

Living Green Master Plan

Final Report

January 2023



Contents

Introduction	3
Transportation	6
Urban Form	1C
Natural Heritage / Natural Areas System	13
Air	15
Water	18
Waste	20
Energy	23
Organization and Policy	26
Education Programs	28
Appendix	32

Introduction

The LGMP is Mississauga's 10-year action plan for doing business and providing services in an environmentally sustainable way. It was adopted by City Council in 2012.

The Living Green Master Plan (LGMP) has guided the City of Mississauga's environmental sustainability actions for a decade. Adopted by Mississauga City Council in January 2012, the LGMP has provided guidance to help the City prioritize actions to meet the environmental objectives of its Strategic Plan.

Having reached the 10-year mark, the City is pleased to report that significant progress has been achieved.

This report provides a final status of the initiatives from the LGMP. The priority areas, concepts and actions within the LGMP have advanced and are highlighted throughout this report and in Figure 2. This evolution was required given the importance, complexity and desire for the City to take further and deliberate action to protect our environment. Many supportive, comprehensive strategies, plans, standards and policies have since been created and are being implemented across the City.

Progress Snapshot

The LGMP provided a strategic framework that identified three key roles for the City to meet the objectives of the Strategic Plan: Set an example; Encourage others; and, Compel others.

Forty-nine corresponding actions were then designed to reinforce linkages between City departments and partner agencies. They are focused around nine priority areas, which are managed throughout different city departments and include transportation, urban form, natural heritage, air, water, waste, energy, organization and policy and education programs.

Introduction

Progress has been categorized as:

- Completed & Closed: The action has been achieved, with supporting documentation available
- Completed & Ongoing Progress: The action has been completed and efforts are ongoing to continuously improve
- Underway: Plans are being carried out to achieve action
- Deferred/Not Applicable

This report highlights some of the accomplishments of City staff and community members. It is designed to provide qualitative and/or quantitative insights into the City's progress. The detailed status of all actions can be found in Appendix I.











Figure 1: Status of all LGMP actions

Introduction

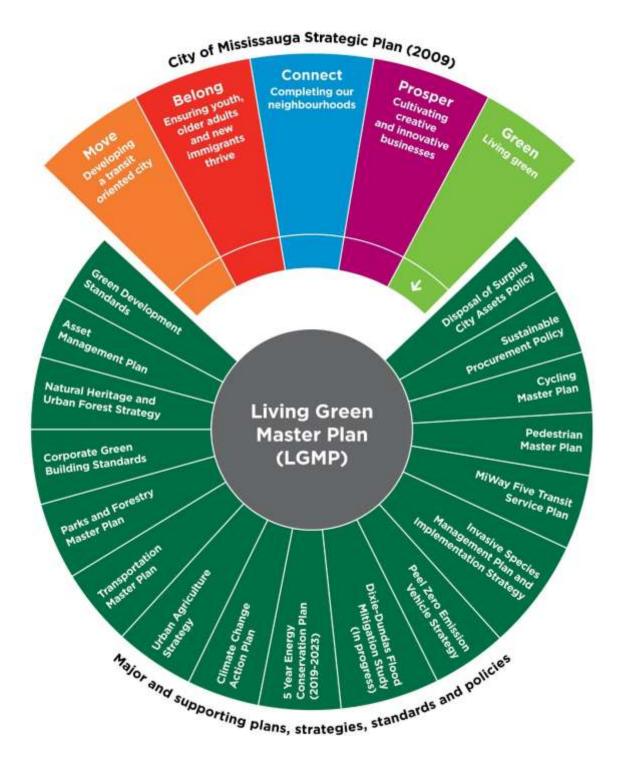


Figure 2: The evolution of environmental sustainability at the City of Mississauga

The City is committed to providing safe and effective transportation networks that make it easier for residents and commuters to travel across Mississauga using sustainable modes such as walking, biking and transit. Sustainable transportation offers healthy options that also lead to improved air quality and a reduction in greenhouse gas (GHG) emissions.

A number of plans and strategies have been developed that support specific transportation actions. As a result, the City is able to report considerable progress in providing access to sustainable modes of transportation.

Cycling

The City is committed to transforming Mississauga into a bicycle-friendly city, where people can choose to cycle for recreation, fitness and daily transportation needs. Our evolving cycling network is composed of shared roadways with signed bicycle routes and sharrows, dedicated bicycle lanes, boulevard multi-use trails and off-road trails.

The 2010 Mississauga Cycling Master Plan recommended a bicycle route network and supporting programs to create a multi-modal transportation system—one that includes various

modes of transport (e.g. walking, cycling, automobile, public transit, etc.). That plan built upon existing trails and bicycle facilities to propose an expanded and connected bicycle network to provide access to key destinations around the city. More than 600 km of cycling infrastructure is now in place. The City is also seeing more participation in events like the annual Tour de Mississauga and Community Rides.

Since 2016, the City has been able to leverage funding from several federal and provincial programs, such as the Ontario Municipal Commuter Cycling Program, the Investing in Canada Infrastructure Program and others. These investments have helped to support trails and cycle tracks, cycling programs and services, as well as taking a "complete streets" approach to the development and reconstruction of our roads to create a network that residents are comfortable using.

Guided by the City's second Cycling Master Plan, approved in 2018, the long-term cycling network will include close to 900 km of cycling infrastructure that will be built over the next three decades. The resulting network aspires to be safe, connected, convenient and comfortable for people on bicycles.

Cycling Facility Type	Constructed before 2010 (km)	Constructed from 2010 to 2016 (km)	Constructed from 2016 to 2022 (km)	Total (km)
Bicycle Lanes	29	25	12.7	66.7
Boulevard Multi-Use Trails	61	27	36.7	124.7
Off-Road Multi-Use Trails	205	16	77.4	298.4
Shared Routes	79	12	27.1	118.1
Total	374	80	153.9	607.9

Figure 3: Kilometres of cycling facilities in place in Mississauga



Transportation Master Plan

Approved in May 2019, Mississauga's Transportation Master Plan (TMP) envisions everyone in Mississauga having the freedom to move safely, easily and efficiently anywhere, at any time. The TMP supports a growing population by expanding its transportation corridors and connecting the city to its neighbouring municipalities, while creating new connections between employers and major attractions. Investments are being made to manage congestion, bolster transit services, manage traffic and provide new methods of transportation, such as cycling and pedestrian networks that are safe, comfortable, connected and convenient.

The Transportation Master Plan consists of nearly 100 actions, categorized into six goals that focus on the freedom to move.

- Safe conditions for all travellers, advancing Vision Zero by supporting hazard-free travel and striving for zero fatalities.
- Accessible networks where moving is easy regardless of a person's age, ability, income, or familiarity with the city.
- An integrated network, where people and goods have viable options for moving within and beyond the city.

