Imperial Oil Limited
Construction of the Waterdown to Finch Project

Application under section 90(1) of the *Ontario Energy Board Act, 1998*
OEB File Number EB-2019-0007

City of Toronto – Evidence

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TAB 4

budget TO —2019—

BUDGET NOTES

Toronto Water

What We Do

We manage one of the largest water and wastewater systems in North America, 24 hours a day, seven days a week. Our services ensure that over 3.6 million residents and businesses in Toronto, and portions of York and Peel have access to high quality, safe drinking water and that they can trust that their wastewater is collected, treated and responsibly managed. Toronto Water delivers the following services:

- Water Treatment & Supply
- Wastewater Collection & Treatment
- Stormwater Management

Toronto Water has stewardship of an inventory of capital assets valued at $28.638 billion. It maintains two categories of assets: linear infrastructure, such as distribution (5,551 km) and transmission (550 km) watermains, sanitary (3,730 km), combined (1,411 km) and storm (4,981 km) sewers; and facilities/plant assets such as water filtration (4) and waste water treatment (4) plants, pumping stations (105), as well as a variety of reservoirs, storage and detention tanks.

Why We Do It

Toronto Water provides water services through supplying drinking water and treatment of wastewater and stormwater to residents, businesses and visitors in order to protect public health, safety and property in an environmentally and a fiscally responsible manner.

Our Experience & Success

- Over 1 billion litres of potable water daily is delivered to industrial, commercial, institutional, and household water users in the City of Toronto (including York Region), amounting to more than 511,000 service connections.
- Over 1.5 billion litres of wastewater is collected and treated per day, from residents and businesses in Toronto and a portion of Peel Region.
- Continuity of our services is ensured by replacement (31 km) and rehabilitation (128 km) of watermains and sewers in 2018.
- We have made significant progress by investing in critical stormwater management projects, including the Don River & Central Waterfront Phase 1 and ongoing critical upgrades to water and wastewater treatment plants to ensure regulatory requirements.

Key Challenges

- Toronto Water's infrastructure is aging with an accumulated state of good repair backlog estimated at $1.491 billion. Ongoing significant capital investment is required to effectively eliminate the backlog by 2028.
- Significant investment is required to ensure extreme weather resiliency and to manage basement flooding and other stormwater issues across the city.
- Providing efficient and effective response to customer service.
- Toronto Water's long-term financial sustainability including planning for growth depends primarily on successive water rate increases of 3%.
- Minimizing operating pressures.

Priority Actions

- The 10-Year Capital Plan includes funding of $6.745 billion for state of good repair projects.
- Approximately $3.4 billion or 25% of the 10-Year Capital Plan's expenditures will be allocated to projects that will improve the city's resiliency to extreme weather events.
- Increased customer satisfaction through improved service processes and operationalization of the Customer Care Centre in 2019.
- The City of Toronto is experiencing significant growth. Approximately $603.4 million will be drawn from Toronto Water's capital reserves to accommodate development growth over the next 10 years.
- $7.284 million in efficiencies and other savings will fully offset the 2019 budget pressures.

Budget At A Glance

STAFF RECOMMENDED OPERATING BUDGET

$Million	2019	2020	2021
Gross Expenditures	$463.9	$484.5	$495.0
Revenues	$1,331.2	$1,376.3	$1,407.8
Capital Contribution	$867.4	$891.8	$912.8
Approved Positions	1,805.6	1,840.6	1,846.6

STAFF RECOMMENDED 10-YEAR CAPITAL PLAN

$Million	2019	2020-2028	Total
Gross Expenditures	$797.1	$12,654.1	$13,451.2
Debt	$0.0	$0.0	$0.0

Note: Excluding 2018 carry forward funding to 2019

Our Key Service Levels

22 mainbreaks per 100 km of pipe

4 sewer mainline backups per 100km of pipe

1,248 ML of dedicated (designed) stormwater storage capacity

0 non-compliance water treatment incidents

0 non-compliance wastewater events

7,065 hectares of drainage area where quality control provided

Source of Image: www.icons8.com

Key Service Deliverables

- Provide treatment and supply of **+435 billion litres** of water (including Region of York)
- Provide collection and treatment of **+400 billion litres** of wastewater (including Region of Peel)
- Continue maintenance and repair of **+6,100 km** of water mains and **+4,100 km** of sanitary sewers
- Replace **+5,000** substandard water services
- Repair **+1,600** broken watermains
- Provide Environmental Monitoring and Protection including on-going public consultation and awarenes programs

Who We Serve

Water Treatment & Supply

- Water Account Holders
- Water Consumers

Beneficiaries

- Businesses
- Residents
- City & Agency Staff
- Visitors

Wastewater Collection & Treatment

- Wastewater Account Holders
- Wastewater producers
- Public & Private Landowners

Beneficiaries

- Businesses
- Residents
- City & Agency Staff
- Visitors

Stormwater Management

- Public & Private Landowners

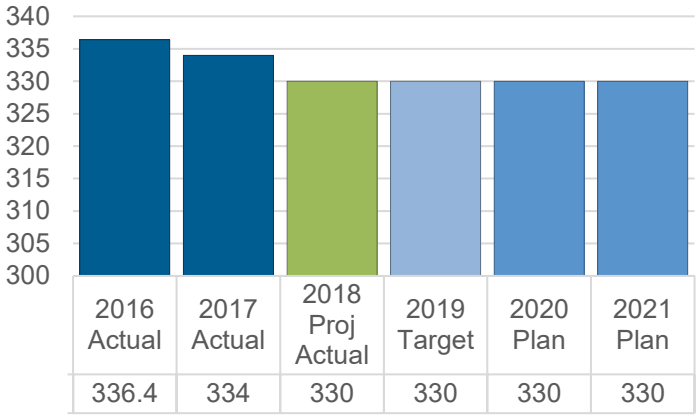
Beneficiaries

- Businesses
- Residents
- City & Agency Staff
- Visitors

How Well We Are Doing

Performance Measures

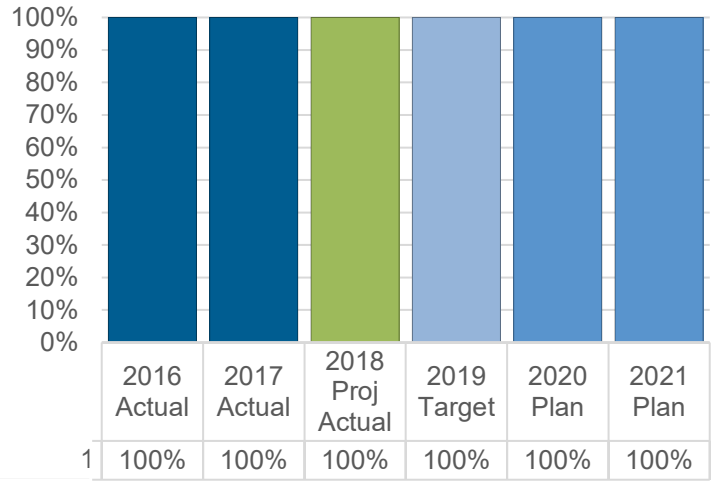
Efficiency Measure - Electrical kWH per ML of Water Pumped



Behind the Numbers

- 2016-2017 actual usage of electricity per mega liter of water pumped was lower than the 340 kWh target.
- Toronto Water continues to improve electrical efficiency through the transmission operations optimization project at the water treatment plants, thus reducing the target to 330 kWh per mega liter of water.

Effectivenes Measure - Percent Biosolids Beneficially Used (ABTB)



- Continuing efforts to increase beneficial use by pelletizing biosolids resulted in an actual performance reaching 100% in 2016 and 2017.
- 2018 projected actuals and 2019-2021 target and plan are projected to maintain beneficial use to 100% target level.

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RECOMMENDATIONS

RECOMMENDATIONS

The City Manager and Chief Financial Officer & Treasurer recommend that:

1. City Council approve the 2019 Staff Recommended Operating Budget for Toronto Water of $463.869 million gross, $867.368 million net capital-from-current contribution for the following services:

Service:	Gross ($000s)	Net ($000s)
Water Treatment and Supply	201,369.5	384,894.2
Wastewater Collection & Treatment	231,185.0	508,270.2
Stormwater Management	31,314.4	(25,796.6)
Capital-from-Current Contribution	463,869.0	867,367.7

2. City Council approve the 2019 service levels for Toronto Water as outlined in Appendix 3 of this report, and associated staff complement of 1,805.7 positions, comprising of 84.4 capital positions and 1,721.3 operating positions.

3. City Council direct the General Manager, Toronto Water to provide an update on the implementation progress of the Utility Cut Program, including costs and benefits, through the 2020 Budget process.

4. City Council approve the 2019 Staff Recommended Capital Budget for Toronto Water with a total project cost of $1.730 billion, and 2019 cash flow of $960.506 million and future year commitments of $6.256 billion comprised of the following:

a. New Cash Flow Funds for:

1. 328 new / change in scope sub-projects with a 2019 total project cost of $1.730 billion that requires cash flow reduction of $555.857 million in 2019 and future year cash flow commitments of $430.279 million for 2020; $665.437 million for 2021; $497.822 million for 2022; $262.318 million for 2023; $132.326 million for 2024; $81.788 million for 2025; $47.459 million for 2026; $69.666 million for 2027; and $98.634 million for 2028;

2. 297 previously approved sub-projects with a 2019 cash flow of $1.516 billion; and future year cash flow commitments of $1.091 billion for 2020; $831.283 million for 2021; $617.081 million for 2022; $503.592 million for 2023; $369.285 million for 2024; $285.160 million for 2025; $201.051 million for 2026; and $71.985 million for 2027;

b. 2018 approved cash flow for 183 previously approved sub-projects with carry forward funding from 2018 into 2019 totalling $163.426 million.

