitor, be enacted by City Council;
 - (ii) That the proposed change in zoning is consistent with the Provincial Policy Statement (PPS) and conforms to A Place to Grow (2019);
 - (iii) That the proposed change in zoning complies with the Urban Hamilton Official Plan and the Ancaster Wilson Street Secondary Plan.
- (b) That the following conditions apply:

1. That on weekends and special occasions, the applicant provide a shuttle service for visitors and staff to avoid on street parking.
 2. That all construction activity be limited to between 7:00 a.m. and 5:30 p.m. from Monday to Friday.
 3. That no closure of a lane on Wilson Street will be permitted during rush hours.
 4. That a pre-construction survey be completed by the applicant.
- (c) That the public submissions received on this matter did not affect the decision.

9. Accessible Taxicab Financial Incentive Program (PED18082(a)) (City Wide) (Item 10.1)

- (a) That the Accessible Taxicab Financial Incentive Pilot Program be extended for an additional 16 months to the end of April 2021 and that the program be funded through the Working Funds - General Reserve 112400 at an estimated net cost of \$80,000 or \$5,000 per month; and,
- (b) That funding for a permanent Accessible Taxicab Financial Incentive Program be considered during the 2021 budget deliberations.

10. Release of Standard Taxi Plates – Priority List (PED20011) (City Wide) (Item 10.2)

That staff be authorized to issue three standard taxicab plates in January 2020 and an additional three standard taxicab plates per year until the Standard Taxicab Priority List expires.

11. Advertising on Taxicabs (PED20014) (City Wide) (Item 10.3)

That Report PED20014 respecting Advertising on Taxicabs, be received.

12. Property Standards By-law – Rental Properties and Apartments (Item 11.1)

WHEREAS, the Building Code Act, 1992, authorized the City of Hamilton to pass a bylaw prescribing standards for the maintenance and occupancy of property;

WHEREAS, the City of Hamilton Consolidated By-law 10-221, being a By-law to prescribe standards of the maintenance and occupancy of property was passed by Council in 2010;

WHEREAS, as part of continuous improvement, by-laws require changes over time to align with changes in legislation, improve processes and to maintain the by-law to the original intent and effectiveness;

WHEREAS, since the adoption of the Property Standards By-law, there have been eight (8) incorporated amendments to improve the By-law; and,

WHEREAS, there have been concerns of the health and safety of rental house and apartments within the City.

THEREFORE BE IT RESOLVED:

- (a) That staff be directed to meet with Internal and external stakeholders concerning possible improvements to the Property Standards By-law involving rental properties, apartments and tenant living areas; and,
- (b) That staff be directed to review and compare our current Property Standards Bylaw against other municipalities to determine best practices and improvement to our current legislation.

13. Authorization for LJM Developments Inc. to apply for a Variance to a By-law for Lands Located at 2782 Barton Street East (Item 11.2)

WHEREAS Bill 73, Smart Growth for our Communities Act, 2015 placed a moratorium for minor variance applications within 2 years of passing a site specific zoning by-law amendment;

WHEREAS the application as presented in Report PED19170 for lands including 2782 Barton Street East was approved September 3, 2019 and is within the 2 year moratorium;

WHEREAS Council may waive this moratorium on a site specific basis, to allow the applicant to make an application to the Committee of Adjustment;

WHEREAS the application as presented in Report PED19170 was approved at a maximum density of 441 units per hectare (or 244 units), and any proposed height increases cannot increase the maximum density established without an amendment to the Urban Hamilton Official Plan;

THEREFORE BE IT RESOLVED:

That Council of the City of Hamilton provide authorization to LJM Developments Inc. to apply for minor variances to a by-law for lands located at 2782 Barton Street East in order to vary building height, among other variances, of a site specific by-law approved within the last 2 years.

**14. Roof Top Amenity Area for 600 North Service Road, Stoney Creek
(Added Item 11.3)**

WHEREAS, conditional site plan approval was issued for Site Plan Control application DA-19-053 which included a condition which required the completion of a detailed noise study; and,

WHEREAS, a noise study, dated September 9, 2019, prepared by Valcoustics Canada Ltd. was submitted with the Site Plan Control application which identified that at the common outdoor amenity areas, the unmitigated daytime sound levels are predicted to be 70 dbA at the rooftop terrace and that a 4.4 m high sound barrier would be required around the south, east and west sides of the terrace to mitigate the sound levels to the MECP guidelines;

THEREFORE BE IT RESOLVED:

That staff be directed to waive the requirement for noise mitigation for the rooftop terrace and require the inclusion of noise warning clauses in all offers of purchase and sale and/or lease agreements advising that noise levels will be exceeding MECP guidelines, to be implemented through both the Site Plan Control application and future Plan of Condominium.

15. Site Alteration Permit (PED20029) (Ward 11) (Item 14.1)

That the direction provided to staff in Closed Session be approved and remain confidential.

FOR INFORMATION:

(a) APPROVAL OF AGENDA (Item 2)

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

1. DELEGATION REQUESTS (Item 6)

- 6.2 Nicole Smith, Kumon Hamilton West End, respecting Property Standards By-law – Rental Properties and Apartments (Item 11.1) - WITHDRAWN
- 6.3 John Ariens respecting Roof Top Amenity Area for 600 North Service Road, Stoney Creek (PED20037) (Item 7.5) (For today's meeting) - WITHDRAWN
- 6.4 Mike Wood, Hamilton ACORN, respecting Property Standards By-law - Rental Properties and Apartments (Item 11.1) (For the January 14, 2020 meeting)

- 6.5 Dayna Sparks, Hamilton ACORN, respecting Property Standards By-law - Rental Properties and Apartments (Item 11.1) (For the January 14, 2020 meeting)
- 6.6 Brenda Mills, Hamilton ACORN, respecting Property Standards By-law - Rental Properties and Apartments (Item 11.1) - WITHDRAWN
- 6.7 Veronica Gonzalez, Hamilton ACORN, respecting Property Standards By-law - Rental Properties and Apartments (Item 11.1) (For the January 14, 2020 meeting)
- 6.8 Sarah Jama, Disability Justice Network of Ontario, respecting Property Standards By-law - Rental Properties and Apartments (Item 11.1) - WITHDRAWN

2. CHANGE TO THE ORDER OF ITEMS

- 11.1 Motion respecting Property Standards By-law - Rental Properties and Apartments be moved up in the agenda to be heard after the Delegations

The agenda for the January 14, 2020 meeting was approved, as amended.

(b) DECLARATIONS OF INTEREST (Item 3)

Councillor Pearson advised she has a conflict with Item 11.1, Property Standards By-law – Rental Properties and Apartments, as she is a landlord of rental properties.

Councillor Clark advised, that on the advice of the Ombudsman, he no longer has a conflict with Item 11.1, Property Standards By-law – Rental Properties and Apartments, as he had a former professional relationship with the Hamilton and District Apartment Association, and the Ombudsman advised that the relevance of that relationship on Councillor Clark’s Council related matters has expired.

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

(i) December 3, 2019 (Item 4.1)

The Minutes of the December 3, 2019 meeting were approved, as presented.

(d) DELEGATION REQUESTS (Item 6)

(i) Various Delegation Requests (Items 6.1 – 6.8)

The following Delegation Requests, were approved for today’s meeting:

- 6.1 Denise Harvey, respecting Violation of the Site Alteration By-law on Lynden Road, to be heard before the Public Meetings.
- 6.4 Mike Wood, Hamilton ACORN, respecting Property Standards By-law - Rental Properties and Apartments (Item 11.1), to be heard before the Public Meetings.
- 6.5 Dayna Sparks, Hamilton ACORN, respecting Property Standards By-law - Rental Properties and Apartments (Item 11.1), to be heard before the Public Meetings.
- 6.7 Veronica Gonzalez, Hamilton ACORN, respecting Property Standards By-law - Rental Properties and Apartments (Item 11.1), to be heard before the Public Meetings.

(e) PUBLIC HEARINGS/DELEGATIONS (Item 8)

(i) Denise Harvey, respecting Violation of the Site Alteration By-law on Lynden Road (Item 6.1)

Denise Harvey addressed the Committee respecting Violation of the Site Alteration By-law on Lynden Road.

The Delegation from Denise Harvey, respecting Violation of the Site Alteration By-law on Lynden Road, was received.

(ii) Various Delegations respecting Property Standards By-law – Rental Properties and Apartments (Item 11.1) (Added Items 6.4, 6.5 and 6.7)

The following Delegations addressed Committee respecting Property Standards By-law – Rental Properties and Apartments:

- 1. Mike Wood, Hamilton ACORN (Added Item 6.4)
- 2. Dayna Sparks, Hamilton ACORN (Added Item 6.5)
- 3. Veronica Gonzalez, Hamilton ACORN (Added Item 6.7)

The Delegations, Added Items 6.4, 6.5 and 6.7, respecting Property Standards By-law – Rental Properties and Apartments, were received.

For disposition of the matter, refer to Item 12.

(iii) Application for Approval of a Draft Plan of Condominium (Common Element) for Lands Located at 185 Bedrock Drive, Stoney Creek (PED20001) (Ward 9) (Item 8.1)

In accordance with the provisions of the *Planning Act*, Chair Farr advised that if a person or public body does not make oral submissions at a public meeting or make written submissions to the Council of the City of Hamilton before Council makes a decision regarding the Draft Plan of Condominium (Common Element) the person or public body is not entitled to appeal the decision of the Council of the City of Hamilton to the Local Planning Appeal Tribunal, and the person or public body may not be added as a party to the hearing of an appeal before the Local Planning Appeal Tribunal unless, in the opinion of the Tribunal, there are reasonable grounds to do so.

No members of the public came forward.

The public meeting was closed.

The staff presentation was waived.

Maria Jones, Armstrong Planning and Project Management, was in attendance and indicated support for the staff report.

The recommendations in Report PED20001 were amended by adding the following sub-section (c):

(c) *That a warning clause be added to any sale, lease or rental agreement that the property is within 500 metres of an operational industrial, commercial, institutional landfill.*

The recommendations in Report PED20001 were amended by adding the following sub-section (d):

(d) *That there were no public submissions received regarding this matter.*

For disposition of this matter, refer to Item 6.

(iv) Applications for Official Plan Amendment and Zoning By-law Amendment for Lands Located at 125 and 129 Robert Street, Hamilton (PED20015) (Ward 2) (Item 8.2)

In accordance with the provisions of the *Planning Act*, Chair Farr advised that if a person or public body does not make oral submissions at a public meeting or make written submissions to the Council of the City of Hamilton before Council makes a decision regarding the Official Plan Amendment or Zoning By-law Amendment, the person or public body is not entitled to appeal the

decision of the Council of the City of Hamilton to the Local Planning Appeal Tribunal, and the person or public body may not be added as a party to the hearing of an appeal before the Local Planning Appeal Tribunal unless, in the opinion of the Tribunal, there are reasonable grounds to do so.

Councillor Farr relinquished the Chair to Councillor Clark.

No members of the public came forward.

The public meeting was closed.

Andrea Dear, Senior Planner, addressed the Committee with the aid of a PowerPoint presentation. A copy of the presentation is available through the Office of the City Clerk and online at www.hamilton.ca.

The staff presentation was received.

John Ariens, IBI Group, was in attendance and indicated support for the staff report, and addressed the Committee with the aid of a PowerPoint presentation. A copy of the presentation is available through the Office of the City Clerk and online at www.hamilton.ca.

The presentation from John Ariens, IBI Group, was received.

Written Submissions:

- (i) Beasley Neighbourhood Association (8.2 (a)(i))

The written submission was received.

The recommendations (a) and (b) in Report PED20015 were amended, and a new sub-section (c) was added, as follows:

- (a) That Official Plan Amendment Application UHOPA-17-033 by Vision Hamilton Inc, Owner, for a change in designation on Schedule “M-2” of the West Harbour (Setting Sail) Secondary Plan in the former City of Hamilton Official Plan to add a Site Specific Policy Area to permit the development of a six unit, three storey multiple dwelling with a maximum residential density of 143.0 units per gross hectare, for lands located at 125 and 129 Robert Street, as shown on Appendix “A” to Report PED20015, be **APPROVED**;
- (b) That Zoning By-law Amendment Application ZAC-17-073 by Vision Hamilton Inc., Owner, for a change in zoning from the “D/S-378” (Urban Protected Residential – One and Two Family Dwellings) District, Modified to a site specific “DE-2” (Low Density Multiple Dwellings) District, Modified to permit a six unit, three storey

multiple dwelling with no on-site parking on lands located at 125 and 129 Robert Street, Hamilton, as shown on Appendix "A" to Report PED20015, be **APPROVED**;

- (c) ***That staff be directed to prepare the Official Plan Amendment and Zoning By-law Amendment consistent with the concept plans presented at Planning Committee on this day (January 14, 2020), and ensure implementation through the future site plan application, and any other necessary agreements to implement Council's direction, with a warning clause in purchase or rental agreements that owners/tenants are not eligible for on street parking permits, and owners/tenants cannot petition the City for changes to on-street parking; and,***

The recommendations in Report PED20015 were amended by adding the following sub-section (d):

- (d) ***That the public submissions received on this matter did not affect the decision.***

For disposition of this matter, refer to Item 7.

Councillor Farr resumed the Chair.

- (v) **Application for a Zoning By-law Amendment for Lands Located at 179, 183 and 187 Wilson Street West (Ancaster) (PED20022) (Ward 12) (Item 8.3)**

In accordance with the provisions of the *Planning Act*, Chair Farr advised that if a person or public body does not make oral submissions at a public meeting or make written submissions to the Council of the City of Hamilton before Council makes a decision regarding the Zoning By-law Amendment, the person or public body is not entitled to appeal the decision of the Council of the City of Hamilton to the Local Planning Appeal Tribunal, and the person or public body may not be added as a party to the hearing of an appeal before the Local Planning Appeal Tribunal unless, in the opinion of the Tribunal, there are reasonable grounds to do so.

James Van Rooi, Planner I, addressed the Committee with the aid of a PowerPoint presentation. A copy of the presentation is available through the Office of the City Clerk and online at www.hamilton.ca.

The staff presentation was received.

Terri Johns, T. Johns Consulting Group, was in attendance and indicated support for the staff report, and addressed the Committee with the aid of a

PowerPoint presentation. A copy of the presentation is available through the Office of the City Clerk and online at www.hamilton.ca.

The presentation from Terri Johns, T. Johns Consulting Group, was received.

Registered Speakers:

- (i) Barry Coe, Condo Association WVLC#49 (8.3 (b)(i))

The delegation from Barry Coe, Condo Association WVLC#49, was received.

Written Submissions:

- (i) Joanne and Frank Otterspoor (8.3 (a)(i))

The written submission was received.

The public meeting was closed.

The recommendations in Report PED20022 were amended by adding the following sub-section (b):

(b) *That the following conditions apply:*

- 1. *That on weekends and special occasions, the applicant provide a shuttle service for visitors and staff to avoid on street parking.***
- 2. *That all construction activity be limited to between 7:00 a.m. and 5:30 p.m. from Monday to Friday.***
- 3. *That no closure of a lane on Wilson Street will be permitted during rush hours.***
- 4. *That a pre-construction survey be completed by the applicant.***

The recommendations in Report PED20022 were amended by adding the following sub-section (c):

(c) *That the public submissions received on this matter did not affect the decision.*

For disposition of this matter, refer to Item 8.

(f) PRIVATE AND CONFIDENTIAL (Item 14)

The Committee moved into Closed Session respecting Item 14.1, pursuant to Section 8.1, Sub-sections (e) and (f) of the City's Procedural By-law 18-270, and Section 239(2), Sub-sections (e) and (f) of the *Ontario Municipal Act, 2001*, as amended, as the subject matter pertains to litigation or potential litigation, including matters before administrative tribunals, affecting the City; and, the receiving of advice that is subject to solicitor-client privilege, including communications necessary for that purpose.

(i) Site Alteration Permit (PED20029) (Ward 11) (Item 14.1)

For further disposition of this matter, refer to Item 15.

(g) ADJOURNMENT (Item 15)

There being no further business, the Planning Committee was adjourned at 2:09 p.m.

Councillor Jason Farr
Chair, Planning Committee

Lisa Chamberlain
Legislative Coordinator



GENERAL ISSUES COMMITTEE REPORT 20-001

9:30 a.m.

Wednesday, January 15, 2020

Council Chambers

Hamilton City Hall

71 Main Street West

Present: Mayor F. Eisenberger, Deputy Mayor B. Clark (Chair)
Councillors M. Wilson, N. Nann, J. Farr, S. Merulla, C. Collins,
T. Jackson, E. Pauls, J. P. Danko, M. Pearson, B. Johnson,
L. Ferguson, A. VanderBeek, T. Whitehead, J. Partridge

THE GENERAL ISSUES COMMITTEE PRESENTS REPORT 20-001, AND RESPECTFULLY RECOMMENDS:

**1. Transit Area Rating Review Sub-Committee Clerk's Report 19-001,
December 11, 2020 (Item 7.1)**

That the Transit Area Rating Review Sub-Committee Clerk's Report 19-001,
December 11, 2020, be received.

**2. Assessment of the Business Retention and Expansion Plan (FCS20002)
(City Wide) (Item 7.2)**

That Report FCS20002, respecting the Assessment of the Business Retention
and Expansion Plan, be received.

**3. Ottawa Street Business Improvement Area Proposed Budget and Schedule
of Payment for 2020 (PED20002) (Wards 3 and 4) (Item 10.1)**

(a) That the 2020 Operating Budget for the Ottawa Street Business
Improvement Area, attached as Appendix "A" to Report 20-001, in the
amount of \$133 K, be approved;

(b) That the levy portion of the Operating Budget for the Ottawa Street
Business Improvement Area in the amount of \$133 K, be approved;

- (c) That the General Manager of Finance and Corporate Services be hereby authorized and directed to prepare the requisite By-law, pursuant to Section 208, the *Municipal Act, 2001*, to levy the 2020 Operating Budget for the Ottawa Street Business Improvement Area; and,
- (d) That the following schedule of payments for the 2020 Operating Budget for the Ottawa Street Business Improvement Area, be approved:

| | |
|---------|----------|
| January | \$66,500 |
| June | \$66,500 |

4. Westdale Village Business Improvement Area Proposed Budget and Schedule of Payment for 2020 (PED20003) (Ward 1) (Item 10.2)

- (a) That the 2020 Operating Budget for the Westdale Village Business Improvement Area, attached as Appendix “B” to Report 20-001, in the amount of \$125 K, be approved;
- (b) That the levy portion of the Operating Budget for the Westdale Village Business Improvement Area in the amount of \$125 K, be approved;
- (c) That the General Manager of Finance and Corporate Services be hereby authorized and directed to prepare the requisite By-law, pursuant to Section 208, *Ontario Municipal Act, 2001*, as amended, to levy the 2020 Operating Budget for the Westdale Village Business Improvement Area; and,
- (d) That the following schedule of payments for the 2020 Operating Budget for the Westdale Village Business Improvement Area, be approved:

| | |
|---------|----------|
| January | \$62,500 |
| June | \$62,500 |

5. Waterdown Business Improvement Area (BIA) Proposed Budget & Schedule of Payment for 2020 (PED20004) (Ward 15) (Item 10.3)

- (a) That the 2020 Operating Budget for the Waterdown Business Improvement Area, attached as Appendix “C” to Report 20-001, in the amount of \$335,015, be approved;
- (b) That the levy portion of the Operating Budget for the Waterdown Business Improvement Area in the amount of \$250,000, be approved;

- (c) That the General Manager of Finance and Corporate Services be hereby authorized and directed to prepare the requisite By-law, pursuant to Section 208, *Ontario Municipal Act*, 2001, as amended, to levy the 2020 Operating Budget for the Waterdown Business Improvement Area; and,
- (d) That the following schedule of payments for the 2020 Operating Budget for the Waterdown Business Improvement Area, be approved:

| | |
|---------|-----------|
| January | \$125,000 |
| June | \$125,000 |

6. Stoney Creek Business Improvement Area Proposed Budget and Schedule of Payment for 2020 (PED20005) (Ward 5) (Item 10.4)

- (a) That the 2020 Operating Budget for the Stoney Creek Business Improvement Area, attached as Appendix “D” to Report 20-001, in the amount of \$62,788, be approved;
- (b) That the levy portion of the Operating Budget for the Stoney Creek Business Improvement Area in the amount of \$49 K, be approved;
- (c) That the General Manager of Finance and Corporate Services be hereby authorized and directed to prepare the requisite By-law, pursuant to Section 208, *Ontario Municipal Act*, 2001, as amended, to levy the 2020 Operating Budget for the Stoney Creek Business Improvement Area;
- (d) That the following schedule of payments for the 2020 Operating Budget for the Stoney Creek Business Improvement Area, be approved:

| | |
|---------|----------|
| January | \$24,500 |
| June | \$24,500 |

7. Review of Problems Associated with Increased Visitors to Waterfalls (PED18011(a)) (Ward 13) (Item 10.5)

That the multi-disciplinary working group, approved by City Council on March 27, 2019 to investigate the negative impacts to the Greensville and Dundas neighbourhoods associated with the increase in visitors to Webster and Tews Falls and Dundas Peak, continue to meet and report back to the Planning Committee in 2020 following the completion of a comprehensive traffic management plan for this area.

8. Municipal Accommodation Tax (PED20009) (City Wide) (Item 10.6)

That staff be directed to develop the structure and implementation plan for a Municipal Accommodation Tax Program in Hamilton at 4% including the required business case study, and creation of a Municipal Services Corporation (MSC), which will operate as the City of Hamilton's eligible tourism entity to receive funds from the Municipal Accommodation Tax (MAT) as required by Provincial regulation, enacting by-law and any necessary agreements, and report back to the General Issues Committee.

9. Commonwealth Games 2030 (PED19108(c)) (City Wide) (Item 10.7)

That staff be directed to review and analyze the Hamilton100's Hosting Proposal (Part 2) with a report back to General Issues Committee on February 19, 2020 to receive Council direction, prior to the Commonwealth Games submission deadline of March 9, 2020.

10. Business Improvement Area Advisory Committee Report 19-012, December 10, 2019 (Item 10.8)

(a) Main Street West Business Improvement Area Expenditure Request (Item 11.1)

- (i) That the expenditure request from the Main Street West Business Improvement Area, in the amount of \$1,089.71 for the supply and installation of Christmas Decorations, to be funded from the Community Improvement Plan (CIP) Contribution Program (BIA Payments Account 815010-56905), be approved; and,
- (ii) That the expenditure request from the Main Street West Business Improvement Area, in the amount of \$900 for the balance of the costs to supply and install Christmas Decorations, to be funded from the Shared Parking Revenue Program (Parking Revenue Account 815010-45559), be approved.

(b) Locke Street Business Improvement Area Expenditure Request (Added Item 12.2)

That the expenditure request from the Locke Street Business Improvement Area, in the amount of \$11,774.03 for events and promotions around the Christmas activities and Locke Street reopening activities, to be funded from the Shared Parking Revenue Program (Parking Revenue Account 815010-45559), be approved.

**11. School Board Properties Sub-Committee Report 19-003, December 17, 2019
(Item 10.9)**

(a) Hamilton-Wentworth District School Board Property at 1284 Main Street East, Hamilton (PED19162) (Ward 4) (Item 10.1)

- (i) That the Real Estate Section of the Planning and Economic Development Department be authorized and directed to advise the Hamilton-Wentworth District School Board (HWDSB) that the City of Hamilton does not have an interest in acquiring its property located at 1284 Main Street East, Hamilton, as shown on Appendix “A” attached to Report PED19162; and,
- (ii) That the Real Estate Section of the Economic Development Division of the Planning and Economic Development Department be directed to advise the Hamilton-Wentworth District School Board (HWDSB) of the City of Hamilton’s site development requirements, as identified in Appendix “B” attached to Report PED19162.

(b) Hamilton-Wentworth District School Board Property at 1020 Upper Paradise Road, Hamilton (Falkirk West Vacant Site) (PED19235) (Ward 14) (Item 10.2)

- (i) That the Real Estate Section of the Planning and Economic Development Department be authorized and directed to advise the Hamilton-Wentworth District School Board (HWDSB) that the City of Hamilton does not have an interest in acquiring its property located at 1020 Upper Paradise Road, Hamilton (Falkirk West Vacant Site), as shown on Appendix “A” attached to Report PED19235; and,
- (ii) That the Real Estate Section of the Economic Development Division of the Planning and Economic Development Department be directed to advise the Hamilton-Wentworth District School Board (HWDSB) of the City of Hamilton’s site development requirements, as identified in Appendix “B” attached to Report PED19235.

(c) Hamilton-Wentworth District School Board Property at 65 Frances Avenue, Stoney Creek (PED19239) (Ward 10) (Item 10.3)

- (i) That the Real Estate Section of the Planning and Economic Development Department be authorized and directed to advise the Hamilton-Wentworth District School Board (HWDSB) that the City of Hamilton does not have an interest in acquiring its property

located at 65 Frances Avenue, Stoney Creek, as shown on Appendix "A" attached to Report PED19239; and,

- (ii) That the Real Estate Section of the Economic Development Division of the Planning and Economic Development Department be directed to advise the Hamilton-Wentworth District School Board (HWDSB) of the City of Hamilton's site development requirements, as identified in Appendix "B" attached to Report PED19239.

(d) Proposed City-Initiated Rezoning of the Land Located at 65 Frances Avenue, Stoney Creek (Added Item 11.1)

- (i) That the land located at 65 Frances Avenue, Stoney Creek, be referred to the Planning Committee for consideration on a proposed City-initiated rezoning of the land to open space; and,
- (ii) That staff be directed to communicate to the Hamilton-Wentworth District School Board that the Hamilton Conservation Authority be pursued as a potential purchaser of the property located at 65 Frances Avenue, Stoney Creek.

12. West Harbour Development Sub-Committee Report 19-004, December 18, 2019 (Item 10.10)

(a) Piers 6-8 Interim Parking (PW17076(a)) (Item 7.1)

That Report PW17076(a), respecting Piers 6-8 Interim Parking, be received.