- Simple and pleasant connections between people and the places and things they need to prosper.
- 5. Support for the health of people and the planet, with more people-powered trips, lower vehicle emissions, and better stewardship of the natural environment
- Leadership in adapting to changes that reshape the transportation system and how it is used.

Key actions of the TMP include developing a Traffic Management Plan, expanding bicycle parking on Cityowned property, developing a zeroemission vehicle (ZEV) strategy, and providing cycling outreach and education for community members.

The completion of these actions and fulfillment of these goals will not only strengthen Mississauga's transportation system, but will also foster the City's growth and make Mississauga a more sustainable and accessible place to live.





To support our complex transportation needs, a number of plans and strategies have been developed that support specific action on transportation. These include, but are not limited to:

- Transportation Master Plan
- Cycling Master Plan
- Changing Lanes Study
- Pedestrian Master Plan
- Climate Change Action Plan
- Peel Zero Emissions Vehicle Strategy
- <u>Transportation Demand Management Strategy and Implementation Plan</u>
- MiWay Five Transit Service Plan
- MiWay's Infrastructure Growth Plan
- Transit and Road Infrastructure Plan

Urban Form

Urban form is best described as the physical layout and design of a city while incorporating urban design - the art of shaping the interaction between people and places - through the arrangement, appearance and physical and natural functions of cities. Urban form is a key policy and program area where municipalities have clear jurisdiction and can undertake actions to significantly improve the environment. The City has been proactive in bringing forward innovative programs, standards, policies and pilot projects to support urban form and the social fabric of Mississauga.

Support for Urban Agriculture and Community Gardens

Community gardens provide access to locally grown foods while educating residents on the importance of urban agriculture. These gardening spaces are a means to encourage active, healthy living and connect Mississauga residents with resources to practise urban agriculture.

The first community garden in Mississauga was established in 2006, next to Mississauga Valley Community Centre. Named 'Garden of the Valley', this community garden has more than doubled in size, expanding from 20 plots to 47 plots by 2022. The tremendous success and popularity of this early pilot project led to the establishment and growing interest in a

community garden program.

Since the inception of Garden of the Valley, nine additional community gardens and an urban farm have been constructed in partnership with Ecosource. Each garden varies in size, ranging from 17 to 52 plots.

Thousands of pounds of locally grown, fresh produce are harvested at Mississauga's community gardens each year. In 2020, 3,583 kilograms of produce were grown by residents for consumption or donation to local food banks. These numbers increased significantly in 2021, where 4,835 kilograms of produce were grown, indicating growing support and need for community gardens in Mississauga.

The community garden program is a key component of the City's Urban Agriculture Strategy, which was approved in 2022. Through this program, residents are able to participate in urban agriculture efforts throughout the city, grow culturally significant foods, identify and address food insecurity and strengthen community-level resilience and preparedness.

Urban Form

Promoting Green Development Standards

The City continues to promote the Green Development Standards (GDS) through development applications for new buildings. As part of this process, developers submit a green features letter for all new development applications. The list itemizes the proposed sustainable features, including stormwater initiatives and plans for Leadership in Energy and Environmental Design (LEED®) certification.

The GDS initiative has successfully tracked the construction of 50 LEED® buildings across the City, and an estimated 265 bio-retention swales, 50 rain harvest features, 330 preamble areas and thousands of preserved and new trees on-site and in boulevards.

A refresh of the 2012 GDS is underway and will include more robust energy and resilience considerations within buildings, site features and boulevard design.





Urban Form



Key standards, awards program, strategies and studies guiding work on Urban Form include:

- Green Development Standards
- Mississauga's Urban Design Awards
- Urban Agriculture Strategy
- Traffic Impact Study

Natural Heritage / Natural Areas System

Mississauga is home to a thriving urban forest and natural heritage system. Supported by its native vegetation and wildlife, the City is working towards a smart, sustainable future while preserving its landscapes and natural areas.

By-laws, strategic plans and programs are used to enhance Mississauga's rich natural heritage system by protecting native plants and promoting the growth of trees on public and private property while also preventing the outward expansion of invasive species.

Growing and Protecting the Urban Forest

Mississauga earned the Tree Cities of the World designation in 2020, joining the ranks of cities like Paris, Auckland, New York City and Toronto. This international program celebrates cities across all continents that meet core standards for the care and planning of urban trees and forests. Mississauga's rich natural heritage System, which is supported by key initiatives like the One Million Trees program, played a key role in securing this prestigious designation.

Mississauga's One Million Trees program has a goal to plant one million new trees by 2032 to help conserve and enhance the City's open spaces and forested areas. Since 2012, nearly 500,000 new trees have been planted with the help of City staff, partners and volunteers.

The City's Fantastic Trees Program also fosters an appreciation of Mississauga's urban forest by offering residents the opportunity to recognize remarkable trees on City property.

Invasive Species Management Plan and Implementation Strategy

The Invasive Species Management Plan and Implementation Strategy (ISMP) was adopted in 2021 and guides invasive species management in Mississauga. This includes staff-led monitoring and control, volunteer invasive control events, as well as new strategy development.

Established in 2019, the Garlic Mustard Task Force is an initiative with the intent of reducing the Garlic Mustard population in Mississauga. Garlic Mustard is an invasive species that inhibits the growth of native species in natural areas where it has been introduced. Registered volunteers are trained by City staff on how to properly remove Garlic Mustard from City-owned spaces. In 2022, over 40 registered volunteers joined City staff to remove Garlic Mustard.



Natural Heritage / Natural Areas System

Mississauga is a Bee City

In 2019, Mississauga was officially recognized as a Bee City for its initiatives to enhance habitat for pollinators. Since then, the City has successfully renewed its Bee City status each year. Habitat creation projects such as the One Million Trees program continue to create and restore natural habitats throughout the city for the benefit of pollinators and wildlife. Restoration efforts have taken place at Jack Darling Memorial Park where a prescribed burn was conducted in 2021 to prevent the growth of invasive species and promote native species to support pollinators.





Key plans, strategies and studies guiding work on The City of Mississauga's Natural Heritage System and Natural Areas include:

- Parks and Forestry Master Plan
- Natural Heritage and Urban Forest Strategy
- <u>Urban Forest Management Plan</u>
- Invasive Species Management Plan and Implementation Strategy
- Credit River Parks Strategy

Air

Mississauga's air quality is impacted by air pollutants from local, regional, national and international sources. Local airshed pollutants generally come from heating and cooling our homes and vehicles travelling along major regional roads, such as 400-series highways, and within Mississauga's industrial zones. It is also worthwhile to note that according to the Region of Peel, approximately 50 per cent of air pollutants come from sources in the United States.

