

**APPENDIX “B” HAMILTON’S CLIMATE ACTION STRATEGY IMPLEMENTATION UPDATE 2024**

The following table represents the most current update as of September 2024 on the actions found within Hamilton’s Climate Action Strategy. The table below is broken out into actions found within the two plans that constitute the Strategy:

- ReCharge Hamilton – Our Community Energy and Emissions Plan; and
- Hamilton’s Climate Change Impact Adaptation Plan.

***ReCharge Hamilton – Our Community Energy and Emissions Plan Update on 2023 Calendar Year Progress***

<b>Enabling Actions within Hamilton’s Climate Action Strategy</b>		
<b>HCAS Actions &amp; Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments &amp; Outlook</b>
<p><b><i>(Enabling Action i)</i></b> Investigate and Design a Carbon Accounting Framework</p> <p><i>Office of Climate Change Initiatives, Planning &amp; Economic Development</i></p>	<p><b>IN PROGRESS</b> Multi-year Project Charter complete and approved internally. Procurement Policy 11 approved by PED General Manager.</p>	<p>Technical consultant has been retained and work has started. Community and Corporate 'fair-share' carbon budget complete with beta-test of GHG tools being piloted through 2025 budget planning.</p>
<p><b><i>(Enabling Action ii)</i></b> Corporate Energy Reserve (revolving fund expansion)</p> <p><i>Corporate Facilities &amp; Energy Management, Public Works</i></p>	<p>Committed Funds by type for 2023:</p> <ul style="list-style-type: none"> <li>• Renewable: Construction \$370K, Payback \$200K, Transfer Back \$2.0M</li> <li>• Energy/Cost Saving: Payback \$1.8M</li> </ul> <p>*Note - Payback and Transfer back are funds that are committed but not actively in construction.</p>	
<p><b><i>(Enabling Action iii)</i></b> Municipal and Community Green Bond Assessment</p> <p><i>Financial Planning, Administration &amp; Policy, Corporate Services</i></p>	<p>Initial investigation on framework development and a draft work plan were completed in 2023. Project put on hold in 2024 to accommodate other priorities. Framework development deemed non-urgent due to high-interest rates and debt issuance not being planned for 2024.</p>	<p>Project on hold during 2024 and will be launched in 2025.</p>

<b>Enabling Actions within Hamilton's Climate Action Strategy</b>		
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	The project is currently planned to launch in 2025.	
<b>(Enabling Action iv)</b> Climate Change Reserve  <i>Office of Climate Change Initiatives, Planning &amp; Economic Development</i>	2023 allocation of funding for city-led initiatives successfully completed, utilizing a basic internal application process.	2024 allocation of \$2.5 million in CCR funding completed utilizing a refined internal application template for city-led initiatives that was developed with the input and endorsement of the internal Climate Change Initiatives Steering Committee. As of September 2024, a list of recommended projects must still be presented to Council for final approval.

<b>Low-Carbon Transformation #1: Innovating Our Industry</b>		
<b>HCAS Actions &amp; Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments &amp; Outlook</b>
<b>CEEP Action 1.0:</b> Establish a net-zero Industrial Working Group  2022 Onward  <i>Joint collaboration between: City Manager’s Office – Director of Digital and Innovation; Office of Climate Change Initiative and Economic</i>	In May 2023 City Council approved \$240K over 4 years to support the creation of a 'first-of-its-kind' Hamilton Regional Decarbonization Hub.  Total 4-year budget estimated for the initiative is \$3.2 M with the additional required funding being sought from federal government and private stakeholders  <b>INDICATOR - Number of facilities 50,000ft<sup>2</sup> or larger facilities in Hamilton that are</b>	Work has continued in 2024 to secure external funding from entities including FedDev and the Province of Ontario to fund the multi-year Hub initiative.  In the interim, opportunities are being explored to engage local business and industry in information updates and learning opportunities around

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<i>Development Division, Planning and Economic Development.</i>	<p><b>compliant with Ontario's Energy &amp; Water Reporting Benchmark initiative:</b> Total buildings reporting in 2021 = 70 Total buildings reporting in 2022 = 126 *NB - Reporting threshold changed from 100,000 ft<sup>2</sup> to 50,000 ft<sup>2</sup> for 2022 reporting year, contributing to the increase in facilities filing reports. Manufacturing, heavy industrial, and agricultural buildings are not included.</p> <p><b>INDICATOR - Total number of local industries on federal Greenhouse Gas Reporting Program (GHGRP) Large Emitter list:</b> Tracking of greenhouse gas emission trends for large emitters has been completed for the 5-year period 2017 - 2022. A total of 19 Hamilton industries are on the 'large emitters' list as they exceed the 10 kt CO<sub>2</sub>e threshold reporting requirement set out by the GHGRP.</p>	decarbonizing the private sector.
<p><b>CEEP Action 1a:</b> Development and deployment of a zero-emissions industry program</p> <p>2022-2024</p> <p><i>Office of Climate Change</i></p>	<p><b>INDICATOR - Number of industrial partners with corporate sustainability plans that are harmonized with the community-wide net-zero target</b></p>	Work has been initiated in 2024 to gather information regarding status of climate planning for local large industrial emitters reporting to the federal Greenhouse Gas Reporting Program.

Low-Carbon Transformation #1: Innovating Our Industry		
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<i>Initiatives, Planning &amp; Economic Development (coordinating role)</i>		
<p><b>CEEP Action 2.0:</b> Establish a cleantech accelerator</p> <p>2022-2026 <i>Joint collaboration between: City Manager’s Office – Director of Digital and Innovation; Office of Climate Change Initiative and Economic Development Division, Planning and Economic Development.</i></p> <p>Development</p>	<p><b>INDICATOR – City support for/influence over the establishment of cleantech businesses/industries in Hamilton.</b></p> <ul style="list-style-type: none"> <li>• Work is underway to identify companies /partners who are focused on Decarbonization Technologies - a key subsector of strength identified in the City’s Economic Development Division Manufacturing Strategy</li> <li>• Via City’s Goods Movement Strategy work is being done to highlight new technology, pilot projects and progress towards a low-carbon economy; support efforts to evaluate Hamilton’s energy supply and relative potential for fleet charging needs and recommendations for enhancement.</li> </ul>	
<p><b>CEEP Action 3.0:</b> Expand local industrial energy management training programs (incl. subsidized opportunities for marginalized populations)</p> <p>2022-onwards</p> <p><i>Office of Climate Change Initiatives (Coordinating Role),</i></p>	<p><b>INDICATOR - Number of trained/retrained industrial energy management professionals (including numbers from equity-owned populations if available)</b></p> <ul style="list-style-type: none"> <li>• Canadian Colleges for a Resilient Recovery (C2R2) partners with 15 institutions across Canada – including Hamilton’s Mohawk College - to offer online synchronous and asynchronous ‘rapid cycle training’.</li> </ul>	210 learners have enrolled for these course offerings Canada-wide in 2024.

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<i>Planning &amp; Economic Development</i>	<ul style="list-style-type: none"> <li>All training through C2R2 or Mohawk College was offered at no cost through the ESDC SWSP Quick Train program.</li> <li>C2R2 offered six (6) courses related to industrial energy management, with a total enrolment of 213 in 2023 across Canada. It is unclear how many Hamilton residents participated.</li> </ul> <p><b>INDICATOR – Number of bursaries/ subsidized training opportunities provided.</b> C2R2 reported that for ALL micro-credential offerings across Canada 57% of learners self-identified as a member of an equity-deserving group.</p>	

Low-Carbon Transformation #2: Transforming Our Buildings		
HCAS Actions & Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
<p><b>CEEP Action 4.0</b> Develop and integrate City-wide new green development standards</p> <p>2022-2023</p> <p><i>Planning Division, Building Division, Planning &amp; Economic Development</i></p>	<p><b>INDICATOR – Development &amp; Integration of City-wide Green Development Standards</b></p> <ul style="list-style-type: none"> <li>Green Building Standards final report will be brought forward to Council in Q4 2024, followed by the development of a detailed implementation strategy including incentives which will be brought forward to Council in 2025</li> </ul>	<p>Green Building Standards implementation strategy will be brought forward for approval in 2025.</p>

<b>Low-Carbon Transformation #2: Transforming Our Buildings</b>		
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	<p><b>INDICATOR - Energy and emissions intensity of new buildings (per sq/ft or m2)</b></p> <ul style="list-style-type: none"> <li>The Ontario Building Code is Provincial legislation, with minimum prescriptive requirements which guide building construction. The Building Division does not document, or report on energy and emission intensity of new buildings. This is not data that is collected during building permit application for review purposes, nor can the Division require that it be submitted</li> </ul>	
<p><b>CEEP Action 5.0:</b> Install solar PV on new and existing buildings.</p> <p>2022-onwards</p> <p><i>Building Division, Planning and Economic Development; Corporate Facilities and Energy Management, Public Works</i></p>	<p><b>INDICATOR – Megawatts of solar photovoltaics (PV) installed on new and existing buildings.</b></p> <ul style="list-style-type: none"> <li>The Building Division reviews Solar PV installations through a lens of structural and installation requirements. The Division does not review or inspect electrical components or tie-ins to the grid, nor does it track MW of specific equipment. (Electrical is regulated by ESA – see below)</li> </ul> <p>Building Division data regarding the number of solar permits issued for 2019-2024 is provided below. No data is available through City</p>	<p><b>Future proposed INDICATOR - ESA Electrical Permits for Solar:</b></p> <p>The Electrical Safety Authority has been recommended by the Building Division as a better source of data for electrical permits related to specific project types. Applicants seeking solar permits are advised by the Building Division that an ESA permit is or may be required.</p> <p>Hamilton Water has initiated a</p>

