

Infrastructure and Environment Committee Overview

Tracey Cook

Deputy City Manager
Infrastructure & Development
Services

Giuliana Carbone

Deputy City Manager
Community & Social Services

Josie Scioli

Deputy City Manager
Corporate Services

March 18, 2019

Presentation Outline

Committee Overview

Division Overviews

Key Committee Reports in 2019 (by Quarters)

Committee Overview

Mandate of the Committee

The Infrastructure and Environment Committee's primary focus is on infrastructure and the natural environment, with a mandate to monitor and make recommendations on Toronto's infrastructure needs and services, parks and forestry and the sustainable use of Toronto's environment.

Types of items at this Committee:

- **Infrastructure** (e.g. strategic policy items related to mobility - Vision Zero, Congestion Management, Ten Year Cycling Plan; Right-of-Way management, contract awards for major capital projects; roads, bridges, water, sewers, etc.)
- **Environment** (e.g. environmental policy, progress in waste diversion, TransformTO)
- **Parks and Forestry** (e.g. tree canopy, urban forestry management, bylaw enforcement, Parkland and Ravine strategies and plans, etc.)

Committee Overview

The Committee is primarily supported by Engineering & Construction Services, Solid Waste Management Services, Toronto Water, Transportation Services, Parks, Forestry & Recreation Services and Environment & Energy divisions.



Engineering & Construction Services
Michael D'Andrea,
Chief Engineer &
Executive Director



Solid Waste Management Services
Matt Keliher,
General Manager



Toronto Water
Lou Di Gironimo,
General Manager



Transportation Services
Barbara Gray,
General Manager



Parks, Forestry & Recreation
Janie Romoff,
General Manager



Environment & Energy
Jim Baxter,
Director

Infrastructure & Development Services

Engineering & Construction Services
Solid Waste Management Services
Toronto Water
Transportation Services

Divisional Overview

Engineering & Construction Services

Engineering & Construction Services Key Staff



Michael D'Andrea
Chief Engineer &
Executive Director



John Kelly
Director, Engineering Review



Frank Clarizio
Director, Design & Construction
Transportation Infrastructure and Gardiner
Rehabilitation Project



Judy Tse
Director, Design & Construction
Linear Underground Infrastructure



Mika Raisanen
Director,
Engineering Support Services



Simon Hopton
Director, Design & Construction
Major Infrastructure

Program Highlights – *What We Do*

ECS MISSION: *“To build safe and sustainable infrastructure that enhances the quality of life for the people of Toronto”*

ACTIVITIES

Provide engineering **design and construction** services to in-house clients:

- ✓ Transportation Services
- ✓ Toronto Water
- ✓ Solid Waste Management Services
- ✓ TTC

Undertake engineering **review of development applications** and proposals for works by third parties, such as Metrolinx

Conduct **condition assessments** and rehabilitation planning for bridges and the Gardiner Expressway and management of the City's infrastructure and utility **as-built records**