5. City Council approve the 2020 - 2028 Staff Recommended Capital Plan for Toronto Water totalling $6.398 billion in project estimates, comprised of $69.251 million for 2020; $206.698 million for 2021; $501.865 million for 2022; $625.437 million for 2023; $748.820 million for 2024; $864.797 million for 2025; $1.016 billion for 2026; $1.216 billion for 2027, and $1.150 billion for 2028.

6. City Council consider the operating costs of $0.738 million net in 2019; $1.049 million net in 2020; $0.775 million net in 2021; $2.174 million net in 2022, $0.150 million net in 2023, $0.580 million net in 2024, and $1.915 million net in 2026 resulting from the approval of the 2019 Capital Budget for inclusion in the 2019 and future year operating budgets.

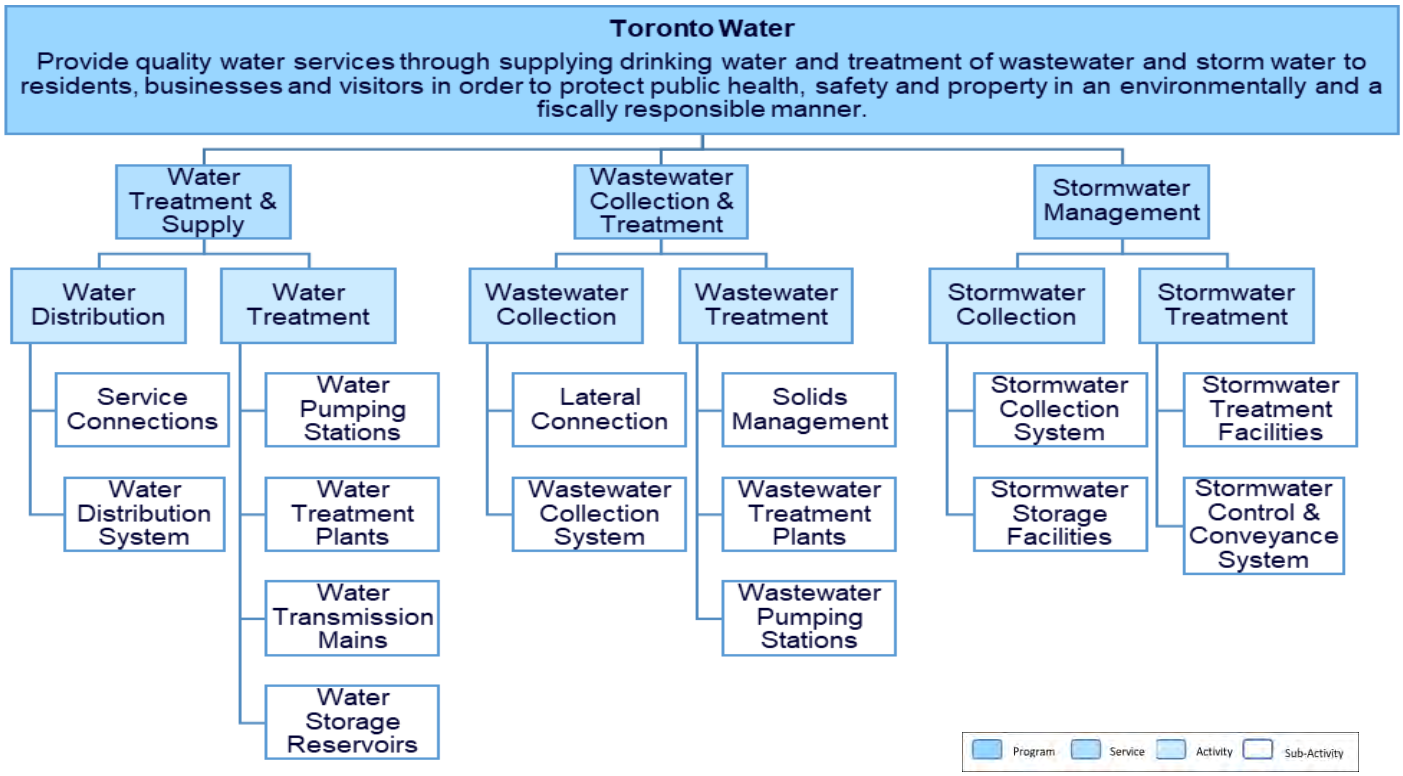
7. City Council approve 2 net new temporary capital positions for the delivery of 2019 capital projects and that the duration for each temporary position not exceed the life and funding of its respective projects / sub-projects.

8. All sub-projects with third party financing be approved conditionally, subject to the receipt of such financing in 2019 and if such funding is not forthcoming, their priority and funding be reassessed by City Council relative to other City-financed priorities and needs.

9. This report be considered concurrently with the 2019 Water and Wastewater Consumption Rates and Service Fees Report from the Chief Financial Officer & Treasurer and the Acting General Manager for Toronto Water.

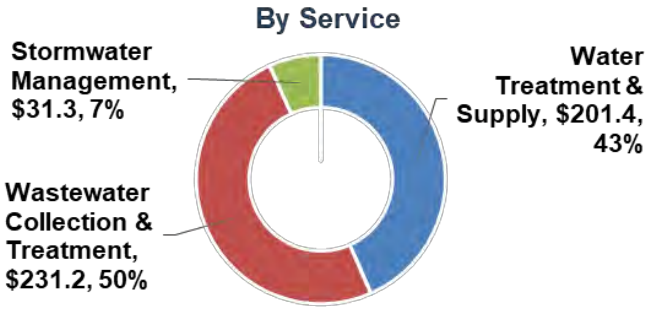
2019 STAFF RECOMMENDED OPERATING BUDGET

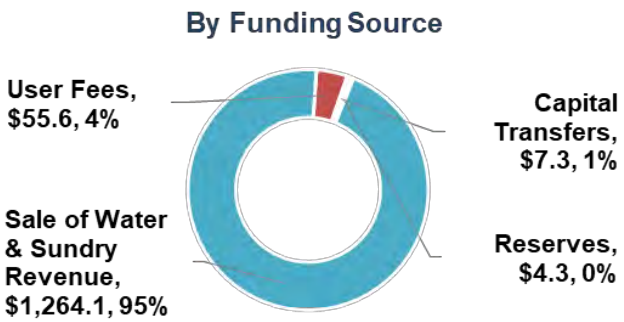
PROGRAM MAP



2019 OPERATING BUDGET HIGHLIGHTS

2019 Staff Recommended Operating Budget $463. M





- **3.0%** increase over the 2018 Approved Capital Contribution Budget to maintain existing service levels and meet additional service demands.
- **$1.223 M** Efficiency savings in water and wastewater production utility costs.
- **$7.985 M** New/enhanced funding for new initiatives such as utility cut repairs and chamber adjustment program, bulk water fill station pilot project and provision of dedicated sttaff resources for insurance/risk management, legal services and Ontario One Call locate tickets clearing, funded from capital projects and reserve funds.
- **2020/2021** Increases primarily for known inflationary adjustments for salaries, benefits and operating impact of completed capital projects, and anticipated changes in other costs and revenues.

2019 OPERATING BUDGET OVERVIEW

Table 1: 2019 Staff Recommended Operating Budget and Plan by Service

(In $000s)	2018 Budget	2018 Projected Actual*	2019 Base	2019 New / Enhanced	2019 Total Staff Recommended Budget	Changes $	Changes %	Incremental Change 2020 Plan	Incremental Change 2021 Plan
By Service	$	$	$	$	$	$	%	$	$
Water Treatment & Supply									
Gross Expenditures	190,923.3	180,045.5	196,492.1	4,877.4	201,369.5	10,446.3	5.5%	10,706.2	4,876.4
Revenue	565,454.7	575,918.9	584,954.4	1,309.3	586,263.7	20,809.1	3.7%	19,757.3	13,996.2
Capital Contribution	374,531.4	395,873.4	388,462.3	(3,568.2)	384,894.2	10,362.8	2.8%	9,051.0	9,119.8
Wastewater Collection & Treatment									
Gross Expenditures	225,770.4	212,907.3	228,560.3	2,624.7	231,185.0	5,414.5	2.4%	8,735.8	5,365.7
Revenue	718,861.1	732,164.2	738,734.7	720.5	739,455.2	20,594.1	2.9%	25,142.2	17,790.9
Capital Contribution	493,090.6	519,257.0	510,174.4	(1,904.2)	508,270.2	15,179.5	3.1%	16,406.5	12,425.2
Stormwater Management									
Gross Expenditures	30,558.1	28,817.1	30,831.6	482.8	31,314.4	756.3	2.5%	1,168.2	258.2
Revenue	4,971.2	5,063.2	5,380.2	137.6	5,517.8	546.6	11.0%	180.5	(277.0)
Capital Contribution	(25,586.9)	(23,753.9)	(25,451.4)	(345.2)	(25,796.6)	(209.7)	0.8%	(987.7)	(535.2)
Total									
Gross Expenditures	447,251.8	421,769.8	455,884.0	7,985.0	463,869.0	16,617.1	3.7%	20,610.2	10,500.2
Revenue	1,289,287.0	1,313,146.4	1,329,069.3	2,167.4	1,331,236.7	41,949.7	3.3%	45,079.9	31,510.1
Total Capital Contribution	842,035.1	891,376.5	873,185.3	(5,817.6)	867,367.7	25,332.6	3.0%	24,469.7	21,009.8
Approved Positions	1,764.7	1,626.3	1,774.7	31.0	1,805.7	41.0	2.3%	34.9	6.0

** Year-End Projection Based on Q3 2018 Variance Report*

Base Changes
($8.632 million gross)

- Operating costs for salaries and benefits, utilities, chemicals and contracted services resulting from completed capital projects, including addition of 8 positions to operate new facilities and infrastructure, and 2 positions for delivery of capital projects.
- Salary & benefit cost inflationary increases.
- Inflationary increases for materials, supplies and contracted services.
- Above pressures are offset by base expenditure savings arising from a line by line review, other operational savings, utility efficiencies and higher revenues from sale of water to Region of York and increase in new service conections and other revenues.

