
Environmental Action Committee

Date: December 8, 2020
Time: 9:30 AM
Location: Online Video Conference

Members

Councillor Matt Mahoney	Ward 8 (Chair)
Councillor Stephen Dasko	Ward 1 (Vice-Chair)
Councillor George Carlson	Ward 11
Brad Bass	Citizen Member
Chelsea Dalton	Citizen Member
Lea Ann Mallett	Citizen Member
Pujita Verma	Citizen Member
Nandini Menon	PEYA (Peel Environmental Youth Alliance) Student
Carina Suleiman	UTM (University of Toronto Mississauga) Student
Alice Casselman	Association for Canadian Educational Resources
Melanie Kramer	Credit Valley Conservation
Britt McKee	Ecosource
Jeff Robertson	Partners in Project Green
Andrea Rowe	Greening Sacred Spaces (Non-Voting Member)
Brad Butt	Mississauga Board of Trade (Non-Voting Member)
Sid Gendron	Sawmill Sid Inc. (Non-Voting Member)

Participate Virtually

Any member of the public interested in speaking to an item listed on the agenda may register at dayna.obaseki@mississauga.ca or call 905-615-3200 ext. 5425 by Friday, December 4, 2020 before 4:00 P.M.

Please note the Environmental Action Committee will not be streamed or video posted afterwards. If you are interested in attending the meeting virtually, please contact dayna.obaseki@mississauga.ca or call 905-615-3200 ext. 5425 by Friday, December 4, 2020 before 4:00 P.M. in order to join the meeting.

Contact

Dayna Obaseki, Legislative Coordinator, Legislative Services
905-615-3200 ext. 5425
Email dayna.obaseki@mississauga.ca

1. **CALL TO ORDER**

2. **APPROVAL OF AGENDA**

3. **DECLARATION OF CONFLICT OF INTEREST**

4. **MINUTES OF PREVIOUS MEETING**

4.1. Environmental Action Committee DRAFT Minutes – November 3, 2020

5. **DEPUTATIONS**

5.1. Alex Xia, Secondary School Student to speak on Marker Recycling

5.2. Jack Gibbons, Chair, Ontario Clean Air Alliance to present on Phasing-Out Ontario's Gas-Fired Power Plants

(Related to Item 8.1)

5.3. Alice Casselman, EAC Member and Founding President of Association for Canadian Educational Resources and Catherine Soplet, Founder, Building Up Our Neighbourhoods to provide an Update on Project Crossroads

(Related to Item 9.1)

5.4. Reg Langen, Supervisor, Parks Operations to present on Electric Grass Cutting Equipment Pilot Project

5.5. Andrea Westfall, Sustainable Procurement Coordinator to present on the Sustainable Procurement Policy

6. **PUBLIC QUESTION PERIOD - 15 Minute Limit**

Public Comments: Any member of the public interested in speaking to an item listed on the agenda may register at dayna.obaseki@mississauga.ca or call 905-615-3200 ext. 5425 by December 4, 2020 before 4:00 P.M.

Pursuant to Section 42 of the Council Procedure By-law 0139-2013, as amended:

Environmental Action Committee may grant permission to a member of the public to ask a question of Environmental Action Committee, with the following provisions:

1. The question must pertain to a specific item on the current agenda and the speaker will state which item the question is related to.
2. A person asking a question shall limit any background explanation to two (2) statements, followed by the question.
3. The total speaking time shall be five (5) minutes maximum, per speaker.

7. CONSENT AGENDA

Please note: This category is a new addition to all advisory committee agendas. The Consent Agenda is used for those items that all Environmental Action Committee Members deem appropriate to approve or deal with together without discussion or individual motions because they are deemed routine and/or non-contentious.

8. MATTERS TO BE CONSIDERED

- 8.1. Phasing-Out Ontario's Gas-Fired Power Plants Request Memo

(Related to Item 5.2)

- 8.2. Environmental Action Committee (EAC) Work Plan

9. INFORMATION ITEMS

- 9.1. Association for Canadian Educational Resources (ACER) Canada Proposal to Environment Canada's Climate Action and Awareness Fund (CAAF)

(Related to Item 5.3)

10. OTHER BUSINESS

11. ENQUIRIES

12. DATE OF NEXT MEETING

Tuesday, February 2, 2021 at 9:30am

Location to be Determined.

13. ADJOURNMENT

Environmental Action Committee

Date: November 3, 2020
Time: 9:30 AM
Location: Online Video Conference

Members Present	Councillor Matt Mahoney	Ward 8 (Chair)
	Councillor Stephen Dasko	Ward 1 (Vice-Chair)
	Councillor George Carlson	Ward 11
	Brad Bass	Citizen Member
	Chelsea Dalton	Citizen Member
	Lea Ann Mallett	Citizen Member
	Alice Casselman	Association for Canadian Educational Resources
	Britt McKee	Ecosource
	Jeff Robertson	Partners in Project Green
	Melanie Kramer	Credit Valley Conservation
	Andrea Rowe	Greening Sacred Spaces (Non-Voting Member)
	Brad Butt	Mississauga Board of Trade (Non-Voting Member)
Members Absent	Pujita Verma	Citizen Member
	Carina Suleiman	UTM (University of Toronto Mississauga) Student
	Nandini Menon	PEYA (Peel Environmental Youth Alliance) Student
	Sid Gendron	Sawmill Sid Inc. (Non-Voting Member)
Staff Present	Dianne Zimmerman, Manager Environment	
	Lisa Urbani, Supervisor, Environment Initiatives	
	Leya Barry, Climate Change Specialist	
	Sharon Chapman, Manager, Parks Planning	
	Sumeet Jhingan, Manager, Asset Management	
	Alex Legrain, Project Leader, Transportation Planning	
	Mojan Jianfar, Project Lead, Planner, City Planning Strategies	
	Susan Tanabe, Manager, Transportation Planning	
	Dayna Obaseki, Legislative Coordinator	

1. CALL TO ORDER

Councillor Mahoney, Chair called the meeting to order at 9:32 AM.

2. APPROVAL OF AGENDA

Approved (B. McKee)

3. DECLARATION OF CONFLICT OF INTEREST - Nil.**4. MINUTES OF PREVIOUS MEETING****4.1 Environmental Action Committee DRAFT Minutes – October 6, 2020**

Approved (M. Kramer)

5. DEPUTATIONS**5.1 Gabriella Kapalos, Executive Director, Clean Air Partnership to present on the Inter-Governmental Declaration of Clean Air and Climate Change for Clean Air Council (Related to Item 7.1)**

Ms. Kapalos presented on the Clean Air Council's update and 2019-2023 Intergovernmental Declaration on Clean and Climate Change. She briefly provided a background on Clean Air Partnership and the Clean Air Council initiative. Ms. Kapalos provided an overview on the upcoming priorities that include Corporate Leadership, Resilience Financial Mechanisms, Low Carbon Buildings, Green Infrastructure, Maximizing Transportation Air Pollution and Carbon Reductions as well as Conservations Plans, Green Fleets, Green Procurements, Community Energy and Climate Mitigation. Ms. Kapalos requested support and recommendation for Council endorsement.

Alice Casselman, Community Group Representative inquired if the carbon offset calculations are being conducted. Ms. Kapalos responded by noting that yes carbon sequestration is being calculated through i-Tree assessment tools.

RECOMMENDATION EAC-0022-2020

Moved By Councillor Dasko

1. That the deputation and associated presentation by Gabriella Kapalos, Executive Director, Clean Air Partnership regarding Inter-Governmental Declaration of Clean and Air and Climate Change for Clean Air Council be received.
2. That the Environmental Action Committee are in support of Clean Air Council's 2019-2023 Intergovernmental Declaration on Clean and Climate Change and recommend endorsement from General Committee on November 18, 2020.

Carried

5.2 Dianne Zimmerman, Manager Environment and Sumeet Jhingan, Manager, Asset Management to present on Energy Efficiency in Buildings and Low Carbon Energy Supply

Ms. Zimmerman and Mr. Jhingan presented on Energy Efficiency in Buildings and Low Carbon Energy Supply. They provided an overview on the six building and clean energy actions, which consist of renewable energy, low carbon systems, energy efficiency, climate resilience and retrofit programs that will help achieve the Climate Change Action Plan (CCAP) goals. They noted that the City of Mississauga has updated the Green Development Standard, revised application requirements and introduced new environmental associated by-laws as well as introduced a 5 Year Energy Conservation Plan (2019-2023), a Corporate Green Building Standard and conducted a number of solar studies. They also noted passive design features and spoke to funding limitation due to COVID impacts. Mr. Jhingan and Ms. Zimmerman noted the cost and benefit analysis on high performance buildings.

Members of the Committee spoke to the matter and raised the following questions and concerns;

- Inquired about green roofs on new builds and retrofitted buildings;
- Suggested that green roofs should be combined with solar panelling roofs;
- Inquired about temperature setting thresholds;
- Inquired why the automated temperature setting thresholds are not being utilized in the smaller city facilities;
- Inquired if this approach is being shared with the school boards;
- Inquired if cost analysis is being conducted to determine whether a building should be torn down or retrofitted; and
- Inquired if the embodied carbon from new construction builds and building demolition are being counted.

Mr. Jhingan and Ms. Zimmerman responded to the questions from the Members of the Committee;

- Solar panels are usually the first option for premium use of a roof space, green roofs are second option based on the building structure.
- The Environment division works directly with Facilities Property Management to activate automated set temperature thresholds. The Recreation Centres utilize the CLASS booking system that has now been integrated with automated thermostats to have the temperature increase when programs are running and to decrease when the programs are not running.
- The automated temperature set threshold mainly active at larger city facilities due the smaller buildings lacking the automated thermostats and the CLASS booking system.
- Noted the Race to Reduce campaign and the City Green Leaders.
- The Environmental Outreach team works closely with the schools and the eco school teams, however there is no formal relationship with respect to energy management.

- The holistic sustainable approach focuses on low cost high impact when determining if a building should be replaced or retrofitted.
- Capturing carbon emissions from construction and/or demolition is a challenge due to there being no consistent standard in the industry.

RECOMMENDATION EAC-0023-2020

Moved By C. Dalton

That the deputation and associated presentation by Dianne Zimmerman, Manager Environment and Sumeet Jhingan, Manager, Asset Management to present on Energy Efficiency in Buildings and Low Carbon Energy Supply be received for information.

Received

5.3 Sharon Chapman, Manager, Parks Planning to present on Parkland Acquisition

Ms. Chapman presented on Parkland Acquisition by providing an overview on park planning and acquisition. Parkland Acquisition is determined through staff divisions, policies, master plans, strategies, funding and criteria. The Parkland Acquisition Evaluation Criteria consists of supporting a healthy environment, expanding and connecting trails systems, park design and development, population growth and recreational programming. The two processes for parkland acquisition consist of a development application or a direct acquisition that requires Council approval to utilize the cash in-lieu parkland reserve fund. Ms. Chapman further noted the City of Mississauga current status and achievements on parkland and the City's future plans for the Park Acquisition Program.

Members of the Committee spoke to the matter and raised the following questions and concerns;

- Inquired about equitable neighbourhoods;
- Inquired if the City loses or sells any parkland;
- Inquired about the forestry, meadows and turf ratios; and
- Inquired about the accessibility of getting to the parks.

Ms. Chapman responded to the questions from the Members of the Committee;

- The City has adjusted their target to a 12% parkland target in high density areas, such as the downtown core.
- Selling parkland is not a common practice at the City.
- Majority of the parkland purchases are already Greenland and not converted from turf.
- Walkability to a park is measured with a targeted aim of within a ten minute walk from a residential area and to be located away from major roadways and highways.

RECOMMENDATION EAC-0024-2020

Moved By M. Kramer

That the deputation and associated presentation by Sharon Chapman, Manager, Parks Planning to present on Parkland Acquisition be received for information.

Received

5.4 Alex Legrain, Project Leader, Transportation Planning and Mojan Jianfar, Project Lead, Planner, City Planning Strategies to present on the Downtown Movement Plan

Mr. Legrain and Ms. Jianfar presented on the Downtown Movement Plan and provided a project overview and an update. The Downtown Movement Plan consists of a technical study of the Downtown Strategy and Action Plan and delivering Multi-Modal Transportation Master Plan. The City of Mississauga plans to go through an Environmental Assessment process to speed up the implementation and determine the most effective options for the Downtown core. They spoke to the Downtown 21 Master Plan and the six guiding principles. They outlined the phases of the Downtown Strategy and the Downtown Movement Plan. The received feedback from Phase One (1) focused on four themes; walking, cycling, transit and driving. The Downtown Movement Plan's next steps are to conduct a Public Meeting in Winter/Spring 2021 that will consist of reviewed public feedback and alternative solutions prior to reporting to Council.

