STAFF REPORT
Chief Administrative Officer

Title:	2023 Sustainability and Climate Change Update Report
Report Number:	CAO2023-013
Author:	Ena Ristic
Council Date:	April 24, 2023
File:	[File]
Attachments:	Appendix A: Timeline of Sustainability and Climate Change in the City of Waterloo Appendix B: Climate Partners Appendix C: Community Partners and Advocacy Groups Appendix D: November 18th, 2019 Declaration of a Climate Emergency
Ward No.:	All Wards

Recommendations:

1. That staff report CAO2023-013 be approved.
2. That Council reaffirms the 2019 climate emergency attached as Appendix D.
3. That staff report back annually on our progress towards our corporate and community greenhouse gas reduction targets.

A. Executive Summary

The following report summarizes work done by the City of Waterloo on the Sustainability and Climate Change portfolio. This report is intended as the first of a series of annual reports which will track the progress in this field of work, celebrate achievements, and identify future direction and initiatives as determined by the City of Waterloo.

Historically, individual teams and divisions within the City have taken great initiative on environmental and climate change actions within their respective fields and areas of expertise. Over the past year, significant progress has been made on institutionalizing this work and increasing the collaboration and efficiency of City efforts.

As of 2022 the City has a new Senior Sustainability Officer staff position within the Office of the CAO dedicated to pushing forward the sustainability and climate change portfolio. Working in tandem with the Facility Design and Management Services division and several other divisions and internal/external committees, the City has been able to

make great strides in formalizing and coordinating climate change efforts. Every division has a role to play in this work, and the progress made to date has been an encouraging sign of the dedication and enthusiasm staff and Council have put forward.

Outside of the corporation, residents have made it known that climate change is an important issue to them. During the most recent Municipal Services Satisfaction Survey (MSSA), a key element to improving resident's satisfaction was identified as being climate change and bicycle lanes. There are also several community partners and advocate groups within the City pushing for increased action to this effect.

Over the past several years it is clear that climate change is being weaved into the fabric of the City. In 2019 Council declared a climate emergency and set ambitious greenhouse gas (GHG) reduction targets of 50% by 2030 and 80% by 2050 (as compared to 2010). Within the past five years Council has approved the community mitigation plan TransformWR, the Corporate Climate Change Adaptation Plan (CCCAP), the Community Energy Investment Strategy (CEIS), the Energy Conservation Demand Management Plan (ECDM), and the upcoming creation of a Corporate Climate Action Plan (CorCAP). Sustainability and climate change have also been included in master plans, the Strategic Plan, and the Official Plan.

Since 2011 there has been a 1,882 tCO2e decrease in corporate emissions and a 3.72% decrease in community emissions (measured regionally). It is important to note that a large part of that decrease was from the decarbonisation of the provincial energy grid, which is not a guarantee in the future.

The City has implemented several policies and projects to mitigate and adapt to climate change. Corporately, this includes the creation and adoption of a Corporate Green Building Policy, the electrification of facilities and fleet, ongoing initiatives to reduce fleet emissions through rightsizing and the purchase of some electric units, and the upcoming creation of the CorCAP. In the community, there has been a focus on expanding and improving the active transportation network, including the creation of a shared use Woonerf on Larch Street, creating resilient communities through storm water management and increased green infrastructure, and setting ambitious mitigation and adaptation targets for the new Generation Park. Council has also backed the City's goals with financial resources, including the creation of the Climate Action Reserve Fund (CARF), to finance climate adaptation and mitigation projects.

The City's work to date is a promising sign of the increasing momentum happening in this space. However, in order to meet the ambitious targets set by staff and council, large scale transformational change will be required on all levels. This will require increased sustainability and climate change funding through tools such as increased annual CARF allocation, potentially leveraging debt and continuing to seek out grant opportunities and continued advocacy to senior levels of government as the climate crisis requires a multi-layered response. Another tool available to maintain the City's current momentum is the use of the Capital Infrastructure Reinvestment Reserve Fund (CIRRF) to fund "like-for-modern-equivalent" asset replacement (e.g. replacing natural

gas boilers with electric boilers) activities. The next year will focus on institutionalizing change through the creation of the City's CorCAP and continuing to increase collaboration with all internal and external partners.

B. Financial Implications

On December 6, 2021, via CORP2021-037, Council approved the establishment of a Green Initiatives program number within the Capital Reserve Fund (CRF) to provide Council the flexibility to support initiatives in the short term, while the Corporate Climate Action Plan and associated reserve policy were under development. The initial funding for this program was provided through the closeout of the Innovation Reserve balance of $250,000 and a one-time reallocation of 2021 year end capital overhead surplus of $324,000.

In 2022, the Green Initiatives program number within CRF was consolidated into the new Climate Action Reserve Fund (CARF) with Council's approval of CORP2022-049, the Reserves and Reserve Funds Annual Update report, on December 12, 2022. Also by way of this report, Council approved the governing policy for CARF and established a permanent source of funding, through the redirection of $918,000 in ongoing annual funding from the budgeted annual CRF contribution to the new reserve fund. Opportunities to provide additional funding for CARF will be considered through the upcoming 2024-2026 budget process.

On February 13, 2023, Council approved the 2023 capital budget and approved, in principle, the 2024-2032 capital forecast. Key capital investments included sustainability and climate change (Table 1) as well as active transportation initiatives (Table 2).

Table 1: Sustainability and Climate Change Capital Items

Item Name	Ref.	Amount	Fund	Year	Notes
Corporate Climate Change Action Plan Implementation	#142	$103,000	CRF/CIRRF	2023	Additional $408,000 forecasted in 2024
Corporate Climate Change Adaptation Plan Implementation	#143	$264,000	CARF	2023	Additional $264,000 forecasted in 2024
Electric Vehicle Charging Strategy	#144	$25,000	CARF	2023	Additional $25,000 forecasted annually (2024-2032)
Green Building Policy Implementation	#221	$526,000	CARF	2023	Additional $6M over the capital forecast (2024-2032)

Item Name	Ref.	Amount	Fund	Year	Notes
Community Energy Investment Strategy Implementation	#633	$155,000	CARF	2023	NA

Table 2: Active Transportation Capital Items

Item Name	Ref.	Amount	Fund	Year	Notes
Trails in New Development Areas (NW Waterloo)	#592	$263,000	DC	2023	Additional $2.5M over the capital forecast (2024-2032)
Municipal Trail Former Waterloo Inn Lands	#684	$2.3M	DC	2023	NA

Funding for sustainability and climate change includes more than just CARF funding. For example, many rehabilitation/replacement projects funded by the Capital Infrastructure Reinvestment Reserve Fund (CIRRF) contain elements of “like-for-modern-equivalent” which provide climate benefits along with replacing the aging asset. Our enterprises (I.e. Stormwater) deliver numerous programs and capital projects that support sustainability through measures like flood control and environmental compliance. Grants also play a significant role in helping the City achieve its climate change targets because tackling the climate crisis requires support from all levels of government and private enterprises. On February 27, 2023, Council approved our Green and Inclusive Community Buildings Grant Second Intake application via report COM2023-004. This grant application targets increasing accessibility, increasing energy efficiency, reducing Greenhouse Gas (GHG) emissions, and enhancing climate resiliency through retrofits, repairs, and upgrades at three main City facilities. If successful, the grant would provide $25M in grant funding and result in an estimated 25% savings of City-owned building level GHG.

