



# Environment

2019-2022 Business Plan  
& 2019 Budget

# Foreword

## Our Vision for the Future

Mississauga will inspire the world as a dynamic and beautiful global city for creativity and innovation, with vibrant, safe and connected communities; where we celebrate the rich diversity of our cultures, historic villages, Lake Ontario and the Credit River Valley. A place where people choose to be.

Mississauga City Council approved **Our Future Mississauga**; a Strategic Plan to achieve this vision over a forty year timeframe. The City engaged over 100,000 people to develop this Vision Statement. To achieve this vision the City has identified five Strategic Pillars for Change: **move**, **belong**, **connect**, **prosper** and **green**. Each year the City proposes various initiatives that are aligned with the Strategic Pillars and are intended to bring us closer to fulfilling our vision for the future. The City has over 300 lines of business which are consolidated into the 17 Services Areas (including the Stormwater Program) that are outlined in this Plan. The 2019-2022 Business Plan and 2019 Budget detail how and where the City plans to allocate resources to deliver programs and services.

The City is committed to providing programs and services cost-effectively. In this Plan we have outlined measures that will help us assess the quality, efficiency and customer satisfaction that our services achieve. The results help inform decisions on resource allocation and direct program offerings, and improve service delivery to ensure our vision is efficiently realized.

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# Executive Summary of Environment

**Mission:** To lead environmental sustainability in Mississauga by empowering people to take environmental action.

## Services we provide:

The Environment Division drives environmental sustainability in Mississauga by providing:

- A framework for the City of Mississauga and the community to take action on climate change
- An efficient waste diversion and recycling program for City of Mississauga facilities
- Awareness and education for residents and City staff to take environmental action
- Environmental strategic planning and advice to develop plans, policies and programs that advance the City's environmental priorities

## Interesting facts about this service:

- Leading the City's response to climate change
- Leading and administering six Corporate waste diversion programs
- Engaging 10,000 people in environmental education and outreach at 60 community events throughout Mississauga in 2018
- Managing 150 Green Leaders across the City in environmental action
- Greening the City's culture by infusing environmental considerations into City projects

## Highlights of the Business Plan include:

- Developing and implementing a City of Mississauga Climate Change Action Plan
- Developing and implementing a Corporate waste diversion plan which will achieve an overall 75 per cent diversion rate for City of Mississauga facilities
- Continued evolution of education and outreach programs for staff and the public
- Developing an environmental sustainability framework for the City, including a review of the Living Green Master Plan
- Developing an Urban Agriculture Plan
- Developing a Zero-Emission Vehicle Strategy

Net Investment (\$000's)	2019	2020	2021	2022
Operating	1,704	1,870	2,039	2,097
Capital	425	0	0	0
Full Time Equivalents	10.3	12.3	13.3	13.3

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# Core Services

## Vision, Mission, Goals of Service and Service Delivery Model

### Vision

To transform the City of Mississauga into an environmentally sustainable community.

### Mission

To lead environmental sustainability in Mississauga by empowering people to take environmental action.

### Goals of Service

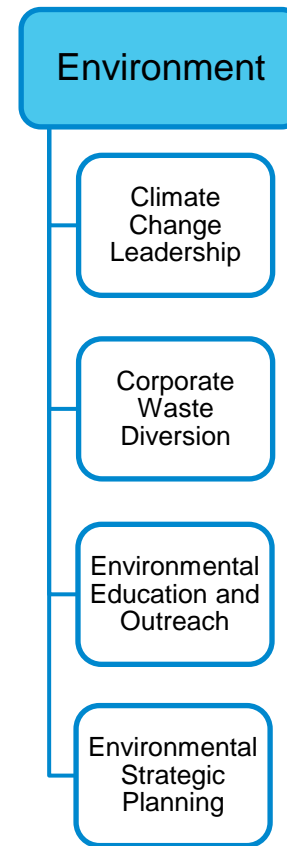
To ensure the City of Mississauga achieves its strategic environmental goals and objectives.

- **Drive climate action** – To reduce greenhouse gas (GHG) emissions, position the city competitively in the transition to a low carbon economy, and reduce climate change risks, liabilities, and costs, guided by the upcoming Climate Change Action Plan, which will provide a blueprint for Mississauga to mitigate and adapt to the impacts of climate change
- **Advance Corporate waste diversion** – Advance towards diverting 75 per cent of waste from landfill within six years through a standardized, cost-effective Corporate waste program
- **Foster environmental awareness and action** – Empower and engage employees and the community in

environmental action and raise awareness of the City's environmental priorities and initiatives, with a focus on climate change

- **Promote Corporate environmental sustainability**  
Provide environmental strategic leadership to the City of Mississauga by developing policies, strategies and programs, and monitoring and reporting on implementation and results

### Service Delivery Model



## Current Service Levels and Trends

### Climate Change

In 2018 and 2019, the Environment Service Area is continuing to lead the development and implementation of the City's first Climate Change Action Plan, including six background studies. The Climate Change Action Plan will:

- Help reduce greenhouse gas emissions
- Create jobs and position the city competitively in the low carbon economy
- Increase the city's resilience to climate change impacts
- Increase the capacity to deal with climate events

In addition to developing the climate change plan (i.e., The Climate Change Project), the City is pursuing opportunities to further climate action in the city in the short term. These opportunities relate to flooding, electric vehicles, and energy.