(b) Piers 6 and 7 Land Disposition Plan (PED19191(b)) (Ward 2) (Item 10.1)

- (i) That Area 1 comprised of approximately 1,066.00 square meters; Area 2 comprised of approximately 1,483.38 square meters; Area 3 comprised of approximately 1,221.29 square meters; and, Area 4 comprised of approximately 1,342.50 square meters be individually severed from the portion of the lands commonly known as Piers 5, 6 & 7 comprising part of the West Harbour and more specifically all part of PIN 175790165 (LT), as depicted in Appendix "A" attached to Report PED19191(b), (final property limits to be determined by survey) and declared surplus to the requirements of the City of Hamilton, in accordance with the "Procedural By-law for the Sale of Land", being By-law No. 04-299;

- (ii) That staff from the Real Estate Section of the Economic Development Division of the Planning and Economic Development Department be authorized and directed to sell the lands known as Areas 1 to 4 of Pier 6 and 7, in accordance with the “Procedural By-law for the Sale of Land”, being By-Law 04-299, and include the proposed terms and conditions of a structured transactional offering as outlined in Report PED19191(b);
- (iii) That the General Manager, Planning and Economic Development Department, or designate, be authorized and directed to negotiate and enter into the relevant real estate agreements (e.g. Agreement of Purchase and Sale), on terms and conditions consistent with those outlined in Report PED19191(b), including the imposition of covenants and contractual performance obligations, and such other terms and conditions deemed appropriate by the General Manager, Planning and Economic Development;
- (iv) That the net proceeds of the sale of each of the lands known as Area 1 to 4 of Pier 6 and 7 be deposited in capital project 4411606002 entitled “West Harbour Real Estate Disposition” and that all associated legal costs, appraisal fees, real estate and legal fees, environmental and geotechnical studies (if required), survey and property maintenance costs related to each of the subject properties be sourced from this account;
- (v) That the City Solicitor be authorized to complete the transactions for the disposition of the lands known as Area 1 to 4 of Pier 6 and 7 on behalf of the City, including paying any necessary expenses, amending the closing, due diligence and other dates, and amending and waiving terms and conditions on such terms as she considers reasonable; and,
- (vi) That Mayor and Clerk be authorized and directed to execute any resultant necessary documents associated to the disposition of the lands known as Area 1 to 4 of Pier 6 and 7 as contemplated in this Report PED19191(b), in a form satisfactory to the City Solicitor.

13. Advisory Committee for Persons with Disabilities Report 19-011, December 10, 2019 (Item 10.11)

(a) Advisory Committee for Persons with Disabilities Working Group Review (Item 10.1)

- (i) That a Built Environment Working Group of the Advisory Committee for Persons with Disabilities be established for the remainder of the

2018 – 2022 Term of Council and be comprised of the following Members:

- (1) Shahan Aaron
- (2) Patty Cameron
- (3) Jayne Cardno
- (4) Michele Dent
- (5) Anthony Frisina
- (6) James Kemp
- (7) Paula Kilburn
- (8) Aznive Mallet
- (9) Tom Manzuk
- (10) Tim Nolan

(ii) That a Housing Issues Working Group of the Advisory Committee for Persons with Disabilities be established for the remainder of the 2018 – 2022 Term of Council and be comprised of the following Members:

- (1) Jayne Cardno
- (2) Michele Dent
- (3) Lance Dingman
- (4) Anthony Frisina
- (5) James Kemp
- (6) Paula Kilburn
- (7) Tom Manzuk

(iii) That a Transportation Working Group of the Advisory Committee for Persons with Disabilities be established for the remainder of the 2018 – 2022 Term of Council and be comprised of the following Members:

- (1) Shahan Aaron
- (2) Anthony Frisina
- (3) James Kemp
- (4) Paula Kilburn
- (5) Aznive Mallett
- (6) Tom Manzuk
- (7) Mark McNeil
- (8) Tim Murphy
- (9) Kim Nolan
- (10) Tim Nolan

- (b) That Mary Sinclair and Robert Semkow be invited to attend meetings of the Built Environment Working Group, Housing Issues Working Group, and Transportation Working Group of the Advisory Committee for Persons with Disabilities on an ongoing basis to provide subject-matter expertise, as required.

14. LRT/Provincial Taskforce Update (PED20033) (City Wide) (Item 10.12)

That Report PED20033, respecting an LRT/Provincial Taskforce Update, be received.

15. Feasibility of Locating a New Arena on the Hamilton Mountain (PED20008) (City Wide) (Item 10.13)

That staff be directed to take no further action on the unsolicited proposal attached as confidential Appendix “A” to Report PED20008.

16. GRIDS 2 Transportation and Infrastructure Assessment (Item 11.2)

WHEREAS, the City is undertaking an update to GRIDS, known as GRIDS 2, which is a long-term growth strategy to allocate forecasted population and employment growth from 2031 to 2041;

WHEREAS, approaches and options for the allocation of growth will have impacts on infrastructure needs, and further, that needs may vary by growth option;

WHEREAS, infrastructure needs associated with growth may include new transportation corridors, road capacity enhancements, urbanization of rural cross-sections within or adjacent to growth areas, higher-order transit improvements, and new multi-modal infrastructure, in addition to municipal service upgrades;

WHEREAS, historically, infrastructure for new growth areas has typically been delivered concurrently with development by the private sector and financed through development agreements, or subsequent to development by the City using Development Charge revenues;

WHEREAS, the practice of relying on the private sector to front-end and construct growth-related infrastructure can be advantageous, some potential shortcomings include the potential for delayed delivery of complete networks (e.g. piecemeal corridor construction) and the potential for under-estimation of

multi-modal needs and opportunities (e.g. sidewalks, transit upgrades, cycling infrastructure), which are indirectly triggered by development;

WHEREAS, an alternative model whereby major infrastructure is delivered in advance of development may help address problems created by piece-meal infrastructure development;

WHEREAS, alternative approaches to front-ending infrastructure may have an influence on the evaluation of growth options being considered as part of GRIDS 2;

THEREFORE, BE IT RESOLVED:

- (a) That staff be directed to undertake a transportation infrastructure needs assessment for growth areas, as part of the analysis being undertaken as part of GRIDS 2, at an estimated cost of \$150,000, to be funded from Reserve 110324 DC Admin Studies – Hard – Residential (\$94,500) and Reserve 110325 DC Admin Studies – Hard – Non-Residential (\$55,500), with that analysis to:
 - (i) focus on areas of significant change to include, but not be limited to, Upper Stoney Creek;
 - (ii) include the implications of a model whereby major transportation infrastructure is front-ended to occur in advance of major development activity; and,
 - (iii) The evaluation of growth options under GRIDS 2 include criteria that reflects the implications of a front-ended infrastructure model.

17. GRIDS 2 Transportation and Infrastructure Assessment – Hamilton-Halton Home Builders’ Association (Item 11.3)

That staff be directed to consult with the Hamilton-Halton Home Builders’ Association with respect to the GRIDS 2 Transportation and Infrastructure Assessment.

18. Amalgamated Transit Union Local 107 - Ratification of the Collective Agreement (HUR20001) (City Wide) (Item 14.1)

- (a) That the tentative agreement reached on December 18, 2019 between the City of Hamilton and the Amalgamated Transit Union, Local 107 (ATU) representing 804 employees, be ratified by Council; and,

- (b) That Report HUR20001 respecting the Amalgamated Transit Union, Local 107, Ratification of Collective Agreement remain confidential.

19. Proposed Acquisition of Land - Lloyd Street, Hamilton (PED20017) (Ward 3) (Item 14.2)

That Report PED20017, respecting the Proposed Acquisition of Land - Lloyd Street, Hamilton remain confidential until completion of the real estate transaction, with the exception of Appendices "B" and "C" of Report PED20017, which will remain confidential and not be released as public documents.

20. Downtown Entertainment Precinct Status Update (PED18168(c)) (City Wide) (Item 14.3)

- (a) That Report PED18168(c), respecting the Downtown Entertainment Precinct Status Update, be received; and,
- (b) That Report PED18168(c), respecting the Downtown Entertainment Precinct Status Update, remain confidential.

FOR INFORMATION:

(a) APPROVAL OF AGENDA (Item 2)

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

5. COMMUNICATIONS

5.1 Correspondence respecting Item 3 of the School Board Properties Sub-Committee Report 19-003, as it relates to Report PED19239 - Hamilton-Wentworth District School Board Property at 65 Frances Avenue, Stoney Creek (Ward 10) (Item 10.9)

- (a) Lakewood Beach Community Council
- (b) Sherry Hayes and Dennis Facia
- (c) D. and P. Stanford
- (d) Alexandra Kamphuis
- (e) Debbie Martin

(f) Linda McEneny

(g) Susan Easson

Recommendation: Be received and referred to consideration of Item 10.9.

- 5.2 Suzanne Mammel, CEO - Hamilton-Halton Home Builders' Association, respecting Item 11.2 - GRIDS 2 Transportation and Infrastructure Assessment

Recommendation: Be received and referred to consideration of Item 11.2.

6. DELEGATION REQUESTS

- 6.2 Dave Steeves, Stelco Fishing Club and Area Angling Clubs, respecting a Request for a Free Public Boat Launch at Fisherman's Pier (For a future GIC)
- 6.3 Don McLean, Hamilton 350 Committee, respecting the City's Climate Emergency (For the February 5, 2020 GIC)
- 6.4 Tom Ker, respecting Item 10.13 - Report PED20008, Feasibility of Locating a New Arena on the Hamilton Mountain (For today's meeting.)
- 6.5 Greg Maychak, Cecelia Carter-Smith and Jasper Kujavsky, Hamilton100 Commonwealth Games Bid Corporation, respecting Item 10.7 - Report PED19108(c) - Commonwealth Games 2030 (For today's meeting.)

12. NOTICES OF MOTION

- 12.1 Protection of Solicitor-Client Privilege by Separating Legal Advice from all Confidential Staff Reports and Recommendations
- 12.2 Leaving Children Unattended in a Vehicle
- 12.3 Feasibility of Developing a Hamilton Biodiversity Action Plan

The agenda for the January 15, 2020 General Issues Committee meeting was approved, as amended.

(b) DECLARATIONS OF INTEREST (Item 3)

Councillor J. P. Danko declared an interest to Item 10.9 - School Board Properties Sub-Committee Report 19-003, December 17, 2019, as his wife is the Vice Chair of the Hamilton-Wentworth District School Board.

Councillor L. Ferguson declared a potential interest to Item 14.2 – Report PED20017 – Proposed Acquisition of Land – Lloyd Street, Hamilton, as a member of his extended family owns one of the companies noted in the report.

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

The following minutes of the General Issues Committee meetings were approved, as presented.

- (i) December 4, 2019 (Item 4.1)
- (ii) December 9, 2020 (Item 4.2)

(d) COMMUNICATIONS (Item 5)

- (i) Correspondence respecting Item 3 of the School Board Properties Sub-Committee Report 19-003, as it relates to Report PED19239 - Hamilton-Wentworth District School Board Property at 65 Frances Avenue, Stoney Creek (Ward 10) (Item 10.9) (Item 5.1)**

The following items of correspondence were received and referred to consideration of Item 10.9 - the School Board Properties Sub-Committee Report 19-003, as it relates to Report PED19239 - Hamilton-Wentworth District School Board Property at 65 Frances Avenue, Stoney Creek:

- (1) Lakewood Beach Community Council
- (2) Sherry Hayes and Dennis Facia
- (3) D. and P. Stanford
- (4) Alexandra Kamphuis
- (5) Debbie Martin

- (6) Linda McEneny
- (7) Susan Easson

For disposition of this matter, please refer to Item 11(c).

(ii) Suzanne Mammel, CEO - Hamilton-Halton Home Builders' Association, respecting Item 11.2 - GRIDS 2 Transportation and Infrastructure Assessment (Item 5.2)

The correspondence from Suzanne Mammel, CEO - Hamilton-Halton Home Builders' Association, respecting Item 11.2 - GRIDS 2 Transportation and Infrastructure Assessment, was received and referred to consideration of Item 11.2.

For disposition of this matter, please refer to Items 16 and 17.

(e) DELEGATION REQUESTS (Item 6)

The following delegation requests were approved, as follows:

- (i) Paven R. Bratch, MetroPartners Inc., respecting an Opportunity for a Downtown Technology Centre (For a future GIC) (Item 6.1)
- (ii) Dave Steeves, Stelco Fishing Club and Area Angling Clubs, respecting a Request for a Free Public Boat Launch at Fisherman's Pier (For a future GIC) (Item 6.2)
- (iii) Don McLean, Hamilton 350 Committee, respecting the City's Climate Emergency (For the February 5, 2020 GIC) (Item 6.3)
- (iv) Tom Ker, respecting Item 10.13 - Report PED20008, Feasibility of Locating a New Arena on the Hamilton Mountain (For the January 15, 2020 GIC) (Item 6.4)
- (v) Greg Maychak, Cecelia Carter-Smith and Jasper Kujavsky, Hamilton100 Commonwealth Games Bid Corporation, respecting Item 10.7 - Report PED19108(c) - Commonwealth Games 2030 (For the January 15, 2020 GIC) (Item 6.5)

(f) PUBLIC HEARINGS / DELEGATIONS (Item 8)

(i) James Chase, Public Consultation Process respecting the Wentworth Lodge Lands (Item 8.1)

James Chase addressed Committee respecting the public consultation process regarding the Wentworth Lodge lands.

The delegation provided by James Chase, regarding the Public Consultation Process respecting the Wentworth Lodge Lands was received.

(ii) Tom Ker, respecting Item 10.13 - Report PED20008, Feasibility of Locating a New Arena on the Hamilton Mountain (Item 8.2)

Tom Ker addressed Committee respecting Item 10.13 - Report PED20008, Feasibility of Locating a New Arena on the Hamilton Mountain.

The delegation provided by Tom Ker, respecting Item 10.13 - Report PED20008, Feasibility of Locating a New Arena on the Hamilton Mountain, was received.

For disposition of this matter, please refer to Item 15.

(iii) Greg Maychak, Cecelia Carter-Smith and Jasper Kujavsky, Hamilton100 Commonwealth Games Bid Corporation, respecting Item 10.7 - Report PED19108(c) - Commonwealth Games 2030 (Item 8.3)

Greg Maychak, Cecelia Carter-Smith and Jasper Kujavsky, Hamilton100 Commonwealth Games Bid Corporation, addressed Committee respecting Item 10.7 - Report PED19108(c) - Commonwealth Games 2030.

The delegation provided by Greg Maychak, Cecelia Carter-Smith and Jasper Kujavsky, Hamilton100 Commonwealth Games Bid Corporation, respecting Item 10.7 - Report PED19108(c) - Commonwealth Games 2030, was received.

For disposition of the above matter, please refer to Item 9.

(g) DISCUSSION ITEMS (Item 10)

The following MOTION was **DEFEATED**:

(i) Feasibility of Locating a New Arena on the Hamilton Mountain (PED20008) (City Wide) (Item 10.13)

That Report PED20008, respecting the Feasibility of Locating a New Arena on the Hamilton Mountain, be DEFERRED until the February 5, 2020 meeting, pending further information.

For disposition of this matter, please refer to Item 15.

(h) MOTIONS (Item 11)

Councillor J. Farr WITHDREW the following Motion:

(i) Options to Reduce Use of Municipal Law Enforcement Vehicles (Item 11.1)

WHEREAS, City Council has unanimously declared a Climate Crisis;

WHEREAS, vehicles are a major contributor to green-house gas emissions;

WHEREAS, there are approximately 35 cars that make up part of the Municipal Law Enforcement Fleet;

WHEREAS, reducing the use of vehicles, particularly lone occupant vehicles, will likely translate to a reduction in operating costs; and,

WHEREAS, cycling, transit and walking are good for the environment and a healthy model option of transportation for City of Hamilton employees;

THEREFORE, BE IT RESOLVED:

That, in an effort to lead by example as the City of Hamilton during this officially declared Climate Crisis, the appropriate staff be requested to report back to Planning Committee and/or the 2020 Operating Budget Process on considerations respecting reducing the amount of vehicle use by MLE staff during day-to-day operations that may include, but not be limited to, cycling, transit, car share and car-pooling.

(i) **NOTICES OF MOTION (Item 12)**

Councillor B. Clark introduced the following Notice of Motion:

(i) **Protection of Solicitor-Client Privilege by Separating Legal Advice from all Confidential Staff Reports and Recommendations (Item 12.1)**

WHEREAS, the Solicitor-Client privilege is a legal concept that enables the client to entrust with their lawyers confidential and private information and enables their lawyer to provide unfettered and confidential advice to their client;

WHEREAS, the Supreme Court of Canada has called Solicitor-Client Privilege, “a principal of fundamental justice and civil right of supreme importance in Canadian law.” (*Lavallee, Rackel & Heintz v. Canada (Attorney General)*; *White, Ottenheimer & Baker v. Canada (Attorney General)*; *R. v. Fink*, [2002] 3 S.C.R. 209, 2002 SCC 61);

WHEREAS, the Solicitor-client privilege is solely the clients’ and as such only the client can voluntarily waive the privilege;

WHEREAS, it has been past practice of Hamilton’s Senior Leadership Team to provide confidential staff reports that are a hybrid of staff information, recommendations and legal advice;

WHEREAS, concerns have been expressed that any public release of such reports could mean a waiver of Solicitor-Client privilege;

THEREFORE, BE IT RESOLVED:

That the City Manager and City Solicitor be directed to implement a policy, by March 31, 2020, requiring the separation of any legal advice from all confidential staff reports, with any such legal advice to be provided as an appendix to be attached to the corresponding confidential staff report.

The following Notice of Motion will be placed in the February 5, 2020 agenda as a Motion:

(ii) **Leaving Children Unattended in a Vehicle (Item 12.2)**

WHEREAS, the Province of Quebec, under section 380 of the *Highway Safety Code* Chapter C-24. 2, prohibits a person from leaving a child under the age of 7 unattended in a vehicle;

WHEREAS, section 218 of the *Criminal Code* and Section 136 of the *Child, Youth and Family Services Act*, S.O. 2017, c. 14. Sched.1 prohibits abandoning a child, there is no explicit provision in Ontario to prohibit a person from leaving a child unattended in a vehicle;

WHEREAS, the Province of Ontario under the *Highway Traffic Act*, RSO 1990, c. H. 8, does not have adequate language that prohibits a person from leaving a child unattended in a vehicle;

WHEREAS, the Province of Quebec is the only province with an age limit for leaving children unattended in a vehicle; and,

WHEREAS, there have been concerns of the health and safety of children being left unattended in vehicles in the City of Hamilton.

THEREFORE, BE IT RESOLVED:

- (a) That the Mayor correspond with the Premier of Ontario, the Minister of Transportation and local Members of Provincial Parliament to request that the Province consider adopting similar provisions to Quebec, specially that a person is prohibited from leaving a child under the age of 7 unattended in a vehicle; and,
- (b) That a copy of the correspondence be forwarded to other Ontario municipalities and the Association of Municipalities of Ontario requesting their endorsement.

Councillor B. Clark introduced the following Notice of Motion:

(iii) Feasibility of Developing a Hamilton Biodiversity Action Plan (Item 12.3)

WHEREAS, the scientific consensus is that habitat loss and climate change together have triggered mass extinction of life on earth and that 60% of all wildlife worldwide has been lost since 1970;

WHEREAS, increasing and/or enhancing biodiversity within ecosystems benefits all species, including humans, and provides ecological services such as pollination services, climate resiliency and stability, as well as providing beautiful green spaces that support the wellbeing and mental health of individuals and communities;

WHEREAS, enhancing biodiversity is a “nature-based solution” to climate impacts, such as managing flooding by storing water, significantly reducing air pollution by sequestering carbon, filtering out harmful particulates, and

cooling, thereby reducing the harmful effects of heatwaves and increasing the quality and resilience of infrastructure at lower costs and reduced risk;

WHEREAS, cities have a critical role to play in the biodiversity crisis and the climate change crisis and a Biodiversity Action Plan for Hamilton will help the City of Hamilton and conservation partners to protect and restore Hamilton's biodiversity;

WHEREAS, Hamilton is addressing the climate crisis with the Climate Change Task Force and a Biodiversity Action Plan can help to mitigate the climate crisis with nature-based solutions to help address serious issues like storm water management and temperature amelioration and reduction of urban heat island. The Biodiversity Action Plan will complement the Climate Change Task Force workplan;

WHEREAS, the development of the Biodiversity Action Plan will foster environmental awareness and sustainability and increase interactions and engagement among community stewards;

WHEREAS, the Biodiversity Action Plan allows the City of Hamilton to highlight and align initiatives already in place and further engage local communities in an environment of creativity and innovation which will promote a healthier life for our community; and,

WHEREAS, many other municipalities have developed Biodiversity Strategies that can be used as resources for Hamilton (ex. Toronto, Calgary, Edmonton, Vancouver);

THEREFORE, BE IT RESOLVED:

That the appropriate staff be directed to investigate the feasibility and resources required to develop a Biodiversity Action Plan for Hamilton in collaboration with the conservation and report back to the General Issues Committee.

(i) PRIVATE & CONFIDENTIAL (Item 14)

Committee moved into Closed Session respecting Items 14.1 to 14.4, pursuant to Section 8.1, Sub-sections (c), (d) and (k) of the City's Procedural By-law 18-270; and, Section 239(2), Sub-sections (c), (d), and (k) of the *Ontario Municipal Act*, 2001, as amended, as the subject matters pertain to a proposed or pending acquisition or disposition of land by the municipality or local board; labour relations or employee negotiations; and, a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or

on behalf of the municipality or local board. 2001, c. 25, s. 239 (2); 2017, c. 10, Sched. 1, s. 26.

(j) ADJOURNMENT (Item 15)

There being no further business, the General Issues Committee adjourned at 5:03 p.m.

Respectfully submitted,

Deputy Mayor, B. Clark
Chair, General Issues Committee

Stephanie Paparella
Legislative Coordinator,
Office of the City Clerk

**OTTAWA STREET
BUSINESS IMPROVEMENT AREA (BIA)
PROPOSED 2020 OPERATING BUDGET**

| | |
|-----------------------|------------------|
| Revenue | |
| BIA Levy | \$133,000 |
| | |
| Total Revenues | \$133,000 |
| | |
| Expenses | |
| Insurance | \$3,500 |
| Office Facilities | \$27,500 |
| Contract Employee(s) | \$42,000 |
| Administration | \$4,000 |
| Beautification | \$16,500 |
| Marketing/Advertising | \$23,500 |
| Events/Operational | \$15,000 |
| BIA Contingency | \$0 |
| Office Improvements | \$1,000 |
| | |
| Total Expenses | \$133,000 |
| | |

**WESTDALE VILLAGE
BUSINESS IMPROVEMENT AREA (BIA)
PROPOSED 2020 OPERATING BUDGET**

| | |
|-----------------------|------------------|
| Revenue | |
| BIA Levy | \$125,000 |
| | |
| Total Revenues | \$125,000 |
| | |
| Expenses | |
| Staffing | \$33,000 |
| Special Events | \$34,000 |
| Marketing | \$33,000 |
| Office Expenses | \$1,000 |
| Beautification | \$18,000 |
| Casual Labour | \$2,000 |
| Contingency | \$4,000 |
| | |
| Total Expenses | \$125,000 |

**WATERDOWN VILLAGE
BUSINESS IMPROVEMENT AREA (BIA)
PROPOSED 2020 OPERATING BUDGET**

| | |
|--|------------------|
| Revenue | |
| BIA Levy | \$250,000 |
| Vendor Fees | \$22,000 |
| Grants | \$6,500 |
| Transfer from Surplus | \$46,015 |
| Other (ticket sales, fees, City contributions) | \$500 |
| Marketing Reserve Contribution | \$10,000 |
| Total Revenues | \$335,015 |
| | |
| Expenses | |
| Admin & Operations | \$142,480 |
| Beautification | \$99,035 |
| Farmers' Market | \$28,500 |
| Events & Promotions | \$26,800 |
| Marketing & Advertising | \$30,700 |
| Member Engagement | \$4,000 |
| Non-Refundable 22% of PST | \$3,500 |
| | |
| Total Expenses | \$335,015 |

**STONEY CREEK
BUSINESS IMPROVEMENT AREA (BIA)
PROPOSED 2020 OPERATING BUDGET**

| | |
|-------------------------------|-----------------|
| Revenue | |
| BIA Levy | \$49,000 |
| Opening Bank Balance | \$8,588 |
| HST Refund | \$5,200 |
| Sponsorship/Grants | \$3,000 |
| City Enrichment Fund | \$3,000 |
| Operating Grant | \$7,000 |
| Christmas Grant | \$1,000 |
| Vendor Revenues | \$7,000 |
| Associate Memberships | \$500 |
| Total Revenues | \$84,288 |
| | |
| Expenses | |
| <i>Streetscape</i> | |
| Banner Installation | \$3,750 |
| Planters | \$1,500 |
| Christmas Wreath Installation | \$4,500 |
| | |
| <i>Promotion</i> | |
| Web Page Hosting | \$500 |
| Santa Claus Parade | \$500 |
| | |
| <i>Administration</i> | |
| Executive Director | \$23,300 |
| Student | \$3,000 |
| Meeting Expenses | \$400 |
| Office Supplies | \$350 |
| Liability Insurance | \$2,000 |
| OBIAA Membership | \$250 |
| Bank Charges | \$60 |
| Audit Fees | \$475 |
| | |
| <i>Events</i> | |
| Strawberry/Folkfest | \$9,000 |
| Pumpkin Fest | \$9,000 |
| Stoney Creek Sparkles | \$3,000 |
| Jazz in the Creek | \$5,000 |
| Market | \$3,000 |
| Kringle in the Creek | \$3,000 |
| | |
| <i>Reserve Fund</i> | \$11,703 |
| | |
| Total Expenses | \$84,288 |



AUDIT, FINANCE AND ADMINISTRATION COMMITTEE REPORT 20-001

9:30 a.m.

January 16, 2020

Council Chambers

Hamilton City Hall

Present: Councillors M. Wilson (Chair), C. Collins, B. Clark, M. Pearson, B. Johnson, L. Ferguson, A. VanderBeek and J. Partridge

THE AUDIT, FINANCE AND ADMINISTRATION COMMITTEE PRESENTS REPORT 20-001 AND RESPECTFULLY RECOMMENDS:

1. Fraud, Waste, and Whistleblower Update - Q3 2019 (AUD20001) (City Wide) (Item 7.2)

That Report AUD20001, respecting the Fraud, Waste, and Whistleblower Update - Q3 2019, be received.

2. 2020 Temporary Borrowing and Interim Tax Levy By-laws (FCS20003) (City Wide) (Item 7.3)

(a) That Appendix "A" attached to Report FCS20003, "By-law to Authorize the Temporary Borrowing of Monies to Meet Current Expenditures Pending Receipt of Current Revenues for 2020", be passed; and,

(b) That Appendix "B" attached to Report FCS20003, "By-law to Authorize an Interim Tax Levy for 2020", be passed.

3. Education Development Charge Update (FCS20010) (City Wide) (Item 7.4)

That Report FCS20010, respecting the Education Development Charge Update, be received.

4. Agreement respecting the Continued Supply of Raw Water to 690 Strathearne Avenue North, Hamilton - Deadline Extension (Added Item 11.1)

(a) That the deadline for reaching an agreement respecting the continued supply of raw water to 690 Strathearne Avenue North, Hamilton be extended from January 15, 2020 to February 7, 2020; and,

- (b) That, in the event an agreement has not been reached, the deadline for cutting off the water supply to 690 Strathearne Avenue North, Hamilton, be extended from February 1, 2020 to February 28, 2020.

5. HMRF/HWRF Pension Administration Sub-Committee Report 19-001 - December 10, 2019 (Item 10.1)

(a) HMRF/HWRF/HSR Pension Plan Possible Transfer to OMERS (FCS18093(a)) (City Wide) (Item 10.1)

That Report FCS18093(a) respecting the HMRF/HWRF/HSR Pension Plan Possible Transfer to OMERS, be received.

(b) Master Trust Pension Investment Performance Report as at December 31, 2018 (FCS18091(a)) (City Wide) (Item 10.2)

That Report FCS18091(a) respecting the Master Trust Pension Investment Performance Report as at December 31, 2018, be received.