Sustainability efforts over the past decade have had a noticeable, positive impact on air quality in Mississauga. This includes the growing uptake of zero-emission vehicles and improved energy efficiency measures within the City. Completion of the actions listed below have also contributed to improving local air quality.

MiWay Transit Improvements

In 2020, MiWay announced the introduction of 11 new, second-generation hybrid-electric buses that are convertible to full battery power. These buses possess features to reduce emissions, such as the start-stop engine technology that shuts down the engine while stopped at bus stops and automatically restarts when the brake is released – achieving up to 25 per cent fuel savings.

In March 2020, a joint investment of more than \$675 million was made by the Government of Canada, Government of Ontario and the City of Mississauga to support three public infrastructure projects in Mississauga. Funds will be directed towards the design and construction of the Dundas Bus Rapid Transit corridor, general upgrades to Mississauga's existing bus corridors, and the purchase of an additional 358 second-generation hybrid buses to replace existing diesel vehicles. These efforts will help to reduce greenhouse gas emissions, improve local air quality, and enhance the quality and reliability of transit in Mississauga.

Zero-Emission Vehicle Strategy

In June 2022, the Peel Zero-Emission Vehicle (ZEV) Strategy was endorsed by council. The strategy aims to reduce GHG emissions and air pollution from the transportation sector, improve business and resident knowledge on the benefits and costs of ZEVs, increase ZEV driving experiences, availability and ownership, enhance planning processes and access to charging infrastructure, and promote local job creation.

The ZEV Strategy is a five-year plan that identifies actions to accelerate the adoption of ZEVs across the region.

Air

ZEVs are defined as vehicles with no tailpipe emissions. They can have a conventional internal combustion engine, but must be able to operate without using it. ZEVs include battery-electric (BEV), plug-in hybrid electric (PHEV), and hydrogen fuel cell vehicles (hydrogen is converted to electricity using a fuel cell). An increased uptake in ZEVs can reduce GHG emissions, improve public health, advance equity, promote job growth and enhance energy security.

There are five primary actions in the ZEV strategy to increase ZEV uptake:

- Expanding access to public EV charging stations
- 2. Enhancing ZEV education and awareness
- 3. Enhancing private investments into ZEVs and charging infrastructure
- 4. Embedding ZEV infrastructure considerations in the planning process
- 5. Advocating, implementing and reporting collectively

Several of these actions are already underway. One such example is the installation of public charging stations at municipally owned facilities. As of December 2022, 22 public charging stations have been installed on City property with an additional 56 charging stations for City fleet.





Air



Key plans and strategies guiding the City of Mississauga in combatting air pollution include:

- Climate Change Action Plan
- Peel Zero Emission Vehicle Strategy

Water

Much of the City's focus on water has been related to stormwater and flood management, due to Mississauga's geographical location in the floodplain. The prevalence of hard, non-permeable surfaces makes it difficult for groundwater to rejuvenate and flow back to nearby rivers. Low impact developments (LIDs) and stormwater management facilities play a key role in improving flood management in Mississauga.

Stormwater Management

The City is implementing the recommendations of the Cooksville Creek Flood Evaluation Study by constructing a series of stormwater management facilities to capture and slow stormwater runoff entering Cooksville Creek. As of June 2022, two of these underground facilities have been constructed at Eastgate Park and Sandalwood Park. Each park now contains plastic chambers connected to a large storm sewer to mitigate stormwater flooding and reduce flows during large rain events. These underground facilities are capable of holding almost 15,000 cubic metres of stormwater, which is equivalent to roughly five Olympic-size swimming pools. Three additional underground stormwater management facilities are to be constructed in the coming years, located under Mississauga Valley Park, Mackenzie Park and Huron Heights.

Saigon Park is home to an aboveground stormwater management facility in the form of a 2.7 hectare constructed lake and wetland, providing stormwater treatment and flood control for a 605 hectare drainage area. The park is positioned strategically in the headwaters of the Cooksville Creek watershed and is capable of controlling 254 million litres of stormwater runoff during large rain events. The multifunctional character of Saigon Park, marked by its recreational and cultural amenities alongside critical infrastructural services garnered it recognition as a 2022 Finalist for the Urban Land Institute's Americas Awards for Excellence.

The award recognizes projects with significant achievements in marketplace acceptance, design, planning, technology, amenities, economic impact, management, community engagement, innovation, and sustainability.

Water







Key plans, strategies and studies guiding the City of Mississauga in water conservation, stormwater management and flood management include:

- Asset Management Plan
- Cooksville Creek Flood Study
- <u>Dixie-Dundas Flood Mitigation Study</u>
- Malton Flood Mitigation Study
- <u>Little Etobicoke Creek Flood Evaluation Study</u>
- Stormwater Master Plan

Waste

As a lower-tier municipality, Mississauga is responsible for waste generated in City-owned facilities and City-run parks and roads. With a continued drive to reduce, reuse and recycle, the City has introduced many waste diversion initiatives and now embraces a circular economy framework to support its core objectives.

Waste Diversion at Central Library

During Mississauga Central Library's major renovation, City staff from various departments worked together to devise a waste diversion strategy to reduce the amount of City assets that would be sent to landfill. A cross-departmental team worked together to guide the disposal of existing office furniture, bookshelves and other library materials and assets in an environmentally responsible way. These efforts led to the diversion of an estimated 120 metric tonnes of material, which would have otherwise gone to a landfill, resulting in substantial environmental, community and economic benefits.

The project contributes to the City's vision of becoming a waste diversion leader by incorporating a philosophy of reduce, reuse and recycle. To measure the project's success and serve as a model of best practice for future renovation and construction projects, the process was fully documented.



Figure 4: Central Library renovation waste diversion statistics.

In addition to co-ordinating with internal departments to repurpose City assets, the project leveraged external partnerships by donating materials to not-for-profit organizations. The commitment and dedication to consider what would otherwise be deemed end-of-life assets exemplified an often-overlooked environmental opportunity: waste prevention.

The project successfully demonstrated the benefits of asset reuse, recycling and donation which can be applied to future renovation and construction projects at the City. By diverting over 120 metric tonnes of materials, this project prevented approximately 40 kg of carbon emissions from being generated at landfill and additional emissions that would have otherwise been produced to manufacture new material.

Waste

The Central Library Pre-Construction Asset Disposition also addresses specific actions within Mississauga's Climate Change Action Plan. Most notably was the establishment of community partnerships to improve waste diversion rates while exploring opportunities to implement a circular economy framework.

Waste Diversion in City Parks

In collaboration with Sutera Inc., the City completed a pilot program in 2021 to divert dog waste in City parks from landfills and convert it to energy. Specially designed, fully in-ground concrete containers were installed in select City parks. These containers store waste below ground where it is cooler and out of direct sunlight, reducing odour and allowing the waste to be held for up to four weeks until collection. The waste is removed using a vacuum cleaner and transported to an organics facility where it is converted into energy and fertilizer.