*Downtown Mississauga, Spring 2014*

### Waste Diversion

The Environment Service Area leads the City of Mississauga's Corporate waste diversion programs and training, which include:

- Conducting waste audits, and equipment mapping and inventories, to identify opportunities for continuous improvements in managing the City's waste, reducing costs and making waste diversion more efficient and easier for the user. In 2018, 83 waste and/or equipment audits were conducted in City of Mississauga facilities and parks: third-party professionals conducted three waste audits and summer students conducted 80 waste and equipment audits



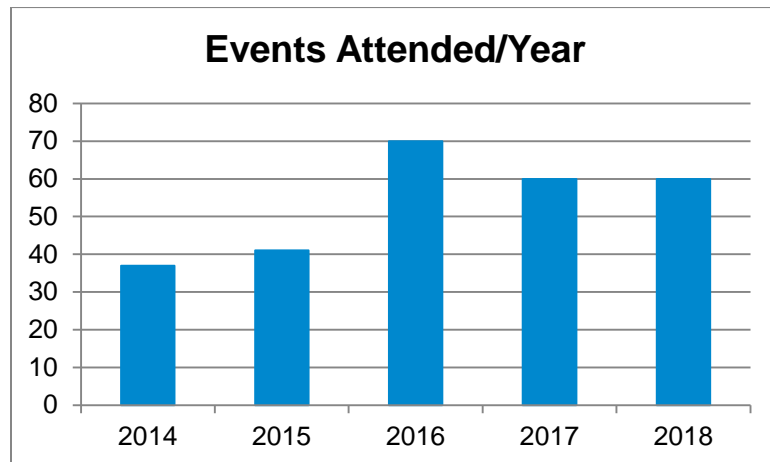
*Waste Audit*

- Delivering waste training to 10 per cent of City staff resulting in reduced waste and increased diversion
- Coordinating the annual 20-Minute Makeover, resulting in decreased litter in parks and on streets, with an 18 per cent increase in participation in 2018

- Leading and administering six Corporate waste diversion programs including confidential paper shredding, battery collection and fluorescent bulb recycling, resulting in 167 metric tonnes (368,172 pounds) of additional waste diverted from landfill in 2017
- Leading the development of a Corporate Six-Year Waste Diversion Plan to achieve 75 per cent diversion from landfill
- Piloting a new, innovative alternative for dog waste contaminant material impacting recycling in parks

### Environmental Education and Outreach

The Environmental Education and Outreach program has been evolving over the last five years.



In 2018, environment education and outreach staff and volunteers are engaging 10,000 people at 60 events. The events were chosen strategically to allow for high quality engagement with residents and the public.

To increase capacity, in 2018, Environment has trained and led 31 volunteers who have contributed 300 hours delivering

community environment education and outreach at events across the city.

Since 2015, Environment has held eight Earth Markets. The 2018 After Dark Earth Market was the largest to date. It was held in partnership with Many Feathers on Celebration Square, addressed the theme of climate change action, and was one of the key public engagement events for The Climate Change Project. Approximately 5,000 visitors attended. Special features of the Earth Market included a full-sized escape room (in partnership with Escape from The 6), ArtWorkX, and a musical performance from Rhythm Works.



*After Dark Earth Market, July 2018*

The Work of Wind, Air, Land, Sea is a project being undertaken in partnership with the University of Toronto Mississauga's Blackwood Gallery and the Culture Division, and involves producing an environmental education program titled the Society for the Diffusion of Useful Knowledge (SDUK) and a 10-day climate-change themed, contemporary public art festival. The education program will engage residents across the city in climate change discourse through a series of public programs as well as a series of six broadsheet publications. The education program aligns with and supports the City's engagement work for

The Climate Change Project, and will be used as an input during the development of the Climate Change Action Plan.

Mississauga Environment has several online and social media channels reaching large numbers of residents in the community. In the first seven months of 2018 (January to July), Environment's online and social media channels had the following activity:

- 2,400 Twitter followers; 277,795 Twitter impressions
- 1,145 Facebook followers; 99,040 Facebook impressions
- 3,200 visits on the Climate Change Project Engagement website
- 4,000 visits on the Mississauga environment web pages



Environment issued a multi-year grant (2014-2018) to Ecosource for community gardens, which enabled:

- Nine community food growing spaces in public parks across the City
- 10 garden projects with community partners
- 275 community garden plots
- 14,500+ people engaged at the gardens over four years
- 30,000+ pounds (13,600+ kilograms) of food grown over four years
- 30,000+ volunteer hours over four years

## Environmental Strategic Planning

Environment provides environmental strategic leadership to the City of Mississauga in order to ensure all departments have clear direction for their contribution to the City's environmental sustainability and to influence the City's environmental values and outcomes by:

- Developing a Zero-Emission Vehicle Strategy
- Developing environmental sustainability policies and programs
- Developing an Urban Agriculture Plan
- Providing an environment lens to City projects and plans
- Leading the Environment Community of Practice
- Providing guidance and support to the Environmental Action Committee
- Monitoring and facilitating Living Green Master Plan implementation and other environmental plans and strategies





## Performance Measures and Results

The City of Mississauga is committed to delivering services economically and efficiently. The City's performance measures are used to help assess how well we are doing at achieving our goals and where we need to improve operations. The results also inform decision-making and strengthen accountability.

### Balanced Scorecard

A Balanced Scorecard groups measures in four key areas of an organization's performance: Financial, Customer, Employee, and Business Process. By paying attention to all four areas, an organization can retain balance in its performance and ensure that it is moving toward the attainment of its goals.

Below are descriptions of the measures this service area's Balanced Scorecard takes into account. The Balanced Scorecard that follows shows trends since 2015 and expected outcomes up to 2022.

### Financial Measures

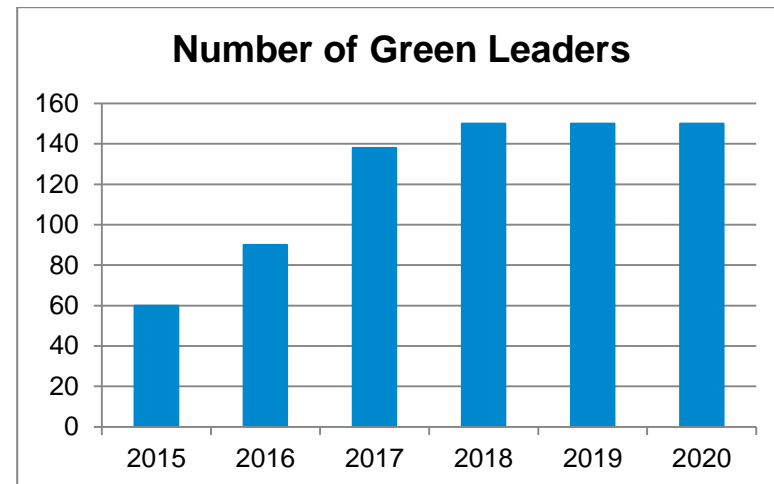
*Value of Community Environment Volunteers* is the dollar value of the time contributed by the Community Green Leader volunteers to deliver environmental education and outreach. This measure shows how volunteers help Environment reach out to more people in the community in a cost-effective manner. In 2017, volunteers were more active, contributing over 500 hours.