SERVICES



Municipal Infrastructure Construction



Engineering Review and Acceptance

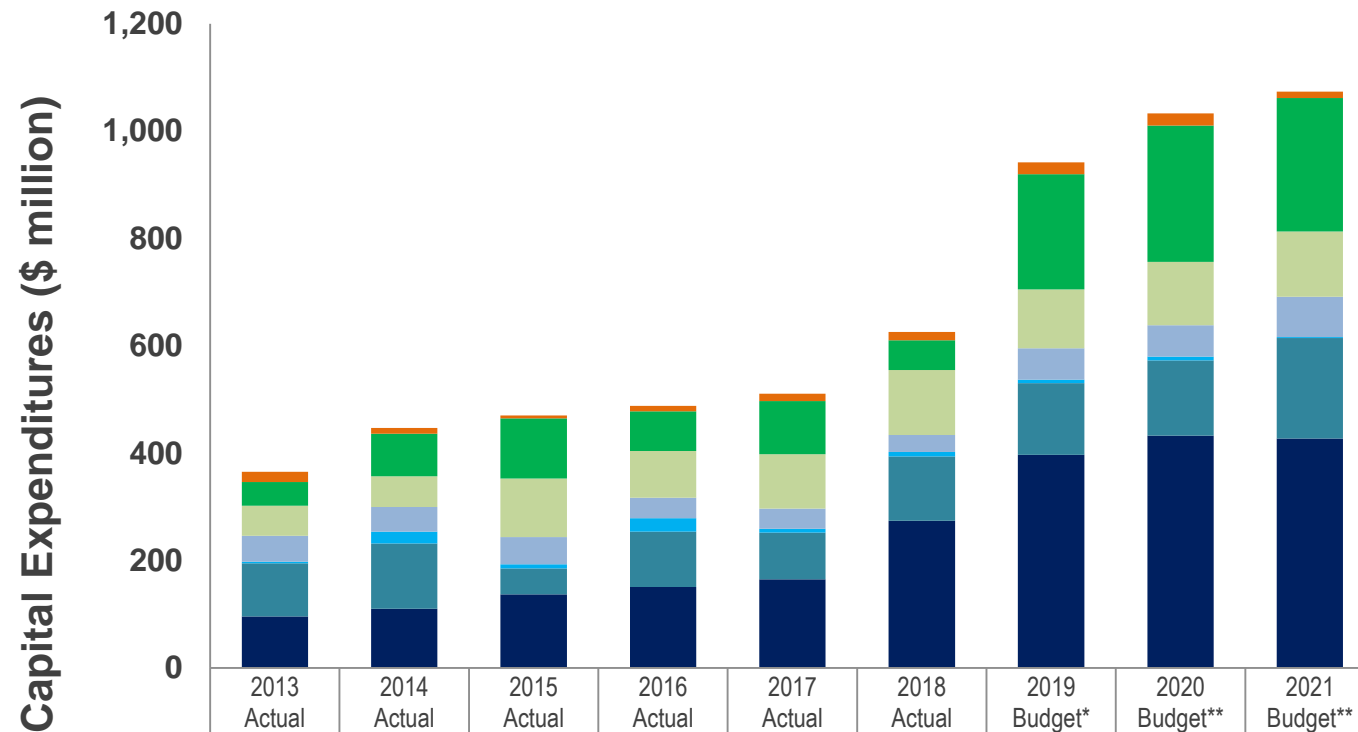


Engineering Information

Program Highlights – *What We Did in 2018*

- Delivered **\$578 million in capital construction projects**, \$67 million (13%) more than in 2017, representing an overall 80% delivery rate
- Awarded **new construction contracts valued at \$1.4 Billion**
- Processed more than **3,000 payments** for construction contracts and engineering assignments, 95% completed within 30 days.
- Completed 677 bridge condition assessments and structures inspections, ensuring **100% compliance with regulatory requirements**.
- Completed **2,015 engineering reviews of development application circulations**, with 80% completed within Council approved STAR timelines (target = 75%)
- Processed 97% of **6,032 third party application circulations** within 20 working days (target = 90%).
- Processed **70 applications for street/lane names** within six months, 94% of the time.
- Processed **300 municipal numbering requests** and comments within five days, 97% of the time.

Program Highlights – *Looking Ahead to 2019*



	2013 Actual (\$ million)	2014 Actual (\$ million)	2015 Actual (\$ million)	2016 Actual (\$ million)	2017 Actual (\$ million)	2018 Actual (\$ million)	2019 Budget* (\$ million)	2020 Budget** (\$ million)	2021 Budget** (\$ million)
TOTAL	365	447	470	488	511	626	941	1033	1074
■ Solid Waste Management	19	11	5	10	14	16	22	23	12
■ TR Bridges and Major Projects	44	79	112	74	99	55	215	254	249
■ TR Roads	56	57	109	87	101	121	110	118	122
■ TW Basement Flooding	48	46	51	38	38	32	58	58	75
■ TW Wet Weather Flow	3	22	8	25	7	8	6	7	2
■ TW Linear	99	122	48	103	87	120	134	140	187
■ TW Facilities	96	110	137	151	165	274	397	433	427

Major Initiatives

Construction Act, 2018

- ✓ The *Construction Act, 2018* will have significant financial and organizational impacts across the City with respect to management and administration of construction contracts.
- ✓ ECS is leading, along with Legal Services and Purchasing and Materials Management, in aligning systems and processes to the new legislative requirements.

Transforming Procurement of Construction and Professional Services

- ✓ City wide modernization of the bidding process from paper to electronic.
- ✓ ECS is the first Division to implement a new procurement strategy under the Supply Chain Management Program released March 1st: “Standalone Watermain Replacement”.
 - Active engagement of industry
 - in developing Strategic Sourcing “Request for Proposal”
 - represents larger value (than conventional tenders) and multi-year (2019, 2020, 2021) commitment
 - strategic relationship with contractors who are making a longer term commitment of equipment and staff resources which is expected to reduce overall costs to the City

Divisional Overview

Solid Waste Management Services

Solid Waste Management Services Key Staff



Matt Keliher
General Manager



Carlyle Khan
Director, Infrastructure Development &
Asset Management



Vince Sferrazza
Director, Policy Planning & Support
Ending March 29, 2019



Grace Maione
Director, Processing & Resource
Management (Acting)



Rob Orpin
Director, Collections & Litter Operations
Retiring March 29, 2019



Lisa Duncan
Director, Collections & Litter Operations (Interim)
Starts March 30, 2019

Program Highlights



Residential – 873,000
Single family households and
Multi-residential units



Commercial – 7,600
Bin and bag-only small
commercial locations



Non-Residential – 3,500
Schools, charities, religious
institutions, City facilities