Brad Butt, Community Group Representative recalled a previously piloted shuttle bus service in the downtown core and suggested initiating that service again as an automated electric shuttle bus in order to reduce the number of driving trips and/or walking during the winter months. Councillor Carlson noted he was a big supporter of the shuttle bus, however further noted the reasons behind the pilot not succeeding was due to lack of density at the time in the core and no return bus service, which generated longer wait times. Therefore, if those elements were addressed another shuttle services could be successful. Mr. Legrain noted that a large number to driving trips within the core are under 5km. Mr. Legrain responded by noting that a shuttle service has been pitched to MiWay, however received mixed reviews and the City is currently looking a variety of transit alternatives for the downtown core.

Melanie Kramer, Community Group Representative suggested incentives for business to shift working hours to reduce peak times. Mr. Legrain responded by noting shifting work patterns, such as working from home would help offset peak times and create more efficiency to use alternative modes of transportation, however also noted that this may cause more driving due to the less congestion on the road.

RECOMMENDATION EAC-0025-2020

Moved By Councillor Carlson

That the deputation and associated presentation by Alex Legrain, Project Leader, Transportation Planning and Mojan Jianfar, Project Lead, Planner, City Planning Strategies to present on the Downtown Movement Plan be received for information.

Received

6. **PUBLIC QUESTION PERIOD - 15 Minute Limit**

Rosemary Martin, Resident inquired about Energy Efficiency in Buildings and Low Carbon Energy with respect to Lakeview. She noted the presentation did not address Lakeview specifically and further advocated for the passive house standard versus using district energy. Ms. Martin inquired if the weather temperature has been considered as a factor. Ms. Zimmerman noted that the Climate Change Action Plan greenhouse gas emission reduction targets will require renewable energy instead of utilizing natural gas to attain those goals. Mr. Jhingan responded by noting the weather has been noted and captured in the 5 Year Energy Conservation Plan.

DIRECTION to staff to connect offline with Ms. Martin regarding her concerns and questions surrounding Lakeview and energy efficiency standards.

Jonathan Giggs, Resident inquired about the Downtown Movement Plan and the possible use of the lands north of Confederation Parkway. Mr. Legrain responded by noting this area is a hydro corridor, high pressurized that contains a large amount of natural gas and oil pipelines that is protected by the Ministry of Transportation. Mr. Legrain further noted that the introduction of a north distribution road and fly overs could provide accessibility for cyclists. Mr. Legrain also noted that outer downtown core areas will be assessed to include transportation links into the core.

7. **MATTERS TO BE CONSIDERED**

7.1 **Clean Air Council Declaration: 2019-2023 Intergovernmental Declaration on Clean Air and Climate Change (Related to Item 5.1)**

This item was previously discussed and voted on under Item 5.1.

RECOMMENDATION EAC-0026-2020

Moved By Councillor Dasko

That the memo and appendix on the Clean Air Council's 2019-2023 Intergovernmental Declaration on Clean and Climate Change be received for information.

Received

7.2 **Green Fleet and Equipment Policy and Electric Vehicle Charging Station Standard**

Leya Barry, Climate Change Specialist briefly spoke to the report and requested Committee support and recommendation for Council endorsement.

RECOMMENDATION EAC-0027-2020

Moved By A. Casselman

That the draft Green Fleet and Equipment Policy, attached as Appendix 1, the Decision Making Framework and Electric Vehicle Charging Station Standard, attached as

Appendix 2 and 3 be supported by the Environmental Action Committee and recommend endorsement by General Committee.

Carried

7.3 Environmental Action Committee (EAC) Work Plan

Dayna Obaseki, Legislative Coordinator noted there will be an update at the next EAC meeting.

RECOMMENDATION EAC-0028-2020

Moved By B. Bass

That the Environmental Action Committee Work Plan be approved as discussed at the November 3, 2020 EAC meeting.

Approved

8. **INFORMATION ITEMS**

8.1 Adopt-A-Park Litter Clean-Up Update (Verbal)

Dianne Zimmerman, Manager, Environment thanked all the Committee Members and staff that attended and participated in the October 17, 2020 Litter Clean-up. The clean-up included the newly implemented health and safety guidelines and resulted in approximately 10kg (22lbs) of litter being picked up.

RECOMMENDATION EAC-0029-2020

Moved By C. Dalton

That the verbal update by Dianne Zimmerman, Manager, Environment on the Adopt-A-Park Litter Clean-Up on October 17, 2020 be received.

Received

8.2 Environmental Action Committee 2021 Meeting Dates

No discussion took place.

RECOMMENDATION EAC-0030-2020

Moved By M. Kramer

That the Environmental Action Committee 2021 Meeting Dates memo be received for information.

Received

9. **OTHER BUSINESS** - Nil.

10. **ENQUIRIES** - Nil.

11. **DATE OF NEXT MEETING**

Tuesday, December 8, 2020 at 9:30am via online video conference

12. **ADJOURNMENT**

11:22 AM (Councillor Dasko)

DRAFT

marker

recycling

Reuse plastic instead of throwing it away.

Instead of wasting plastic, we keep it.

We keep it.





DEAR MISSISSAUGA





IS IT POSSIBLE





BY ANY CHANCE IN THE WORLD





THAT YOU CAN PLACE A BIN





A T E V E R Y C O M M U N I T Y C E N T E R ,



LIBRARY, AND PUBLIC FACILITY?





T H I S B I N H A S A S I M P L E P U R P O S E .





TO COLLECT EVERY
SINGLE USED MARKER





PEOPLE PUT INSIDE OF IT



SO THAT THEY CAN BE
RECYCLED.





IS THIS POSSIBLE BY ANY
CHANCE?



Dear Mississauga. Is it possible, by any chance in the world, that you can place a bin at every community center, library, and public facility that is located in your city? This bin has a simple purpose. To collect every single used marker people decide to put inside of it and to eventually be able to have them be recycled. Is this possible by any chance?

having or showing the capacity to become or develop into something in the future. (According to Oxford)

Potential.

has and shows the capacity to become something better in the future.

A used
marker.

A USED MARKER IS FULL OF POTENTIAL.



POTENTIAL TO...

Change a world where 40 billion tons of Carbon Dioxide is released.

Each
Year

Change a world where 8 million pieces of plastic are washed into oceans

Each
Day

Change a world that is being suffocated by its own pollution.

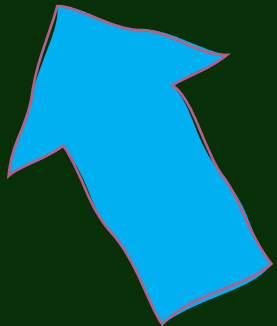




One marker
weighs 6 grams.

1 marker a millisecond!

10,000 markers in 10 seconds!



1000

Markers a second!



marker

recycling

Reuse plastic instead of throwing it away.

Instead of wasting plastic, we keep it.

We keep it.



HERE IS WHY:

850,000
markers saved.

5.1

IF EVERYONE IN MISSISSAUGA
RECYCLED JUST 1 MARKER A YEAR...

From going to

odorous landfills...



Winding up
in oceans



and

Being mistaken for
food by a

seagull



Because 1
marker per
person
means...

3000 gallons of fuel.



Or 12,000
liters of fuel!

THAT'S AWESOME.

If all 29 cities in the GTA did this...

86,000
liters

of fuel

can be
made!

This number is
achieved with 1
marker per person.

The average car
needs 56 liters of
fuel to be full.

THIS IS WHAT MARKER
RECYCLING IS ALL ABOUT.

5.1 MILLION
THE AMOUNT OF GRAMS
WORTH OF PLASTIC SAVED
IF EVERYONE IN
MISSISSAUGA RECYCLED 2
MARKERS A YEAR.

IT
SUPPORTS LOCAL
AND WORLDWIDE
ECONOMIES

850,000
THE AMOUNT OF
MARKERS EASILY
SAVED PER YEAR IN
MISSISSAUGA.

400 MILLION
HOW MANY WHITEBOARD
MARKERS ARE THROWN
AWAY EACH YEAR IN THE
UNITED STATES.

COUNTLESS
NEW PLASTICS ABLE
TO BE MADE INSTEAD
OF BEING WASTED.

RECYCLING
IS UNBELIEVABLY
EASY TO ACHIEVE
BECAUSE OF
MODERN
TECHNOLOGIES AND
SKILLS.



If you think it's awesome that 86,000 litres of fuel can be made with 6 million markers.

Then you'll like hearing this...

The hard work has been done for us by



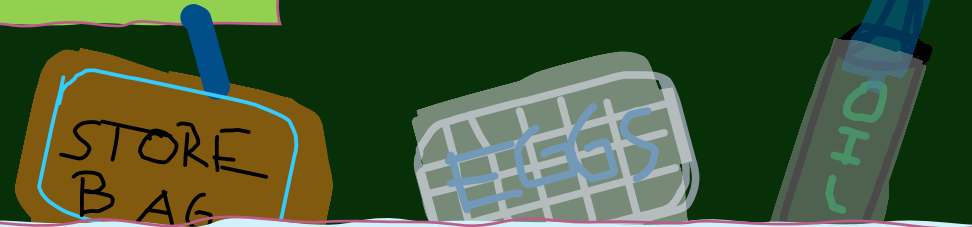
They shred!

They grind!

They pelletize!

Then, the plastics can be melted and then remade into brand new recycled plastic materials.

That's ALL that needs to happen. That's it.



TWO STEPS.

1.



We collect the
markers.

2.



Teracycle recycles them.



TWO steps.

Let me

illustrate this

now.^{5.1}

please please please

Watch this

CAREFULLY.



When you finish using...









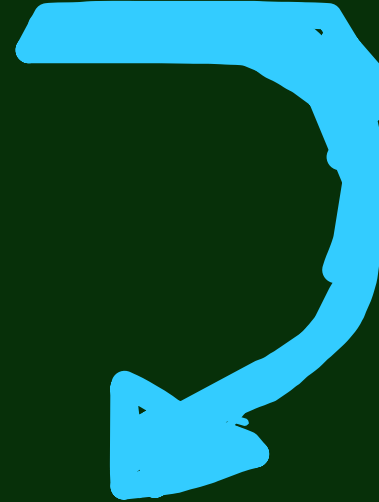












Which
causes more
of...



This is our

current
situation!





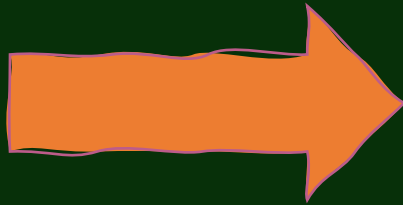
Let's go back in time.

To that day where you could make that choice.



What if you put it in...













The environment.

The economy.

Animals

Environmental
Businesses

1+ MILLION
MORE
THINGS.

Plants

A strong
marker industry

Less mining
and landfill
sites
worldwide

Teaching value
to students.

Recycling
Awareness

Future
generations

Increased
Jobs

More plastic
availability
for longer







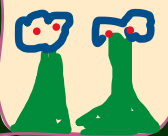
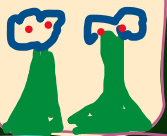
I heard about

your

Green Tools Pilot project



Mary Fix Park woodland.



Dog Waste Energy Pilot program.



there is a
need for
them.



Explore all projects

Search projects



Locations

Categories

Status

53 projects

Sorting by: Updated (newest - oldest)

In progress

Mary Fix Park woodland

Restoring the woodland in Mary Fix Park to make sure it remains a functioning forest ecosystem.

In progress

Green Tools pilot project

Changing grass cutting equipment from gas and diesel powered to all-electric, battery-powered units.



In progress

Marker Recycling initiative program

Installing Marker Recycling boxes in all public facilities for everybody to place in their used markers to be repurposed to make new plastics.



In progress

Dog Waste Energy Pilot Program

A one-year pilot program that converts dog waste into renewable energy and fertilizer.

Does this deserve
to belong here?

<https://www.mississauga.ca/projects-and-strategies/city-projects/>



Did you know
that each year...

Plastic:

5.1 MILLION

grams of valuable polypropylene.

SAVED.

The cost:

14.5 THOUSAND DOLLARS.

if public paid for every box.

FOR EVERY
FACILITY.

Average person
(Who buys recycled plastic).

20% HAPPIER.

because of

SUSTAINABLE HAPPINESS.

EARTH:

THRILLED
BECAUSE

30,600 kg worth of Carbon Dioxide


10,200 kilograms of petroleum

378,930,000 kilojoules of energy

and 918,000 litres of water


are saved
each year.