*Impact of Environment Ads on Environment Social Media Channels* is the number of people reached (includes reach, engagement and/or impressions) per dollar spent on advertising Environment initiatives on Environment's social media channels (i.e., Twitter and Facebook). This is a new measure for Environment, and is an example of Environment's evolving use of social media.

## Customer Measures

*Online Engagement* is the number of "interactions" as a result of Environment online and social media tactics (e.g., Twitter, web pages). Online engagement complements face-to-face engagement and provides the ability to reach larger numbers of people in the community. A spike occurred in 2016, when Environment joined Facebook and participated in an employee engagement campaign with a significant online component.

*Employees that have a Green Leader* are the number of City of Mississauga employees who have access in their workplace to a Green Leader. Green Leaders are a team of staff volunteers, led by Environment, who champion environmental awareness and action. This measure demonstrated Environment's ability to reach out to and affect behaviour change amongst all City employees.



Environment trains and manages a dynamic group of Green Leaders across the City. While the program will continue to evolve, the number of Green Leaders is expected to stabilize going forward, given that all departments and divisions will be participating by the end of 2018.

## Employee Measures

*Employee Overall Satisfaction* is the overall satisfaction score for Environment from the Employee Engagement Survey, which is conducted every three years. The 2015 Environment Division score is consistent with the City's overall score.

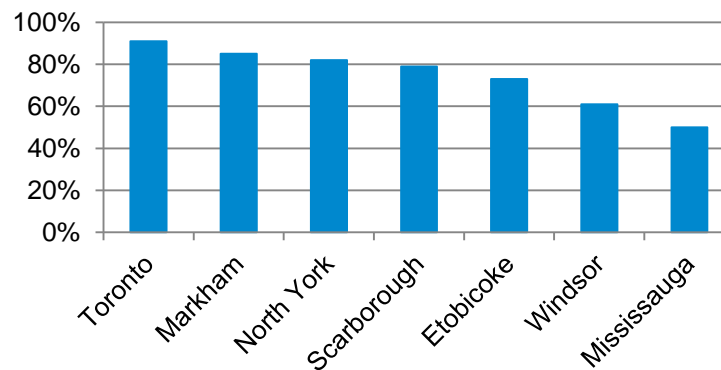
*Square Footage of Office Space per Environment Employee* is the amount of office space used by each Environment employee. This measure demonstrates Environment's commitment to continued innovation, efficiency and savings by creating a more efficient work area and taking advantage of alternative work arrangements. Since 2013, Environment has continued to occupy the same amount of office space despite an increase in staff, and has reduced space per employee by 60 per cent.

## Internal Business Process Measures

*Living Green Master Plan Implementation* is the percentage of actions in the Living Green Master Plan that are complete or on-track. This measure demonstrates Environment's influence and collaboration in ensuring actions are taken towards achieving environmental sustainability.

*Waste Diversion Rate at Civic Centre* is the percentage of waste generated at the Civic Centre that is diverted from landfill. This measure demonstrates the effectiveness of waste diversion techniques such as focused education, sustainable procurement, improved programs and employee/patron engagement. While the Waste Diversion program is targeting an overall 75 per cent diversion rate, the diversion goal at the Civic Centre is 85 per cent, as facilities that primarily contain offices are capable of achieving higher diversion rates.

## City Hall/Civic Centre Waste Diversion Rates

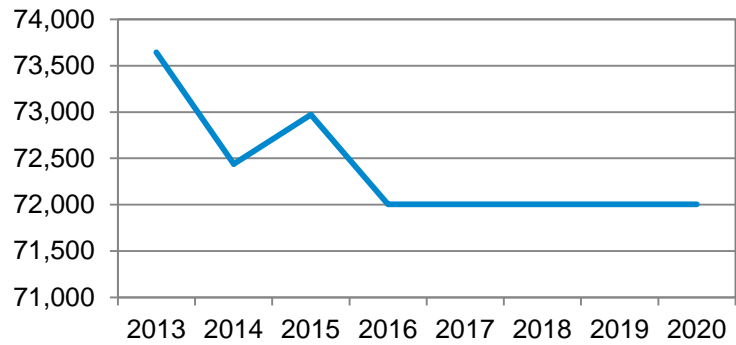


Mississauga is lagging behind other municipalities' civic centre waste diversion rates.

*Number of Waste Audits* is the total number of waste and/or equipment audits conducted by Environment students and staff, and third-party professionals. Audits provide data to support decision making; they also identify opportunities for continuous improvements in managing the City's waste, reducing costs and making waste diversion more efficient and easier for the user. In 2018, fewer audits were conducted in favour of performing more detailed/strategic audits. Environment will continue to do audits at key representative locations to monitor performance.

*Corporate Greenhouse Gas Emissions* is the amount of GHGs in tonnes of equivalent carbon dioxide that is produced from the City's corporate emission sources. This is a common environmental performance measure municipalities use to show their contribution to global GHG emissions. The City's GHG emissions have remained relatively constant.

### Corporate Greenhouse Gas Emissions



The City of Mississauga's power consumption has been increasing in order to keep up with increasing service demands, but the City's GHG emissions have been offset by factors such as the closing of the coal-fired power plants, the connection of more renewable generation sources to the grid, and the installation of LED street lights.