The dog waste demonstration pilot was implemented at the same time as Parks Operations began their phased replacement of waste and recycling containers in City parks. The new dual stream containers have pictograms to demonstrate how to properly dispose of dog waste when a dedicated dog waste container is not available.

As of December 2022, 54 metric tonnes of dog waste has been diverted from landfill. There was also a noticeable improvement in recycling contamination at City parks. A waste-to-energy facility produced approximately 18,920 kWh of energy from the collected dog waste, which is enough to power 21 homes for a month.





Waste

Waste Diversion at Special Events

In 2022, the Ontario Parasport Games and the Ontario Summer Games were held in Mississauga. These events featured 4,000 athletes from across Ontario competing in 25 different sports.

Waste sorting stations were set up at each venue. City staff and volunteers sorted waste at each station, separating organics, recyclables and garbage to reduce the total amount of garbage heading to landfills. Over the course of both events, more than 1,900 kg of organics were diverted from landfill. An additional 491 kg of waste was diverted and sent for recycling.

The City of Mississauga has invested in waste diversion strategies at special events since 2015. As of July 2022, more than 23,000 kg of organics have been diverted from landfills at special events.



Key plans, strategies and studies guiding waste diversion at The City of Mississauga:

- Smart City Master Plan
- Sustainable Procurement Policy
- Corporate Asset Management Plan
- Disposal of Surplus City Assets Policy
- Corporate Green Building Standards

Energy

The City has had great success with corporate efforts to improve energy efficiency resulting in cost savings and a reduction of GHGs. For more than two decades, the City has developed and implemented energy conservation plans for significant building retrofits and upgrades to City-owned buildings by adding energy-efficient lighting, controls and solar panels.

Greenhouse gas emissions from the City's own buildings account for 25 per cent of the organization's corporate emissions. Efforts to reduce energy to heat and cool our libraries, recreation centres and other City-owned buildings requires continuous improvements in energy efficiency and building standards. It also relies heavily on Ontario's electricity grid to remain clean and emissions free.

City staff have successfully implemented a number of initiatives to promote energy conservation within the City of Mississauga.

Climate Change Action Plan Progress Report and Results

Approved in December 2019, the Climate Change Action Plan presents the City's roadmap to reduce GHG emissions and adapt to the impacts of climate change over the next 10 years. It is guided by the City's vision to be a low carbon and resilient community and has two primary goals:

- Reduce GHG emissions 80 per cent below 1990 levels by 2050, with a long-term goal of becoming a net-zero community.
- 2. Increase resilience and the capacity of the city to withstand and respond to climate events.

Despite facing the challenges of the COVID-19 global pandemic, the City continues to make progress on climate action. In fact, of the 89 actions listed in the Climate Change Action Plan, 58 are already either underway, ongoing or completed. Most notably, the City has already completed a GHG Reduction and Solar Feasibility Study for Corporate Buildings and has developed a Green Fleet and Equipment Policy to identify and prioritize electrification opportunities for all City fleet vehicles.

Other notable highlights of the City's progress in tackling climate change include:

- 30 per cent fewer corporate building emissions in 2019 relative to 1990
- 37.9 acres of parkland acquired in 2020
- 14 low-impact development road right-of-ways installed as of summer 2021
- 400,000+ trees planted
- 54 electric and hybrid-electric fleet vehicles acquired as of fall 2021



Energy

Though there has been considerable progress, there is still a need to accelerate climate actions to limit global warming to 1.5 °C by the end of the century. The City will continue efforts to achieve greater GHG reductions from the two largest sectors—buildings and transportation—to make Mississauga more resilient to climate impacts. This will remain a City priority while creating new economic opportunities and ensuring climate justice. The complexities of climate change will require a series of targeted and deliberate actions, leadership, collaboration and financial support from all levels of government.

Energy Conservation Plan

The latest 5-Year Energy Conservation Plan (2019-2023) builds on the successes of two previous plans, created in 2009 and 2014. Similar to previous plans, this plan targets a 1 per cent annual reduction in energy use and GHGs over the next five years. The main objectives of each plan is to identify energy and water saving opportunities that will lower utility costs, improve operational efficiency and contribute to the City's overall environmental and climate change plans.

Within the last five years, the City implemented numerous initiatives including installing solar panels to heat outdoor pools, pool drain heat recovery systems, solar pathway park lights and more.

A summary of results from the previous 5-Year Energy Conservation Plan (2014-2019) include:

- Dropping Energy Use Intensity (EUI) and GHG emissions by 9.3 per cent and 8.1 percent, respectively
- Avoiding \$1,306,550 in total utility costs
- Receiving \$1,199,505 in total incentives from utilities due to cost savings
- Receiving numerous awards including the Living City Energy Efficiency award for Mississauga City Hall, three years in a row, ENERGY STAR® certification for Mississauga City Hall (2018) and Best
 Municipality/University/School/E

Municipality/University/School/Ho spital (MUSH) 1MW+ Customer award (2018)

The 5-Year Energy Conservation Plan (2019-2023) continues to build on these successes and provides a systematic, data-driven process which focuses on improving energy performance.

Energy







Key plans and standards guiding work on energy conservation and efficiency at the City of Mississauga include:

- Climate Change Action Plan
- 5 Year Energy Conservation Plan
- Corporate Green Building Standards

Organization and Policy

Actions from the LGMP related to Organization and Policy can apply to all City Departments, as they relate to Corporate environmental principles and activities such as procurement and the preparation of Corporate Reports.

The City of Mississauga continues to make important improvements in becoming more sustainable at an organizational level.

Sustainable Procurement

Through the Sustainable Procurement Policy, which was approved by Council on January 2018, the City has been able to determine priorities when it comes to the procurement of green goods and services. It has embedded many of those priorities into the procurement process.

The majority of Requests for Proposals (RFPs) issued by Procurement Services allot 10 per cent of the total proponent score to Sustainability. This is evaluated in several ways, predominately through the Supplier Leadership Questionnaire, which requires proponents to share their policies and practices in the following categories:

- 1. Sustainability Policy
- 2. Waste Reduction and Diversion
- Carbon/Greenhouse Gas Emissions and Energy Use
- 4. Equity, Diversity and Inclusion
- 5. Local Economic Development
- 6. Employee Wellness
- 7. Community Contributions
- 8. Other Sustainability Leadership Practices

Procurement Services has also developed a Supplier Code of Conduct (SCC), which is included in 100 per cent of all Medium and High Value Acquisitions and is an Appendix to the Sustainable Procurement Policy. The SCC defines the minimum standards for suppliers and their subcontractors and is based on core labour conventions from the International Labour Organization.