All these things because of 1 MARKER per PERSON in MISSISSAUGA.



Now, have you made your decision on whether you want marker recycling or not?





Now, have you made your decision on whether you want marker recycling or not?

I really hope you have!

But, if you haven't...



It's hard to see the benefits in your head!

5.1

But

you

will.

If you try.

If you try. Scout's Honor.

IF YOU TRY.



We cannot change our past.



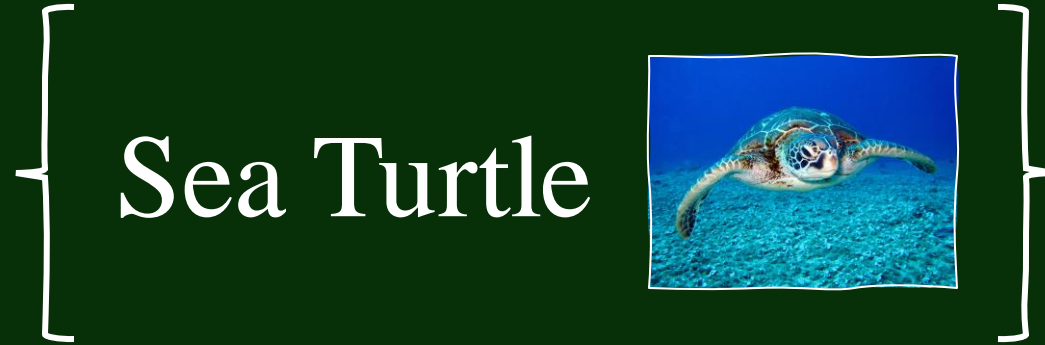


But we can save our future.



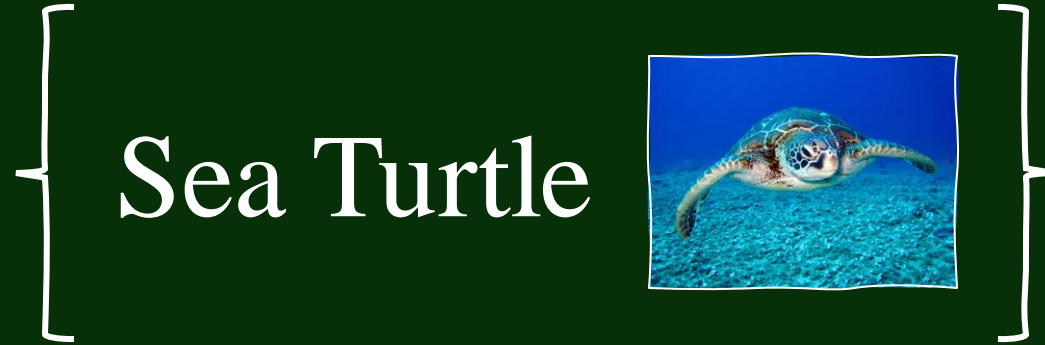


A marker recycled today means a





A marker recycled today means a





A marker recycled today means a



Koala





A marker recycled today means a



Koala





A marker recycled today means a





A marker recycled today means a





A marker recycled today means a





A marker recycled today means a



Saved tomorrow.





A marker recycled today means a



Saved tomorrow.





And so.

"Unless someone like you cares a whole awful lot,
nothing is going to get better. It's not."



- Dr. Seuss

Please Please Please Please

Remember one thing.

“Until we, or at least we, the citizens of Vaughan, willingly choose to recycle our markers, that is when we deserve to use them.

Do you not think that we should try?



A cardboard box and people who have a desire to help is all it takes.

All it takes to make this a dream come true.

For the planet. For nature. For the people.

For me.

Oh, and I hope you made a decision about whether you think marker recycling is important enough!

It will be an investment that is well worth its while.

-Alex

Ontario's Growing Climate Crisis

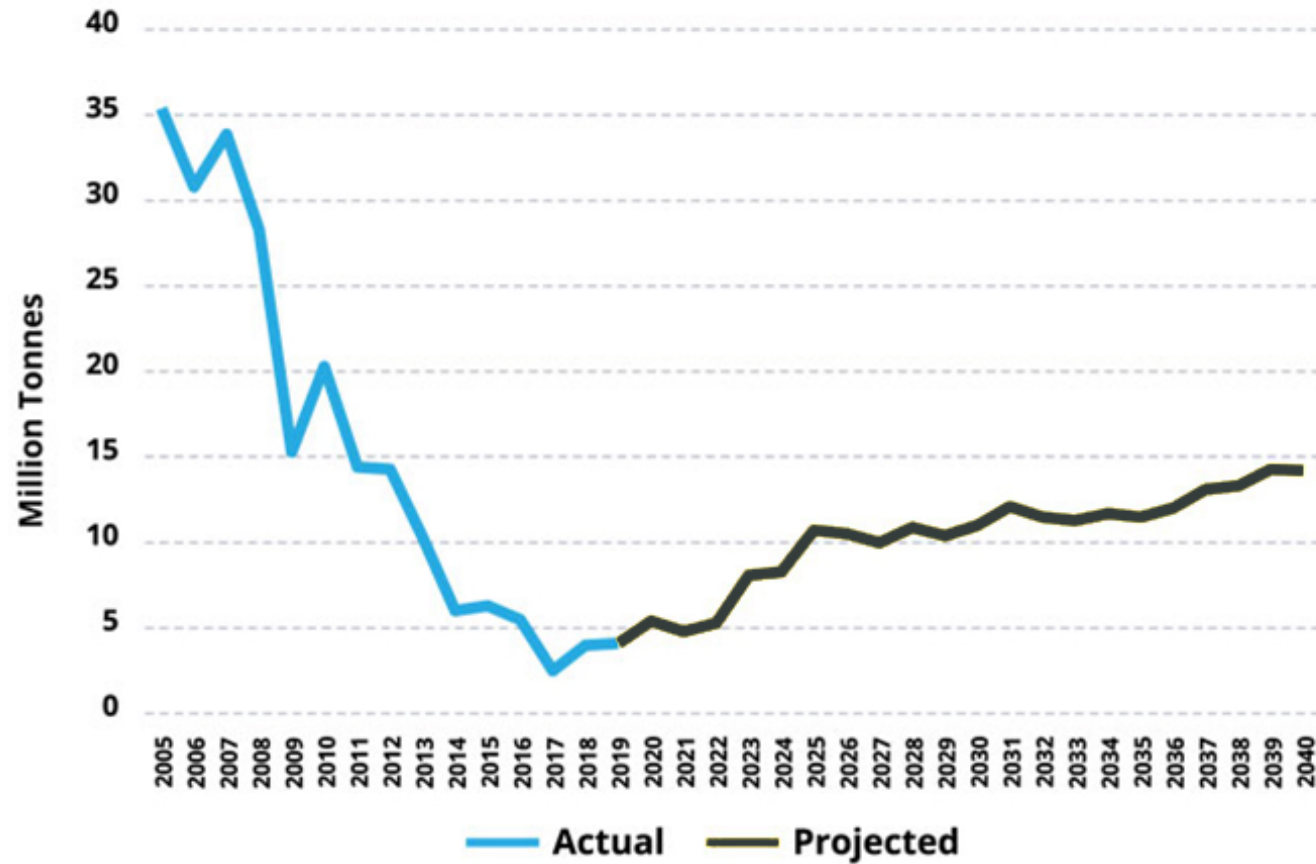
**Gas Plant Pollution
to increase by more
than 300%**



ONTARIO
CLEAN AIR
ALLIANCE

Ontario's rising emissions

Ontario's Historic
and Forecast GHG
Pollution from its
Electric Power Plants



(IESO)

What's behind these rising emissions?

- ▶ Ontario's demand for electricity will rise by about 1% per year.
- ▶ The Pickering Nuclear Station will close in 2024.
- ▶ Virtually all of our need for new electricity resources will be met by ramping up province's gas-fired power plants.



Reaching Ontario's 2030 Climate Target

- ▶ According to Ontario's Auditor General, we need to implement measures that will reduce our greenhouse gas pollution by an additional 7.3 to 14 million tonnes per year to achieve our 2030 climate target.
- ▶ A phase-out of Ontario's gas plants would provide our province with all or virtually all of the incremental pollution reductions that it needs to achieve its 2030 climate target.

Historic and Forecast GHG Pollution and Electricity Generation from Ontario's Gas-Fired Power Plants

Year	2017	2018	2019	2020	2025	2030	2040
GHG Pollution (Million Tonnes)	2.5	4.0	4.1	5.4	10.7	11.0	14.2
Electricity Generation (Billion kWh)	5.9	9.6	9.5	13.6	28.0	28.6	37.0

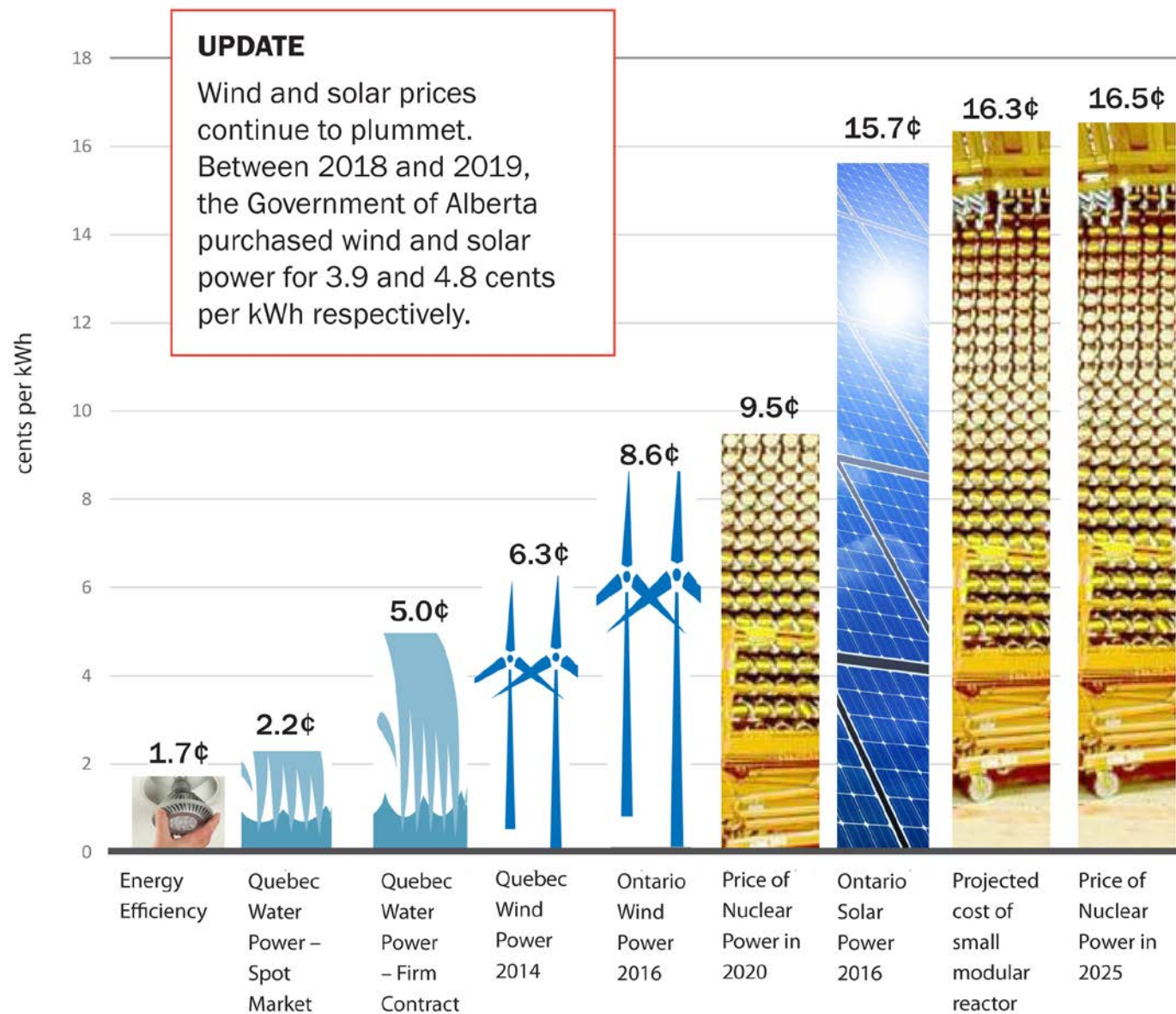
How can we phase out Ontario's gas plants?

