Corporate Goals and Areas of Focus for Climate Change Mitigation and Adaptation
We acknowledge the City of Hamilton is situated upon the traditional territories of the Erie, Neutral, Huron-Wendat, Haudenosaunee and Mississaugas. This land is covered by the Dish With One Spoon Wampum Belt Covenant, which was an agreement between the Haudenosaunee and Anishinaabek to share and care for the resources around the Great Lakes. We further acknowledge that this land is covered by the Between the Lakes Purchase, 1792, between the Crown and the Mississaugas for the Credit First Nations.

Today, the City of Hamilton is home to many Indigenous people from across Turtle Island (North America) and we recognize that we must do more to learn about the rich history of this land so that we can better understand our roles as residents, neighbours, partners and caretakers.
Acknowledgements:

Thank you to the members of the Corporate Climate Change Task Force (CCCTF) for their hard work and dedication to helping move Hamilton forward towards a prosperous low carbon and sustainable future. The multi-department CCCTF included:

Dave Arsenault – Hamilton Water  
Gavin Chamberlain – Corporate Services  
Tom Chessman – Public Works  
Robert Clackett – Planning and Economic Development  
Jennifer DiDomenico – Public Works  
Margaret Fazio – Planning and Economic Development  
Trevor Imhoff (Chair) – Healthy and Safe Communities  
John Lane – Planning and Economic Development  
Alissa Mahood – Planning and Economic Development  
Andrea McDowell – Healthy and Safe Communities  
Brian McMullen – Corporate Services  
Raffaella Morello – Public Works  
Scott Peck – Hamilton Conservation Authority  
Jeff Poljanksi – Public Works  
Shelley Rogers – Healthy and Safe Communities  
Sam Scarlett – Public Works  
Chris Shilton – CityHousing Hamilton

Thank you to all of the staff across the City of Hamilton that helped in the creation of this report and ongoing work you all do on a daily basis to make Hamilton the best place to raise a child and age successfully.

A special thank you for the strategic direction and guidance of our City Manager Janette Smith and the rest of Senior Leadership including:

Paul Johnson – General Manager, Healthy and Safe Communities Department  
Dan MacKinnon – General Manager, Public Works  
Jason Thorne – General Manager, Planning and Economic Development  
Mike Zegarac – General Manager, Corporate and Finance Services
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City of Hamilton’s
Corporate Climate Change Goals

Goal 1  Buildings
To increase the number of new and existing high performance state-of-the-art buildings that improve energy efficiency and adapt to a changing climate.

Goal 2  Active and Sustainable Travel
To change the modal split and investigate strategies so that more trips are taken by active and sustainable transportation than single use occupancy vehicles.

Goal 3  Transportation
To accelerate the uptake of modes of transportation that are low and/or zero emissions.

Goal 4  Planning
To ensure a climate change lens is applied to all planning initiatives to encourage the use of best climate mitigation and adaptation practices.

Goal 5  Procurement
To procures goods, services and construction from vendors who conduct their business in a sustainable and ethical manner that considers equity, diversity and inclusion that contributes to the greater good of the community.

Goal 6  Protect and Restore the Natural Environment
To increase our carbon sinks and local food production through the preservation and enhancement of the natural environmental, including local farmland.

Goal 7  Climate Adaptation
To improve Hamilton’s climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.

Goal 8  Diversity, Health and Inclusion
To ensure all our work promotes equity, diversity, health and inclusion and improves collaboration and consultation with all marginalized groups, including local Indigenous Peoples.

Goal 9  Education and Awareness
To increase the knowledge and empower City staff and the Hamilton community including business, NGO’s and individual citizens while advocating to higher levels of government to take action on climate change.
Overview and Context

The City of Hamilton has been tracking and annually reporting city-wide Greenhouse Gas (GHG) emissions since 2006. Since 2006 city-wide emissions has been reduced approximately 33% or 5,780,768 tonnes carbon dioxide equivalent (tCO₂e).