New/Enhanced Service Priorities
($7.985 million Gross / $5.818 million Net).

- Transfer of Utility Cut and and Chamber Adjustment Program from Transportation Services, requiring addition of 27 new positions.
- Dedicated insurance/risk management position to reduce claim settlements, as well as funding for addition of one solicitor to address growing demand for legal services.
- Addition of 3 positions to support the review/clearing of Transportation Services Ontario One Call Locate Tickets involving markings for the City's infrastructure at exavation sites.
- Introduction of a new bulk water fee and fill station pilot project for mobile washing businesses.

Future Year Plan

- Inflationary increases for salaries and benefits.
- Operating impact of capital projects once completed and salaries and benefits for staff delivering capital projects.
- Anticipated inflationary increases for utilities, chemicals and other materials and supplies, contributions to TRCA and payment of taxes.
- Anticipated changes in volume and price of water sold in Toronto and Region of York.

EQUITY IMPACTS

Toronto Water's 2019 Staff Recommended Operating Budget does not include any changes that affect equity-seeking groups and vulnerable residents of Toronto and it has no equity impacts.

2019 Staff Recommended Operating Budget Changes by Service

The 2019 Staff Recommended Operating Budget for Toronto Water is $463.869 million gross and $1.331 billion in revenue resulting in an $867.368 million capital-from-current contribution. It reflects an increase of $25.333 million or 3% over the 2018 Approved Capital Contribution Budget. Table 2 below summarizes the key cost drivers to maintain current service levels, recommended service changes that achieve budget target as well as recommended new and enhanced service priorities to meet outcomes.

Table 2: 2019 Staff Recommended Operating Budget Changes by Service

(In $000s)	Services			Total	
	Water Treatment & Supply	Wastewater Collection & Treatment	Stormwater Management		
	$	$	$	$	Positions
2018 Council Approved Capital-from-Current Contribution	**374,531.4**	**493,090.6**	**(25,586.9)**	**842,035.1**	**1,764.7**
Base Expenditure Changes					
Prior Year Impacts					
In-Year Organizational Change Approvals	109.1	51.3	(36.0)	124.4	
Reversal of Zero Based Items	(2.1)	(19.4)	(0.8)	(22.2)	
Operating Impacts of Capital					
Operating Impact of Capital - Toronto Water Capital Projects (Page 27)	327.1	394.2	16.5	737.8	5.0
Operating Impact of Capital - Transfer of Infrastructure Completed By Others (Including Metrolinx & Waterfront)	70.5	93.7	22.6	186.8	3.0
Delivery of Capital Projects					
Delivery of Capital Projects - Various Projects	(47.4)	(127.4)	(51.1)	(225.9)	2.0
Economic Factors					
Inflationary Increases for Utilities, Chemicals and Other Materials, Equipment and Contracted Services	3,271.5	3,176.8	102.8	6,551.1	
Salaries and Benefits					
Cost of Living Adjustments, Progression Pay & Step Increases	5,235.0	(655.6)	(1,189.3)	3,390.1	
Other Base Expenditure Changes					
TRCA - 2.5% Annual Inflation Adjustment & Payment in Lieu of Taxes	136.4	162.5	123.8	422.6	
Increase in Interdepartmental Chanrges (IDC)	147.3	419.6	147.2	714.1	
Transit Position Consolidation	(996.7)	136.8	859.9	(0.0)	
Water & Wastewater Production Annual Adjustments	(968.7)	168.3		(800.4)	
Continuos Improvement Initiative - Repurposing/Realignment of Positions	(200.4)	36.1	(42.7)	(207.0)	
Sub-Total Base Expenditure Changes	**7,081.6**	**3,836.8**	**(47.0)**	**10,871.4**	**10.0**
Base Revenue Changes					
Increase in Revenue from Region of York (Volume Change)	2,159.3			2,159.3	
Increase in Revenue from Region of York (Rate Change)	706.7			706.7	
Increase in New Service Connections & Other Revenues	2,156.9	597.2	58.0	2,812.0	
Decrease in Sale of Water (Volume Change)	(2,778.4)	(3,683.0)		(6,461.4)	
Increase in Revenue from Sale of Water (3% Inflationary Factor)	15,273.8	20,246.7		35,520.5	
Sub-Total Base Revenue Changes	**17,518.3**	**17,160.9**	**58.0**	**34,737.2**	
Service Changes					
Base Expenditure Changes					
Adjustments to Expenses Based on Actual Experience (Line-By-Line Review)	(208.7)	(850.2)	(30.6)	(1,089.5)	
Payment in Lieu of Taxes Base Adjustment	(365.1)	(434.9)		(800.0)	
Base Revenue Changes					
Increase in Revenue from User Fees (Inflationary Factor of 2.82%)	(74.1)	(13.8)		(88.0)	
Increase in Contribution from Reserve Funds for Utility Cut Restoration Backlog	(1,756.0)	(2,327.7)		(4,083.6)	
Service Efficiencies					
Water & Wastewater Utility Efficiencies	(1,090.4)	(132.9)		(1,223.3)	
Sub-Total Service Changes[1]	**(3,494.2)**	**(3,759.6)**	**(30.6)**	**(7,284.5)**	
Total Base Changes	**(13,930.9)**	**(17,083.7)**	**(135.5)**	**(31,150.2)**	**10.0**
New & Enhanced Services					
Enhanced Service Priorities					
New Solicitor for Toronto Water (IDC/IDR TO Legal Services)	57.3	51.6	5.7	114.7	
Locates Clearing Program for Transportation Services	21.5	16.5	7.1	45.1	3.0
New Service Priorities					
Utility Cut Program	3,452.3	1,827.0	325.1	5,604.4	24.0
Dedicated Risk Insurance Staff	51.9	27.7	6.9	86.5	1.0
Toronto Water Chamber Adjustment Program	0.0	0.0	0.0	0.0	3.0
New Revenues					
Bulk Water Fill Station Pilot New Fee (Block 1 Water Rate - $3.96/m3)	(14.9)	(18.6)	0.4	(33.0)	
Sub-Total New & Enhanced Services[1]	**3,568.2**	**1,904.2**	**345.2**	**5,817.6**	**31.0**
Total Budget Changes Changes	**(10,362.8)**	**(15,179.5)**	**209.7**	**(25,332.6)**	**41.0**
Changes in Capital-from Current Contribution	**10,362.8**	**15,179.5**	**(209.7)**	**25,332.6**	
Total 2019 Staff Recommended Capital-from-Current Contribution	**384,894.2**	**508,270.2**	**(25,796.6)**	**867,367.7**	**1,805.7**

Note:

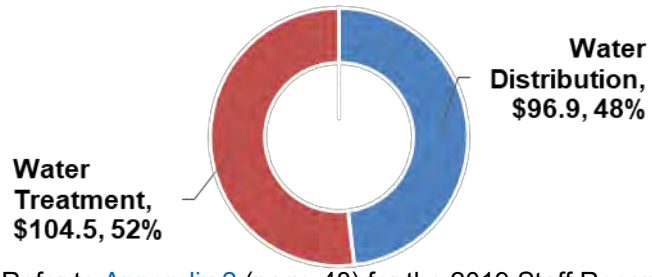
1. For additional information, refer to Appendix 4 (page 52) for a more detailed listing and descriptions of the 2019 Staff Recommended Service Changes and Appendix 5 (page 53) for the 2019 Staff Recommended New and Enhanced Service Priorities, respectively.

Water Treatment and Supply

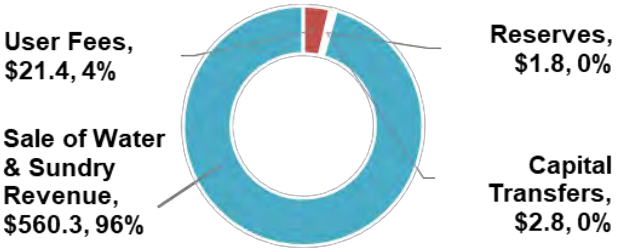
Treat and distribute drinking water in a safe, responsible manner in accordance with all legislated requirements.

2019 Staff Recommended Operating Budget $201.4M Gross

Service Budget By Activity



Service Budget By Funding Source



Refer to Appendix 2 (page 48) for the 2019 Staff Recommended Operating Budget by Service.

