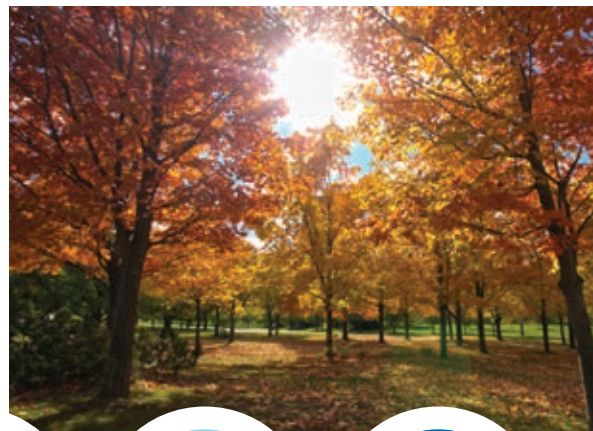


# GROW GREEN ACHIEVEMENTS Snapshot



2014 - 2020  
 **BRAMPTON**

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In 2014, City Council approved the Brampton Grow Green Environmental Master Plan (EMP), the City's first blueprint for improving environmental sustainability at both the City (internal) and community (external) level.

Brampton Grow Green directs the City's environmental sustainability approach, and identifies six core components – People, Air, Water, Land, Energy, and Waste – through which the EMP goals, metrics, actions, and targets are organized.

Significant progress has been made since the launch of Brampton Grow Green, as Brampton works toward becoming a more healthy, resilient, and sustainable city. This Grow Green Achievements: Snapshot document highlights some of Brampton's accomplishments over the last 6 years.

# PEOPLE



Invest in people to create a healthy, livable, safe community.

## Grow Green Network

In 2017, the City's Environment Advisory Committee launched the Grow Green Network, a collective of local organizations focusing on environmental stewardship and sustainability. To date, over 20 organizations have joined the Network. Members can identify like priorities and leverage each other's skills, resources, and ideas. As a result, members are able to expand their reach and impact. The Network also provides an effective forum for the City to engage with active community groups, and learn about activities beyond City initiatives.



## Grow Green Team

The Grow Green Team is a group of cross-departmental City staff that help facilitate the implementation of the Brampton Grow Green Environmental Master Plan, track progress, and promote a culture of conservation. The benefits of having one team are multifaceted, including shared information, improved communication, and increased collaboration between departments. In addition, the Grow Green Team has been instrumental in providing an in-depth understanding of the successes, opportunities, and challenges of implementing Brampton Grow Green.



## Grow Green Eco Pledge

The Grow Green Eco Pledge Program started in 2017 and encourages residents and City staff to commit to simple, eco-friendly actions for a specific period of time. Some actions are easy and others are more ambitious - participants decide what works best for their lifestyle and interests. They are also encouraged to challenge their friends, family, classmates, or coworkers to also make a pledge.



## Recreation Programming

Recreation programs in Brampton are offered to grades 1 through 12 and provide a variety of opportunities for youth to learn in experiential programming and workshops. This includes outdoor environmental education programs that offer students hands-on interactive activities and age appropriate sessions with curriculum based programs, such as lessons on biodiversity, wildlife, ecosystems, sustainable agriculture, water systems, and human impact on the environment. Between 2014 and 2019, over 1700 students participated in these programs.



## Lighthouse Program

In 2019, the City of Brampton launched the Lighthouse Program, which coordinates faith-based organizations to offer their facilities as refuge during times of citywide emergency. The City aims to create a network of "lighthouses" accessible to all community members, regardless of their belief system. The Lighthouse Program will boost Brampton's emergency preparedness and, in response, increase the city's resilience against natural disasters, such as floods and storms, and other emergency events.



## Blue Dot Movement Signatory

In 2016, the City of Brampton joined the Blue Dot Movement along with 173 other Canadian municipalities. Led by the David Suzuki Foundation, Blue Dot advocates that everyone in Canada deserves the right to a healthy environment and that the Federal and Provincial governments should amend appropriate legislation to include this right. Joining the Blue Dot Movement confirms the City recognition that people are part of the environment, and that a healthy environment is inextricably linked to community well-being.



## Advance Brampton Fun

The Advance Brampton Fund (ABF) launched in late 2019. It provides grant funding for charitable and non-profit organizations in Brampton for projects that align with and advance Term of Council Priorities, which include the "Brampton is a Green City" priority. The ABF Green City stream prioritizes environmental stewardship projects that support the Brampton Grow Green Environmental Master Plan by enhancing the city's urban forest and natural heritage system (e.g. naturalization/restoration planting, tree planting, invasive species removal), encouraging active transportation (e.g. walking or cycling), and/or providing opportunities for residents to learn about environmental issues and solutions.



## Parks Environmental Stewardship Education Program

In 2016, the City's Parks Maintenance & Forestry team began offering a variety of educational stewardship programs for students in Kindergarten through Grade 8, primarily focused on parks and natural heritage stewardship. Educational programs are free of charge, adhere to the Ontario Curriculum, and include in-classroom and outdoor lessons and activities, as well as tree planting. The program has reached over 18,000 students across more than 70 schools in Brampton so far.