Public Space and Events
Parks, litter bins, special
events



Services

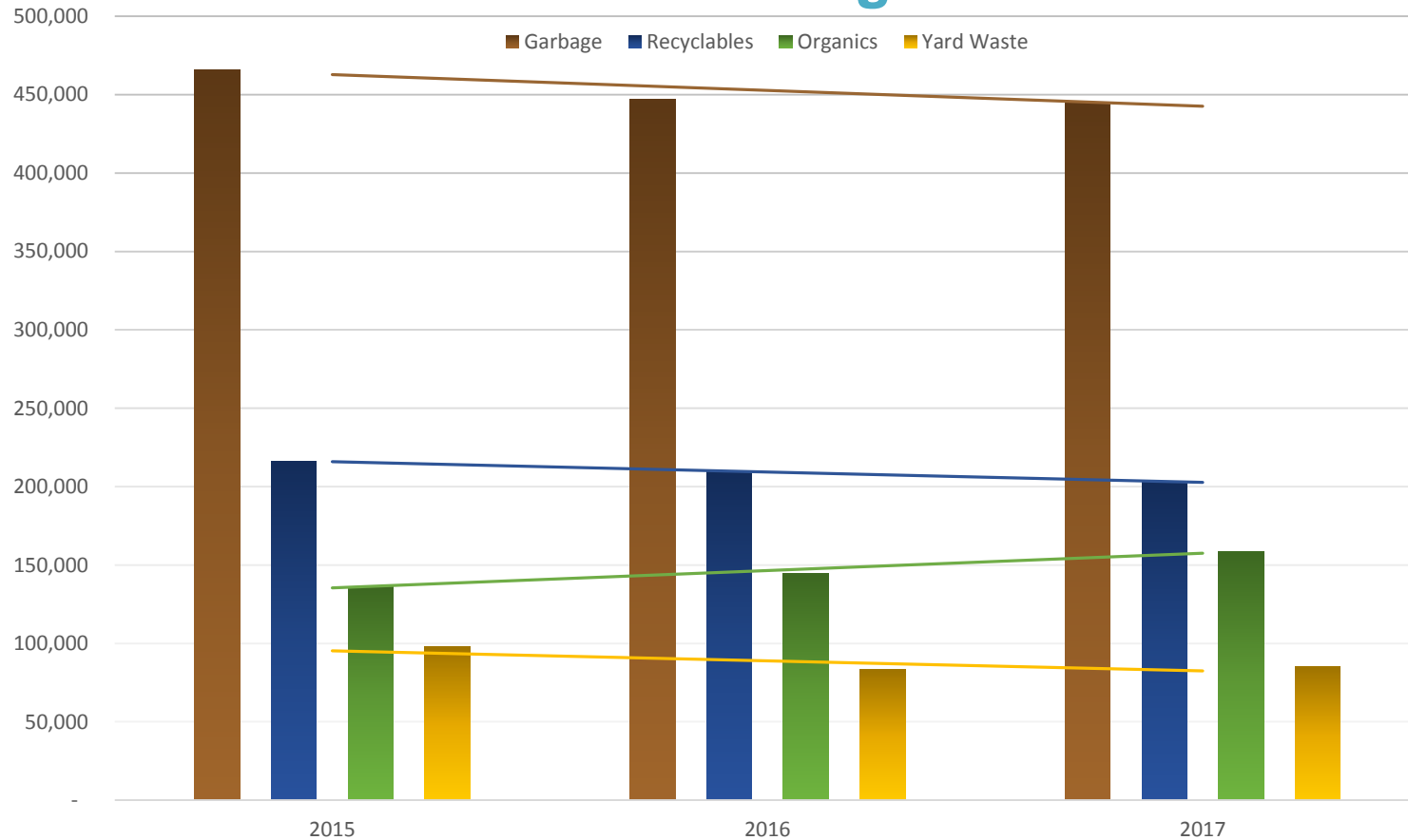
- Garbage
- Blue Bin Recycling
- Green Bin Organics
- Yard Waste
- Household Hazardous Waste
- Electronic Waste
- Drop-off Depots
- Bulky Item Pick-up
- Drop & Load Services

Assets

- 13 Maintenance & Operating Yards
- 7 Transfer Stations
- Green Lane Landfill
- 161 Closed Landfills
- 2 Organics Processing Facilities
- 5 Collection / Litter Yards
- 750+ Vehicles and equipment
- 1.5 million bins