Key Service Levels

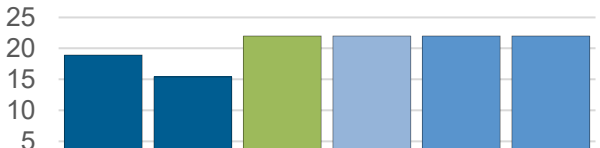
- **99.5** % of time operating within 276 kPA to 793 kPA requirements
- **330** of kWh/ML of water pumped
- **1,500** of transmission valve chambers inspected
- **22** mainbreaks per 100 km of pipe
- **0** non-compliance water treatment incidents
- **1,895** ML of storage capacity maintained

Source of Image: www.icons8.com

Refer to Appendix 3 (page 50) for a complete list of the 2019 Staff Recommended Service Levels for this Service.

Service Performance Measures

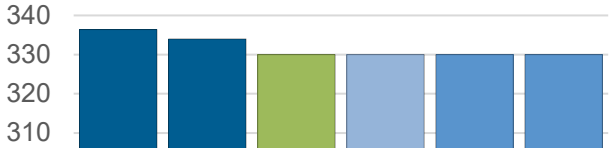
Watermain Breaks per 100 KM Water Distribution Pipe



2016 Actual	2017 Actual	2018 Proj Actual	2019 Target	2020 Plan	2021 Plan
18.9	15	22	22	22	22

- 2013 -2015 experience sees a rising trend due to severe cold weather fluctuations and aging watermains, with 2016 and 2017 actuals reflecting more regular weather patterns.
- Projected 2018 actuals and 2019-2021 planned target is to maintain watermain break and repair levels of typical climate years with improved state-of-good repair program.

Efficiency Measure - Electrical kWH per ML of Water Pumped



2016 Actual	2017 Actual	2018 Proj Actual	2019 Target	2020 Plan	2021 Plan
336.4	334	330	330	330	330

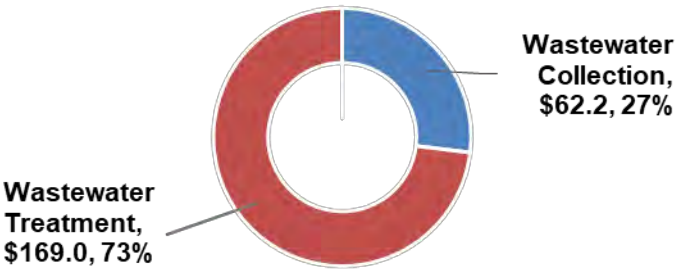
- 2016-2017 actual usage of electricity per mega liter of water pumped was lower than the 340 kWh target.
- Toronto Water continues to improve electrical efficiency through the transmission operations optimization project at the water treatment plants, thus reducing the target to 330 kWh per mega liter of water, consistent with 2018 experience.

Wastewater Collection and Treatment

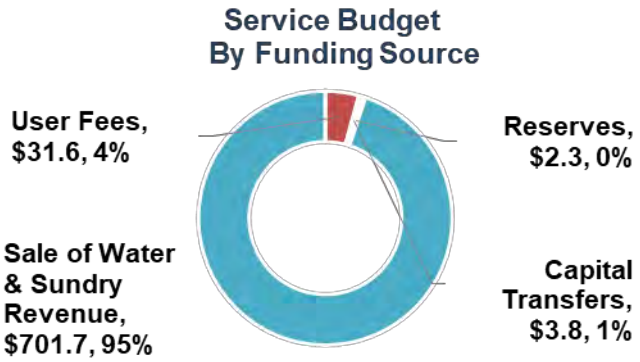
Collect and treat wastewater in a safe, responsible manner in accordance with all legislated requirements.

2019 Staff Recommended Operating Budget $231.2 M Gross

Service Budget By Activity



Service Budget By Funding Source



Refer to Appendix 2 (page 48) for the 2019 Staff Recommended Operating Budget by Service.

Key Service Levels

30% of sewer service line blocked requests resulting in repair or rehab (Work Orders)

0% of samples not meeting NMA requirements

100% of wastewater pumping stations meeting legislative requirements

4 mainline backups per 100km of pipe

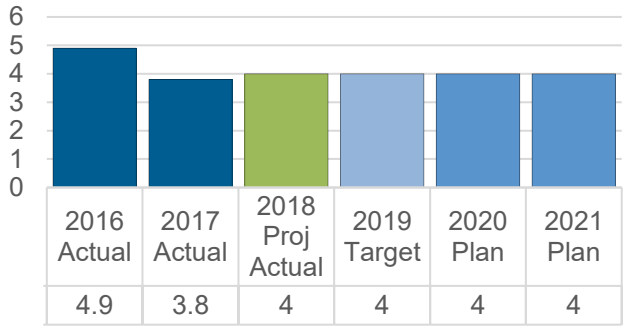
0 non-compliance wastewater events

Source of Image: www.icons8.com

Refer to Appendix 3 (page 50) for a complete list of the 2019 Staff Recommended Service Levels for this Service.

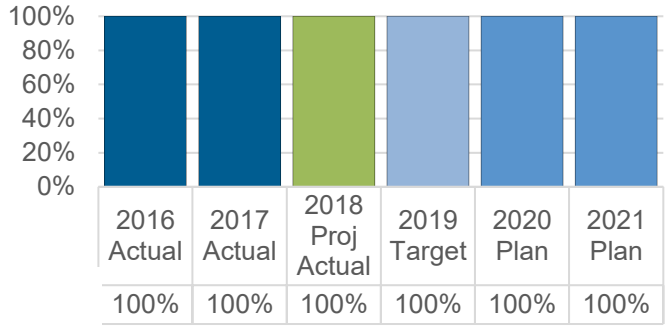
Service Performance Measures

Wastewater Main Backups per 100 KM Wastewater Main



- 2012-2016 rising trend was impacted by severe storms causing wastewater capacity constraints, with 2017 actuals reflecting more regular weather patterns.
- 2018 projected actuals and 2019–2021 target and plan is to maintain wastewater main back-ups and repair levels of typical climate years.

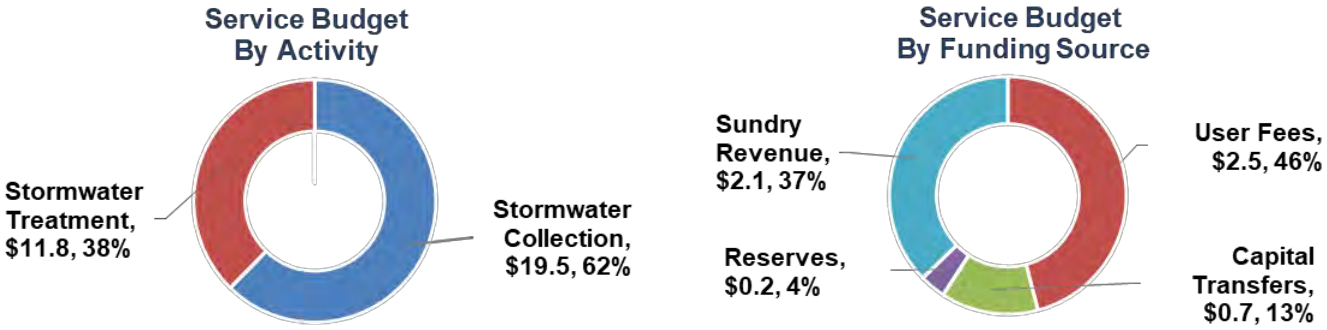
Effectivenes Measure - Percent Biosolids Beneficially Used (ABTB)



- Continuing efforts to increase beneficial use by pelletizing biosolids resulted in an actual performance reaching 100% in 2016 and 2017.
- 2018 projected actuals and 2019-2021 target and plan are projected to maintain beneficial use to 100% target level.

Stormwater Management Collect and treat stormwater in a safe, responsible manner in accordance with all legislated requirements.

2019 Staff Recommended Operating Budget $31.3 M



Refer to Appendix 2 (page 48) for the 2019 Staff Recommended Operating Budget by Service.

Key Service Levels

100% of catch basins cleaned

1,248 ML of dedicated (designed) stormwater storage capacity

7,065 hectares of drainage area where quality control provided

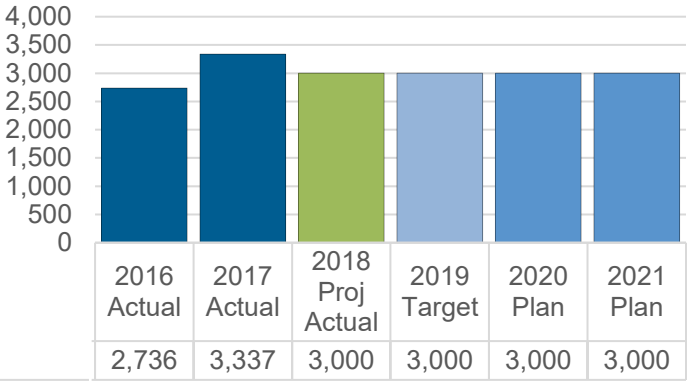
100% of stormwater conveyance & control systems meeting all COA Requirements

Source of Image: www.icons8.com

Refer to Appendix 3 (page 50) for a complete list of the 2019 Staff Recommended Service Levels for this Service.

Service Performance Measures

Water Course Inlet Inspections



- 2016 -2017 reflects high effort in inspecting water course inlets to improve stormwater management.
- 2018 projected actuals and 2019 target and 2020-2021 plan is to maintain inlet inspections to target levels.