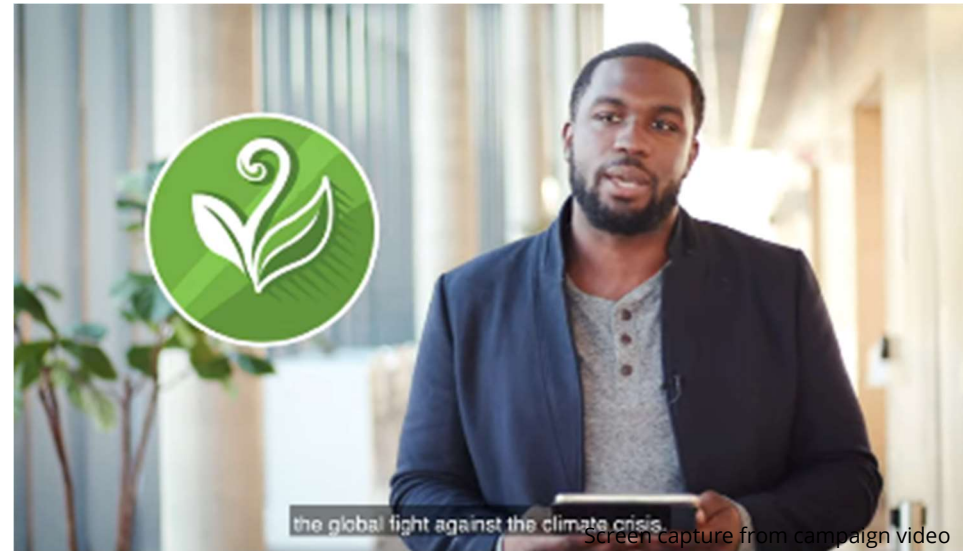
## Community Parks Week

Each October, the Parks Maintenance & Operations team hosts a Community Parks Week event for five elementary schools that are located next to a Brampton park. At a local park, students learn about park stewardship and how to become a "Park Hero" through various activities, such as tree and wildflower planting. Students also learn how Parks staff keep Brampton's parks clean, green, and safe.



## Our Ecosystem, Our Home, Our Responsibility

All residents and living beings in Brampton rely on the interconnected system of natural and built environments. This is Brampton's ecosystem. The Our Ecosystem, Our Home, Our Responsibility campaign commenced in 2020, and advocates that Brampton's residents and businesses have a responsibility to take ownership and stewardship of our surroundings, including the natural environment, through our daily activities and life-long decisions.





# AIR



Reduce impacts on air quality.

## Transportation Master Plan

In 2015, the City updated its Transportation Master Plan, the blueprint for strategic transportation planning and direction for the future. The Plan addresses existing challenges and makes recommendations for sustainable transportation solutions to manage the transportation impacts and address travel demand associated with future growth. It outlines a transportation system to better serve residents, employers, employees and visitors while accommodating multiple modes of transportation (e.g. public transit, commuter travel, commercial vehicles, and active transportation).



## Active Transportation Master Plan

In 2019, the City of Brampton released the Let's Connect: Active Transportation Master Plan, which outlines a network plan, policies, and programs to support a mosaic of safe and integrated transportation choices, emphasizing walk, cycling, and transit. It underscores the importance of providing accessible, high quality and connected active transportation infrastructure to encourage the use of active modes and to build sustainable and livable communities.



## Active Transportation Infrastructure

Active Transportation, which includes walking, cycling and other self-propelled mobility options, presents one of the greatest untapped opportunities for reducing single occupant vehicle trips, and for addressing a host of environmental, community design, and public health issues. Incorporating global best practices in active transportation and promoting the concept of complete streets and sustainable community design is a guiding principle for the City's efforts. Since 2014, the City introduced over 140 kilometers of bike lanes, multi-use paths, recreational trails, and signed bike routes to the transportation network.



Franceschini Bridge

To protect the health and safety of Brampton residents during the COVID-19 pandemic, the City created temporary bike lanes along the Vodden Street corridor. The lanes provided an additional cycling option to recreational trails for residents and allowed cyclists to maintain physical distancing.



Grow Green Achievements | Air 2

## Cycling Advisory Committee

Established in 2015, the Cycling Advisory Committee advises City Council on utilitarian and recreational cycling matters in Brampton. The Committee advocates for cycling-supportive legislation and policies, provides input to City staff on the delivery of cycling infrastructure and programs, and organizes, delivers, and participates in educational and awareness activities to promote the benefits of cycling.



## Bike the Creek

Launched in 2014, Bike the Creek is a free annual event aimed at encouraging people of all ages to discover the joys of cycling. A partnership between the City of Brampton, Town of Caledon, Living City Foundation, Toronto & Region Conservation Authority, and Bike Brampton, the event attracts hundreds cyclist to one of five routes along the Etobicoke Creek depending on their skill level.



## Bicycle Friendly Community Award

The City of Brampton is working toward building a bicycle-friendly city, and its efforts have been recognized through the Bicycle Friendly Community awards with a Bronze status, announced by the Share the Road Cycling Coalition at the 2017 Ontario Bike Summit awards. The City has made important commitments and investments in building a bicycle-friendly community, and championing bicycling as a safe, healthy and fun means of recreation and transportation.



Image source: TRCA

## Bike to Work Day

Bike to Work Day is an annual event hosted by the City and the Downtown Brampton BIA. The event encourages residents to bike to work to support physical activity, reduce vehicle trips, and exploration of the city's active transportation infrastructure.