## Balanced Scorecard

Measures for Environment	2015 (Actual)	2016 (Actual)	2017 (Actual)	2018 (Plan)	2019 (Plan)	2020 (Plan)	2021 (Plan)	2022 (Plan)
<b>Financial:</b>								
Value of Community Environment Volunteers	\$5,880	\$3,842	\$8,691	\$5,163	\$5,241	\$5,310	\$5,370	\$5,430
Impact of Environment Ads on Environment Social Media Channels (People Reached per Dollar Spent)	N/A	30	43	63	78	93	108	123
<b>Customer:</b>								
Online Engagement	8,000	22,000	14,700	21,000	25,000	30,000	35,000	40,000
Employees that have a Green Leader	1,500	2,500	3,500	5,000	5,000	5,000	5,000	5,000
<b>Employee:</b>								
Employee Overall Satisfaction	68%	N/A	N/A	75%	N/A	N/A	80%	N/A
Square Footage of Office Space per Environment Employee	124	92.6	84.4	70.5	77.5	77.5	71.6	71.6
<b>Internal Business Process:</b>								
Living Green Master Plan Implementation	86%	87%	90%	95%	100%	100%	100%	100%
Waste Diversion Rate at Civic Centre	51%	51%	50%	60%	75%	80%	85%	85%
Number of Waste Audits	26	46	128	83	100	100	100	100
Corporate Greenhouse Gas Emissions*	72,970	72,002	72,002	72,002	72,002	72,002	72,002	72,002

\*Numbers for 2015 and 2016 have been updated using the most up-to-date emissions factors

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## Awards and Achievements

### Climate Change Action Plan Engagement

In addition to using more traditional methods of engaging stakeholders (e.g., workshops) throughout the development of the Climate Change Action Plan, Environment has incorporated a variety of innovative engagement strategies including:

- A full-sized climate-themed escape room (in partnership with Escape from The 6), focusing on actions residents can take to combat climate change
- The Imagine2050 Photo Contest (in partnership with Visual Arts Mississauga), which asked residents to imagine a low carbon and resilient Mississauga in the year 2050
- The Climate Change Time Capsule Challenge (in partnership with Escape from The 6), which used gamification to engage residents in a 10-minute action-oriented activity

### Outdoor Environmental Programming for Children

Environment partnered with internal and external partners on new outdoor environmental programming for children:

- With the Recreation Division and Parks & Forestry Division, developed a garden-themed pilot camp program. Four one-week camps were held at different City sites throughout the summer, with mornings spent in a community garden and facilitated by Ecosource
- With the Recreation Division, hosted four Pop Up Adventure Playground events, run by Earth Day Canada, in Mississauga parks. Pop Up Adventure Playgrounds gave children the opportunity to use their imaginations and experience unstructured, self-directed play



*Pop Up Adventure Playground, Summer 2018*

### Organic Waste Diversion at Fire Stations

Environment partnered with Mississauga Fire & Emergency Services to bring organic waste diversion to fire stations. This opportunity to decrease the amount of material going to landfill will set the stage for continued expansion of organic waste collection at City facilities.



*Organic Waste Collection from a Mississauga Fire Station*

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# The 2019-2022 Business Plan

## Outlook

### Planning for the Future

#### Climate Change Action Plan

Environment is leading the development of the Climate Change Action Plan (completion scheduled for 2019) which will provide a blueprint for Mississauga, both the Corporation and the community, to mitigate and adapt to the impacts of climate change.



#### Zero-Emission Vehicle Strategy

This strategy will guide the City's response to electric vehicles and hydrogen fuel cell vehicles. It will determine the City's role as well as examine what actions can be taken to aid in the transition to a low carbon transportation system.

#### Corporate Six-Year Waste Diversion Plan

Environment is leading the development and implementation of a Corporate Six-Year Waste Diversion Plan with the goal of achieving 75 per cent waste diversion from landfill by 2024. Priorities of the plan include:

- Making Strategic Investments – how we responsibly and effectively direct our capital and operating budgets
- Building Internal Competencies – how we ensure our processes are aligned to facilitate success and provide timely feedback
- Leveraging External Stakeholders – how we work with key stakeholders to further our plan with minimal cost to the City

#### Education and Outreach

Environment will continue to evolve education and outreach by offering more opportunities for community involvement in environmental action through the development of new initiatives and partnerships including outdoor environmental education, youth-focussed programs, investing in new environment displays and building more community capacity. In 2018 and 2019, the focus is on climate change.

#### Green Leaders

Environment's Green Leaders employee engagement program will be in all City departments and divisions by the end of 2018. The program continues to increase environmental awareness and action in the workplace in an effort to green City operations and corporate culture. In 2018 and 2019, the Green Leaders program will focus on climate change, as well as supporting the reduction of single-use plastics within internal operations.



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### **Urban Agriculture Plan**

Environment is developing an Urban Agriculture Plan in 2019 to guide planning and investment to increase urban-scale food production. United Nations research shows the percentage of food consumed in cities which is grown in cities is rapidly increasing due to increasing urbanization, need, food insecurity and grassroots interest. An Urban Agriculture Plan will determine the City's role and examine City properties for their feasibility for food production.

### **Corporate Environmental Sustainability**

Environment is developing an environmental sustainability framework for the City. This will include policies, programs and review of the Living Green Master Plan to build long-term commitment to achieving environmental sustainability.



## Finding Efficiencies

### Lean Program

The City's Lean Program focuses on strengthening the organization's culture of continuous improvement and instills Lean concepts and principles as a way of work in every service area. The program focuses on maximizing customer value and minimizing waste along with empowering staff at all levels to problem-solve on a daily basis.

Since becoming permanent in 2016, the Lean program has delivered significant results. Nine staff members have received introductory White Belt Training, and one staff member has received advanced Green Belt Training. Sixteen small improvements have produced such enhancements as improved customer experience, faster processing times, higher quality and lower costs.