2018 OPERATING PERFORMANCE

2018 Service Performance

Key Service Accomplishments:

- The Ministry of Environment, Conservation and Parks (MECP) has completed annual inspections at the City's water treatment facilities and there have been no major non-conformance issues identified.
- Drinking Water Quality Management Standards (DWQMS) re-accreditation was achieved in 2018 by an external auditor
- The management structure and key phases of hiring for the Toronto Water Customer Care Centre are completed. This is a transformational initiative that sets the stage for significant improvements to increase customer satisfaction. (Initiated in 2017 and resulted in $0.747 million in savings due the reduction of 8 positions.)
- Optimizing GIS technology to enhance operational efficiency and improve customer service
- Piloting smart grid technologies to help with in the field data collection and connectivity.
- As of December, processed 5,651 Basement Flooding Protection Program applications to provide financial subsidy to install flood protection devices such as backwater valves
- Ongoing education and outreach program attending 266 outreach events with an estimated attendance of 3.6 million people as reported by event organizers.
- Water conservation projects related to the Industrial Water Rate Program resulted in estimated cumulative water savings of 5.8 million m3

Status Update on 2018 Council Approved New & Enhanced Services

During the 2018 Budget process, City Council approved $0.123 million gross and net to fund one additional senior communications coordinator position. This position was intended to provide digital communications expertise to the existing team of three senior communication coordinators dedicated to Toronto Water within Strategic Communications.

This position is now in place and assisting in planning, implementing and managing Toronto Water's digital initiatives.

2018 Financial Performance

Table 3: Budget vs. Actual by Category of Expenditures and Revenues

Category (In $000s)	2017 Actual	2018 Budget	2018 Projected Actual *	2019 Total Staff Recommended Budget	2019 Change from 2018 Approved Budget	
	$	$	$	$	$	%
Salaries and Benefits	168,482.7	179,395.4	171,895.4	186,451.0	7,055.5	3.9%
Materials & Supplies	96,317.6	107,410.1	100,310.1	109,196.2	1,786.1	1.7%
Equipment	2,737.8	3,200.5	3,000.5	3,684.5	484.1	15.1%
Service and Rent	51,146.8	62,388.9	54,606.9	69,228.9	6,840.0	11.0%
Contribution To Capital	815,409.2	842,035.1	842,035.1	867,367.7	25,332.6	3.0%
Contribution To Reserves/Reserve Funds	10,130.4	10,130.4	10,130.4	10,130.4		
Other Expenditures	16,654.8	18,895.0	16,995.0	18,517.6	(377.4)	(2.0%)
Inter-Divisional Charges	65,516.5	65,831.7	64,831.7	66,660.4	828.7	1.3%
Total Gross Expenditures	1,226,396.0	1,289,286.9	1,263,805.0	1,331,236.7	41,949.7	3.3%
Inter-Divisional Recoveries	18.5	47.0	47.0	186.1	139.1	295.8%
Provincial Subsidies						
Federal Subsidies						
Other Subsidies						
User Fees & Donations	60,950.9	54,058.1	64,060.6	55,558.1	1,500.0	2.8%
Licences & Permits Revenue						
Transfers From Capital	5,699.2	4,758.9	5,398.9	7,341.5	2,582.6	54.3%
Contribution From Reserves/Reserve Funds	195.0	195.0	195.0	4,278.6	4,083.6	2094.2%
Sundry and Other Revenues	1,159,532.5	1,230,228.0	1,243,444.8	1,263,872.4	33,644.5	2.7%
Total Revenues	1,226,396.1	1,289,287.0	1,313,146.4	1,331,236.7	41,949.7	3.3%
Total Net Expenditures	(0.0)	(0.0)	(49,341.4)	0.0	0.0	(0.0%)
Approved Positions	1,640.3	1,764.7	1,626.3	1,805.7	41.0	2.3%

* Year-End Projection Based on Q3 2018 Variance Report

Toronto Water is projecting to be underspent by $49.341 million at year-end, primarily due to underspending in salaries and benefits as a result of vacancies, declining hydro rates and efficient usage, underspending in chemicals due to change in dosage requirements and other materials, combined with higher than budgeted revenues due to higher than anticipated volume of water sold as a result of hot summer, as well as increases in new water service connections and other revenues.

For additional information regarding the 2018 Q3 operating variances and year-end projections, please refer to the attached link for the report entitled "Operating Variance Report for the Nine-Month Period Ended September 30, 2018", approved by City Council at its meeting on December 4, 5 and 13, 2018.

http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.CC1.7

Impact of 2018 Operating Variance on the 2019 Staff Recommended Operating Budget

- In its Q3 Operating Variance Report Toronto Water projected net under expenditure because of lower than anticipated hydro rates and usage efficiencies. Savings in some other materials and supplies were also projected.
  - Line by line expenditure savings totalling $1.890 million including the reassessment of payments in lieu of taxes, and utility efficiencies of $1.223 million are included in the 2019 Staff Recommended Operating Budget to account for impact of various initiatives undertaken by Toronto Water. That resulted in ongoing savings.

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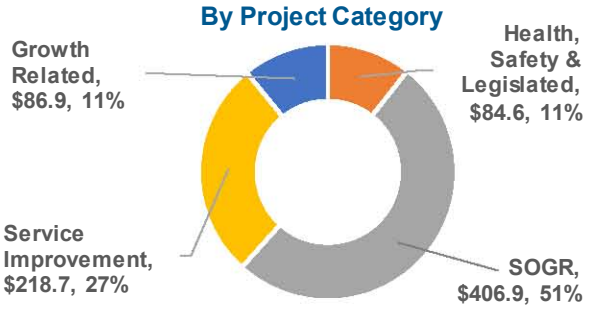
2019 – 2028 STAFF RECOMMENDED CAPITAL BUDGET AND PLAN

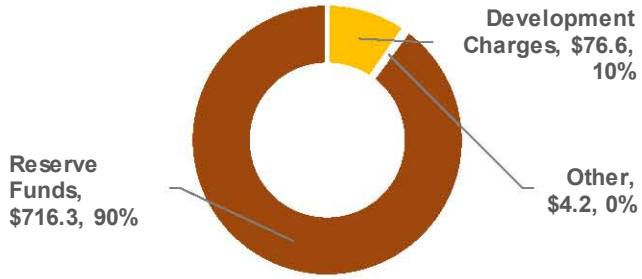
10 YEAR CAPITAL PLAN HIGHLIGHTS

2019 Staff Recommended Capital Budget $797.0M

By Project Category

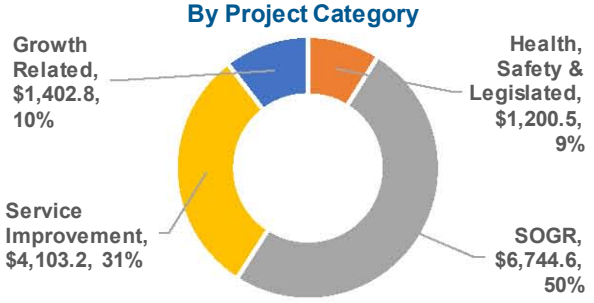


By Funding Source

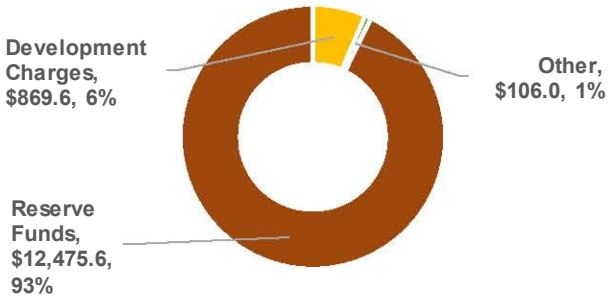


2019-2028 Staff Recommended Capital Budget and Plan $13,451.1M

By Project Category



By Funding Source



1 YEAR

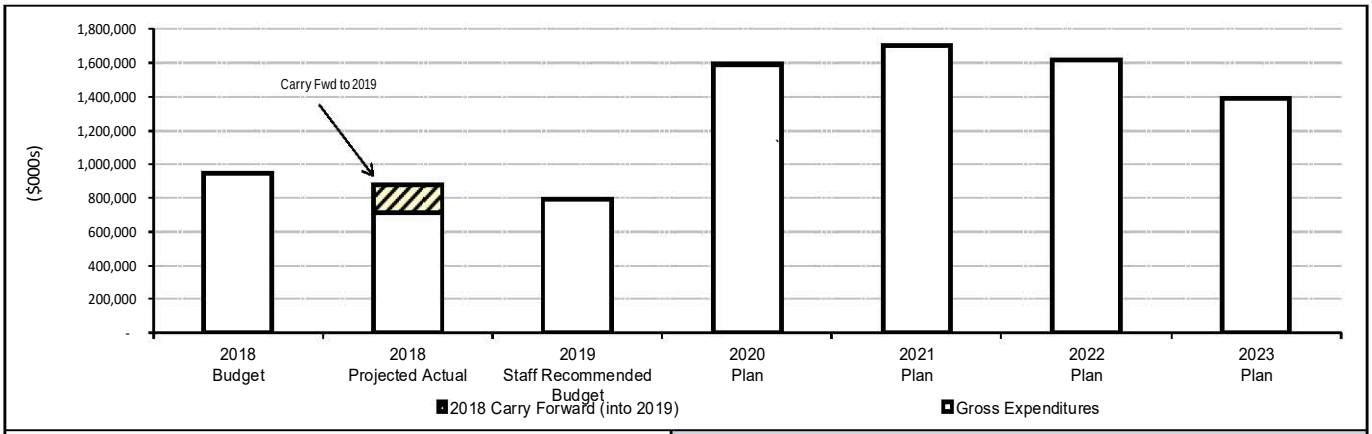
- **$214.978M** Deliver continued state of good repair projects to adress infrastructure renewal such as Watermain Replacement and Rehabilitation ($64.053 million), Sewer System Replacement and Rehabiliation ($130.250 million) and Trunk Sewer and Pumping Station projects ($20.675 million).
- **$168.207M** Implement Basement Flooding ($58.406 million), Wet Weather Flow Master Plan ($102.518 million) and Stream Restoration and erosion projects ($7.283 million)
- **$14.791M** Continue to provide funding for the TRCA erosion control projects including critical Erosion sites.