Program Highlights

Total Materials Managed 2015/17



2017 Diversion Rates

SINGLE FAMILY HOMES

66%

MULTI-RESIDENTIAL HOMES

28%

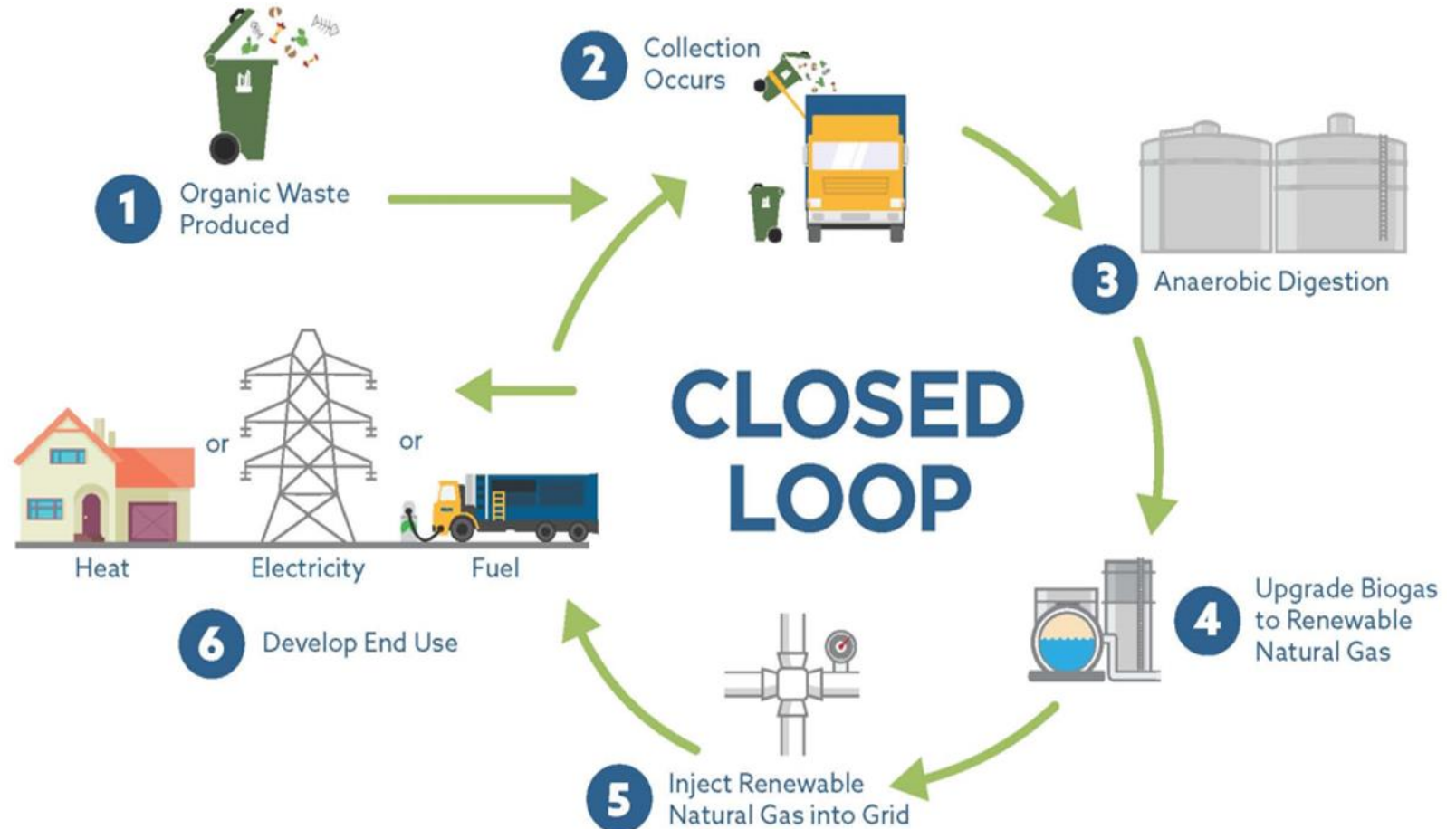
OVERALL RESIDENTIAL

53%

Major Initiatives

Renewable Natural Gas (RNG)

- SWMS plans to generate RNG at 4 facilities, which together have the potential to generate over 60 million cubic meters of RNG.
- RNG is one of the lowest carbon, commercially available fuel in existence today.
- Compared to diesel, RNG reduces emissions by up to 120%, which is even better than electric powered vehicles.
- RNG can be injected directly into the natural gas grid and can help the City achieve a closed-loop process in its waste management operations.



Major Initiatives



- Reducing Single-Use and Takeaway Items
- Community Reduce & Reuse Programs
- TOwaste App
- Waste Reduction Community Grants
- National Love Food Hate Waste Campaign
- Circular Economy
- Mixed Waste Processing Study
- Third Anaerobic Digester
- Transfer Station Network Review

Contamination Reduction

- Contamination in the blue bin continues to be a key issue in Toronto, with rates being approximately 29 percent.
- Currently, SWMS is examining various education options to try and reduce contamination.



Divisional Overview

Toronto Water

Toronto Water Key Staff



Lou Di Gironimo
General Manager



Richard Noehammer
Director, Customer & Technical Support



Bill Shea
Director, Distribution & Collection



Lawson Oates
Director, Environment & Administration



Frank Quarisa
Director, Wastewater Treatment



Graham Harding
Director, Water Infrastructure Management



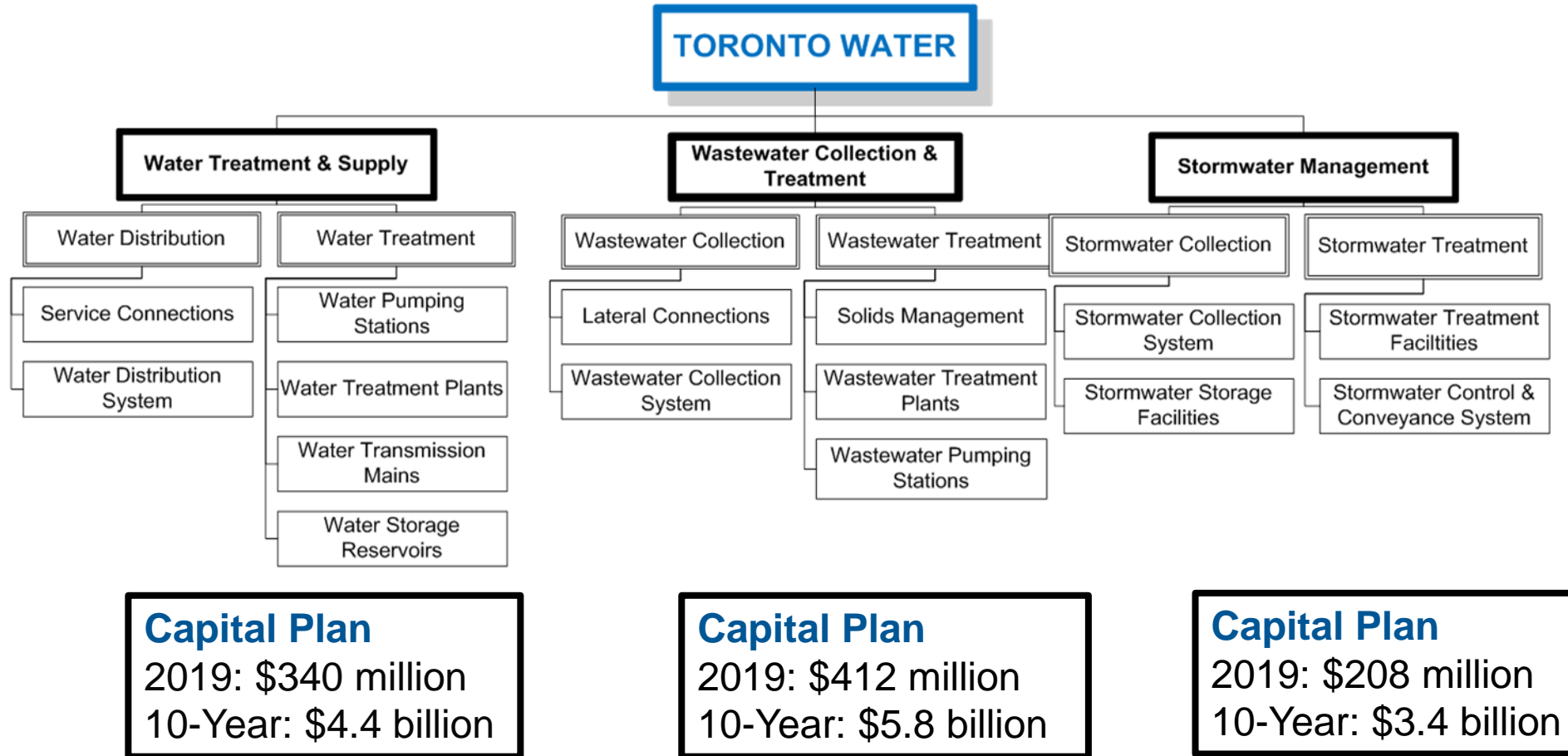
William Fernandes
Director, Water Treatment & Supply