## Etobicoke Creek Trail

In 2016, the City of Brampton in collaboration with the Toronto & Region Conservation and the Town of Caledon completed the Etobicoke Creek Trail Link. The 1.5 km recreational trail link expands Brampton's network of safe walking and cycling trails while providing a connection to Caledon.



Image source: TRCA

## Bike and Ride

Cycling around the city has been made easier with the addition of bike racks on every Brampton Transit bus. All City buses are now equipped with racks to allow cyclist to take transit with their bikes. Bikers can now mount their bikes on the front of the bus, unload, and ride to their destination.



## Next Ride

In an effort to better connect Brampton's residents to transit, the City launched Next Ride, a web and mobile tool that provides real-time bus information for Brampton Transit bus stops. It is a subscription service that sends the rider notifications about selected bus departures, and helps make public transit a more attractive transportation option.



## iRide Bus Routes

During the school year Brampton Transit extends its bus routes by adding school bus routes to encourage students to use public transit. The bus routes service 12 schools in the city providing students with the option of public transit to get to school.



## Electric Bus Pilot Program

In 2019, the City welcomed a significant investment from the Government of Canada for the milestone Pan-Canadian Electric Bus Demonstration and Integration Trial in Brampton. The funding will be applied to Phase 1 of the pilot project, which will test battery electric buses in Brampton. This first-of-its-kind project is an unprecedented initiative that has brought multiple levels of government, bus and charger manufacturers, system integrators, academia, and funding partners together to implement electric buses in Brampton. This will be the largest single global deployment of standardized and fully interoperable battery electric buses and high powered overhead on-route charging systems, with eight electric buses (six by New Flyer Industries and two by Nova Bus) and four charging systems (three by ABB Group and one by Siemens).



In 2020, Council approved plans for Brampton Transit's fully electric transit maintenance and storage facility. This will be one of the largest new bus facilities in North America constructed to help support a fully electric, zero tailpipe emissions future bus fleet.



## Züm Bus Rapid Transit Expansion

Züm is a public transit solution that supports high-capacity routes and has benefits similar to rail transportation – using world-class technologies to provide better and faster ways to connect people and places. Brampton Transit has expanded Züm services to five routes: Queen Street, Main Street, Steeles Avenue, Bovaird Drive, and Queen Street West. Public transit is highly utilized by Bramptonians, and the City continues to provide more transit options to connect residents and businesses locally and regionally.



## Hurontario Light Rail Transit

Major construction of the Hurontario Light Rail Transit (HuLRT) began in spring 2020. The HuLRT will bring 18 kilometres of fast, reliable, rapid transit along the Hurontario corridor between the Brampton Gateway Terminal in Brampton and the Port Credit GO Station in Mississauga. This city-building and region-connecting project will transform Hurontario Street into a vibrant people-oriented corridor connecting communities and accommodating growth anticipated over the next 30 years. The HuLRT will play a transformative role in contributing to better air quality in nearby communities by offering an efficient and convenient alternative to using a car. In addition, the HuLRT vehicles will be electric powered, emitting near zero emissions, which in turn will aid in a substantial reduction of greenhouse gas emissions and other air pollutants. The anticipated completion of the HuLRT is fall 2024.



## Electric Vehicle Charging Stations

Since 2015, the City EV infrastructure has rapidly expanded among city facilities. Currently the City owns and operates over 50 electric vehicle charging stations across 13 City facilities to help make electric vehicle use more convenient for residents and businesses in Brampton. All the stations are level-2 charging stations, which can fully charge a vehicle in 3 to 6 hours, depending on vehicle type. Expanding electric vehicle infrastructure supports the growth of a cleaner, more sustainable transportation options.

At the Brampton Soccer Centre, electricity use and costs from EV charging stations are reduced using electricity generated from solar panels. The panels are located above the EV charging station, and can also act as a canopy to provide protection from the elements while an electric vehicle is being recharged.



EV charger at Springdale Library



## Global Covenant of Mayors for Climate and Energy

In 2019, the City of Brampton joined the Global Covenant of Mayor for Climate and Energy (GCoM), a global alliance leading to fight against climate change. The City was also selected by GCoM to join Showcase Cities, a pilot project led by GCoM, where the City will receive support to help reduce greenhouse gas (GHG) emissions and adapt to climate change.



## Climate Emergency Declaration

In 2019, Brampton City Council voted unanimously to declare a climate emergency, joining a growing list of municipalities across Canada and the world. The motion highlighted actions the City is already taking to mitigate and adapt to climate change, and also recommended a greenhouse gas emission reduction for Brampton of 80 per cent by 2050.



# WATER



Protect and respect water as a non-renewable, life critical resource.

## City Hall Green Roof

In 2018, the City installed green roofs on City Hall, complimenting the green roofs constructed as part of the West Tower City Hall expansion. The roofs provide insulation and decrease heating/cooling costs. Vegetation on the roofs absorb rainwater and decrease stormwater runoff. As well, the roofs provide wildlife habitat and improve the aesthetics of the buildings "fifth facade".