10 YEARS

- **$7.945B** State of Good Repair projects (including Health & Safety and Legislated projects of $1.201B) to ensure the replacement or rehabiliation of aging watermains and sewers and investment in the aging water and wastewater facilities.
- **$4.103B** Service Improvement projects for the implementation of water quality improvements projects, Wet Weather Flow Master Plan and to advance the Basement Flooding Protection projects in 67 chronic basement flooding areas accross the City.
- **$1.402B** Growth Related projects to increase the hydraulic capacity in the Toronto Water supply system and to provide necessary servicing capacity for growing population, to install service connections for new homes and developments, and to provide for wastewater projects such as Waterfront Sanitary Servicing and Ashbridges Bay Plant Aeration Tanks.

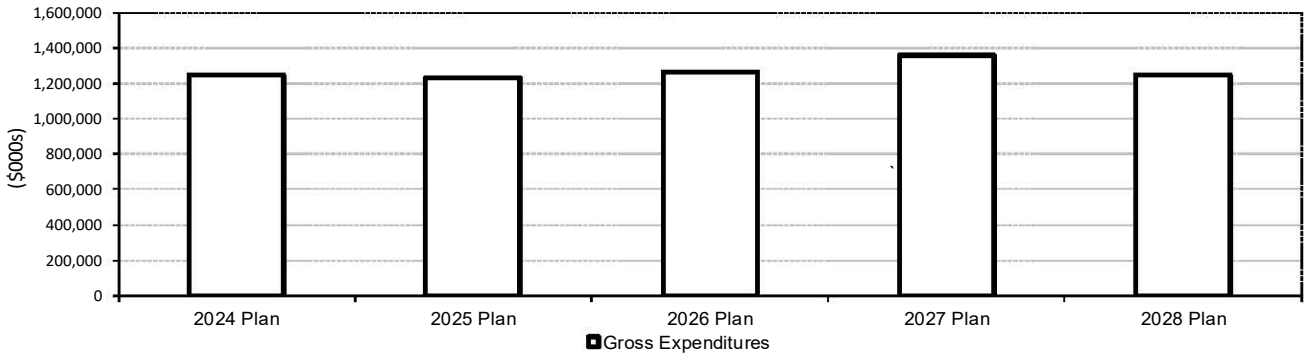
2019 2028 CAPITAL BUDGET & PLAN OVERVIEW

Chart 1: 10-Year Capital Plan Overview



	2018		2019 Staff Recommended Capital Budget and 2020 - 2023 Capital Plan						
	Budget	Projected Actual	2019	2020	2021	2022	2023	2019 - 2023	5-Year Total Percent
Gross Expenditures by Project Category:									
Health & Safety	3,998	2,953	741	11,769	3,007	2,374	1,891	19,782	0.3%
Legislated	120,544	77,598	83,879	197,246	210,812	187,515	128,302	807,754	11.4%
SOGR	582,232	428,623	406,855	872,870	932,227	823,888	715,382	3,751,222	52.8%
Service Improvement	164,283	143,189	218,685	380,408	417,157	460,433	377,556	1,854,239	26.1%
Growth Related	75,516	61,625	86,920	127,793	140,215	142,558	168,216	665,702	9.4%
Total by Project Category	**946,572**	**713,988**	**797,080**	**1,590,086**	**1,703,418**	**1,616,768**	**1,391,347**	**7,098,699**	**100.0%**
Program Debt Target								-	
Financing:									
Debt									
Reserves/Reserve Funds	893,236	673,792	716,323	1,448,822	1,553,610	1,522,766	1,296,355	6,537,876	92.1%
Development Charges	45,779	34,490	76,584	125,895	132,949	79,204	82,579	497,211	7.0%
Provincial/Federal				5,000	5,000	5,000	6,000	21,000	0.3%
Debt Recoverable									
Other Revenue	7,557	5,706	4,173	10,369	11,859	9,798	6,413	42,612	0.6%
Total Financing	**946,572**	**713,988**	**797,080**	**1,590,086**	**1,703,418**	**1,616,768**	**1,391,347**	**7,098,699**	**100.0%**
By Status:									
2018 Capital Budget & Approved Future Year (FY) Commitments	946,572	713,988	1,245,340	1,050,645	813,638	616,756	503,592	4,229,971	59.6%
Changes to Approved FY Commitments			107,597	39,911	17,645	325		165,478	2.3%
2019 New/Change in Scope & FY Commitments			(555,857)	430,279	665,437	497,822	262,318	1,299,999	18.3%
2020 - 2023 Capital Plan Estimates				69,251	206,698	501,865	625,437	1,403,251	19.8%
2-Year Carry Forward for Reapproval			-						
1-Year Carry Forward to 2019		163,426 →							
Total Gross Annual Expenditures & Plan	**946,572**	**877,414**	**797,080**	**1,590,086**	**1,703,418**	**1,616,768**	**1,391,347**	**7,098,699**	**100.0%**
Asset Value ($) at year-end		**28,637,915**	**28,723,367**	**28,909,910**	**29,104,500**	**29,595,884**	**30,011,000**	**30,011,000**	
Yearly SOGR Backlog Estimate (not addressed by current plan)			(37,814)	(289,927)	(350,811)	(233,757)	(170,620)	(1,082,928)	
Accumulated Backlog Estimate (end of year)		1,490,984	1,453,170	1,163,243	812,432	578,675	408,056	408,056	
Backlog: Percentage of Asset Value (%)		5.2%	5.1%	4.0%	2.8%	2.0%	1.4%		
Debt Service Costs			0	0	0	0	0	0	
Operating Impact on Program Costs			738	1,049	775	2,174	150	4,886	
New Positions			5	5	4			14	

Chart 2: 10-Year Capital Plan Overview (Continued)



	2024 - 2028 Staff Recommended Capital Plan						
	2024	2025	2026	2027	2028	2019 - 2028	10-Year Total Percent
Gross Expenditures by Project Category:							
Health & Safety	31					19,813	0.1%
Legislated	98,972	88,565	74,286	55,606	55,546	1,180,729	8.8%
SOGR	624,302	647,213	620,876	594,688	506,283	6,744,584	50.1%
Service Improvement	319,163	328,831	447,225	586,090	567,670	4,103,218	30.5%
Growth Related	207,963	167,136	122,126	120,993	118,893	1,402,813	10.4%
Total by Project Category	**1,250,431**	**1,231,745**	**1,264,513**	**1,357,377**	**1,248,392**	**13,451,157**	**100.0%**
Program Debt Target							
Financing:							
Debt							
Reserves/Reserve Funds	1,163,635	1,145,208	1,184,399	1,276,286	1,168,190	12,475,594	92.7%
Development Charges	75,909	77,455	70,741	74,078	74,188	869,582	6.5%
Provincial/Federal	6,000	6,000	6,000	6,000	6,000	51,000	0.4%
Debt Recoverable							
Other Revenue	4,887	3,082	3,373	1,013	14	54,981	0.4%
Total Financing	**1,250,431**	**1,231,745**	**1,264,513**	**1,357,377**	**1,248,392**	**13,451,157**	**100.0%**
By Status:							
2018 Capital Budget & Approved Future Year (FY) Commitments	369,285	285,160	201,051	71,985		5,157,452	38.3%
Changes to Approved FY Commitments						165,478	1.2%
2019 New/Change in Scope & FY Commitments	132,326	81,788	47,459	69,666	98,634	1,729,872	12.9%
2024 - 2028 Capital Plan Estimates	748,820	864,797	1,016,003	1,215,726	1,149,758	6,398,355	47.6%
2-Year Carry Forward for Reapproval							
Total Gross Annual Expenditures & Plan	**1,250,431**	**1,231,745**	**1,264,513**	**1,357,377**	**1,248,392**	**13,451,157**	**100.0%**
Asset Value($) at year-end	**30,950,021**	**31,509,684**	**31,787,373**	**31,990,960**	**33,367,448**	**33,367,448**	
Yearly SOGR Backlog Estimate (not addressed by current plan)	(73,022)	(20,182)	(39,708)	(39,093)	(27,556)	(1,282,489)	
Accumulated Backlog Estimate (end of year)	335,034	314,851	275,144	236,051	208,495	208,495	
Backlog: Percentage of Asset Value (%)	1.1%	1.0%	0.9%	0.7%	0.6%		
Debt Service Costs	0	0	0	0	0	0	
Operating Impact on Program Costs	580		1,915			7,381	
New Positions						14	