While significant progress has been made though the creation of CARF and the above highlighted other contributing funding sources, future increased additional capital investment will be required to achieve these ambitious targets. Consideration and prioritization of increased sustainability and climate change funding will be included in the 2024-2026 budget process and future budget processes with recommendations brought forward for Council’s consideration and approval including the potential leveraging of debt to advance projects such as Transformational Change at City Buildings. In addition, and in recognition of the fact that municipalities cannot solve the climate crisis alone, ongoing advocacy to senior levels of government, and leveraging of grants opportunities will continue.

C. Technology Implications

None.

D. Link to Strategic Plan

(Strategic Objectives: Equity, Inclusion and a Sense of Belonging; Sustainability and the Environment; Safe, Sustainable Transportation; Healthy Community & Resilient Neighbourhoods; Infrastructure Renewal; Economic Growth & Development)

(Guiding Principles: Equity and Inclusion; Sustainability; Fiscal Responsibility; Healthy and Safe Workplace; Effective Engagement; Personal Leadership; Service Excellence)

This report and the work it summarizes links to the Strategic Objective of Sustainability and the Environment by supporting the measurement and reporting of the City's Sustainability and Climate Change efforts.

E. Previous Reports on this Topic

CAO 2022-012: 2018-2022 Sustainability and Climate Change Progress Update.

2023 Sustainability and Climate Change Update Report
CAO2023-013

1.0 Role of Municipalities in Climate Work

While federal and provincial governments hold most of the legislative authority and financial resources, municipalities are often the key implementers, innovators, and influencers when it comes to climate action. Some of the advantages to addressing climate change at a municipal level include:

- **Municipalities have direct or indirect control of approximately 44% of greenhouse gas (GHG) emissions in Canada[1].** Directly, they provide municipal services and operate municipal buildings, fleets, and facilities. Indirectly, they can reduce emissions through municipal planning, transit access, and policy mechanisms such as building codes and land use regulations (e.g. development charges and zoning requirements). These decisions can significantly shape the pattern of energy use within communities.
- **Municipalities own approximately 60% of public infrastructure.[2]** This means they both have the power to mitigate GHGs from that infrastructure and the responsibility and incentive to protect it from climate change impacts.
- **Municipalities are most aware of what goes on in their own contexts**. They have practical knowledge of the challenges and opportunities of their own environments and communities that cannot be achieved at a higher scale of government. They can also track their GHG emissions with more accuracy and at smaller scales, and develop policies that are truly actionable on-the-ground.
- **Municipalities have some room to experiment.** Smaller cities are often incubators and case studies for developing solutions that are more tailored and customizable to their communities. For certain unregulated services or activities municipalities can test out innovative solutions that lie within the scope of their authority.

Despite these benefits, there are some key challenges with addressing climate change at a municipal level. Municipalities have reduced powers and resources, and are reliant and beholden to extensive provincial and federal regulation and funding allocations.

---

[1] FCM (2009). Act Locally: The Municipal Role in Fighting climate Change. https://fcm.ca/sites/default/files/documents/resources/report/act-locally-municipal-role-fighting-climate-change.pdf

[2] FCM. https://fcm.ca/en/focus-areas/infrastructure#:~:text=Local%20governments%20own%20approximately%2060,them%20build%20a%20stronger%20Canada.

Municipalities further have a reduced influence over certain large-emitting sectors such as agriculture and industrial sectors. Despite this, there is still a notable potential for the City of Waterloo to utilize its position as a mid-sized and innovative municipality to create a resilient and low carbon future for its residents.

1.1 The History of Sustainability at the City of Waterloo

City of Waterloo staff, residents, and Council have a long history of supporting sustainability and climate change work and initiatives. While the most recent and current Councils have placed an increased emphasis on climate change mitigation and adaptation efforts, this work would not have been possible without the strong foundation and emphasis on environmental stewardship, public health and safety, and protection of our natural environment. That environmental stewardship is reflected in many ways through the built form of the City and early tools that were adopted to guide development in a more sustainable way. Appendix A includes a timeline highlighting a history of the City of Waterloo's work in sustainability and climate change from the development of the 'Environment First Policy' in 1989 to the setting of our current ambitious GHG reduction and adaptation targets today.

2.0 City Roles and Responsibilities

Sustainability and climate change (SCC) impacts all aspects of City operations, services, and programs as well the safety, enjoyment, and opportunity of the residents and community. Whether it is the protection of City assets and residents from adverse weather conditions, or working to create cleaner and more energy efficient community buildings, considerations of how actions impact the environment, and how the environment impacts all aspects of life, must always be central to the conversation. The holistic nature of this works necessitates involvement from staff across the Corporation as well as residents and community partners. While there is often overlap, below is a general representation of the roles and responsibilities of the sustainability and climate change portfolio within the Corporation. It is important to note that the staff and groups identified below are reflective of those whose work focuses primarily on sustainability and climate change initiatives. This does not include the numerous staff across the Corporation whose work overlaps or contributes to the City meeting its goals and targets.

2.1 Senior Sustainability Officer (SSO)

The Senior Sustainability Officer (SSO) leads the Corporation and community sustainability plans and actions, with a significant focus on climate change. Broadly, this includes implementation of the Corporate Climate Change Adaptation Plan, Transform Waterloo Region (TransformWR), and the upcoming Corporate Climate Action Plan (CorCAP). They also act as a liaison to external bodies such as the Sustainability Advisory Committee (SAC), post-secondary institutions, energy partners (Enova, Waterloo Region Community Energy, Grand River Energy), and community groups. The SSO is part of Strategic Initiatives in the Office of the CAO and works with all other divisions in the City to meet the City's sustainability and climate change goals.