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	<p>regarding MW energy/permit issued.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Year</th> <th style="text-align: center;"># Permits Issued</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2019</td> <td style="text-align: center;">9</td> </tr> <tr> <td style="text-align: center;">2020</td> <td style="text-align: center;">12</td> </tr> <tr> <td style="text-align: center;">2021</td> <td style="text-align: center;">34</td> </tr> <tr> <td style="text-align: center;">2022</td> <td style="text-align: center;">52</td> </tr> <tr> <td style="text-align: center;">2023</td> <td style="text-align: center;">72</td> </tr> <tr> <td style="text-align: center;">2024</td> <td style="text-align: center;">13</td> </tr> </tbody> </table> <p><b>INDICATOR – MW of solar PV installed on/at new and existing City facilities (including any ground mount solar).</b></p> <ul style="list-style-type: none"> <li>The City’s Office of Energy Initiatives currently has 1 project ready for tender and is working to secure funding alternative partnerships to proceed with implementation of this project. At this time, multiple municipal solar PV projects are ON HOLD due to lack of approved funding.</li> <li>Project: Harry Howell Arena – 250-kW solar project (located at 27 Highway #5), estimated at \$1.1M in 2023 dollars.</li> </ul>	Year	# Permits Issued	2019	9	2020	12	2021	34	2022	52	2023	72	2024	13	<p>Solar Renewable Energy and Battery Energy Storage System feasibility study for its site.</p> <p>The City’s Office of Energy Initiatives is working on technical and financial business cases for the incorporation of a solar system on the roof of the new transit storage facility for the generation of an estimated 2 MW in generation capacity.</p> <p>Other future projects identified as a part of the Office of Energy Initiatives Net Zero study include:</p> <p><b>Solar PV system for entire building:</b>            Fire Station #5 complex (150 kw system), Morgan Firestone Arena ( 265 kw system), Traffic Operations (375kw system), Mountain Transit Centre (370kw system), 330 Wentworth (1000kw system), Dundas Town Hall (20kw system), Bennetto Recreation (20kw system), Stoney Creek Recreation (20kw</p>
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<b>Low-Carbon Transformation #2: Transforming Our Buildings</b>		
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		<p>system), Kanetskare Recreation (60kw system)</p> <p><b>Public Pool Heating Solar systems:</b>            Bennetto – preheat water 20kw system            Bennetto – heating pool size unknown            Stoney Creek -preheat water 20kw            Stoney Creek – heating pool size unknown            Westmount – heating pool size unknown</p>
<p><b>CEEP Action 6.0:</b> Design and plan for a mass deep energy retrofit program (may include retrofit delivery centre)</p> <p>2022-2023</p> <p><i>Office of Climate Change Initiatives, Planning and Economic Development</i></p>	<p>The Better Homes Hamilton Pilot Program approved by GIC in May 2023 with \$1.0M in approved loans and \$275K in fixed costs launched in December 2023. The application intake closed on February 1, 2024, with 150+ applications received.</p> <p>Future proposed INDICATORS to assess pilot impact include:</p> <ul style="list-style-type: none"> <li>• <b>Energy use and emissions reductions achieved through program.</b></li> </ul>	<p>Following the initial screening of applications for program eligibility, a rigorous evaluation was applied to remaining applications to ensure the objectives of the pilot are achieved.</p> <p>The 50 successful applicants have now been notified to proceed with getting contractor quotes.</p>



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	<ul style="list-style-type: none"> <li>• Number of homes participating within neighbourhoods identified as having high energy poverty burden.</li> <li>• Number of building retrofits (number of properties, by type etc.) completed through City program.</li> </ul>	Moving forward the 50-home pilot will be used to inform future efforts to scale up the Better Homes Hamilton program.
<p><b>CEEP Action 6a:</b> Training and retraining programs</p> <p>2022-onwards</p> <p><i>Office of Climate Change Initiatives (co-ordinating role), Planning and Economic Development</i></p>	<p><b>INDICATOR - Tracking skilled graduates and workforce trends.</b></p> <ul style="list-style-type: none"> <li>• The Canadian Colleges for a Resilient Recovery (C2R2) offered a total of 13 micro-credential courses related to trades and building retrofits.</li> <li>• As a partner in C2R2 Mohawk College offered 3 of the 13 micro-credential courses and saw a total of 123 learners enrolled in 2023.</li> </ul> <p><b>INDICATOR - Number of low-income, marginalized/ equity-owed applicants participating in these training programs.</b></p> <ul style="list-style-type: none"> <li>• C2R2 through voluntary self-identification reported that 57% of its students across Canada identified as being a member of an equity-deserving group.</li> </ul>	As of August 2024, Mohawk College reported that a total of 252 learners were enrolled through their micro-credential offerings related to trades and building retrofits.
<p><b>CEEP Action 6b:</b> Launch a small-scale neighbourhood deep energy and emissions retrofit</p>	The Better Homes Hamilton Pilot Project (described above in Action 6.0) is targeting 50 low rise residential properties. However, this	Undertake assessment of feasibility of a small-scale residential neighbourhood deep

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<p>project in the residential sector</p> <p>2022-2023</p> <p><i>Office of Climate Change Initiatives, Planning and Economic Development</i></p>	<p>type of geographically focused neighbourhood approach will be further explored during the pilot phase and the feasibility of this approach reported to Council after the two-year Better Homes Hamilton pilot phase is completed.</p> <p>This approach is modelled after the Energiesprong method developed and implemented in the Netherlands. The federal government is supporting the piloting of this approach in Canada via the ‘Greener Neighbourhoods Pilot Program’ underway through Natural Resources Canada.</p>	<p>energy and emissions retrofit project (geographically focused on a specific neighbourhood, in contrast to BHH Program which includes participants from every ward in the municipality).</p>
<p><b>CEEP Action 6c:</b> Finance and deliver mass deep energy retrofit program for the residential sector, scaling up to city-wide program considering development of a commercial retrofit program</p> <p>2023-onwards</p> <p><i>Office of Climate Change Initiatives, Planning and Economic Development</i></p>	<p>Future proposed INDICATORS to assess a mass deep energy building retrofit program include:</p> <ul style="list-style-type: none"> <li>• <b>Number of building retrofits completed.</b></li> <li>• <b>Trends in energy use and emissions intensity over subsequent years by sector (residential, institutional, commercial, industrial)</b></li> <li>• <b>Number of homes participating within neighbourhoods identified as having high energy burden.</b></li> </ul>	<p>Feasibility for expanding Better Homes Hamilton (as described above in Action 6.0 and 6b) will be considered through the pilot phase with recommendations to Council following completion of the 2-year pilot project.</p>

<b>Low-Carbon Transformation #3: Changing How We Move</b>		
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<p><b>CEEP Action 7.0:</b> Expand and connect active transportation networks</p> <p>2022-onwards</p> <p><i>Transportation Operations, Public Works</i></p>	<p><b>INDICATOR - Kilometers of total cycling infrastructure and breakdown of type (new, upgraded, separated, multi-use trail)</b></p> <ul style="list-style-type: none"> <li>• 10.4 lane km of bike lanes were added in 2023.</li> <li>• Total of 11 cycling infrastructure projects were delivered in 2023 via a joint effort between Transportation Planning and Parking (PED), and Transportation Division, and Engineering Services Division in Public Works.</li> <li>• \$1.393 M was invested in cycling infrastructure in 2023.</li> </ul> <p>*NOTE - City Council approved acceleration of the Cycling Master Plan in 2023.</p> <p>Future potential INDICATORS for tracking progress with the expansion and connectivity of Hamilton’s active transportation networks include:</p> <ul style="list-style-type: none"> <li>• <b>Kilometers of connected active transportation networks.</b></li> <li>• <b>Data regarding vulnerable roadway users - pedestrians, cyclists, high collision locations/intersections (Annual collision report - via Vision Zero initiative - provides this</b></li> </ul>	

Low-Carbon Transformation #3: Changing How We Move		
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	information)	
<p><b>CEEP Action 8.0:</b> Decarbonize the bus fleet</p> <p>2022-onwards</p> <p><i>Transit Services, Public Works</i></p>	<p><b>INDICATOR – Track percentage/ number of decarbonized vs. fossil-fuel powered buses (including ‘fuel type’ breakdown - diesel, CNG, RNG, etc)</b></p> <ul style="list-style-type: none"> <li>By the end of 2023, 77.4% of HSR fleet was fuelled by compressed natural gas (CNG), an increase from 64% in 2023.</li> <li>The goal is to fully decommission all diesel buses by 2026.</li> </ul> <p><b>INDICATOR – Track number of decarbonized buses in operation.</b></p> <ul style="list-style-type: none"> <li>In 2023, there was one decarbonized bus in operation – an articulated bus powered by renewable natural gas (RNG).</li> </ul> <p><b>INDICATOR - Completion of technical analysis of bus charging and/or fuelling infrastructure required for fleet decarbonization.</b></p> <ul style="list-style-type: none"> <li>No update available for 2023</li> </ul>	<p>It is expected that diesel buses will be fully decommissioned by 2026.</p> <p>The current challenge is to replace natural gas with renewable natural gas and/or electric buses to effectively decarbonize the public transit fleet. This will become critically important as transit service frequency increases, new routes are added, and more buses are needed for the system.</p> <p>The HSR reported that, starting in 2024, it eliminated its initiative to fuel one of the HSR fleet’s articulated bus with RNG. The bus was promoted as Ontario’s first ‘carbon negative bus’ when the initiative was launched in 2021.</p>
<p><b>CEEP Action 9.0:</b> Plan for and develop expanded urban and rural transit service and e-</p>	<p><b>INDICATOR – Track user statistics as e-mobility services are established.</b></p>	<p>2024 brought expansions for both the Hamilton Bike Share System and Bird e-scooter</p>

Low-Carbon Transformation #3: Changing How We Move		
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mobility services  2022-onwards  <i>Transit Services, Public Works; Transportation Planning and Parking, Planning and Economic Development</i>	<ul style="list-style-type: none"> <li>For April 3 – November 20, 2023 (first year of shared e-scooter system in Hamilton) 450 e-scooters were available within the same service area as the bike share system, plus an additional area east to Kenilworth Avenue.</li> <li>119,283 trips were taken for a total of 269,614km travelled.</li> <li>During the same period the bike share system had 900 bikes operating in the service area and saw 245,364 trips totalling 567,479km travelled.</li> </ul> <p><b>INDICATOR - Track e-Scooter use in geographic areas identified as priority neighbourhoods where the private operator provides subsidized rates to users to facilitate access/ support mobility justice.</b></p> <ul style="list-style-type: none"> <li>In 2023 there were a total of 2,462 trips that started or ended in these geographic zones.</li> <li>Bird increased promotion of the discount in October 2023 and saw a large increase in rides as a result.</li> </ul> <p><b>INDICATOR – Track e-scooter and bikeshare trips per capita in priority neighbourhoods</b></p> <ul style="list-style-type: none"> <li>Hamilton Bike Share’s ‘Everyone Rides Initiative’ (ERI) was able to offer 200</li> </ul>	system with new McMaster University financial agreements providing student access to both systems.