(c) Master Trust Pension Investment Performance Report as at June 30, 2019 (FCS19075) (City Wide) (Item 10.3)

That Report FCS19075 respecting the Master Trust Pension Investment Performance Report as at June 30, 2019, be received.

(d) 2019 Master Trust Pension Statement of Investment Policies and Procedures (FCS19073) (City Wide) (Item 10.4)

(i) That Appendix "A" to Report 20-001, respecting the 2019 City of Hamilton Defined Benefit Pension Plans Master Trust Statement of Investment Policies and Procedures be approved and replace the previous 2018 City of Hamilton Defined Benefit Pension Plans Master Trust Statement of Investment Policies and Procedures contained in Report FCS18090 and approved by Council on January 23, 2019; and

(ii) That Appendix "A" to HMRF/HWRF Pension Administration Sub-Committee Report 19-001, respecting the 2019 City of Hamilton Defined Benefit Pension Plans Master Trust Statement of Investment Policies and Procedures be forwarded to the Hamilton Street Railway Pension Advisory Committee for their information.

6. 2019 City of Hamilton External Audit Plan (FCS20004) (City Wide) (Item 10.2)

That Report FCS20004, respecting the 2019 City of Hamilton External Audit Plan, be received.

7. Use of External Services for Tax Assessment & Appeals (FCS20005) (City Wide) (Item 10.3)

- (a) That staff be directed to proceed with a modified Request for Proposals, in adherence to By-law 17-064, Procurement Policy #5.4, for consultancy firms specializing in Tax Assessment and Appeals;
- (b) That the General Manager of Corporate Services or designate be authorized to negotiate and execute all agreements and any ancillary documents required in a form satisfactory to the City of Hamilton (City);
- (c) That staff report back on actual consulting costs incurred in 2020, to determine if a sustainable funding source is required for 2021 and future; and,
- (d) That the consulting costs incurred in 2020 be funded from the Tax Stabilization Reserve. (Account number 110046).

8. Citizen Committee Report - Hamilton Aboriginal Advisory Committee - Updated Terms of Reference (Item 10.4)

That the Hamilton Aboriginal Advisory Committee's Terms of Reference be updated to reflect the Committee's voting and non-voting members.

9. 2020 Grant Advances – City Enrichment Fund (GRA20001) (City Wide) (Item 10.5)

- (a) That effective January 1, 2020, an advance of funds be provided to the organizations specified in the attached Appendix "B" to Report 20-001; and,
- (b) That any outstanding arrears due to the City of Hamilton by the organizations (as shown in the attached Appendix "A" to Report GRA20001) be first applied against the approved grant funding, including advances until the debt is satisfied, prior to that organization receiving the balance of any approved payment.

FOR INFORMATION:

(a) CHANGES TO THE AGENDA (Item 2)

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

6. DELEGATION REQUESTS (Item 6)

- 6.2 Tom Hunter, CEO of CityHousing Hamilton, respecting a request for abatement for a water leak at 25 Towercrest Dr (For a future meeting)

- 6.3 Rosemary Fisher and Bart Sarsh, ArcelorMittal Long Product Canada (AMLPC), respecting the raw water supply agreement, and seeking an extension of 1 month on the deadlines for finalizing the contract (For today's meeting)

7. CONSENT ITEMS (Item 7) - WITHDRAWN

- 7.1(m) Lesbian, Gay, Bisexual, Transgender and Queer Advisory Committee - April 30, 2019
- 7.1(n) Lesbian, Gay, Bisexual, Transgender and Queer Advisory Committee - June 25, 2019
- 7.1(o) Lesbian, Gay, Bisexual, Transgender and Queer Advisory Committee - August 20, 2019
- 7.1(p) Lesbian, Gay, Bisexual, Transgender and Queer Advisory Committee - August 27, 2019
- 7.1(q) Lesbian, Gay, Bisexual, Transgender and Queer Advisory Committee - September 17, 2019
- 7.1(r) Lesbian, Gay, Bisexual, Transgender and Queer Advisory Committee - October 15, 2019

The agenda for the January 16, 2020 Audit, Finance and Administration Committee meeting 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) December 5, 2019 (Item 4.1)

The Minutes of the December 5, 2019 meeting of the Audit, Finance and Administration Committee were approved, as presented.

(d) DELEGATION REQUESTS (Item 6)

- (i) The following delegations requests were approved for a future meeting:
- (1) Fardad Chadorshabchi, respecting water billing charges (Item 6.1)
- (2) Tom Hunter, CEO of CityHousing Hamilton, respecting a request for abatement for a water leak at 25 Towercrest Drive (Added Item 6.2)

- (ii) **Rosemary Fisher and Bart Sarsh, ArcelorMittal Long Product Canada (AMLPC), respecting the raw water supply agreement, and seeking an extension of 1 month on the deadlines for finalizing the contract (For today's meeting) (Added Item 6.3)**

The Delegation Request from Rosemary Fisher and Bart Sarsh, ArcelorMittal Long Product Canada (AMLPC), respecting the raw water supply agreement, and seeking an extension of 1 month on the deadlines for finalizing the contract was approved for today's meeting.

(e) CONSENT ITEMS (Item 7)

The following Volunteer Advisory Committee Minutes, were received:

- (i) Committee Against Racism - September 24, 2019 (Item 7.1(a))
- (ii) Committee Against Racism - October 22, 2019 (Item 7.1(b))
- (iii) Committee Against Racism - November 12, 2019 (Item 7.1(c))
- (iv) Hamilton Aboriginal Advisory Committee - September 5, 2019 (Item 7.1(d))
- (v) Hamilton Aboriginal Advisory Committee - October 3, 2019 (Item 7.1(e))
- (vi) Hamilton Aboriginal Advisory Committee - December 5, 2019 (Item 7.1(f))
- (vii) Hamilton Mundialization Committee - April 17, 2019 (Item 7.1(g))
- (viii) Hamilton Mundialization Committee - June 19, 2019 (Item 7.1(h))
- (ix) Hamilton Mundialization Committee - September 18, 2019 (Item 7.1(i))
- (x) Hamilton Mundialization Committee - October 16, 2019 (Item 7.1(j))
- (xi) Hamilton Mundialization Committee - November 5, 2019 (Item 7.1(k))
- (xii) Hamilton Status of Women Committee - November 28, 2019 (Item 7.1(l))

(f) PUBLIC HEARINGS / DELEGATIONS (Item 8)

- (i) **Rosemary Fisher and Bart Sarsh, ArcelorMittal Long Product Canada (AMLPC), respecting the raw water supply agreement, and seeking an extension of 1 month on the deadlines for finalizing the contract (Added Item 8.1)**

Rosemary Fisher and Bart Sarsh, ArcelorMittal Long Product Canada (AMLPC), addressed the Committee respecting the raw water supply agreement, and seeking an extension of 1 month on the deadlines for finalizing the contract, with the aid of a handout.

A copy of the handout is available on the City's website at www.hamilton.ca or through the Office of the City Clerk.

The Delegation from Rosemary Fisher, ArcelorMittal Long Product Canada (AMLPC), respecting the raw water supply agreement, and seeking an extension of 1 month on the deadlines for finalizing the contract, was received.

For further disposition of this matter, refer to Item 4.

(g) PRIVATE AND CONFIDENTIAL (Item 14)

(ii) December 5, 2019 – Closed Session Minutes (Item 14.1)

- (a) The Closed Session Minutes of the December 5, 2019 Audit, Finance and Administration Committee meeting, were approved as presented; and,
- (b) The Closed Session Minutes of the December 5, 2019 Audit, Finance and Administration Committee meeting will remain confidential.

(h) ADJOURNMENT (Item 15)

There being no further business, the Audit, Finance and Administration Committee adjourned at 10:15 a.m.

Respectfully submitted,

Councillor Wilson, Chair
Audit, Finance and Administration
Committee

Loren Kolar
Legislative Coordinator
Office of the City Clerk

Statement of Investment Policies and Procedures

City of Hamilton Defined Benefit Pension Plans Master Trust

December 2019

APPROVED on this day of December, 2019

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Section 1—Overview

1.01 Purpose of Statement

This Statement of Investment Policies and Procedures (the “Policy” or “Master Trust SIPP”) provides the framework for the investment of the assets of the City of Hamilton Defined Benefit Pension Plans Master Trust (the “Master Trust”).

This Policy is based on the “prudent person portfolio approach” to ensure the prudent investment and administration of the assets of the Master Trust are within the parameters set out in the *Pension Benefits Act*, (Ontario) and the Regulations thereunder.

1.02 Background of the Master Trust

The inception date of the Master Trust is November 1, 1999, when three defined benefit pension plans, the “Plans”, (the Hamilton Municipal Retirement Fund (Registration number 0275123), the Hamilton Street Railway Pension Plan (1994) (Registration number 0253344), and the Hamilton Wentworth Retirement Fund (Registration number 1073352)) invested in units of the Master Trust. The portfolio of assets in the Master Trust is referred to as “the Fund”. These Plans hold units of the Master Trust and share, on a pro-rata basis, in all income, expenses and capital gains and losses of the Master Trust.

For reference purposes, the details of the Statement of Investment Policies and Procedures for each of the above mentioned Plans participating in the Master Trust have been attached to Appendix A of this Policy.

1.03 Objective of the Plan

The objective of the Plans is to provide members of the Plans with retirement benefits prescribed under the terms thereof.

1.04 Investment and Risk Philosophy

The primary investment objective is to provide an economic return on assets sufficient to fund Plan liabilities over the long-term, while adhering to prudent investment practices.

The investment philosophies and strategies must take into account both return and risk objectives of the Plans and the City of Hamilton (the “City”).

In recognition of the risk and return objectives of the Plans and the City, an initial asset allocation policy was developed by the Investment Consultant in consultation with both the Chief Investments Officer and the Treasurer of the City (the “Treasurer”) based on the Plans’ current (at that time) funded status and the characteristics of the Plans and City. It is recognized, however, that the Plans’ return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plans’ funded statuses improve.

1.05 Administration

The General Manager of Finance and Corporate Services for the City ("General Manager of Finance and Corporate Services") is the designated contact person at the City for administrative purposes.

Section 2—Asset Mix and Diversification Policy

2.01 Master Trust Return Expectations

Each of the investment managers appointed to invest the assets of the Master Trust (the “Investment Managers”) is directed to achieve a satisfactory long-term real rate of return through a diversified portfolio, consistent with acceptable risks, performance objectives and prudent management.

In order to achieve their long-term investment goals, the Plans must invest in assets that have uncertain returns, such as Canadian equities, foreign equities and bonds. However, the City attempts to reduce the overall level of risk by diversifying the asset classes and further diversifying within each individual asset class. Based on historical data and reasonable expectations for future returns, the City believes that a diversified portfolio of Canadian equities, nominal bonds, real return bonds and foreign equities will likely outperform over the long term.

The overall goal of this Policy is to maximize the return of the Fund while bearing a reasonable level of risk relative to the liabilities in order to ensure the solvency of the Fund over time. The assets of the Plans are sufficiently liquid to make payments which may become due from the Plans. The weights applied to each of the asset classes are based on the targets in the initial asset allocation outlined in Section 2.03 and adjusted based on the target allocation in the Dynamic Investment Policy Schedule in Section 2.03.

2.02 Expected Volatility

The volatility of the Master Trust is directly related to its asset mix, specifically, the balance between Canadian bonds, Canadian equities and foreign equities. Since the Investment Managers do not have the authority to make any type of leveraged investment on behalf of the Master Trust, the volatility of the Master Trust should be similar to the volatility of the Benchmark Portfolio set out in Section 4.02 (Performance Measurement).

2.03 Asset Mix

(a) In order to achieve the long-term objective within the risk/return considerations described in Section 1.04, the following asset mix policy (Benchmark Portfolio) and ranges were selected for the initial asset allocation:

| Assets | Minimum % | Initial Target Weight % | Maximum % | Asset Category |
|-----------------|-----------|-------------------------|-----------|-------------------|
| Canadian Equity | 25 | 30 | 35 | Return-Seeking |
| Global Equity | 25 | 30 | 35 | Return-Seeking |
| Total Equities | 50 | 60 | 70 | Return-Seeking |
| Fixed Income | 30 | 40 | 50 | Liability-Hedging |

For purpose of the total asset mix described above, the Investment Managers' asset class pooled funds are deemed to be 100% invested, even though these funds may contain a portion held in cash and cash equivalent instruments.

The Plan's target asset allocation for each investment category listed in subsection 76(12) of the Regulation 909 to the Pension Benefits Act (Ontario) is as follows:

| Investment Category under subsection 76(12) of Regulation 909 | Target Asset Allocation | Accessed through mutual or pooled or segregated funds |
|---|--------------------------------|--|
| 1. Insured Contracts | 0.0% | - |
| 2. Mutual or pooled funds or segregated funds | N/A | - |
| 3. Demand deposits and cash on hand | 0.0% | - |
| 4. Short-term notes and treasury bills | 0.0% | - |
| 5. Term Deposits and guaranteed investment certificates | 0.0% | - |
| 6. Mortgage Loans | 0.0% | - |
| 7. Real Estate | 0.0% | - |
| 8. Real Estate Debentures | 0.0% | - |
| 9. Resource properties | 0.0% | - |
| 10. Venture Capital | 0.0% | - |
| 11. Corporations referred to in subsection 11(2) of Schedule III to the federal investment regs | 0.0% | - |
| 12. Employer issued securities | 0.0% | - |
| 13. Canadian stocks other than investments referred to in 1 to 12 above | 30.0% | Yes |
| 14. Non-Canadian stocks other than investments referred to in 1 to 12 above | 30.0% | Yes |
| 15. Canadian bonds and debentures other than investments referred to in 1 to 12 above | 40.0% | Yes |
| 16. Non-Canadian bonds and debentures other than investments referred to in 1 to 12 above | 0.0% | - |
| 17. Investments other than investments referred to in 1 to 16 above | 0.0% | - |

For inclusion within a fixed income investment category in the above table, the minimum ratings for target asset allocations of fixed income assets are outlined below. This framework is used to inform whether the target asset allocation to an investment category qualifies as fixed income for purposes of calculating the Provision for Adverse Deviations (PfAD) as defined under Regulation 909.

| Credit Rating Agency | Rating – Bond Market Securities | Rating – Money Market Securities |
|-----------------------------|--|---|
| DBRS | BBB | R-2 (middle) |
| Fitch Ratings | BBB- | F-3 |
| Moody's Investors Services | Baa3 | P-3 |
| Standard & Poor's | BBB- | A-3 |

- (b) **Return-Seeking Assets:** These assets generally will consist of all non-fixed income investments, such as equities and alternatives, with a main focus on price appreciation with generally higher expected long-term returns.
- (c) **Liability-Hedging Assets:** These assets generally will be fixed-income investments, such as bonds, with similar duration characteristics as the pension liabilities (i.e., these assets generally behave like pension liabilities). Since these assets focus mainly on current income, their expected long-term returns will generally be lower than return-seeking assets.
- (d) **Sub-Allocations and Rebalancing Ranges:** The sub-allocations and rebalancing ranges within the return-seeking portfolio will be reviewed from time to time as the total return-seeking allocation changes due to the Dynamic Investment Policy Schedule below. The rebalancing ranges for the total return-seeking assets and liability-hedging assets (fixed income) are also determined by the Dynamic Investment Policy Schedule below.

(e) In recognition of the risk and return objectives of the Plans and the City, an initial asset allocation policy was developed by the Investment Consultant in consultation with both the Chief Investments Officer and the Treasurer based on the Plans' current (at that time) funded status and the characteristics of the Plans and City. It is recognized, however, that the Plans' return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plans' funded statuses improve.

Based on an assessment of the Plans' long-term goals and desired risk levels, the HMRF/HWRF Pension Administration Sub-Committee (following advice from the Investment Consultant) recommended to City Council a "Dynamic Investment Policy" which was subsequently approved by City Council. The Dynamic Investment Policy was developed by the Investment Consultant in consultation with the Chief Investments Officer and the Treasurer, and is based on the 2010 Dynamic Investment Policy Study which was conducted by the Investment Consultant.

The Dynamic Investment Policy dynamically adjusts the allocation to return-seeking assets and liability-hedging assets as the Plans' funded statuses improve. Funded status may change due to any combination of investment returns, contributions, benefit payments, fund expenses, and changes to liabilities (including discount rate changes).

This Policy is based on the results of the 2010 Dynamic Investment Policy Study and the Dynamic Investment Policy Schedule is as follows:

| Funded Ratio ^{1 2} | Return -Seeking Allocation | | |
|-----------------------------|----------------------------|--------|---------|
| | Minimum | Target | Maximum |
| <65% | 50% | 60% | 70% |
| 65% | 50% | 60% | 70% |
| 66% | 50% | 60% | 70% |
| 67% | 50% | 60% | 70% |
| 68% | 50% | 60% | 70% |
| 69% | 50% | 60% | 70% |
| 70% | 50% | 60% | 70% |
| 71% | 49% | 59% | 69% |
| 72% | 47% | 57% | 67% |
| 73% | 46% | 56% | 66% |
| 74% | 44% | 54% | 64% |
| 75% | 43% | 53% | 63% |
| 76% | 41% | 51% | 61% |
| 77% | 40% | 50% | 60% |
| 78% | 38% | 48% | 58% |
| 79% | 37% | 47% | 57% |
| 80% | 35% | 45% | 55% |
| 81% | 34% | 44% | 54% |
| 82% | 32% | 42% | 52% |
| 83% | 31% | 41% | 51% |

| Return -Seeking Allocation | | | |
|-----------------------------|---------|--------|---------|
| Funded Ratio ^{1 2} | Minimum | Target | Maximum |
| 84% | 29% | 39% | 49% |
| 85% | 28% | 38% | 48% |
| 86% | 26% | 36% | 46% |
| 87% | 25% | 35% | 45% |
| 88% | 23% | 33% | 43% |
| 89% | 22% | 32% | 42% |
| 90% | 20% | 30% | 40% |
| 91% | 19% | 29% | 39% |
| 92% | 17% | 27% | 37% |
| 93% | 16% | 26% | 36% |
| 94% | 14% | 24% | 34% |
| 95% | 13% | 23% | 33% |
| 96% | 11% | 21% | 31% |
| 97% | 10% | 20% | 30% |
| 98% | 8% | 18% | 28% |
| 99% | 7% | 17% | 27% |
| 100% | 5% | 15% | 25% |
| >100% | 5% | 15% | 25% |

¹ Funded ratio defined on a Wind-up basis.

² Funded ratio will change based on any combination of investment returns, contributions, benefits payments, expenses and changes in liabilities.

Sub-Allocations: The sub-allocations within the liability hedging and return seeking categories will be drawn down approximately based on the table below. However, allocations to illiquid assets may be adjusted at a slower rate. Sub-allocations should be within 5% of their targets. The sub-allocations will be adjusted proportionately when the return-seeking allocation is between the levels listed in the table below.

| | Return Seeking | | Liability Hedging | |
|--------------------|-----------------|---------------|-------------------|-------------------|
| | Canadian Equity | Global Equity | Long-Term Bonds | Real Return Bonds |
| 15% return seeking | 8% | 7% | 11% | 74% |
| 20% return seeking | 10% | 10% | 12% | 68% |
| 25% return seeking | 13% | 12% | 14% | 61% |
| 30% return seeking | 15% | 15% | 15% | 55% |
| 35% return seeking | 18% | 17% | 17% | 48% |
| 40% return seeking | 20% | 20% | 18% | 42% |
| 45% return seeking | 23% | 22% | 20% | 35% |
| 50% return seeking | 25% | 25% | 21% | 29% |
| 55% return seeking | 28% | 27% | 23% | 22% |
| 60% return seeking | 30% | 30% | 25% | 15% |

Duration Strategy: Based on the Dynamic Investment Policy Study completed in 2010, the portfolio interest rate dollar duration will increase as the funded status improves and the allocation to liability hedging assets increases. Interest rate derivatives may be used on either a strategic or opportunistic basis to mitigate risk by increasing the hedge ratio up to 100%. This will be at the discretion of the Administrator and based on the duration of the Plan's liabilities.

Rebalancing and Monitoring: A systematic rebalancing procedure will be utilized to ensure that the asset allocation of the Fund stays within the ranges defined above. As the return-seeking asset allocation changes, the sub-category allocations will be kept approximately proportional to the Initial allocation specified above. However, the allocations to illiquid investments may be adjusted more slowly. The funded ratio and asset allocation of the Fund will be reviewed regularly or when significant cash flows occur, and will be monitored and reported on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time. The Fund will be rebalanced as necessary, making use of benefit payments and contributions to the extent possible and considering the transaction costs involved in the rebalancing.

2.04 Management Structure

The Master Trust may employ a mix of active and passive management styles. Active management provides the opportunity to outperform specific investment benchmarks and it can provide lower absolute volatility of returns. Passive, or index, management minimizes the risk of underperformance relative to a benchmark index and is generally less expensive than active management. This approach also diversifies the manager risk, making the Master Trust less reliant on the skills of a single Investment Manager.

Because holding large amounts of foreign assets can expose the Master Trust to fluctuations in the level of the Canadian dollar, a portion of the foreign assets may be hedged back into Canadian dollars.

2.05 Environmental, Social and Governance (ESG) Issues

The Administrator's primary responsibility is to make decisions in the best interest of the Plan beneficiaries. This responsibility requires that there be an appropriate balance between the need to seek long-term investment returns to help build better pensions for all members of the Plans and the needs for those returns to be delivered in as stable a manner as possible (given the behaviour of the investment markets).

The Administrator neither favours nor avoids managers and investments based on ESG integration. In keeping with the foregoing, and having regard to the size of the Plans and the pension fund, the Administrator does not take ESG factors into account when making investment decisions. As previously noted, the Administrator has delegated the search for investment managers to its Investment Consultant. On the direction of the Administrator, the Investment Consultant is directed to search and select the best investment managers for investing the assets of the Plans considering factors such as business, staff, historical performance and investment process, since the Administrator believes that these factors will contribute to higher investment returns in the long run and manage risk. Investment Managers are not prohibited from considering ESG factors if they believe that it will have a positive impact on the Plans' investment returns.

Section 3—Permitted and Prohibited Investments

3.01 General Guidelines

The investments of the Master Trust must comply with the requirements and restrictions set out in the *Income Tax Act* (Canada) and the *Pension Benefits Act* (Ontario), and their respective Regulations.

3.02 Permitted Investments

In general, and subject to the restrictions in this Section 3, the Investment Managers may invest in any of the following asset classes and in any of the investment instruments listed below:

- (a) **Canadian and Foreign Equities**
 - (i) Common and convertible preferred stock the shares of which are (a) listed on a prescribed stock exchange in Canada; or (b) listed on a prescribed stock exchange outside Canada;
 - (ii) Debentures convertible into common or convertible preferred stock, provided such instruments are traded on a recognized public exchange or through established investment dealers;
 - (iii) Rights, warrants and special warrants for common or convertible preferred stock the shares of which are (a) listed on a prescribed stock exchange in Canada; or (b) listed on a prescribed stock exchange outside Canada;
 - (iv) Private placement equities, where the security will be eligible for trading on a recognized public exchange within a reasonable and defined time frame;
 - (v) Instalment receipts, American Depository Receipts, Global Depository Receipts and similar exchange traded instruments;
 - (vi) Units of real estate investment trusts (REITs);
 - (vii) Exchange traded index-participation units (e.g., iUnits; SPDRs);
 - (viii) Income trusts registered as reporting issuers under the Securities Act, domiciled in a Canadian jurisdiction that provides limited liability protection to unit holders; and
 - (ix) Units of limited partnerships which are listed on the TSX exchange.

(b) **Canadian and Foreign Fixed Income**

- (i) Bonds, debentures, notes, non-convertible preferred stock and other evidence of indebtedness of Canadian or developed market foreign issuers whether denominated and payable in Canadian dollars or a foreign currency, provided such instruments are traded on a recognized public exchange or through established investment dealers, subject to Section 3.04 below;
- (ii) Real return bonds, subject to Section 3.04 below;
- (iii) Mortgages secured against Canadian real estate subject to Section 3.05 below;
- (iv) Mortgage-backed securities, guaranteed under the *National Housing Act*;
- (v) Term deposits and guaranteed investment certificates;
- (vi) Private placements of bonds subject to Section 3.03 below; and,
- (vii) Investment in bond and debenture issues of the City and affiliated bodies is neither encouraged nor discouraged. The decision by the Investment Manager(s) to invest in such issues is entirely their responsibility and they should be governed by the same degree of due diligence and prudence that they would apply when assessing any other investment in respect of a registered pension plan.

(c) **Cash and Short Term Investments**

- (i) Cash on hand and demand deposits;
- (ii) Canadian and U.S. Treasury bills and bonds (with remaining maturities not exceeding 365 days) issued by the federal (Canada & U.S., as applicable) and provincial governments and their agencies;
- (iii) Sovereign short-term debt instruments of developed countries, with maturities not exceeding 365 days;
- (iv) Obligations of trust companies and Canadian and foreign banks chartered to operate in Canada, including bankers' acceptances;
- (v) Commercial paper and term deposits; and
- (vi) Other money market instruments (maturity not exceeding 365 days).

(d) **Derivatives**

Assets are not invested in derivative instruments and the trust will not invest in derivatives directly (including options and futures). In the event that a pooled fund invests in derivatives, prior to investing in such pooled fund, appropriate risk management processes and procedures will be in place in order to help mitigate any risks associated with derivatives. Specifically, all derivative investments will

be made in accordance with applicable legislation and regulatory policies relating to the investment of pension plan assets in derivatives. The following uses of non-leveraged derivative instruments are permitted:

- (i) Covered put and/or call options with respect to publicly traded securities that are held in the portfolio;
 - (ii) The Investment Manager of an index portfolio may utilize fully backed, i.e. non-leveraged, derivative strategies designed to replicate the performance of specific market indices, i.e.- exchange-traded equity index futures contracts;
 - (iii) Investment Managers may use currency futures contracts and forward contracts to hedge foreign currency exposure; and
 - (iv) Interest rate derivatives can be used to hedge the interest rate risk in the liabilities.
- (e) **Other Investments**
- (i) Investments in open-ended or closed-ended pooled funds provided that the assets of such funds are permissible investments under this Policy, and
 - (ii) Deposit accounts of the Custodian can be used to invest surplus cash holdings.
- (f) **Index Mandates**
- (i) For managers of index mandates, permitted investment vehicles may include all instruments that may form part of the respective index.

3.03 Minimum Quality Requirements

- (a) **Quality Standards**
- Within the investment restrictions for individual portfolios, all portfolios should hold a prudently diversified exposure to the intended market.
- (i) The minimum quality standard for individual bonds and debentures is 'BBB-' or equivalent as rated by a Recognized Bond Rating Agency, at the time of purchase.
 - (ii) The minimum quality standard for individual short term investments is 'R-1' low or equivalent as rated by a Recognized Bond Rating Agency, at the time of purchase.
 - (iii) The minimum quality standard for individual preferred shares is 'P-1' or equivalent as rated by a Recognized Bond Rating Agency, at the time of purchase.
 - (iv) All investments shall be reasonably liquid (i.e. in normal circumstances they should be capable of liquidation within 1 month).