2.2 Facility Design and Management Services (FDMS)

One of the areas of focus of Facility Design and Management Services (FDMS) is for the sustainable management of City-owned facilities. This includes the implementation of the Green Building Policy for City-owned facilities which looks to reduce the GHG emissions of our facility assets, and overseeing low carbon building operations and maintenance practices. In addition, they manage the cooling and disaster centers for the City.

2.3 Committees, Teams, and Working Groups

2.3.1 Sustainability Advisory Committee (SAC)

The Sustainability Advisory Committee (SAC) is a volunteer resident committee which advises Council on the implementation and promotion of the City's sustainability program and strategy.

2.3.2 Environmental Sustainability Team (EST)

The Environmental Sustainability Team (EST) is an internal staff committee composed of representatives from the Office of the CAO, Integrated Planning and Public Works (IPPW), Planning, Fleet and Procurement, Asset Management, Finance, and FDMS. The team was established in February 2021 to streamline sustainability initiatives across the City and help guide the creation of the Corporate Climate Action Plan (CorCAP), implementation of TransformWR and the Corporate Climate Change Adaptation Plan, and general sustainability and climate change initiatives.

2.3.3 Sustainability and Climate Change and Diversity, Equity, and Inclusion Working Group (SCC-DEI)

The SCC-DEI working group was established in late 2022 to explore the connections between climate and equity work, to ensure that climate initiatives were inclusive of DEI considerations, and to keep an open line of communication between the two teams to increase efficiencies and reduce duplication of efforts.

2.3.4 Energy Management Committee

The Energy Management Committee is an internal staff committee created to better understand and effectively utilize and manage the City's energy and water resources to reduce GHG and other emissions. The committee is comprised of members of FDMS, Fleet, Finance, Corporate Communications, and Transportation Services.

2.4 Climate Partners

The City of Waterloo is fortunate to work with a number of external community partners on various projects and initiatives. These partners include: ClimateActionWR (CAWR), REEP Green Solutions (REEP), Sustainable Waterloo Region (SWR), Enova Power

Corp, Waterloo Region Community Energy, and Grand River Energy. Appendix B expands on their roles within the community.

2.5 Strategic Partnerships

Staff works closely with our post-secondary institutions to increase alignment and collaboration efforts regarding sustainability and climate change.

The City of Waterloo has established a partnership with Wilfrid Laurier University and the Laurier City Hub, an initiative which allows students to participate in social change and shape policy innovations. Students have the opportunity to work with City staff to research, design, and test real-world social and policy innovation. Previously, students designed and implemented a project to determine the level of staff engagement with sustainability and climate change work within the City, culminating into a list of potential solutions based on their research and engagement. Currently, the City has two sustainability projects ongoing with the university which include:

- Reducing end-of-term student bulk waste, and
- Greening City events and festivals.

The City has recently begun a partnership with the University of Waterloo's GreenHouse, a social impact incubator for students who want to create social or environmental change. The program trains students to develop entrepreneurial and intrapreneurial knowledge, skills, and mindsets to help build their professional networks. This will be the City's first year participating in the program with the theme of decarbonizing affordable housing.

2.6 Community Partners and Advocacy Groups

Everyone has a role to play in sustainability and climate change, and the residents of Waterloo have been shown to be an engaged and active community in this space. Appendix C includes a non-exhaustive list of resident groups, non-profits, and advocacy groups that operate within our community.

3.0 Climate Change Mitigation

Climate change mitigation refers to the reduction of GHGs in the atmosphere. This can be done through reducing the amount that is emitted, or by removing and storing, or "sequestering", gases that are already in the atmosphere. The City of Waterloo considers mitigation on both a corporate and community scale. Corporate GHGs are those that are directly emitted by City buildings, facilities, vehicles, staff activity, etc. Community GHGs include everything else within the geographic borders of the City, with the exception of assets that are owned by the Region of Waterloo. This includes residential and commercial travel and transportation, residential housing, and industry and commercial workspaces.

3.1 Corporate GHG Mitigation

3.1.1 Corporate Climate Action Plan (CorCAP)

On November 18th, 2019 Council directed staff to investigate options for a Corporate Climate Action Plan (CorCAP) consistent with limiting global heating to 1.5 degrees Celsius. The plan was to include a framework for carbon budgeting and reporting metrics developed in partnership with Climate Action Waterloo Region (ClimateActionWR) as well as appropriate accountability frameworks. The terms of reference for the project were brought forward and approved by Council on October 5th, 2020.

This plan is currently being developed, and will outline a detailed and integrated corporate approach to achieving the City's corporate emissions reductions targets. While the emissions from City-owned buildings, assets, services, and staff are relatively small as compared to the greater community of Waterloo, the intangible effects from this initiative will be felt across the community. Action on a corporate level allows the City to show leadership in this space, invest in new technologies, and integrate sustainability in a way that will reverberate across all staff work. The plan has been delayed due to resource challenges and disruptions from the COVID-19 pandemic. The plan will be brought forward for approval to Council in late 2023.

The SSO and Strategic Initiatives division are currently working with the EST on the CorCAP. Significant research has been conducted on best and promising practices in other municipalities. This will be paired with extensive internal engagement of staff in summer 2023 to create a plan that is ambitious, tailored, and most importantly grounded in the realities of the work staff does.

3.1.2 Corporate Mitigation Monitoring

Reporting corporate GHGs and creating an Energy Conservation Demand Management (ECDM) Plan is a regulatory requirement for municipalities under O.Reg. 407/18: Broader Public Sector: Energy Reporting and Conservation Demand Management Plans. The next ECDM Plan is scheduled to be completed for 2024.

Below is a high-level comparison of the City's corporate GHG emissions between 2011 and 2018. Please note, that differences in methodology (such as the inclusion of solid waste in 2018) may cause some minor discrepancies between the data sets. Between 2011 and 2018 the City's corporate GHG emissions declined by 1,882 tCO_2e. This represents a 30% reduction as compared to 2011 levels. It is important to note that, while promising, a large part of this reduction is due to change in the provincial energy grid, which are subject to fluctuations in the future.

Table 3: Corporate GHG Emissions 2011 and 2018

Sector	2011 GHG Emissions (tCO_2e)	2018 GHG Emissions (tCO_2e)
Buildings & Facilities	6,118	4,256
Wastewater	41	8
Street Lighting	535	47
Vehicles and Equipment	1,332	1,452
Business Air Travel	18	6
Business Personal Vehicle Travel	68	51
Solid Waste	NA	410
Total	8,112	6,230

3.1.3 Corporate Mitigation Actions

In 2019 the City of Waterloo Council declared a climate emergency and adopted a corporate GHG emissions reduction target of 50% by 2030 and 80% by 2050. This was followed in 2021 by the endorsement of the community mitigation plan TransformWR and the adoption of parallel community GHG reduction targets. Over the past several years the City has initiated or completed several projects to reduce or encourage the reduction of GHG, most notably in the buildings and transportation space. In 2018 the City of Waterloo (as a partner in ClimateActionWR) was recognized by the Federation of Canadian Municipalities (FCM) for completing milestone four and five of their Partners for Climate Protection Program.