As part of the three-year implementation plan for Sustainable Procurement, Procurement Services developed and facilitated several training modules. One is an Introduction to Sustainable Procurement which is offered to all City employees. Another module focuses more specifically on Sustainable Procurement for Buyers and Contract Managers. Procurement Services has also conducted specific training as requested by individual business units and divisions. In addition, in 2019, they conducted a training session for local suppliers.

Organization and Policy

In 2020, the City of Mississauga was awarded the Sustainable Purchasing Leadership Council (SPLC) Award for Outstanding Case Study – Sustainable Procurement Training Implementation.

As of July 2022, the Sustainable Procurement Policy and program has been effective in purchasing sustainable products at the City of Mississauga, such as electric zambonis, hybrid fleet vehicles and Fairtrade coffee.





Key policies and standards guiding the City of Mississauga's sustainability initiatives at an organizational and policy level:

- Sustainable Procurement Policy
- Procurement By-law

Education Programs

Education and outreach play key roles in ensuring that residents and businesses can more easily obtain information or direction to reduce their impact on the environment. Public awareness campaigns, workshops and events are compelling and costeffective ways to encourage residents and community and business groups to change their behaviour.

It is also important to educate City staff about sustainability initiatives and climate change action to better promote efforts to reduce carbon emissions at a corporate level, creating a clean and green culture at the City of Mississauga.

In 2020 and 2021, many education programs were affected by the COVID-19 pandemic. Events were successfully moved online as per public health guidelines to help to prevent the spread of COVID-19.

While not specifically related to the certain actions within this section, City staff are more broadly committed to ongoing environmental education and engagement programs that are designed to support and empower individuals to take environmental action.

Education for City Staff

Green Leaders is the City of Mississauga's employee environmental engagement program. Green Leaders are staff volunteers from every department in the corporation who focus on increasing environmental awareness and sustainability in their workplaces and at home. The Environment team leads the program and develops resources to empower and engage staff in achieving cost savings from energy conservation, reduced GHG emissions, reduced waste sent to landfill and building climate change resiliency into all City operations. Green Leader volunteers led initiatives like the Great Canadian Shoreline Clean-up event, Waste Reduction Week, single-use plastic reduction campaigns and lights-off campaigns.

In 2019, the Green Leaders program was recognized for its corporate sustainability efforts, receiving the People Power Challenge award from Partners in Project Green, an initiative of the Toronto and Region Conservation Authority (TRCA).

Education for the Community

Community partners play a pivotal role in environmental outreach and education.

Education Programs

The City's Environmental Outreach team partnered with Ecosource's Peel Environmental Youth Alliance (PEYA) to deliver the Amazing Green Race in 2022. The event gave youth, aged 14 to 18, the opportunity to spend the day completing environmental challenges throughout Mississauga while exploring forms of sustainable transportation and learning about climate action.

Each year, the City of Mississauga hosts Earth Days, an annual campaign that features City initiatives and events delivered with the support of local partners to help educate residents on the importance of environmental sustainability. Events are held in-person and online, ranging from tree plantings to sketch nights.

In 2020, the Environment team partnered with the Library to deliver a year-long social media campaign #SaugaClimateReads to engage residents in reading a selection of fiction and non-fiction books related to climate change. Members of City Council including Mayor Bonnie Crombie and leadership staff participated and were featured on social media with their book selections.

The City's Environment team continues to use creative method to engage the public on sustainability and climate action. Some examples include a climate change-themed escape room, tabletop games, a time capsule and the Mississauga Climate Change Youth Challenge.







Education Programs



Key plans and strategies guiding the City of Mississauga in educating City staff and members of the public include:

- Community Engagement Strategy
- Climate Change Action Plan
- Smart City Master Plan
- <u>Urban Agriculture Strategy</u>

Conclusion

The Living Green Master Plan has played a key role in supporting the City's sustainability efforts over the past decade. The LGMP alongside its 49 recommended actions have led to the completion of several successful interdepartmental projects at the City of Mississauga.

City staff continue to work to address climate change and promote a green and sustainable Mississauga. Their work is now guided by dozens of different plans and strategies across City divisions.

As 98% of all actions in the LGMP are now either completed or underway, the decade old plan is no longer needed to provide guidance for the City's sustainable strategy. Instead, these new plans and strategies will provide the foundation for the City's sustainable efforts moving forward.



Photo Credit: Farhaan Hussain, We are Resilient Photo Contest submission

Seven actions fall under the Transportation sector.

Action	Status	Lead(s)	Stakeholders	Comments
Action 1: Maximize investment in the expansion of public transit in areas where transit-supportive development exists or is planned for the future.	Completed & Ongoing Progress	Transportation and Works	Mississauga business community, Mississauga Board of Trade, Greater Toronto Airports Authority, Metrolinx/ GO Transit, Region of Peel	Staff continue to plan for and develop transit improvements in identified transit-supportive areas. The Transportation Master Plan (TMP), The MiWay Five Service Plan (2021-2025) and MiWay's Infrastructure Growth Plan all provide further direction and actions.
Action 2: Lobby for funding to improve the regional transportation system.	Completed & Ongoing Progress	Transportation and Works		Staff actively pursue funding for regional transportation system improvements and work closely with Metrolinx to support GO services and the development of the Hurontario Light Rail Transit system. The City has received \$113.5 million in federal funding for transit infrastructure through the Investing in Canada Infrastructure Program (ICIP). MiWay will initiate the detailed design and construction of queue jump lanes at key intersections in 2022.

Action	Status	Lead(s)	Stakeholders	Comments
Action 3: Evaluate Transportation Demand Management (TDM) initiatives to date and existing modal split; and work collaboratively to implement TDM measures in Mississauga.	Completed & Ongoing Progress	Transportation and Works	Smart Commute Mississauga, Region of Peel	The Transportation Demand Management (TDM) Strategy is complete and implementation is ongoing. In April 2018, City Council approved the Transportation Demand Management (TDM) Strategy and Implementation Plan ("TDM Plan"), which identified 23 actions over a 10-year period. The TDM Plan identifies short, medium and longterm opportunities for the City to lead TDM programming and initiatives, to encourage sustainable travel habits through both hard and soft measures.
Action 4: Invest in the expansion of alternative forms of transportation including cycling, walking and car-sharing.	Completed & Ongoing Progress	Transportation and Works		Investments and expansion plans are underway and are outlined in more detail in associated strategies/plans such as the TDM Strategy and Implementation Plan, the Cycling Master Plan and the Pedestrian Master Plan.
Action 5: Develop targets for modal splits in the Transportation Strategy.	Underway	Transportation and Works		This action is being addressed within the Transit and Road Infrastructure Plan, which is expected to be complete by late 2022/early 2023. Staff will be investigating neighbourhood and mode specific targets to achieve the city-wide 50 per cent sustainable mode share target by 2041.