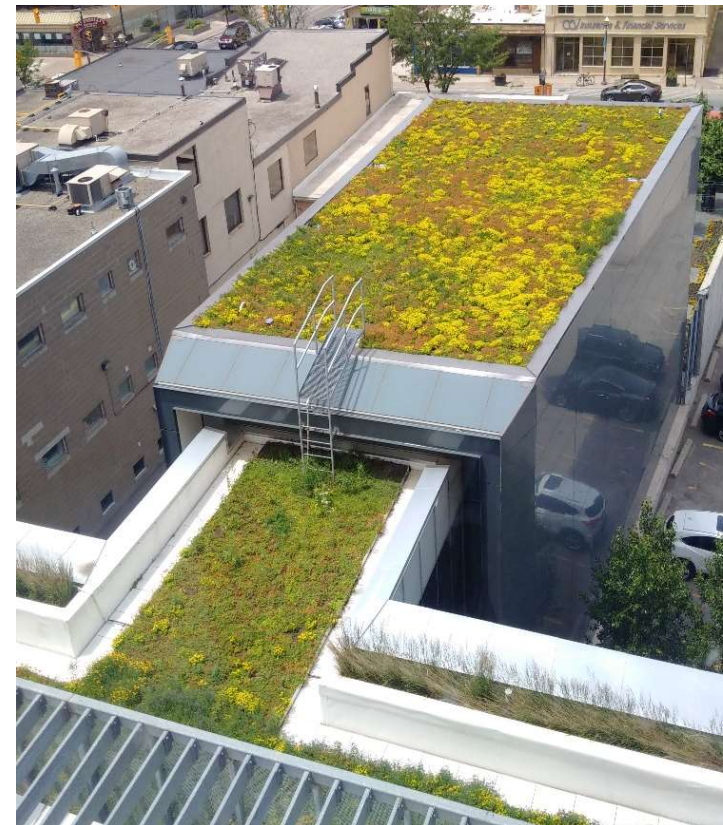




Image source: TRCA



## County Court Bioswale

In 2014 as part of County Court SNAP, the City installed its first bioswales along County Court Boulevard in concert with the scheduled road resurfacing. The primary role of the bioswales is to collect and clean storm water run-off from County Court Boulevard before it enters the Etobicoke Creek. Ongoing monitoring of the bio-filter swale has revealed that this feature has successfully reduce concentrations and loads of typical stormwater pollutants, and reduce runoff volume and peak flow rates from their road drainage areas.



The County Court bioswales capture over 240,000 litres of water, reducing stormwater runoff by up to 34%. They also decrease the amount of pollutants in the water released by up to 77%. Some of the pollutants they capture include chromium, copper, nitrogen, oil and grease, iron, and zinc.

## Glendale Public School Rain Garden

As part of Fletchers Creek Sustainable Neighbourhood Action Program, the City of Brampton and Credit Valley Conservation (CVC) worked with Glendale Public School to establish a rain garden on their property in 2019. Based on a “treatment train” approach, the garden captures rainwater from the school roof and playground surface, which previously pooled in the schoolyard making the field too soggy to play on. It also helps to cool water before it enters Fletchers Creek, which is home to Redside Dace. The garden has enhanced the aesthetics of school property through plantings and landscaped features, and showcases benefits of Green Infrastructure Low Impact Development solutions. In addition to helping design the garden, students helped plant it with bird and pollinator friendly plants. Additional learning opportunities for students and the community regarding stormwater management, native species, and pollinators were created, and an information sign installed.



## Stormwater Management Charge

Stormwater management is an important part of community safety and environmental protection. Due to factors such as climate change, aging infrastructure, and a growing community, the City developed a proactive program to manage stormwater infrastructure in a sustainable and fiscally responsible manner to ensure the City continues to provide the services the community expects. The Stormwater Charge, which commenced in June 2020, is a fair and equitable means of paying for stormwater services, and is based on the amount of runoff from a property. The Stormwater Charge will ensure that the City can provide dedicated and sustainable funding for stormwater services that increase public safety, reduce flooding and erosion, and protect property and the environment.



# LAND



Manage land to sustain the natural environment.

## Brampton Eco Park Strategy

A catalytic action identified in the Brampton 2040 Vision, the Brampton Eco Park Strategy aims to enhance and maintain natural systems and processes, while integrating opportunities for meaningful social and environmental interactions and experiences. Through seven guiding principles and a detailed action plan, it outlines how to establish an interconnected network of urban and green spaces that allow people and the environment to live and thrive together. Brampton's Natural Heritage System will form the foundation of the Brampton Eco Park, and will be coupled with Eco Spaces, such as parks and utility corridors, to become a showcase for the city that fosters healthier people, places, and ecosystems. The strategy was approved in 2020.



## Brampton One Million Trees Program

The Brampton One Million Trees Program is a framework for the City and its partnering organizations to increase tree plantings and meet its one million tree planting target outlined in the Brampton 2040 Vision. Approved in 2020, it contains goals, strategies, and actions including but not limited to, planting opportunities within streetscapes, parks, new and existing development, as well as community education and engagement.



## Tree Planting Tracker Map

The tree planting tracker map is a great tool the City of Brampton launched to help track and report progress toward achieving the one million tree planting goal. Anyone who plants a tree in Brampton is encouraged to record the tree planting on the map, including a photo of the tree.



The City of Brampton currently plants approximately 7000 trees annually, while its partners including the TRCA, CVC, and development industry plant a combined total of approximately 36,000 trees a year.