(b) **Split Ratings**

In cases where the Recognized Bond Rating Agencies do not agree on the credit rating, the bond will be classified according to the following methodology:

- (i) If two agencies rate a security, use the lower of the two ratings;
- (ii) If three agencies rate a security, use the most common; and if four agencies rate a security, use the lowest most common; and
- (iii) If three agencies rate a security and all three agencies disagree, use the middle rating; if four agencies rate a security and all four agencies disagree, use the lowest middle rating.

(c) **Downgrades in Credit Quality**

Each Investment Manager will take the following steps in the event of a downgrade in the credit rating of a portfolio asset by a Recognized Rating Agency to below the purchase standards set out in Section 3.03 (a) Quality Standards:

- (i) The Chief Investments Officer will be notified of the downgrade by telephone at the earliest possible opportunity;
- (ii) Within ten business days of the downgrade, the Investment Manager will advise the Chief Investments Officer in writing of the course of action taken or to be taken by the Investment Manager, and its rationale; and
- (iii) Immediately upon downgrade, the Investment Manager will place the asset on a Watch List subject to monthly review by the Investment Manager with the Chief Investments Officer until such time as the security matures, is sold or until it is upgraded to a level consistent with the purchase quality standards as expressed in the above guidelines.

(d) **Rating Agencies**

For the purposes of this Policy, the following rating agencies shall be considered to be 'Recognized Bond Rating Agencies':

- (i) Dominion Bond Rating Service Limited;
- (ii) Standard and Poor's;
- (iii) Moody's Investors Services Inc.; and
- (iv) Fitch Ratings

(e) **Private Placement Bonds**

Private placement bonds are permitted subject to **all** of the following conditions:

- (i) The issues acquired must be 'A' or equivalent rated;
- (ii) The total investment in such issues must **not** exceed 10% of the market value of the Investment Manager(s) bond portfolio;

- (iii) The Investment Manager's portfolio may **not** hold more than 5% of the market value of any one private placement;
- (iv) The Investment Manager(s) must be satisfied that there is sufficient liquidity to ensure sale at a reasonable price; and
- (v) The minimum issue size for any single security must be at least \$150 million.

3.04 Maximum Quantity Restrictions

(a) Total Fund Level

No one equity holding shall represent more than 10% of the total market value of the Master Trust's assets.

(b) Individual Investment Manager Level

The Investment Manager(s) shall adhere to the following restrictions:

(i) Equities

- (A) No one equity holding shall represent more than 10% of the market value of any one Investment Manager's equity portfolio.
- (B) No one equity holding shall represent more than 10% of the voting shares of a corporation.
- (C) No one equity holding shall represent more than 10% of the available public float of such equity security.
- (D) Income Trusts shall not comprise more than 15% of any Investment Manager's Canadian equity portfolio.

(ii) Bonds and Short Term

- (A) Except for federal and provincial bonds (including government guaranteed bonds), no more than 10% of an Investment Manager's bond portfolio may be invested in the bonds of a single issuer and its related companies.
- (B) Except for federal and provincial bonds, no one bond holding shall represent more than 10% of the market value of the total outstanding for that bond issue.
- (C) No more than 8% of the market value of an Investment Manager's bond portfolio shall be invested in bonds rated BBB (this includes all of BBB's: BBB+, BBB, and BBB-) or equivalent.
- (D) This Policy will permit the continued holding of instruments whose ratings are downgraded below BBB- after purchase, provided that such instruments are disposed of in an orderly fashion.

- (E) No more than 10% of the market value of an Investment Manager's bond portfolio shall be invested in bonds denominated in a currency other than Canadian dollars.
- (F) Except for the dedicated real return bond mandate, no more than 10% of the market value of the bond portfolio may be held in real return bonds.

(iii) Other

The use of derivative securities shall be supported at all times by the explicit allocation of sufficient assets to back the intended derivative strategy. For greater certainty, Investment Managers are not permitted to leverage the assets of the Master Trust. The use of derivative securities is only permitted for the uses described in this Policy. Purchase or sale of any of these instruments for speculative purposes is prohibited.

Notwithstanding the limits described in this Section, the single security limits do not apply to an Investment Manager's index mandate.

3.05 Prior Permission Required

The following investments are permitted **provided that** prior permission for such investments has been obtained from the Administrator:

- (a) Investments in private placement equities (except for the foreign equity investment managers investing in pooled funds where the pooled fund policy permits private placement equities).
- (b) Direct investments in mortgages.
- (c) Direct investments in any one parcel of real property that has a book value less than or equal to 5% of the book value of the Master Trust's assets. The aggregate book value of all investments in real property and Canadian resource properties shall not exceed 25% of the book value of the Master Trust's assets. (Previously, the overall 25% limit in respect of real and resource properties was a requirement under the *Pension Benefits Act* (Ontario).)
- (d) Direct investments in venture capital financing or private equity partnerships; and
- (e) Derivatives other than those described in 3.02(d).

3.06 Prohibited Investments

The Investment Managers shall not:

- (a) Invest in companies for the purpose of managing them;
- (b) Invest in securities that would result in the imposition of a tax on the Fund under the *Income Tax Act* (Canada) unless they provide a prior written acknowledgement that such investments will result in a tax and receive prior written permission for such investments from the Administrator or;
- (c) Make any investments not specifically permitted by this Policy.

3.07 Securities Lending

The investments of the Master Trust may be loaned, for the purpose of generating revenue for the Fund, subject to the provisions of the *Pension Benefits Act* (Ontario) and the *Income Tax Act* (Canada), and applicable regulations.

For securities held in segregated accounts, such loans must be secured by cash and/or readily marketable government bonds, treasury bills and/or letters of credit, discount notes and bankers' acceptances of chartered banks. For loaned securities, the security held or collateral must have an aggregate market value which shall never be less than the percentage of the aggregate market value of the loaned securities which is the highest of: (i) the minimum percentage required by any applicable legislation, regulatory authority or prevailing market practice; or (ii) 105%. The aggregate market value of the loaned securities and of the collateral shall be monitored and calculated by the Custodian daily.

The terms and conditions of any securities lending program will be set out in a contract with the custodian. The custodian shall, at all times, ensure that the Chief Investments Officer has a current list of those institutions that are approved to borrow the Fund's investments.

Lending of the portion of the Master Trust's assets held in a pooled fund is governed by the terms of the conditions set out in the pooled fund Statement of Investment Policies and Procedures or similar document.

3.08 Borrowing

The Master Trust shall not borrow money, except to cover short-term contingency and the borrowing is for a period that does not exceed ninety days, subject to the *Pension Benefits Act* (Ontario), the *Income Tax Act* (Canada) and the written permission of the General Manager of Finance and Corporate Services.

3.09 Conflicts between the Policy and Pooled Fund Investment Policies

While the guidelines in this Policy are intended to guide the management of the Master Trust, it is recognized that, due to the use of pooled funds, there may be instances where there is a conflict between the Policy and the investment policy of a pooled fund. In that case, the Investment Manager is expected to notify Chief Investments Officer upon the initial review of the Policy and whenever a change in the pooled fund policy creates a conflict. However, it is understood that any ambiguity will be interpreted in favour of the pooled fund policy, provided such interpretation complies with all applicable laws.

Section 4—Monitoring and Control

4.01 Delegation of Responsibilities

The General Manager of Finance and Corporate Services is the designated contact person for administrative matters. However, City Council has delegated certain administrative duties and responsibilities to internal and external agents, including to the HMRF/HWRF Pension Administration Sub-committee, the Chief Investments Officer and the General Manager of Finance and Corporate Services. Overall responsibility for the Master Trust ultimately rests with City Council, and the City (acting through Council) is the pension plan administrator of the Plans (for each Plan, the "Administrator").

(a) Chief Investments Officer

The Chief Investments Officer has been delegated the following responsibilities:

- (i) monitoring the Master Trust asset mix and rebalancing as required, including executing asset mix changes required per the Dynamic Policy Schedules outlined in section 2.03;
- (ii) day-to-day liaison including contract management with external Investment Managers, the Investment Consultant, and the Custodian/Trustee;
- (iii) monitoring and budgeting for cash flow within the pension fund;
- (iv) researching, recommending and implementing improvements to asset management of the Master Trust;
- (v) directing and implementing strategy for self-managed portfolios, if any; and
- (vi) preparing and presenting to City Council and the HMRF/HWRF Pension Administration Sub-Committee a report on the Plan's investment performance and asset mix, and such other information as City Council may require and/or other such information as the Chief Investments Officer considers appropriate to include in the report, on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time.

(b) Investment Managers

The Investment Managers have been delegated the following responsibilities:

- (i) invest the assets of the Master Trust in accordance with this Policy;

- (ii) meet with the Chief Investments Officer as required and provide written reports regarding the Investment Manager's past performance, their future strategies and other issues as requested;
- (iii) notify the Chief Investments Officer, in writing of any significant changes in the Investment Manager's philosophies and policies, personnel or organization and procedures;
- (iv) will provide periodically, but no less than on an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time, lists of assets and such other information as may be requested by the Chief Investments Officer; and,
- (v) file, on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time compliance reports (see Section 4.03).

(c) Custodian/Trustee

The custodian/trustee will:

- (i) Fulfil the regular duties of a Custodian/Trustee as required by law;
- (ii) maintain safe custody over the assets of the Master Trust Plans;
- (iii) execute the instructions of the Chief Investments Officer and the Investment Managers; and
- (iv) record income and provide financial statements to the Chief Investments Officer on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time, or as otherwise required.

(d) Investment Consultant

The investment consultant has been delegated the following responsibilities:

- (i) assist the Chief Investments Officer in developing a prudent long-term asset mix, and specific investment objectives and policies;
- (ii) monitor, analyse and report on the Master Trust's investment performance and to support the Chief Investments Officer on any investment related matters;
- (iii) monitor and report the funded status of the Plans to the Chief Investments Officer on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time;
- (iv) assist with the selection of Investment Managers, custodians and other suppliers; and

(v) meet with the Chief Investments Officer as required.

(e) **Actuary**

The actuary has been delegated the following responsibilities:

(i) perform actuarial valuations of the Plan as required; and

(ii) advise the Chief Investments Officer and the Investment Consultant on any matters relating to Plan design, membership and contributions, and actuarial valuations.

4.02 Performance Measurement

For the purpose of evaluating the performance of the Master Trust and the Investment Managers, all rates of returns are measured over moving four-year periods. Return objectives are net of fees and include realized and unrealized capital gains or losses plus income from all sources. Returns will be measured quarterly and will be calculated as time-weighted rates of return.

(a) **Active and Index Canadian Equity Managers**

Investment results of the active and index Canadian Equity Managers are to be tested regularly against a Benchmark Portfolio comprising:

| Benchmark | % |
|-------------------------|-----|
| S&P/TSX Composite Index | 100 |

(b) **Active and Index Global Equity Managers**

Investment results of the active and index Global Equity Managers are to be tested regularly against a long-term Benchmark Portfolio comprising:

| Benchmark | % |
|------------------------|-----|
| MSCI World Index (C\$) | 100 |

(c) **Active and Index Canadian Bond Managers – Long Bonds**

Investment results of the active and index Canadian Bond Managers for Long Bonds are to be tested regularly against a Benchmark Portfolio comprising:

| Benchmark | % |
|-----------------------------|-----|
| FTSE Canada Long Bond Index | 100 |

- (d) **Active and Index Canadian Bond Managers – Real Return Bonds**
Investment results of the active and index Canadian Bond Managers for Real Return Bonds are to be tested regularly against a Benchmark Portfolio comprising:

| Benchmark | % |
|------------------------------------|----------|
| FTSE Canada Real Return Bond Index | 100 |

4.03 Compliance Reporting by Investment Manager

The Investment Managers are required to complete and deliver a compliance report to the Chief Investments Officer and the Investment Consultant on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time. The compliance report will indicate whether or not the Investment Manager was in compliance with this Policy during the period covered in the report.

In the event that an Investment Manager is not in compliance with this Policy, the Investment Manager is required to advise the Chief Investments Officer immediately, detail the nature of the non-compliance and recommend an appropriate course of action to remedy the situation.

The Master Trust invests in pooled funds with separate investment policies. In that case, the Investment Manager must confirm compliance to the pooled fund policy. In addition, should a conflict arise between a pooled fund policy and this Policy, the Investment Manager is required to advise the Chief Investments Officer immediately and detail the nature of the conflict.

4.04 Standard of Professional Conduct

The Investment Managers are expected to comply, at all times and in all respects, with a written code of ethics that is no less stringent in all material respects than the Code of Ethics and Standards of Professional Conduct as promulgated by the CFA Institute.

The Investment Managers will manage the assets with the care, diligence and skill that an investment manager of ordinary prudence would use in dealing with pension plan assets. The Investment Managers will also use all relevant knowledge and skill that they possess or ought to possess as prudent investment managers.

Section 5—Administration

5.01 Conflicts of Interest

(a) **Responsibilities**

This standard applies to the City's staff, as well as to all agents employed by the City, in the execution of their responsibilities under the *Pension Benefits Act* (Ontario) (the "Affected Persons").

An "agent" is defined to mean a company, organization, association or individual, as well as its employees who are retained by the Administrator to provide specific services with respect to the investment, administration and management of the assets of the Master Trust.

(b) **Disclosure**

In the execution of their duties, the Affected Persons shall disclose any material conflict of interest relating to them, or any material ownership of securities, which could impair their ability to render unbiased advice, or to make unbiased decisions, affecting the administration of the Master Trust assets.

Further, it is expected that no Affected Person shall make any personal financial gain (direct or indirect) because of his or her fiduciary position. However, normal and reasonable fees and expenses incurred in the discharge of their responsibilities are permitted in accordance with City policies as approved by Council.

No Affected Person shall accept a gift or gratuity or other personal favour, other than one of nominal value, from a person with whom the employee deals in the course of performance of his or her duties and responsibilities for the Master Trust.

It is incumbent on any Affected Person who believes that he or she may have a conflict of interest, or who is aware of any conflict of interest, to disclose full details of the situation to the attention of the General Manager of Finance and Corporate Services and/or the Treasurer immediately. The General Manager of Finance and Corporate Services and/or the Treasurer, in turn, will decide what action is appropriate under the circumstances.

No Affected Person who has or is required to make a disclosure as contemplated in this Policy shall participate in any discussion, decision or vote relating to any proposed investment or transaction in respect of which he or she has made or is required to make disclosure, unless otherwise determined permissible by decision of the General Manager of Finance and Corporate Services and/or the Treasurer.

5.02 Related Party Transactions

The Chief Investments Officer shall not, on behalf of the Plans or the Master Trust, directly or indirectly,

- (i) lend the moneys of the Plans to a related party or use those moneys to hold an investment in the securities of a related party; or
- (ii) enter into a transaction with a related party.

The Chief Investments Officer may enter into a transaction with a related party:

- (i) for the operation or administration of the Plans if it is under terms and conditions that are not less favourable to the Plans than market terms and conditions and such transaction does not involve the making of loans to, or investments in, the related party or
- (ii) the value of the transaction is nominal or the transaction is immaterial. In assessing whether the value of the transaction is nominal or immaterial, two or more transactions with the same related party shall be considered as a single transaction.

For the purposes of Section 5.02, only the market value of the combined assets of the Fund shall be used as the criteria to determine whether a transaction is nominal or immaterial. Transactions less than 0.5% of the combined market value of the assets of the Fund are considered nominal.

The following investments are exempt from the related party rules:

- (i) investments in an investment fund or a segregated fund (as those terms are used in the *Pension Benefits Standards Regulations*) in which investors other than the administrator and its affiliates may invest and that complies with Section 9 and Section 11 of Schedule III to the *Pension Benefits Standards Regulations*;
- (ii) investments in an unallocated general fund of a person authorized to carry on a life insurance business in Canada;
- (iii) investments in securities issued or fully guaranteed by the Government of Canada, the government of a province, or an agency of either one of them;

- (iv) investments in a fund composed of mortgage-backed securities that are fully guaranteed by the Government of Canada, the government of a province, or an agency of either one of them;
- (v) investments in a fund that replicates the composition of a widely recognized index of a broad class of securities traded at a marketplace (as that term is used in the *Pension Benefits Standards Regulations*); or
- (vi) investments that involve the purchase of a contract or agreement in respect of which the return is based on the performance of a widely recognized index of a broad class of securities traded at a marketplace (as that term is used in the *Pension Benefits Standards Regulations*).

A "related party" is defined to mean the Administrator of the Plans, including any officer, director or employee of the Administrator. It also includes, the Investment Managers and their employees, a union representing employees of the employer, a member of the Master Trust, a spouse or child of the persons named previously, or a corporation that is directly or indirectly controlled by the persons named previously, and any other person constituting a "related party" under the *Pension Benefits Act (Ontario)*. Related party does not include government or a government agency, or a bank, trust company or other financial institution that holds the assets of the Master Trust.

5.03 Selecting Investment Managers

In the event that a new Investment Manager must be selected or additional Investment Manager(s) added to the existing Investment Manager(s), the Chief Investments Officer will undertake an Investment Manager search with or without the assistance of a third-party investment consultant depending on the expertise required. The criteria used for selecting an Investment Manager will be consistent with the investment and risk philosophy set out in Section 1.04 (Investment and Risk Philosophy).

5.04 Directed Brokerage Commissions

Investment Managers may use directed brokerage to pay for research and other investment related services provided they comply with, and provide the disclosure required by, the Soft Dollar Standards promulgated by the CFA Institute.

5.05 Monitoring of Asset Mix

In order to ensure that the Master Trust operates within the minimum and maximum guidelines stated in this Policy as outlined in Section 2, the Chief Investments Officer shall monitor the asset mix on at least an annual basis, or upon such more frequent basis as may be requested by City Council or its delegates from time to time. Rebalancing between the investment mandates can take place over a reasonably short period of time after an imbalance has been identified. Rebalancing may be effected by redirecting the net cash flows to and from the Master Trust, or by transferring cash or securities between portfolios and/or Investment Managers.

5.06 Monitoring of Investment Managers

An important element in the success of this Policy is the link between the Investment Managers and the Chief Investments Officer. It is expected that the Investment Managers will communicate with the Chief Investments Officer whenever necessary. Periodic, written investment reports from the Investment Managers are sent to and reviewed by the Chief Investments Officer and form part of the monitoring process.

Meetings including telephone conference call meetings between the Investment Managers and the Chief Investments Officer will be scheduled as required. At each meeting or telephone conference call meeting, it is expected that the Investment Managers will prepare a general economic and capital markets overview, which will be distributed prior to or during the meeting. They should also include the following in their presentations:

- review of the previous period's strategy and investment results,
- discussion of how the condition of the capital markets affects the investment strategy of their respective portfolios,
- economic and market expectations,
- anticipated changes in the asset mix within the limits provided in this Policy, and,
- discussion of compliance and any exceptions.
- discussion of any votes that were cast against the wishes of company management by the Investment Managers in exercising voting rights (Section 5.08).

5.07 Dismissal of an Investment Manager

Reasons for considering the termination of the services of an Investment Manager include, but are not limited to, the following factors:

- (a) performance results which are below the stated performance benchmarks;
- (b) changes in the overall structure of the Master Trusts' assets such that the Investment Manager's services are no longer required;
- (c) change in personnel, firm structure or investment philosophy which might adversely affect the potential return and/or risk level of the portfolio; and/or
- (d) failure to adhere to this Policy.

5.08 Voting Rights

The Administrator has delegated voting rights acquired through the investments held by the Master Trust to the custodian of the securities to be exercised in accordance with the Investment Manager's instructions. Investment Managers are expected to exercise all voting rights related to investments held by the Master Trust in the interests of the members of the underlying pension plans. The Investment Managers shall report when they vote against the wishes of the company management to the Chief Investments Officer, providing information as to the reasons behind this vote.

5.09 Valuation of Investments Not Regularly Traded

The following principles will apply for the valuation of investments that are not traded regularly:

- (a) **Equities**
Average of bid-and-ask prices from two major investment dealers, at least once every calendar quarter.
- (b) **Bonds**
Same as for equities.
- (c) **Mortgages**
Unless in arrears, the outstanding principal plus/minus the premium/discount resulting from the differential between face rate and the currently available rate for a mortgage of similar quality and term, determined at least once every month.
- (d) **Real Estate**
A certified written appraisal from a qualified independent appraiser at least once every two years.

5.10 Policy Review

This Policy may be reviewed and revised at any time, but at least once every calendar year it must be formally reviewed. Should the Investment Manager(s) wish to review this Policy at any time, it is his/her responsibility to contact the Chief Investments Officer with specific recommendations.

The appropriateness of the Dynamic Investment Policy asset allocation parameters should be reviewed on an ongoing basis. A new Dynamic Investment Policy Study (Dynamic Asset-Liability Modeling Study) may be undertaken if any of the following events occur:

- (a) The plan gets significantly closer to the end-state of the flight path, including if the flight path funded ratio measurement changes significantly (to over 84%) from the starting point of the 2010 study, which was 69%.
- (b) There are significant changes to the regulations that affect the key metrics used in making decisions in the 2010 Dynamic Investment Policy Study or should affect the asset allocation in the future;
- (c) Capital market conditions change significantly such that the assumptions embedded in the 2010 Dynamic Investment Policy Study are no longer reasonable; or
- (d) The plan sponsor's risk posture changes significantly.

Appendix A - Statement of Investment Policies & Procedures Hamilton Municipal Retirement Fund

Overview

1.01 Purpose of Statement

This Statement of Investment Policies and Procedures (the "Hamilton Municipal Retirement Fund SIPP") provides the framework for the investment of the assets of the Hamilton Municipal Retirement Fund, registration number 0275123 (the "Plan");

The objective of the Hamilton Municipal Retirement Fund SIPP is to ensure that the assets of the Plan, together with expected contributions made by both the City and the Plan members, shall be invested in a continued prudent and effective manner.

The Hamilton Municipal Retirement Fund SIPP is based on the "prudent person portfolio approach" to ensure the prudent investment and administration of the assets of the Plan (the "Fund") are within the parameters set out in the *Pension Benefits Act*, (Ontario) and the Regulations thereunder.

All provisions in the Master Trust SIPP apply to this Appendix.

1.02 Background of the Plan

The Hamilton Municipal Retirement Fund is a contributory defined benefit plan. The plan has been closed to new entrants since 1965. Municipal employees hired after June 30, 1965 participate in the OMERS Pension Plan. Therefore, this is a closed fund and will terminate upon the death of the last retiree or successor. Effective July 1, 2001, the last active member retired from the Plan.

1.03 Plan Profile

a) Contributions

There are no active members in the Plan.

b) Benefits

2% of average annual earnings in best consecutive 5 years before retirement for each year of credited service up to 35 years reduced by 0.675% of the 5-year average earnings up to the final year's YMPE for each year of contributory service after January 1, 1966. CPP Offset suspended from date of retirement to age 65. Effective Jan 1, 2006 annual increases will not be less than the increase provided to retirees under the OMERS plan. .

c) Liabilities

As of the most recent actuarial valuation of the Plan as at December 31, 2017 there were no active members, 3 terminated vested members and 186 retirees and beneficiaries.

As of December 31, 2017 the going-concern liability of the plan was \$73,940,300, including Provision for Adverse Deviation (PfAD) of 4,239,000, compared to the actuarial value of assets of \$77,679,500. On a solvency basis, the liability was \$63,784,500, while the assets (at market) were \$77,579,500 (net of provision for plan windup expenses of \$100,000). On a windup basis, the liability was \$79,960,200.

1.04 Objective of the Plan

The objective of the Plans is to provide members of the Plans with retirement benefits prescribed under the terms thereof.

1.05 Investment and Risk Philosophy

The primary investment objective is to provide an economic return on assets sufficient to fund plan liabilities over the long-term, while adhering to prudent investment practices.

The investment philosophies and strategies must take into account both return and risk objectives of the Plan and the City.

In recognition of the risk and return objectives of the Plan and the City, an initial Asset Allocation Policy was developed based on the Plan's current funded status and the characteristics of the Plan and City. It is recognized, however, that the Plan return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plan's funded status improves.

1.06 Administration

The General Manager of Finance and Corporate Services for the City of Hamilton is the designated contact at the City for administrative purposes.

1.07 Pooling of Assets

For investment purposes, certain assets of the Plan are invested in units of the City of Hamilton Defined Benefit Plans Master Trust, along with certain assets of the Hamilton-Wentworth Retirement Fund and the Hamilton Street Railway Pension Plan (1994).

Up to 2 % of Plan assets may be invested outside of the City of Hamilton Defined Benefit Plans Master Trust for operating expenses and liquidity purposes, in accordance with the parameters set out in Section 3.02 (c) and (e) of the City of Hamilton Defined Benefit Plans Master Trust SIPP. The provisions of the City of Hamilton Defined Benefit Plans Master Trust SIPP apply to the investment of these assets.

1.08 Master Trust SIPP

The Master Trust SIPP is the policy that should be followed while investing the pooled assets of the Hamilton Municipal Retirement Fund.

Appendix B - Statement of Investment Policies & Procedures Hamilton Street Railway Pension Plan (1994)

Overview

1.01 Purpose of Statement

This Statement of Investment Policies and Procedures (the "Hamilton Street Railway Pension Plan SIPP") provides the framework for the investment of the assets of the Hamilton Street Railway Pension Plan (1994), registration number 0253344 (the "Plan");

The objective of the Hamilton Street Railway Pension Plan SIPP is to ensure that the assets of the Plan, together with expected contributions made by both the City and the Plan members, shall be invested in a continued prudent and effective manner.

The Hamilton Street Railway Pension Plan SIPP is based on the "prudent person portfolio approach" to ensure the prudent investment and administration of the assets of the Plan (the "Fund") are within the parameters set out in the *Pension Benefits Act*, (Ontario) and the Regulations thereunder.

All provisions in the Master Trust SIPP apply to this Appendix.

1.02 Background of the Plan

The current Plan dates from January 1, 1994 when two former plans – Canada Coach Lines and Hamilton Street Railway plans were merged. Effective January 1, 2009 this contributory defined benefit plan was closed to new members and active members stopped contributing and accruing service under the plan.

1.03 Plan Profile

a) Contributions

Under the terms of the Plan text, members' contributions prior to 1999 were 7.5% of earnings less contributions made to Canada Pension Plan. For the calendar years 1999 through 2008, members (depending on the year) either enjoyed a contribution holiday or were limited to contribution rates of 1% of earnings. Effective January 2009, as members became City employees, no member contributions have been required or permitted to be made to the Plan.

b) Benefits

Members receive a pension equal to 1.5% of average pensionable earnings up to the average Year's Maximum Pensionable Earnings (YMPE) as established under the Canada Pension Plan, plus 2% of the excess, multiplied by years of credited service accrued up to December 31, 2008. The "average pensionable earnings" are defined as the average of best five years' earnings during the member's credited service and OMERS credited service, if any. The "average YMPE" is defined as the average of the YMPE for the last thirty-six complete months of plan membership.