3.1.3.1 Buildings

Over the past several years the City of Waterloo has been very successful at implementing and funding various GHG mitigation projects at City facilities and buildings. Notable projects include:

- The construction of the Community Pavilion to be 47% more energy efficient than the building code
- The construction of the East Side Library to be 40% more energy efficient than the building code
- The planning of upcoming projects including:
    - The electrification of the Grey Silo HVAC and domestic water heating
    - The electrification of natural gas fired space heating equipment including furnaces and rooftop units
    - The electrification of natural gas fired domestic water heating systems
    - Conversion of non-LED lighting fixtures and lamps to LED
- Deployment of solar panels at the new WMRC construction

Much of the work being done on City buildings was facilitated by the creation and evolution of the City's Green Building Policy (Corporate Policy A-033 Green Building Policy for City-Owned Buildings). The policy was first endorsed by Council in 2008 and has had several revisions to reflect Council's direction to a more environmentally

sustainable and low-carbon future. The most recent revision occurred on April 25th, 2022 (COM2021-027). The current policy applies to City-owned buildings and aims to meet the 80% by 2050 GHG reduction target. The policy stipulates that new construction is to be “zero-carbon ready” and existing building retrofits align with low carbon measures identified and require to achieve an 80% GHG emission reduction at each facility.

3.1.3.2 Vehicles

The City’s Transportation Master Plan has several priorities and action items which align with transitioning to a lower carbon transportation system. This includes preparing for and encouraging the transition of community vehicles to electric, and creating a City which encourages safe and efficient active and public transit. The City’s corporate fleet has made considerable strides towards decarbonization, highlights include:

- Transitioning portions of the corporate fleet to electric or low carbon. This includes the purchase of 14 fully electric vehicles, two hybrid vehicles, an electric lawn mower, and a 60 foot bucket truck with a completely electric hydraulic slide.
- Installation of telematics equipment to reduce idling, speeding, hard breaking, and hard cornering to reduce fuel use and monitor utilization. Currently installed in 180 vehicles, with plans to install the equipment in all fleet vehicles.
- Introduction of a “right-sizing” exercise when purchasing new vehicles to ensure the smallest and most fuel-efficient vehicles are purchased whenever possible to replace larger trucks.
- Fleet uses the EMDECs fleet management system to track proper service intervals of their equipment. This ensures that vehicles are not over- or under-serviced and reduces waste and improperly running vehicles.

3.2 Community Greenhouse Gas Emissions

While the ability of municipalities to directly influence community GHGs is limited in scope, they are able to indirectly influence 45-50% of community emissions through policies, grants, funding, planning, by-laws, education, and communication initiatives. The City of Waterloo is also in the unique position of being a part-owner of its local energy utility. This may allow for a larger opportunity to influence the energy transition. In 2022, City Council approved the merger between Waterloo North Hydro and Kitchener-Wilmot Hydro. The new company, Enova, is better able to focus on innovation in electricity distribution.

3.2.1 Plans and Governance

3.2.1.1 Official Plan

The Official Plan guides land use decision-making for the city. It represents Council's vision for growth and change, guided by the public interest.

Over time, the principles of sustainability have been more deeply integrated into the Official Plan. In the early 1990s, policies related to subwatershed planning were first incorporated. These policies recognized subwatershed planning as integral to the land use planning process and required the carrying capacity and integrity of ecosystems to be evaluated prior to development. Through studying the interrelationships between surface and groundwater and terrestrial and aquatic habitats, subwatershed planning identified where and how development could occur to minimize flood risks, stream erosion, degradation of water quality and negative impacts on natural systems.

Then, in the early 2000s, a new city structure was embedded in the Official Plan. The new structure was focused on growing inward and upward within designated nodes and corridors. In 2017, this growth management strategy was expanded by completing planning for Major Transit Station Areas.

Together, these fundamental shifts have moved the city toward development that provides for a more compact built form, more sustainable transportation choices and stronger protection of the natural environment.

3.2.1.2 TransformWR

TransformWR is a regional community GHG mitigation plan endorsed by Council on May 31st, 2021. It was developed through the collaborative efforts of all eight area municipalities as well as academic representatives and community organizations including Sustainable Waterloo Region, REEP Green Solutions, and Waterloo Region Community Energy (WRCE). The plan identifies 78 local long- and short-term actions to achieve an 80% regional GHG emissions reduction target by 2050 (based on 2010 levels). These actions are broken up into six Transformative Changes:

1. Most trips will be taken using active transportation with the support of a robust public transit system.
2. Remaining personal and commercial vehicles will be zero emissions vehicles.
3. Businesses and homes will no longer use fossil fuels for space heating and cooling, and hot water heating.
4. Waterloo Region will use less, waste less, and no longer dispose of organic matter in landfills.
5. Waterloo Region will have a thriving local food system built on local farming and food production and processing that feeds much of the community.
6. Waterloo Region will have leveraged reducing GHG emissions to increase equity, prosperity, and resiliency for all.

The City of Waterloo (and area municipalities) are directly responsible for leading, partnering, collaborating, or supporting 31 of the actions in the plan. The other actions are either the responsibility of the other municipalities or the Region of Waterloo. Since the release of the plan, the City has been working with the ClimateActionWR collaborative to create a governance structure intended to guide all work going forward in the region. The collaborative has also spearheaded public education about the plan including the recent release of a video and multiple in-person public engagements.

The City (and all area municipalities) are responsible for leading 26 of the 31 actions assigned. Of these actions, the City of Waterloo has either initiated or completed over 80% ranging from large scale transformative initiatives to more localized action such as managing community gardens.

3.2.1.3 The Energy Conservation Demand Management (ECDM) Plan

The ECDM Plan is a provincial requirement under O.Reg.507/18, and is legislated to be updated every 5 years. The last iteration of the plan was completed in 2019. The plan includes an inventory of corporate GHG emissions, action items to reduce emissions, and a historic list of previous items.