Hamilton City Council at its meeting on March 27, 2019 ratified the motion Accelerating and Prioritizing Climate Action in Response to the Climate Emergency which set a new GHG reduction target of achieving carbon neutrality before 2050. This new target aligns with the United Nations Intergovernmental Panel on Climate Change (IPCC) scientific report that outlined global requirements to keep global warming below 1.5 degrees Celsius.

Figure 1 | Hamilton’s Community Greenhouse Gas Emissions Inventory

![Graph showing Hamilton’s Community Greenhouse Gas Emissions Inventory from 2006 to 2017 with targets for 2020, 2030, and 2050. The graph includes data for Residential, Commercial, Industry, Transportation, Waste, Wastewater, Steel Industry, and Agriculture.]
The City of Hamilton has already established an interim target of 50\% reduction by 2030. In order to reach the interim target of 50\% reduction based on 2006 baseline, GHG emissions will need to be reduced by approximately 2,894,138.50 tCO\textsubscript{2}e from 2017 levels.

When excluding industrial emissions from Hamilton’s inventory the major sources of GHG emissions are:

**Figure 2 | Hamilton’s GHG Emissions Inventory and Reduction Targets**

The major GHG emission sources in Hamilton remain to be industrial emissions, specifically steel emissions at approximately 5,156,276 tCO\textsubscript{2}e, or 45\% of Hamilton’s total emissions. Although the industrial and steel sector still represent the largest source of emissions, both steel and industrial emissions have reduced their emissions since 2006 by 33.5\% and 47.8\% respectively, whereas commercial and transportation has increased their emissions by +5.5\% and +20.7\% respectively from 2006 baseline emissions.

When excluding industrial emissions from Hamilton’s inventory the major sources of GHG emissions are:

**Figure 3 | Hamilton’s Big Three Community GHG Emissions Excluding Industry**
City Council declared a climate change emergency in March 2019, at that time joining 435 municipalities world-wide. Since then the total number of municipalities have reached more than 800 cities around the world, including the Government of Canada, all acknowledging the scale of the climate crisis and the need for accelerated action.

The City of Hamilton understands declaring a climate emergency is just the beginning. City Council through its climate emergency declaration directed staff to form a multi-departmental Corporate Climate Change Task Force (CCCTF). Through the CCCTF a centralized reporting approach has been created where all departments have compiled a list of their existing climate change initiatives.

The CCCTF follows corporate principles based on:

Figure 4 | Corporate Climate Change Task Force Principles

Utilizing the most current scientific reports including Hamilton's Community Climate Change Action Plan¹, Hamilton and Burlington Low-Carbon Scenario and Technical Report 2016 to 2050², and The Science of Climate Change: Climate Data for the City of Hamilton, Ontario³ the CCCTF compiled departmental-wide lists of existing and future actions and conducted a gap analysis to determine new high impact areas of focus departments can take in order to enable the acceleration of low carbon and climate resilient actions to move Hamilton towards a prosperous low carbon resilient community.

Corporate Goals, High Impact Actions, Areas of Focus and Indicators

The purpose of this report is to lay the foundation for the first corporate-wide climate change reporting framework and areas of focus to empower City staff and enable the community to take action on climate change.

The corporate goals, high impact actions, areas of focus and indicators listed in the subsequent pages follow the Results Based Accountability (RBA) corporately endorsed process. The RBA uses a data-driven, decision-making process to help community and organizations get beyond talking about problems and taking actions to improve the lives of the community as a whole.

Using science driven data from the most recent climate change reports for the City of Hamilton for both climate change mitigation and adaptation, the CCCTF prioritized a list of over 175 actions. Through a gap analysis those actions were compared to those identified existing climate change actions. The actions that were not being fully addressed were prioritized based on its impacts to reduce GHG emissions and adapt to climate change.