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	<p>additional subsidized ERI passes in 2023 (vs 100 in 2022) through an ‘E-Scooter Equity Fee’ which is part of the Bird Canada e-scooter contract.</p> <ul style="list-style-type: none"> <li>• Bird’s e-scooter trip data also showed a steady increase in monthly trips that started/stopped in priority zones in 2023.</li> </ul> <p><b>INDICATOR - Track transit ridership and modal split trends over time</b></p> <ul style="list-style-type: none"> <li>• HSR ridership experienced a substantial decline (47%) during the height of the pandemic, with levels decreasing from 21.6 million to 11.7 million riders.</li> <li>• In 2023, ridership levels increased to 19.1 million - an 88% return of ridership levels.</li> <li>• In March 2024, HSR reported that, for February 2024, ridership hit 102.1%, surpassing 2019 pre-pandemic levels.</li> </ul> <p><b>INDICATOR - HSR Target and Level of Services</b></p> <ul style="list-style-type: none"> <li>• No data provided.</li> </ul>	
<p><b>CEEP Action 10.0:</b> Establish then implement a city-wide EV Strategy (residential, commercial, and municipal)</p>	<p>Terms of Reference for a city-wide Electric Vehicle (EV) strategy were developed and an internal Steering Committee established in 2023.</p>	<p>A competitive Request for Proposal (RFP) for a consultant to develop the Strategy is expected to be released in Q4</p>

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<p>2022-2025</p> <p><i>Transportation Planning and Parking, Planning and Economic Development</i></p>	<p>Future proposed INDICATORS to track effectiveness of EV Strategy implementation over time include:</p> <ul style="list-style-type: none"> <li>• <b>Number of charging stations per km2</b></li> <li>• <b>Kwh/day/month/yr at each station</b></li> <li>• <b>Number of networked charging stations</b></li> <li>• <b>Number of EVs Registered within Hamilton</b></li> <li>• <b>Number of public e-bike parking/charging facilities</b></li> </ul>	<p>2024.</p> <p>Additionally, as part of Parking Standards Review, new zoning requirements were developed to ensure new residential developments are EV ready.</p>
<p><b>CEEP Action 11.0:</b> Commercial Fleet Decarbonization Work Group</p> <p>2022-onwards</p> <p><i>Office of Climate Change Initiatives (co-ordinating role), Planning and Economic Development</i></p>	<p>Work on this action was not initiated in 2023.</p> <p>Future proposed INDICATORS to track progress with commercial fleet decarbonization efforts include:</p> <ul style="list-style-type: none"> <li>• <b>Number of private fleet operators committing to transition to net zero by 2050 via a fleet decarbonization plan</b></li> </ul>	<p>Work on this action was not initiated in 2024, but initiation of the Hamilton Regional Decarbonization Hub will support efforts to get this working group established.</p>
<p><b>CEEP Action 12.0:</b> EV mechanic training and retraining program</p> <p>2022-onwards</p>	<p><b>INDICATOR - Number of trained/retrained low-carbon transportation mechanics.</b></p> <ul style="list-style-type: none"> <li>• Mohawk College partnered with the Canadian Colleges for a Resilient Recovery (C2R2) offered a total of 8 micro-credential courses related to</li> </ul>	<p>As of August 2024, Mohawk College saw a total of 45 learners enrol in the course offerings related to electric vehicle training during 2024.</p>

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<i>Office of Climate Change Initiatives (community co-ordinating role), Planning and Economic Development; Fleet Services, Corporate Asset Management, Public Works</i>	electric vehicle training. Mohawk College offered 1 of those 8 micro-credentials and had a total of 44 learners enrolled in 2023.	
<b>CEEP Action 13.0:</b> Limit parking in the downtown core and promote EV parking  2022-2025  <i>Transportation Planning and Parking, Planning and Economic Development</i>	<p>Since 2018 a total of 502 parking spaces in the Downtown have been repurposed for development. This represents 15% of the public parking supply. The installation of 40 EV chargers in public lots was completed in early 2023.</p> <p>The Parking Master Plan has been adopted, with emphasis on integrating parking supply with new development and supporting expansion of EV parking infrastructure.</p> <p>Draft updated parking standards, including eliminating parking minimums in some areas of the City and establishing zoning requirements for EV parking, were approved for consultation in August 2023.</p>	<p>Public information meetings were held in January 2024, and the New City-Wide Parking Standards were presented at the City’s Planning Committee in February 2024.</p> <p>The new standards were approved by Committee and Council but have been appealed to the Ontario Land Tribunal.</p>

<b>Low-Carbon Transformation #4: Revolutionizing Renewables</b>		
<b>HCAS Actions &amp; Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments &amp; Outlook</b>
<b>CEEP Action 14.0:</b> Develop a next generation electrical grid	During 2023, City staff participated in Independent Energy Service Operator (IESO)	During 2024, staff have continued to participate in IESO



Low-Carbon Transformation #4: Revolutionizing Renewables																		
HCAS Actions & Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook																
<p>2022-onwards</p> <p><i>Office of Climate Change Initiatives (co-ordinating role for community), Planning and Economic Development</i></p>	<p>southwestern regional planning processes that have also engaged our applicable Local Utilities. City staff also participate in organizations (e.g. Clean Air Partnership, Bay Area Climate Change Council) that advocate to the IESO and other provincial agencies on the importance of a next generation grid.</p> <p><b>INDICATOR - Monitor trends with Ontario Electricity Emissions Factors:</b></p> <ul style="list-style-type: none"> <li>The Annual Average Emissions Factor is a measure of the average amount of carbon emissions produced per kilowatt-hour (kWh) of electricity consumed in Ontario. As more natural/methane gas is added to power the grid, the AEF or carbon intensity of the grid increases.</li> </ul> <table border="1"> <thead> <tr> <th>Year</th> <th>*Annual Average Emissions Factor</th> </tr> </thead> <tbody> <tr> <td>2023</td> <td>67</td> </tr> <tr> <td>2022</td> <td>51</td> </tr> <tr> <td>2021</td> <td>44</td> </tr> <tr> <td>2020</td> <td>36</td> </tr> <tr> <td>2019</td> <td>29</td> </tr> <tr> <td>2018</td> <td>29</td> </tr> <tr> <td>2017</td> <td>18</td> </tr> </tbody> </table> <p><i>*Source – The Atmospheric Fund</i></p>	Year	*Annual Average Emissions Factor	2023	67	2022	51	2021	44	2020	36	2019	29	2018	29	2017	18	<p>regional planning efforts and have met with local utility Alectra to discuss system needs and constraints. In Q4 of 2024, an internal Director-level ‘Energy Transformation Roundtable’ will be established to facilitate corporate-wide conversations about the transition to a next generation electrical grid and the need to complete a long-term electricity plan aligned with a net zero future and significant local electrification to get the community there.</p> <p>There remains a need to explore the creation of a simple and easy program for new connections to the electricity grid for solar PV and EV charging stations.</p>
Year	*Annual Average Emissions Factor																	
2023	67																	
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Low-Carbon Transformation #4: Revolutionizing Renewables		
HCAS Actions & Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
	<p><b>INDICATOR - Track system investments by Alectra, Hydro One, IESO, and/or the Province:</b></p> <ul style="list-style-type: none"> <li>No data gathered for 2023.</li> </ul>	
<p><b>CEEP Action 15.0:</b> Encourage development of local renewable energy cooperatives</p> <p>2022-onwards</p> <p><i>Office of Climate Change Initiatives (co-ordinating role for community), Planning and Economic Development</i></p>	<p>No efforts were initiated in 2023 to encourage the development of local renewable energy cooperatives.</p> <p>Future potential INDICATORS include:</p> <ul style="list-style-type: none"> <li><b>Number of cooperatives established.</b></li> <li><b>MW of renewable energy generation systems installed by cooperatives (existing coops, and total MW existing in Hamilton)</b></li> </ul>	
<p><b>CEEP Action 16.0:</b> Implement strategic renewable solar energy installations</p> <p>2022-2025</p> <p><i>Office of Climate Change Initiatives (co-ordinating role for community), Planning and Economic Development</i></p> <p>Corporate Facilities and Energy Management, Public Works</p>	<p>Future potential INDICATORS include:</p> <ul style="list-style-type: none"> <li><b>kWh of renewable energy supplied corporately (City of Hamilton).</b></li> <li><b>MW of renewable energy capacity installed community-wide</b></li> <li><b>Local outcomes via provincial ‘requests for proposals’ for renewable energy projects.</b></li> </ul>	<p>There is currently work underway through the City’s Corporate Net Zero Roadmap for both deep energy retrofits and strategic solar renewable energy installations:</p> <ul style="list-style-type: none"> <li>Tender ready Harry Howell Arena project– 250-kW solar project estimated at \$1.1M in 2023 dollars</li> </ul>

Low-Carbon Transformation #4: Revolutionizing Renewables		
HCAS Actions & Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
		See <b>CEEP Action 5.0</b> above for list of other municipal renewable energy projects for which technical and financial business cases are currently being developed. More funding is required to make these projects reality.
<p><b>CEEP Action 17.0:</b> Technical feasibility study of expanded anaerobic digestion facilities</p> <p>2023-2025</p> <p><i>Hamilton Water and Waste Management Division, Public Works</i></p>	<p>The City’s Central Composting Facility (CCF) currently has a processing cap of 20,000 tonnes annually.</p> <p>In 2023, the City initiated a technical feasibility study to identify the best option for increasing capacity at the CCF, taking into consideration the capacity and potential for RNG production and local utilization.</p> <p>A Phase 1 organics opportunities report was initiated in 2023 and is now complete.</p>	<p>The RFP for Phase 2 of the ‘organics opportunities’ report was released in 2024 and is meant to select a preferred technology for processing organics which would also facilitate increased organics capacity.</p> <p>The RFP to complete a technical feasibility study for the 2nd phase of investigating options for organics management considering RNG is planned to be issued in Q3, 2024</p>
<p><b>CEEP Action 18.0:</b> Technical analysis of green hydrogen potential, costs, as well as actions to increase green</p>	<p>See update on Action 1.0 above. Hamilton Regional Decarbonization Hub mandate, although not 100% confirmed, will include feasibility assessments of clean technology</p>	

Low-Carbon Transformation #4: Revolutionizing Renewables		
HCAS Actions & Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
<p>hydrogen deployment in the City through the creation of a hydrogen hub. (Part of CEEP Actions #1-3)</p> <p>2024-2025</p> <p><i>Joint collaboration between: Chief Digital and Innovation, City Manager’s Office; Office of Climate Change Initiatives and Economic Development Division, Planning and Economic Development</i></p>	<p>(e.g. green hydrogen) to begin accelerating pilot initiatives and study the potential for scaling up.</p>	
<p><b>CEEP Action 19.0:</b> Decarbonize and expand HCE downtown district energy system</p> <p>2023-2025</p> <p><i>Office of Climate Change Initiatives (co-ordinating role for the City), Planning and Economic Development</i></p>	<p>During 2023 City staff participated on the Hamilton Community Enterprises (HCE) technical steering committee for the Energy Harvesting Feasibility Study with a goal of developing a scalable model for low-carbon building heating using residual waste heat from industry.</p> <p>Future potential INDICATORS to track successful decarbonization and expansion of HCE’s downtown district energy system:</p> <ul style="list-style-type: none"> <li>• <b>*Private sector uptake of district energy incentive programs for buildings.</b></li> </ul>	<p>Progress has continued during 2024 with efforts to advance HCE’s Energy Harvesting Feasibility Study, including next steps for making the proposed project reality, including a business case for the initiative.</p>

Low-Carbon Transformation #4: Revolutionizing Renewables		
HCAS Actions & Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
	<ul style="list-style-type: none"> <li><b>Gigajoules of residual heat harnessed through the future energy harvesting system</b></li> </ul> <p>*The City’s Economic Development Division currently offers incentive programs for buildings that are designed to connect to district energy and/or are district energy ready.</p>	
<p><b>CEEP Action 20.0:</b> Technical + financial analysis for expanded organics collection and diversion</p> <p>2022-onwards</p> <p><i>Waste Management Division, Public Works</i></p>	<p>See waste management updates provided in Action 17.0 above.</p> <p>Future proposed INDICATOR.</p> <ul style="list-style-type: none"> <li><b>Tonnes of organics diverted from landfill.</b></li> </ul>	<p>See waste management updates provided in Action 17.0 above.</p>