In the event that pensions accrued under the prior plan exceed the pension accrued under the current plan for service prior to July 1, 1980, then the pension is increased accordingly. Pensions are subject to annual indexing equal to the indexing provided to retirees under the OMERS plan (100% of inflation to a maximum of 6% per annum).

c) *Liabilities*

As of the most recent actuarial valuation of the Plan as at January 1, 2017, there were 388 active members, 26 deferred members and 599 retirees and beneficiaries. The average age of the active members was approximately 52.8 years with average pensionable earnings of \$66,849.

As of January 1, 2017, the going-concern liability of the plan was \$214,681,400 compared to the actuarial value of assets of \$193,491,200. Approximately 34.2% of the accrued liability was related to active members, approximately 65.3% was related to retirees, and approximately 0.5% was related to deferred members. On a solvency basis, the liability was \$219,410,700 while the assets (at market) were \$193,291,200. Both the going-concern and solvency deficits are being eliminated through a series of special payments.

1.04 Objective of the Plan

The objective of the Plan is to provide members of the Plan with retirement benefits prescribed under the terms thereof.

1.05 Investment and Risk Philosophy

The primary investment objective is to provide an economic return on assets sufficient to fund plan liabilities over the long-term, while adhering to prudent investment practices.

The investment philosophies and strategies must take into account both return and risk objectives of the Plan and the City.

In recognition of the risk and return objectives of the Plan and the City, an initial Asset Allocation Policy was developed based on the Plan's current funded status and the characteristics of the Plan and City. It is recognized, however, that the Plan return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plan's funded status improves.

1.06 Administration

The General Manager of Finance and Corporate Services for the City of Hamilton is the designated contact at the City for administrative purposes.

1.07 Pooling of Assets

For investment purposes, certain assets of the Plan are invested in units of the City of Hamilton Defined Benefit Plans Master Trust, along with certain assets of the Hamilton-Wentworth Retirement Fund and the Hamilton Municipal Retirement Fund.

Up to 2 % of Plan assets may be invested outside of the City of Hamilton Defined Benefit Plans Master Trust for operating expenses and liquidity purposes, in accordance with the parameters set out in Section 3.02 (a), (c) and (e) of the City of Hamilton Defined Benefit

Plans Master Trust SIPP. The provisions of the City of Hamilton Defined Benefit Plans Master Trust SIPP apply to the investment of these assets.

1.08 Master Trust SIPP

The Master Trust SIPP is the policy that should be followed while investing the pooled assets of the Hamilton Street Railway Pension Plan (1994).

Appendix C - Statement of Investment Policies & Procedures The Hamilton-Wentworth Retirement Fund

Overview

1.01 Purpose of Statement

This Statement of Investment Policies and Procedures (the "Hamilton-Wentworth Retirement Fund SIPP") provides the framework for the investment of the assets of the Hamilton-Wentworth Retirement Fund, registration number 1073352 (the "Plan");

The objective of the Hamilton-Wentworth Retirement Fund SIPP is to ensure that the assets of the Plan, together with expected contributions made by both the City and the Plan members, shall be invested in a continued prudent and effective manner.

The Hamilton-Wentworth Retirement Fund SIPP is based on the "prudent person portfolio approach" to ensure the prudent investment and administration of the assets of the Plan (the "Fund") are within the parameters set out in the *Pension Benefits Act*, (Ontario) and the Regulations thereunder.

All provisions in the Master Trust SIPP apply to this Appendix.

1.02 Background of the Plan

The Plan is a contributory, defined benefit Plan. Effective January 1, 1985 all active Region Other Participants, excluding Police Civilians, were transferred to OMERS. The liability to transfer such members to OMERS was met by monthly payments of \$115,187 until December 31, 2000 and monthly payments of \$361 thereafter, concluding September 30, 2003. Effective January 1, 2002, the last active member retired from the plan.

1.03 Plan Profile

a) Contributions

Under the terms of the Plan text:

For normal retirement age 60 class:

- 1) Senior Police Officers: contributions should be 7% of earnings up to the YMPE plus 8.5% of contributory earnings in excess of YMPE.
- 2) Other Police Officers: contributions should be 6.5% of earnings up to YMPE plus 8% of contributory earnings in excess of YMPE.

For a normal retirement age of 65 contributions should be 5.75% of earnings.

b) *Benefits*

2% of average annual earnings in best 5 years before retirement for each year of credited service up to 35 years reduced by 0.675% of the 5-year average earnings up to the final year's YMPE for each year of contributory service after January 1, 1966. CPP Offset suspended from date of retirement to age 65. Effective Jan 1, 2008 annual increases will not be less than the increase provided to retirees under the OMERS plan, which is currently equal to 100% of the increase in the Consumer Price Index to a maximum of 6.0% per annum.

c) *Liabilities*

As of the most recent actuarial valuation of the Plan as at December 31, 2016, there were no active members, no deferred members and 171 retirees and beneficiaries.

As of December 31, 2016, the going-concern liability of the plan was \$55,249,000 compared to the actuarial value of assets of \$59,443,000. On a solvency basis, the liabilities were \$63,005,000 while the assets were \$59,373,000. The solvency deficit is being eliminated through a series of special payments.

1.04 Objective of the Plan

The objective of the Plan is to provide members of the Plan with retirement benefits prescribed under the terms thereof.

1.05 Investment and Risk Philosophy

The primary investment objective is to provide an economic return on assets sufficient to fund plan liabilities over the long-term, while adhering to prudent investment practices.

The investment philosophies and strategies must take into account both return and risk objectives of the Plan and the City.

In recognition of the risk and return objectives of the Plan and the City, an initial Asset Allocation Policy was developed based on the Plan's current funded status and the characteristics of the Plan and City. It is recognized, however, that the Plan return requirements and risk tolerance will change over time, and the intent is to reallocate the portfolio to lower risk allocations dynamically as the Plan's funded status improves.

1.06 Administration

The General Manager of Finance and Corporate Services for the City of Hamilton is the designated contact at the City for administrative purposes.

1.07 Pooling of Assets

For investment purposes, certain assets of the Plan are invested in units of the City of Hamilton Defined Benefit Plans Master Trust, along with certain assets of the Hamilton Street Railway Pension Plan (1994) and the Hamilton Municipal Retirement Fund.

Up to 2 % of Plan assets may be invested outside of the City of Hamilton Defined Benefit Plans Master Trust for operating expenses and liquidity purposes, in accordance with the parameters set out in Section 3.02 (c) and (e) of the City of Hamilton Defined Benefit Plans Master Trust SIPP. The provisions of the City of Hamilton Defined Benefit Plans Master Trust SIPP apply to the investment of these assets.

1.08 Master Trust SIPP

The Master Trust SIPP is the policy that should be followed while investing the pooled assets of the Hamilton-Wentworth Retirement Fund Pension Plan.

Appendix D – Compliance Reports

**The City of Hamilton Master Trust
Index Bond Manager**

**Compliance Report for the Quarter Ended _____
(date)**

| | | GUIDELINES | POLICY COMPLIED WITH YES/NO * |
|--|---|-------------------|--|
| ASSET MIX (at Market Value) | | % | |
| FIXED INCOME | BONDS | 100% | |
| CASH | SHORT-TERM & CASH | 0% | |
| CONSTRAINTS | | | |
| GENERAL | Investment Policy Section 3.01 – General Guidelines | | |
| BONDS | Investment Policy Section 3.02 (b) – Bonds | | |
| CASH | Investment Policy Section 3.02 (c) – Cash | | |
| DERIVATIVES | Investment Policy Section 3.02 (c) – Derivatives | | |
| OTHER | Investment Policy Section 3.02 (e) – Other Investments | | |
| INDEX | Investment Policy Section 3.02 (f) – Index Mandates | | |
| QUALITY REQUIREMENTS | Investment Policy Section 3.03 – Minimum Quality Requirements | | |
| QUANTITY RESTRICTIONS | Investment Policy Section 3.04 – Maximum Quantity Restrictions | | |
| PRIOR PERMISSION | Investment Policy Section 3.05 – Prior Permission Required | | |
| PROHIBITED INVESTMENTS | Investment Policy Section 3.06 – Prohibited Investments | | |
| SECURITIES LENDING | Investment Policy Section 3.07 – Securities Lending | | |
| RESPONSIBILITIES | Investment Policy Section 4.01 (b) – Delegation of Responsibilities – Investment Managers | | |
| STANDARDS OF PROFESSIONAL CONDUCT | Investment Policy Section 4.04 - Standards of Professional Conduct | | |
| CONFLICTS OF INTEREST | Investment Policy Section 5.01 - Conflicts of Interest | | |
| VOTING RIGHTS | Investment Policy Section 5.08 - Voting Rights | | |

* If policy not complied with, comment on specifics

COMPLETED BY: _____ **SIGNED BY:** _____

**The City of Hamilton Master Trust
Index Equity Manager**

**Compliance Report for the Quarter Ended _____
(date)**

| | | GUIDELINES | POLICY COMPLIED WITH YES/NO * |
|--|---|-------------------|--|
| ASSET MIX (at Market Value) | | % | |
| EQUITIES | | | |
| | U.S. | | |
| | EAFE | | |
| | TOTAL FOREIGN | | |
| CASH | SHORT-TERM & CASH | | |
| CONSTRAINTS | | | |
| GENERAL | Investment Policy Section 3.01 – General Guidelines | | |
| EQUITIES | Investment Policy Section 3.02 (a) – Canadian and Foreign Equities | | |
| CASH | Investment Policy Section 3.02 (c) – Cash and Short Term Investments | | |
| DERIVATIVES | Investment Policy Section 3.02 (d) – Derivatives | | |
| OTHER INVESTMENTS | Investment Policy Section 3.02 (e) – Other Investments | | |
| INDEX | Investment Policy Section 3.02 (f) – Index Mandates | | |
| QUALITY REQUIREMENTS | Investment Policy Section 3.03 – Minimum Quality Requirements | | |
| QUANTITY RESTRICTIONS | Investment Policy Section 3.04 – Maximum Quantity Restrictions | | |
| PRIOR PERMISSION | Investment Policy Section 3.05 – Prior Permission Required | | |
| PROHIBITED INVESTMENTS | Investment Policy Section 3.06 – Prohibited Investments | | |
| SECURITIES LENDING | Investment Policy Section 3.07 – Securities Lending | | |
| BORROWING | Investment Policy Section 3.08 – Borrowing | | |
| RESPONSIBILITIES | Investment Policy Section 4.01 (b) – Delegation of Responsibilities – Investment Managers | | |
| STANDARDS OF PROFESSIONAL CONDUCT | Investment Policy Section 4.04 - Standards of Professional Conduct | | |
| CONFLICTS OF INTEREST | Investment Policy Section 5.01 - Conflicts of Interest | | |
| VOTING RIGHTS | Investment Policy Section 5.08 - Voting Rights | | |

* If policy not complied with, comment on specifics

COMPLETED BY: _____ **SIGNED BY:** _____

**The City of Hamilton Master Trust
Active Bond Manager**

**Compliance Report for the Quarter Ended _____
(date)**

| | | GUIDELINES | POLICY COMPLIED WITH YES/NO * |
|--|---|-------------------|--|
| ASSET MIX (at Market Value) | | % | |
| FIXED INCOME | BONDS | 100% | |
| CASH | SHORT-TERM & CASH | 0% | |
| CONSTRAINTS | | | |
| GENERAL | Investment Policy Section 3.01 – General Guidelines | | |
| BONDS | Investment Policy Section 3.02 (b) – Bonds | | |
| CASH | Investment Policy Section 3.02 (c) – Cash | | |
| DERIVATIVES | Investment Policy Section 3.02 (c) – Derivatives | | |
| OTHER | Investment Policy Section 3.02 (e) – Other Investments | | |
| INDEX | Investment Policy Section 3.02 (f) – Index Mandates | | |
| QUALITY REQUIREMENTS | Investment Policy Section 3.03 – Minimum Quality Requirements | | |
| QUANTITY RESTRICTIONS | Investment Policy Section 3.04 – Maximum Quantity Restrictions | | |
| PRIOR PERMISSION | Investment Policy Section 3.05 – Prior Permission Required | | |
| PROHIBITED INVESTMENTS | Investment Policy Section 3.06 – Prohibited Investments | | |
| SECURITIES LENDING | Investment Policy Section 3.07 – Securities Lending | | |
| RESPONSIBILITIES | Investment Policy Section 4.01 (b) – Delegation of Responsibilities – Investment Managers | | |
| STANDARDS OF PROFESSIONAL CONDUCT | Investment Policy Section 4.04 - Standards of Professional Conduct | | |
| CONFLICTS OF INTEREST | Investment Policy Section 5.01 - Conflicts of Interest | | |
| VOTING RIGHTS | Investment Policy Section 5.08 - Voting Rights | | |

* If policy not complied with, comment on specifics

COMPLETED BY: _____ **SIGNED BY:** _____

**The City of Hamilton Master Trust
Active Equity Manager**

**Compliance Report for the Quarter Ended _____
(date)**

| | | GUIDELINES | POLICY COMPLIED WITH YES/NO * |
|--|---|-------------------|--|
| ASSET MIX (at Market Value) | | % | |
| EQUITIES | CANADIAN | | |
| | U.S. | | |
| | EAFE | | |
| | TOTAL FOREIGN | | |
| CASH | SHORT-TERM & CASH | | |
| CONSTRAINTS | | | |
| GENERAL | Investment Policy Section 3.01 – General Guidelines | | |
| EQUITIES | Investment Policy Section 3.02 (a) – Canadian and Foreign Equities | | |
| CASH | Investment Policy Section 3.02 (c) – Cash and Short Term Investments | | |
| DERIVATIVES | Investment Policy Section 3.02 (d) – Derivatives | | |
| OTHER INVESTMENTS | Investment Policy Section 3.02 (e) – Other Investments | | |
| INDEX | Investment Policy Section 3.02 (f) – Index Mandates | | |
| QUALITY REQUIREMENTS | Investment Policy Section 3.03 – Minimum Quality Requirements | | |
| QUANTITY RESTRICTIONS | Investment Policy Section 3.04 – Maximum Quantity Restrictions | | |
| PRIOR PERMISSION | Investment Policy Section 3.05 – Prior Permission Required | | |
| PROHIBITED INVESTMENTS | Investment Policy Section 3.06 – Prohibited Investments | | |
| SECURITIES LENDING | Investment Policy Section 3.07 – Securities Lending | | |
| BORROWING | Investment Policy Section 3.08 – Borrowing | | |
| RESPONSIBILITIES | Investment Policy Section 4.01 (b) – Delegation of Responsibilities – Investment Managers | | |
| STANDARDS OF PROFESSIONAL CONDUCT | Investment Policy Section 4.04 - Standards of Professional Conduct | | |
| CONFLICTS OF INTEREST | Investment Policy Section 5.01 - Conflicts of Interest | | |
| VOTING RIGHTS | Investment Policy Section 5.08 - Voting Rights | | |

* If policy not complied with, comment on specifics

COMPLETED BY: _____ **SIGNED BY:** _____

**City Enrichment Fund
Requiring Advance Payments in 2020**

| Agency | Advance Payment Schedule for 2020 | #of Payments (advance) | 2019 Approved Annual Budget | 2020 Advance Payment Amount (Monthly) | 2020 Advance Payment Amount (5 Payments) |
|--|-----------------------------------|------------------------|-----------------------------|---------------------------------------|--|
| Art Gallery of Hamilton | 1st of each month | 5 | \$1,000,000.00 | \$83,333.33 | \$416,666.67 |
| Theatre Aquarius | 1st of each month | 5 | \$260,100.00 | \$21,675.00 | \$108,375.00 |
| Festival of Friends (Hamilton-Wentworth) | 1st of each month | 5 | \$90,000.00 | \$7,500.00 | \$37,500.00 |
| Hamilton Philhamonic Orchestra | 1st of each month | 5 | \$171,666.00 | \$14,305.50 | \$71,527.50 |
| Brott Music Festival | 1st of each month | 5 | \$182,800.00 | \$15,233.33 | \$76,166.67 |
| 91st Highlanders Athletic Assoc | 1st of each month | 5 | \$23,535.00 | \$1,961.25 | \$9,806.25 |
| Total | | | \$1,728,101.00 | \$144,008.42 | \$720,042.08 |



EMERGENCY & COMMUNITY SERVICES COMMITTEE REPORT 20-001

1:30 p.m.

Thursday, January 16, 2020

Council Chambers

Hamilton City Hall

71 Main Street West

Present: Councillors E. Pauls (Chair), T. Jackson, S. Merulla, N. Nann, and T. Whitehead

**Absent with
Regrets:** Councillor B. Clark – City Business

THE EMERGENCY & COMMUNITY SERVICES COMMITTEE PRESENTS REPORT 20-001 AND RESPECTFULLY RECOMMENDS:

1. **Recommended Projects from Coming Together to End Homelessness: Call for Applications 2019 (HSC20004) (Item 9.1)**
 - (a) That, the Coming Together to End Homelessness Call for Applications (CFA) recommended funding allocations, in the amount of \$7,576,159 (as outlined in Appendix “A” to attached to Emergency and Community Services Committee Report 20-001), be approved;
 - (b) That the General Manager of Healthy and Safe Communities, or his designate, be authorized and directed to enter into and execute agreements according to the recommended funding allocations and any subsequent ancillary agreements required to give effect thereto in a form satisfactory to the City Solicitor; and,
 - (c) That Good Shepherd Non-Profit HOMES – Low Barrier Housing for Women application be referred to the Expanding Housing and Support Services for Women and Transgender Community Sub-committee for further review and to seek external financial and operational partnerships.

2. Compliance Reporting for Long Term Care Homes (Macassa Lodge & Wentworth Lodge) (HSC20002) (City Wide) (Item 10.1)

That Report HSC20002, respecting Compliance Reporting for Long Term Care Homes (Macassa Lodge & Wentworth Lodge), be received.

3. Transfer from Reserve for Hamilton Veterans Committee (PED20031) (City Wide) (Item 10.2)

That \$15 K be transferred from the Volunteer Committee Reserve 112212 to the Hamilton Veterans Committee 55948-300324 to offset the cost of the 2019 City of Hamilton Remembrance Day ceremonies.

4. Ontario Disability Support Program (HSC20005) (City Wide) (Item 11.1)

(a) That a letter be sent to the Ontario Minister of Children, Community and Social Services respecting the following:

- (i) Reversing budget cuts made and planned for the Ministry of Children, Community and Social Services;
- (ii) Maintaining the current Ontario Disability Support Program definition of disability;
- (iii) Increasing social assistance rates;
- (iv) Respecting the rights of people living with disability to participate in decisions affecting them by creating a meaningful process of co-reviewing and co-designing programs of social assistance and adjudication processes; and,

(b) that copies of the letter be sent to the Association of Municipalities Ontario (AMO) and to the Mayors of other comparable-sized cities in Ontario.

5. Hill Park Pickleball Courts Renovation (Item 11.2)

WHEREAS, Pickleball is one of the fastest growing sports among adults and seniors in North America;

WHEREAS, the City of Hamilton converted two tennis courts at the Hill Park Recreation Centre into Pickleball courts for a one-year trial in 2015;

WHEREAS, the sport of Pickleball continues to grow in popularity in the City of Hamilton;

WHEREAS, there is a need to renovate and convert the existing two tennis courts at Hill Park Recreation Centre into Pickleball courts; and,

WHEREAS, Pickleball Hamilton has raised \$25,000 for the court renovation project;

THEREFORE, BE IT RESOLVED:

- (a) That funding for the conversion and renovation of the existing two tennis courts into Pickleball courts at the Hill Park Recreation Centre (Project I.D. 4241909701) in the amount of \$ 200,000 be funded accordingly; \$175,000 from the Ward 7 Area rating Reserve account (#108057), and \$25,000 raised donation from Pickleball Hamilton be approved; and,
- (b) That the Mayor and City Clerk be authorized and directed to execute and required agreement(s) and ancillary documents, respecting the conversion and renovation of the existing two tennis courts into Pickleball courts at the Hill Park Recreation Centre, with such terms and conditions in a form satisfactory to the City Solicitor.

6. Empowering Youth Leadership and Civic Engagement (Added Item 11.3)

WHEREAS, civic engagement and civic education are core components enabling young people to lead and act in an informed way;

WHEREAS, Model City Hall Hamilton is the first conference in Canada to offer high school students the opportunity to experience municipal politics at no cost;

WHEREAS, Model City Hall Hamilton is doing direct engagement of high school students in Ward 3; and,

WHEREAS, supporting excellence in youth-led initiatives is a practice of putting equity, diversity and inclusion in action;

THEREFORE, BE IT RESOLVED:

- (a) That \$1350 be funded to Model City Hall Hamilton's 2020 conference from the Ward 3 Cell Tower fund Account (3301609603); and,
- (b) That the Mayor and City Clerk be authorized and directed to execute any required agreement(s) and ancillary documents in relation to funding Model City Hall Hamilton's 2020 conference, with such terms and conditions in a form satisfactory to the City Solicitor.

7. Ontario Works Funding Update (HSC20005) (City Wide)

That Report HSC20005, respecting Ontario Works Funding Update, be received and remain confidential.

FOR INFORMATION:

(a) APPROVAL OF AGENDA (Item 2)

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

6. DELEGATION REQUESTS (Item 6)

- 6.1 Dr. Sally Palmer has requested an amendment to her delegation request; she now represents the McMaster Community Poverty Initiative, rather than the Hamilton Social Work Action Committee (for a future meeting)
- 6.3 Carolyn Buck and John Sharp, Pickleball Hamilton, respecting a request for funding to re-purpose unused tennis courts to pickleball courts to be managed by Pickleball Hamilton (for today's meeting)
- 6.4 Sheri Selway, Canadian Federation of University Women - Hamilton, respecting the crisis with social assistance rates, with a focus on how women and families are particularly affected (for a future meeting)

12. NOTICES OF MOTION (Item 12)

- 12.1 Empowering Youth Leadership and Civic Engagement

The agenda for the January 16, 2020 Emergency and Community Services Committee meeting 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) December 6, 2019 (Item 4.1)

The Minutes of the December 6, 2019 meeting of the Emergency and Community Services Committee were approved, as presented.

(d) DELEGATION REQUESTS (Item 6)

The following Delegation Requests, were approved:

- (i) Dr. Sally Palmer, McMaster Community Poverty Initiative, respecting the decision of the Ontario government to give no cost-of-living raise to social

assistance for 2019, and the escalation of food prices in 2019 (for a future meeting) (Item 6.1)

- (ii) Elizabeth McGuire, Campaign for Adequate Welfare and Disability Benefits, respecting social assistance rates (for today's meeting) (Item 6.2)
- (iii) Carolyn Buck and John Sharp, Pickleball Hamilton, respecting a request for funding to re-purpose unused tennis courts to pickleball courts to be managed by Pickleball Hamilton (for today's meeting) (Added Item 6.3)
- (iv) Sheri Selway, Canadian Federation of University Women - Hamilton, respecting the crisis with social assistance rates, with a focus on how women and families are particularly affected (for a future meeting) (Added Item 6.4)

(e) PUBLIC HEARINGS/DELEGATIONS (Item 8)

Item 11.1 respecting the Ontario Disability Support Program, was moved up on the agenda to be heard immediately after the Delegation from Elizabeth McGuire.

- (i) **Elizabeth McGuire, Campaign for Adequate Welfare and Disability Benefits, respecting social assistance rates and the Ontario Disability Program (Item 8.1)**

Elizabeth McGuire, Campaign for Adequate Welfare and Disability Benefits, addressed the Committee respecting social assistance rates and the Ontario Disability Support Program.

The Delegation from Elizabeth McGuire, Campaign for Adequate Welfare and Disability Benefits, respecting social assistance rates and the Ontario Disability Support Program, was received.

For further disposition of this matter, refer to Item 4.

Item 11.2 respecting the Hill Park Pickleball Courts Renovation, was moved up on the agenda to be heard immediately after the Delegation from Carolyn Buck and John Sharp.

- (ii) **Carolyn Buck and John Sharp, Pickleball Hamilton, respecting a request for funding to re-purpose unused tennis courts to pickleball courts to be managed by Pickleball Hamilton (Item 8.2)**

Carolyn Buck and John Sharp, Pickleball Hamilton, addressed the Committee respecting a request for funding to re-purpose unused tennis courts to pickleball courts to be managed by Pickleball Hamilton.

The delegation from Carolyn Buck and John Sharp, Pickleball Hamilton, respecting a request for funding to re-purpose unused tennis courts to pickleball courts to be managed by Pickleball Hamilton, was received.

For further disposition of this matter, refer to Item 5.

(f) STAFF PRESENTATIONS

(i) Recommended Projects from Coming Together to End Homelessness: Call for Applications 2019 (HSC20004) (Item 9.1)

Edward John, Director, Housing Services, addressed the Committee respecting the Recommended Projects from Coming Together to End Homelessness: Call for Applications 2019.

The presentation, respecting Recommended Projects from Coming Together to End Homelessness: Call for Applications 2019, was received.

A copy of the presentation is available on the City's website at www.hamilton.ca or through the Office of the City Clerk.

For further disposition of this matter, refer to Item 1.

(g) NOTICES OF MOTION (Item 12)

(i) Empowering Youth Leadership and Civic Engagement (Added Item 12.1)

Councillor Nann introduced a Notice of Motion respecting Empowering Youth Leadership and Civic Engagement.

The Rules of Order were waived to allow for the introduction of a motion respecting Empowering Youth Leadership and Civic Engagement.

For further disposition of this matter, refer to Item 6.

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

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

The following amendments to the Emergency and Community Services Outstanding Business List, were approved:

(a) Items Considered Completed and to be Removed

- (i) Ministry Inspection Report**
Item on OBL: O
Addressed as Item 10.1 on today's agenda

(i) PRIVATE AND CONFIDENTIAL (Item 14)

The Emergency and Community Services Committee moved into Closed Session respecting Item 14.1, pursuant to Section 8.1, Sub-section (b) and (d) of the City's Procedural By-law 18-270, and Section 239(2), Sub-section (b) and (d) of the Ontario Municipal Act, 2001, as amended, as the subject matter pertains to personal matters about an identifiable individual, including City employees, and labour relations or employee negotiations.

(i) Ontario Works Funding Update (HSC20005) (City Wide)

For disposition of this matter, refer to Item 7.

(j) ADJOURNMENT (Item 15)

(Whitehead/Nann)

There being no further business, the Emergency and Community Services Committee was adjourned at 3:20 p.m.