- ▶ Energy efficiency
- ▶ Quebec water power
- ▶ Wind and solar energy

- ▶ Distributed resources can create jobs in every community
- ▶ Quebec water power can back-up wind and solar energy

Ontario Electricity Options: A Cost Comparison

5.2



Phase out supporters



Kitchener council calls on province to phase out gas-fired power production

Kitchener City Council voted unanimously on Monday to join Halton Hills in calling on the Government of Ontario to phase-out the province's gas-fired power plants by 2030.

about 10 hours ago By: [Casey Taylor](#)



Lennox Power Station near Bath, Ontario, Canada. November 2010.

Municipal Leadership



Phasing-Out Ontario's Gas-Fired Power Plants:

A ROAD MAP



ONTARIO
CLEAN AIR
ALLIANCE



ONTARIO
CLEAN AIR
ALLIANCE

Let's get to work!

Jack Gibbons
jack@cleanairalliance.org

Angela Bischoff
angela@cleanairalliance.org

CleanAirAlliance.org
OntarioClimateAction.ca



Proposal to Environment Canada: Community Action and Awareness Fund

Project Crossroads: #Climate justice science, for trees and for people.

Proof of concept: #AcerPx Project Crossroads in Knightsbridge, October 2020
Results and impacts contributed to Brampton Sustainable Neighbourhood Action Program

Environmental Action Committee

City of Mississauga

Presented: December 8, 2020

Prepared: Catherine Soplet, Building Up Our Neighbourhoods

With: Alice Casselman, B.Sc.(Hons), M.O.Ed., Founder and President

ACER (Association for Canadian Educational Resources)

About this presentation: Requests

5.3

REQUESTS:

- Refer delegation to City Council on December 9, 2020 to request a Letter of Support for ACER's Proposal to Environment Canada: Climate Action and Awareness Fund.
 - Peel Region delegation for Letter of Support is scheduled for December 10.
- Refer to staff to establish a process with public school boards to extend One Million Trees program by providing mulch for school yard use in "Mulch, Measure and MOR" units, by students and residents.
 - Deliver hands-on STEM to strengthen student academic talent
 - Engage public schools with residents of all ages and backgrounds.
- Refer to staff for Climate Change Plan and Equity and Inclusion Committee
 - Explore ACER programs with equity staff and ECO schools to see benefits of outdoor and cross-curricular activity, framed to foster equity and inclusion.

About this presentation: Rationale

- **Introduce: Project Crossroads: "*Climate justice science, for trees and for people*"**
Proposal to Environment Canada under Climate Action and Awareness Fund
Period running four years, from 2021-2025: Total Value \$ 1,477,588
- **Proof of Concept:**
How ACER targets planting sites to foster equity, in Mississauga and in Peel
 - **Presentation slides to Peel Poverty Reduction Strategy Committee – 2021 Priorities Session on November 27. 2020**
 - **Results and Impacts to deliver Project Crossroads in Knightsbridge, October 2020**
- **Pandemic Protocol to deliver ACER programs in 2020:**
 - **Planting for Change, November 2020 in Malton**
 - **Mulch, Measure and MOR to extend municipal One Million Trees programs**
- **Collecting annual data, for carbon calculation, for use in GHG offset**
- **Further Background: About ACER programs, and**
Founder Alice Casselman, B.Sc.(Hons), M.O.Ed.

www.acer-acre.ca/project-crossroads

ACER's Project Crossroads



Volunteers
Family "bubbles"

.... and students



Interested in tree planting, measuring, and monitoring?
Get started with Mulch, Measure, and MOR!

RESULTS: October 2020, under COVID

- 5 planting events in 3 Knightsbridge locations
- 71 volunteers, include secondary students
- 153 large trees + native pollinator/bird shrubs (biomass equivalent to 1840 x 1-gallon 18" trees)

Impact:

- Measure-Mulch-MOR units w/ training videos
- Extend Million Trees program for mulch delivery
- Animate non-profit agency ecosystem
- Introduce Carbon Calculation for GHG emission

Project Crossroads is a Proof-in-Concept for application Environment Canada under CAAF:

<https://bit.ly/ACER-Proposal-CAAF-11-2020>

Climate Action and Awareness Fund



Total Proposal value: \$ 1,472,588

EC-CAAF: \$ 816,712

In-Kind: \$ 655,876

Four years:
2021-2021



Project Crossroads: Climate justice science, for trees and for people supports health and wellbeing of communities with significant exposure to climate risk through:

- * action on climate change adaptation**
- * risk reduction and**
- * Greenhouse Gas (GHG) mitigation.**

By 2025, ACER will engage more than 2000 people from all ages and backgrounds, to plant 7,500 native tree indicator species for climate change research.

After Year 4, more than 18 T of Carbon will have been sequestered where people most need shade. Carbon capture will increase as tree canopies grow.

Using civic engagement and proven “Everyday Scientist” research protocols, ACER will develop high-exposure communities with knowledge, tools, and skills that engage residents of all ages and backgrounds in climate action to mitigate heat by planting cooling indicator species shade trees and annual recording Smithsonian data for climate change research.

ACER targets planting sites to foster equity

In 2019, ACER prioritized equity sites in Peel

In 2020, COVID caseload worsened unmet needs

**Next three
Slides presented
to “2021 Priorities”
PPRSC Meeting
November 27, 2020**

2019 Insight:

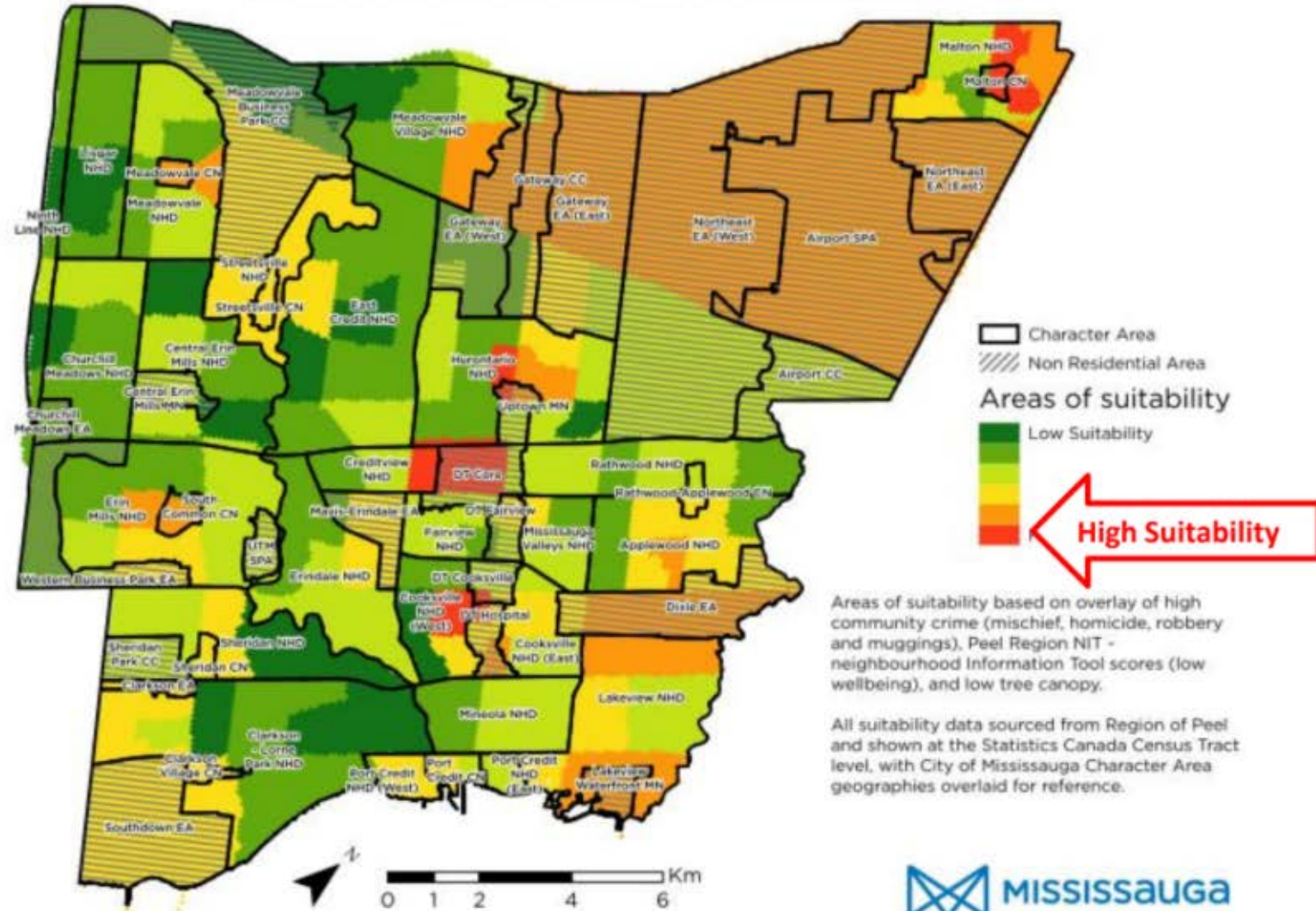
- Low tree canopy overlays with vulnerable social data.
- ACER moved P4C community tree planting for climate research from schoolyards to where students and families live.

2020 Innovation:

- Pandemic Learning: ACER pivots to digital delivery
- NFP Agency embedded ecosystems benefit from outdoor/ on-line/ remote activity to reconnect digitally and in the field with client students and families.

Where to plant for Anti-Racism Action Program: City of Mississauga overlays StatCan vulnerability data

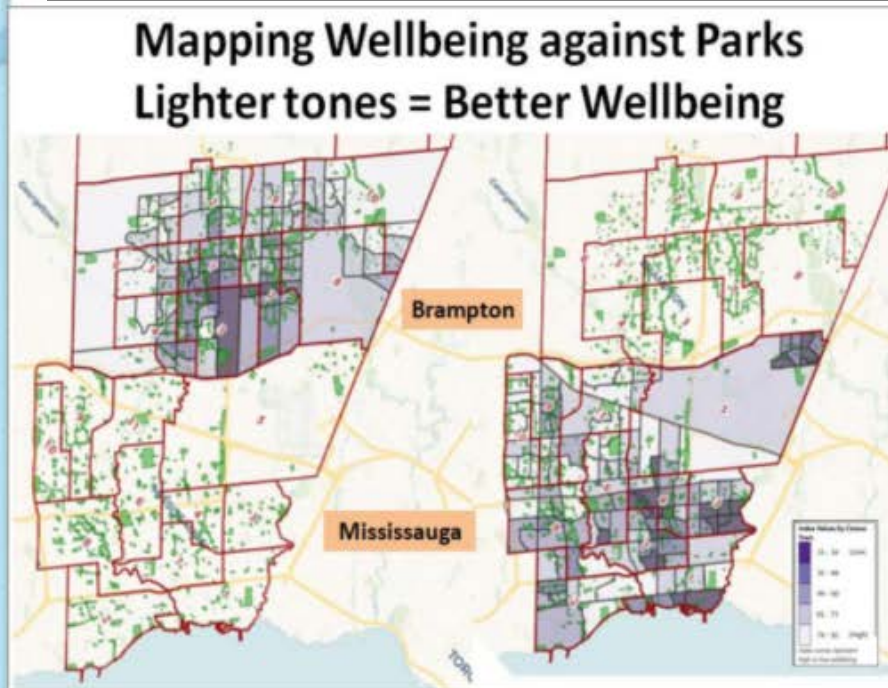
Slides presented
"2021 Priorities"
PPRSC Meeting
November 27, 2020



Climate Justice is at risk in Peel

New Immigrant is less likely to reside with easy access to Tree Canopy

Climate Change is a Crisis



Peel Region
Neighbourhood Information Tool

Racism is a Crisis

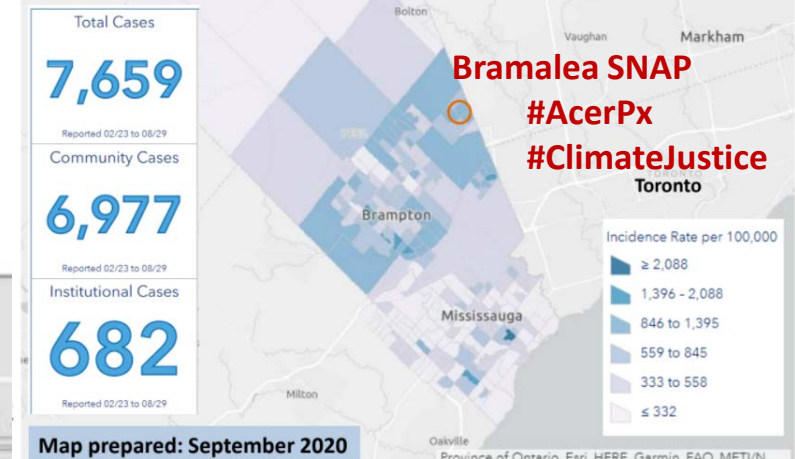


Recent Immigrants in Peel
by Dissemination Area (2016)
Peel Newcomer Strategy Group
Collective Impact Report (2019)

Covid-19 is a Crisis

Where to plant for Project Crossroads:
Region of Peel – Public Health COVID-19 Dashboard

COVID-19 Caseload by Postal Code



In 2019 Knightsbridge targeted for
urban reforestation via community
tree planting for climate change research

In 2020, COVID had disproportionate
high impact in same areas.