3.2.1.4 The Community Energy Investment Strategy for Waterloo Region

The Community Energy Investment Strategy for Waterloo Region (CEISWR) was created in February 2018 in collaboration with the Region of Waterloo, the cities of Waterloo, Kitchener, and Cambridge, and the local utilities. The purpose of the CEISWR is to improve and sustain Waterloo Region's economic competitiveness and quality of life through the coordination of targeted energy investments. The Strategy includes a list of 22 Energy Opportunities and 20 Recommended Actions that aim to support and facilitate implementation of the opportunities towards improving energy performance of buildings, enhancing local energy generation and security, transitioning to a low-carbon local transportation network, and cultivating a supportive and innovative environment for energy investments.

3.2.2 Community Mitigation Monitoring

The City of Waterloo is part of the regional climate collaborative ClimateActionWR which acts in tandem with all eight area municipalities to plan and implement community GHG mitigation measures. As part of this partnership, community GHG are measured and reported on as a region, rather than as individual municipalities.

Traditionally, community GHG emissions are measured every five years, with the last measurement having occurred in 2020. However, as a result of the COVID-19 pandemic, the year 2020 is not an accurate representation of changes in GHG emissions. Reductions in commuter and personal travel, changes to industrial operations, and the closing of workplaces and retail locations led to lower than expected emissions that should not be used to indicate a trend. To reduce this impact, 2019 data will be presented as a proxy. Table 4 represents a summary of the community GHG inventory data. A full report is available through ClimateActionWR's Our Progress, Our Path 2022: Community GHG Re-Inventory Report.

Table 4: Community GHG Inventory Summary for 2010, 2015, and 2019

	2010 (Baseline)	2015	2019
Total (Tonnes of CO_2e)	4,500,982	4,223,636	4,333,642

	2010 (Baseline)	2015	2019
Per Capita (Tonnes of CO_2e)	8.4	7.5	7.1

The data shows that the per capita emissions of CO_2e were reduced from 2015 to 2019. However, due to factors such as an increasing population, the total amount of community GHG emissions has increased by 110,006 Tonnes of CO_2e in the same time period.

3.2.3 Community Mitigation Actions

3.2.3.1 Active and Public Transportation

Although the City of Waterloo is not directly responsible for public transit, several initiatives have been undertaken to encourage active and public transit in the community. The City also encourages low-carbon methods of transportation through its Transportation Master Plan and Trails and Bikeways Master Plan.
Active transit, such as walking or cycling, has been encouraged through community planning, incentives, education programs, and behavioral change programs including:

- In October of 2022 the City of Waterloo officially opened the Larch Street woonerf. A woonerf, also known as a “living street”, is a shared street designed to emphasize walking and cycling over car use, while still allowing for vehicle traffic. Pedestrians, cyclists, and vehicles all share the same right-of-way without any physical boundaries separating them. This encourages only vehicles who are there to patron the local businesses to use the road. The design included bike racks, planters, benches, street furniture, waste receptacles, and young trees for a future urban garden and a community meeting space.
- There are more than 225 bike parking spaces (covered and uncovered) in Uptown Waterloo, Cycling Maps and Newsletters, bike parking maps, bike parking at all community centers, bicycle pumps available at several public facilities, and bike valet services at certain City events. Bicycle cross-rides and bike-boxes can also be found at intersections throughout the City.
- There are150 km of off-road and multi-use trail with in-house trail maps.

The City of Waterloo was the first mid-sized City in Ontario to achieve the Bike Friendly Gold Standard (Gold Bicycle Friendly Community) by the Share the Road Cycling Coalition. The City is currently working on implementing aspects of the Transportation Master Plan with the aim of achieving the Platinum level Bicycle-Friend Community ranking.

3.2.3.2 Waste Reduction

While waste collection and disposal is a Regional responsibility, the City of Waterloo has initiated several smaller projects to reduce the amount of waste produced.

- The City has dog waste collection units, affectionately known as “poop power”. Waste from these units is collected and shipped to a local bio-digester where the waste is separated from the bags and converted into electricity, heat, and

nutrient dense fertilizer. As of 2022 enough waste has been collected through that system to power 400 homes for a month.
- In 2019 the CAO implemented a single-use water bottle ban inside Waterloo City Center for municipal business use.
- The City hosts 20 Minute Makeover Events on Earth Day to encourage cleaning up litter in city parks and grounds.
- Clerks made leftover election supplies available for further use beyond the election, and there are e-waste containers available at City Center
- Several services have been made available online, including paying parking tickets, paying property taxes, filing complaints, job applications, etc. These services no longer require the use or disposal of paper products.
- Fleet has implemented the use of fully synthetic oils, which has resulted in longer service intervals, less spent oil, and fewer used filters. Recycling of metal, spent oil, solvents, batteries, and tires is standard practice in the operation.
- Procurement transitioned to an electronic bidding system alleviating the need for suppliers to travel to City offices to deliver multiple copies of paper submissions.

3.2.3.3 Thriving Local Food Systems

While the City of Waterloo is primarily an urban center, efforts have been made to create a thriving local food system through the following initiatives:

- In 2020, during the worst of the pandemic, the City provided 100 residents with at home garden kits. The kits were so popular that they were gone within an hour. The kits included everything needed to grow vegetables and herbs in a backyard, patio, or balcony. In addition to supporting resident health and well-being, the kits also provided access to local and low-cost food for residents.
- The City manages seven community gardens at six different locations. The gardens began near the early 2000's, but took off as a program in its current form in 2013. The gardens are neighborhood led with operational and funding support from the City. In 2023 Council approved policy M-012 Community Garden Program Policy to continue to guide the successful program and promote safe, transparent, sustainable, and equitable delivery.

3.2.3.4 Sustainable Economic Development

The City encourages local businesses to be sustainable through educational opportunities and planning including:

- The Waterloo Region Small Business Centre hosts events on the SDGs for local businesses which focuses on the contributions of organizations and entrepreneurs to achieve the UN SGD targets.
- Council approved Sustainability Standards for the City's Generation Park. Urban design principles include all-encompassing environmental sustainability, unique innovative and green design features, and direct linkages to on-road and off-road facilities to enable safe and highly visible connections for pedestrian and cyclists.

4.0 Climate Change Adaptation

Climate change adaptation refers to changing traditional behaviors, assets, policies, and processes to become more resilient to the impacts of climate change. Often many of the activities a City already does are part of making sure the community is resilient towards impacts of weather. Contrary to mitigation, adaptation efforts are often harder to quantify or differentiate. Positive impacts may not be seen until after an event, or may be entangled with other compounding influences.

4.1 Corporate Adaptation

4.1.1 The Corporate Climate Change Adaptation Plan

The Corporate Climate Change Adaptation Plan (CCCAP) was approved by Council on June 17th, 2019. The intent of the CCCAP is to increase the adaptive capacity and resiliency of the City's assets and services to future climate impacts, and to integrate climate change adaptation into day-to-day operations.