Some highlights of the many projects and small improvements completed include:

- Utilized City vehicles that would otherwise be unused on Saturdays/Sundays, for weekend community outreach events, instead of staff expensing mileage or renting a vehicle
- Redesigned equipment and waste audits to reduce service times and travel
- Reduced paper use by switching from hardcopies to tablets and fillable forms for outreach reports at events
- Leading a project, in progress, towards ensuring the most effective gathering, separation and removal of waste from City-owned recreation facilities

Completed Initiatives					Total Benefits	
Improvement Type	2014-2016	2017	September 2018	Total	Type	Total
Small Improvement	1	15		16	Cost Savings and Avoidance	
Rapid Improvement					Customer Service Improvements	9
Project					Safety Improvements	
<b>Total</b>	<b>1</b>	<b>15</b>		<b>16</b>	Environmental Improvements	<b>7</b>
In-Progress Initiative	Goals of the Initiative					
Facility Waste Equipment Standardization	Improve, document and standardize the waste management systems within recreation centres across the City to enhance customer service and value, avoid and/or reduce operational costs, and achieve 75 per cent waste diversion in all facilities					



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### **Other Continuous Improvement Programs and Initiatives**

- Conducting various background studies (e.g., fleet analysis, energy mapping) that will feed into the action planning phase of The Climate Change Project, towards development of a climate action plan that will help prepare the City for the impacts of a changing global climate
- Leading the Green Leaders employee engagement program, which aims to achieve environmental sustainability in the workplace (e.g., green City operations and corporate culture) by providing information and championing action, with a focus on climate change, energy conservation and waste diversion
- Performing waste audits, waste equipment mapping, and waste equipment inventories to catalogue and identify opportunities for continuous improvements in standardizing and managing the City's waste, reducing costs and making waste diversion more efficient and easier for the user

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## Advancing the City's Strategic Plan

### move - developing a transit oriented city

Environmental outreach promotes sustainable transportation, including public transit and active transportation in the community.

Climate change actions will seek to help the city transition to a low carbon transportation system.

### belong - ensuring youth, older adults and new immigrants thrive

Environmental Community Grant supports the creation and programming of community gardens which provides community spaces.

Earth Markets are tailored to Mississauga's diverse communities. Environmental outreach is at multicultural festivals and events.

Environment is working to integrate environmental education and nature-based play into child and youth recreation programs.

The Climate Change Action Plan will reduce climate risks for vulnerable populations, including low-income older adults and children.

### connect - completing our neighbourhoods

Environment is leading the City towards environmental sustainability and mitigating the impacts of climate change. Climate change actions will improve neighbourhood energy efficiency and sustainability, and reduce impacts of climate change on infrastructure and residents.

Environmental outreach helps residents appreciate the natural environment.

Community gardens improve neighbourhood security.

### prosper - cultivating creative and innovative businesses

The Climate Change Action Plan will position Mississauga competitively in the transition to a low carbon economy and make the city resilient to climate change.

### green - living green

Environment promotes a green culture through community outreach and the Green Leaders employee engagement program.

The Corporate waste diversion program reduces waste going to landfill.

The Climate Change Action Plan will transition Mississauga towards a low carbon resilient city.

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## Transforming our Business with Technology

### Climate Change

Online engagement is being used during the development of the Climate Change Action Plan – [yoursay.mississauga.ca/climate-change](https://yoursay.mississauga.ca/climate-change).



### Waste

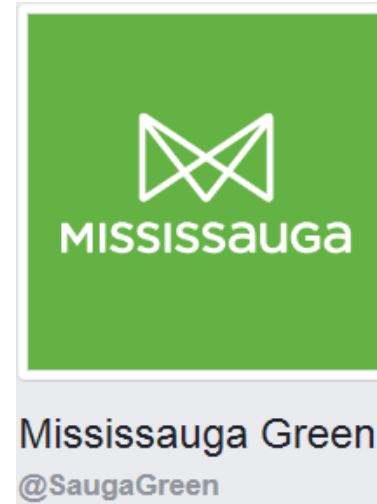
Waste data is obtained from radio frequency identification on all Region of Peel-provided waste equipment to monitor individual facility performance and identify opportunities for continuous improvement.



*Region of Peel Waste Equipment Radio Frequency Identification*

### Environment Education and Outreach

Environment uses its own online and social media channels to reach large numbers of people in the community (e.g., Twitter, Facebook and web pages).



*The Environment Division on Facebook – @SaugaGreen*

Environment also uses mobile devices to engage residents and conduct surveys.

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## Maintaining Our Infrastructure

### Climate Change

The Climate Change Action Plan will:

- Help the City adapt to and reduce impacts of climate change
- Increase the City's ability to recover from climate change events (resiliency)
- Examine three parks to understand the risk to infrastructure from climate change and gain recommendations to reduce those risks
- Examine and start to develop a method to incorporate climate change into the City's asset management practices that are under development



*December 2013 Ice Storm*

### Waste Diversion

The Corporate Six-Year Waste Diversion Plan will:

- Support implementation of standards for waste equipment and signage (the right equipment, in the right place and at the right time)
- Improve the equipment maintenance and replacement process
- Guide strategic investments to responsibly and effectively direct capital and operating budgets for waste equipment



*Waste Container at Paramount Fine Foods Centre*

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# Managing Our Human Resources

## Workforce Analytics

The Environment Division was formed in 2012 and has evolved to meet the growing requirements for environmental strategy planning, waste diversion, climate change, and environmental education and outreach.

In 2018, Environment included a combination of full-time staff, contract staff, and summer students, as well as volunteers and interns, to help advance its vision to transform the City of Mississauga into an environmentally sustainable community.

## Our Talent

The team is a multi-generational, culturally diverse group of professionals, with specialties in:

- Environmental Sustainability
- Education
- Employee Engagement
- Community Outreach
- Customer Service
- Social Media
- Waste Management
- Climate Change
- Energy Management
- Sustainability Reporting
- Urban and Regional Planning
- Project Management
- Contract Management
- Regulatory/Environmental Compliance
- Lean (Nine White Belts; One Green Belt)

Professional accreditations include Registered Professional Planners, Ontario Certified Teachers.

Memberships include Urban Sustainability Directors Network, Canadian Urban Sustainability Practitioners' Network.

Environment continues to invest in its staff to keep skills and expertise current and prepared for the future by attending training sessions, conferences and workshops, such as the GLOBE Forum leadership summit for sustainable business, and ICLEI-Local Governments for Sustainability and Great Lakes and St. Lawrence Cities Initiative conferences.