#AcerPx #Knightsbridge

"Climate justice science, for trees and for people."

Where to plant for Project Crossroads: City of Brampton overlays low trees w/ vulnerability

Bramalea SNAP (Google Maps)

Bramalea SS
Earncliffe Sr. PS
Eastbourne Drive PS
Fallingdale PS
Folkstone PS
Cardinal Newman Catholic Elem.
Georges Vanier Catholic

Bramalea Schools

Int PS
ie Senior PS
r SS
ird PS
PS
-D'arc Catholic ES
Greenbriar MS
Glenora BC

Project Crossroads: Planting for Change

Community Tree Planting in Bramalea SNAP Areas

(Sustainable Development Action Plan - Urban Revitalization)

Collaboration of ACER Canada (Association of Canadian Educational Resources)
City of Brampton Toronto and Regional Conservation Authority (TRCA)



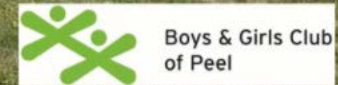
ACER Canada

Project Crossroads: Planting for Change - "Climate justice science, for trees and for people." [Read more...](#)

Toronto and Region Conservation Authority (TRCA), City of Brampton, Region of Peel and Healthy Communities Initiative are working closely with neighbourhood community leaders, residents and businesses to develop a Sustainable Neighbourhood Action Program (SNAP) for Bramalea. [Read more at TRCA site...](#)

Working Dates for Bramalea SNAP area community tree planting with ACER Canada - Subject to Conditions

Wednesday, October 7, 2020 | 9 a.m. to 2 p.m. | Peel Living (10 Knightsbridge Road, Brampton)
Saturday, October 17, 2020 | 10 a.m. to 12 p.m. | Folkstone Park (830 Clark Boulevard, Brampton)
Saturday, October 24, 2020 | 10 a.m. to 12 p.m. | Capreit Towers (11 Knightsbridge Road, Brampton)



ACER thanks Knightsbridge residents for welcoming Project Crossroads ...
ACER thanks Knightsbridge residents for welcoming Project Crossroads trees, to contribute much-needed cooling shade and sustained climate ...
us4.campaign-archive.com

Slides presented
"2021 Priorities"
PPRSC Meeting
November 27, 2020



St. Anthony School
St. Jean Brebeuf Separate School
Ste-Jeanne-D'arc Catholic ES
Ste. Marguerite Bourgeoys Separate
St. Jean de Brebeuf ES
St. John Bosco School
St. John Fisher Catholic School
St. Thomas Aquinas SS
Tall Pines School
Williams Parkway Sr. PS



ACER Canada funded by Arbor Day Foundation, under TD Green Space Program

P4C Planting for Change: Establish New Trees

A schoolyard program to establish outdoor learning and research across the curriculum and grades, teaches many skills to develop tree stewards. A suite of indicator tree species is selected and installed for long term maintenance, to annually measure, report and share data for analysis. A sense of shared ownership reduces vandalism.

Since 2008, P4C planted 60+ schools. Morning Star Middle School planted November 2020, before frost, with ACER-designed with Covid-adapted Planting Protocols meeting Peel Health restrictions that was tested and approved by Mississauga, Brampton, TRCA and CVC on August 6, 2020.



Malton - Middle School planting in November 2020

Mulch, Measure and MOR – For 1 Million Trees

Measuring Our Resources 2020 with ACER's Covid-19 protocols

ACER is finding free mulch for school yard trees as first step to help teachers get outdoors. Why?

1. Civic engagement (1 Million Trees)
2. To provide a real and relevant activity outdoors
3. To put Snow Boots on trees to insulate their roots for survival!
4. To provide FOLLOW UP activities with on-line component

FOLLOW UP ACTIVITIES:

OUTSIDE :

- Hands On - add measurement of dbh, silhouettes and bark photos to help identify the species

INSIDE:

- Online – confirm ID, map trees, use carbon calculator for Carbon stored and CO2 absorbed in Kg. then tons for reporting.

Hands On Measurements: Annual Data





5.3



ACER
ASSOCIATION FOR CANADIAN
EDUCATIONAL RESOURCES

Diameter at
Breast Height
(1.3 metres)

DBH

A caption for this picture



Questions ?

Thank YOU for the opportunity today to share our work!



www.acer-acer.ca

Alice Casselman

Cell 905-601-7685

Introducing Alice Casselman, B.Sc.(Hons), M.O.Ed.^{5.3}

- Ontario Teacher (Retired)
Founding Director, Outward Bound (ON)
- Science Department Head
Etobicoke School of the Arts
- Published author and ecology scientist
- 1987 - Founded ACER Canada to create relevant Canadian-based textbooks
- Humber Arboretum demonstrates five projects for climate change research
- Asset-Based Community Development



September 26, 2020 – Fridays for Future marched to UN for first Youth Summit on Climate Change. ACER launches Project Crossroads in Peel Region.



Programs

One Million Trees

Project Crossroads-Bramalea Oct. 2020

Planting for Change adapts for urban reforestation in areas of low tree canopy where residents experience heat vulnerability and higher impact of extreme weather.

Planting for Change (P4C)

We create planting sites in schoolyards and train students to monitor tree growth. The school becomes a part of our climate change monitoring network.

Riparian Rangers (RR)

Plantings along watercourses
Partners choose sites and species
Long term monitoring of 10%

Measuring Our Resources (MOR)

We teach volunteers how to inventory the existing trees on their property for our climate change monitoring network.

Youth Stewardship Project (HYS)

Local youth are trained to restore and monitor natural areas of ecological concern through partnership initiatives.

Go Global (GG)

We train community volunteers to monitor one-hectare forest sites in our international network to track changes in biodiversity over time.

Tracking for Success (T4S)

We measure survival rates of trees to add value to our partners' plantings.



Tree Caching Trails (TCT)

Our mobile application for trails and schoolyards encourages individuals to learn more about their natural surroundings by scanning coded tree tags.

Est.
1987

ACER creates living labs on public school yards with Planting 4 Change program.

ACER is the preferred agency for City of Mississauga – One Million Trees.

Electric Grass Cutting Equipment Pilot Project

EAC Deputation

December 8, 2020

Overview

- Project Scope
- Mission
- Next Steps



Project Scope



- This pilot project includes a fully enclosed trailer that houses two riding lawn mowers, a push mower, leaf blowers and trimmers that are all battery operated.
- This project was a collaboration between Parks, Fleet and F&PM.

Mission

- Aligns with deliverables in the Council-approved Climate Change Action Plan
- Benefits include:
 - Reduced carbon emissions
 - Increased safety for employees
 - No fuel required
 - Reduced noise



Municipal Leader

Mississauga is one of the first municipalities in Canada to outfit a complete grass cutting crew to use battery-operated equipment only.



Next Steps



- Work is underway to explore further options to convert equipment to battery-powered units.
- Existing grass cutting equipment will be transitioned at the end of their current lifecycles.

Sustainable Procurement Policy Update

Presented to the Environmental
Action Committee December 8, 2020

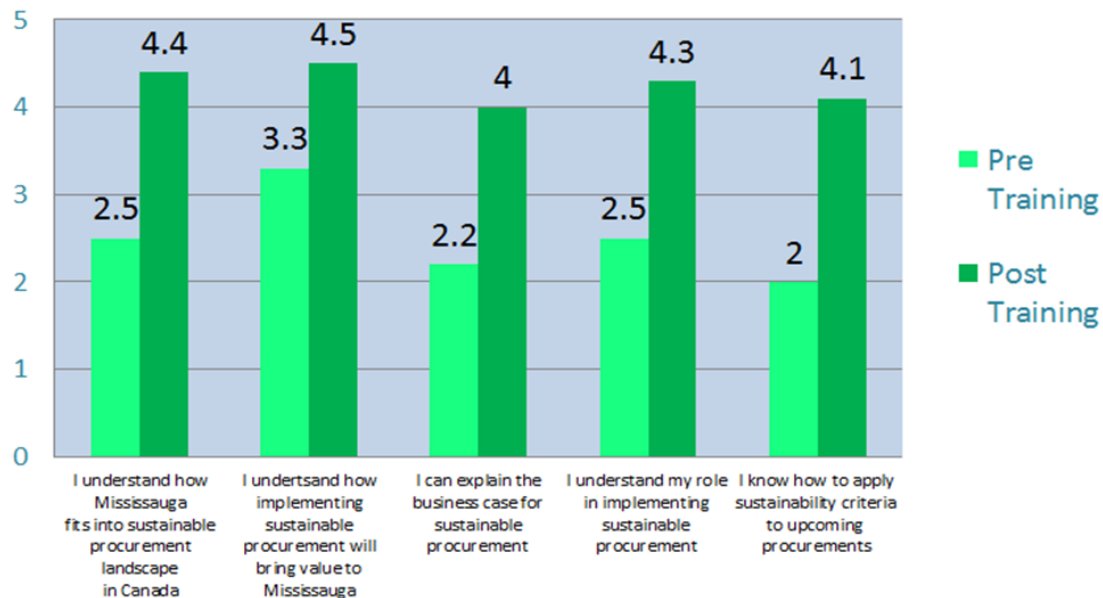
Sustainable Procurement Policy



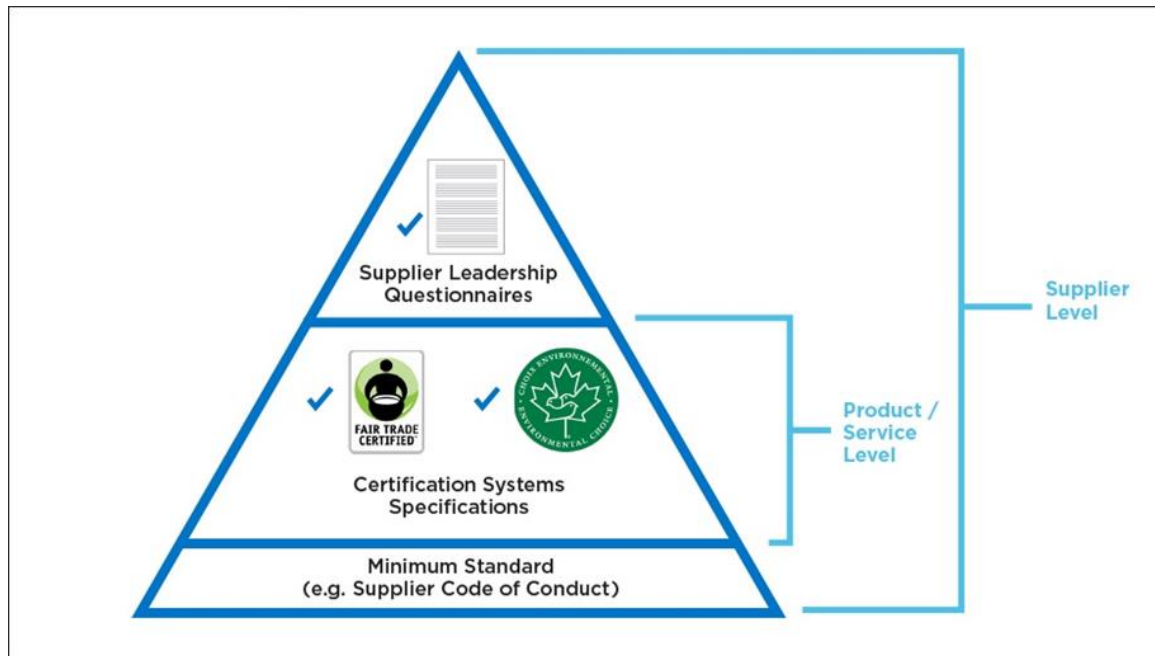
Build Staff Capacity

100% of Buyers
Trained

82% of Contract
Managers Trained



Implement Tools and Procedures



High Impact Procurement Opportunities

FAIRTRADE COFFEE COMES TO MISSISSAUGA

Material Management conducted a procurement process for the supply and delivery of coffee, hot beverages, products and equipment. Aramark was the successful bidder and with Leadership Team endorsement, is now supplying us with Fairtrade coffee for both Concessions and Corporate use at the same cost as regular coffee.