Action	Status	Lead(s)	Stakeholders	Comments
Action 6: Develop guidelines that advance new or rehabilitated transportation infrastructure that supports natural ecological functions.	Underway	Transportation and Works		This action is being addressed within the Changing Lanes study to deliver Complete Street design guidelines, which will include low impact development guidance.
Action 7: Study the efficiency of the transit network on priority corridors to speed up the system and make it more competitive and more attractive to commuters.	Underway	Transportation and Works		This action is being addressed within Transit and Road Infrastructure Plan, which will study future transit network requirements, and make recommendations regarding transit prioritization.

Eight actions fall under the Urban Form sector.

Action	Status	Lead(s)	Stakeholders	Comments
Action 27: Report to the Environmental Advisory Committee every six months on the Stage One (2012) Green Development Standards (GDS) implementation, specifically: Stormwater management for roads, parking lots and buildings; and Low-impact development techniques. And on efforts to develop: Education materials for homeowners about what they can do regarding Stormwater retrofits; and Awareness and education materials to promote Stage One Green Development Standards.	Completed & Ongoing Progress	Planning and Building		City staff provides regular updates to EAC on progress of the GDS. City staff promotes the GDS through development applications (new buildings). A refresh to the 2012 GDS has begun and is expected to be completed in 2023. It will include energy and resilience considerations within buildings, site features and boulevard design.
Action 28: Create an Environmental Community Grants Program. Start by drafting terms of reference and a funding structure to support and showcase community-based environmental initiatives.	Completed & Closed	Community Services	Community- based environmental groups	The City's grant program has been established, and continues to support community-based environmental initiatives.

Action	Status	Lead(s)	Stakeholders	Comments
Action 29: Develop a program to expand the Sustainable Neighbourhood Retrofit Action Plan (SNAP) to other neighbourhoods in Mississauga.	Underway	Transportation and Works	Conservation Authorities, Region of Peel	The City is working with Toronto and Region Conservation Area (TRCA) and Credit Valley Conservation to identify ideal area(s) within Mississauga for a new SNAP. Work continues in the
				existing Burnhamthorpe SNAP, led by Toronto and Region Conservation Authority (TRCA).
				This action is being addressed through the Climate Change Action Plan to support new SNAP neighbourhoods or other neighbourhood-level action planning.
Action 30: Support the development of community gardens and ensure that every neighbourhood has access to at least one community garden.	Underway	Community Services	Community- based environmental groups	The City has ten community gardens and one teaching farm on parkland in eight wards. Future community garden locations are being explored and will be supported the City's Urban Agriculture Strategy approved in 2022.
Action 31: Launch a new design award to complement Mississauga's Urban Design Awards. The award would address two areas: Investment in green infrastructure for the benefit of the public realm; and Sustainable land-use management that	Completed & Closed	Community Services	Environmental Advisory Committee	The City has revamped the urban design awards to include an environmental aspect and to encourage more engagement and uptake. In 2021, the new awards were launched and an award for a linear park was given for community sustainability and engagement.
integrates land-use, transportation and green infrastructure.				

Action	Status	Lead(s)	Stakeholders	Comments
Action 32: Develop partnership opportunities to build on the success of Partners in Project Green and expand ecoindustrial parks across the city.	Completed & Ongoing Progress	Economic Development Office	Conservation Authorities, Businesses	In 2021, the City worked to engage and educate property owners and operators of multi-unit residential buildings on methods for undertaking energy efficiency retrofits. Topics included undertaking energy audits, developing a business case, identifying funding opportunities, and choosing appropriate partners. City staff are working on ways to engage Mississauga businesses on sustainability and climate action. For example, the Economic Development Office and Environment team are currently developing a program for Mississauga businesses, which will support and encourage these businesses to implement actions that decrease their emissions and increase their environmental sustainability. The City has already compiled a list of
				resources and programs for businesses into an online database, and is planning to launch its own pilot program in 2023.
Action 44: Integrate Transportation Demand Management measures into the development approval process.	Underway	Transportation and Works	Development industry	The City is working on the Traffic Impact Study guidelines to integrate Transportation Demand Management measures into the development approval process.

Five actions fall under the Natural Heritage/Natural Areas System sector.

Action	Status	Lead(s)	Stakeholders	Comments
Action 8: Include in the Natural Heritage System Strategy guidelines to:	Completed & Closed	Community Services	Conservation Authorities, Region of Peel	The Natural Heritage and Urban Forest Strategy study was launched in April 2012 and completed in February 2014 following
 Develop neighbourhood green system and naturalization targets that support the Natural Heritage System Strategy; 				approval by City Council. The Invasive Species Management Plan and Implementation Strategy were approved in 2021.
 Involve a wide range of private and public stakeholders; 				
 Develop a strategic restoration strategy; 				
 Identify an action plan and resources to implement recommendations in existing studies; 				
 Develop an Invasive Species Management Plan that identifies priority management areas for invasive plant and insect species; and includes replanting strategies and preventive programs; and 				
 Increase minimum vegetation protection zone setbacks for regulated areas and natural area features. 				

Action	Status	Lead(s)	Stakeholders	Comments
Action 46: Amend the Street Tree By-law (91-75) and the Tree Permit By-law (474-05) to include single trees and further measures to restrict tree removals and	Completed & Closed	Community Services		The Public Tree By-law (0020-2022) was approved by Council in February 2022. The amended By-law allows the City of Mississauga to better protect and preserve its tree canopy.
ensure consistency with the Official Plan.				The Private Tree By-law (0021-2022) was approved by Council in February 2022. A permit is now required for the injury, destruction or removal of any individual tree 15 cm (6 in) in diameter or greater.
Action 47: Consider introducing a regulatory tool to protect and enhance	Completed & Ongoing Progress	Community Services	Conservation Authorities	The Natural Heritage and Urban Forest Strategy (NHUFS) was created in 2014.
the green system				Subsequent to the completion of that document, the Official Plan policies were updated in Chapter 6 (e.g., updating the definition of the significance of natural features) and the map in Schedule 3 to reflect updates from the NHUFS.
				In 2017, the Nuisance Weed and Tall Grass Control Bylaw was updated to include additional species under the classification of 'Nuisance Weeds', providing a greater ability to control the spread of invasive species.