Low-Carbon Transformation #5: Growing Green		
HCAS Actions & Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
<p><b>CEEP Action 21.0</b> Review &amp; update Official Plan to address climate change and energy policies</p> <p>2022 – onwards</p>	<p>Phase 2 of the City Planning Division’s Municipal Comprehensive Review (MCR) work – which will include addressing the elements of Action 21 - was delayed as a result of changing provincial planning policy causing planning staff to adjust work plans.</p>	<p>Phase 2 of the MCR work will be ongoing in 2024.</p> <p>The Terms of Reference work will be ongoing in 2024.</p>

Low-Carbon Transformation #5: Growing Green		
HCAS Actions & Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
<i>Planning Division, Planning and Economic Development</i>	The Terms of Reference for Climate Change Official Plan work was delayed as a result of changing provincial planning policy causing planning staff to have to pivot with work plans	
<p><b>CEEP Action 22.0:</b> Integrate community energy/climate action policy directions into Secondary Plans</p> <p>2022 – onwards</p> <p><i>Planning Division, Planning and Economic Development</i></p>	<p>Completion of an Official Plan review related to secondary plan requirements has yet to be completed.</p> <p><b>INDICATOR - Number of secondary plans integrating energy/ climate action policy direction:</b></p> <ul style="list-style-type: none"> <li>• Work has been slowed due to changing provincial policy requiring planning staff to adjust work plans.</li> </ul>	These processes will continue over the next several years. A Terms of Reference for an Energy and Environmental Assessment will be completed.
<p><b>CEEP Action 23.0:</b> Set a target of 50,000 trees planted per year within City boundaries</p> <p>2022 – onwards</p> <p><i>Office of Climate Change Initiatives, Planning &amp; Economic Development (co-ordinating role for community)</i></p> <p><i>Environmental Services Division, Public Works</i></p>	<p><b>INDICATOR - Number of trees planted annually through City’s Forestry &amp; Horticulture Division.</b></p> <ul style="list-style-type: none"> <li>• Total number of trees added to Hamilton’s Tree Canopy by Forestry was 15,256 for 2023 surpassing the goal of 12,000.</li> <li>• Of this 15,256 total: <ul style="list-style-type: none"> <li>○ 3,536 were provided to residents through the 2023 Free Tree Giveaways</li> <li>○ 1000 were given to students at the Hamilton Children’s Water Festival,</li> </ul> </li> </ul>	The Forestry and Horticulture Division’s tree planting target for 2024 is 20,000 trees.

Low-Carbon Transformation #5: Growing Green		
HCAS Actions & Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
	<ul style="list-style-type: none"> <li>○ 3,927 were planted on City land via community volunteer planting events</li> <li>○ 6,779 were planted through the Forestry Operations Group in parks, cemeteries, streets, and public golf courses.</li> </ul> <p><b>INDICATOR - Number of trees planted annually through the efforts of community partners including conservation authorities, Royal Botanical Gardens, environmental organizations.</b></p> <ul style="list-style-type: none"> <li>● Community partners planted a total of 32,578 trees on public and private land as follows:               <ul style="list-style-type: none"> <li>○ Area Conservation Authorities – 28,083</li> <li>○ Environmental Not-For-Profits – 1,651</li> <li>○ Royal Botanical Gardens – 2,238</li> <li>○ McMaster/Mohawk – 626</li> </ul> </li> </ul> <p><b>TOTAL</b> Trees planted by City and community partners in 2023 = <b>47,834</b> *This total does not include trees purchased and planted by residents, businesses, industry, and other private property owners. It is reasonable to conclude that the 50,000-tree target has likely been met and surpassed in</p>	<p>The Office of Climate Change Initiatives will continue to improve the methods it uses to track the number of trees planted by community partners and other non-municipal entities.</p> <p>Work is currently underway to measure the canopy cover of the entire City area within the urban boundary for 2024. Staff will provide an update on this effort in 2025 through the City’s first State of the Forest report.</p>

<b>Low-Carbon Transformation #5: Growing Green</b>		
<b>HCAS Actions &amp; Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments &amp; Outlook</b>
	2023.	

**Hamilton’s Climate Change Impact Adaptation Plan Update on 2023 Calendar Year Progress**

<b>Enabling Actions within Hamilton’s Climate Action Strategy</b>		
<b>HCAS Actions &amp; Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments &amp; Outlook</b>
<p><b>E.1 - Establish a Climate Change Office with staff dedicated to implementing and tracking the Climate Change Impact Adaptation Plan.</b></p> <p><i>Planning &amp; Economic Development</i></p>	<p>The Office of Climate Change Initiatives was established in November 2022. A Senior Project Manager was transferred into the Office in November 2022, a Director was hired in December 2022, and a new Senior Project Manager and Project manager were funded in the 2023 Municipal Budget and hired during the summer of 2023.</p> <p>During 2023 staff in the OCCI facilitated and tracked progress with implementation of the CCIAP.</p>	<p>An additional Project Manager was formally transferred to the OCCI from Healthy &amp; Safe Communities Department in 2024, bringing the staff complement up to five full-time positions.</p> <p>OCCI staff continued, during 2024, to determine how to support CCIAP implementation.</p>
<p><b>E.2 - Designate key metrics for climate impacts in the City and task staff with collecting and tracking data over time (e.g. traffic accident reports, basement flood reports, etc.).</b></p> <p><i>Office of Climate Change Initiatives, Planning &amp; Economic</i></p>	<p>Preparation for the 2023 data collection process involved the establishment of a draft list of priority indicators for key actions set out in the CCIAP. This process involved engaging other City staff – a process that was coordinated through the director-level Climate Change Initiatives Steering Committee. Input was also sought from community members serving on the City’s Climate Change Advisory Committee.</p>	<p>Moving forward, the process of establishing and applying indicators needs to be an iterative process that is responsive to emerging issues and lessons learned as implementation efforts proceed.</p>



Enabling Actions within Hamilton's Climate Action Strategy		
HCAS Actions & Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
<i>Development (in collaboration with internal Climate Change Initiatives Steering Committee)</i>		

Resilient Theme #1: Built Environment		
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
<p><b>CCIAP Action 1.1:</b> Develop requirements for the incorporation of Low Impact Development (LID) features and green infrastructure into new development and redevelopment projects and consider watershed and landscape scales in the development of plans and objectives.</p> <p>Long-term (&gt;5 years)</p> <p><i>Growth Management, Planning and Economic Development</i></p>	<p>During 2023 work progressed with the development of both Low Impact Development Guidelines and Green Building Standards for the City of Hamilton.</p> <p>Future proposed INDICATORS to track progress with implementation of these new guidelines:</p> <ul style="list-style-type: none"> <li>• <b>Number of LID features implemented.</b></li> <li>• <b>Area covered by LID feature and associated diversion of stormwater.</b></li> <li>• <b>Locations of LID features reported in site plans.</b></li> <li>• <b>Watershed conditions in priority areas (i.e. water quality, erosion sites, etc.)</b></li> </ul>	<p>Low Impact Development Guidelines were approved by the City’s Planning Committee, along with proposed Green Building Standards, on October 1, 2024. Looking ahead, work will be done to detail implementation plans in 2025.</p>
<p><b>CCIAP Action 1.2:</b> Develop guidelines and incentives for homeowners and landlords to improve the resilience of</p>	<p>Efforts were accelerated during 2023 to develop a stormwater fee including exploration of incentives/ credits to support on-property stormwater management</p>	<p>The incentives program that accompanies the Stormwater Rate Structure was presented to the City's General Issues</p>

Resilient Theme #1: Built Environment		
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
<p>residential buildings to climate-related risks through upgrades and/or retrofits.</p> <p>Short-term (&lt;2 years)</p> <p><i>Hamilton Water (lead for stormwater fee development), Public Works</i></p> <p><i>Office of Climate Change Initiatives (lead for Better Homes Hamilton Pilot), Planning and Economic Development</i></p>	<p>measures as an integral part of the fee framework.</p> <p>Future proposed INDICATORS to track the impact of the stormwater fee incentive/ credit programs:</p> <ul style="list-style-type: none"> <li>• <b>Number and type of on-site stormwater management enhancements accessed by residential homeowners through incentive program.</b></li> <li>• <b>Number and type of benefits resulting through the stormwater management credit program proposed for IC&amp;I properties.</b></li> </ul> <p><b>INDICATOR – Annual uptake in City’s Protective Plumbing Program:</b></p> <ul style="list-style-type: none"> <li>• A total of 349 backwater valves were installed through the program in 2023.</li> <li>• 31 downspouts were disconnected at properties through the program in 2023.</li> </ul> <p>Better Homes Hamilton pilot home energy retrofit loan program – design was completed in 2023, and the intake of applications from residents was initiated in December 2023. . See <b>CEEP Action 6</b> above for a list of future</p>	<p>Committee on June 5th, 2024. Implementation of the stormwater fee and associated incentive program will not occur until 2026 and so, no data related to uptake of incentives offered for on-property stormwater management will be available until after 2026.</p> <p>Moving forward, methods will continue to be refined for tracking uptake of building upgrades/ retrofits, including exploring the possibility of tracking relevant building permit data.</p>

Resilient Theme #1: Built Environment		
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
	INDICATORS that will be used to track progress with building retrofits, including the Better Homes Hamilton initiative.	
<p><b>CCIAP Action 1.3:</b> Conduct more studies or reviews to determine flooding and other risks throughout the City &amp; develop plans (e.g. relocating sites where appropriate) to improve the resilience of infrastructure (i.e. buildings, roads, water/wastewater infrastructure, etc.) to climate-related risks from extreme weather and temperatures.</p> <p>Medium-term (2-5 years)</p> <p><i>Hamilton Water, Public Works</i></p>	<p>Flooding and Drainage Improvement Framework – Environmental Assessments - first one to be initiated Q4 2023, with more EAs to be completed in future years in other parts of the combined sewer shed. Ultimately these EAs will likely point to infrastructure solutions such as green infrastructure and sewer separation.</p> <p>Future potential INDICATORS to track progress with studies and reviews to determine flooding and other climate impact related risks from extreme weather and temperatures:</p> <ul style="list-style-type: none"> <li>• <b>Percentage of the City that has been studied (geographic metric) as part of Flooding and Drainage Improvement Framework</b></li> <li>• <b>Number/ size of impacted sites along the waterfront and Escarpment face that require mitigation due to climate-related weather impacts (roadway infrastructure, trail infrastructure)</b></li> </ul>	<p>Efforts have continued into 2024 to address stretches of trail, shoreline and other City amenities impacted by extreme weather events:</p> <ul style="list-style-type: none"> <li>• The Mountain Brow Rail Trail - from Mohawk Sports Park to Corktown Park – has been changed by storms and studies are ongoing to assess the impacts to this landscape.</li> <li>• Stormwater management issues have been identified at Hamilton Cemetery</li> <li>• Geotechnical studies have been undertaken at Sam Lawrence Park for escarpment pathways.</li> <li>• Confederation Beach &amp; Hamilton Beach Shoreline Management Master Plan initiated in 2024 in response to fact that shorelines of Hamilton Beach, Confederation</li> </ul>