Staff Recommended 10-Year Capital Plan by Project Category

Table 4: Summary of Capital Projects by Project Category

(In $000s)	2019 Budget	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan	2027 Plan	2028 Plan	2019 - 2028 Total	Total Project Cost
Total Expenditures by Category												
Health & Safety												
Ashbridges Bay TP	491	6,629	2,583	2,374	1,891	31					**13,999**	13,999
Humber TP	250	5,140	424								**5,814**	5,814
Sub-Total	**741**	**11,769**	**3,007**	**2,374**	**1,891**	**31**					**19,813**	**19,813**
Legislated												
Water Service Replacement	15,390	57,043	45,625	48,221	46,246	46,246	45,746	44,246	44,246	44,246	**437,255**	437,255
Pumping Stations	3,489	7,338	8,919	11,490	12,924	9,558	6,700	8,425	4,250		**73,093**	73,093
WT - Storage & Treatment	125	125	125								**375**	375
Ashbridges Bay TP	55,907	117,316	129,560	101,068	60,016	42,764	35,719	20,615	60		**563,025**	563,025
Highland Creek TP	4,935	9,586	10,417	7,456	37	37	400	1,000	6,500	11,300	**51,668**	51,668
Humber TP	1,378	2,676			550				550		**5,154**	5,154
RL Clark TP	2,087	700	3								**2,790**	2,790
Island TP	568	2,462	16,163	19,280	8,529	367					**47,369**	47,369
Sub-Total	**83,879**	**197,246**	**210,812**	**187,515**	**128,302**	**98,972**	**88,565**	**74,286**	**55,606**	**55,546**	**1,180,729**	**1,180,729**
State of Good Repair												
Business & Technology		79	78	80							**237**	237
Linear Eng	69,110	112,329	122,283	104,413	88,038	74,298	74,309	80,251	75,489	74,309	**874,829**	874,829
Sewer Rehabilitation	50,798	77,236	89,179	78,637	69,853	66,953	68,303	67,053	68,603	69,553	**706,168**	706,168
Sewer Replacement	12,332	19,458	21,086	16,012	17,469	15,100	15,000	15,000	15,000	15,000	**161,457**	161,457
WM Rehabilitation	47,901	68,171	83,054	71,180	71,560	70,460	70,360	70,260	65,460	65,360	**683,766**	683,766
WM Replacement	55,424	129,525	117,014	103,704	101,130	95,000	95,000	95,000	95,000	95,000	**981,797**	981,797
Water Service Replacement	5,115	7,854	7,854	675							**21,498**	21,498
Pumping Stations	1,303	8,212	7,612	8,816	7,935	7,875	6,815	4,260	3,550	4,000	**60,378**	60,378
Trunk Water Mains	4,542	5,891	2,360	14,600	25,300	27,800	22,150	25,975	25,925	25,650	**180,193**	180,193
WT - Storage & Treatment	20,445	32,061	47,276	32,227	10,712	13,737	26,385	35,830	17,155	5,610	**241,438**	241,438
Trunk Sewers & Pumping Stations	19,261	77,830	70,103	80,188	52,000	61,157	53,115	33,515	28,350	14,082	**489,601**	489,601
Ashbridges Bay TP	53,618	184,523	217,002	203,880	165,514	120,748	151,159	129,487	114,564	64,040	**1,404,535**	1,404,535
Highland Creek TP	9,425	39,327	32,880	35,157	43,890	24,610	26,255	18,640	13,927	14,314	**258,425**	258,425
Humber TP	33,649	43,676	52,590	26,529	32,487	18,057	7,585	11,235	36,360	35,000	**297,168**	297,168
RL Clark TP	7,950	4,941	315	291	200	200	200	200	200	200	**14,697**	14,697
RC Harris TP	1,910	12,808	10,648	3,437	2,024	11,550	11,500	11,500	12,550	500	**78,427**	78,427
FJ Horgan TP	180	1,701	1,281	1,321	825	202	202	200	200	200	**6,312**	6,312
Island TP	4,480	17,312	8,421	7,438	8,875	3,775	725	525	475	4,675	**56,701**	56,701
WWF-Implementation Projects	1,567	12,828	25,109	17,081	3,665	4,000	4,000	4,000	6,000	4,500	**82,750**	82,750
WWF - Stream Restoration	7,283	16,339	14,349	16,947	12,420	7,295	12,665	16,460	14,395	12,805	**130,958**	130,958
Yards & Facility	562	769	1,733	1,275	1,485	1,485	1,485	1,485	1,485	1,485	**13,249**	13,249
Sub-Total	**406,855**	**872,870**	**932,227**	**823,888**	**715,382**	**624,302**	**647,213**	**620,876**	**594,688**	**506,283**	**6,744,584**	**6,744,584**
Service Improvement												
Water Meter Program (AMR)	4,605	1,680	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	**18,285**	18,285
Basement Flooding	58,406	143,565	157,987	183,371	163,152	151,264	147,986	221,612	226,263	217,001	**1,670,607**	1,670,607
Business & Technology	12,277	12,584	12,572	8,506	7,769	4,769	2,914	2,014	2,014	2,014	**67,433**	67,433
Linear Eng	954	3,000	3,075	3,735	7,125	8,975	8,475	7,975	7,975	7,975	**59,264**	59,264
Sewer Replacement	923	1,825									**2,748**	2,748
Pumping Stations	188	69									**257**	257
Trunk Water Mains	50	3,568	3,327	3,333	41	92					**10,411**	10,411
WT - Storage & Treatment	2,247	8,945	5,521	4,061	60						**20,834**	20,834
Trunk Sewers & Pumping Stations	700	1,100	700	900	8,400	9,450	750				**22,000**	22,000
Ashbridges Bay TP	1,926	14,609	14,098	15,826	10,655	2,062	2,115	2,100	20,050	41,300	**124,741**	124,741
Highland Creek TP	9,062	9,757	15,005	27,652	24,150	29,920	48,125	44,080	25,150	29,290	**262,191**	262,191
Humber TP	4,179	8,070	7,849	9,277	7,500	3,500					**40,375**	40,375
RC Harris TP	1,029	5,853	864								**7,746**	7,746
FJ Horgan TP	213	750	2,360	540	760	1,011					**5,634**	5,634
Island TP		2,900	3,957	867	695	650	75	650	225		**10,019**	10,019
WTP-Plantwide	2,149	14,128	36,828	49,507	29,174	30,609	30,825	16,710	16,515	13,815	**240,260**	240,260
WWF-Implementation Projects	100,951	124,013	125,573	135,344	99,892	58,674	69,252	133,640	260,870	237,560	**1,345,769**	1,345,769
WWF-TRCA	14,791	14,104	14,219	14,337	15,958	16,082	16,209	16,339	16,473	16,610	**155,122**	155,122
Yards & Facility	4,035	9,888	11,722	1,677	725	605	605	605	9,055	605	**39,522**	39,522
Sub-Total	**218,685**	**380,408**	**417,157**	**460,433**	**377,556**	**319,163**	**328,831**	**447,225**	**586,090**	**567,670**	**4,103,218**	**4,103,218**
Growth Related												
Linear Eng	531	250	150	150	150	150	150	150	150	150	**1,981**	1,981
New Connections	41,836	52,503	54,993	49,857	45,223	48,223	48,223	48,223	48,223	48,223	**485,527**	485,527
New Sewers	5,500	9,566	20,459	27,537	12,651	3,930	2,048	1,698	1,000	1,000	**85,389**	85,389
WM Replacement	26,925	35,723	31,982	19,712	20,505	18,040	19,000	19,000	19,000	19,000	**228,887**	228,887
Pumping Stations	4,312	5,558	2,068	2,245	1,050	900					**16,133**	16,133
Trunk Water Mains	6,791	15,625	17,215	16,709	17,700	17,700	9,345	35			**101,120**	101,120
WT - Storage & Treatment		165	1,000	2,000	3,000						**6,165**	6,165
Trunk Sewers & Pumping Stations	188	1,347	3,545	12,400	28,150	52,400	52,400	52,200	51,900	50,000	**304,530**	304,530
Ashbridges Bay TP	50	4,850	5,300	7,900	39,000	66,000	35,350	300	200		**158,950**	158,950
Highland Creek TP	192	800	500								**1,492**	1,492
FJ Horgan TP				41							**41**	41
Island TP	100	700	2,300	3,300							**6,400**	6,400
Water Effeciency Plan	495	706	603	607	687	520	520	520	520	520	**5,698**	5,698
WWF-Implementation Projects			100	100	100	100	100				**500**	500
Sub-Total	**86,920**	**127,793**	**140,215**	**142,558**	**168,216**	**207,963**	**167,136**	**122,126**	**120,993**	**118,893**	**1,402,813**	**1,402,813**
Total Expenditures by Category (excluding carry forward from 2018)	**797,080**	**1,590,086**	**1,703,418**	**1,616,768**	**1,391,347**	**1,250,431**	**1,231,745**	**1,264,513**	**1,357,377**	**1,248,392**	**13,451,157**	**13,451,157**

2019 - 2028 Key Capital Projects

The 10-Year Staff Recommended Capital Plan supports Toronto Water's objectives by balancing infrastructure renewal needs for State of Good Repair with new Service Improvement projects, while providing the capacity to keep pace with population growth, and ensuring the delivery of water supply and wastewater treatment within an increasingly stringent regulatory framework.