This plan includes 37 recommended actions encompassing policies, projects, and programs. These actions are rooted in eight key goals:

1. Create conditions to minimize health and safety risks to outdoor workers and community members.
2. Generate awareness of changing climate conditions with staff and the public.
3. Ensure a coordinated response to and recovery from extreme weather events.
4. Consider climate change impacts in the design, construction, and maintenance of built infrastructure.
5. Foster resiliency within the urban forest and natural landscape.
6. Reduce risks associated with heavy rainfall and flooding.
7. Minimize disruptions to City services.
8. Integrate climate change adaptation into the City's strategies, plans, policies, procedures, and operations.

The creation of the plan was the result of a collaborative effort by the staff Adaptation Working Group, the Project Manager, ICLEI Canada, and LURA Consulting. Staff from several other divisions including the City Managers and Director groups were also key in the planning process. The corporate-wide and collaborative nature of this initiative enabled the creation of a plan that could tackle adaptation for the City in a practical, thorough, and inclusive manner. It was a successful example of the collaborative approach required to undertake efforts towards sustainability and climate change goals. The City is currently working on implementation of the actions, and staff will be bringing forth a 5-year update report in 2024.

4.2 Community Adaptation

4.2.1 Community Adaptive Actions

4.2.1.1 Enhancing the Natural Environment and Biodiversity Protection

The City has a longstanding history of protecting its natural resources including forests, air, water, and local wildlife. Each fall the City works with local neighborhood and community groups to host tree planting events in different City parks. These trees provide healthy habitats for pollinators and expands our urban forest, creating shade and improving water and air quality. In the upcoming years, the City will be creating its Urban Forest Management Strategy which will integrate existing policy, strategies, and plans to provide a clear direction for the management of the City's urban forests for the next 10-15 years. Urban forests are under pressure from any things, including climate change and invasive species insects. In addition, the City is currently conducting the Laurel Greenway Feasibility Study, which will focus on creating meaningful greenspace for residents along the Laurel Creek from Waterloo Park to Weber Street.

Notably, the City of Waterloo is recognized as a Bee City due to its efforts in supporting native pollinators and their habitat. This is done through education and community stewardship on municipal parkland including:

- Waterloo's Pollinator Working Group provides educational experiences and park stewardship activities relating to native pollinators and their habitat.
- During September and October, the community is invited to dig in and plant native trees, shrubs, and wildflowers in public parks through the community planting program.
- The City provides additional information through a Bee-City e-newsletter.

Communities within the City have often been involved with efforts in park stewardship. A prominent example is the City's Partners in Parks program, which allows residents short- or long-term stewardship opportunities. Neighborhood Associations can also host a park project involving the planting and maintenance of up to 15 trees.

4.2.1.2 Resilient and Adaptive Community

During periods of extreme heat the City has several cooling-specific locations including the splash pads and spray parks at Waterloo Park and Albert McCormick Community Centre and the Moses Springer outdoor pool. During extreme weather the City also encourage people to seek relief if needed within our recreational facilities. Several upcoming projects will also be used to protect residents from the heat, and provide more pleasant and accessible public spaces:

- Improvements to Waterloo Public Square including a water feature and a permanent and moveable shade element.
- Installation of water drinking fountain in upcoming uptown public bathroom.

Resilience against changing conditions, in particular precipitation, have been or are being integrated into several City Master Plans and processes:

- The Stormwater Master Plan (December 2019) included network modelling under predicted impacts of climate change. The modelling exercise determined that climate change does increase the prevalence of flooding, but that this can largely be mitigated through the implementation of wide-spread source and conveyance controls to reduce runoff volumes into the storm sewer network.
- The Asset Management Plan (2020) has a goal and objective of addressing climate change implications and was noted as a sample driver in the work. The Corporate A-030L Strategic Asset Management Policy stated that detailed asset management plans will define the costs that may arise from climate change risks & implications, opportunities and strategies to mitigate climate change risks and implications, and a disaster strategy for climate change related impacts on infrastructure.
- The City made a strategic adjustment to its asset management approach in 2022 by changing from a like-for-like approach to a modern equivalent methodology. This change improves the Waterloo DSS's forecasting capability, adjust the estimated annual infrastructure funding gap and inform the "percentage of needs" calculation used to allocate capital replacement and rehabilitation funding for tax base funded assets. An example of this change is a replacement of HPS decorative street light bulbs with Light Emitting Diode (LED) bulbs.
- The Waterloo Sanitary Master Plan considered, as the wet weather design event, the impact of a 10-yr, 3 hour Chicago storm on the collection system response. This storm was characterized by its high intensity and short duration. The Plan includes a section on the potential impacts of climate, including a review on the current lack of standards in the field, and the current best practices available to municipalities.

Additional projects to increase the resilience of the City and community on increasing precipitation include:

- The Vista Hills subdivision has a system whereby clean water is collected from rooftops and infiltrated directly into the ground to reduce overland flooding. This was the second system of this scale built in Ontario.
- In partnership with REEP a rain garden was planted at Waterloo City Center in 2020.
- In 2011 the City began implementing the stormwater credit program. Residents of the City who use methods such as rain barrels to divert stormwater are eligible for up to a 45% credit on the stormwater portion of their water utility bill. The program aims to help protect water resources.
- Planning has an environmental stewardship booklet "Naturally: Your Waterloo" which advises residents on how they can make environmentally conscious decisions in their own lives and properties.
- GreenLab is an environmental education project located within RIM Park. The project features a new outdoor sports facility with two artificial turf fields, four natural sports fields, a rain-water harvesting system, and a green roof on a

pavilion in the central gathering area. GreenLab was conceived by the City of Waterloo to showcase and build awareness of the importance of water conservation and re-use. The system collects and re-uses rainwater that would otherwise be drained directly into the storm sewers. It reduces water consumption on four grassed sports fields by up to 10 million liters of water annually. The rainwater harvesting system stores 563,000 liters of rainwater, reducing the impact on the City's stormwater system. It also acts as an educational tool with descriptive signage and a web-based educational module available.

- The City has begun an advanced metering initiative for monitoring household water use so that residents can better understand and reduce their consumption.
- The City has been monitoring the Laurel Creek Watershed since 1996 to assess the quality and quantity of the water.
- The City of Waterloo also introduced a rainwater harvesting system at the Waterloo Service Centre to collect, treat, store and reuse stormwater runoff from building rooftops and parking lots.