## Our Structure

The Environment Division is comprised of four units:

1. Climate Change – Lead climate action in the City
2. Corporate Waste Diversion – Implement Corporate Six-Year Waste Diversion Plan
3. Environmental Education and Outreach – Community awareness, environmental education, and Green Leaders internal staff engagement program
4. Environmental Initiatives – Develop environmental strategy and policy

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**Critical Roles/Functions to Achieve Business Goals**

- Climate change expertise, particularly for adaptation, will be required to implement the Climate Change Action Plan
- Waste diversion expertise to implement and report on the Corporate Six-Year Waste Diversion Plan
- Education and outreach for community outreach and Green Leaders internal engagement programs
- Strategy/Policy development for: climate change, Corporate environmental sustainability, waste diversion, urban agriculture, and zero-emission vehicle program

**Talent Needs**

In order to continue to provide an efficient, cost-effective Corporate waste diversion program that will divert 75 per cent of waste from landfill within six years, the existing waste management assistant position contract will be converted to permanent in 2019.

In 2019, the Climate Change Action Plan will be Council-approved. With its Corporate and community scope, the plan will require dedicated resources and expertise to advance implementation (BR# 5470).

**Proposed Full Time Equivalent (FTE) Staffing Distribution by Program**

Program	2018	2019	2020	2021	2022
Environmental Management	10.3	10.3	12.3	13.3	13.3
Total Service Distribution	10.3	10.3	12.3	13.3	13.3

# Proposed Operating Budget

This part of the Business Plan sets out the financial resources required to deliver the proposed 2019-2022 Business Plan. Information is provided by major expenditure and revenue category as well as by program. The costs to maintain existing service levels and operationalize prior decisions are identified separately from proposed changes. The Environment budget for 2018 was \$1.5 million and the proposed budget for 2019 is \$1.7 million.

## Total Changes to Maintain Current Service Levels

The cost of maintaining the 2018 service level for Environment is estimated to be \$88,200, which includes:

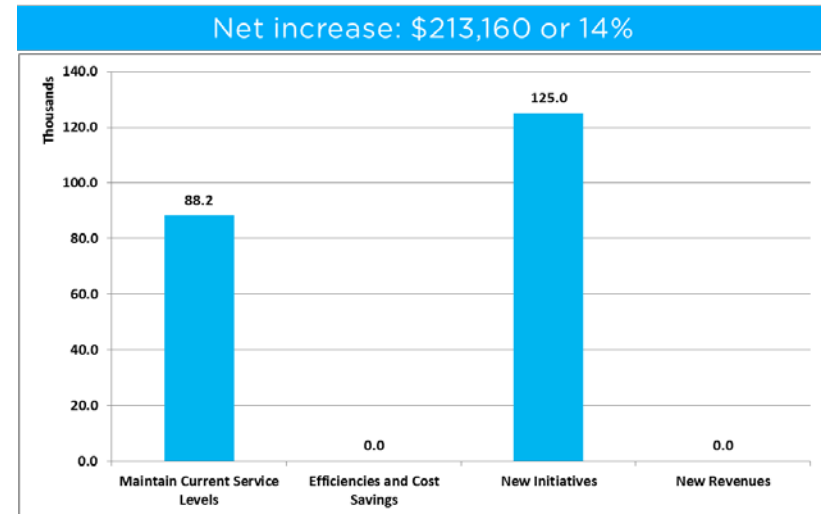
- \$38,000 for labour and benefit adjustments, including a contract conversion (waste management assistant)
- \$20,000 for environmental outreach materials
- \$15,000 for third-party waste audits
- \$15,000 for increased memberships and dues

## New Initiatives

The following new initiative is proposed for 2019:

- \$125,000 will be used for climate action and innovation to support City participation in multi-stakeholder initiatives that present strong opportunities to advance the City's pending Climate Change Action Plan

## Proposed Changes to 2019 Net Operating Budget by Category (\$000's)



## Operating Budget Details

The following table identifies the budgeted and forecasted operating expenditures and revenues for 2019-2022, as well as the 2018 Budget and 2017 Actuals by major program within the Service Area.

### Proposed Budget by Program

Description	2017 Actuals (\$000's)	2018 Budget (\$000's)	2019 Proposed Budget (\$000's)	2020 Forecast (\$000's)	2021 Forecast (\$000's)	2022 Forecast (\$000's)
<b>Expenditures to Deliver Current Services</b>						
Environmental Management	1,381	1,491	1,579	1,597	1,619	1,639
<b>Total Expenditures</b>	1,381	1,491	1,579	1,597	1,619	1,639
<b>Revenues</b>	(6)	0	0	0	0	0
Transfers From Reserves and Reserve Funds	0	0	0	0	0	0
New Initiatives and New Revenues			125	273	420	458
<b>Proposed Net Budget Including New Initiatives &amp; New Revenues</b>	<b>1,375</b>	<b>1,491</b>	<b>1,704</b>	<b>1,870</b>	<b>2,039</b>	<b>2,097</b>
Expenditures Budget - Changes by Year			6%	1%	1%	1%
Proposed Net Budget - Changes by Year			14%	10%	9%	3%

Note: Numbers may not balance due to rounding.



## Summary of Proposed Budget

The following table shows the proposed budget changes by description and category. Costs (labour; operational costs; and facility, IT and support) and revenues are shown by category with the approved 2018 budget for comparison. The three columns to the far right of the table show the totals proposed for 2019 and their dollar and percentage changes over 2018.