Resilient Theme #1: Built Environment																																						
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook																																				
	<p><b>INDICATOR - Number of flood-related calls and geographic distribution of those calls</b></p> <ul style="list-style-type: none"> <li>2023 numbers broken down by municipal ward:</li> </ul> <table border="1"> <thead> <tr> <th>Ward Number</th> <th>Number of calls</th> </tr> </thead> <tbody> <tr><td>Ward 1</td><td>130</td></tr> <tr><td>Ward 2</td><td>56</td></tr> <tr><td>Ward 3</td><td>145</td></tr> <tr><td>Ward 4</td><td>121</td></tr> <tr><td>Ward 5</td><td>51</td></tr> <tr><td>Ward 6</td><td>57</td></tr> <tr><td>Ward 7</td><td>75</td></tr> <tr><td>Ward 8</td><td>71</td></tr> <tr><td>Ward 9</td><td>18</td></tr> <tr><td>Ward 10</td><td>26</td></tr> <tr><td>Ward 11</td><td>12</td></tr> <tr><td>Ward 12</td><td>24</td></tr> <tr><td>Ward 13</td><td>58</td></tr> <tr><td>Ward 14</td><td>55</td></tr> <tr><td>Ward 15</td><td>9</td></tr> </tbody> </table> <p>Further details regarding nature of these flooding incidents are as follows:</p> <table border="1"> <thead> <tr> <th>Number of Events</th> <th>Nature of Flooding</th> </tr> </thead> <tbody> <tr> <td>47</td> <td>Roads (catch basin, sidewalk, ditch, roadway)</td> </tr> </tbody> </table>	Ward Number	Number of calls	Ward 1	130	Ward 2	56	Ward 3	145	Ward 4	121	Ward 5	51	Ward 6	57	Ward 7	75	Ward 8	71	Ward 9	18	Ward 10	26	Ward 11	12	Ward 12	24	Ward 13	58	Ward 14	55	Ward 15	9	Number of Events	Nature of Flooding	47	Roads (catch basin, sidewalk, ditch, roadway)	<p>Beach, and the adjacent Breezeway Trail have been impacted by erosion and flooding due to increased extreme high-water levels and more frequent intense storm events.</p>
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Resilient Theme #1: Built Environment			
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information		2024 Accomplishments & Outlook
	20	Property flooded by ground or stormwater	
	21	Sewer backup on sewer main	
	820	Sewer lateral backup in basement	
<p><b>CCIAP Action 2.1:</b> Improve winter travel conditions through further expanding sidewalk clearing.</p> <p>Short-term (&lt;2 years)</p> <p><i>Roads Operations, Public Works</i></p>	<p><b>INDICATOR – Number of kilometers of sidewalks cleared.</b></p> <ul style="list-style-type: none"> <li>Starting in November 2022, Transportation increased kilometers of sidewalks maintained during the winter from 397km to 866km.</li> <li>Transportation now clears all sidewalks along Priority 1 &amp; 2A roadways where transit services operate.</li> </ul> <p>On December 3, 2023, the Transportation Division presented Information Report PW23077 to Council. The report outlined various options to enhance the levels of service for sidewalk snow clearing. However, no approval was given to expand the service at this time.</p> <p><b>INDICATOR - Number of resident requests</b></p>	<p>On September 21, 2023, the City Council approved transitioning the Snow Angels program from a volunteer-based initiative to a snow clearing subsidy. The subsidy, now referred to as the snow clearing subsidy to better reflect this change, has been allocated funds to support up to 144 qualifying homeowners with up to a \$450 snow clearing subsidy for the winter season. Council has requested staff report back to Council annually on the snow clearing subsidy program.</p>	

Resilient Theme #1: Built Environment		
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
	<p><b>to City’s Snow Angels program for help with snow clearing:</b></p> <ul style="list-style-type: none"> <li>• 2022 – 23 Winter Season – 62 households or 73% of applicants were matched with a snow clearing volunteer.</li> <li>• 2023 – 24 Winter Season – 67 households applied for the new ‘snow clearing subsidy’ launched in 2023 and 44 of those households were approved. Requests for support were lower due to lack of snow.</li> <li>• Two other programs provided support for snow clearing in Winter 2023-2024: <ul style="list-style-type: none"> <li>○ Flamborough Connects – supported 8 households with 6 volunteers but had 3 households on a wait list.</li> <li>○ Stoney Creek Outreach Services supported 105 seniors with 12 volunteers but had 60 residents on a wait list.</li> </ul> </li> </ul>	
<p><b>CCIAP Action 2.2:</b> Encourage and promote safer travel practices, choices, and alternatives through considering all users of Hamilton's transportation network and by</p>	<p>In 2023, the City of Hamilton and its partners offered several programs providing equitable access to sustainable transportation options including: Hamilton Bike Share’s ‘Everyone Rides Initiative’ subsidized bike share memberships, reduced e-scooter fees in</p>	<p>For future reporting, Hamilton commuter data available through the annual Transportation Tomorrow Survey will be utilized as it provides a more statistically rigorous assessment of any</p>

Resilient Theme #1: Built Environment		
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
<p>working with local groups to create a communications campaign around the benefits of work-from-home</p> <p>Medium-term (2-5 years)</p> <p><i>Sustainable Transportation Division, Planning and Economic Development</i></p>	<p>priority neighbourhoods, and subsidized and/or free HSR transit fare programs.</p> <p><b>INDICATOR – Annual number of registered Smart Commute users</b></p> <ul style="list-style-type: none"> <li>In 2023 there were 1139 registered users on the City’s Smart Commute tool and 913 residents completed Smart Commute surveys.</li> </ul> <p><b>INDICATOR - Percent of commuters travelling using sustainable modes (walk, cycle, transit, rideshare) based on 2023 Smart Commute survey results:</b></p> <ul style="list-style-type: none"> <li>55% drive alone.</li> <li>16% use public transit.</li> <li>8% bicycle</li> <li>6% carpool</li> <li>6% walk</li> <li>5% are dropped off/picked up.</li> <li>3% work remotely</li> </ul> <p><b>INDICATOR - Number of Everyone Rides Initiative subsidized bike share memberships provided each year.</b></p> <ul style="list-style-type: none"> <li>Subsidized memberships increased from 100 in 2022 to 300 in 2023 as a result of support revenue generated through contract with e-scooter private operator.</li> </ul>	<p>modal shift trends. See: <a href="http://transportationtomorrow.on.ca">transportationtomorrow.on.ca</a></p> <p>HSR revamped its fare subsidy programming in 2024, launching a new ‘Fare Assist’ program for eligible community members.</p>

<b>Resilient Theme #1: Built Environment</b>		
<b>HCAS Actions and Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments &amp; Outlook</b>
	<p><b>INDICATOR - Number of road accidents involving vulnerable road users and geographic locations of these incidents where they are located (via City of Hamilton Annual Collision Report and Hamilton Police Collision reporting)</b></p> <ul style="list-style-type: none"> <li>• In 2023 Hamilton Police report that there were 3 pedestrian fatalities and 1 cyclist fatality as a result of collisions with motor vehicles.</li> <li>• The 2023 City of Hamilton Annual Collision report was not available at time of report preparation.</li> </ul> <p>Future potential INDICATORS to assess alternative transportation uses and equitable access:</p> <ul style="list-style-type: none"> <li>• <b>Number of participants in subsidized HSR programs</b></li> </ul>	

<b>Resilient Theme #2: People and Health</b>		
<b>HCAS Actions and Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments and Outlook</b>
<b>CCIAP Action 3.1:</b> Develop and implement a response program for vulnerable populations to protect residents from climate-	During 2023 a Heat Response Strategy was developed with input from community partners from the Extreme Heat Working Group. The	The staff presentation of the Heat Response Strategy to the Public Health Committee in Q1 2024



Resilient Theme #2: People and Health		
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments and Outlook
<p>related risks (i.e. extreme cold, extreme heat, etc.)</p> <p>Medium-term (2-5 years)</p> <p><i>Public Health Services, Healthy and Safe Communities</i></p>	<p>Strategy was presented to the City’s Public Health Committee in April 2024.</p> <p>The city also has a Heat Response Plan that is reviewed and updated annually. The Plan includes actions the City takes during Heat Warnings and Extended Heat Warnings, including criteria for activation of the Emergency Operations Centre.</p> <p>In 2023, Public Health Services initiated efforts to engage with Landlords to provide education about heat related illness and measures they can take to protect tenants. Building outreach was prioritized based on urban heat mapping.</p> <p><b>INDICATOR - Number of annual weather-related (heat, cold, air quality related) emergency room visits for residents of Hamilton.</b></p> <ul style="list-style-type: none"> <li>No data available for 2023 - this indicator began reporting in 2024</li> </ul> <p><b>INDICATOR - Number of annual weather-related (heat, cold, air quality related) deaths for residents of Hamilton.</b></p> <ul style="list-style-type: none"> <li>This indicator has a data lag period of approximately 5 - 6 years and is provided by the Ontario Ministry of</li> </ul>	<p>led to additional enhancements to 2024 heat response efforts:</p> <ul style="list-style-type: none"> <li>Free bus ticket giveaways at identified City facilities and social service agencies to enable impacted residents to get to cooling centres</li> <li>Enhancement of the air conditioner subsidy program administered through Ontario Works to enable up to 200 more subsidies to be offered to qualifying residents.</li> <li>Meetings of the Extreme Heat Working Group continued during 2024, along with meetings of the Community Heat Response Committee, which is made up of City staff and community partners who provide key supports during heat events.</li> </ul> <p>Public Health staff-initiated efforts</p>

<b>Resilient Theme #2: People and Health</b>		
<b>HCAS Actions and Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments and Outlook</b>
	<p>Health's IntelliHealth system. Most recent data available is from 2018 (BOH24005).</p> <p><b>INDICATOR - Number of weather-related (heat, cold, air quality related) paramedic calls for residents of Hamilton.</b></p> <ul style="list-style-type: none"> <li>No data available for 2023 - this indicator began reporting in 2024.</li> </ul> <p><b>INDICATOR - Air quality and health impacts tenant complaints.</b></p> <ul style="list-style-type: none"> <li>No 2023 data available due to database access issues</li> </ul> <p>In November 2023, the City launched a 'Winter Response Strategy' to support unhoused Hamiltonians during the period from Dec 1, 2023 – Mar 31, 2024. The program offered the following for those needing supports:</p> <ul style="list-style-type: none"> <li>Overnight warming bus</li> <li>Extended hours at some rec centres and HPL's Central Library</li> <li>24-hr washrooms at 2 city parks</li> <li>100 additional daytime shelter drop-in spaces</li> <li>80 overnight shelter warming spaces.</li> </ul>	<p>to track heat-related illness and deaths in Hamiltonians in 2024 from May through September using existing data sources and staffing resources with the following two components:</p> <ul style="list-style-type: none"> <li>Surveillance of emergency department complaints; and,</li> <li>Annual assessments of heat-related emergency department visits, hospitalization visits and deaths.</li> </ul> <p>This information will be used to inform the service levels, planning and evaluation in the Health Hazards Program with respect to extreme heat response.</p>
<b>CCIAP Action 3.2:</b> Consolidate existing vulnerable persons'	During 2023 no progress was reported regarding efforts to consolidate existing	