Fletchers Creek Valley: Before Valley Naturalization



Fletchers Creek Valley: After Valley Naturalization

## Natural Heritage and Environmental Management Strategy

The Natural Heritage and Environmental Management Strategy, released in 2016, is a proactive approach to ensure that natural heritage and built green spaces are conserved, restored, connected, and enhanced to support the health and diversity of the natural and built environments. To do so, the Strategy examines Brampton's natural heritage with a full systems approach that recognizes the challenges and opportunities presented by conserving natural features, functions, and linkages in an urban setting. It includes an action plan, performance indicators, and targets for the long term sustainability, biodiversity, and health of the city and its watersheds for future generations.



## Valley Naturalization Program

The Valley Naturalization Program is designed to restore native plant communities in valleys that were stripped of native vegetation by past agricultural practices and development. The new plantings, over time, restore the vegetation in these areas to a pre-agricultural state, dramatically improving their ecological value by introducing new wildlife habitat, improving fish habitat, and flood plain stabilization. The City has naturalized over 220 hectares since the launch of the program, 104 hectares of which were planted between 2014 and 2019.





## Natural Heritage Restoration Program

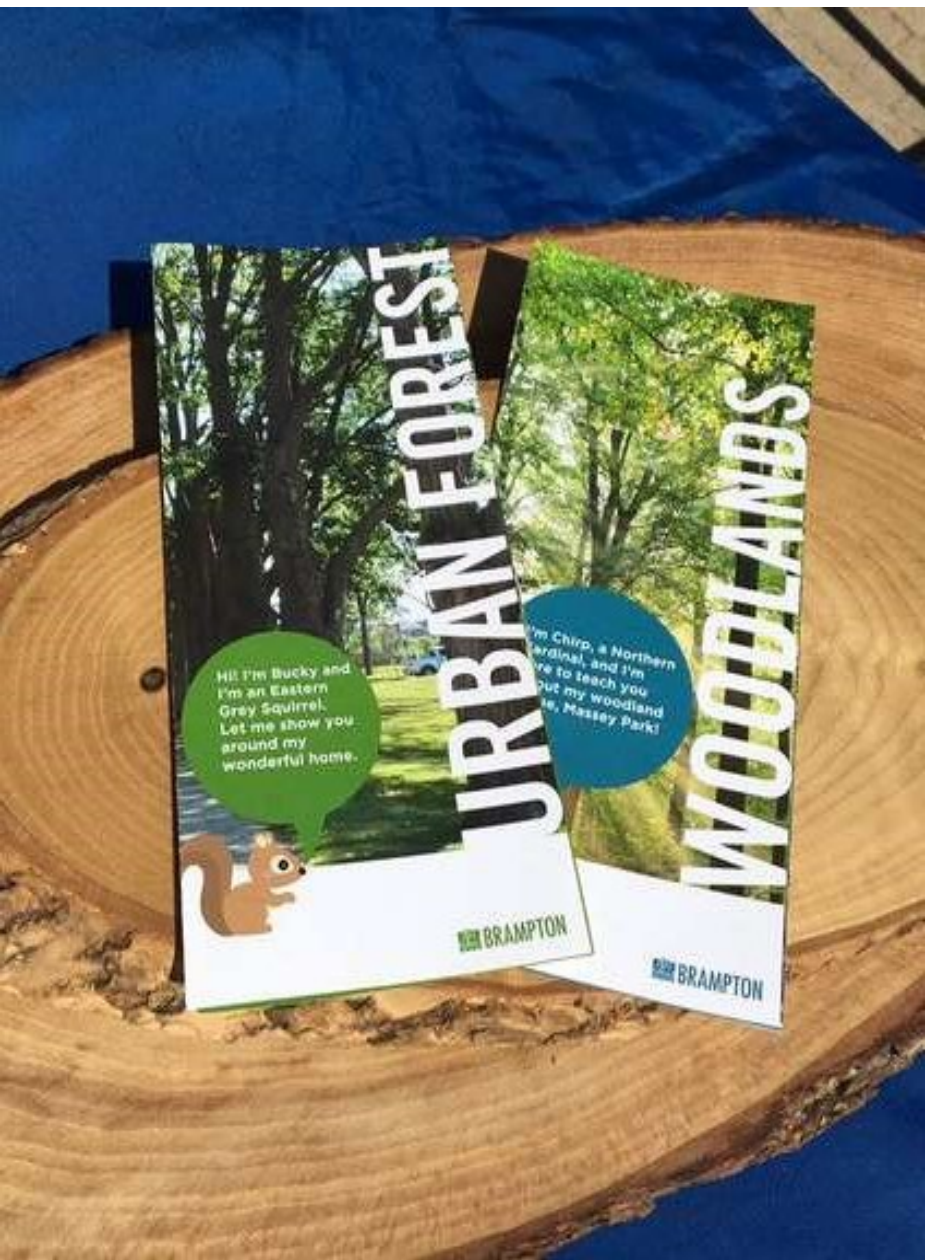
In 2018, the City of Brampton launched the Natural Heritage Restoration Program that focuses on projects that protect, restore, connect, and enhance the natural heritage system. The primary program goal is to manage Brampton's natural features to maximize the ecosystem services they provide. The program helps the City identify and prioritize areas for restoration and enhancement. It also focuses on education and outreach, as well as partnerships with Conservation Authorities, community groups and residents.