Program Highlights

- Serve 3.6 million residents and businesses in Toronto, and portions of York and Peel
 - 435 billion litres safe drinking water (+York)
 - 400 billion litres wastewater collection/treatment (+Peel)
- Over \$28.6 billion in infrastructure
- Operates facilities 24 hours per day, 365 days per year
- Program is rate-supported – no reliance on the property tax base to support Toronto Water operating and capital budgets

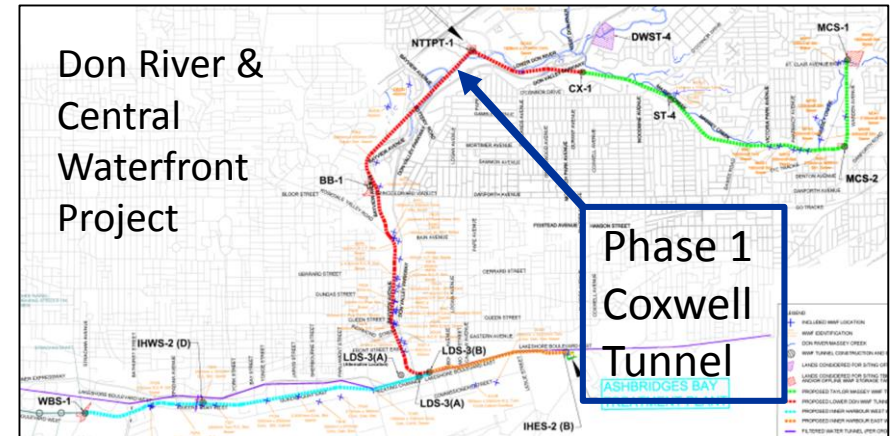


Program Highlights

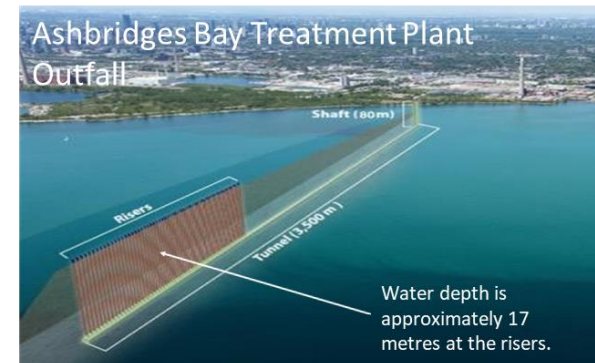


Major Initiatives

- Ten year (2019 – 2028) Toronto Water capital plan of \$13.6 billion includes:
 - \$3.4 billion for Stormwater Management, including:
 - ❖ \$1.72 billion for the Wet Weather Flow Master Plan (25-years)
 - Don River & Central Waterfront Project
 - 3 tunnels, shafts, tanks, inter-connections, etc.
 - Ashbridges Bay Landform Project/High Rate Treatment
 - Ashbridges Bay Wastewater Treatment Plant Upgrades:
 - Integrated Pumping Station
 - Outfall
 - Ultraviolet Disinfection Wastewater Treatment System
 - ❖ \$1.67 billion Basement Flooding Protection Program



DR&CW is the largest and most significant water quality improvement program in the City of Toronto. Includes five substantial infrastructure projects to improve water quality in Lower Don River, Taylor-Massey Creek and Toronto's Inner Harbour.



Major Initiatives

Program	2019	10-Year Plan
Infrastructure State of Good Repair *	\$495 million	\$6.8 billion
Wastewater Treatment Plant Upgrades	\$231 million	\$3.24 billion
Watermain and Sewer (including trunk mains and engineering costs)	\$354 million	\$4.95 billion
Wet Weather Flow Master Plan	\$132 million	\$1.72 billion
Basement Flooding Protection Program	\$ 76 million	\$1.69 billion

* Toronto Water has the largest State of Good Repair infrastructure backlog of urban centres in Canada at \$1.5 billion. By investing \$495 million in 2019 in infrastructure renewal funding and \$6.8 billion over 10 years, the City will eliminate all but \$210 million of the backlog by 2028.