<b>Resilient Theme #2: People and Health</b>		
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<p>contact lists and update/expand them to guide emergency response and/or other assistance programs. Medium-term (2-5 years)</p> <p><i>Public Health Services, Hamilton Paramedics, Healthy and Safe Communities</i></p>	<p>vulnerable persons contact lists. The Health Hazards &amp; Vector-Borne Diseases program has proposed to maintain a consolidated inventory of agencies and/or city service providers that maintain lists that service vulnerable clients, including Hamilton Police Service, City Housing Hamilton, street outreach/ social housing organizations.</p> <p>Hamilton Paramedics currently maintains a database of clients who are part of its Mobile Integrated Health (MIH) program.</p> <p>Future potential INDICATOR designed to assess effectiveness of a consolidated vulnerable persons registry:</p> <ul style="list-style-type: none"> <li>• <b>Number of vulnerable persons reached/supported during an extreme weather event/ climate-related emergency.</b></li> </ul>	
<p><b>CCIAP Action 3.3:</b> Coordinate local efforts to address excessive indoor temperatures in rental housing Medium-term (2-5 years)</p> <p><i>Joint effort between Municipal Law Enforcement, Planning and</i></p>	<p>In 2023, Licensing and Bylaw Services, in collaboration with Public Health, was directed by Council to prepare an Adequate Temperature Bylaw for City Council review and approval in Q1 2024. A report authored by Municipal Law Enforcement is going to Planning Committee in October 2024.</p>	<p>A staff recommendation report from Municipal Law enforcement, entitled ‘Amending the Property Standards By-Law Respecting Air Conditioning Appliances’ will be presented to the Planning Committee in Q4 2024</p>

<b>Resilient Theme #2: People and Health</b>		
<b>HCAS Actions and Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments and Outlook</b>
<i>Economic Development; and Public Health Services, Healthy and Safe Communities.</i>	<p>Additionally, Public Health Services has initiated an outreach program targeting landlords in areas of the city that struggle more with heat, based on heat mapping data.</p> <p><b>INDICATOR - Number of health promotion sessions delivered including number of session attendees, whether attendees are from vulnerable groups, and number of resources provided for heat-related responses.</b></p> <ul style="list-style-type: none"> <li>• 1 pre-heat-season education and awareness webinar offered to members of the Hamilton and District Apartment Association (HDAA).</li> <li>• 7 Extreme Heat Working Group meetings among City and community partners toward development of the Hamilton Community Heat Strategy</li> <li>• 2 Community Heat Response Committee (CHRC) meetings in 2024 to review 2023 Heat Response Plan operational roles and responsibilities and debrief at end of heat season.</li> </ul> <p><b>INDICATOR - Number of media releases on heat-related topics</b></p>	

<b>Resilient Theme #2: People and Health</b>		
<b>HCAS Actions and Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments and Outlook</b>
	<ul style="list-style-type: none"> <li>Four media releases were issued to alert the public to the four heat warnings that were issued during 2023.</li> </ul> <p><b>INDICATOR - Social media (number of posts, engagements, etc)</b></p> <ul style="list-style-type: none"> <li>30 social media posts on various heat-related topics during 2023 (heat &amp; extended heat warnings, cancellation of warnings, ‘Heat Wave Hero’ landlord messaging)</li> </ul>	
<p><b>CCIAP Action 3.4:</b> Align ongoing efforts within the City to continue expanding affordable housing to protect vulnerable populations to reduce climate-related impacts from extreme weather and temperatures</p> <p>Long-term (&gt;5 years)</p> <p><i>Housing Secretariat, Healthy and Safe Communities</i></p>	<p>CityHousing Hamilton continued during 2023 to follow through on its commitment to retrofit existing units and build new social housing units that are constructed to climate resilient, passive house standards. CHH has been successful with securing ‘green funding’ from sources including the Federation of Canadian Municipalities’ Green Municipal Fund to support this transition to greener building</p> <p>The City’s Housing Secretariat has also been actively working to encourage and support climate resilient features in the new housing projects it is working to facilitate.</p> <p><b>INDICATOR - Number of affordable housing units</b></p>	<p>Efforts continue into 2024 through CityHousing Hamilton and the Housing Secretariat to promote climate resilient features in new affordable housing.</p> <p>Social housing agencies on the community side continue on this front as well, utilizing Passive House design and other methods to provide affordable, safe, healthy and climate resilient housing for all.</p>

Resilient Theme #2: People and Health			
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information		2024 Accomplishments and Outlook
	Year	# New Rent Geared to Income (RGI) Units	# New Affordable Market Units
	2021	114	32
	2022	15	n/a
	2023	73	30
	<p><b>INDICATOR - Number of high-performance units (e.g. Passive House, CaGBC etc.) in affordable housing complexes.</b></p> <ul style="list-style-type: none"> <li>The 73 RGI units with a 2023 occupancy date were built to National Energy Code/Ontario Building Code standards.</li> </ul> <p><b>INDICATOR - Shelter expansion and number of individuals served through expansion.</b></p> <ul style="list-style-type: none"> <li>Housing Services Division reported no net new shelter beds created in 2023</li> </ul> <p><b>INDICATOR - Number of social housing units with cooling interventions (fans, AC, awnings, etc.)</b></p> <ul style="list-style-type: none"> <li>Information about number of units with cooling interventions is currently not available to the City's Housing Secretariat or to the Housing Services Division.</li> </ul>		

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	<p><b>INDICATOR – Average rental costs in the city.</b></p> <ul style="list-style-type: none"> <li>• Average rent for all two-bedroom units rose to \$1,335 in Oct 2022, up 5% from \$1,271 in Oct 2021.</li> <li>• Rents for vacant (available to rent) two-bedroom units in Hamilton jumped 12% between June 2022 and June 2023 to an average cost of \$2,298.</li> <li>• Over the past decade, Hamilton rents for all units have risen 55% - more than double the 22% cost of living increase.</li> </ul> <p><b>INDICATOR – Average house price in Hamilton</b></p> <ul style="list-style-type: none"> <li>• Hamilton's average house price in June 2023 was \$831,540, down 3.6% from the June 2022 average of \$863,016 but still substantially above the winter 2020 pre-pandemic value of \$607,939.</li> </ul> <p><b>INDICATOR – Diversification of housing options (e.g. co-ops, co-housing/co-ownerships)</b></p> <ul style="list-style-type: none"> <li>• These details will be provided in the Oct 2024 Housing Needs Assessment.</li> </ul>	

<b>Resilient Theme #2: People and Health</b>		
<b>HCAS Actions and Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments and Outlook</b>
<p><b>CCIAP Action 4.1:</b> Create educational campaigns on communicating the risks associated with climate change (i.e. health impacts, property damage, etc.) and what residents can do to prepare (GDS, LID, etc.)</p> <p>Short-term (&lt;2 years)</p> <p><i>Office of Climate Change Initiatives, Planning and Economic Development</i></p>	<p>During 2023, the Office of Climate Change Initiatives began to create a communications strategy and develop associated outreach tools to engage and inform the community. These efforts continued to evolve over the year and included implementation of elements of the communications strategy.</p> <p><b>INDICATOR - Tracking public engagement including number of public events attended, number of presentations, and audience size, diversity of audiences etc.</b></p> <ul style="list-style-type: none"> <li>• 1,100+ residents reached via 17 community presentations about Hamilton’s Climate Action Strategy</li> <li>• Tabled at 3 community events including Open Streets, HamOnt Youth Summit, Urban Indigenous Festival.</li> <li>• Participated in urban community hikes focused on profiling community climate action through greening.</li> </ul> <p><b>INDICATOR - City website and social media posts analytics (e.g. number of visits, material downloads, etc.)</b></p> <ul style="list-style-type: none"> <li>• Social media data unavailable</li> </ul> <p>Other City Departments and Divisions also engage in efforts to educate the broader</p>	<p>During 2024, the Office of Climate Change Initiatives has continued to develop engagement tools - including presentations, social media posts, website updates – to raise public awareness about the risks that the climate emergency is bringing.</p>



Resilient Theme #2: People and Health		
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments and Outlook
	public on these issues - for example - Public Health Services educates the public on the health impacts of issues associated with climate change including extreme heat and cold and vector borne diseases. See CCIAP Actions 3.3 and 5.1 for social media statistics regarding these posts.	
<p><b>CCIAP Action 4.2:</b> Evaluate and select programs for making emergency preparedness kits accessible to anyone, regardless of income (e.g. subsidies or free distribution campaigns)</p> <p>Medium-term (2-5 years)</p> <p><i>Office of Climate Change Initiatives, Planning and Economic Development; Office of Emergency Management, Hamilton Fire.</i></p>	<p>In 2023, the Office of Climate Change Initiatives enlisted students in the CityLab program to undertake background research on emergency preparedness kits. A report was presented in April 2023 that provides advice and direction on key elements of a kit, costing various kits, and proposed pathways forward. The report was shared with staff in the Office of Emergency Management.</p> <p>Future potential INDICATORS to track progress with raising awareness about and ensuring residents have emergency preparedness kits:</p> <ul style="list-style-type: none"> <li>• <b>Number of workshops/ presentations on how to build and maintain a personal emergency preparedness kit and associated emergency plan – including number of participants.</b></li> <li>• <b>Number of emergency preparedness kits provided through City efforts.</b></li> </ul>	<p>In 2024, staff from the Office of Climate Change Initiatives and the Office of Emergency Management have been exploring the potential to combine efforts and run a pilot program designed both to raise awareness about Hamilton’s Climate Action Strategy and to help residents prepare their own emergency preparedness kit.</p> <p>The plan, starting in Q1 of 2025, is to organize sessions for community members most impacted by climate change but least able to respond. The sessions will share information about the risks from climate change and will offer basic emergency kit components and a guidebook on how to build a kit at no cost to session participants.</p>

Resilient Theme #2: People and Health		
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments and Outlook
	<ul style="list-style-type: none"> <li>• <b>Number of other programs/ organizations raising awareness about and delivering emergency preparedness kits</b></li> </ul>	
<p><b>CCIAP Action 4.3:</b> Establish buddy systems/help-your-neighbour programs to implement during extreme weather events</p> <p>Short-term (&lt;2 years)</p> <p><i>Public Health Services, Healthy and Safe Communities; Office of Climate Change Initiatives, Planning and Economic Development</i></p>	<p>Currently, Public Health Services encourages residents to check on their neighbours and family during Heat Warnings and Extended Heat Warnings. This is included in the messaging the City uses in its media releases during Heat Events, it is referenced on the City’s website, and it is also included in promotional hand-outs.</p> <p>This action is also recognized in the 2024 Heat Response Strategy as something the City will continue to facilitate and support.</p>	<p>The Climate Action Strategy/ Emergency Preparedness Kits pilot workshops initiative described in CCIAP Action 4.2 above will also be used as opportunities to encourage and support residents to establish and/or expand neighbourhood networks of caring.</p>
<p><b>CCIAP Action 5.1:</b> Work with local partners to ensure vulnerable groups are informed about and have the means to be adequately protected from vector-borne diseases (e.g. West Nile Virus, Lyme Disease, etc.)</p> <p>Long-term (&gt;5 years)</p> <p><i>Public Health Services, Healthy and Safe Communities</i></p>	<p>City staff reported in 2023 that work with local partners to ensure vulnerable groups are aware of vector-borne diseases would begin in 2024.</p> <p><b>INDICATOR - Number of cases of vector-borne disease related illnesses:</b></p> <ul style="list-style-type: none"> <li>• West Nile Virus - 5 human cases in 2023</li> <li>• Lyme disease - 81 human cases in 2023</li> </ul>	