## Don't Mow, Let it Grow

In 2018, the City of Brampton launched Don't Mow, Let it Grow, an initiative focused on strategically converting areas of public space from turf grass into naturalized meadows and pollinator gardens. The "No Mow" zones contribute a range of environmental, financial, and aesthetic benefits. For example, they provide support for pollinators and wildlife, reduce green house gas emissions, and help manage stormwater.





## Natural Heritage Brochure Series

In 2019, the City of Brampton released a series of educational brochures to help build awareness on natural heritage features, the services they provide, and what actions people can take to responsibly enjoy and conserve them. The brochures are visually attractive, include animated characters to attract young readers, and are available at City facilities and distributed at public events.



## Riverstone

In 2017, the City moved forward with purchasing Riverstone Golf Club, which comprises of 60 hectares of valleyland. The existing facility will be converted to a recreation centre while the surrounding golf course will be re-naturalized by the City, in cooperation with the TRCA and the Ontario Ministry of Natural Resources and Forestry. In addition to providing more opportunities for Bramptonians to interact with and enjoy nature, this initiative will aid in conserving the West Humber tributary and will provide protected habitat for Redside Dace, an endangered fish. It will offer a new connection for active transportation on the east side of Brampton.



## Sustainable Neighbourhood Action Program

The Sustainable Neighbourhood Action Programs (SNAPs) are partnership initiatives between the City of Brampton, TRCA, CVC, and Region of Peel. SNAPs focus on environmental improvements and urban renewal of existing neighborhoods, and promote widespread adoption of sustainable technologies, practices, and lifestyles in the community. The SNAPs result in numerous environmental achievements, such as tree planting, stormwater management projects, natural heritage restoration, community festivals, residential energy and water conservation activities, and community empowerment initiatives.



Brampton currently has two SNAPS, the County Court SNAP and the Fletchers Creek SNAP, with a third SNAP (Bramalea) on its way!



## Community Garden Program

Community Garden program allows community members to join together to manage and maintain an identified plot of land for the purpose of growing fresh produce and plants. Although the actual space is owned by the City of Brampton, the garden itself is overseen by a Community Garden Group. In addition to providing access to fresh produce and nutritionally rich foods, these community gardens provide areas for recreation and exercise, offer a place to share knowledge, add beauty to the community, heighten people's awareness and appreciation for living things, and reduce fuel consumption and packaging.



## Backyard Garden Program

Launched in 2020, the Backyard Garden Program aimed to increase food security in the city and encourage Brampton residents to get active at home amid the COVID-19 pandemic. The program provided soil and seed to residents to grow produce and herbs in their backyards for their own consumption and/or to be donated to local food banks and community organizations. Through the Backyard Garden Program, more than 10,000 lbs of produce was donated to those in need from April to October 2020.



## Community Planting Program

City's Community Planting Program encourages the public to get involved in greening their communities by planting trees, shrubs, and wildflowers in public spaces across the city. The planting events bring together families, friends, and communities, and builds environmental awareness, creates habitat, promotes physical activity and mental health, and fosters local engagement.



## Adopt-a-Park Program

The City of Brampton encourages families, neighbourhoods, civic groups, businesses, and individuals to get involved in the preservation and enhancement of the parks system through the Adopt-a-Park program. The volunteer group commits to care for the park for two years through activities such as clean-ups and other park stewardship efforts. Volunteers donate time and resources to give special care to a City park by helping maintain, beautify, enhance and keep the park safe for all to enjoy. Over 80 parks across Brampton are adopted.



Friends & Stewards of Dorchester Park



## Heart Lake Road Wildlife Crossings

Heart Lake Road bisects a Provincially Significant Wildlife complex in north Brampton, and through a study known as the Heart Lake Road Ecology Volunteer Monitoring Project it was revealed that a high incidence of vehicle-related wildlife mortality was occurring on this road as wildlife tried to move between their habitats by crossing the road. This included The City of Brampton in partnership with the TRCA implemented mitigation measure to protect local biodiversity and Species at Risk, and enhance habitat connectivity, including the installation of:

- wildlife culverts, also referred to as eco passages, beneath the road at three locations along Heart Lake Rd, between Sandalwood Pkwy and Mayfield Rd in Brampton,
- wildlife directional fencing to keep animals from accessing road and guide them to safe passageways (e.g. culverts),
- signs to raise awareness and alert public to potential small wildlife on roads, and
- Optical Speed Bars painted to cause a visual effect intended to reduce driver's speed.

Citizen scientists have been instrumental in collecting the data needed to support this initiative.



## Brampton 2040 Vision: Living the Mosaic

The Brampton 2040 Vision: Living the Mosaic, endorsed in 2018, proposes a bold new vision for Brampton's future. Informed by one of the largest and most innovative public engagement exercises ever undertaken by the City, the Vision provides seven ambitious vision statements with its first being "Sustainability and the Environment". It envisions Brampton as mosaic of sustainable urban places, sitting within an interconnected green park network, with its citizens as environmental stewards. To achieve this future, the Vision calls for the establishment of an Institute of Sustainable Brampton, a Brampton Eco Park Strategy, and a Brampton Millions Trees Project. The remaining vision statements further support an urban transformation to a more sustainable Brampton through the provision of urban centres, complete communities, multi-modal transportation and social and cultural programming.