Divisional Overview

Transportation Services

Transportation Services Key Staff



Barbara Gray
General Manager



Elyse Parker
Director, Policy & Innovation



Ashley Curtis
Director, Planning & Capital Program



Jacquelyn Hayward
Director, Project Design & Management



Myles Currie
Director, Operations & Maintenance
Retiring April 30, 2019



Vince Sferrazza
Director, Operations & Maintenance
Starts April 1, 2019



Gregg Loane
Director, Business Performance



Roger Browne
Acting Director, Traffic Management



Dave Twaddle
Director, Permits & Enforcement



Steven Kodama
Director, Special Projects – I&T Strategy
Implementation

Program Highlights



\$12B in Assets

\$20B Replacement Cost

\$477M Capital Budget

\$396M Operating Budget



5,600 km
of streets



6,960 km
of sidewalk



2,360
traffic signals



900
bridges and culverts



600
pedestrian crossovers



938 km
of bike lanes, trails and routes

Major Initiatives – Vision Zero



Community Safety Zones

Installed **350**
Year-End Target **250**



Curb Radii Reductions

Completed **35+**
Year-End Target **---**



Mobile Watch Your Speed

Installed **188**
Year-End Target **188**



Leading Pedestrian Interval

Installed **80**
Year-End Target **80**



Speed Humps

Installed **91 segments**
Year-End Target **91 segments**



Active and Safe Routes to School Pilot

Installed **5 schools**
Year-End Target **5 schools**



Senior Safety Zones

Installed **53**
Year-End Target **53**



School Safety Zone

Installed **56**
Year-End Target **88**



Cycling Corridor Enhancements

Completed **3**
In-progress **5**
In design / investigation **4**
Year-End Target **12**



Accessible Pedestrian Signals

Installed **86**
Year-End Target **83**



Red Light Camera

Installed **59**
Year-End Target **59**



Sidewalk Inspection

Inspected **7,982km**
Year-End Target **7,982**

Major Initiatives – Congestion Management Plan



Congestion Management Plan

The CMP's objective is to better manage congestion and improve safety through innovation and technology that will maximize the efficiency, reliability and sustainability of the road network for all users while reducing the impacts on the environment.

“Smart” Traffic Signal Controls

- A pilot was undertaken on Yonge St between Castlefield Ave & Yonge Blvd and on Sheppard Ave E between Neilson Rd & Meadowvale Rd. Work is underway to complete the evaluation with the recommendations forthcoming.

Traffic Signal Optimization Program

- 978 traffic signals across 41 corridors were retimed between 2015-2017, which resulted in a travel time reduction of 3.6% or 2,041,500 hours

Traffic Assistance Personnel (TAP) Pilot

- A feasibility study about using TAPs at key congested intersections was conducted in 2016
- Intersection compliance was found to be at 90% when a TAP was present

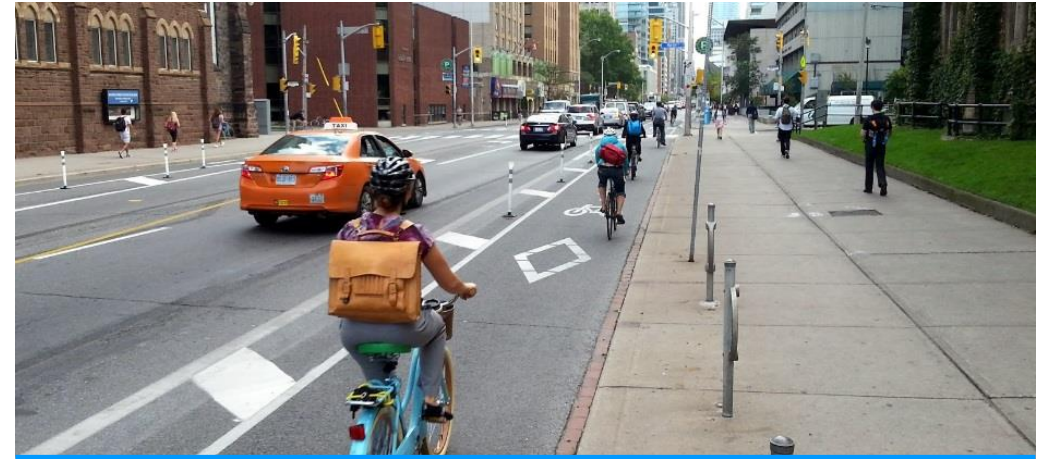
Major Initiatives – Improving Mobility



King Street Pilot

Pilot designed to improve reliability, speed and capacity on Toronto's busiest surface transit route

- **17%** increase in all-day weekday ridership
- **5-6** minute improvement of travel time for the slowest streetcar during the PM commute
- **19** new public spaces created along King Street



10 Year Cycling Network Plan

Guides the City's commitment to connecting, growing and renewing cycling infrastructure from 2016-2025

- **560** lane km of new bike lanes or cycle tracks
- **380** lane km of new bike routes on quiet streets
- **55** centreline km of new multi-use trails

Community & Social Services

Parks, Forestry & Recreation

Divisional Overview

Parks, Forestry & Recreation

Parks, Forestry & Recreation Key Staff



Janie Romoff
General Manager



Howie Dayton
Director, Community Recreation



Richard Ubbens
Director, Parks



Jason Doyle
Director, Urban Forestry



Petra Wolfbeiss
Director, Policy and Strategic Planning



Ann-Marie Nasr
Director, Park Development & Capital Projects



Sandra Cuff
Director, Management Services



Jason Baker
Director, Information Technology



Matthew Cutler
Manager, General Manager's Office

Program Highlights



URBAN FORESTRY

Manages a healthy and growing urban forest and provides access to nature while maintaining the urban canopy through inspection, protection, pruning, tracking and management of forest threats.