## Summary of Proposed 2019 Budget

Description	2018 Approved Budget (\$000's)	Maintain Current Service Levels	Efficiencies and Cost Savings	Annualized Prior Years Budget Decisions	Operating Impact of New Capital Projects	Proposed New Initiatives And Revenues	Special Purpose Levies	2019 Proposed Budget (\$000's)	\$ Change Over 2018	% Change Over 2018
Labour and Benefits	1,004	38	0	0	0	0	0	1,042	38	4%
Operational Costs	480	50	0	0	0	125	0	655	175	36%
Facility, IT and Support Costs	7	0	0	0	0	0	0	7	0	0%
<b>Total Gross Expenditures</b>	<b>1,491</b>	<b>88</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>125</b>	<b>0</b>	<b>1,704</b>	<b>213</b>	<b>14%</b>
<b>Total Revenues</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0%</b>
<b>Total Net Expenditure</b>	<b>1,491</b>	<b>88</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>125</b>	<b>0</b>	<b>1,704</b>	<b>213</b>	<b>14%</b>

## Summary of Proposed 2019 Budget and 2020-2022 Forecast

Description	2017 Actuals (\$000's)	2018 Approved Budget (\$000's)	2019 Proposed Budget (\$000's)	2020 Forecast (\$000's)	2021 Forecast (\$000's)	2022 Forecast (\$000's)
Labour and Benefits	948	1,004	1,042	1,208	1,376	1,434
Operational Costs	427	480	655	655	656	656
Facility, IT and Support Costs	7	7	7	7	7	7
<b>Total Gross Expenditures</b>	<b>1,381</b>	<b>1,491</b>	<b>1,704</b>	<b>1,870</b>	<b>2,039</b>	<b>2,097</b>
<b>Total Revenues</b>	<b>(6)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Net Expenditure</b>	<b>1,375</b>	<b>1,491</b>	<b>1,704</b>	<b>1,870</b>	<b>2,039</b>	<b>2,097</b>

Note: Numbers may not balance due to rounding.

## Proposed Cost Increase Required to Maintain Current Service Levels

The following table provides detailed highlights of budget changes by major cost and revenue category. It identifies the net changes to maintain existing service levels, taking into account efficiencies, cost savings, and cost increases arising from prior year decisions.

Description	2018 Budget (\$000's)	2019 Proposed Budget (\$000's)	Change (\$000's)	Details (\$000's)
<b>Labour and Benefits</b>	<b>1,004</b>	<b>1,042</b>	<b>38</b>	Increase reflects labour adjustments and other fringe benefit changes
Administration and Support Costs	7	7	0	
Advertising & Promotions	72	92	20	Environmental outreach materials
Communication Costs	3	3	0	
Contractor & Professional Services	41	56	15	Third party waste audits
Finance Other	83	83	(0)	
Materials, Supplies & Other Services	16	16	0	
Occupancy & City Costs	25	25	(0)	
Staff Development	36	51	15	Increased memberships and dues
Transfers To Reserves and Reserve Funds	200	200	0	
Transportation Costs	5	5	0	
<b>Subtotal - Other Operating</b>	<b>487</b>	<b>537</b>	<b>50</b>	
	0	0	0	
	0	0	0	
<b>Subtotal - Revenues</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Total</b>	<b>1,491</b>	<b>1,579</b>	<b>88</b>	

Note: Numbers may not balance due to rounding.

## Proposed New Initiatives and New Revenues

This table presents the costs by Budget Request (BR) for proposed new initiatives. Each BR is numbered. Detailed descriptions of each Request can be found in the pages following the table.

Description	BR #	2019 FTE Impact	2019 Proposed Budget (\$000's)	2020 Forecast (\$000's)	2021 Forecast (\$000's)	2022 Forecast (\$000's)	2019 to 2022 FTE Impact	2019 to 2022 Capital (\$000's)
<b>New Initiative</b>								
Climate Change Staff Resources	5470	0.0	0	148	295	333	3.0	0
Climate Action and Innovation	5471	0.0	125	125	125	125	0.0	0
<b>Total New Initiative</b>		<b>0.0</b>	<b>125</b>	<b>273</b>	<b>420</b>	<b>458</b>	<b>3.0</b>	<b>0</b>
<b>Total New Initiatives and New Revenues</b>			<b>125</b>	<b>273</b>	<b>420</b>	<b>458</b>	<b>3.0</b>	<b>0</b>

Note: Numbers may not balance due to rounding.

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Budget Request #: 5470

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**Proposed Initiative**

Climate Change Staff Resources

**Department**

Community Services Department

**Service Area**

Environment

**Description of Budget Request**

Climate action on a community scale is a new area of activity that requires dedicated expertise to advance initiatives with external stakeholders and within the Corporation.

This request is for two climate change positions hired in 2020, and one further climate change position hired in 2021.

**Required Annual Operating Investment**

<b>Impacts (\$000s)</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Gross Expenditures	0.0	148.2	294.9	333.1
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	0.0	148.2	294.9	333.1
* Net Change in \$		148.2	146.7	38.1
FTEs	0.0	2.0	3.0	3.0

*\*In each year, all values are cumulative, not incremental.*

**Required Capital Investment**

<b>Total Capital (\$000s)</b>	<b>2018 &amp; Prior</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022 &amp; Beyond</b>
Expenditures	0.0	0.0	0.0	0.0	0.0

**Why Staff Recommend this Initiative**

The City's first Climate Change Action Plan will be complete in 2019; this work will focus on areas of activity for climate action in Mississauga.

Specialized expertise is needed to drive and support the Climate Change Action Plan's transformation initiatives within the Corporation and the community/industry. Areas of action will include climate policy and program development, project management, and external stakeholder engagement.

### **Details of Service Change**

There is currently one climate change FTE at the City, leading the development of the climate change plan. This request increases the staff complement by two FTEs in 2020 and by an additional FTE in 2021. The four FTEs in 2021 will do a number of things, including:

- Lead the implementation of the Climate Change Action Plan
- Support and work with internal staff to address climate change
- Build programs and partnerships with external stakeholders to address climate change at the community level
- Build strategies to fund action, including leveraging grants and private capital

One senior and one less-senior FTE would be added in 2020, and one senior FTE would be added in 2021.

### **Service Impact**

The three climate change positions would consist of:

- Two senior positions focused on building internal and external programs and partnerships to support implementation of the climate change plan. These projects will require participation from a diverse and varied group of divisions in the City, and stakeholders throughout the city. This would include Corporate actions, working with stakeholders and other members of the community to develop and implement community actions, and building strategies to fund actions, including utilizing grants and private capital. With such a large plan, the work will need more than one position to implement
- One less-senior position supporting the implementation of the projects and the development of technical information needed to undertake those projects

This will account for an operating increase of \$148,000 in 2020, an additional \$147,000 in 2021, and a further \$38,000 in 2022.