What does Fairtrade mean?

When you buy products with the FAIRTRADE mark, you support farmers and workers as they work to improve their lives and communities. By choosing Fairtrade coffee we ensure farmers get a fair price for their beans and an additional premium to invest in schools, and reforestation and agricultural improvements. This means that they can improve their working, social and community lives and protect the environment they live in.



The City officially launched Fairtrade Coffee during Waste Reduction Week October 15-21 2018.

The C-Cafe offered free Fairtrade coffee to anyone who brought their own reusable mugs.

Pictured left: Senior Buyer Vesna Marjanovic and Sustainable Procurement Coordinator Natalie Adams enjoying Fairtrade coffee in the C-Cafe (October 15, 2018)

A SIMPLE CONVERSATION ABOUT PACKAGING

The City had to purchase 966 Laptops for the Municipal Elections in 2018. This was the first year voting would all be done electronically.



What can we do to reduce packaging waste?

The IT department asked the vendor what could be done about packaging waste.

The result was that rather than packaging each laptop individually, the vendor packaged them in bundles of 25. This was the most that they could pack without risking the integrity of the product.



Benefits

This saved time, storage space and eliminated excessive waste

Driving Value for Dollar

Maria Torres, Intermediate Buyer
John Crozier, Fleet Manager, T&W

In Spring of 2018, Transportation and Works completed a tender process for the purchase of ten new vehicles. This purchase was to replace 4 vehicles (2008 and 2009 Honda Civic Hybrids) and purchase 6 new ones.

In this tender process, Vendors were asked to submit estimated fuel costs as well as initial vehicle price on fuel, hybrid and electric vehicle options.

This is a method of **life cycle costing** and an example of analyzing **total cost of ownership** past the point of sale/lease.

Successful Vehicle in Analysis: Hybrid

Savings: 4192.4 T of ECO2 and \$110,000 in fuel savings (over 10 years) and a \$70,000 EHVP rebate for purchasing Hybrid option.

There is future saving potential if these vehicles are used as fully electric - this will depend on users and availability.

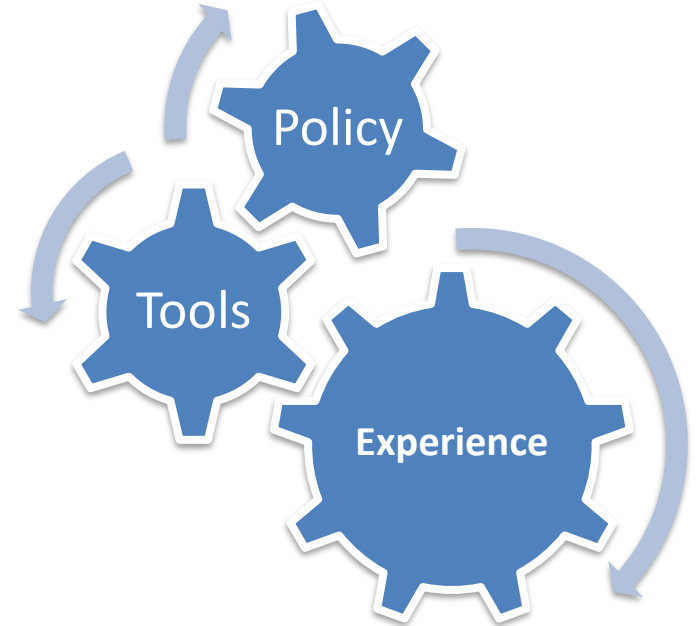


Shared Learnings:

1. Make sure tender is as clear and open as possible
2. Ensure infrastructure is available for vehicles selected
3. Know the market and what is available
4. Research historical data on Lifecycle costs (may be difficult to find)

Routine Sustainable Procurement

- Sustainable Leadership Questionnaire
- Specifications and statement of work
- Corporate Green Building Standard



Cultivate Stakeholder Relations



Monitor, Evaluate, Plan

- Monitoring internal processes and vendor sustainability through KPI's
- Sustainable Procurement Barometer 2020



Post-Implementation: Beyond 2020

Investigation of
Fair Wage/Living
Wage

Diverse Supplier
List

Ongoing Training:
e-learning

Grow routine
sustainable
procurement



City of Mississauga Resolution Calling for Gas-Fired Electricity Generation Phase-Out (DRAFT)

Background

The Government of Ontario is planning to [ramp up the greenhouse gas pollution](#) from Ontario's gas-fired power plants by more than 300% by 2025 and by more than 400% by 2040 to replace the output of the Pickering Nuclear Station (scheduled to close in 2024). This plan will throw away more than a third of the greenhouse gas reductions Ontario achieved by phasing-out its dirty coal-fired power plants.

To support this massive increase in fossil fuel electricity and climate-threatening greenhouse gas (GHG) pollution, the provincial government recently [purchased 3 gas plants](#) at a cost of \$2.8 billion.

Greenhouse gas pollution is causing temperatures in Canada to rise at [more than double](#) the rate in the rest of the world, causing adverse impacts for the citizens of the City of Mississauga, such as heat waves, rain, flooding and winter storms with related property damage and public health impacts.

The City of Mississauga has declared a Climate Emergency, is a member of both the Global Covenant of Mayors and Partners for Climate Protection, and is taking proactive measures to reduce its greenhouse gas pollution. The City's comprehensive Climate Change Action Plan includes a commitment to reduce corporate GHG emissions 40% from 1990 levels by 2030, and 80% by 2050.

The planned increase in GHG pollution associated with electricity will reduce the effectiveness of the City's climate adaptation and mitigation efforts. It will decrease the effectiveness of electrification programs (deep building retrofits, EV programs) due to increased GHGs associated with electricity, discourage development of distributed renewable energy initiatives, delay municipal transition to the clean economy of the future, and prevent Ontario from meeting its GHG reduction commitment.

Ontario can phase-out its gas-fired power plants by 2030 by an integrated combination of energy efficiency investments, wind and solar energy and Quebec water power. The costs of the alternatives to gas-fired generation are [all less than](#) the price Ontario Power Generation's current price per kilowatt-hour (kWh) for power from nuclear plants (9.5 cents per kWh).

Ontario can increase its investments in quick-to-deploy and low-cost energy efficiency programs. Ontario can cost-effectively maximize its energy efficiency efforts by paying up to the same price for energy efficiency measures as it is currently paying for power from nuclear plants.

Ontario can become a leader in developing increasingly low-cost renewable energy resources rather than investing in high-cost nuclear re-builds. Ontario should support renewable energy projects that have costs that are below what we are paying for nuclear power and work with communities to make the most of these economic opportunities.

Quebec has offered Ontario [low-cost](#) 24/7 power from its massive water power system at less than one-half the cost of the planned re-buildings of the aging Darlington and Bruce Nuclear Stations.

In addition, Quebec's system of hydro-electric reservoirs can be used like a giant battery to provide load balancing/back-up for Ontario's intermittent sources of renewable energy.



Ontario can benefit from making long-term electricity deals with its green energy-rich neighbour.

The phase-out of Ontario's gas-fired power plants will help the City of Mississauga and the Province of Ontario to achieve their greenhouse gas pollution reduction goals.

Municipal Resolution

Whereas: The Government of Ontario is planning to increase electricity generation and greenhouse gas pollution from Ontario's gas-fired power plants by more than 300% by 2025 and by more than 400% by 2040, reversing more than a third of the greenhouse gas pollution reductions achieved by phasing out our coal-fired power plants;

And whereas: Greenhouse gas pollution is causing temperatures in Canada to rise at more than double the rate of the rest of the world, causing impacts to the operations and citizens of the City of Mississauga;

And whereas: The City of Mississauga has declared a Climate Emergency and is taking ambitious measures to mitigate and adapt to the climate impacts caused by increasing greenhouse gas pollution;

And whereas: The planned increase in electricity-related greenhouse gas pollution will reduce the effectiveness of the City's greenhouse gas reduction efforts;

And whereas: There are feasible, cost-effective alternatives to increasing gas-fired electricity generation without increasing greenhouse gas pollution at costs well below the current price for Ontario's nuclear energy (9.5 cents/kWh), including:

- energy efficiency investments;
- low-cost, distributed, renewable energy, providing employment in Ontario communities and restoring our leadership in this industry;
- the purchase of low-cost power offered by the Province of Quebec from its existing hydroelectric generating stations; and
- using Quebec's system of reservoirs like a giant battery to back-up made-in-Ontario renewable power, eliminating the need to use gas-fired power plants for this purpose;

Therefore be it resolved that the City of Mississauga requests the Government of Ontario to place an interim cap of 2.5 megatonnes per year on the greenhouse gas pollution from Ontario's gas-fired power plants and develop and implement a plan to phase-out all gas-fired electricity generation by 2030 to help Ontario and the City of Mississauga meet their climate targets.

And be it finally resolved that this resolution be sent to the Premier of Ontario, the Minister of Energy, Northern Development and Mines, the Minister of the Environment, Conservation and Parks, all local MPPs and the Association of Municipalities of Ontario.

2019-2022 Environmental Action Committee Work Plan

WORK PLAN ITEM	ACTION FOR EAC MEMBERS	TIMING	PROGRESS	
			Action Taken or Date Completed	
Climate Change	Support approval and implementation of the Climate Change Action Plan.	Ongoing	May 29, 2019	At the May 29, 2019, General Committee meeting, students from Camilla Road Senior Public School requested the City of Mississauga declare climate change an emergency. The following recommendation was issued; <i>That a motion provided by the students of Camilla Road Senior Public School regarding the City of Mississauga declaring climate change an emergency be referred to the Environmental Action Committee for further consideration. GC-0306-2019</i>
			June 11, 2019	Referred from the May 29, 2019 GC meeting, the Eco Team Students from Camilla Road Senior Public School provided an overview on the crisis surrounding climate change and requested that the City of Mississauga declare a Climate Emergency at the June 11, 2019 EAC meeting. The following recommendation was issued; <i>That the Environmental Action Committee supports Camilla Road Sr. Public School Eco Team's position that the City of Mississauga will declare a Climate Emergency and create an action plan to help achieve net zero emissions and increased renewable energy by 2050. EAC-0016-2019</i>
			June 19, 2019	At the June 19, 2019 Council, the following EAC-0016-2019 recommendation was amended and approved as; <i>Climate change is a real and urgent crisis, driven by human activity, that impacts the environment, biodiversity, human health and the economy.</i> <i>The City of Mississauga is committed to taking action on climate change, therefore the City if Mississauga declares a climate emergency and direct staff to develop and bring forward a climate change action plan to Council for approval by the end of 2019.</i> <i>That the students of Camilla Road Senior P.S. be thanked for their initiative on this matter.</i> 0149-2019
			July 9/2019	Deep dive discussion surrounding the Climate Change Action Plan with the EAC Members gaining insightful comments and feedback for consideration during the finalization of the overall plan.
			July 25/2019	The Climate Change Stakeholder Panel workshop was held, where several EAC Members participated. Comments received at this workshop were incorporated in the draft Climate Change Action Plan (CCAP). The updated CCAP will go to Council at the September 18th meeting for information. If public consultation for this draft CCAP is approved by Council at this meeting, public consultations will run from Mid-September to October.

2019-2022 Environmental Action Committee Work Plan

Climate Change	Support approval and implementation of the Climate Change Action Plan.	Ongoing	Sept. 9/2019	The Corporate Green Building Standard for New Construction and Major Renovations Building Projects takes into account the Climate Change Action Plan to reach 80% GHG Reduction by 2050.
			Sept. 19/2019	An email was sent to EAC Members to share public consultation opportunities (e.g., open houses, survey) for the draft Climate Change Action Plan. Consultation opportunities available between September 18, 2019 and October 18, 2019.
			Nov. 12/2019	At the November 12, 2019 EAC meeting – A deputation and memo related to the final draft version of the Climate Change Action Plan were presented to the EAC Members and the Committee approved the following recommendation; <i>That the Environmental Action Committee are in support of the Climate Change Action Plan and bringing it to General Committee on December 4, 2019 for endorsement. EAC-0041-2019</i>
			Dec. 4/2019	At the December 4, 2019 General Committee meeting – The Climate Change Action Plan was unanimously supported and approved by the Members of Council. <i>That the Climate Change Action Plan (CCAP), and its supporting vision, goals, and actions, attached as Appendix 1 to the Corporate Report dated November 22, 2019 entitled “Climate Change Action Plan” from the Commissioner of Community Services be approved, subject to the City of Mississauga’s annual budget process. GC-0650-2019</i>
			Sept. 15/2020	City staff presented to EAC on the Climate Change Online Public Education and Engagement Tools.
			Nov. 3/2020	At the November 3, 2020 EAC meeting – A deputation from Clean Air Partnership and a staff memo regarding Inter-Governmental Declaration on Clean Air and Climate Change for Clean Air Council were presented to the EAC Members and the Committee approved the following recommendation; <i>2. That the Environmental Action Committee are in support of Clean Air Council's 2019-2023 Intergovernmental Declaration on Clean and Climate Change and recommend endorsement from General Committee on November 18, 2020. EAC-0022-2020</i>
Volunteering	Participate in volunteering opportunities as members of the Community Green Leaders volunteer program.	Spring 2020	Sept. 26/2019	Opportunities for EAC Members to participate in the program will be brought to the Committee in spring 2020.
		Ongoing	Oct. 8/2019	Adopt-a-Park deputation and discussion around the Members of EAC participating in a litter pick-up at a local park. Pujita Verma, EAC Citizen Member will be coordinating the details of the next volunteer event (date to be determined).