The establishment of the overarching ambitious goals were created from grouping the list of over 175 actions into themes. The CCCTF underwent a visioning exercise as well to further reinforce the main themes. Figure 5 below briefly describes the process of the CCCTF and how it plans to continue to be results based by annually evaluating our results through the identification and tracking of key indicators.

Figure 5 | CCCTF Process Map for Action Planning

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Goal 1: Buildings

To increase the number of new and existing high performance state-of-the-art buildings that improve energy efficiency and adapt to a changing climate.

Community

<table>
<thead>
<tr>
<th>High Impact Actions</th>
<th>Areas of Focus for Further Work</th>
<th>Department Lead</th>
<th>Reporting Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>The City will work within its jurisdiction and authority to achieve a high level of environmental performance in future private sector construction.</td>
<td>Material reuse/recycling associated with demolitions.</td>
<td>Planning and Economic Development</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Eligibility of climate change-related property improvements as part of existing financial incentive programs.</td>
<td>Planning and Economic Development</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Development fees and potential fee rebates for green development.</td>
<td>Planning and Economic Development</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Award/recognition programs for green development.</td>
<td>Planning and Economic Development</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
</tbody>
</table>

Background Data:

- When excluding industry, residential and commercial buildings represent 44% (1,349,362 tCO$_{2}$e) of Hamilton's GHG emissions.
- Climate change threatens our existing and future infrastructure through extreme weather events and climate resilient infrastructure is needed.

Key Indicators:

- Number of new buildings achieving enhanced energy efficiency compared to minimum Ontario Building Code requirements.
- Total tCO$_{2}$e by fuel type per residential, commercial and industrial sector.
Figure 6 | 2017 Community Emissions (excluding Industry)

- Transportation: 55%
- Residential: 24%
- Commercial: 20%
- Agriculture: 1%
- Waste: 0%
- Wastewater: 0%

Figure 7 | Number of Buildings Achieving Enhanced Environmental Performance

Figure 8 | Electricity and Natural Gas tCO₂e by Building Sector 2013-2017
Goal 1: Buildings

City Leading by Example

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>The City will update the Corporate Energy Policy so that all new corporately owned assets are built to the highest performance, best industry standards.</td>
<td>Integrating best practices for climate mitigation.</td>
<td>Public Works</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td>The City will retrofit existing corporately owned assets to improve energy efficiency and reduce GHG emissions to achieve new Corporate Energy Policy targets.</td>
<td></td>
<td>Public Works</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
</tbody>
</table>

Background Data:

- Corporately owned buildings represent 30% (approx. 23,916 tCO₂e) of the City of Hamilton's corporate GHG emissions.
- Building retrofits and energy efficiency is one of the most affordable ways to reduce GHG emissions.

Key Indicators:

- Adoption of Corporate Policy Update.
- Total tCO₂e by corporately owned buildings by fuel type.
- Total energy and cost savings from corporate building retrofits annually.
Figure 9 | Corporate GHG Emissions Breakdown

- Vehicle Fleet 44%
- Corporate Buildings 30%
- Water & Sewage 11%
- Contracted Waster Fleet 7%
- Employee Commuting 5%
- Streetlights 2%
- Wasterwater Emissions 1%
- Expensed Kilometers <1%
- Small Engines <1%

Figure 10 | Corporate Owned Buildings tCO₂e by Fuel Type 2013-2017

Figure 11 | Corporate Owned Buildings Fuel Consumption 2013-2017
Goal 2: Active and Sustainable Travel

To change the transportation modal split so that more trips are taken by active and sustainable transportation than single use occupancy vehicles.