<b>Proposed Initiative</b>	<b>Department</b>	<b>Service Area</b>
Climate Action and Innovation	Community Services Department	Environment

**Description of Budget Request**

Climate Action and Innovation operating budget dollars will be used to support City participation in multi-stakeholder initiatives that present strong opportunities to advance the City's pending climate action plan. Expenditures will support development of project concepts and help to assess feasibility and readiness to participate in pilots. This includes professional services or Corporate projects, or contributions towards projects that partner with other organizations in the community.

**Required Annual Operating Investment**

<b>Impacts (\$000s)</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Gross Expenditures	125.0	125.0	125.0	125.0
Reserves & Reserve Funds	0.0	0.0	0.0	0.0
User Fees & Other Revenues	0.0	0.0	0.0	0.0
Tax Levy Requirements	125.0	125.0	125.0	125.0
* Net Change in \$		0.0	0.0	0.0
FTEs	0.0	0.0	0.0	0.0

*\*In each year, all values are cumulative, not incremental.*

**Required Capital Investment**

<b>Total Capital (\$000s)</b>	<b>2018 &amp; Prior</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022 &amp; Beyond</b>
Expenditures	0.0	0.0	0.0	0.0	0.0

**Why Staff Recommend this Initiative**

The Climate Action and Innovation operating dollars will advance community and industry transformation initiatives that are aligned with the Climate Change Action Plan where there is a strategic opportunity for the City's participation in an initiative. Available federal government funding opportunities often have short response timelines for multi-stakeholder projects. The funds requested will provide agility for City staff to participate in fund application development processes.

**Details of Service Change**

Federal government funding orients to investment in strategic, community-scale greenhouse gas emission reduction initiatives or increasing the resiliency of infrastructure to endure the impacts of a changing climate (i.e., extreme weather). Mississauga must elevate ambition and support early stage innovation that will occur through collaboration with multiple industrial sectors and levels of government; initiatives that emerge this way will be better developed and poised to achieve scaled impact.

Candidate initiatives in 2019 include assessing the feasibility of district energy in Mississauga's downtown, and establishing transportation hydrogen as a switch fuel for industry and goods movement firms in Mississauga. The Climate Change Action Plan will prioritize other similar scale initiatives.

**Service Impact**

The requested operating dollars will be in place yearly.

The associated expenditures will stimulate rapid advancement of initiatives that have significant community impact.

There is currently no dedicated funding to support initiative development for climate action. This funding request addresses that gap, adding \$125,000 to the Environment Division's operating budget on an ongoing basis.

# Proposed Capital Budget

This section summarizes the forecast 10-year capital requirements for this service. The following table presents the forecast by major program. The next table summarizes the sources of financing for the capital forecast.

## Proposed 2019-2028 Capital Budget by Program

Program Expenditures	2019 Proposed Budget (\$000's)	2020 Forecast (\$000's)	2021 Forecast (\$000's)	2022 Forecast (\$000's)	2023-2028 Forecast (\$000's)	Total 2019-2028 (\$000's)
Environmental Study	400	0	0	0	450	850
Vehicles & Equipment	25	0	0	0	0	25
<b>Total</b>	<b>425</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>450</b>	<b>875</b>

Note: Numbers may not balance due to rounding. Numbers are gross.

## Proposed 2019-2028 Capital Forecast Highlights

2019

- Living Green Master Plan Update \$200,000
- Zero-Emission Vehicle Strategy \$200,000
- Mobile Environmental Outreach Unit – Concept and Design \$25,000

2023-2028

- Environmental Sustainability and Climate Change Plan Updates \$450,000



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**Proposed 2019-2028 Capital Budget by Funding Source**

The following table provides the funding sources proposed to fund the capital portion of the proposed 2019-2022 Business Plan and 2019 Budget and the consolidated forecast for 2023-2028.

<b>Funding</b>	<b>2019 Proposed Budget (\$000's)</b>	<b>2020 Forecast (\$000's)</b>	<b>2021 Forecast (\$000's)</b>	<b>2022 Forecast (\$000's)</b>	<b>2023-2028 Forecast (\$000's)</b>	<b>Total 2019-2028 (\$000's)</b>
Tax Capital	25	0	0	0	0	25
Other Reserves & Reserve Funds	400	0	0	0	450	850
<b>Total</b>	<b>425</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>450</b>	<b>875</b>

Note: Numbers may not balance due to rounding.

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**Proposed 2019 Capital Budget Detail**

The following tables provide a detailed listing of proposed capital projects for 2019.

Program: Environmental Study

<b>Project Number</b>	<b>Project Name</b>	<b>Gross Cost (\$000's)</b>	<b>Recovery (\$000's)</b>	<b>Net Cost (\$000's)</b>	<b>Funding Source</b>
CMEV006241	Zero-Emission Vehicle Strategy	200	0	200	Other Reserves & Reserve Funds
CMEV006242	Living Green Master Plan Update	200	0	200	Other Reserves & Reserve Funds
<b>Total</b>		<b>400</b>	<b>0</b>	<b>400</b>	

Program: Vehicles & Equipment

<b>Project Number</b>	<b>Project Name</b>	<b>Gross Cost (\$000's)</b>	<b>Recovery (\$000's)</b>	<b>Net Cost (\$000's)</b>	<b>Funding Source</b>
CMEV007080	Mobile Environmental Outreach Unit - Concept and Design	25	0	25	Tax Capital
<b>Total</b>		<b>25</b>	<b>0</b>	<b>25</b>	

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### Proposed 2020-2022 Capital Budget by Sub-Program

The following tables provide a listing of capital forecast by sub-program for 2020-2022.

Sub-Program	2020 Forecast (\$000's)	2021 Forecast (\$000's)	2022 Forecast (\$000's)
<b>Environmental Study</b>			
ENVIR Studies	0	0	0
<b>Subtotal</b>	0	0	0

Sub-Program	2020 Forecast (\$000's)	2021 Forecast (\$000's)	2022 Forecast (\$000's)
<b>Vehicles &amp; Equipment</b>			
ENVIR Equipment	0	0	0
<b>Subtotal</b>	0	0	0
<b>Total Expenditures</b>	<b>0</b>	<b>0</b>	<b>0</b>

No proposed capital expenditures for 2020-2022.