2019-2022 Environmental Action Committee Work Plan

Volunteering	Participate in volunteering opportunities as members of the Community Green Leaders volunteer program.	Ongoing	Mar. 3/2020	<p>Pujita Verma, EAC Citizen Member coordinated the details of Adopt-A-Park Clean Up for the Members of the Committee. The Committee decided on the following;</p> <p>2. That the Environmental Action Committee selected the proposed dates of April 18, August 22, and October 17, 2020 at 10:00AM to participate in the Adopt-A-Park Clean-Up Program.</p> <p>a. That the April 18, 2020 Adopt-A-Park Clean Up be located at the R.K. McMillan Park along the banks of the Cooksville Creek from Lakeshore Road to Lake Ontario.</p> <p>b. That the locations of the August 22 and October 17, 2020 proposed Adopt-A-Park Clean-up dates be determined at a future date. EAC-0009-2020</p> <p>Due to the COVID-19 Pandemic – the April and August dates for the Adopt-A-Park Clean Ups have been postponed.</p>
			Aug. 14/2020	<p>City staff have developed COVID protocols for safely reengaging volunteers and on August 14, 2020 conducted a trail litter clean up at R.K. McMillan Park with the Environment staff to test these protocols. Based on this, a date to conduct a litter clean-up with EAC Members will be discussed on September 15, 2020 EAC Meeting.</p>
			Oct. 6/2020	<p>Pujita Verma, EAC Citizen Member provided an update to EAC on the Committee's upcoming October Litter Clean Up and new health and safety protocols surrounding COVID-19. An email was sent post meeting outlining the volunteer participation; Saturday, October 17, 2020 from 10AM to 12PM at R.K. McMillian Park.</p>
			Oct. 17/2020	<p>EAC Members participated in Litter Clean Up at R.K. McMillian Park.</p>
Support City Action on Environment	Be prepared to comment on City-led items brought forward to EAC meetings (E.g., strategic plans, by-laws).	At EAC meetings	Sept. 9/2019	<p>The Corporate Green Building Standard for New Construction and Major Renovations Building Projects was presented to EAC and recommended by the Members of Environmental Action Committee to General Committee for endorsement.</p>
			Sept. 9/2019	<p>The Downtown Strategy was presented at EAC, where the Members provided comments and feedback. An email was sent post meeting asking for participation from the EAC Members to fill out the survey to provide more insightful feedback.</p>
			Nov. 12/2019	<p>The Stormwater Master Plan was presented at EAC, where the Members provided comments and feedback.</p>
			July 7/2020	<p>An email was sent to EAC Members requesting feedback on the Stormwater Master Plan.</p>
			Sept. 15/2020	<p>City staff presented to EAC an Update on District Energy in the City of Mississauga.</p>
			Oct. 6/2020	<p>A deputation regarding the Pedestrian Master Plan was presented at EAC, where the Members provided comments and feedback.</p>
			Oct. 6/2020	<p>A deputation regarding the Green Fleet and Equipment Policy was presented at EAC, where the members provided comments and feedback.</p>

2019-2022 Environmental Action Committee Work Plan

Support City Action on Environment	Be prepared to comment on City-led items brought forward to EAC meetings (E.g., strategic plans, by-laws).	At EAC meetings	Oct. 6/2020	City staff presented to EAC on the Home Energy Retrofit Program.
			Nov. 3/ 2020	A deputation regarding Energy Efficiency in Buildings and Low Carbon Energy Supply was presented at EAC, where the Members provided comments and feedback.
			Nov. 3/2020	A deputation regarding Parkland Acquisition was presented at EAC, where the Members provided comments and feedback.
			Nov. 3/2020	A deputation regarding the Downtown Movement Plan was presented at EAC, where the Members provided comments and feedback.
			Nov. 3/ 2020	At the November 3, 2020 EAC Meeting – the Committee approved the following recommendation; <i>That the draft Green Fleet and Equipment Policy, attached as Appendix 1, the Decision Making Framework and Electric Vehicle Charging Station Standard, attached as Appendix 2 and 3 be supported by the Environmental Action Committee and recommend endorsement by General Committee. EAC-0027-2020</i>
Report on Committee Progress	Report to General Committee bi-annually on the progress of the EAC's work plan and activities. (Includes the EAC Actions Summary as an appendix)	Twice per year	Mar. 3/2020	At the March 3, 2020 EAC Meeting – the Committee approved the following recommendation; 1. <i>That Carina Suleiman and Shazerah Qureshi, Environmental Action Committee Student Members have been selected to present on the Committee's Progress and Achievements outlined in the Environmental Action Committee Work Plan to Members of Council at the June 10, 2020 General Committee.</i> 2. <i>That the Environmental Action Committee Work Plan be approved as discussed at the March 3, 2020 Environmental Action Committee meeting. EAC-0010-2020</i>
			July 22/2020	At the July 22, 2020 Virtual Council Meeting - Carina Suleiman and Shazerah Qureshi, Environmental Action Committee Student members presented (deputation) the Committee's Progress and Achievements based on the Environmental Action Committee Work Plan.
Additional/Other			Nov. 12/2019	At the November 12, 2019 EAC meeting – the Committee supported going paperless and approved the following recommendation; <i>That the Legislative Coordinator for the Environmental Action Committee (EAC) eliminates the distribution of paper copies of the agenda and will only provide electronic copies of the agendas for all EAC meetings starting December 10, 2019. EAC-0042-2019</i>
			Oct. 6/2020	The Citizen Satisfaction Survey was presented at EAC. Members provide comments and feedback pertaining to expanding the Environmental section to include a question on Climate Change.

2019-2022 Environmental Action Committee Work Plan

			Oct. 6/2020	A verbal update on the Smart City Challenge was provided at EAC. If interested, Members can be invited to attend the industry presentations and the closing awards session.
Next Steps	Upcoming suggested environmental actions and initiatives to be implemented.	Ongoing	Feb. 4/2020	<p>At the February 4, 2020 EAC Meeting – Two external deputations presented on the decline of birds as result of unfriendly bird glazing. The Committee requested that staff contact FLAP (Fatal Light Awareness Program) Canada to gather birds of prey statistics and report back to EAC. The Committee approved the following recommendation;</p> <p>2. <i>That staff be directed to report back to a future Environmental Action Committee meeting to investigate the feasibility of becoming a Bird City.</i></p> <p>3. <i>That Animal Services staff be requested to provide a list of programs and services related to injured animals and wildlife rehabilitation to be circulated to the Environmental Action Committee and Members of Council.</i> EAC-0002-2020</p>

ACER Canada
Proposal to Environment Canada - Climate Action Awareness Fund
Submitted October 26, 2020

Call for Proposals

Environment Canada – Climate Action and Awareness Fund (CAAF) objective is to support projects that will develop knowledge, tools and/or skills that engage communities in activities to enable climate action.

Community-based climate action projects should help to support Canada's goals for climate action, such as net zero greenhouse gas emissions by 2050

Project Title

Project Crossroads: Climate justice science, for trees and for people.

Total Proposal value: \$1,472,588 for 2021-2025

EC-CAAF: \$816,712

In-Kind \$655,876

Project Goals and Objectives

ACER Canada's proposal "Project Crossroads: Climate justice science, for trees and for people" supports health and wellbeing of communities with significant exposure to climate risk through action on climate change adaptation, risk reduction and Greenhouse Gas (GHG) mitigation.

Peel Region's geospatial maps show these exposed communities also coincide with highest COVID-19 caseload by postal code, and also disproportionately racialized

By 2025, ACER will engage more than 2000 people from all ages and backgrounds, to plant 7,500 native tree indicator species for climate change research. After Year 4, more than 18 T of Carbon will have been sequestered where people most need shade. Carbon capture will increase as tree canopies grow.

Using civic engagement and proven "Citizen Science" research protocols, ACER will develop high-exposure communities with knowledge, tools, and skills that engage them in climate action to mitigate heat by planting cooling indicator species shade trees and reporting Smithsonian data for climate change research.

Community risk reduction to both climate change and COVID-19 recovery, was demonstrated in October 2020 in Bramalea Sustainable Neighbourhood Action Plan areas, when community non-profits and public school councils reconnected to residents in COVID-compliant community tree planting.

Residents' tree growth data supports plans for future urban forest plantings and meets objectives of Peel Region Climate Change Action Plan for building community resilience with green infrastructure.

Carbon sequestration and carbon dioxide are easily computed by residents, using ACER's on-line Treepedia and Carbon Calculator, thus generating local climate solutions to meet federal Climate Change targets and offset GHG emissions.

Project Description

In delivering Project Crossroads, ACER will impart the knowledge, tools and skills to communities with significant exposure to climate risk to empower capacity to take action on climate change.

Key Performance indicators will be met. Residents of all ages and backgrounds are inclusively engaged, invited through their community ecosystem comprised of schools, faith and service groups, settlement and non-profit agencies.

Using proven "Citizen Science" research protocols, ACER will establish community indicator tree species sites to restore urban tree canopy.

Restoring tree canopy is needed to reduce heat vulnerability in areas where Peel health data show up to 500% higher emergency response calls during extreme heat events.

In August 2019, ACER targeted "heat islands" in collaboration with Peel Health, using Geographic Information System (GIS) data maps from Neighbourhoods Information Tool (NIT) <https://www.peelregion.ca/planning-maps/nit/>. Diverse and cross-sectoral stakeholders joined with conservation authorities and urban foresters to add further GIS layers for high crime, recent immigration and lowest-decile income.

In 2020, the heat island targets coincide with highest COVID-19 caseload by postal code, and are disproportionately racialized

Through meetings and digital/on-line resources, ACER prepares and resources residents to plant, monitor, measure, collect and report Smithsonian data for open-data sharing with international research and mitigate/iterate/innovate processes. ACER will support community's sustained collection and annual data reporting with celebrations.

ACER's Project Crossroads "proof in concept" demonstration in October 2020 delivered four community treeplanting events. ACER's outreach through community non profit ecosystem led to oversubscription of volunteers, especially students. Post-event mood perception surveys were vibrant.

ACER Canada (www.acer-acre.ca) was founded in 1987 by Alice Casselman B.Sc., M.O.Ed., retired Science Department Head and Founder of Council of Outdoor Educators of Ontario.

Project Team Experience

Since 1987, without exception, ACER has delivered all projects on time and within budget. (See ACER History of Accomplishments 1997-2020)

ACER's active Board is supported by a Science Advisory Committee, comprised of industry experts. (Refer to ACER's organization chart.)

ACER's core program coordinator and admin staff support each project with on site experts and "Citizen Science" volunteers.

Commencing in 1990, Eco-Action funded ACER's pioneer "Citizen Science" projects with Environment Canada - Ecological Monitoring and Assessment Network (EMAN) and Smithsonian Institution (SI)..

Citizen Science" prepares and trains on-site volunteers in international protocols to plant, monitor, mitigate, annually measure, record and freely share data to contribute to climate change research. All ACER program protocols sustain annual results supported with digital training modules.

ACER research produced academic papers and notable citations in both urban and rural settings. Data analysis identifies critical links between forest biodiversity changes and climate change. Conservation authorities have evolved practices for optimal species survival.

Following 1997 establishment of many Niagara Escarpment Biosphere Reserve Studies (NEBRs) GO Global 1-hectare plots, ACER and partners used SI's international monitoring protocols to collect data on forest growth and biodiversity.

ACER's best practices were demonstrated featured by Environment Canada: Climate Impacts and Adaptation Division, at SIs 2008 conference to field-train SI staff and university students in Panama, and assist Laurentian University establish their coastal plot in Costa Rica.

