

# Partners in Project Green

Municipal Water Efficiency Cluster:  
Lessons Learned and Potential for Replication

**Presented by:**

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# About us

## Vision:

The vision of Partners in Project Green is to transform the Pearson Eco-Business Zone across the Greater Toronto Area into an internationally recognized community of leaders advancing environmental action and economic prosperity.

## Founding Ambassadors:



Toronto Pearson



## Key Milestones:

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- **2019:** New Strategic Plan
  - **2018:** 10-year anniversary of program success
  - **2014:** Program expansion, including Tree Wood Recovery Centre & EV Network
  - **2013:** Development of key performance areas
  - **2012:** Strategic plan update
  - **2008:** Partnership established

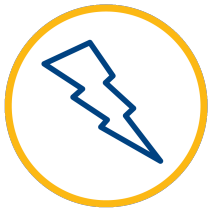
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# Focus on Performance Areas



Water Stewardship

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Energy Performance & Transportation

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Waste Management

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Communications & Engagement

# Current Members – 2020



# Governance Committee Members



**Todd Ernst**  
Director  
Aviation Infrastructure,  
Energy & Environment  
(co-chair)



**John Mackenzie**  
Chief Executive Officer  
Toronto and Region  
Conservation Authority



**Chris Fonseca**  
Peel Regional Councillor  
City of Mississauga, Ward 3



**Jim Karygiannis**  
City of Toronto Councillor  
Ward 22



**Paul Vicente**  
Peel Regional Councillor  
City of Brampton, Wards 1 & 5



**Jack Heath**  
Regional Councillor - Ward 5



**John Coyne**  
VP, General Counsel &  
Corporate Secretary,  
Unilever (co-chair)



**Tim Faverl**  
VP Sustainability & Shared Value  
Maple Leaf Foods



**Michelle Brown**  
VP, Property Management  
Real Estate Services  
Bentall Kennedy



**Maxx Kochar**  
Chief Business Officer  
Silver Dart Group



**Brad Chittick**  
President  
Hydrogen Business Council



**Teresa Schoonings Bimbo**  
Canada (Canada Bread)  
Senior Director  
GR & Sustainability



**Erica Brabon**  
Director  
Energy & Sustainability  
Black and McDonald



**Scott Pegg**  
Vice President  
Infrastructure Advisory  
Ernst & Young LLP

## BUSINESS LEADERS



**Learie Miller**  
Advisor, Environmental Planning  
Region of Peel



**Doug Whillans**  
City of Brampton Councillor



**Scott Hendershot**  
Program Lead - Sustainability  
Pratt & Whitney Canada Corp

## MUNICIPAL LEADERS

## ADVISORY MEMBERS

# PPG Strategic Refresh 2019-2023

Enhanced  