Community

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<tbody>
<tr>
<td></td>
<td>Opportunities for acceleration</td>
<td>Planning and</td>
<td>Initiate: 2020</td>
</tr>
<tr>
<td></td>
<td>of implementation of Transportation Master Plan, and Vision Zero initiatives.</td>
<td>Economic</td>
<td>Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Opportunities for acceleration</td>
<td>Planning and</td>
<td>Initiate: 2020</td>
</tr>
<tr>
<td></td>
<td>of implementation of Hamilton's cycling master plan and cycling infrastructure, including bike share and bike parking.</td>
<td>Economic</td>
<td>Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Opportunities to expand car share programs including “floating car share”.</td>
<td>Planning and</td>
<td>Initiate: 2020</td>
</tr>
<tr>
<td></td>
<td>Update to the City's Parking Master Plan, including parking pricing, boulevard parking policies, priority parking policies.</td>
<td>Economic</td>
<td>Report: Annually</td>
</tr>
</tbody>
</table>

Background Data:
- 2016 Census data reports that single occupancy vehicles represent approximately 67% of all the trips taken in Hamilton.

Key Indicators:
- Percent modal split of public and active transportation vs single use passenger vehicles.
- Total tCO2e by fuel type and vehicle type.
- Total kilometers of bike lanes across Hamilton.
Figure 12 | Hamilton’s 2016 Modal Split

67% Single Occupancy Vehicles
5% Walk / Cycle
7% Transit

Figure 13 | tCO₂e by Fuel and Vehicle Type

Figure 14 | Hamilton 2019 Cycling Infrastructure

325 km Signed cycling routes
232 km Bicycle lanes
150 km Major multi-use trails
Goal 2: Active and Sustainable Travel

City Leading by Example

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<th>Reporting Timeline</th>
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</thead>
<tbody>
<tr>
<td>The City will shift employee travel, including trips to work and trips for work purposes, away from single occupant vehicles toward more sustainable modes of travel.</td>
<td>Promotion of existing programs such as Smart Commute, employee transit passes and employee SOBI memberships.</td>
<td>All Departments</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Mileage reimbursement policies and employee benefit programs such as employee parking.</td>
<td>Corporate Services</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Best practices for analysis of Route Optimization.</td>
<td>All Departments</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Walking/cycling for delivery of city services such as parking enforcement, by-law enforcement.</td>
<td>Planning and Economic Development</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
</tbody>
</table>

Background Data:

- At 61% (1,036,302 tCO\(_2\)e) of total transportation emissions, light duty and medium duty single occupancy vehicles by far represents the largest city-wide transportation GHG emissions.

Figure 15 | Community Transportation tCO\(_2\)e per Vehicle Type

- Light Duty Trucks 36%
- Light Duty Vehicles 24%
- Off-Road 16%
- Heavy Duty Vehicles 12%
- Avation 5%
- Rail 3%
- Navigation 3%
- Bus 1%
- Motorcycles <1%
Goal 3: Transportation

To accelerate the uptake of modes of transportation that are low and/or zero emissions.

Community

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</thead>
<tbody>
<tr>
<td>The City will expand private Electric Vehicle (EV) infrastructure.</td>
<td>Opportunities for encouraging or requiring EV infrastructure as part of new development.</td>
<td>Planning and Economic Development</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Opportunities for electrical connections at festival sites, frequent filming locations, and other areas where generators are commonly used.</td>
<td>Planning and Economic Development, Public Works</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
</tbody>
</table>

Background Data:

- In 2017 it is estimated that light duty gasoline trucks and light duty gasoline vehicles represents 60% (1,027,642 tCO₂e) of total emissions from the transportation sector.

Key Indicators:

- Total number of low and/or zero emission vehicles registered within Hamilton using Ministry of Transportation data.
- Total number and map of electric vehicle charging stations across Hamilton.