## Term of Council Priorities

The 2018-2022 Term of Council Priorities is a set of twenty-two priorities that will inform the City's activities, decisions, and budgets. There are five directions in which the priorities are organized, including "Brampton is a Green City". Council has directed staff to prioritize how Brampton will build sustainably by improving transit and active transportation, focusing on energy efficiency and revitalizing natural spaces and the urban tree canopy.



## Sustainability Performance Metrics for New Development

In support of the City's commitment to elevate the level of sustainable development in Brampton, the City of Brampton in partnership with the Cities of Vaughan and Richmond Hill, released a series of sustainability performance metrics that have an associated point value, to evaluate and score the sustainability performance of new development and encourage builders/developers to achieve a minimum level of performance.

As of 2015 development applicants are required to indicate which metrics their proposal achieves and the total point score via an online Sustainability Assessment Tool (SAT). In 2018, the City of Brampton mandated applicants achieve a final score within the Bronze threshold.

By adopting these performance metrics and thresholds as a lens through which to evaluate development, the City is facilitating more livable communities that are environmentally, economically, and socially sustainable.







## Seedy Saturday and Garden Show

Each spring the City hosts the Seedy Saturday and Garden Show in collaboration with the Brampton Horticultural Society. The show provides attendees the opportunities to hear from experts, get gardening information, swap and buy seeds, join gardening programs, and engage with fellow gardening enthusiasts. Hundreds of participants enjoy this annual event, which has grown in scale over the last five years.



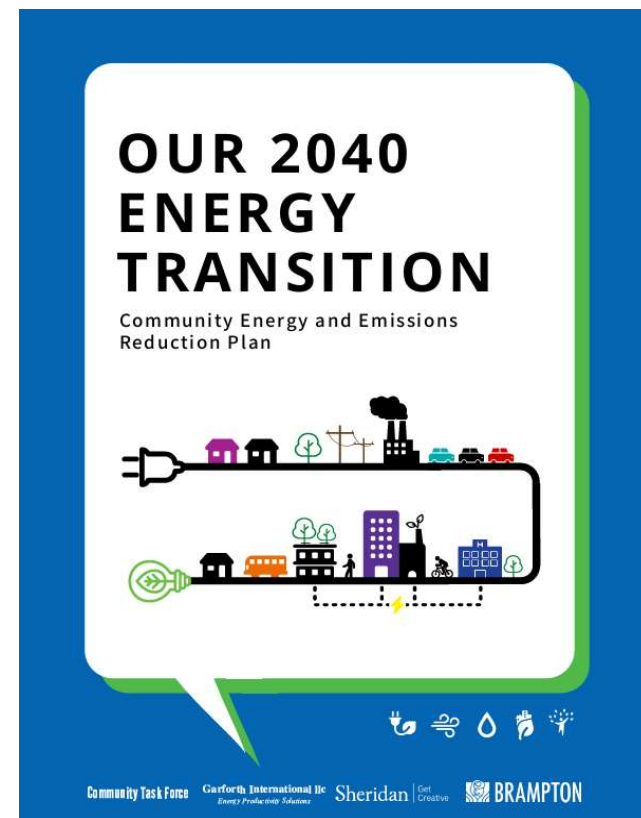
# ENERGY



Reduce energy consumption and manage the impact of energy usage on the environment.

## Community Energy & Emissions Reduction Plan

The Community Energy and Emissions Reduction Plan (CEERP) is an evidence-based, comprehensive plan approved in 2020 to drive innovation, employment, and economic development while achieving the City's environmental and climate change goals, along with its associated social benefits. CEERP offers a roadmap that will improve energy efficiency, reduce greenhouse gas emissions, create economic advantage, ensure energy security, and increase Brampton's resilience to climate change. The CEERP has three goals: reduce community wide energy use by 50% by 2041; reduce community-wide emissions by 50% by 2041 while establishing a pathway to reduce emissions by 80% by 2050; and retain at least \$26 billion in cumulative energy costs by 2041. Alongside the Brampton Grow Green Environmental Master Plan, the CEERP is the City's climate change mitigation plan.





## Energy Conservation at City Facilities

Between 2014 and 2019, a total of 50 energy conservation projects were completed on City facilities, resulting in an energy savings of 31,442,000 ekWh in total over the five years and the potential to reduce 1,190 tons of CO<sub>2</sub>e of GHG emissions per year. Projects were guided by the City's Corporate Energy Management Plan, and include, but are not limited to, instantaneous water heaters, swimming pool heat recovery, de-stratification fans, high efficiency lighting, and emerging technologies such as REALice heat saver. The simple payback of these projects is estimated to be seven years.



The City of Brampton has saved \$2.9 million in energy costs through energy conservation projects from 2014 to 2019.

## LEED (Leadership in Energy and Environmental Design) Certified Facilities

The City continues its commitment to sustainability in building design, construction, and operations by participating in the Leadership in Energy and Environmental Design (LEED™) green building program for new construction and major renovations. The City has constructed 7 LEED certified buildings, and all were rated Gold. These buildings were designed to optimize energy and water efficiency, while addressing construction waste management and recycling, indoor environmental quality, and durability in material selection, amongst other environmental friendly features.