Respectfully submitted,

Councillor E. Pauls
Chair, Emergency and Community Services
Committee

Tamara Bates
Legislative Coordinator
Office of the City Clerk

Call for Applications (CFA) Funding Outcomes

Twelve applications were deemed successful through the call, totalling \$6,205,120 annually. These include:

| Proponent | Annual Funding Amount |
|---|------------------------------|
| Catholic Children's Aid Society, Community Youth Housing Project Diversion | \$332,150 |
| Good Shepherd Centres, Housing First Staying Home Program | \$397,400 |
| Good Shepherd Centres, Housing First Family Diversion | \$225,910 |
| Good Shepherd Centres, Housing First Intensive Case Management Program | \$1,336,410 |
| Good Shepherd Centres, Rapid Rehousing Program | \$534,210 |
| Housing Help Centre—Hamilton & Area, Hamilton Housing Help | \$483,930 |
| Mission Services of Hamilton, Housing UP Intensive Case Management | \$820,000 |
| Mission Services of Hamilton, Housing UP Rapid Rehousing | \$503,760 |
| St. Matthew's House, Housing Outreach Prevention Eviction for Seniors (HOPES) | \$153,980 |
| Wesley Urban Ministries, Wesley Youth Housing | \$108,650 |
| Wesley Urban Ministries, Wesley Hamilton Housing Services Intensive Case Management Housing | \$820,000 |
| YWCA Transitional Living Program | \$488,720 |

Indigenous Community Entity Funding Recommendations

The Indigenous Community Entity and Aboriginal Community Advisory Board (ABCAB) received approval for a transition year of 2020/2021, with a call for application process occurring for new contracts to be in place April 1, 2021. For the fiscal year of 2020/2021, totalling \$1,054,469, ABCAB recommends the following applications, submitted to the General Manager of Healthy and Safe Communities:

| Proponent | Funding Amount |
|--|-----------------------|
| Native Women's Centre- Honouring the Circle, Crisis Intervention Worker | \$13,242 |
| Native Women's Centre- Honouring the Circle, Home Proctor | \$39,491 |
| Hamilton Regional Indian Centre, Aboriginal Men/Youth Homelessness Support Worker | \$62,065 |
| De dwa da dehs nye>s Aboriginal Health Centre, Intensive Case Management Team, Indigenous Housing Services | \$604,003 |
| Hamilton Regional Indian Centre, Aboriginal Men/Youth Homelessness Support Worker- increase program funds | \$12,895 |

| | |
|--|-----------|
| De dwa da dehs nye>s Aboriginal Health Centre, Intensive Case Management Team, Indigenous Housing Services—increase program funds | \$116,805 |
| De dwa da dehs nye>s Aboriginal Health Centre, Intensive Case Management Team, Indigenous Housing Services – Damage Repair (Housing First Clients) | \$25,000 |
| De dwa da dehs nye>s Aboriginal Health Centre, Intensive Case Management Team, Indigenous Housing Services—Move-in package (Housing First Clients) | \$25,000 |
| Coalition of Hamilton Indigenous Leaders (CHIL), Coordinated Access and Data Related Activities | \$55,966 |
| Hamilton Regional Indian Centre, Endaayang: Housing First for Youth | \$50,000 |
| De dwa da dehs nye>s Aboriginal Health Centre, Indigenous Housing Services | \$50,000 |

CITY OF HAMILTON MOTION

Council: January 22, 2020

MOVED BY COUNCILLOR B. CLARK.....

SECONDED BY COUNCILLOR

Recording of In-Camera Meetings

WHEREAS the Ontario Ombudsman recommends that all municipalities make audio recordings or video recordings of all meetings – both open and closed – to ensure a thorough record;

WHEREAS there are now 23 Ontario municipalities that have implemented either audio or audiovisual recordings of their closed meetings;

WHEREAS an audio or audiovisual recording of in-camera meetings provides a clear and accessible record for closed meeting investigators to review;

WHEREAS such recordings of closed meetings will assist the municipality in quickly demonstrating that Council and staff did not stray from the legislated requirements during closed meetings; and

WHEREAS such recordings of closed meetings will provide a complete record to be used by the municipality and/or Councillors for future references as needed;

THEREFORE, BE IT RESOLVED:

That the City Manager be directed to report back to the Governance Review Sub-Committee within 30 days on the costs and policies to implement an audio or audiovisual recording system to be utilized for the recording of in-camera meetings; and the ways and means for the City Clerk to archive and protect such records.

CITY OF HAMILTON MOTION

Council: January 22, 2020

MOVED BY COUNCILLOR T. WHITEHEAD.....

SECONDED BY COUNCILLOR

Retaining Wall Repair/Replacement Loan Agreements Between the City of Hamilton and the Property Owners at 126, 130 and 134 Adis Ave, Hamilton

WHEREAS, the City of Hamilton’s Property Standards by-law requires property owners to maintain their properties;

WHEREAS, retaining walls on private property on 126, 130 and 134 Adis Avenue, Hamilton are in need of repair and / or replacement;

WHEREAS, the City of Hamilton is proceeding with a work order to have the retaining wall repaired/replaced on the private property at 126, 130 and 134 Adis Avenue, Hamilton;

WHEREAS, the City would like to provide compassionate loans for residential property owners for the repair and / or replacement of retaining walls on their private property at 126, 130 and 134 Adis Avenue, Hamilton for an amount not to exceed \$15,000 per affected property;

WHEREAS, the City has External Loan Guidelines (Reports FCS06078 and FCS06078(a)) for loans to external, not-for-profit corporations for the repair and / or replacement of their capital assets;

WHEREAS, some of the conditions of these loan guidelines would need to be waived to provide loans to the affected property owners at 126, 130 and 134 Adis Avenue, Hamilton to repair and / or replace their private retaining walls; and,

WHEREAS, these loan guidelines include interest rate terms for interest bearing loans at the City’s cost of borrowing plus 0.25% administration fee;

THEREFORE, BE IT RESOLVED:

- (a) That the City of Hamilton provide an interest-bearing loan to the affected property owners at 126, 130 and 134 Adis Avenue, Hamilton, as borrowers to fund the repair of retaining walls on their private property in an amount not to exceed \$15,000 to be repaid in full over a period of five years from the date of the loan

advance at an interest rate of 2.61% (2.36% + 0.25% administration fee) for an annual amount of \$3,238.93;

- (b) That the affected property owners at 126, 130 and 134 Adis Avenue, Hamilton, provide proof repair/replacement of the retaining walls within 30 days of being notified of the completion of the work by Municipal Law Enforcement to the General Manager of Finance and Corporate Services, prior to the loan advance payment, in a form satisfactory to the General Manager of Finance and Corporate Services;
- (c) That the affected property owners at 126, 130 and 134 Adis Avenue, Hamilton, enter into Retaining Wall Repair/Replacement Loan Agreements with the City of Hamilton, in a form satisfactory to the City Solicitor; and,
- (d) That the Mayor and Clerk be authorized to execute these Retaining Wall Repair/Replacement Loan Agreements between the City of Hamilton and the affected property owners, at 126, 130 and 134 Adis Avenue, Hamilton, with content satisfactory to the General Manager of Finance and Corporate Services and in a form satisfactory to the City Solicitor.

CITY OF HAMILTON MOTION

Council: January 22, 2020

MOVED BY COUNCILLOR T. WHITEHEAD.....

SECONDED BY COUNCILLOR

Retaining Wall Repair/Replacement Grant to the Property Owners at 126, 130 and 134 Adis Ave, Hamilton

WHEREAS the City of Hamilton’s Property Standards by-law requires property owners to maintain their properties;

WHEREAS retaining walls on private property on 126, 130 and 134 Adis Ave, Hamilton are in need of repair and or replacement;

WHEREAS the property owner behind the properties at 126, 130 and 134 Adis Ave is unwilling to allow access to the retaining wall for the purpose of repair/replacement from his property, increasing the cost to repair/replace the retaining wall by approximately \$5,000.00;

WHEREAS the City of Hamilton’s Municipal Law Enforcement department is moving forward with a work order to repair/replace the retaining all at 126, 130 and 134 Adis Ave at a maximum cost per homeowner of \$15,000.00; and,

WHEREAS there is no city program currently in place to assist the owners at 126, 130 and 134 Adis Ave with the cost to repair/replace a retaining wall;

THEREFORE BE IT RESOLVED:

That following the completion of the repair/replacement of the retaining wall at 126, 130 and 134 Adis Ave, Hamilton, as confirmed by Municipal Law Enforcement and subject to the owners at 126, 130 and 134 executing a release form and with content satisfactory to the City Solicitor, the homeowners be reimbursed the costs of repair in the form of a grant up to a maximum amount of \$5,000.00 (\$1,666.67 each) from the Ward 14 Area Rating capital reserve (Account #108064).

CITY OF HAMILTON

MOTION

Council: January 22, 2020

MOVED BY COUNCILLOR C. COLLINS.....

SECONDED BY MAYOR / COUNCILLOR

Amendment to Item 16 of the Audit, Finance & Administration Committee Report 19-022, respecting Report FCS19090 - CityHousing Hamilton Corporation (CHH) Redevelopment Financing Request (City Wide)

WHEREAS, at its meeting of December 11, 2019, Council approved Item 16 of the Audit, Finance & Administration Committee Report 19-022, respecting Report FCS19090 - CityHousing Hamilton Corporation (CHH) Redevelopment Financing Request; thereby, approving two loans to CHH, subject to the terms and conditions contained in Appendices “C” and “D” to Audit, Finance & Administration Committee Report 19-022;

WHEREAS, Appendices “C” – External Loan Guidelines for 500 MacNab North Tower Renewal; and, “D” External Loan Guidelines for Roxborough Park Development included the following items;

- f) Late Payment charges will be applied as per the City’s policy on late payments.
- f) In the event of non-payment or late payments, the City will follow current protocols on collecting payments on amounts owing.
- h) In case of Loan default, the loan agreement must ensure that the applicant’s asset or other security is included as collateral against the loan. The value of the asset or security must be of an equivalent value to the loan.

WHEREAS, the value of the property prior to project completion and perhaps after project completion may not equal the value of the loans for these affordable housing projects;

WHEREAS, the City’s policy on late payment charges would result in an undesirable interest rate of 15% annual interest being payable by CHH in respect of any late payments; and,

WHEREAS, loans secured by mortgages have collection remedies unique to them and it is desirable to have loan default remedy procedures consistent with other City loans secured by mortgages;

THEREFORE, BE IT RESOLVED:

That Item 16 of the Audit, Finance and Administration Committee Report 19-022, respecting Report FCS19090 - CityHousing Hamilton Corporation (CHH) Redevelopment Financing Request, **be amended by amending Appendices “C” and “D” as attached to Audit, Finance and Administration Committee Report 19-022, by deleting sub-sections “f”, “f)” and “h)” in their entirety, and re-lettering the remaining sub-sections**, as attached hereto.

Main Motion **as amended** to read as follows:

16. CityHousing Hamilton Corporation (CHH) Redevelopment Financing Request (FCS19090) (City Wide) (Item 10.8)

- (a) That a 10-year, interest-bearing loan of \$9,229,500 for CityHousing Hamilton Corporation from the City of Hamilton for the 500 MacNab North Tower Renewal, be authorized and approved in accordance with the terms and conditions contained in Appendix “C”, **as amended, attached hereto;**
- (b) That a loan receivable be established on the City’s balance sheet, not to exceed \$9,229,500, to record the corresponding CityHousing Hamilton Corporation liabilities regarding the long-term financing for the 500 MacNab North Tower Renewal;
- (c) That the Mayor and City Clerk be authorized and directed to execute a loan agreement together with any ancillary documentation in a form satisfactory to the City Solicitor and content satisfactory to the General Manager of Finance and Corporate Services and that the General Manager of Finance and Corporate Services be authorized to approve and execute any loan amending agreements, together with any ancillary amending documentation, if required, provided that the terms and conditions in Appendix “C” **as amended, attached hereto**, are maintained;
- (d) That a short-term, interest-bearing construction loan of \$29,225,000 for CityHousing Hamilton Corporation for the Roxborough Park Development, be authorized and approved in accordance with the terms and conditions contained in in Appendix “D” **as amended, attached hereto;**
- (e) That a loan receivable be established on the City’s balance sheet, not to exceed \$29,225,000, to record the corresponding CityHousing Hamilton Corporation liabilities regarding the financing for the Roxborough Park Development.
- (f) That the City of Hamilton will act as guarantor of any long-term financing not to exceed \$22,491,020 (construction cost less land sale) sought by CityHousing Hamilton Corporation for the Roxborough Park Development and that the General Manager of Finance and Corporate Services and City Clerk be authorized to execute any agreements and ancillary documents relating to the guarantee; and,

- (g) That the Mayor and City Clerk be authorized and directed to execute a loan agreement together with any ancillary documentation, in a form satisfactory to the City Solicitor and content satisfactory to the General Manager of Finance and Corporate Services and that the General Manager of Finance and Corporate Services be authorized to approve and execute any loan amending agreements relating to the long-term financing, together with any ancillary amending documentation, if required, provided that the terms and conditions in Appendix "D" ***as amended, attached hereto***, are maintained.

Loan Term Sheet

500 MacNab Street North (Rehabilitation of 146 Unit Apartment Building)

Borrower: CityHousing Hamilton Corporation ("CHH")

Lender: City of Hamilton ("City")

Type of Loan: \$9,229,500 Loan 10-year Amortization

1. Payment Provisions; The City will advance the \$9,229,500 to CHH (electronically) on or about February 1, 2020. The loan is repayable, together with interest, in 10 annual equal installments by CHH to the City beginning February 1, 2021. (Refer Schedule below)

**500 MacNab Street North
\$9,229,500 Loan Repayment Schedule
10-Year Amortization @ 2.63%**

| | | |
|--------|------|-------------|
| Feb. 1 | 2021 | \$1,063,000 |
| Feb. 1 | 2022 | 1,063,000 |
| Feb. 1 | 2023 | 1,063,000 |
| Feb. 1 | 2024 | 1,063,000 |
| Feb. 1 | 2025 | 1,063,000 |
| Feb. 1 | 2026 | 1,063,000 |
| Feb. 1 | 2027 | 1,063,000 |
| Feb. 1 | 2028 | 1,063,000 |
| Feb. 1 | 2029 | 1,063,000 |
| Feb. 1 | 2030 | 1,063,000 |

| | |
|-----------------------------------|--------------------|
| Total Payments (P&I) | \$10,630,000 |
| Principal Amount | <u>(9,229,500)</u> |
| Total Interest and Administration | \$1,400,500 |

Breakdown of Interest and Administration

| | |
|--------------------|-------------|
| Interest | \$1,267,373 |
| Administration Fee | \$133,127 |

2. Any additional mortgage amounts and / or contributions received by CHH from CMHC or any other senior levels of government regarding this project will be forwarded to the City immediately to reduce the loan amount outstanding.
3. Interest Rate: 2.38% per annum, plus .25% administrative fee, compounded semi-annually. Interest will be paid to the City by CHH on an annual basis (refer to payment schedule).
4. Security: The City will be next in priority only to a CMHC registered mortgage or a long-term (greater than 20 years) third party financing.
5. Title Insurance Policy in favour of the City.

TERMS OF LOAN AGREEMENT (City of Hamilton's external loan guidelines FCS06078(a))

If funding is approved, the legal loan agreement will include the necessary terms as agreed upon by both parties. The following must be included and / or considered during the development of the loan agreement. The list is not exhaustive and can be added to at any time.

- a) The interest rate will be based upon the current serial debenture rate, as provided by the investments section, for the time period that corresponds with the term of the loan. This reflects the equivalent capital cost of the loan. For example, the interest rate for a 10-year loan should be based on the 10-year serial debenture rate.
- b) A 0.25% administration fee will be added to the interest rate.
- c) The term of the loan must not exceed the useful life of the asset.
- d) At a minimum, interest should accrue annually.
- e) Terms of draws and a schedule of draws against the loan.
- f) The City of Hamilton must be recognized on project marketing and promotional material (e.g. City of Hamilton logo).
- g) Any out-of-pocket expenses, such as appraisal costs, incurred for the preparation of the loan agreement, over and above staff costs, will be added to the principal of the loan.
- h) The organization must provide full disclosure, at all times, with respect to issues that will or may affect the completion of the project or the organization's ability to repay the loan.
- i) Follow-up procedures will also be included in the terms of the agreement. These include:
 - i. The organization must provide a final cost of the project
 - ii. The organization must provide the following annually:
 - 1) Annual financial statements (audited, if available)
 - 2) Budgets and cash flow projections
 - 3) Confirmation of insurance on the asset used as collateral
 - iii. The organization should agree to be available, at the request of the City, to an on-site visit to review the capital expenditure and the applicable financial records.
- j) Any other terms deemed appropriate by City Council, the City Solicitor or City staff.

Loan Term Sheet

Roxborough Park Development - 103 Unit Apartment Building (the "Project")

Borrower: CityHousing Hamilton Corporation ("CHH")

Lender: City of Hamilton ("City")

Type of Loan: \$29,225,000 Construction Financing Loan

1. The upset limit on the term of this loan will not exceed 4 years from the date of the first advance to CHH.
2. Payment Provisions: CHH will receive monthly invoices from the developer (Roxborough Park Inc.) based on the percentage of work completed. The City will advance the funds to CHH (electronically) only after CHH's project manager, the CHH CEO, Director of Housing Services and the City's Director of Financial Planning Administration and Policy have approved the invoice for payment (and verified that the work stated on the invoice has been completed). Monthly invoices will contain a 10% holdback provision.
3. When CHH receives payment of \$6,733,980 for the remnant Roxborough land it is selling to the developer (upon Project completion), this amount will be paid to the City immediately to reduce the Construction Loan Amount.
4. Any mortgage amounts and / or contributions received by CHH from CMHC regarding this Project will be forwarded to the City immediately to reduce the Construction Loan Amount outstanding.
5. After terms #3 and #4 have been applied to the outstanding balance of the Construction Financing Loan and within the term limit of this loan (four years), any outstanding City Construction Loan Amount will be converted by CHH to a conventional 30 or 35-year mortgage with the City acting as guarantor for CHH to obtain third party financing.
6. Construction Loan Interest Rate: 2.43% per annum compounded monthly (2.18% plus .25% administration). Interest will be paid to the City by CHH on a quarter-yearly basis commencing three months after the first advance of funds by the City.
7. Section 4.05 of the Master Development Agreement between CHH and the developer provides that CHH is responsible to obtain financing to fund the full cost of construction of the new CHH building. However, the developer agrees to be responsible for and pay to CHH as and when such costs become due, all costs (i.e. interest and other costs) in connection with the construction financing which are incurred up to the later of:
 - i) the CHH building completion date; and
 - ii) the date that the developer pays the purchase price for the lands being sold by CHH to the developer.
8. Security: The City will be next in priority only to a CMHC registered mortgage or a long-term (greater than 20 years) third party financing.
9. Title Insurance Policy in favour of the City.

TERMS OF LOAN AGREEMENT (City of Hamilton’s external loan guidelines FCS06078(a))

If funding is approved, the legal loan agreement will include the necessary terms as agreed upon by both parties. The following must be included and / or considered during the development of the loan agreement. The list is not exhaustive and can be added to at any time.

- a) The interest rate will be based upon the current serial debenture rate, as provided by the investments section, for the time period that corresponds with the term of the loan. This reflects the equivalent capital cost of the loan. For example, the interest rate for a 10-year loan should be based on the 10-year serial debenture rate.
- b) A 0.25% administration fee will be added to the interest rate.
- c) The term of the loan must not exceed the useful life of the asset.
- d) At a minimum, interest should accrue annually.
- e) Terms of draws and a schedule of draws against the loan.
- f) The City of Hamilton must be recognized on project marketing and promotional material (e.g. City of Hamilton logo).
- g) Any out-of-pocket expenses, such as appraisal costs, incurred for the preparation of the loan agreement, over and above staff costs, will be added to the principal of the loan.
- h) The organization must provide full disclosure, at all times, with respect to issues that will or may affect the completion of the project or the organization’s ability to repay the loan.
- i) Follow-up procedures will also be included in the terms of the agreement. These include:
 - i. The organization must provide a final cost of the project
 - ii. The organization must provide the following annually:
 - 1) Annual financial statements (audited, if available)
 - 2) Budgets and cash flow projections
 - 3) Confirmation of insurance on the asset used as collateral
 - iii. The organization should agree to be available, at the request of the City, to an on-site visit to review the capital expenditure and the applicable financial records.
- j) Any other terms deemed appropriate by City Council, the City Solicitor or City staff.

CITY OF HAMILTON M O T I O N

Council Date: January 22, 2020

MOVED BY COUNCILLOR M. PEARSON.....

SECONDED BY COUNCILLOR.....

Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (PED20042) (Ward 5)

WHEREAS, the Hamilton Municipal Heritage Committee considered Report PED20042 respecting the Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek at their meeting on January 16, 2020 and recommended that no action be taken in response to the Notice of Intention to Demolish the two existing commercial buildings located at 23 and 25 King Street East, Stoney Creek; and

WHEREAS, it is necessary to proceed directly to Council in advance of Planning Committee to provide an immediate response regarding the two existing commercial buildings located at 23 and 25 King Street East, Stoney Creek;

THEREFORE BE IT RESOLVED:

- (a) That no action be taken in response to the Notice of Intention to Demolish the two existing commercial buildings located at 23 and 25 King Street East, Stoney Creek, a property included in the City’s Register of Property of Cultural Heritage Value or Interest;
- (b) That the property located 23 and 25 King Street East, Stoney Creek, be removed from the Register and the City’s Workplan for designation; and
- (c) That Council include direction that prior to issuance of the Demolition Permit for 23 and 25 King Street East, Stoney Creek, a Documentation and Salvage report be submitted to the satisfaction of the Director of Planning.

Attachment:

PED20042 - Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (Ward 5)



Hamilton

CITY OF HAMILTON
PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT
Planning Division

| | |
|---------------------------|--|
| TO: | Hamilton Municipal Heritage Committee |
| COMMITTEE DATE: | January 16, 2020 |
| SUBJECT/REPORT NO: | Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (PED20042) (Ward 5) |
| WARD(S) AFFECTED: | Ward 9 |
| PREPARED BY: | Miranda Brunton (905) 546-2424 Ext. 1202 |
| SUBMITTED BY: | Steve Robichaud Director, Planning and Chief Planner Planning and Economic Development Department |
| SIGNATURE: | |

RECOMMENDATION(S)

- a) That no action be taken in response to the notice of intention to demolish the two existing commercial buildings located at 23 and 25 King Street East, Stoney Creek, a property included in the City’s Register of Property of Cultural Heritage Value or Interest; and
- b) The property located 23 and 25 King Street East, Stoney Creek, be removed from the Register and the City’s Workplan for designation.

EXECUTIVE SUMMARY

The subject property known municipally as 23 and 25 King Street East, Stoney Creek, is located at the northwest corner of King Street East and Mountain Avenue North in Stoney Creek (see Appendix “A” of PED20042). The subject property contains two existing mixed use commercial and residential buildings. Although 23 and 25 King Street East, Stoney Creek, is one property, the building on the west side of the lot is associated with the municipal address 23 King Street East and the building on the east side of the lot is associated with municipal address 25 King Street East.

The subject property is included in the City of Hamilton’s Register of Property of Cultural Heritage Value or Interest and included on the City’s Workplan for designation. For

SUBJECT: Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (PED20042) (Ward 5) - Page 2 of 13

properties included on a Register, as per section Subsection 27 (3) of the *Ontario Heritage Act* (OHA), Council must be given 60 days notice in writing of the intention to demolish or remove any building or structure on the property. Additionally, the demolition and removal of a building or structure is prohibited during this 60 day time period. The 60 days' notice will expire on February 8, 2020.

On December 10th, 2019, the property owner submitted a Notice of Intention to Demolish for the two existing commercial buildings located at 23 and 25 King Street East, Stoney Creek. The applicant has not provided any specific details relating to how the site is proposed to be redeveloped.

The property owner contacted Heritage staff on January 8th, 2020 to determine next steps to proceed with the demolition for a property included on the Register.

Following further evaluation and research conducted by Staff, Staff recommend that no action be taken to prevent the demolition of the two existing commercial buildings located at 23 and 25 King Street East as they do not meet the criteria for designation and have not been identified as having any cultural heritage value.

If the decision is made to designate the subject property, the property would be designated as it stands today. Meaning that the heritage attributes would need to be identified based on current state of the building, not previous iterations. The building is heavily modified and few original features remain, which include the stone foundations and the floor joists.

Alternatives for Consideration – See Page 12

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: If it is decided to pursue designation, the City typically retains outside consultants to support the designation of the subject property immediately, incurring a cost of approximately three thousand dollars.

Staffing: None.

Legal: Continued inclusion in the City's Register of Property of Cultural Heritage Value or Interest under Section 27 (3) of the *Ontario Heritage Act* requires that Council be given 60 days' notice of the intention to demolish or remove any building or structure on the property. Council must consult with the Municipal Heritage Committee prior to including a non-designated property in the Register or removing reference to a property from the Register under Section 27 (1.3) of the Act.

HISTORICAL BACKGROUND

The property located at 23 and 25 King Street East, Stoney Creek, includes two existing commercial buildings that have been merged together over time (see "Appendix C" of PED20042). Currently, 25 King Street East is a commercial building with a residential and office space on main floor and office space on the second floor. 23 King Street East is a commercial building with a commercial space on the main floor and residential space on the second. Historically, 25 King Street East housed a commercial space, with postal pickup, on the ground floor and a residential, possibly mixed-use space, on the second floor. The house located at 23 King Street East was originally a residence.

The subject property was added to the City's Register of Property of Cultural Heritage Value or Interest ("the Register") and added to the City's Workplan for designation in June of 2019. A chronology of key events is provided below:

Register Addition

| Date | Summary of Events |
|----------------|--|
| March 25, 2019 | Inventory and Research Working (IRWG) group recommended that the subject land be included on the Register and added to the City's Workplan for designation. |
| April 10, 2019 | Notice of the IRWG recommendation was mailed out to the property owners for the subject land. |
| April 18, 2019 | HMHC reviewed the IRWG recommendations. Bruce Tucker, one of the owners of the subject property, delegated at the HMHC expressing his concerns with adding his property to the register. The HMHC received the delegation, and supported IRWG's recommendations to add the subject property to the Register. |
| April 30, 2019 | The HMHC recommendation to include the subject land on the Register and add to the City's Workplan for designation was reviewed by Planning Committee Meeting. The recommendation was tabled to allow further consultation with the property owners and the Ward Councillor. |
| June 18, 2019 | Planning Committee approved HMHC's recommendation to add the subject property to the Register and to the City's Workplan for designation. |
| June 26, 2019 | City Council approved recommendation to add the subject |

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SUBJECT: Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (PED20042) (Ward 5) - Page 4 of 13

| | |
|-------------------|--|
| | property to the Register and to the City's Workplan for designation. |
| December 10, 2019 | Notice of Intention to Demolish submitted to the Building Division. |
| February 8, 2020 | 60 Day Notice expires. |

As a Notice of Intention to Demolish for the subject property was submitted to the Building Division on December 10th, 2019, the 60 day notice expires on February 8th, 2020.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

Provincial Policy Statement:

Section 2.6 of the Provincial Policy Statement pertains to Cultural Heritage and Archaeology, apply to this decision:

"2.6.1 significant built heritage resources and significant cultural heritage landscapes shall be conserved"

The recommendations of this Report comply with this statement as, the commercial buildings located on the subject property are not considered to have sufficient cultural heritage value to warrant designation under the OHA. As such, the commercial building located on the subject property are not considered to be significant built heritage.

Urban Hamilton Official Plan:

The Urban Hamilton Official Plan (UHOP) was approved by Council on July 9, 2009 and the Ministry of Municipal Affairs on March 16, 2011. The UHOP outlines specific policies related to Cultural Heritage Resources that apply to this decision:

"B.3.4 Cultural heritage resources may include tangible features, structures, sites, or landscapes that, either individually or as part of a whole, are of historical, architectural, archaeological, or scenic value. Cultural heritage resources represent intangible heritage, such as customs, ways-of-life, values, and activities. The resources may represent local, regional, provincial, or national heritage interests and values.