Figure 16 | 2019 Vehicle Registrations of PHEV & BEV in Hamilton

**BEVs:** 759  
**PHEVs:** 1013

Source: Ministry of Transportation BEV and PHEV Ownership Output for Hamilton (2019)

Figure 17 | Location of Electric Vehicle Charging Stations Across Hamilton

Source: PlugShare (2019)  
Retrieved from: https://www.plugshare.com/
## Goal 3: Transportation

### City Leading by Example

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<tr>
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<tbody>
<tr>
<td></td>
<td>Expanding EV stations in municipal parking lots, existing municipal buildings, and on-street.</td>
<td>Planning and Economic Development</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Expanding EV stations in municipal facility parking lots, existing facility buildings, and on-street.</td>
<td>Healthy and Safe Communities</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td>The City will transition City-owned vehicles and equipment toward low or zero emission alternatives where feasible.</td>
<td>Environmental performance standards in the corporate fleet policy.</td>
<td>All Departments</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
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<td></td>
<td>Environmental performance requirements in city procurement processes.</td>
<td>All Departments</td>
<td>Initiate: 2020 Report: Annually</td>
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</table>

**Figure 18 | Hamilton’s 2017 Fleet Composition**

- **Light Duty (Gas)** 463
- **Bus (CNG)** 85
- **Heavy Duty (Diesel)** 225
- **Medium Duty (Gas)** 65
- **Bus (Diesel)** 166
- **Light Duty (Gas)** 5
- **Medium Duty (Diesel)** 101

### Background Data:

- City of Hamilton’s corporate fleet represents 44% (34,671 tCO₂e) of total Corporate GHG emissions.

### Key Indicators:

- Total number and percent of low and/or zero emission vehicles within Hamilton’s fleet.
To ensure a climate change lens is applied to all planning initiatives to encourage the use of best climate mitigation and adaptation practices.

<table>
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</thead>
<tbody>
<tr>
<td>The City will ensure future land use and development supports climate change mitigation and resiliency.</td>
<td>Climate change evaluation framework/ lens as part of GRIDS2 and the Municipal Comprehensive Review.</td>
<td>Planning and Economic Development</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
</tbody>
</table>

**Background Data:**

- All planning decisions that influence the built environment have a direct impact on a city’s GHG emissions and overall climate resiliency.

**Key Indicators:**

- Number of planning initiatives that include climate change evaluation/lens.

Source: City of Hamilton Open Data Portal (2019)
Goal 5: Procurement

To procure goods, services and construction from vendors who conduct their business in a sustainable and ethical manner that considers equity, diversity and inclusion that contributes to the greater good of the community.

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<tbody>
<tr>
<td>Update and modify procurement/purchasing policies to include scoring components for enhanced environmental performance including both climate change mitigation and adaptation, and support for testing innovative technologies.</td>
<td>Minimum environmental performance for standard construction documents.</td>
<td>All Departments</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td>Updating City Roster and Request for Proposal with climate change lens.</td>
<td>Minimum environmental performance for standard construction documents.</td>
<td>All Departments</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
</tbody>
</table>

Background Data:

- Procurement process can be used as a strategic function to support the city and community’s priorities of reducing GHG emissions and adapting to a changing climate.

Key Indicators:

- Total number of completed contracts that invoked updated clauses to achieve key climate change mitigation and adaptation outcomes.

- Amount of solid waste diverted from landfills as result of packaging, construction waste management, and material re-use requirements included in City contract documents.
Goal 6: Protect and Restore the Natural Environment

To increase our carbon sinks and local food production through the preservation and enhancement of the natural environmental, including local farmland.

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<tbody>
<tr>
<td>The City will ensure future land use and development supports climate change mitigation and resiliency.</td>
<td>Adoption of the Urban Forest Strategy.</td>
<td>Planning and Economic Development</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
</tbody>
</table>

Background Data:

- Hamilton has a 35% tree canopy cover target and through the Urban Forest Strategy research urban tree canopy is at approximately 21%.
- The natural environment and green infrastructure can help reduce climate change impacts such as extreme weather while also sequestering carbon from the atmosphere.

Key Indicators:

- Percent complete of incorporating green infrastructure into Asset Management Plan.
- Number of Urban Forest Strategy actions initiated.
**Goal 7: Climate Adaptation**

To improve Hamilton’s climate resiliency by decreasing our vulnerability to extreme weather, minimizing future damages, take advantage of opportunities, and better recover from future damages.