4.3 Staff Engagement on Sustainability and Climate Change

Municipal staff, and the expertise, passion, and ingenuity that they bring to their work, are an integral and indispensable part of pushing the City of Waterloo towards its climate change goals. In order to succeed, each department, division, and team within the City must be aware of how their specific role and knowledge can be used to reduce community and corporate GHG emissions, and create a resilient and adaptable city. By embedding this approach internally, the City can look to establish a culture of sustainability that spreads beyond the Corporation and into the community.

In 2022, various forms of staff engagement were conducted to determine the state of staff knowledge, attitudes, and participation towards sustainability and climate change efforts within the City. This included City-wide interviews conducted by the SSO as well as research completed by students from Wilfrid Laurier University which focused on environmental sustainability and staff engagement. Overall, employees were found to be motivated to be actively engaged and involved in the City's sustainability plans and efforts, but faced several key barriers integrating it into their own roles including:

- A lack of involvement in sustainable initiatives planning and projects.
- A lack of knowledge on how sustainability practices or initiatives converted into individual responsibilities. Of the employees surveyed in the Laurier study, 54% stated that they did not understand their roles in terms of sustainability and environmental efforts.
- A lack of staff education on how to participate in sustainability initiatives, especially on a day-to-day to basis
- Perceived lack of clear sustainability measurements and tracking within the City
- Perceived lack of relevance of sustainability work to their roles.
- Logistical roadblocks including lack of funding or lack of staff or expertise resources.

- A lack of mandate and/or opportunity within their own roles to encourage or allow them to incorporate sustainability.
- Lack of knowledge of any of the City's sustainability and climate change goals, work, staff, or short-and-long term goals.

Despite the above, several sustainability and climate change initiatives have been, or are being, implemented in various divisions across the City.

Several efforts have been made to engage and educate staff to encourage them to be more sustainable in their personal and professional lives. When new staff join the City they must take the Adaptation Learning Module which teaches new employees about the City's climate change adaptation efforts. This module will soon be accompanied by a Greenhouse Gas Mitigation Learning module. This module is being designed to educate new staff on the science behind GHG mitigation and give an overview of the mitigation efforts of the City. The anticipated completion date for this module is 2023.

Staff have also had access to a variety of events and initiatives to encourage active and public means of transportation to replace the use of single-occupancy vehicles to get to work. This includes membership to the TravelWise program, educational workshops, staff bike ride events, and incentivized parking costs.

5.0 Measurement and Reporting Frameworks

As a result of the holistic nature of the work, elements of sustainability and climate change work is measured in various ways throughout the City. While this annual report aims to capture to broad essence of progress, detailed analysis of division-specific reporting on technical work has been left to existing reporting and measurement structures. Below is a list of the current sustainability and climate change specific measurement and reporting structures in place in the City, and when relevant the Region:

- This current report is the first of an intended annual series to be released on or near Earth Day every year highlighting the progress or challenges accomplished in the sustainability and climate change portfolio.
- Every five years the City is provincially legislated to report corporate GHG emissions through the completion of an ECDM Plan.
- Every year the City submits to the province under the Broader Public Sector reporting requirements electricity, natural gas, and water use for City owned buildings.
- Ongoing participation as part of ISO 37120 Sustainable Cities and Communities led by the World Council on City Data (WCCD).
- Every five years the City of Waterloo contributes to the Region's reporting of community GHG emissions. The most recent inventory was for the year 2020.

6.0 Next Steps

The City of Waterloo is currently in a position to formalize and institutionalize its sustainability and climate change initiatives, which will be a key area of focus in the upcoming year. A significant amount of work has been done to date to establish a baseline of knowledge throughout the City, and this work will be built on to prioritize actions and funding. Notable upcoming projects in this space include:

- Completion of the Corporate Climate Action Plan to formalize specific actions in the City on reducing GHG emissions.
- Formalization of funding structures and internal decision-making as part of the three year budget process
- Inclusion of sustainability and climate change in the 2023-2026 Strategic Plan.
- Establishment of a process for reviewing and reporting on localized climate projections at regular time intervals.
- The SSO and Strategic Initiatives, in partnership with Communications, are currently updating the Environment and Climate Change Website to be more focused around our current climate change activities and goals, feature the City's accomplishments in this space, and provide information for residents on how they can be sustainable in their own lives.
- Exploration of the links between asset management and climate change adaptation as per O.Reg 588/17: Asset Management Planning for Municipal Infrastructure.
- Continued internal and external engagement, communication, and partnership creation.
- Five year update on the CCCAP in 2024.

Appendix A
Timeline of Sustainability and Climate Change in the City of Waterloo

- **1989**
  - Development of the Environment First Policy
- **1992**
  - The City of Waterloo completes one of Ontario's first watershed studies in partnership with the Grand River Conservation Authority leading to the completion of a number of subwatershed plans and environmental policies in the Official Plan
- **1999**
  - The City of Waterloo becomes a member of the FCM (Federation of Canadian Municipalities) Partners for climate protection program
  - Council agrees to work towards a corporate GHG emission reduction target of 20% and a community GHG reduction targets of 6% by 2009
  - Completion of the City's Clean Air Plan
- **2002**
  - Council accepts the Environmental Strategic Plan
- **2003**
  - The City of Waterloo generates its first Solar PV energy to offset a portion of the electrical load of City Center
- **2010**
  - The Environmental Strategic Plan becomes the Environmental Strategy
- **2011**
  - The City of Waterloo begins tracking its GHG emissions as per O.Reg. 507/18
  - Council approves the decision to join ClimateActionWR (previously Waterloo Region Climate Collaborative)
  - Stormwater management utility rates are introduced
- **2013**
  - Council approves the City's first Energy Conservation Demand Management (ECDM) Plan
- **2014**
  - The City becomes a pledging partner in the Impact Network (previously the Regional Sustainability Initiative)
- **2015**
  - Creation of the City of Waterloo's Sustainability Office
- **2016**
  - Formation of the Sustainability Advisory Committee (SAC)
- **2018**
  - Council endorses the Community Energy Investment Strategy
  - Council endorses a community energy reduction target of 80% by 2050
  - Council endorses the Green Building Policy for City-Owned buildings

- **2019**
  - Council endorses the Corporate Climate Change Adaptation Plan
  - “Enable bold local actions to address the climate change crisis” is named as an objective in the 2019-2022 Strategic Plan
  - Council declares a climate emergency and adopts corporate reduction targets of at least 80% by 2050
- **2020**
  - Council approves the terms of reference for the Corporate Climate Action Plan (CorCAP)
- **2021**
  - Council endorses the TransformWR community GHG emission reduction targets of 50% by 2030 and 80% by 2050
  - Council approves the Corporate Greenhouse Gas and Energy Roadmap-Phase 1.
- **2022**
  - City of Waterloo hires a Senior Sustainability Officer in the Office of the CAO to oversee work on the sustainability and climate change portfolio.
  - Strategic adjustment of asset replacement from a like-for-like to modern equivalent approach.
- **2023**
  - Council approves budget for a Director of Strategic Initiatives role to oversee sustainability and climate change as part of their portfolio.