- Enhances the urban canopy by investing in the planting of new trees either directly or through partnership, future planning that promotes biodiversity and mitigates forest health threats, and engaging residents in stewardship in their local neighborhoods.
- Manages hazardous trees and the impacts of storm damage.



PARKS

Provides clean, safe and well-maintained green space and park amenities for passive and active uses by:

- Designing, developing and expanding our park network to meet growth and ensure equitable provision across the city, while maintaining and ensuring the state-of-good-repair of existing facilities.
- Providing specialized services for unique programs such as golf, animal attractions, community gardens and Toronto Island ferry services.

The City of Toronto's Parks, Forestry and Recreation division animates, builds and maintains our common grounds – the parks, recreation facilities and natural spaces where we come together to build a connected, welcoming city.

Key Achievements – 2018

Parks

- Completed the implementation of the Parks Maintenance and Inspection Tool with two full inspections of each park annually ensuring clean, green, and welcoming parks.
- Implemented the Bluffers Park Traffic Management Plan that improved access to the park with coordinated parking and provided commuting options for residents. Through a partnership with the TTC, piloted and funded bus service every 15 minutes from Kennedy station to Bluffers Beach on summer weekends through agreement with the TDSB to secure additional nearby overflow parking.



Inspect each of Toronto's **1,600** parks at least once annually



Perform turf-maintenance on **324** multi-use sports fields on a weekly, bi-weekly and seasonal basis dependent on the season and turf type.



Maintain **3** plant conservatories, **4** greenhouses and **10** seasonal flower shows

Urban Forestry

- Over 460,000 Urban Forestry work orders were completed in 2018 including more than 325,000 for tree and natural area maintenance, 15,000 for tree protection and 120,000 for tree planting
- Responded to over 17,000 calls for storm clean-up which was an increase of 130% from 2017.



Grow and steward Toronto's urban canopy, including **10.2** million trees, **4.7** million of which are City-owned



Complete over **176,500** tree inspections and **132,900** prunings

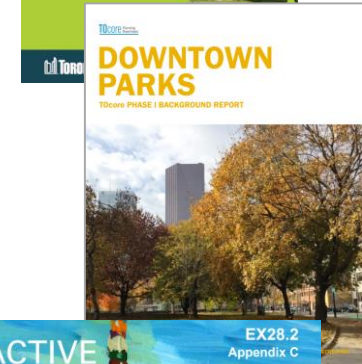
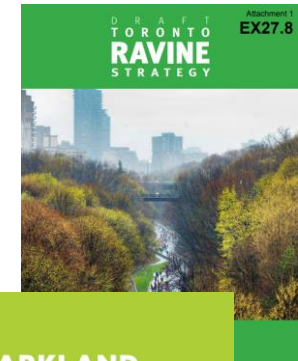


Plant **120,000** new trees each year on both public and private lands.

Major Initiatives

Providing an update on the implementation of:

- Toronto Ravine Strategy
- Parkland Strategy
- Toronto's Strategic Forest Management Plan
 - Tree Canopy Study



Corporate Services

Environment & Energy

Divisional Overview

Environment & Energy

Environment & Energy Key Staff



Jim Baxter
Director



Laura Atkins
Manager, Program Administration



Mark Bekkering
Manager, Policy & Research



Fernando Carou
Manager, Public Initiatives – New Development



Robert Maxwell
Manager, Corporate Energy Initiatives



Rae-Anne Miller
Manager, Public Initiatives – Existing Buildings



Nancy Ruscica
Manager, Outreach & Engagement

Program Highlights – *What We Do*

Environment & Energy Division's Mission

Our mission is to lead, foster and coordinate environmental and energy action towards achieving Toronto's environmental priorities, in particular TransformTO, the City of Toronto's climate change action plan.

We achieve this by:

- Engaging with residents and businesses;
- Providing technical and financial assistance;
- Developing strategic directions and partnerships; and
- Demonstrating City leadership by making changes to City Operations.



Program Highlights – *What we did in 2018 in the Community*

- **\$52 million in financing** provided for deep energy efficiency retrofits
- Supported issuance of Toronto's first **\$300 million green debenture** saving \$600,000 in borrowing costs.
- Joint Development Agreement with Enwave for **Low Carbon Thermal Energy Networks** approved by City Council in March '18.
- City Council adopted **Pollinator Protection Strategy** in April '18.
- Phase 1 of **Electric Mobility Strategy** completed in Dec '18
- **79 eco-roof projects** completed representing over 12 football fields of roof space.
- 82 Smart Commute clients representing over **300,000 commuters supported**
- **Live Green** delivered 5,200+ hours of volunteer service at 150+ community events; 450 business and 80,000 members in Live Green Perks Program
- **200,000 residents** participated in Clean Toronto Together



Program Highlights – *What we did in 2018 in City Operations*

Zero Waste Buildings

89% waste diversion at 11 largest City owned facilities.

Renewable Energy Installations

100 solar PV projects now installed on City owned facilities.

Energy Efficiency Retrofits

\$17 million in annual utility cost savings achieved to date in City Facilities.