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</thead>
<tbody>
<tr>
<td>The City will undertake a city-wide climate vulnerability and risk assessment through ICLEI Canada’s Building Adaptive and Resilient Cities (BARC) framework.</td>
<td>Update existing climate risk statements.</td>
<td>Healthy and Safe Communities</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Collect comprehensive background data.</td>
<td>Healthy and Safe Communities</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
</tbody>
</table>

**Background Data:**

- Climate change is projected to increase the intensity, duration and frequency of extreme weather events.

- Insurance Bureau of Canada recent report by Green Analytics estimates that across Canada an average annual investment of $5.3 billion is needed for municipalities to adapt to climate change.5

- Hamilton is already experiencing climate change impacts through flooding, extreme heat, increase freeze-thaw cycles damaging infrastructure, increase vector-borne disease, etc.

**Key Indicators:**

- Number of milestones achieved through the BARC framework.

---

Figure 21 | ICLEI Canada’s BARC Milestones

**MILESTONE 1: INITIATE**
- Identify stakeholders
- Build climate change adaptation team
- Identify an adaptation champion
- Take a first look at climate change impacts and existing adaptation actions
- Pass council resolution and community charter

**MILESTONE 2: RESEARCH**
- Initiate research on climatic changes
- Refine impacts and consider service areas for each
- Vulnerability assessment (study of sensitivity and adaptive capacity)
- Risk assessment (consequence and likelihood of impacts) and prioritization

**MILESTONE 3: PLAN**
- Establish adaptation vision and objectives
- Set goals
- Identify options and actions
- Identify possible drivers and constraints
- Evaluate actions against drivers and constraints
- Determine appropriate baseline and indicator data
- Examine financing and budget
- Establish implementation schedule
- Create action plan
- Launch plan

**MILESTONE 4: IMPLEMENT**
- Begin implementation
- Solidify support from Council and community
- Use appropriate implementation tools
- Follow terms of action plan
- Report on successes regularly to maintain momentum

**MILESTONE 5: MONITOR/REVIEW**
- Assess new information and review drivers
- Track implementation progress
- Evaluate effectiveness of actions using baseline data and indicators
- Communicate accomplishments
- Investigate future adaptation options and actions
- Revise adaptation plan
- Launch next round of adaptation plan

UPDATE ADAPTATION ACTIONS

REVIEW

REVIEW

REVIEW

REVIEW

Review Review Review

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Goal 8: Diversity, Health and Inclusion

To ensure all our work promotes equity, diversity, health and inclusion and improves collaboration and consultation with all marginalized groups, including local Indigenous Peoples.

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<tbody>
<tr>
<td>The City will work to enhance collaboration and consultation with the public and all marginalized groups, including local Indigenous people on climate change and protecting the environment.</td>
<td>Identification of existing and future initiatives to enhance local Indigenous consultation.</td>
<td>All Departments</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Implement corporate public engagement policy and toolkit when ready.</td>
<td>All Departments</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
</tbody>
</table>

Background Data:

- Working in collaboration with Indigenous people will not only strengthen the cause, but it works within the scope of Hamilton’s Urban Indigenous Strategy that identifies the City’s commitment on consultation and reconciliation creating meaningful relationships.

- An equitable and diversity lens on climate change actions will help to prevent unjust impacts to our most vulnerable populations.

- Climate change action can also achieve many community-wide objectives that can improve public health and social equity.

Key Indicators:

- Number and percent of staff trained on Indigenous Cultural Training.
Goal 9: **Education and Awareness**

To increase the knowledge and empower City staff and the Hamilton community including business, NGO’s and individual citizens while advocating to higher levels of government to take action on climate change.