Project delivery experience

Financial Capacity

Since 1997, when ACER received its first major grant, all project undertaken have been delivered on time and on budget. EcoAction, our first funder, supported installation and inventory of 3 sets of one-hectare lots along the Niagara Escarpment for Environment Canada. Our key donors have supported us over the years funding continuing projects and new programs as ACER developed them i.e. Planting for Change with 60 schools by TD Friends of the Environment since 2008, Ontario Trillium Fund for larger grants as we built capacity, and Ontario Great Lakes Guardian Community Fund for 13 Conservation Authorities as partners in our Riparian Rangers program, planting and monitoring along watercourses.

Program Management Capacity

ACER's programs, once initiated, are contiguous and ongoing. On-site experts are developed and sustained.

- Despite 2020 pandemic and loss of spring planting season, ACER's completed its 2020 research across its programs. See maps <https://www.acer-acre.ca/programs>.
- See "ACER History of Accomplishments 1997-2020"

ACER constantly adapts programs to meet needs and address data gaps.

Project Crossroads following 2019 municipal Declarations: Climate Change is a Crisis. In October 2020 ACER demonstrated four pandemic-compliant community tree plantings for climate change research to Bramalea SNAP urban revitalization areas. Surplus volunteers were engaged in a new community delittering collaboration. Student volunteers logged 40 service hours.

In September 2020, delegations to Toronto and Peel school boards introduced pandemic-adapted Outdoor/On-line/Remote unit to deliver hands-on STEM unit "Shovel, Mulch and MOR" (Measure Our Resources). Data collection will capture carbon sequestration.

Major research ongoing since 2000 at Humber Arboretum, was embodied in papers presented at 2006 UN Convention on Bio Diversity by Environment Canada scientists (<https://www.cbd.int/doc/reports/cbd-report-2006-en.pdf>)

Five separate demonstration models encompassing 2167 tree plantings distribute across SI GO Global 1-hectare experimental plots, and four indicator-species tree installations

- 2008 - Planting for Change partners with 60+ schools to install indicator-species tree plots with community planting event
- 2015 - Riparian Rangers partners with 13 Ontario Conservation Authorities in plantings along watercourses

Graduation and Jobs Creation: conduct field research and yield academic papers:

- 1993 - Canada Summer Jobs Students - 21 total
- 1993 - University of Toronto / UT Mississauga/ Sheridan College ~45 student program/Intern placements
-

Primary Activity

Project Crossroads: Climate science justice, for trees and for people proposes to take action on climate change mitigation, including environmental restoration to reduce greenhouse gas emissions.

Communities reached in Primary Activity:

Communities with significant exposure to climate risk

ACER's inclusively engages communities together with their non-profit ecosystem comprised of schools, faith and service groups, settlement and non-profit agencies. Taking the lead from established cultural norms, ACER taps local wisdom as it imparts proven knowledge, tools and skills that empower capacity for collective action on climate change. Key performance indicators are met.

Restoring tree canopy is a lead tenet for green infrastructure in Peel Climate Change Plan, which aligns with the federal Climate Change targets.

ACER identified Communities with significant exposure to climate risk in using Neighbourhoods Information Tool (NIT) (<https://www.peelregion.ca/planning-maps/nit/>). EMS calls ranged 500% higher in areas of low tree canopy. ACER's stakeholders GIS layers for higher crime, recent immigration and lowest-decile income.

Ground truth from embedded community - Boys and Girls Club of Peel, settlement agencies, school parents, faiths and service groups confirmed many residents are racialized or newcomer families with unmet needs.

Peel Health COVID-19 caseload maps revealed heat islands were hardest hit. Toggle ACER's map of Bramalea SNAP schools: (<https://www.acer-acre.ca/wp-content/uploads/2020/06/Bramalea-SNAP-Map.pdf>)

Planting cooling shade brings residents action for relief from heat. Meetings to prepare and train for planting, monitoring, measuring, collect and report data help residents understand how to mitigate impact of climate change.

Increasing trust and community relationships leads to risk reduction, states resilience expert Daniel Aldrich, Director of Security and Resilience Studies Program, Northeastern University. Emergency preparedness is more efficient where relationships pre-exist crisis.

Data collection captures informs on climate change, as well as captures carbon sequestration that helps meet federal Climate Change Targets.

Additional groups to describe the selected community:

- Living with disabilities
- Low-income
- New Canadians
- Small to medium sized businesses (fewer than 500 employees)
- Visible minorities

For its Project Crossroads "proof in concept" demonstration run in October 2020, Knightsbridge community was identified in 2019 by ACER using maps of low tree canopy and Peel Regional health data for high incidence of EMS response during extreme heat as a community with significant exposure to climate risk.

Peel Region's geospatial maps show climate-exposed communities also coincide with highest COVID-19 caseload by postal code, who are also reported to be disproportionately racialized and low income. ACER publicized the connection between climate change and COVID-19 impact in creation of its digital invitation to Knightsbridge residents <http://bit.ly/ACER-invites-Knightsbridge-residents>. On Page 2 of the invitation appears ACER's map of Bramalea SNAP schools embedded with a clickthrough link to Peel Region's COVID-19 caseload by postalcode.

From the embedded community ecosystem of non-profit and settlement agencies, public schools, faith and service groups, local politicians and property owners, ACER knows that both physical and mental health disability are disproportionately prevalent amongst residents. NIT data confirms, with 30-day reporting

In addition to racialized, low-income, eroded mental health and physical disability, Knightsbridge community has other vulnerable populations comprising children and youth, New Canadians and small-medium business enterprise (SME).

Service sector, food, faith groups, settlement and non-profit agencies have been unable to adapt to pandemic protocols to reopen to the residents that they serve.

ACER's four demonstration plantings have brought relief, to all, together -- in outdoor activity that is safe, social and low-barrier to participate. ACER's inclusive approach reduces stigma, and residents feel comfortable to find other familiar members of their community and community ecosystem engaged in the community tree planting.

From ACER demonstration project, perception surveys were vibrant with enthusiasm, in anticipation of spring.

Communications Plan

Refer to Communications Plan document, attached.

ACER adapted its communications to pandemic protocols. New to ACER Board in June 2020 is a Journalist, who established a Communications Committee, and had the website evolved to a mobile-friendly format. ACER's communications are digital, through social media platforms of Twitter (2011) and Facebook (2010), and Instagram (2020). Digital messaging is amplified through resident community leaders, school parents and

non-profit agencies and include digital tags from local politicians. Digital analytics are tracked by ACER's webmaster. ACER creates MailChimp press releases at least once per month, with greater frequency to publicize planting events. As a result, since May 2019, ACER has been covered by Peel Weekly News and Toronto.com digital media eight times.

Since August 2020, community partner Brampton Focus /Brampton Neighbourhood Watch is training students in digital media to record video and publish content about ACER's community tree planting events. ACER creates printed materials only when budgeted, or as an in-kind with project partners. ACER's e-mail and telephone communications with community non-profit ecosystem are the most productive way to communicate information out to residents. Calls for volunteers are often oversubscribed, and ACER is adept to ensure that volunteers are kept engaged. ACER presents regularly in municipal Environmental Action Committees, school board curriculum activities, at Environment & Sustainability committees of local boards of trade, and at the Peel Region-Poverty Reduction Strategy Committee. ACER is very engaged with environment association ecosystem, such as Green Drinks of Mississauga and Mississauga Climate Action Network.

Reporting Plan

Key Performance Indicators are provided.

These include: mapping and tracking planting installations, as well as individual specimens; numbers of volunteers; new and updates to manuals; videos - produced and posted; Intake and post-event surveys of participants and residents at planting events;

Plantings data is collected annually. Planting teams have four-year follow-up. In 2020, Project Crossroads has a new KPI satisfaction survey for municipal and private land owners and residents. Photographic images will track changes to the landscape..

Social data collected on Peel NIT will be monitored for change. It is anticipated that over time as tree canopy improves that EMS calls during severe heat episodes can be mitigated. ACER will watch for reported rates of crime, and residents' perception for community safety and well-being through the embedded non-profit ecosystem partners.

As funding becomes available, more Project Crossroads sites can be installed. The ones that are established will continue to yield data to contribute to carbon sequestration, tree canopy, and hands-on STEM curriculum for students.

ACER believes there is costs savings and value-add when more residents participate. New ways to value carbon capture as offsets under Environmental Damages Fund can be a new revenue stream for municipalities and school boards to fund social and human infrastructure, as well as green infrastructure.

It is critical to avoid any data gaps in longterm measurements to calibrate/mitigate/iterate/innovate for future plantings aiming to increase health and wellbeing of the residents, whose exposure to impacts of climate change have been worsened and expose under COVID-19 pandemic.

Project externalities: risks, permits and environmental stability

Ahead of planting events, all participants from novice to experienced are apprised of the process. At planting events, everyone together is guided through safety and other protocols to guide the planting event, and the measuring to collect data.

Permits required for the project are "locates" from property owners, which are certificates obtained from utility

companies and facility management to avoid planting areas which would be contra-indicated for tree and vegetation roots.

Since 1987, ACER has coordinated with property owners for any required permits, and routinized the locates process into its tree planting program.

COVID-19 adaptation:and risk reduction

ACER's outdoor activities are scheduled in 2-hour increments. Participants are forewarned and understand there is no biobreak amenities for washrooms, or for food. Bottled water is available upon request. Participants are further advised to bring their own masks and gloves. Work gloves are provided if requested. Site visits will be conducted by masked and distanced stakeholders on projected planting sites, including a professional landscaper and city forestry staff. COVID planting protocols, ACER designed and field tested several times, modified by stakeholder organizations to fit local needs, will be used in these plantings.

Data analysis will be managed remotely. Google meet and other platforms will be used for planning and operations virtual meetings. Planting groups will not exceed 3 people working together in an outdoor setting. All people will be masked and follow social distancing. Equipment will be sanitized between groups. COVID precautions have been vetted by 4 organizations in planting events. Safety training and pandemic protection training will be provided ahead of time and checked for adherence during any event, in accordance with public health restrictions. A copy of ACER's COVID planting protocol can be found at [www.acer-acre.ca/covid plantings](http://www.acer-acre.ca/covid-plantings)

Project Evaluation

By 2025, ACER will engage more than 2000 people from all ages and backgrounds, to plant 7,500 native tree indicator species for climate change research. After Year 4, more than 18 T of Carbon will have been sequestered where people most need shade. Capture will increase as tree canopies grow.

ACER can predict how data will contribute to climate change research - by increasing canopy, capturing carbon sequestering, reducing risk to communities with installation of green infrastructure that help to meet Environment Canada goals.

ACER has been keeping Smithsonian data continuously and contiguously for decades. Its research contribution has helped to evolve investments in conservation areas which inform species thriving, for better return on investment.

There can be no gaps in the data. The time is now to ensure the future, and scale up recovery.

ACER requires adequate funding to scale up its community tree planting for climate change research so that it can make an even more meaningful impact. The Project Crossroads "proof in concept" demonstrates an appetite for communities to enthusiastically engage and play a role in climate mitigation, together.

ACER further want to get data on narrative that people do better from this activity. Resilience is bottom up, so long as decision makers can reach down to help.

Capturing carbon is a way to create revenue for municipalities and school boards, to continue virtuous investment in social and human care infrastructure.

Canada is at the Crossroads. Let us pick the best path, together, for our future, together.



Project Crossroads

Table of Contents

1. ACER stories Listed in UN Biodiversity Press Release 2006
2. Poster – Biological Threats to Biodiversity
3. ACER How to plant during COVID restrictions
4. ACER Video of COVID field testing with 3 partners
5. City of Mississauga support letter
6. ACER Map of heat Islands for planting In Brampton
7. ACER Map Heat islands for planting in Mississauga
8. ACER impacts in Rural areas
9. ACER How to calculate Tree Carbon sequestration
10. ACER Tree Trackers proposed program
11. ACER participant 2008 Climate Change and Biodiversity in the Americas
12. ACER contributor in Gaps in Climate Change and Biodiversity, 2008
13. Map of ACER Riparian Rangers Program (RR) Ontario
14. Map of ACER Planting for Change Program (P4C) Ontario
15. Map of ACER international 1-ha plots (GG) Ontario
16. Survey results Project Crossroads Bramalea
17. ACER Organization Structure
18. ACER History of Accomplishments 1997-2020
19. ACER Literature Review: Effects of Nature on Health
20. ACER Large Donors
21. Project Communications Plan



★ Proposed planting locations



Prepared January 2020 City of Brampton

Potential Areas of Focus for Anti Racism Action Program

Prepared December 2019 City of Mississauga