Action	Status	Lead(s)	Stakeholders	Comments
Action 48: Modify the Nuisance Weeds and Tall Grass Control Bylaw (0267- 2003) and the Property Standards By-law (654- 98) to ensure that they do not unduly restrict naturalization efforts on private property.	Completed & Ongoing Progress	Community Services		In June 2017, Council directed staff to review the Nuisance Weed and Tall Grass By-law, which led to an amendment to reduce the maximum permitted height from 30cm to 20cm and update the list of noxious weeds from 12 to 25. On April 20, 2022, the Property Standards By-Law 654-98 was amended to address water discharge from sump pumps to adjoining properties, construction site hoarding and fencing and abandoned, vacant and derelict properties. The Property Standards Bylaw has not been amended to address naturalization efforts; however, Enforcement Officers exercise their discretion to ensure that properties are being maintained in a reasonable condition in relation to the neighbouring environment pursuant to Section 28(4) of the by-law.
Action 49: Increase monitoring and enforcement of the Erosion and Sediment Control By-law (512-91).	Completed & Closed	Transportation and Works		Improvements have been made to monitor expired erosion and sediment control permits to ensure work has been completed or confirm a permit renewal is required. Further enhancements have been made to the permit application process to be more digital and self-serving.

Five actions fall under the Air sector.

Action	Status	Lead(s)	Stakeholders	Comments
Action 33: Improve local air quality and help develop a national Air Quality Management System as a municipal partner of the Oakville-Clarkson Air Zone Pilot committee.	Completed & Closed	Community Services	Ministry of the Environment, Oakville-Clarkson Air Zone Pilot Project Committee (Oakville, Halton and Peel Public Health Units and local businesses, industry and citizen groups)	City staff participated in the Oakville-Clarkson Air Zone Management Advisory Committee which was created in 2012 until it was disbanded.
Action 34: Continue to implement the recommendations targeted at municipalities in the Dr. Balsillie Task Force Action Plan.	Completed & Ongoing Progress	Community Services		The City continues to address municipal-related actions outlined in the Balsillie Report (2010). This includes actions to reduce emissions and improve air quality. Specific actions related to air quality and the goods movement sector have also been identified in the City's Climate Change Action Plan.
Action 35: Evaluate the effectiveness of the City's five-year "Greening Our Fleet" program (2006-2011) and develop a plan to further reduce GHG emissions and air contaminants from City vehicles over the next five years.	Completed & Closed	Community Services		In 2020, Council approved the Corporate Green Fleet and Equipment policy and an Electric Vehicle Charging Station Standard, designed to prioritize the conversion of our fleet and equipment to low or zero emissions technologies.

Action	Status	Lead(s)	Stakeholders	Comments
Action 36: Respond to repeated complaints about idling vehicles by providing enhanced education and more enforcement of the Idling Control Bylaw, as called for in Dr. Balsillie Task Force Action Plan.	Completed & Ongoing Progress	Transportation and Works		The Idling Control By-law continues to be enforced on a complaint basis, with a focus on education. The Idling Control By-law and Unnecessary Vehicle Idling policy will be updated as part of implementing the CCAP.
Action 37: Support the Region of Peel's efforts to establish an air modelling and monitoring program that will provide baseline data and an accurate picture of air quality in the geographical region of Peel, including the Clarkson Airshed.	Underway	Community Services	Region of Peel	The Region of Peel established an air modelling and monitoring program in 2012. Post COVID, staff time will be redirected back to focus on actions that would result in improved air quality. As identified in the Region of Peel's Official Plan (dated April 2022), a number of policies are aimed at improving air quality, specifically policy 2.5.11 – "Model air quality to accurately establish local air emissions in Peel and report on the findings from modelling." The City of Mississauga does require air quality studies be conducted for select redevelopments. For example, in December 2020, Council adopted the Mississauga Official Plan Amendment No.117 which requires that a satisfactory air quality study be completed, before sensitive land uses can be considered on the lands located within the Southdown Employment Area and the Clarkson GO Major Transit Station Area.

Six actions fall under the Water sector.

Action	Status	Lead(s)	Stakeholders	Comments
Action 9: Audit corporate water usage in City operations and City-owned and operated facilities; and develop strategies to reduce water use.	Completed & Closed	Facilities and Property Management		A corporate water audit was completed. Strategies to reduce water usage have since been developed and implemented.
Action 10: Audit City buildings and properties to assist retrofitting and planning for new facilities to achieve the standards the City requires for private developments as per the Green Development Strategy.	Completed & Closed	Facilities and Property Management		The City continues with energy auditing and retrofitting of existing buildings as per the targets of the 5-Year Energy Conservation Plan. In 2019, Council approved the Corporate Green Building Standard for all new construction and major renovation projects.
Action 11: Develop guidelines that require low-impact development features (including the use of indigenous species in landscaped areas) for all (existing and new) City projects.	Completed & Closed	Facilities and Property Management		The City's Stormwater Program implements low impact development (LID) features as part of its normal business. LID features often incorporate native plantings. The Corporate Green Building Standard also includes requirements for LID features.

Action	Status	Lead(s)	Stakeholders	Comments
Action 12: Ensure that the Stormwater Quality Control Strategy Update addresses:	Underway	Transportation and Works	Conservation Authorities, Region of Peel	The City is undertaking an aspirational plan, resetting the foundation of the Stormwater Quality Control Strategy to ensure the City
 Ways that stormwater management infrastructure can protect and enhance the natural areas system; 				addresses broader goals relating to stormwater management. The "Build Beautiful" Stormwater Master Plan is anticipated to be completed in late
 Increased requirements for Pollution Prevention Planning for businesses with the potential for discharge of contaminants; 				2022/early 2023.
 Adopting and promoting the use of green infrastructure (as set out in the Stage One Green Development Strategy) to treat stormwater run-off before it flows into the city's natural water bodies; 				
 Updating Stormwater management criteria based on standards developed by the conservation authorities; 				
 Impacts of erosion and prioritizing watercourse erosion works; and 				
 Identifying stormwater funding opportunities. 				

Action	Status	Lead(s)	Stakeholders	Comments
Action 13: Expand and develop additional flood management plans.	Underway	Transportation and Works	Conservation Authorities	The City is implementing the recommendations of the Cooksville Creek Flood Evaluation Study by constructing a series of stormwater management facilities to capture and slow the stormwater runoff entering Cooksville Creek. The Dixie-Dundas Flood Mitigation Study is reviewing options to reduce or eliminate the spill of floodwaters from Little Etobicoke Creek into the surrounding neighbourhood near the intersection of Dixie Road and Dundas Street. The City is continuing neighbourhood based flood
				mitigation work.
Action 14: Conduct a water-use analysis to understand patterns of water usage in Mississauga; and develop land-use and associated strategies for water conservation.	Completed & Ongoing Progress	Transportation and Works	Region of Peel, Conservation Authorities, Community- Based Partners	The Region of Peel has a water efficiency strategy, which outlines target audiences and key tactics to promote the efficient use of water by residents and businesses within the City of Mississauga and the rest of the Region. Tactics implemented support both residential and industrial, commercial

Two actions fall under the Waste sector.