3.4.2.1 The City of Hamilton shall, in partnership with others where appropriate:

SUBJECT: Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (PED20042) (Ward 5) - Page 5 of 13

- a) Protect and conserve the tangible cultural heritage resources of the City, including archaeological resources, built heritage resources, and cultural heritage landscapes for present and future generations.
- b) Identify cultural heritage resources through a continuing process of inventory, survey, and evaluation, as a basis for the wise management of these resources.

The purpose of the above policies is to protect tangible cultural heritage through continuing process of inventory, survey, and evaluation. The subject property is not considered to have sufficient cultural heritage value to warrant designation under the OHA. As such, the recommendations of this Report comply with these policies.

Protection of Non-Designated or Non-Registered Heritage Properties

- “3.4.2.6 The City recognizes there may be *cultural heritage properties* that are not yet identified or included in the Register of Property of Cultural Heritage Value or Interest or designated under the Ontario Heritage Act, but still may be of cultural heritage interest. These may be properties that have yet to be surveyed, or otherwise identified, or their significance and cultural heritage value has not been comprehensively evaluated but are still worthy of conservation.
- 3.4.2.7 The City shall ensure these non-designated and non-registered *cultural heritage properties* are identified, evaluated, and appropriately *conserved* through various legislated planning and assessment processes, including the Planning Act, R.S.O., 1990 c. P.13, the Environmental Assessment Act and the Cemeteries Act.
- 3.4.2.8 To ensure consistency in the identification and evaluation of these non-designated and non-registered *cultural heritage properties*, the City shall use the criteria for determining cultural heritage value or interest established by provincial regulation under the Ontario Heritage Act and set out in Policy B.3.4.2.9.”

Inclusion of non-designated property in the Register, established under Subsection 27 (1.2) of the OHA requires that Council be given 60 days notice in writing of the intention to demolish or remove any building or structure on the property, and the demolition and removal of a building or structure is prohibited during this time period (subsection 27 (3) of the OHA). Inclusion of a property on the Register does not automatically indicate a property should be designated under the OHA. Rather, the intent is to provide Council with an opportunity to consider if the property should be designated to prevent the

SUBJECT: Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (PED20042) (Ward 5) - Page 6 of 13

demolition of the building and to issue the Notice of Intention to Designate (NOID) if designation is deemed appropriate or to discuss other options with the proponent.

The recommendations of this Report comply with the above policy as the commercial buildings located on the subject property were evaluated against Ontario Regulation 9/06 (Appendix "C" or PED20042) and were found not to have sufficient cultural heritage value to warrant designation under the OHA.

Ontario Heritage Act

Section 27 of the OHA outlines requirement of a Municipality for the demolition or removal of a structure on a property included in the Register. The following applies to this decision:

"27(3) If property included in the register under subsection (1.2) has not been designated under section 29, the owner of the property shall not demolish or remove a building or structure on the property or permit the demolition or removal of the building or structure unless the owner gives the council of the municipality at least 60 days notice in writing of the owner's intention to demolish or remove the building or structure or to permit the demolition or removal of the building or structure

27(5) The notice required by subsection (3) shall be accompanied by such plans and shall set out such information as the council may require."

As the subject lands are included on the City's Register Council must consider the designation within the 60 day notice period for a Notice of Intent to Demolish to prevent demolition of the building should it warrant designation.

RELEVANT CONSULTATION

Heritage staff consulted with Bruce Tucker, one of the property owners, and conducted a site visit on January 9th, 2020.

ANALYSIS AND RATIONALE FOR RECOMMENDATION(S)

Section 29 (1) of the *Ontario Heritage Act* permits the Council of a municipality to designate property to be of cultural heritage value or interest where property meets the criteria prescribed by provincial regulation. In 2006, the Province issued Ontario Regulation 9 / 06: Criteria for Determining Cultural Heritage Value or Interest. According to Sub-section 1(2) of Ontario Regulation 9 / 06, a property may be designated under Section 29 of the *Ontario Heritage Act* where it meets one or more of the identified criteria. Ontario Regulation 9 / 06 identifies criteria in three broad

SUBJECT: Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (PED20042) (Ward 5) - Page 7 of 13

categories: Design / Physical Value, Historical / Associative Value and Contextual Value (see Appendix "C" to Report PED20042). The following presents the analysis and rationale for the recommendations within the Ontario Regulation 9/06.

To note, the following analysis and further evaluation is based on documentation provided as part of the preliminary assessment to add the subject property to the Register (included in the HMHC Agenda Package for meeting 19-003). Staff conducted additional archival research including historical sources, such as directory references for Stoney Creek, archival photographs, aerial photographs, historic maps and documentation regarding historical building techniques and materials.

1. **Design / Physical Value:**

- i. The two existing commercial buildings do not appear to be a rare, unique, representative or early example of a style, type, expression, material or construction method.

The preliminary evaluation of the subject property for inclusion on the Register indicated that the style of the structures was rare. To note, the structures located on the subject property were once separate and over the years and modification appear to have been attached. It is not clear who constructed the structures and the exact date of construction. Based on documentary sources and building techniques, the structures may have been constructed during the first half of the 19th Century.

Both structures were constructed in a local vernacular style with Victorian influences, two stories, with rough cased wood frames with thick stone rubble foundations. The thickness of the stone foundation, ranging between 0.5 and 0.75 metres, is typical of structures constructed during the first half of the 19th century. The building on the east, 25 King Street East, was purposely built with a commercial retail space on the main floor and residential space on the second floor. While the building on the west, 23 King Street East, was originally built as a residence and the first floor was converted for retail use during the second half of the 20th century. When constructed, the structures were not attached and 23 King Street East constructed slightly set back from 25 King Street East.

25 King Street East, the property colloquially known as the Millen's store, originally had enclosed glazed bays that flanked the recessed entrance way to the general store. Based on researched documentation, the second floor space was accessed with an exterior staircase and the building was originally been clad in stucco, but the building had been reclad multiple times. 23 King Street East was originally constructed with an open air front veranda on the ground level and was probably clad in wooden board and batten. The veranda has been replaced

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SUBJECT: Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (PED20042) (Ward 5) - Page 8 of 13

with a single storey addition to the ground floor of the front of the building, used for a commercial space.

Since construction, both buildings on the subject property have been significantly altered on the interior and the exterior (see Appendix "B" of Report PED20042), impacting the integrity, both culturally and structurally, of the buildings. Currently, the buildings are mostly clad in vertical metal siding, with the exception of the enclosed veranda and the east elevation of 25 King Street East, which is clad in stucco. An addition has been added to the main floor of the street facing elevation of 23 King Street East in the later half on the 20th Century. The front elevation of this addition is glazed and is used as commercial space. The enclosed veranda of 25 King Street East has been significantly redesigned and now includes two arched windows flanking an arched, recessed entranced way. On the back elevation of the 25 King Street East there are two single storey additions, the first addition appears to have been added around the turn of the 20th century and the second small addition possibly added in the mid-20th century. Due to the significant modifications to the building, the existing buildings are not a rare, unique, representative or early example of a style, type, expression, material or construction method.

- ii. The commercial buildings do not display a high degree of craftsmanship or artistic merit.

The preliminary evaluation of the subject property for inclusion on the Register indicated that the structures displayed a high degree of craftsmanship. Although well-constructed, the significant alterations and modifications have replaced much of the original work and original materials have been replaced with modern materials. As such from cultural heritage perspective, the structures do not display a high degree of craftsmanship as the craftsmanship related to the initial construction as been completely replaced by modern materials and construction methods.

- iii. The commercial buildings do not demonstrate a high degree of technical or scientific achievement.

The two commercial buildings are examples of a regular house buildings constructed during the first part of the 19th Century. As such they do not demonstrate a high degree of technical or scientific achievement.

2. Historical / Associative Value:

- i. The commercial buildings may be considered to have direct associations with a theme, event, belief, person, activity, organization or institution that

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is significant to a community.

As part of the preliminary evaluation to include the subject property on the Register, it was indicated that the subject met this criteria. 25 King Street East, the 'Millen's Store', has passed through many hands and housed a variety of business for varying lengths of time. Located within the historic core area of Stoney Creek, as depicted on the 1875 Wentworth Atlas, research documentation indicates that the subject property has been used for commercial purposes since the early 19th century and possibly the very late 18th century.

Following a treaty between the Mississaugas and the Crown in 1792, thousands of Empire Loyalists started to settle the land between Lake Erie and Lake Ontario. The first Loyalists who came to the area now known as Stoney Creek started farms and mills along the many waterways flowing through the area. The commercial historic core area of Stoney Creek started to develop amongst the vast and hearty farmland to help serve the needs of the community. The historic core had merchants for trade, goods and services and postal pickup. Following the Battle of Stoney Creek, which took place on the night of June 5-6, 1813, and proved to be the turning point for the British during the war of 1812, the Stoney Creek community started to steadily grow. The location of the battlefield and the Battlefield House Museum and Park National Historic Site is located just west of the subject property.

During the early 19th century a general store, which also served as a 'post office', was established on the subject property and may have been the first general store in the historic core. Throughout the mid and late 19th century there were many different storekeepers and postmasters including Alva Jones, William Jones, Charles Moore, and Isaac Corman. As part of the historic core of the Village of Stoney Creek, the general store with a postal pick-up would have played an important role in the developing community. The residents in the area would have come to the store to send and pick mail, as well as purchase goods. As such, due to the nature of the business and service located on the subject property, there was an intrinsic value to the growing community. Postal service was available onsite until 1899.

Just after the turn of the 18th century, A.J. Millen purchased the business and building located at 25 King Street East, as well as the house located at 23 King Street East. The Millen's family continued to serve the community with their family run general store for six decades. The general store was located on the main level of 25 King Street East, while the second storey contained a multi-use space with an exterior access that was rented out to a variety of tenants for a variety of uses. A.J. Millen and his large family lived in 23 King Street East. It is also noted that the Millen's store had the first public telephone in Stoney Creek.

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SUBJECT: Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (PED20042) (Ward 5) - Page 10 of 13

After A.J. Millen's death in 1955, his wife Mary-Jane continued to run the general store. The Millen's son Richard took over family store when his mother retired. During Richard's management, he made great efforts to modernize the store, which included significant renovations and alterations to the building. In September of 1967, 23 and 25 King Street East, was sold out of the family.

Since the 1970s, the subject property has been further altered. The first floor of 23 King Street East was turned into a retail spaces with tenants above and 25 King Street East has house a variety of tenants, from private offices to restaurants. Although the Millen's General Store and home is still in living memory, the changes in the businesses and physical appearance have altered the character of the building. As such, this obstructs the historical role this property played in the social, economical, and historic development of Stoney Creek.

- ii. The commercial buildings are not considered to have the potential to yield information that contributes to an understanding of a community.

The initial evaluation of the subject property for the inclusion on the City of Hamilton's Register, identified this property to meet this criterion. From a general historical perspective, the story of property and the previous owners and their businesses helps us to better understand the social, economical and historic develop of Stoney Creek. However, much of this information can be obtained through other means of research than through the structures.

- iii. The commercial buildings on the property are not attributed to a prominent builder.

The initial evaluation of the property and two structures for the inclusion on the City of Hamilton's Register, identified this property and two structures to meet this criterion though its association with a prominent builder. Upon further evaluation and consideration, it is unclear who designed the building and who originally construct the structures. As such, this property does not meet his criteria.

3. Contextual Value:

- i. The commercial buildings are not considered important in defining, maintaining and supporting the character of the area.

The initial evaluation of the subject property for the inclusion on the City of Hamilton's Register identified this property to meet this criterion and future

SUBJECT: Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (PED20042) (Ward 5) - Page 11 of 13

indicated that the property is important in defining, maintaining and supporting the character of the area.

Over the 19th and 20th Centuries, the built environment and context of the section of King Street East, Stoney Creek, around the subject property has significantly changed. Notable in early 20th Century maps and aerial photographs, this area contained house structures similar to the subject property. Moving forward in the 20th Century, within this historic core area of Stoney Creek there is movement way from two storey residential building and the introduction of taller commercial and industrial buildings in the immediate King Street East area and development of subdivisions in the surrounding areas. As the built context changed, the modifications to the subject property were an attempt to keep the building relevant and meet the needs of commercial tenants in an evolving built and economic context. Although once important to defining, maintaining and supporting the character of the area, the subject property no longer meets this criterion.

- ii. The commercial buildings are not considered to be physically, functionally, visually and historically linked with the surrounding properties.

The initial evaluation of the subject property for the inclusion on the City of Hamilton's Register identified this property to meet this criterion and future indicated that the property is physically, visually and historically linked to its surroundings.

The subject property is physically and historically linked to it's surroundings as the early post office and general store located on the subject property played a role in the overall development of Stoney Creek. Due to the significant modifications, which were attempts to keep the structures relevant in an evolving context, the subject property is no longer visually or physically linked to the surrounding area. As such, it no longer meets this criterion.

- iii. The commercial buildings are not considered a landmark.

Landmarks are statement buildings that stand out amongst their surrounding context and can be used for such things as wayfinding. Although located on a corner lot, the commercial buildings do not stand out in their existing context and are not considered to be a landmark.

Conclusion:

Noted in the introduction of this section, if a property meets one or more of the criteria outline in Regulation 9/06 property may be designated under the *Ontario Heritage Act*.

SUBJECT: Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (PED20042) (Ward 5) - Page 12 of 13

Although the subject property may meet one of the 9/06 criteria, is not considered to have sufficient cultural heritage value to warrant designation under the *Ontario Heritage Act*.

In addition to the discussion above, if the decision is made to designate the subject property, the property would be designated as it stands today. Meaning that the heritage attributes would need to be identified based on current state of the building, not previous iterations. The building is heavily modified and few original features remain, which include the stone foundations and the floor joists.

Under the umbrella of heritage, designation and in situ physical retention of a structure is only one means of preserving the historical significance of a property. Due to the rich history of the site, a more suitable and impactful means of preservation would be a commemoration approach. This could include public interpretative display, such as an historic plaque, telling the history and refreshing the public memory of the people, business and structures that once occupied this space.

For the subject property, there are:

- a wide variety of archival photographs available;
- Historical documentation in the form of directly listings, tax assessment records and newspaper articles and advertisements; and,
- salvageable materials from the building, including the hand shaped wooden floor joists, stone from the foundation and an Anthes-Imperial Fire King furnace.

All of the above can be used for an interpretive display. Alternatively, the salvaged material can be incorporated into a future development on site. The property owner indicated a willingness to salvage the above mentioned materials and some form of commemoration.

ALTERNATIVES FOR CONSIDERATION

Under Part IV of the *Ontario Heritage Act*, the designation of property is a discretionary activity on the part of Council. Council, as advised by the HMHC, may consider the alternative to designate the property immediately. HMHC can advise that Council make designation of the subject property an immediate priority.

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Community Engagement and Participation

Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community.

SUBJECT: Notice of Intention to Demolish Structures located at 23-25 King Street East, Stoney Creek (PED20042) (Ward 5) - Page 13 of 13

Economic Prosperity and Growth

Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.

Built Environment and Infrastructure

Hamilton is supported by state of the art infrastructure, transportation options, buildings and public spaces that create a dynamic City.

Our People and Performance

Hamiltonians have a high level of trust and confidence in their City government.

APPENDICES AND SCHEDULES ATTACHED

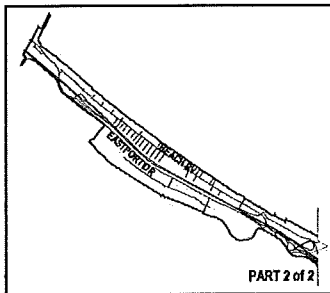
Appendix "A" - Location Map

Appendix "B" - Photographs

Appendix "C" - Ontario Regulation 9 / 06: Criteria for Determining Cultural Heritage Value or Interest



● Site Location



Key Map - Ward 5

Location Map



Hamilton

PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT

File Name/Number:
23 & 25 King St E

Date:
January 10, 2020

Appendix "A"

Scale:
N.T.S.

Planner/Technician:
MB/NB

Subject Property



23 and 25 King Street East, Stoney Creek
(Ward 3)



Image 1: View of the street facing (south) façade, along King Street East, Stoney Creek. 23 King Street East is located on the left (west) side and 25 King Street East is located on the right side of the photo (MB 2020).



Image 2: View towards northeast corner of King Street East and Mountain Avenue North showing the south façade of 23 & 25 King Street East and the east façade of 25 King Street East, Stoney Creek (MB, 2020).



Image 3: View of back (north) façade, 23 King Street East is located on the right and 25 King Street East is located on the left side of the photo (MB, 2020).

ONTARIO REGULATION 9 / 06
CRITERIA FOR DETERMINING CULTURAL HERITAGE VALUE OR INTEREST

Criteria

1. (1) The criteria set out in subsection (2) are prescribed for the purposes of clause 29 (1) (a) of the Act. O. Reg. 9 / 06, s. 1 (1).

(2) A property may be designated under section 29 of the Act if it meets one or more of the following criteria for determining whether it is of cultural heritage value or interest:

1. The property has design value or physical value because it,
 - i. is a rare, unique, representative or early example of a style, type, expression, material or construction method,
 - ii. displays a high degree of craftsmanship or artistic merit, or
 - iii. demonstrates a high degree of technical or scientific achievement.
2. The property has historical value or associative value because it,
 - i. has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community,
 - ii. yields, or has the potential to yield, information that contributes to an understanding of a community or culture, or
 - iii. demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.
3. The property has contextual value because it,
 - i. is important in defining, maintaining or supporting the character of an area,
 - ii. is physically, functionally, visually or historically linked to its surroundings, or
 - iii. is a landmark. O. Reg. 9 / 06, s. 1 (2).

**CITY OF HAMILTON
M O T I O N**

Council Date: January 22, 2020

MOVED BY COUNCILLOR J. PARTRIDGE.....

SECONDED BY COUNCILLOR.....

Ward 15 Council Priority Minor Maintenance Projects

WHEREAS, Parkside Drive, from Main Street to Churchill Avenue, within Ward 15 is in need of rehabilitation to extend the life of the roadway and therefore improving service levels and reducing maintenance costs;

WHEREAS, we have current competitively bid projects and prices available as a base for comparison and negotiation that can be used to ensure value for money on the award of the proposed works; and

WHEREAS, given the current resources along with the time needed to complete a tender and award process, road improvements cannot be addressed within our normal process manner during the 2020 construction process;

THEREFORE BE IT RESOLVED:

- (a) That Parkside Drive, from Main Street to Churchill Avenue, at an estimated cost of \$440,000, be rehabilitated using asset preservation practices, with the work to include the rehabilitation of the existing asphalt with repaving;
- (b) That the Ward 15 allocation, in the amount of \$440,000 (Project ID 4031911615) being the Ward 15 Road Minor Maintenance program, be utilized to fund the asset preservation of Parkside Drive, from Main Street to Churchill Avenue, and
- (c) That the General Manager of Public Works be authorized to procure all or some of the proposed works identified through Procurement Policy #11 Non-Competitive Procurements, where deemed appropriate, to expedite the works for this construction season.

CITY OF HAMILTON M O T I O N

Council Date: January 22, 2020

MOVED BY COUNCILLOR J. FARR

SECONDED BY COUNCILLOR.....

Naming of a Municipal Property Located at 125 Barton Street, West, Hamilton to the Bridgeworks

WHEREAS; 125 Barton Street, Hamilton, is a former industrial site now adaptively restored and reused as an arts and cultural community centre;

WHEREAS; The site is located in the West Harbour of Hamilton, where our industrial heritage continues to be honoured through the revitalization; and

WHEREAS; It is fitting that since the original site was home to a bridge building industry, the property be named The Bridgeworks;

THEREFORE BE IT RESOLVED:

- (a) That the Director of Facilities be directed to investigate the process for the naming of a Municipal property located at 125 Barton Street, West, Hamilton; and
- (b) That a report on the Naming of a Municipal Property Located at 125 Barton Street, West, Hamilton to the Bridgeworks, come back to the Facility Naming Sub-Committee for consideration.

CITY OF HAMILTON

NOTICE OF MOTION

Council: January 22, 2020

MOVED BY COUNCILLOR J. FARR.....

Amendment to Item 8 of the General Issues Committee Report 18-014, respecting Report PED16253(b) – 18-28 King Street East, Extension of Conditional Approval, Hamilton Heritage Property Grant Program and GORE Building Improvement Grant Program

WHEREAS, at its meeting of December 11, 2013, Council approved Item 14 of the General Issues Committee Report 13-026, respecting Report PED13208 - 18-28 King Street East – Hamilton Heritage Property Grant Program and GORE Building Improvement Grant Program;

WHEREAS, the deadlines to submit a Building Permit Application and applications to both the Hamilton Heritage Property Grant and GORE Building Improvement Grant Programs for 18-28 King Street East have been extended on a number of occasions with the most recent being on July 12, 2019 where Council approved Item 11.4, an amendment to Item 8 of the General Issues Committee Report 18-014, respecting Report 16253(b) – 18-28 King Street East, Extension of Conditional Approval, Hamilton Heritage Property Grant Program and GORE Building Improvement Grant Program, which again extended the submission deadline for Building Permit Applications to January 31, 2020 as well as extending the submission deadline for the Hamilton Heritage Property Grant Program and GORE Building Improvement Grant Program for the completion of the program applications to July 31, 2020;

WHEREAS, Hughson Business Space Corporation has made significant progress towards satisfying the requirements that will allow for the redevelopment of 18-28 King Street East to commence including the majority of their Site Plan Approval conditions and those pertaining to the approved Heritage Permits;

WHEREAS, a Record of Site Condition (RSC) and/or Certificate of Property Use (CPU) issued by the Ministry of Environment, Conservation and Parks is required to submit a Building Permit Application; and,

WHEREAS, the requirement to obtain an RSC and/or CPU is being pursued by Hughson Business Space Corporation but will not be received from the Ministry by January 31, 2020;

THEREFORE, BE IT RESOLVED:

- (a) That subsections (a) and (b) to Item 8 of the General Issues Committee Report 18-014, respecting Report PED16253(b) – 18-28 King Street East, Extension of

Conditional Approval, Hamilton Heritage Property Grant Program and GORE Building Improvement Grant Program, be amended by deleting the words “extended to no later than January 31, 2020” and replacing them with the words “***maintained at July 31, 2020***”; and, by deleting the second reference to the words “January 31, 2020” and replacing it with the words “***July 31, 2020***”; to read as follows:

8. **18-28 King Street East, Extension of Conditional Approval, Hamilton Heritage Property Grant Program and GORE Building Improvement Grant Program (PED16253(b)) (Ward 2) (Item 8.1)**
 - (a) That the deadline for the submission of a separate, completed Hamilton Heritage Property Grant Program (HHPGP) Application for each 18, 20, 22, 24 and 28 King Street East, for the previously approved conditional grant commitment to an upset limit of \$850,000 for the Hughson Business Space Corporation (Linda Barnett, David Blanchard, Ronald Quinn and William Rogan) the registered owners, be ~~extended to no later than January 31, 2020~~ ***maintained at July 31, 2020***, conditional upon the receipt of a Building Permit Application being submitted to the City for the redevelopment of 18-28 King Street East no later than ~~January 31, 2020~~ ***July 31, 2020***;
 - (b) That the deadline for the submission of a separate, completed GORE Building Improvement Grant Program (GBIGP) Application for each 18, 20, 22, 24 and 28 King Street East, for the previously approved conditional grant commitment to an upset limit of \$250,000 under the GORE Building Improvement Grant Program (GBIGP) for Hughson Business Space Corporation (Linda Barnett, David Blanchard, Ronald Quinn and William Rogan), the registered owners, be ~~extended to no later than January 31, 2020~~ ***maintained at July 31, 2020*** conditional upon the receipt of a Building Permit Application being submitted to the City for the redevelopment of 18-28 King Street East no later than ~~January 31, 2020~~ ***July 31, 2020***; and,
- (b) That subsection (c) to Item 8 of the General Issues Committee Report 18-014, respecting Report PED16253 (b) – 18-28 King Street East, Extension of Conditional Approval, Hamilton Heritage Property Grant Program and GORE Building Improvement Grant Program, be amended by deleting the words “January 31, 2020” and replacing it with the words “***July 31, 2020***”, to read as follows:
- (c) That, should the Hughson Business Space Corporation (Linda Barnett, David Blanchard, Ronald Quinn and William Rogan) the registered owners of 18, 20, 22, 24 and 28 King Street East not submit a Building Permit Application for the redevelopment of 18-28 King Street East by ~~January 31, 2020~~ ***July 31, 2020***, staff be directed to report back to the General Issues Committee for direction as to whether or not the conditional grant commitments, under the Hamilton Heritage Property Grant Program (HHPGP) and GORE Building Improvement Grant Program (GBIGP), for those properties should continue to be valid.

Authority: Item 2, Public Works Committee
Report 19-012 (PW19074)
CM: September 11, 2019
Ward: 13

Bill No. 001

CITY OF HAMILTON

BY-LAW NO. 20-

To Permanently Close and Sell a portion of Hatt Street, Dundas abutting the property municipally known as 118 Hatt Street, Dundas, Ontario, namely Part of Lot 20 on Registrar's Compiled Plan 1442 in the City of Hamilton, designated as Part 3 on Plan 62R-21294, being part of PIN 17481-0436 (LT); City of Hamilton

WHEREAS sections 8, 9 and 10 of the *Municipal Act, 2001* authorize the City of Hamilton to pass by-laws necessary or desirable for municipal purposes, and in particular by-laws with respect to highways; and

WHEREAS section 34(1) of the *Municipal Act, 2001* provides that a by-law permanently closing a highway does not take effect until a certified copy of the by-law is registered in the proper land registry office; and

WHEREAS highways to be closed by by-law are declared to be surplus to the needs of the City of Hamilton under the Sale of Land Policy By-law; and

WHEREAS at its meeting of September 11, 2019, Council approved of Item 2 of Public Works Committee Report 19-012, and authorized the City of Hamilton to permanently close and sell a portion of Hatt Street abutting the north-east side of 118 Hatt Street, Hamilton, Ontario, namely Part of Lot 20 on Registrar's Compiled Plan 1442, Designated as Part 3 on Plan 62R-21294, being part of PIN 17481-0436 (LT); and

WHEREAS notice to the public of the proposed sale of the part of the road allowance has been given in accordance with the requirements of the Sale of Land Policy By-law.

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. The part of the public road allowance set out as follows:

Part of Lot 20 on Registrars Compiled Plan 1442, in the City of Hamilton, Designated as Part 3 on Plan 62R-21294, being Part of PIN 17481-0436 (LT); City of Hamilton

To Permanently Close and Sell a portion of Hatt Street, Dundas abutting the property municipally known as 118 Hatt Street, Dundas, Ontario, namely Part of Lot 20 on Registrar's Compiled Plan 1442 in the City of Hamilton, designated as Part 3 on Plan 62R-21294, being part of PIN 17481-0436 (LT); City of Hamilton

- is permanently closed.
2. The soil and freehold of the Part 3 on Plan 62R-21294, hereby permanently closed, be sold to 1722276 Ontario Inc. for the sum of Two Dollars (\$2.00).
 3. That this by-law shall come into force and effect on the date of its registration in the Land Registry Office for the Land Titles Division of Wentworth (No. 62).