Vision

TRCA,  
municipal  
plans & GTAA  
strategy  
alignment

Impact and  
performance  
measurement

Diversifying  
network and  
business  
models

Research for  
businesses  
and  
municipalities

Supporting  
sustainability  
best practices  
in planning  
process

Enhanced  
systems  
approaches &  
co-benefits in  
programs

# PPG Strategic Refresh 2019-2023

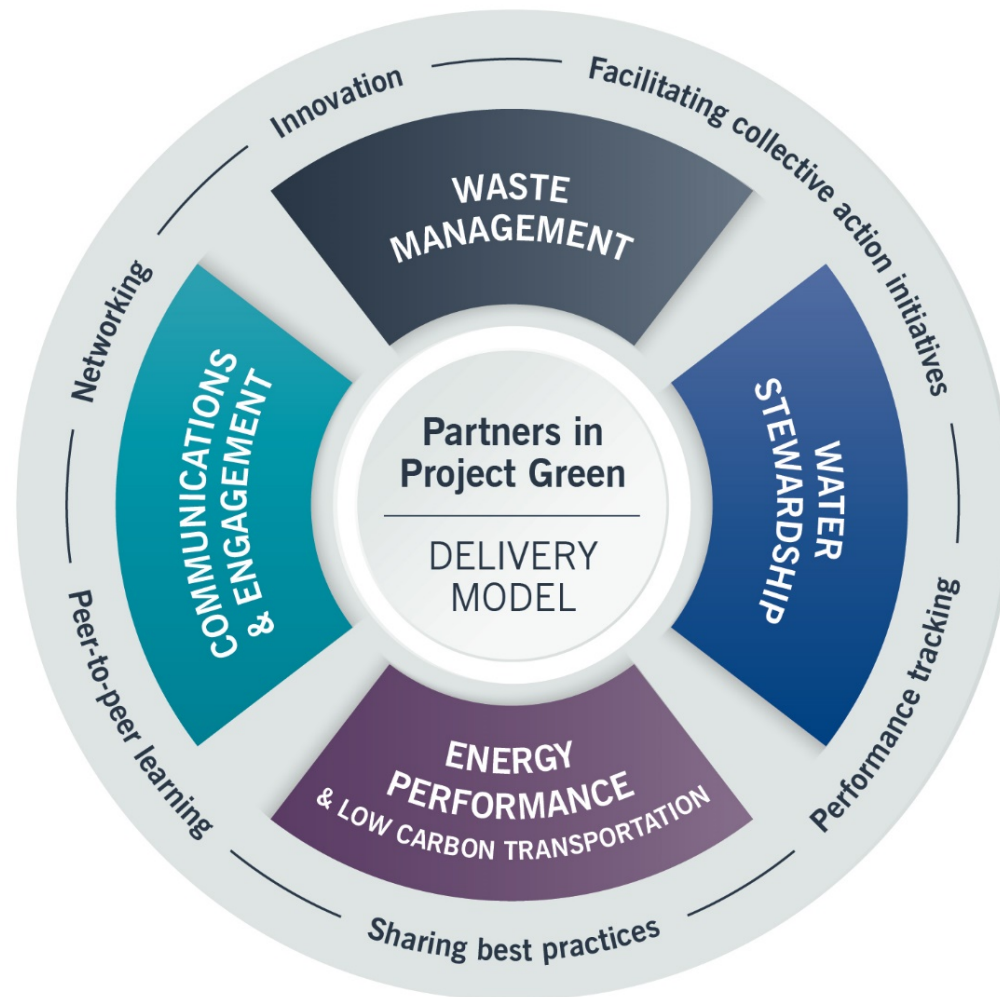
## VISION

The vision of Partners in Project Green is to grow the Pearson Eco-Business Zone model as an internationally recognized community of leaders advancing environmental action and economic prosperity across the Greater Toronto Area.

## PERFORMANCE AREAS and WHAT WE DO

## HOW WE SUPPORT OUR MEMBERS

- Growing the partnership
- Collective impact and reporting
- Improving alignment and embedding sustainability

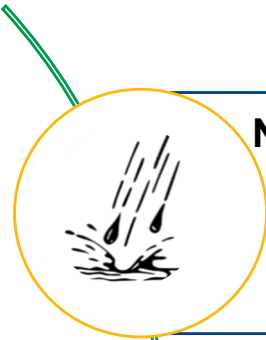




# Water Stewardship Programs

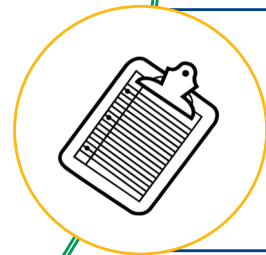


For more information, please visit:  
[www.partnersinprojectgreen.com/your-needs/water-stewardship](http://www.partnersinprojectgreen.com/your-needs/water-stewardship)



## Natural Infrastructure and Climate Resiliency

- Implementation of innovative stormwater management technologies and best practices



## Water Efficiency

- Partner with existing regional programs to maximize implementation opportunities for innovative technologies and best practices





## 2.29 billion litres offset (2014-2019)

- Equivalent to 918 Olympic sized pools
- 6 years of capital infrastructure projects: stormwater, process water, wastewater
- Vendor network to support accelerated project implementation
- Trade publication articles, case studies, and industry speaking engagements



# Municipal Water Efficiency Cluster: 2017 to 2019



- **Initiative:** 18-month working group focused on ICI sector water efficiency programs
- **Participation:** Region of Peel, City of Toronto, York Region, City of Guelph, and Region of Waterloo
- **Advisory Support:** Enviro-Stewards, GRCA, OWWA, OCWA
- **Key Objectives:** Assessment report of best practices, ideal ICI efficiency program design, and showcase of 4 capital project case studies

This initiative was made possible in part through the financial support of the Independent Electricity System Operator's (IESO) Education and Capacity Building Program. TRCA is solely responsible for implementation of, and the content of any materials produced by, this initiative, and the IESO has no responsibility or liability whatsoever in the event that any person suffers any losses or damages of any kind as a result of the initiative.