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<tbody>
<tr>
<td>The City will train its staff and subject matter experts on best practices related to climate change mitigation and climate change resiliency.</td>
<td>Training and education for building managers and facility staff on building and facility operations.</td>
<td>All Departments</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Partnerships, including CityLab, to undertake research and develop best practices.</td>
<td>All Departments</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td></td>
<td>General level of climate change training and onboarding.</td>
<td>All Departments</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td>The City will advocate to higher levels of government for actions to address climate change.</td>
<td>Infrastructure funding.</td>
<td>City Manager’s Office</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
<tr>
<td></td>
<td>Expand existing provincial/federal funded retrofit programs to include improved energy efficiency.</td>
<td>TBD</td>
<td>Initiate: 2020 Report: Annually</td>
</tr>
</tbody>
</table>
Background Data:

- City-wide GHG emissions are approximately at 33% reduction based on 2006 baseline with new targets of 50% by 2030 and carbon neutral before 2050.

- Overall corporate emissions only represent less than 1% of city-wide emissions and a large behavioural shift needs to occur across the community to meet our targets.

Key Indicators:

- Annual percent GHG emission reduction by sector across the City of Hamilton.

- Number of new climate change initiatives across the City of Hamilton through online data portal.

- Number of building managers, staff and inspectors trained on best practices related to climate change mitigation and adaptation.

Figure 22 | 2017 GHG Emission Reduction by Sector Composition

<table>
<thead>
<tr>
<th>2017 GHG Reductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
</tr>
<tr>
<td>Commercial</td>
</tr>
<tr>
<td>Industry</td>
</tr>
<tr>
<td>Transportation</td>
</tr>
<tr>
<td>Waste</td>
</tr>
<tr>
<td>Wastewater</td>
</tr>
<tr>
<td>Steel Industry</td>
</tr>
<tr>
<td>Agriculture</td>
</tr>
<tr>
<td><strong>Total Community</strong></td>
</tr>
<tr>
<td><strong>Total Corporate</strong></td>
</tr>
</tbody>
</table>

Figure 23 | Hamilton's Existing Data Portal

Source: City of Hamilton Open Data Portal (2019)
Conclusion

The City of Hamilton is committed to fighting climate change, reaching our GHG emissions reduction targets and climate resiliency goals with all internal and external partners, including local Indigenous people. It will take a concerted effort from all levels of government, organizations, businesses, institutions and academia to ensure Hamilton city-wide reaches its GHG reduction targets and effectively adapts to a changing climate.

Climate change has and continues to be a priority for the City of Hamilton. Hamilton joined the Partners for Climate Protection in 1994 and has achieved the past established milestones and targets. The climate emergency declaration re-affirms the City’s commitment and directs staff to centralize and accelerate climate change work across all departments. Appendix “B” to Report CMO19008/HSC19073 is a centralized list of existing actions each department is already working on that addresses climate change.

Climate change action not only helps to meet the City’s GHG reduction targets and increase our climate resiliency, but also provides several co-benefits that help to meet Hamilton’s other priorities including but not limited to:

- Reduction of GHG emissions through single use vehicles and improving active and sustainable forms of transportation helps to improve air quality, decreases chronic health diseases such as obesity and reduces sedentary lifestyle and improves overall health and well-being of Hamilton's population;

- Construction of high-performing buildings is an opportunity to increase good quality and paying jobs, while also saving money on energy prices through building energy retrofits. Ensuring an equity lens is included will also help to improve vulnerable populations standard of living and overall well-being; and

- Conducting a climate vulnerability and risk assessment will help to identify current and future risks caused by climate change which will save millions of dollars on infrastructure costs and business continuity disruptions.

This report, along with the list of actions and key indicators is meant to be dynamic as scientific evidence and technology quickly evolves. This centralized climate change report is the first of many annual reports the City will use to transparently track the success of actions and utilize the information to make better informed decisions across the entire corporation and the community.

For more information on this report, progress of the actions or data associated with this report please contact climatechange@hamilton.ca or (905) 546-2424 x1308.