<b>Resilient Theme #2: People and Health</b>		
<b>HCAS Actions and Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments and Outlook</b>
	<p><b>INDICATOR - City website and social media analytics (i.e. number of views/downloads, number of posts, post engagement, etc.)</b></p> <ul style="list-style-type: none"> <li>• City created and posted Instagram reels focused on tick prevention (to avoid tick exposure and risk of Lyme Disease) and ‘tick dragging’ – the method used to sample the tick population.</li> <li>• Tick Dragging reel had +70k Plays (second highest in Corporate channel's history) and +2K interactions - +11K plays - +200 interactions</li> <li>• Tick Prevention Reel had +11k plays and +200 interactions</li> </ul>	
<p><b>CCIAP Action 5.2:</b> In conjunction with the Biodiversity Action Plan, develop an Open Space Management Plan to guide City of Hamilton Natural Open Space Stewardship, including maintenance schedules to minimize ideal conditions for vectors (e.g. plants and animals, such as mosquitos, that can bring diseases, such as rabies, Lyme disease, to human populations)</p>	<p>Balancing the protection and enhancement of naturalized areas, while also limiting exposure of vectors to humans continues to be an ongoing issue. Signage exists with public warnings related to ticks in locations where people may be at risk of higher exposure. Where possible, City Parks staff mow one mower-width (2m or so) on either side of paths to keep a clear pathway for walking and to limit overhanging plants.</p> <p>At the same time, focusing on biodiversity (species diversity, healthy native habitats for</p>	<p>In June 2024, Hamilton’s Biodiversity Action Plan and the city-led actions found within it, were endorsed by the City’s Planning Committee.</p>

<b>Resilient Theme #2: People and Health</b>		
<b>HCAS Actions and Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments and Outlook</b>
<p>Long-term (&gt;5 years)</p> <p><i>Environmental Services, Public Works; Public Health Services, Healthy and Safe Communities</i></p>	<p>native animals and plants) is a key strategy for increasing ecosystem resilience to invasive pests and disease.</p> <p>City staff put out communication updates when new diseases and pests arrive in the Hamilton area. Updates include information about what residents can do if they find these pests/diseases. Enlisting the public to observe and report is an important way to track the status of these invaders.</p> <p><b>INDICATOR - Number of ticks submitted to Public Health for identification each year.</b></p> <ul style="list-style-type: none"> <li>• 182 ticks submitted to PHS for identification in 2023.</li> </ul> <p><b>INDICATOR - Number of complaints about standing water.</b></p> <ul style="list-style-type: none"> <li>• 32 complaints were received about standing water in 2023 (not just in naturalized areas of the city)</li> </ul>	
<p><b>CCIAP Action 6.1:</b> Continue to update existing municipal plans and policies to decrease health and safety risks associated with extreme weather and temperatures to outdoor workers</p>	<p>Current Hot Weather Safety guidelines remain in place and are reviewed and updated as needed. In 2023 the City’s Health, Safety &amp; Wellness Team began providing guidance to people leaders on how to protect outdoor workers during periods of poor air quality.</p>	<p>In 2024, the City’s Human Resources Division released three updated occupational health and safety bulletins:</p> <ul style="list-style-type: none"> <li>• Managing Heat Stress</li> <li>• Sun Safety</li> </ul>

Resilient Theme #2: People and Health		
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments and Outlook
<p>Medium-term (2-5 years)</p> <p><i>Human Resources, Corporate Services</i></p>	<p>In 2023, a new guideline was planned to provide guidance on reducing staff health risk by using the national Air Quality Health Index and corresponding health messages to provide recommendations for the workplace.</p> <p>The City also continues to monitor the Ministry of Labour, Immigration, Training and Skills Development’s consultation on regulating Heat Stress and Poor Outdoor Air Quality under the Occupational Health and Safety Act to prepare for any new employer duties related to heat and poor air quality for municipal outdoor workers.</p>	<ul style="list-style-type: none"> <li>Outdoor Air Quality and Your Health</li> </ul>
<p><b>CCIAP Action 6.2:</b> Explore opportunities to expand current cooling &amp; warming centre programming and interventions.</p> <p>Short-term (&lt;2 years)</p> <p><i>Public Health Services, Healthy and Safe Communities</i></p>	<p>This action is addressed in the Heat Response Strategy presented to the Public Health Committee in Q1 of 2024 and the potential to increase the number of cooling centres is regularly discussed in meeting of the Extreme Heat Working Group.</p> <p>This action has also been addressed through City efforts to develop and implement a ‘Winter Response Strategy’ starting in January 2023. In its first season, the Strategy was in place until March 31<sup>st</sup> and offered supports including additional daytime and overnight warming spaces for residents needing these supports. See <b>CCIAP Action 3.1</b> above for more details on enhancements made to this</p>	<p>In 2024, Public Health Services, through the Healthy Environments Team, developed and implemented a ‘Cool Kit’ initiative designed to get simple resources designed to help residents without in-residence cooling to stay cool in the summer heat.</p>

<b>Resilient Theme #2: People and Health</b>		
<b>HCAS Actions and Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments and Outlook</b>
	<p>program for the Winter of 2023/24.</p> <p>In 2023 Hamilton Public Library began opening the Hamilton Room at the Central Library on Statutory Holidays during Heat Warnings and Extended Heat Warnings. This service is an enhancement from previous years. HPL also extended hours at the Central Library to provide warming spaces as part of the City’s 2023/24 ‘Winter Response Strategy’</p>	
<p><b>CCIAP Action 6.3:</b> Improve monitoring, data collection, and notification surrounding flooding &amp; extreme weather/temperatures</p> <p>Long-term (&gt;5 years)</p> <p><i>Public Health Services, Healthy and Safe Communities</i></p>	<p>This action is addressed in the Heat Response Strategy that was presented to the Public Health Committee in Q1 of 2024.</p> <p>Public Health Services uses epidemiological data along with heat mapping vulnerability data to determine highest risk areas to target for heat initiatives.</p> <p><b>INDICATOR - Number of heat alerts</b></p> <ul style="list-style-type: none"> <li>• In 2023 there were 4 heat warning and extended heat warning events combined lasting a total of 11 days: <ul style="list-style-type: none"> <li>June 1 - 2 (2 days)</li> <li>July 4 - 6 (3 days)</li> <li>July 26 - 28 (3 days),</li> <li>Sept 3 - 5 (3 days)</li> </ul> </li> </ul>	<p>The Office of Climate Change Initiatives will expand this reporting to include indicators related to cold weather events and to include data related to tracking the risk of flooding based on the monitoring of flow and level meters in municipal creeks and sewer systems.</p>

Resilient Theme #2: People and Health		
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments and Outlook
	<p><b>INDICATOR - Number of users of splash pads, parks, community centres, etc.</b></p> <ul style="list-style-type: none"> <li>Recreation staff have confirmed availability of data related to pool usage during extreme heat events and this data will be provided in future climate update reports.</li> </ul>	

Resilient Theme #3: Natural Environment, Agriculture and Water		
HCAS Actions and Timelines (Responsible City Department/Division noted where applicable)	2023 Progress Update and Supporting Quantitative/Qualitative Information	2024 Accomplishments & Outlook
<p><b>CCIAP Action 7.1:</b> Continue to enhance the management and restoration of existing natural areas and seek opportunities to dedicate land and natural areas for conservation.</p> <p>Medium-term (2-5 years)</p> <p><i>Environmental Services, Public Works</i></p>	<p>Work continued in 2023 on a number of on-going naturalization efforts - all in partnership with Conservation Halton at Joe Sam's Park, Courtcliffe Park, and Flamborough Centre Park. Activities include natural habitat restoration, wetland creation, invasive species removal, creek restoration and realignment. Also in 2023, a bioswale was installed at Florence Parker Sports Park.</p> <p><b>INDICATOR - Enhancement of natural areas identified in plan:</b></p> <p>Joe Sam's Park (completed works): 390 m in-stream habitat enhanced, 50 m riparian habitat enhanced, 8529 m2 habitat restored, 775 native grassland/meadow plants planted,</p>	<p>Future projects anticipated at: William Connell Park (invasive species removal &amp; naturalization), Confederation Beach Park - natural shoreline erosion mitigation through native plantings.</p>

<b>Resilient Theme #3: Natural Environment, Agriculture and Water</b>		
<b>HCAS Actions and Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments &amp; Outlook</b>
	<p>145 native trees planted, 80 native shrubs planted. Courtcliffe Park (completed works): 13m in-stream habitat enhanced, 66m riparian habitat enhanced, 175 native trees planted, 1474 native shrubs planted, 3736m2 habitat improved.</p> <p><b>INDICATOR – Track acquisition of space to convert into natural areas to enhance core areas and linkages.</b></p> <ul style="list-style-type: none"> <li>No update provided for 2023.</li> </ul>	
<p><b>CCIAP Action 8.1:</b> Work with local partners to continue tree planting and preservation, explore community partnerships and naturalization programs to reduce urban heat island and enhance ecosystem function.</p> <p>Medium-term (2-5 years)</p> <p><i>Forestry and Horticulture Division, Public Works; Office of Climate Change Initiatives, Planning and Economic Development</i></p>	<p>Expansion of Forestry’s Community Tree Planting Program facilitated surpassing the 2023 target of 1,800 trees and planting 3,927 trees.</p> <p>Forestry staff have engaged CityLab to complete a literature review related to municipal woodlot management.</p> <p>Forestry staff engaged in Air Quality Day with Green Venture &amp; participated in National Indigenous Peoples Day Gathering event on June 21st.</p> <p><b>INDICATOR – Number of trees planted by Forestry Division each year:</b></p>	<p>2024 tree planting target will be over 5000 trees to continue to expand naturalized planting areas with the assistance of volunteer partnerships and build on this success.</p> <p>2024 Free Tree Giveaway target is 5000 trees. Forestry partnered with local not-for-profit Hamilton Naturalists’ Club to deliver the 2024 program.</p> <p>2024 target for total number of trees planted and/or provided by Forestry is 20,000.</p>