# Municipal Water Efficiency Cluster: 2017 to 2019



A program of:  
 Toronto and Region  
Conservation  
Authority

- Comprised of (5) industrial, commercial, and institutional water conservation programs offered in Ontario
- Incentivization to conserve water to provide capacity for the growing urban/industrial population
- Profiles of initiatives currently offered: water assessments and incentives, cost-share water conservation, and reduced water rates
- Showcasing best practices from 52 years of programming experience across the existing programs
- Gap analysis of program approach
- Barriers to implementation
- Key recommendations for program evolution and replication

# Municipal Water Efficiency Cluster: 2017 to 2019 (City of Guelph / Sleeman Breweries)



**5,000 kegs of worth of water per day**

- Bottle line pasteurization retrofits
  - Temperature fluctuations = more water and energy used
  - \$266,000 in overall operational savings
  - \$89,682 financial program incentive
- 
- ~89.4 million litres of process water offset from operations per year
  - ~XX.X tonnes of greenhouse gas emission reduction (municipal electricity pumping, natural gas, steam heat recovery) per year



# Municipal Water Efficiency Cluster: 2017 to 2019 (City of Toronto / Supreme Egg)



## 10-step water conservation retrofit

- Enhanced clean in place practices
- Sanitation and pasteurization adjustments
- \$136,722 in overall operational savings
- 30% municipal block rate incentive

- ~7.7 million litres of process water offset from operations per year
- ~28.3 tonnes of greenhouse gas emission reduction (municipal electricity pumping, natural gas, steam heat recovery) per year

# Municipal Water Efficiency Cluster: 2017 to 2019 (Region of Peel / Credit Valley Hospital)



## Sterilizer and heat exchanger retrofit

- Sterilizer equipped with vacuum pumps
  - Heat exchanger for preheating efficiency
  - \$43,573 in overall operational savings
  - \$12,750 municipal program incentive
- 
- ~18.6 million litres of process water offset from operations per year
  - ~28.2 tonnes of greenhouse gas emission reduction (municipal electricity pumping, natural gas, steam heat recovery) per year

# Municipal Water Efficiency Cluster: 2017 to 2019 (Region of Waterloo / Waterloo Brewing)

## Evaporative loss reduction retrofit



- Enhanced clean in place practices
- Evaporative loss process improvements
- \$350,000 in overall operational savings
- 50% municipal capital cost implementation incentive

- ~23.6 million litres of process water offset from operations per year
- ~223.0 tonnes of greenhouse gas emission reduction (municipal electricity pumping, natural gas, steam heat recovery) per year



# Municipal Water Efficiency Cluster: 2017 to 2019 (York Region / Arla Foods)

## Process water reuse & efficiency retrofit



- Spray nozzle and process water reuse
  - Natural gas, cleaning chemical reduction
  - \$285,000 in overall operational savings
  - \$30,513 municipal program incentive
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- ~122.4 million litres of process water offset from operations per year
  - ~212.0 tonnes of greenhouse gas emission reduction (municipal electricity pumping, natural gas, steam heat recovery) per year

# Municipal Water Efficiency Cluster: 2017 to 2019

Recommendations for current program evolution and potential replication of pilot opportunities across urban centres in Ontario:

- Milestone updates and check-ins with facilities to maintain buy-in
- Provide coaching, vendor referrals, troubleshooting as support
- Set implementation expectations depending on payback
- Understand implementation timeframes to ensure project efficiency
- Incorporate GHG emission reduction estimates to reinforce nexus
- Program verification surveys within 6 months to 1 year of implementation

# Why work with Partners in Project Green?

Because we offer **unique** resources & expertise

- **Collaborate** with other leading businesses and institutions to realize creative new approaches to sustainability
- Enjoy **exclusive access** to our network of world-class vendors and suppliers, and become an early adopter of cutting-edge technological solutions
- **Gain profile and recognition** by promoting your sustainable infrastructure success stories to business and municipal leaders in our community

**Eric Meliton, Program Manager**  
**Water Stewardship and Waste Management**

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