## BOMA BEST Sustainable Buildings Certification

BOMA BEST Sustainable Buildings certification recognizes excellence in energy and environmental management and performance in commercial real estate. The program is managed by the Building Owners and Managers Association (BOMA) of Canada. The City of Brampton operates three BOMA BEST certified buildings, including City Hall (2 Wellington Street West), the Brampton Provincial Offences Act Building (5 Ray Lawson Boulevard), and Brampton Civic Centre (150 Central Park Drive).



LEED Gold Certified Williams Parkway Operations Centre

## Renewable Energy Projects

The City has implemented many renewable energy projects between 2014 and 2019, such as the installation of a geothermal system at Springdale Library and Williams Parkway Operations Centre, a solar photovoltaic (PV) system at Cassie Campbell Community Centre, and the solar thermal system at Brampton Apparatus and Maintenance Facility and Fire Station 11. Between 2014 and 2019 City renewable energy projects produced 11,123,754 ekWh of clean energy.



Between 2014 and 2019 City renewable energy projects produced 11,123,754 ekWh of clean energy.



## LED Street Light Installation

In 2017, the City commenced the LED Streetlight Conversion project to reduce its energy consumption, maintenance costs and the environmental impact associated with its extensive network of streetlights. By converting from traditional high pressure sodium (HPS) to light-emitting diode (LED) streetlights, the City not only achieves energy, cost, and GHG savings, but also improves overall lighting quality and roadway safety for both vehicle and pedestrian traffic. Since the project launch, the City has completed over 24,000 LED installations. It is estimated that the LED conversions will also result in an 80% reduction in maintenance costs, and that approximately 12,340 metric tonnes of GHGs will be eliminated over the life of each luminaire. The City aims to complete an additional 7854 conversions in 2020.



The City have completed over 16,000 LED street light conversions, achieving a 69% decrease in energy consumption, and 48% reduction in energy costs.

## LED Traffic Signal Installation

The City of Brampton was the first municipality in Peel to undertake a city-wide street lighting retrofit project. In 2003, Traffic Services began replacing incandescent traffic signal lamps with more efficient LED (light-emitting diode) technology that had a lifecycle of approximately 10 years.



## Solar Power Flashing Traffic Beacons

Traffic Services have been installing solar powered flashing traffic beacons in key areas requiring extra caution by the average driver, such as school zones, fire stations, and wildlife crossings. Powered only by the solar panel, these beacons helps reduce energy consumption versus traditional flashing traffic beacons.



## Earth Hour

Every March, the City of Brampton join millions of individuals, businesses, and governments around the world by turning off all non-essential lights for Earth Hour. The City encourages everyone in Brampton to join the global campaign to send a message that they care about protecting our environment. In 2019, City facilities achieved an overall 25% energy reduction during Earth Hour.





## Solar Powered Transit Shelters

In 2016, Brampton Transit introduced solar powered bus shelters, whereby energy is stored in batteries built into advertising panels. The panels automatically light up once surrounding natural light drops to a low enough level. By relying on renewable energy, these shelters reduce GHG emissions and save on electricity costs. To date, Brampton Transit has installed 179 solar shelters across the city. They are planning to replace all shelters reaching the end of their life cycle, and retrofit all other existing shelters to solar powered LED interior lighting. New solar powered shelters are strategically placed based on ridership, sun exposure, adjacent land use, and service frequency.



## Centre for Community Energy Transformation

In 2020, Council directed staff to move forward with establishing a Centre for Community Energy Transformation (CCET), a not-for-profit community based organization to help Brampton accelerate towards a low carbon future and act as a catalyst to implement the Community Energy and Emissions Reduction Plan (CEERP). The CCET was formerly referred to as the Institute for Sustainable Brampton, as identified in the Brampton 2040 Vision.



# WASTE



Reduce waste generation to limit resource use, GHG emissions, preserve habitats and resource, and decrease management costs.

## Parks Clean-Up Program

The City of Brampton launches cleanup campaigns each year, starting in Spring (April) and ending in Fall (November). The clean-up program give residents and businesses opportunities to collect litter in parks and other green spaces. Participants that register receive free clean-up kits to clean the location of their choice. In 2019 alone, over 45,000 people helped collect litter across Brampton.





## Don't Be Trashy Anti-Litter Campaign

The Don't Be Trashy litter campaign ran in 2019 and was designed to improve litter awareness, encourage proper waste disposal, and reduce the amount of litter in Brampton. The campaign included street decals, posters, school challenges, and social media posts, and was sponsored by CN. The campaign was part of the City's ongoing commitment to a clean and green Brampton, and a response to growing community concern about the negative impact litter has on human health, wildlife and the natural environment.



## Printer Fleet Replacement Project

In 2016, the City of Brampton undertook a printer fleet replacement program, which included a commitment to environmental sustainability. Over 300 printers were consolidated and replaced with just over 200 units strategically placed in central locations, providing ongoing savings in energy, as well as hardware and maintenance fees. The new printers also include controls that help reduce the amount of printing, including default black and white double-sided printing, and swipe-and-release technology, and automatic deletion of jobs not released for print within 24 hours.



Within the first month of rolling out the new printer fleet, the City saw over 80,000 sheets of paper saved.