Action	Status	Lead(s)	Stakeholders	Comments
Action 15: Conduct a corporation-wide waste audit including parks, public spaces, community facilities and special event venues to establish a baseline against which corporate waste reduction and recycling efforts can be measured.	Completed & Closed	Facilities and Property Management	Region of Peel	To generate detailed baseline data from which to build a successful Corporate waste diversion plan, more than 350 waste, litter and asset audits have been completed since 2015, some of which were conducted by a third party and some of which were conducted by City staff and summer students.
Action 16: Develop a plan to increase diversion rates for recyclables and organic material from City parks and forestry operations and from City-owned and operated facilities.	Completed & Ongoing Progress	Community Services	Region of Peel	Several initiatives to help increase diversion rates at City facilities and parks have been initiated throughout the last several years as part of the Corporate Zero Waste Strategy. The City works closely with the Region of Peel to support the roll out of new diversion programs.

Five actions fall under the Energy sector.

Action	Status	Lead(s)	Stakeholders	Comments
Action 17: Update corporate and community inventories for GHG emissions and Criteria Air Contaminants.	Completed & Ongoing Progress	Community Services	Region of Peel	The City is tracking Corporate and community inventories for GHG emissions. In 2017, Mississauga joined the Global Covenant of Mayors, which requires annual reporting of GHG inventories.
				The Provincial Government has the primary jurisdiction and authority for monitoring and establishing standards for air quality within Ontario. The City is aware of monitoring efforts in some locations across Mississauga.
Action 16: Develop a plan to increase diversion rates for recyclables and organic material from City parks and forestry operations and from City-owned and	Completed & Ongoing Progress	Community Services	Region of Peel	Several initiatives to help increase diversion rates at City facilities and parks have been initiated throughout the last several years as part of the Corporate Zero Waste Strategy.
operated facilities.				The City works closely with the Region of Peel to support the roll out of new diversion programs.
Action 38: Prepare an integrated community energy plan to establish roles and responsibilities in Mississauga's energy community and create a road map for advancing selected energy strategies.	Underway	Community Services	OPG, OPA, Hydro One, Enersource, Enbridge, Region of Peel	The City developed its first ever comprehensive Climate Change Action Plan. This plan included research using city specific community data to identify diverse technologies to help the city meet its greenhouse targets. This research is being updated in 2022.

Action	Status	Lead(s)	Stakeholders	Comments
Action 39: Assess energy efficiency and renewable fuel strategies that are feasible in Mississauga as part of the cost- benefit analysis identified in the Peel Climate Change Strategy.	Underway	Community Services	Region of Peel	Today, the Peel Climate Change Partnership has three key strategic priorities: low-carbon communities, flood resiliency, and green natural infrastructure. Within low-carbon communities, the current focus is on electric vehicles and related infrastructure. Efforts that focus on building performance and efficiency pathways will resume in 2023. Separately, the City is working to increase energy efficiency and the use of renewable fuels across the city. This includes efforts to advance low carbon district energy, implement corporate and community green development standards, and develop a region- wide home retrofits program. As part of these efforts, the City has been learning and sharing lessons learned with its partners across the Region and beyond.
Action 40: Determine how to optimize the use of alternative energy sources through community energy planning in Mississauga as part of the feasibility study identified in the Peel Climate Change Strategy.	Underway	Community Services	Region of Peel, Local Utilities	The City is exploring the use of alternative energy sources in the community and in the corporation. For example, the City is supporting the developerled implementation of district energy at Lakeview Village, which will use waste heat from the adjacent wastewater treatment plant as its main source of energy to heat and cool the community. The City is also looking at options to use renewable energy at its own facilities.

Eight actions fall under the Organization and Policy sector.

Action	Status	Lead(s)	Stakeholders	Comments
Action 19: Include training on green procurement options as part of staff training on existing procurement policies and procedures.	Completed & Closed	Material Management		As part of the implementation of the Sustainable Procurement Policy, City staff have developed two different training modules one for all City employees, and the second on implementing sustainable procurement for Buyers and Contract Managers.
Action 20:	Completed & Ongoing	Material Management		Through the Sustainable Procurement Policy, the City has been able to determine priorities when it comes to the procurement of green goods and services and has embedded those priorities into the procurement process.
Determine corporate priorities regarding the procurement of green goods and services and develop the culture, policies and practices to support these priorities.	& Ongoing Progress			
Action 21:	Completed	Community		This policy was updated in
Review and update the Corporate Policy and Procedure on Corporate Environmental Principles (Policy Number 09-00-01).	& Closed	Services		May, 2014.
Action 22:	Deferred/	Community Services		Inclusion of the Strategic Pillar as "mandatory" is not always applicable for all Corporate Reports. In practice, where it does apply, the Pillars are included.
Ensure that all corporate reports include a mandatory Strategic Plan section for all five Pillars for change.	Not Applicable			

Action	Status	Lead(s)	Stakeholders	Comments
Action 23: Rename the Environmental Management Section of the Community Services Department as the Mississauga Environment Office, a division of the Community Services Department.	Completed & Closed	Community Services		An Environment Division was established and is now part of the Parks, Forestry and Environment Division.
Action 24: Establish a Director position to lead the Mississauga Environment Office (MEO)	Completed & Closed	Community Services		An Environment Director position was created and is now led by the Parks, Forestry and Environment Director.
Action 25: Report through the business planning and budget process on a new staff and reporting structure for the MEO.	Completed & Closed	Community Services		A new staffing and reporting structure was created.
Action 26: Create an interdepartmental LGMP Steering Team chaired by the MEO Director.	Completed & Closed	Community Services		An interdepartmental LGMP Steering Team was created and has evolved to a broader Environmental Community of Practice for City staff to share ideas and knowledge transfer.

Three actions fall under the Education Programs sector.

Action	Status	Lead(s)	Stakeholders	Comments
Action 41: Undertake an infrastructure vulnerability assessment.	Underway	Transportation and Works	Region of Peel	Consistent with Action 9-3 of the CCAP, the City will conduct a climate vulnerability assessment of municipal assets as part of the development of asset management plans. The City plans to start the assessment in 2022, with a completion date in 2023.
Action 42: Develop a Living Green Public Education Campaign that encourages community action in environmental priority areas.	Completed & Closed	Community Services	Region of Peel, Community Environmental Groups	"Let Your Green Show" was an environmental awareness campaign which took place in 2012, engaging more than 500 residents and completing more than 600 environmental actions.
Action 43: Investigate opportunities for research partnerships.	Completed & Ongoing Progress	Community Services	Post- secondary Institutions, Conservation Authorities, other levels of government	The City has been involved in research projects with key stakeholders and with support from government funders. Examples of research partnerships include the development of a regional zero emissions vehicle strategy, flood maps and tools, natural infrastructure, and the advancement of technologies such as hydrogen for buses and district energy using waste heat