Appendix B
Climate Partners

ClimateActionWR (CAWR): ClimateActionWR is a formal collaboration between all eight area municipalities in the Region of Waterloo. It is co-led by REEP Green Solutions and Sustainable Waterloo Region. As a funding partner, the City of Waterloo is a member of their management team along with the Region, and the Cities of Kitchener and Cambridge. ClimateActionWR coordinate the activities of the regional climate mitigation strategy TransformWR, measures and monitors progress on community emissions reductions, and engages the community in climate action initiatives. The collaborative is a member of Sustainable Waterloo Region.

REEP Green Solutions (REEP): REEP is an environmental charity focusing on empowering the local community with practical tools, knowledge, and capacity for action to make sustainable living the norm. Their programs include energy efficiency, water conservation, waste reduction, and cultivating healthy yards with a focus on the residential sector.

Sustainable Waterloo Region (SWR): Sustainable Waterloo Region is a social enterprise non-profit focused on helping local businesses and members of the community become environmentally and economically sustainable and strong. They run several programs including the Impact Network for operational sustainability, DriveZero, TravelWise, ClimateActionWR, and evolveGREEN.

Enova Power Corp: Enova Power Corp is the local utility and distribution company which supplies power to the City of Waterloo.

Waterloo Region Community Energy (WRCE): Waterloo Region Community Energy is a collaborative initiative between the Region of Waterloo, its urban municipalities, and the local utilities. WRCE initiates and supports projects to improve and sustain Waterloo Region's economic competitiveness and quality of life through the coordination of targeted energy investments in Buildings, Energy Generation, and Energy Literacy.
.
Grand River Energy (GRE): Grand River Energy is a sustainable energy solutions company which helps organizations create their own power, use less energy, optimize energy usage, and benefit from government incentives to drastically reduce their operational costs and carbon footprint.

Appendix C
Community Partners and Advocacy Groups

- Bicycle Mayor of Waterloo Arcy Canumay collaborates with people and organizations in Waterloo to create an environment that will encourage more people to ride their bike.
- Climate Legacy mobilizes older Canadians in climate action through their voice, their time and their money.
- Cycle Waterloo Region (CycleWR) is an advocacy group focused on safe, convenient, respected, and everyday cycling as a mode of transportation for people of all ages and abilities.
- Divest Waterloo is an advocacy group focussed on supporting fossil fuel divestment campaigns across Waterloo region.
- Faith Climate Justice WR is a collective of faith communities in Waterloo Region advocating for climate action and a just recovery from the COVID-19 pandemic.
- Grand River Environmental Network (GREN) is a network of advocates and stewards for the protection of the environment in the grant river watershed.
- GreenWR is an organization focusing promoting on Green Development Standards.
- Ground Up Waterloo Region is an inter-advocate platform for political action.
- Hold the Line Waterloo Region is a non-profit group dedicated to planning events and engagement opportunities that shift the needle towards sustainable development in Waterloo Region.
- Rare is a community-based urban land trust and environmental institute that protects over 1,200 acres of highly sensitive lands across 7 properties in Waterloo Region and Wellington County.
- RISE Waterloo Region RISE Waterloo Region is the local chapter of the global RISE for Climate movement which promotes people speaking up for international and local climate action.
- Waterloo Region Climate Initiatives (WRCI) is a non-profit group created to raise awareness about the climate change impacts of our food systems and the benefits of expanding the consumption of a plant-based diet.
- 50 by 2030 WR (50x30WR) is a grassroots, community-led campaign advocating for Waterloo Region to commit to a 50% reduction in GHG emissions reductions by 2030.

Appendix D
November 18th, 2019 Declaration of a Climate Emergency

Motion:

WHEREAS the Canadian government has committed to limiting global heating to 1.5 degrees as per the COP21 Paris Agreement, and the City of Waterloo has committed to a shared community scope reduction of greenhouse gas emissions to 80% below 2010 levels by 2050;

WHEREAS the Intergovernmental Panel on Climate Change implies that to hit these targets, carbon dioxide emissions need to drop between 50% and 58% below 2010 levels by 2030 and between 94% and 107% by 2050, and then continue to decline, reaching net negative emissions in the second half of the century;

WHEREAS the City of Waterloo has identified climate change as a crisis and committed to enabling bold local actions to address the crisis; adopting environmental sustainability as a guiding principle of the 2019-2022 Strategic Plan and embedding it in the Corporate Climate Adaptation Plan, the Conservation Demand Management Program, the City's Green Building Policy and the City's work with Climate Action Waterloo Region;

WHEREAS the City of Waterloo is a community partner in the Region of Waterloo-led process to develop a Community Climate Adaptation Plan for Waterloo Region;

WHEREAS the City of Waterloo has made a commitment to develop a suite of metrics using the ISO 37120:2018 international standard in order to align our efforts with the United Nations' Sustainable Development Goals (SDGs); WHEREAS climate action is an holistic endeavour and must be done alongside Indigenous peoples and nations, the original caretakers of this land, and must also address the immediate social impacts of climate breakdown on our most vulnerable populations;

WHEREAS the purpose of a climate emergency declaration is to accelerate sustained and meaningful action, and to commit to a scaled and timely response to climate breakdown;

Therefore be it resolved that the City of Waterloo declare a climate emergency and formally adopt a Corporate emissions target of a minimum 80% reduction in GHG emissions below 2011 levels by 2050;

Be it further resolved that Council direct staff to investigate options for a Corporate Climate Action Plan commensurate with limiting global heating to 1.5 degrees Celsius, and for that plan to include a framework for carbon budgeting and reporting metrics developed in partnership with Climate Action Waterloo Region, as well as appropriate

accountability frameworks to embed the Strategic Plan's guiding principles into all divisions, departments, reports, and projects; and for staff to report back to Council in 2020 with terms of reference for this plan and a proposed timeline for prompt implementation;

Be it further resolved that Council directs staff to build the capacity of City employees and volunteers, through learning and collaboration as well as staffing and leadership, to fully understand and robustly address the climate emergency within departments and divisions across the organization;

Be it finally resolved that the City consult and collaborate with the public and relevant groups or organizations in the process of addressing climate breakdown and meeting corporate climate goals.