<b>Resilient Theme #3: Natural Environment, Agriculture and Water</b>		
<b>HCAS Actions and Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments &amp; Outlook</b>
	<ul style="list-style-type: none"> <li>3,927 – via Forestry hosted community tree planting events</li> <li>6,779 – via Forestry plantings in parks, cemeteries, along streets, in public golf courses</li> </ul> <p><b>INDICATOR – Number of trees distributed by Forestry to community for planting on private property:</b></p> <ul style="list-style-type: none"> <li>3,536 – via Forestry’s annual Free Tree Giveaway to residents, schools and not-for-profit organizations.</li> <li>1,000 – via the annual Children’s Water Festival</li> </ul> <p><b>INDICATOR – Total number of trees planted or provided by City’s Forestry Division annually:</b></p> <ul style="list-style-type: none"> <li>2023 total = 15,256 trees</li> </ul>	
<p><b>CCIAP Action 8.2:</b> Implement the Urban Forest Strategy (UFS) and consider additional measures to support it or expand its impact.</p> <p>Medium-term (2-5 years)</p>	<p>The Urban Forest Strategy (UFS) was approved by Council on June 21<sup>st</sup>, 2023.</p> <p>Associated recommendations supported by Council included:</p> <ul style="list-style-type: none"> <li>Adoption of a 40% urban canopy cover target</li> </ul> <p>Initiation of the development of a City-wide tree protection by-law on private property</p>	<p>Additional resources were approved as part of the 2024 municipal budget to support the implementation of Hamilton’s Urban Forest Strategy including:</p> <ul style="list-style-type: none"> <li>1 full-time employee in Forestry to monitor, report on, and facilitate the implementation of the UFS,</li> </ul>

<b>Resilient Theme #3: Natural Environment, Agriculture and Water</b>		
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<i>Environmental Services, Public Works</i>	<p>within the urban area.</p> <p>Future proposed INDICATORS to track implementation of the UFS and the key adaptation feature of equitable distribution of the 40% urban canopy cover:</p> <ul style="list-style-type: none"> <li>• <b>Percentage canopy cover across Hamilton wards &amp; neighbourhoods through Urban utilizing LiDAR data acquired as part of Urban Forest Strategy implementation.</b></li> </ul>	<p>including prioritizing those areas with greatest need for urban canopy cover.</p> <ul style="list-style-type: none"> <li>• 1 full-time employee in Forestry to support an increase in the annual City-led tree planting target to 20,000 trees.</li> <li>• Funding to purchase LiDAR (Laser Imaging Detection and Ranging) data to establish accurate percentage canopy cover measurements.</li> </ul>
<p><b>CCIAP Action 9.1:</b> Educate and encourage community to participate in growing food locally (e.g. lot level or urban farms/gardens).</p> <p>Short-term (&lt;2 years)</p> <p><i>Healthy and Safe Communities; Office of Climate Change Initiatives, Planning and Economic Development</i></p>	<p>Support for community gardens is reflected in a recommendation made in the Recreation Master Plan (2022) to increase the number of community gardens on municipal property.</p> <p>In 2023, a total of 18 community gardens were located on City property, mainly in parks and there are community gardens at all City Housing Hamilton seniors’ building sites.</p> <p>Farm to school programming with schools near McQuesten Urban Farm. HWDSB Focus on Youth program partners with McQuesten Urban Farm for summer student placements.</p>	<p>In 2024 another community garden was established on City property – at the Stoney Creek Municipal Centre, bringing the total number of community gardens on City property to 19.</p> <p>In 2024, staff coordination of the City’s network of community gardens is now undertaken through the Office of Climate Change Initiatives.</p>

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	<p>Since the pandemic, the number of community gardens has increased in Hamilton. Many of these community gardens are coordinated by community organizations, located off City property and supported by the Community Garden Network coordinated by Neighbour to Neighbour See: <a href="http://www.n2ncentre.com/hamilton-community-food-centre/community-garden-networking-program/">www.n2ncentre.com/hamilton-community-food-centre/community-garden-networking-program/</a></p>	
<p><b>CCIAP Action 9.2:</b> Expand rainwater capture (i.e. rain barrels, cisterns, etc.) as an irrigation source for more localized food production (i.e. backyard farming, urban gardens, soft landscapes, etc.)</p> <p>Medium-term (2-5 years)</p> <p><i>Hamilton Water, Public Works</i></p>	<p>In 2023, the City’s stormwater funding fee review was completed, and Council approved the fee structure.</p> <p>Finance Staff, in consultation with the initiative’s internal Steering Committee and Working Groups, launched a communications and engagement plan across the City in October 2023 to consult on developing financial incentives for property owners to capture rainfall and retain it on their property.</p>	<p>A revised stormwater incentive program was approved by City Council in June 2024.</p> <p>Implementation of the stormwater fee framework and associated incentive program will occur in April 2026. The incentive program includes support for tools to facilitate rainwater capture and use on properties in the future.</p>
<p><b>CCIAP Action 9.3:</b> Engage with local agricultural leaders to understand existing resources for farmers in addressing climate adaptation, and how the City can support or expand on those efforts.</p> <p>Medium-term (2-5 years)</p>	<p>No City progress to report during 2023.</p>	<p>The municipality’s stormwater funding fee includes an incentive/credit program approved in 2024 and designed to facilitate the installation and/or enhancement of on-property stormwater management measures. The fees and incentive/credit programs will be</p>

<b>Resilient Theme #3: Natural Environment, Agriculture and Water</b>		
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<i>Office of Climate Change Initiatives, Economic Development, Planning and Economic Development; and Healthy and Safe Communities</i>		implemented in April 2026.
<p><b>CCIAP Action 9.4:</b> Develop an educational campaign directed at restaurant and grocery industries, local farms and other possible food sources to better reduce and divert food waste and explore opportunities to reduce food waste.</p> <p>Medium-term (2-5 years)</p> <p><i>Waste Management, Public Works; Healthy and Safe Communities</i></p>	<p>During 2023, Office of Climate Change Initiatives staff worked with students from CityLab on a research project that generated a report entitled ‘Developing a Circular Economy of Food in Hamilton – A Framework’. The report provides research findings and recommendations for pathways forward to address food waste.</p> <p>Addressing food waste is also highlighted as an action within the Food Strategy that may be incorporated into future work.</p> <p>No other progress was made in 2023 on this action.</p>	

<b>Resilient Theme #4: Energy and Economy</b>		
<b>HCAS Actions and Timelines</b> (Responsible City Department/Division noted where applicable)	<b>2023 Progress Update and Supporting Quantitative/Qualitative Information</b>	<b>2024 Accomplishments &amp; Outlook</b>
<b>CCIAP Action 10.1:</b> Provide guidance to local businesses on how to maintain business continuity (e.g. supply chain)	The City’s Economic Development Division offers several programs designed to help local businesses pursue climate resilience and sustainability. These include:	In 2024, the City’s Economic Development Division initiated a formal public review of the ‘LEEDing the Way’ Community

<b>Resilient Theme #4: Energy and Economy</b>		
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<p>during extreme weather (i.e. through business continuity planning, green business practices, adaptation measures)</p> <p>Long-term (&gt;5 years)</p> <p><i>Economic Development, Planning and Economic Development</i></p>	<ul style="list-style-type: none"> <li>• Various cost-sharing and tax increment-based grants through the Environmental Remediation and Site Enhancement (ERASE) Community Improvement Plan</li> <li>• Grants to support Leadership in Energy and Environmental Design (LEED) certification through the LEEDing the Way Community Improvement Plan.</li> </ul> <p><b>INDICATOR – Uptake in programs being offered to promote climate resilience/ sustainability.</b></p> <ul style="list-style-type: none"> <li>• In 2023 there were no applications made to the City’s LEEDing the Way initiative. Between 2014 and 2023 a total of two applications have been made to this program.</li> <li>• In 2023, there were 9 applications for ERASE Study grants, 6 applications for ERASE Redevelopment grants, and 2 applications for the new ERASE Affordable Housing grant.</li> </ul> <p>Future potential INDICATORS for tracking progress with building local business climate resilience:</p>	<p>Improvement Plan, recognizing the low private sector uptake of the program’s grants program and the emergence of many other new certification programs designed to support climate resilient, sustainable building features. The revamped program is scheduled to go to the City’s Planning Committee in Q1 2025.</p> <p>Indicators will be updated in future to reflect the outcome of the review and update of the LEEDing the Way program.</p> <p>The Economic Development Division reports annually on proponent uptake of incentive/ and grant programs – including opportunities designed to promote sustainability /climate resilience.</p>

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	<ul style="list-style-type: none"> <li>• <b>Number of local businesses incorporating District Energy systems to reduce climate impacts.</b></li> <li>• <b>Number of businesses using sustainable/ low carbon options for moving cargo – ie container services and increased rail and intermodal operations.</b></li> <li>• <b>Number of local businesses with comprehensive climate action plans – including considerations of business-related climate adaptation measures.</b></li> </ul>	
<p><b>CCIAP Action 11.1:</b> Work with local partners to conduct vulnerability and risk assessments on local energy systems and identify opportunities to increase local energy generation (e.g. microgrids) to increase reliability (potentially as part of planned CEEP priority actions around identifying renewable energy generation sites within the City).</p> <p>Medium-term (2-5 years)</p>	<p>During 2023, the Energy Management Section continued discussions with Hamilton Community Enterprises (HCE) regarding the decarbonization of their district energy system, and the future addition of more loads in the downtown core.</p> <p>Leaders from the Energy Management Section also participate in various industry working groups that discuss provincial energy demand and supply and explore best practices and partnerships around this topic.</p> <p><b>INDICATOR - Local energy produced (private and public capacity of renewables)</b></p>	<p>The City’s Energy Management Section plans, into the future, to conduct feasibility studies around renewable energy generation opportunities and battery storage at various municipal sites.</p> <p>The Energy Management Section will also continue to meet with key stakeholders including Alectra, IESO and HCE on the feasibility and implementation of renewable energy generation opportunities.</p>

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<i>Corporate Facilities and Energy Management, Public Works</i>	<b>within City)</b>	
<p><b>CCIAP Action 11.2:</b> Establish low-carbon back-up power systems in all City-owned facilities to serve as community hubs during emergencies and create a policy to support and promote the use of low- or no-carbon emergency energy supplies such as batteries or energy storage for residents and businesses.</p> <p>Long-term (&gt;5 years)</p> <p><i>Corporate Facilities and Energy Management, Public Works</i></p>	<p>During 2023, Corporate Facilities &amp; Energy Management (CFEM) initiated a review of multiple generators within the Corporate Facilities portfolio and continues to assess opportunities to switch to low carbon fuel - including appropriate generator sizing for enhanced resiliency.</p> <p><b>INDICATOR - Number of zero and/or low carbon back-up retrofits</b></p> <ul style="list-style-type: none"> <li>A lack of funding has delayed the implementation of proposed transitions to low carbon fuels.</li> </ul> <p>The Energy Management Section also continued with exploration of opportunities to increase biogas production at its two existing sites (Glanbrook Landfill and Woodward Wastewater Treatment Plant) and potential market opportunities to convert biogas into renewable natural gas (RNG) to support conversion from natural gas to low carbon fuel. This also includes consideration of purchasing RNG from gas utilities.</p> <p><b>INDICATOR - Annual Greenhouse gas</b></p>	<p>The Energy Management Section will continue with the review of fossil fuel back-up generators in City facilities and gradually replace with low carbon back up power systems as funding becomes available to do this.</p>

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	<b>emissions estimates from (municipal) generators.</b>	