PASSED this 22nd day of January, 2020.

F. Eisenberger
Mayor

A. Holland
City Clerk

Authority: Item 21, Committee of the Whole
Report 01-029 (CS01083)
CM: September 18, 2001
Ward: 10

Bill No. 002

CITY OF HAMILTON

BY-LAW NO. 20-

**To Establish City of Hamilton Land
Described as Parts 1 and 2 on Plan 62R-10158
as Part of King Street West**

WHEREAS sections 8, 9 and 10 of the *Municipal Act, 2001* authorize the City of Hamilton to pass by-laws necessary or desirable for municipal purposes, and in particular by-laws with respect to highways; and

WHEREAS section 31(2) of the *Municipal Act, 2001* provides that land may only become a highway by virtue of a by-law establishing the highway.

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. The land, owned by and located in the City of Hamilton, described as Parts 1 and 2 on Plan 62R-10158 is established as a public highway, forming part of King Street West.
2. The General Manager of Public Works or their authorized agent is authorized to establish the said land as a public highway.
3. This By-law comes into force on the date of its registration in the Land Registry Office (No. 62).

PASSED this 22nd day of January, 2020.

F. Eisenberger
Mayor

A. Holland
City Clerk

Authority: Item 21, Committee of the Whole
Report 01-029 (CS01083)
CM: September 18, 2001
Ward: 10

Bill No. 003

CITY OF HAMILTON

BY-LAW NO. 20-

**To Establish City of Hamilton Land
Described as Parts 6 and 8 on Plan 62R-4307
as Part of King Street West**

WHEREAS sections 8, 9 and 10 of the *Municipal Act, 2001* authorize the City of Hamilton to pass by-laws necessary or desirable for municipal purposes, and in particular by-laws with respect to highways; and

WHEREAS section 31(2) of the *Municipal Act, 2001* provides that land may only become a highway by virtue of a by-law establishing the highway.

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. The land, owned by and located in the City of Hamilton, described as Parts 6 and 8 on Plan 62R-4307 is established as a public highway, forming part of King Street West.
2. The General Manager of Public Works or their authorized agent is authorized to establish the said land as a public highway.
3. This By-law comes into force on the date of its registration in the Land Registry Office (No. 62).

PASSED this 22nd day of January, 2020.

F. Eisenberger
Mayor

A. Holland
City Clerk

Authority: Item 21, Committee of the Whole
Report 01-029 (CS01083)
CM: September 18, 2001
Ward: 10

Bill No. 004

CITY OF HAMILTON

BY-LAW NO. 20-

**To Establish City of Hamilton Land
Described as Part 1 on Plan 62R-9986
as Part of King Street West**

WHEREAS sections 8, 9 and 10 of the *Municipal Act, 2001* authorize the City of Hamilton to pass by-laws necessary or desirable for municipal purposes, and in particular by-laws with respect to highways; and

WHEREAS section 31(2) of the *Municipal Act, 2001* provides that land may only become a highway by virtue of a by-law establishing the highway.

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. The land, owned by and located in the City of Hamilton, described as Part 1 on Plan 62R-9986 is established as a public highway, forming part of King Street West.
2. The General Manager of Public Works or their authorized agent is authorized to establish the said land as a public highway.
3. This By-law comes into force on the date of its registration in the Land Registry Office (No. 62).

PASSED this 22nd day of January, 2020.

F. Eisenberger
Mayor

A. Holland
City Clerk

Authority: Item 21, Committee of the Whole
Report 01-029 (CS01083)
CM: September 18, 2001
Ward: 10

Bill No. 005

CITY OF HAMILTON

BY-LAW NO. 20-

**To Establish City of Hamilton Land
Described as Part 4 on Plan 62R-9221
as Part of King Street West**

WHEREAS sections 8, 9 and 10 of the *Municipal Act, 2001* authorize the City of Hamilton to pass by-laws necessary or desirable for municipal purposes, and in particular by-laws with respect to highways; and

WHEREAS section 31(2) of the *Municipal Act, 2001* provides that land may only become a highway by virtue of a by-law establishing the highway.

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. The land, owned by and located in the City of Hamilton, described as Part 4 on Plan 62R-9221 is established as a public highway, forming part of King Street West.
2. The General Manager of Public Works or their authorized agent is authorized to establish the said land as a public highway.
3. This By-law comes into force on the date of its registration in the Land Registry Office (No. 62).

PASSED this 22nd day of January, 2020.

F. Eisenberger
Mayor

A. Holland
City Clerk

Authority: Item 7, Economic Development
and Planning Committee Report
10-005 (PED10051)
Ward: 11

Bill No. 006

CITY OF HAMILTON

BY-LAW NO. 20-

**To Establish City of Hamilton Land
Described as Block 89 on Plan 62M-1150
as Part of Gowland Drive**

WHEREAS sections 8, 9 and 10 of the *Municipal Act, 2001* authorize the City of Hamilton to pass by-laws necessary or desirable for municipal purposes, and in particular by-laws with respect to highways; and

WHEREAS section 31(2) of the *Municipal Act, 2001* provides that land may only become a highway by virtue of a by-law establishing the highway.

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. The land, owned by and located in the City of Hamilton, described as Block 89 on Plan 62M-1150, is established as a public highway, forming part of Gowland Drive.
2. The General Manager of Public Works or their authorized agent is authorized to establish the said land as a public highway.
3. This By-law comes into force on the date of its registration in the Land Registry Office (No. 62).

PASSED this 22nd day of January, 2020.

F. Eisenberger
Mayor

A. Holland
City Clerk

CITY OF HAMILTON

BY-LAW NO. 20-

To Authorize the Temporary Borrowing of Monies to Meet Current Expenditures Pending Receipt of Current Revenues for 2020

WHEREAS the Council for the City of Hamilton deems it necessary to pass and enact a by-law to authorize the temporary borrowing of monies by the City to meet current budget expenditures for the year 2020 pending receipt of current revenues; and,

WHEREAS section 407(1) of the *Municipal Act, 2001*, provides as follows:

"At any time during a fiscal year, a municipality may authorize temporary borrowing, until the taxes are collected and other revenues are received, of the amounts that the municipality considers necessary to meet the expenses of the municipality for the year and of the amounts, whether or not they are expenses for the year, that the municipality requires in the year"; and,

WHEREAS Section 407(2) of the *Municipal Act, 2001*, imposes certain limitations on the amounts that may be borrowed at any one time.

NOW THEREFORE the Council of the City of Hamilton hereby enacts as follows:

1. (a) The City of Hamilton is hereby authorized to borrow from a Bank or person by way of Promissory Notes or Bankers Acceptances from time to time a sum or sums of monies not exceeding at any one time the amounts specified in Section 407(2) of the *Municipal Act, 2001* to pay off temporary bank overdrafts for the current expenditures of the City for the year 2020, including amounts for sinking funds, principal and interest falling due within such fiscal year and the sums required by law to provide for the purposes of the City.
- (b) The amount of monies that may be borrowed at any one time for the purposes of Section 407(1) of the *Municipal Act, 2001*, together with the total of any similar borrowings that have not been repaid, shall not, except with the approval of the Local Planning Appeal Tribunal, exceed the prescribed percentages of the total of the estimated revenues of the City as set forth in the estimates adopted for the year, which percentages are set out in Section 407 of the *Municipal Act, 2001* as it may be amended from time to time.
2. (a) Until estimates of revenue of the City for the 2020 year are adopted, borrowing shall be limited to the estimated revenues of the City as set forth in

To Authorize the Temporary Borrowing of Monies to Meet Current
Expenditures Pending Receipt of Current Revenues for 2020

Page 2 of 2

estimates adopted for the next preceding year.

- (b) The total estimated revenues of the City, including the amounts levied for Education purposes, adopted for the year 2020 are One Billion, Nine Hundred Million Dollars (\$1,900,000,000).
3. All sums borrowed pursuant to the authority of this By-law, together with any and all similar borrowings in the current year and in previous years that have not been repaid shall, together with interest thereon, be a charge upon the whole of the revenues of the City for the current year and for all preceding years, as and when such revenues are collected or received.
 4. The Treasurer shall, and is hereby authorized and directed to, apply in payment of all sums borrowed pursuant to this By-law, together with interest thereon, all of the monies thereafter collected or received for the current and preceding years, either on account or realized in respect of taxes levied for the current year and preceding years or from any other sources which may lawfully be applied for such purpose.
 5. That the Mayor and failing such person, the Deputy Mayor of the City Council and failing such person, the City Manager, together with the Treasurer or any one of the Temporary Acting Treasurers be authorized and directed to sign and execute the aforesaid Promissory Notes and Bankers Acceptances, hypothecations, agreements and such other documents, writings and papers which shall give effect to the foregoing.
 6. This By-law shall come into force and effect on the 1st day of January 2020 and shall remain in force and effect until December 31, 2020.

PASSED this 22nd day of January, 2020.

F. Eisenberger
Mayor

A. Holland
City Clerk

Authority: Item 2, Audit, Finance and
Administration Committee
Report 20-001 (FCS20003)
CM: January 22, 2020
Ward: City Wide
Bill No. 008

CITY OF HAMILTON

BY-LAW NO. 20-

To Authorize an Interim Tax Levy for 2020

WHEREAS the Council for the City of Hamilton deems it necessary to pass a by-law to levy on the whole of the assessment for each property class in the local municipality rateable for a local municipality purpose, a sum not to exceed that which would be produced by applying the prescribed percentage (or 50 percent if no percentage is otherwise prescribed) of the total amounts billed to each property for all purposes in the previous year on the properties that, in the current year, are in the property class as provided for in Section 317 of the *Municipal Act, 2001*; and,

WHEREAS Section 317 of the *Municipal Act, 2001*, also authorizes a Municipal Council, by by-law, to adjust the interim taxes on a property if the Council is of the opinion that the Interim Tax Levy on a property is too high or too low in relation to its estimate of the total taxes which will be levied on the property in 2020.

NOW THEREFORE the Council of the City of Hamilton hereby enacts as follows:

1. The interim tax levies shall be levied and collected upon the whole of the rateable property categories in Columns 1 and 2, shown below:

Column 1

Column 2

Class

Class Code

| | |
|---|----------|
| Residential | RT |
| Farmlands Awaiting Development | C1/R1/M1 |
| Multi-Residential | MT |
| New Multi-Residential | NT |
| Commercial | CT |
| Commercial Excess Land / Small-scale on farm | CU/C7 |
| Commercial Office Building / Excess Land | DT/DU |
| Commercial Parking Lot / Vacant Land | GT/CX |
| Commercial Shopping Centre / Excess Land | ST/SU |
| New Commercial | XT |
| New Commercial Excess Land / Small-scale on farm | YU/X7 |
| New Commercial Office Building / Excess Land | YT/YU |
| New Commercial Shopping Centre / Excess Land | ZT/ZU |
| Industrial | IT |
| Industrial Excess / Vacant land / Small-scale on farm | IU/IX/I7 |
| New Industrial | JT |
| New Industrial Excess / Vacant land / Small-scale on farm | JU/JX/J7 |
| Industrial Large/Excess Land | LT/LU |
| New Industrial Large Industrial/Excess Land | KT/KU |
| Landfills | HT |
| Pipeline | PT |
| Farmland | FT |
| Managed Forest | TT |
| Rail Right of Way | WT CN |
| Rail Right of Way | WT CP |
| Utility Right of Way | UT |
| Shortline Railway Right-of-Way | BT |

2. The interim tax levy shall become due and payable in two instalments as allowed under Section 342(1)(a) of the *Municipal Act, 2001*, as follows:

Fifty percent of the interim levy, rounded, shall become due and payable on the 28th day of February 2020, or at a later date, and the balance of the interim levy shall become due and payable on the 30th day of April 2020 and non-payment of the amounts due on the dates stated, in accordance with this section, shall constitute default.

3. That when payment of any instalment or any part of any instalment of taxes levied by this by-law is in default, penalties and where applicable interest, shall be imposed respectively in accordance with City of Hamilton policies.

4. Section 342(1) (b) of the *Municipal Act, 2001* allows for alternative instalment due dates to spread the payment of taxes more evenly over the year. Therefore, the interim tax levy for those on a 12-month, pre-authorized automatic withdrawal payment plan shall be paid in six equal instalments due and payable on or after the first or fifteenth day of each month January to June, inclusive. For those on the 10-month pre-authorized automatic withdrawal payment plan, the interim levy shall be paid in five equal instalments due and payable on or after the first day of each month February to June, inclusive. The pre-authorized payment plans shall be penalty and interest free for as long as the taxpayer is in good standing with the terms of the plan agreements.
5. The interim tax levy rates shall also apply to any property added to the assessment roll after this by-law is enacted.
6. This by-law shall come into force and effect on the 1st day of January 2020.

PASSED this 22nd day of January, 2020.

F. Eisenberger
Mayor

A. Holland
City Clerk

CITY OF HAMILTON

BY-LAW NO. 20-

Respecting Removal of Part Lot Control

**Blocks 6 and 7, Registered Plan No. 62M-1241, “Foothills of Winona Phases ‘2’ and ‘3’”
municipally known as 37, 41, 43, 45, 47, 49 and 51 Sauvignon Crescent and 35, 39, 41,
43, 45, 47 and 49 Foothills Lane**

WHEREAS the sub-section 50(5) of the *Planning Act*, (R.S.O. 1990, Chapter P.13, as amended, establishes part-lot control on land within registered plans of subdivision;

AND WHEREAS sub-section 50(7) of the *Planning Act*, provides as follows:

“(7) **Designation of lands not subject to part lot control.** -- Despite subsection (5), the council of a local municipality may by by-law provide that subsection (5) does not apply to land that is within such registered plan or plans of subdivision or parts of them as are designated in the by-law.”

AND WHEREAS the Council of the City of Hamilton is desirous of enacting such a by-law with respect to the lands hereinafter described;

NOW THEREFORE the Council of the City of Hamilton enacts as follows:

1. Sub-section 5 of Section 50 of the *Planning Act*, for the purpose of creating 14 lots for semi-detached dwellings, shown as Parts 1 to 16, inclusive, including Part 1, to be assembled with Block 3, Registered Plan No. 62M-1241, and Part 9, to be assembled with Block 4, Registered Plan No. 62M-1241, on deposited Reference Plan 62R-21372, shall not apply to the portion of the registered plan of subdivision that is designated as follows, namely:

Blocks 6 and 7, Registered Plan No. 62M-1241, in the City of Hamilton

2. This by-law shall be registered on title to the said designated land and shall come into force and effect on the date of such registration.
3. This by-law shall expire and cease to be of any force or effect on the 22nd day of January, 2022.

PASSED this 22 day of January, 2020.

F. Eisenberger
Mayor

A. Holland
City Clerk

Authority: Item 8, Planning Committee
Report 20-001 (PED20022)
CM: January 22, 2020
Ward: 12

Bill No. 010

CITY OF HAMILTON

BY-LAW NO. 20-

To Amend Zoning By-law No. 05-200, with respect to lands located at 179, 183 and 187 Wilson Street West, Ancaster

WHEREAS Council approved Item 8 of Report 20-001 of the Planning Committee, at its meeting held on January 23, 2020;

AND WHEREAS this By-law conforms with the Urban Hamilton Official Plan;

NOW THEREFORE the Council of the City of Hamilton enacts Zoning By-law No. 05-200 as follows:

1. That Map Nos. 1280 and 1333 of Schedule “A” – Zoning Maps are amended by adding the Community Institutional (I2, 694) Zone to the lands attached as Schedule “A” to this By-law.
2. That Schedule “C”: Special Exceptions is amended by adding the following new Special Exception:
 - “694. Within the lands zoned Community Institutional (I2) Zone, identified on Map Nos. 1280 and 1333 of Schedule “A” – Zoning Maps and described as 179, 183, and 189 Wilson Street West, Ancaster, the following special provisions shall apply:
 - a) In addition to Subsection 8.2.3.1 c), and notwithstanding Subsection 8.2.3.1 d), and g) the following regulations shall apply:
 - ii) Minimum Side Yard 2 metres for a ramp or retaining wall for an underground parking area.

- iii) Minimum Rear Yard 15 metres
- iv) Maximum Capacity Shall not exceed 134 residents.
for a Retirement
Home

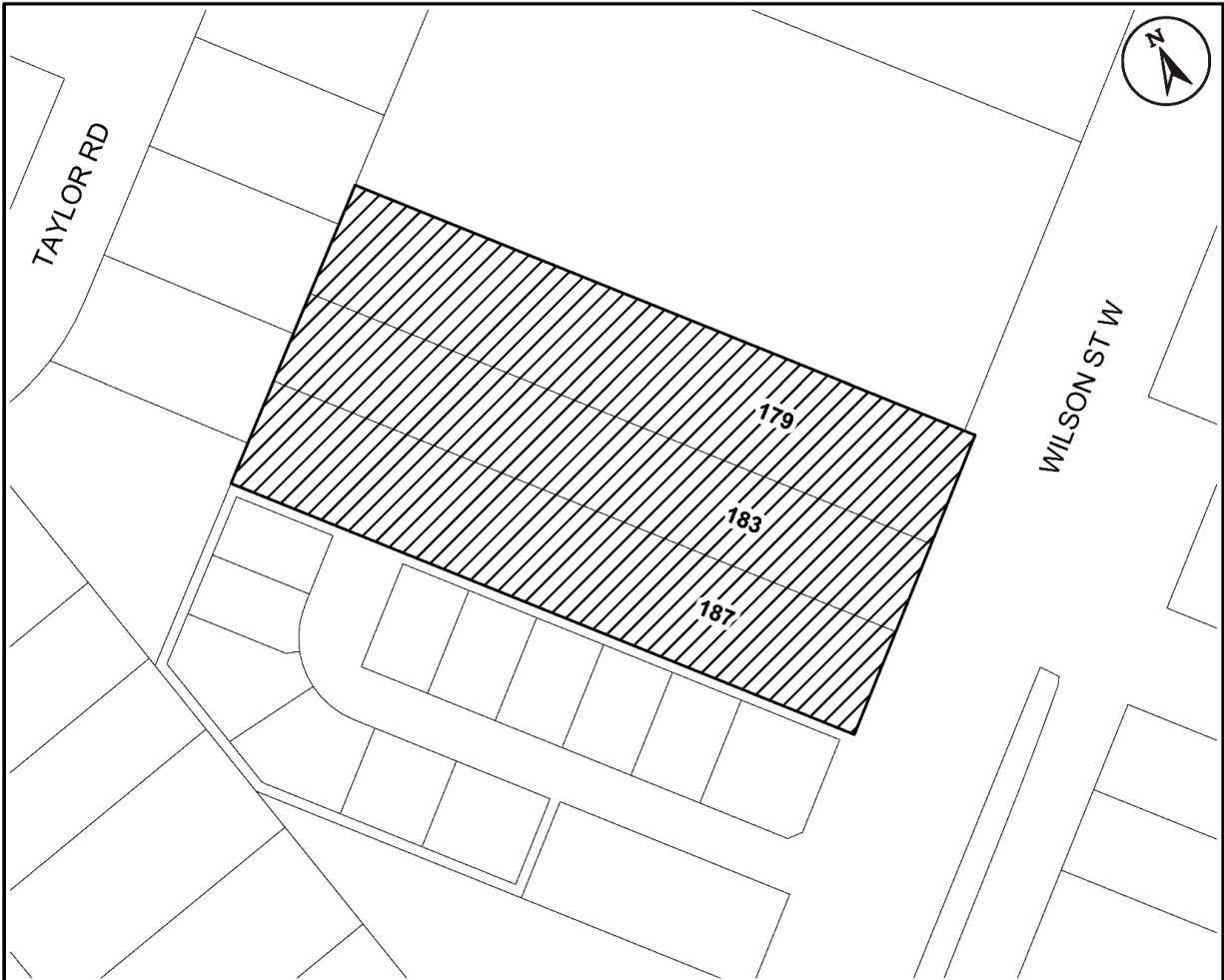
3. That the Clerk is hereby authorized and directed to proceed with the giving of notice of passing of this By-law in accordance with the *Planning Act*.

PASSED this 22nd day of January, 2020.

F. Eisenberger
Mayor

A. Holland
City Clerk

ZAC-19-040



| | |
|---|--------------------------------------|
| This is Schedule "A" to By-law No. 20- Passed the day of, 2020 | ----- Mayor ----- Clerk |
|---|--------------------------------------|

| | |
|---|---|
| <h2 style="margin: 0;">Schedule "A"</h2> <p style="margin: 10px 0 0 0;">Map Forming Part of By-law No. 20-_____</p> <p style="margin: 0 0 0 0;">to Amend By-law No. 87-57</p> | <p>Subject Property 179, 183, 187 Wilson Street West</p> <p> Change in Zoning from the Residential "R2" Zone to the Community Institutional (I2, 694) Zone</p> |
|---|---|

| | | |
|--|--|--|
| Scale: N.T.S. | File Name/Number: ZAC-19-040 | |
| Date: Dec. 5, 2019 | Planner/Technician: JV/NB | |
| PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT | | |

Authority: Item 18, General Issues
Committee Report 19-013
(LS19026/PW19067/PED19141)
CM: July 12, 2019
Ward: 15

Bill No. 011

CITY OF HAMILTON

BY-LAW NO. 20-

Being a By-law to Expropriate 309-311 Parkside Drive, Hamilton, Being Part of Lot 7, Concession 4, East Flamborough, in the City of Hamilton, as in CD241146, S/T CD21146, S/T EF21993, Designated as Parts 1 and 2, Plan 62R-21243, Being Part of PIN 17514-0071(LT), known municipally as 309-311 Parkside Drive, Hamilton, for the Purposes of Development and Construction of North Waterdown Drive (Waterdown East-West Arterial Road)

WHEREAS Section 6 of the Municipal Act, 2001, S.O. 2001, c. 25 as amended empowers a municipality to expropriate land in accordance with the Expropriations Act.

AND WHEREAS the City of Hamilton, as expropriating authority, made application to the Council of the City of Hamilton on the 12th day of July, 2019 for approval to expropriate, 309-311 Parkside Drive, Hamilton, being Part of Lot 7, Concession 4, East Flamborough, in the City of Hamilton, as in CD241146, S/T CD241146, S/T EF21993, designated as Parts 1 and 2, Plan 62R-21243, being Part of PIN 17514-0071 (LT), being the land described in Schedule "A" attached hereto (and forming part of this by-law) in accordance with the Expropriations Act, R.S.O. 1990, Chapter E.26;

AND WHEREAS the City of Hamilton as expropriating authority did serve a Notice of the said Application for Approval to Expropriate upon each registered owner of the said lands and did publish a Notice of the Application for Approval to Expropriate in the Hamilton Spectator; a newspaper having general circulation in the City of Hamilton, in accordance with the Expropriations Act;

AND WHEREAS no request for an Inquiry Hearing was made by any of the owners of the lands described in Schedule "A" attached hereto and accordingly no Inquiry Hearing has been held;

AND WHEREAS the Council of the City of Hamilton, as approving authority deems it expedient to grant the Application to Expropriate the said lands.

Being a By-law to Expropriate 309-311 Parkside Drive, Hamilton, Being Part of Lot 7, Concession 4, East Flamborough, in the City of Hamilton, as in CD241146, S/T CD21146, S/T EF21993, Designated as Parts 1 and 2, Plan 62R-21243, Being Part of PIN 17514-0071(LT), known municipally as 309-311 Parkside Drive, Hamilton, for the Purposes of Development and Construction of North Waterdown Drive (Waterdown East-West Arterial Road)

Page 2 of 3

NOW THEREFORE THE COUNCIL OF THE CITY OF HAMILTON ENACTS AS FOLLOWS:

1. That, as approving authority under the Expropriations Act, the said Application for Approval to Expropriate the lands more particularly described in Schedule "A" attached hereto (and forming part of this By-law), made by the City of Hamilton as expropriating authority, be and the same is hereby granted and Part of Lot 7, Concession 4, East Flamborough, in the City of Hamilton, as in CD241146, S/T CD241146, S/T EF21993, designated as Parts 1 and 2, Plan 62R-21243, being Part of PIN 17514-0071 (LT), is hereby expropriated for the purposes of development and construction of North Waterdown Drive (Waterdown East-West Arterial Road).
2. That the Mayor, Clerk and the proper officials of the City of Hamilton are hereby authorized and directed to do all things necessary to implement and give effect to the provisions of this By-law and this authority shall include the taking of all necessary proceedings to enter and to take possession of the lands hereby expropriated.

PASSED and this 22nd day of January, 2020.

F. Eisenberger
Mayor

A. Holland
City Clerk

Being a By-law to Expropriate 309-311 Parkside Drive, Hamilton, Being Part of Lot 7, Concession 4, East Flamborough, in the City of Hamilton, as in CD241146, S/T CD21146, S/T EF21993, Designated as Parts 1 and 2, Plan 62R-21243, Being Part of PIN 17514-0071(LT), known municipally as 309-311 Parkside Drive, Hamilton, for the Purposes of Development and Construction of North Waterdown Drive (Waterdown East-West Arterial Road)

Page 3 of 3

SCHEDULE "A" TO BY-LAW NO.

CITY OF HAMILTON EXPROPRIATION OF 309-311 PARKSIDE DRIVE, HAMILTON,
BEING:

Part of Lot 7, Concession 4, East Flamborough, in the City of Hamilton, as in CD241146, S/T CD241146, S/T EF21993, designated as Parts 1 and 2, Plan 62R-21243, being Part of PIN 17514-0071 (LT)

CITY OF HAMILTON

BY-LAW NO. 20-

To Confirm the Proceedings of City Council at its meeting held on January 22, 2020.

**THE COUNCIL OF THE
CITY OF HAMILTON
ENACTS AS FOLLOWS:**

1. The Action of City Council at its meeting held on the 22nd day of January, 2020, in respect of each recommendation contained in

Board of Health Report 20-001 – January 13, 2020,
Public Works Committee Report 20-001 – January 13, 2020,
Planning Committee Report 20-001 – January 14, 2020,
General Issues Committee Report 20-001 – January 15, 2020,
Audit, Finance & Administration Committee Report 20-001 – January 16, 2020,
and
Emergency & Community Services Committee Report 20-001 – January 16, 2020

considered by City of Hamilton Council at the said meeting, and in respect of each motion, resolution and other action passed and taken by the City Council at its said meeting is hereby adopted, ratified and confirmed.

2. The Mayor of the City of Hamilton and the proper officials of the City of Hamilton are hereby authorized and directed to do all things necessary to give effect to the said action or to obtain approvals where required, and except where otherwise provided, the Mayor and the City Clerk are hereby directed to execute all documents necessary in that behalf, and the City Clerk is hereby authorized and directed to affix the Corporate Seal of the Corporation to all such documents.

PASSED this 22nd day of January, 2020.

F. Eisenberger
Mayor

A. Holland
City Clerk