Energy Procurement for City Operations

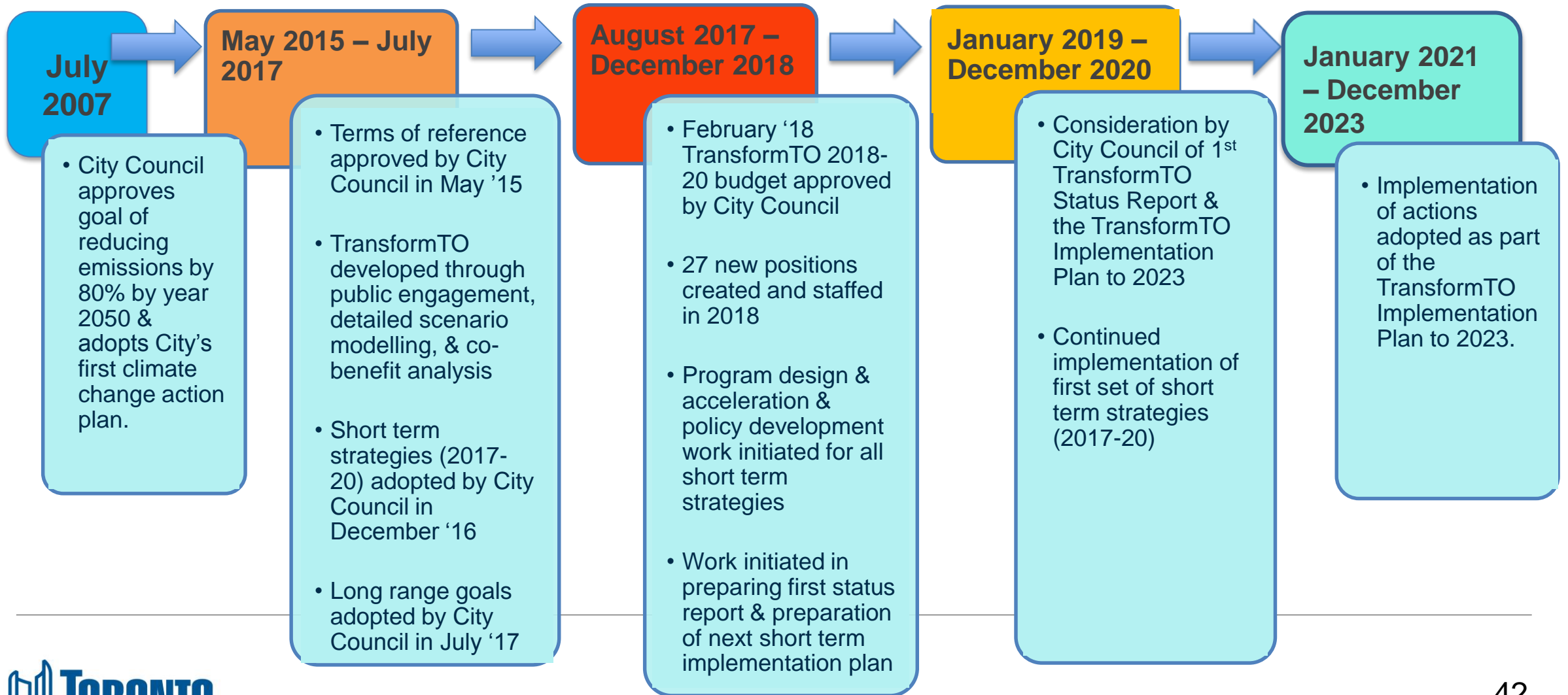
\$5 million in cost avoidance through fixed price hedging contracts & strategic procurement.

Etobicoke Civic Centre Precinct Net Zero Community

Completed schematic design for new near net zero emissions Etobicoke Civic Centre



Major Initiatives – TransformTO



Major Initiatives

Clean Toronto Together - On April 26-28, 2019 hundreds of thousands of residents will clean up their neighbourhoods

Better Buildings Partnership – expanding outreach and offerings to private building owners to support energy efficiency

PollinateTO Community Grants - Launching new grants program in support of the Pollinator Protection Strategy - Deadline to Apply May 1, 2019

Waste Reduction Community Grants Awards – next round of winners announced in June 2019

Global News - In partnership with EED, profiling the environmental issues and actions occurring in Toronto, including, the Home Energy Loan Program; Live Green Perks; Long Term Waste Management; and use of road salt.



2019 Committee Work Plan

Key Committee Reports for 2019 by Quarters

Q2

- TransformTO Implementation & Reporting - Status report on implementation (**Environment & Energy**)
- Home Energy Loan Program (HELP) & HiRISE program update and recommendations for future delivery (**Environment & Energy**)
- Parkland Strategy (**Parks, Forestry & Recreation**)
- Tree Canopy Service Plan (**Parks, Forestry & Recreation**)
- Ravine Strategy Implementation Plan (**Parks, Forestry & Recreation**)
- Transport (Haulage) of Waste to Landfill Contract (**Solid Waste Management Services**)
- Fleet Safety & Accountability Enhancements in Solid Waste Management Service (**Solid Waste Management Services**)
- 2019 Cycling Plan Implementation (**Transportation Services**)

Key Committee Reports for 2019 by Quarters

Q3

- Proposed TransformTO Implementation Plan to 2023 (**Environment & Energy**)
- Contract for Blue Bin Processing (**Solid Waste Management Services**)
- Reimagining Yonge (**Transportation Services**)
- Vision Zero Road Safety Plan: 2019 – 2023 (**Transportation Services**)
- Automated Vehicle Tactical Plan 2019 – 2021 (**Transportation Services**)

Key Committee Reports for 2019 by Quarters



- Electric Mobility Strategy - Strategic Initiatives (**Environment & Energy**)
- Contract for Collection Services In District 2 (**Solid Waste Management Services**)
- Multi-Residential Waste Diversion Requirements (**Solid Waste Management Services**)
- Congestion Management Plan 2021 – 2025 (**Transportation Services**)
- Interim Yonge Tomorrow Environmental Assessment (**Transportation Services**)

Questions?