In addition to the state of good repair projects, considerable funding is provided to support the implementation of the Wet Weather Flow Master Plan, Basement Flooding Protection Program and growth related projects. Additional financial pressures are also accommodated within the Plan as a result of updated cost estimates for Ashbridges Bay Wastewater Treatment Plant upgrades and implementation of various Trunk Sewer and Pumping Station rehabilitation projects.

Over the 10-year planning horizon, Toronto Water's Capital Plan continues to be 100% user fee funded and does not require debenture financing. The 10-Year Staff Recommended Capital Plan of $13.451 billion will be funded primarily from the Program's reserves, representing approximately 93% or $12.476 billion of total capital financing.

State of Good Repair (SOGR), Health & Safety, and Legislated projects

- The on-going state of good repair projects for linear infrastructure renewal to ensure the replacement or rehabilitation of aging watermains and sewers, and investment in the City's aging wastewater treatment facilities, are the focus of the 2019-2028 Capital Budget and Plan.
- The 10-Year Staff Recommended Capital Plan includes $7.945 billion or 59.1% of the total funding of $13.451 billion for new SOGR projects (including Health & Safety and Legislated projects of $1.201 billion or 8.9%) over the next 10 years.
- The 2019-2028 Staff Recommended Capital Budget and Plan includes funding of $563.025 million or 4.2% of total funding to meet legislated requirements governing the Ashbridges Bay Wastewater Treatment Effluent System. Another $56.822 million or 0.4% of the total is allocated to legislated odour control projects at Highland Creek and Humber Wastewater Treatment plants.
- State of Good Repair funding included in the 10-Year Staff Recommended Capital Plan is intended to address Toronto Water's SOGR linear infrastructure and plant backlog, estimated at $1.491 billion by year-end 2018, with the backlog projected to be effectively eliminated by year-end 2028, provided current funding allocations for State of Good Repair projects are maintained over the next 10 years.
- The largest state of good repair projects involving linear infrastructure are watermain ($1.666 billion) and sewer ($0.868 billion) rehabilitation and replacement projects. Another $1.404 billion will be invested over the 10-year period in various state of good repair projects at the Ashbridges Bay Wastewater Treatment Plant including liquid treatment, solids and gas handling projects.
- State of Good Repair funding included in the 10-Year Staff Recommended Capital Plan is intended to address Toronto Water's SOGR linear infrastructure and plant backlog, estimated at $1.491 billion by year-end 2018, with the backlog projected to be effectively eliminated by year-end 2028, provided current funding allocations for State of Good Repair projects are maintained over the next 10 years.
- Adjustments to project costing rates to align with market experience calculated through the bidding process, will require that the SOGR estimate be regularly updated.

Service Improvement

- Service Improvement projects account for $4.103 million or 30.5% of total funding over the 10-year period, some of which is recovered from Development Charges.

  - Approximately $1.670 billion or 12.4% has been allocated to implement the Basement Flooding Protection projects in 67 chronic basement flooding areas across the City.

- Funding is also included for the implementation of other water quality improvement projects from the City's Wet Weather Flow Master Plan to reduce and ultimately eliminate the adverse impacts of polluted stormwater and combined sewer overflows (CSOs) that are discharged from outfalls to the City's watercourses and the waterfront. These projects will achieve a measurable improvement in ecosystem health of the City's watersheds and waterfront, and improved water quality along the City's waterfront beaches and include:
  - The Don River and Central Waterfront Trunk / Combined Sewer Outfall (CSO) project, with allocated funding of $1.064 billion, represent 7.9% of the total 10-Year Capital Plan's expenditures.
  - The Stormwater Management End of Pipe Facilities projects totalling $161.354 million or 1.2% of total capital funding are intended to address most of the storm sewer discharges to the waterfront and all but 9 of the 69 combined sewer overflow discharges in the City.
  - Approximately $155.122 million or 1.2% is included in the 10-Year Capital Plan in funding contributions to the Toronto and Region Conservation Authority (TRCA) for stream restoration and erosion control projects.
- Another $262.191 million or 1.9% has been allocated to the Highland Creek Waste Water Treatment Plant upgrades and biosolids and gas handling projects implementation.
- Toronto Water's 10-Year Capital Plan dedicates $67.433 million for Business and Technology projects to upgrade reliability and connectivity of its water and wastewater treatment plant systems. This allocation includes funding for the Enterprise Work Management System, a multi-divisional initiative that will replace several legacy software applications with an enterprise solution in order to improve the coordination of daily maintenance activities across the four largest divisions, Parks, Forestry and Recreation, Solid Waste Management Services, Toronto Water and Transportation Services.

Growth Related

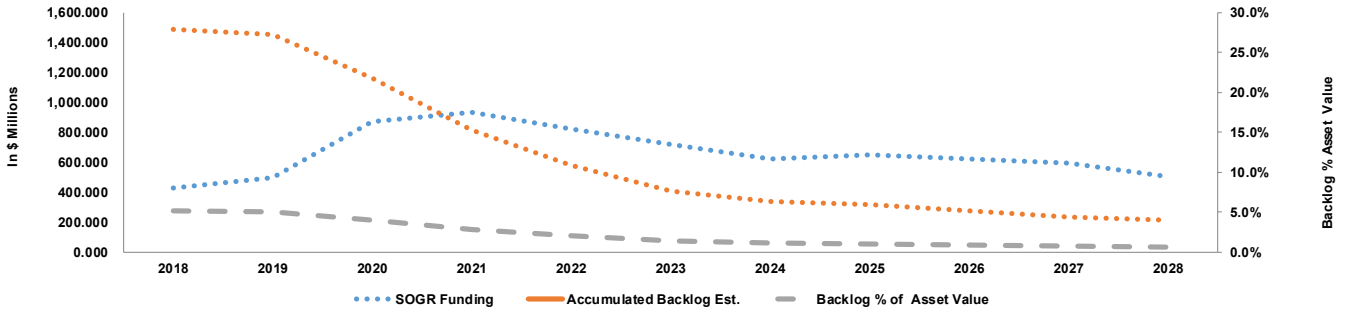
- Growth Related projects account for $1.402 billion or 10.4% of the 10-Year Capital Plan's funding allocation.
- In addition to the New Connection Program, the largest projects in this category are the Local and Trunk Watermain Upgrade projects that will increase the hydraulic capacity in the Toronto Water supply system. Many of the Trunk Watermain projects are cost shared with the Region of York.
- The 2019-2028 Staff Recommended Capital Budget and Plan allocates funding for the New Sewer Construction ($85.389 million) and Trunk Sewer and Pumping Station projects ($304.583 million) including the Black Creek Sanitary Trunk Sewer, as well as New Service Connections ($485.527 million) and Trunk Watermains ($101.120 million) to provide the necessary servicing capacity based on projected population growth, and for the installation of service connections for new homes and developments. It also allocates funding to construct 2 new aeration tanks at the Ashbridges Bay Treatment Plant ($157.150 million).
- Growth related projects are primarily funded by Development Charges (DC). Development Charges provide approximately 6.5% or $869.582 million of financing for the 10-Year Capital Plan, excluding carry forward funding. The use of Development Charge funding has been maximized based on project eligibility. However the following should be noted:
  - As approved by City Council, most non-residential development is exempt from development charge payments, resulting in projected revenues that are lower than they would have been based on the approved project eligibility criteria.
  - Due to insufficient funding collected from Development Charges, Toronto Water will not be able to fully offset the costs of the growth related share for projects that are eligible for development charge funding incorporated in its 10-Year Capital Plan.

- Approximately $603.4 million in project costs related to the growth component will be funded from Toronto Water's capital financing reserves, thus reducing Toronto Water's ability to address its SOGR backlog of projects at a faster rate.

State of Good Repair (SOGR) Funding & Backlog

- At the end of 2018, the replacement value of Toronto Water's assets was estimated at $28.638 billion incorporating both linear (watermains, sewers) and facility/plant (water treatment plants, wastewater treatment plants, pumping stations) assets.
  - Linear infrastructure assets represent approximately 74% of the total asset value at $21.303 billion.
  - Facility/plant assets account for the remaining 26% or $7.335 billion.
- The 2018 year-end backlog of state of good repair work for linear and plant infrastructure renewal is projected at $1.491 billion, representing 5.2% of the asset replacement value. Approximately 55% or $0.819 billion of the backlog relates to linear infrastructure, with the remaining 45% or $0.645 billion representing facilities backlog.
- The linear infrastructure and facilities State of Good Repair backlog and annual renewal need estimates have been periodically updated to reflect changes in unit rates for replacement and the changing condition of the asset.
- The 10-Year Staff Recommended Capital Budget and Plan dedicates $6.745 billion or $675 million on average annually (excluding carryforward funding), to address state of good repair, which is anticipated to effectively eliminate the backlog by 2028.

Chart 3: Total SOGR Funding & Backlog



In $ Millions	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
SOGR Funding	429.018	495.491	872.870	932.227	823.888	715.382	624.302	647.213	620.876	594.688	506.283
Accumulated Backlog Est.	1,490.984	1,453.170	1,163.243	812.432	578.675	408.056	335.034	314.851	275.144	236.051	208.495
Backlog % of Asset Value	5.2%	5.1%	4.0%	2.8%	2.0%	1.4%	1.1%	1.0%	0.9%	0.7%	0.6%
Total Asset Value	28,637.915	28,723.367	28,909.910	29,104.500	29,595.884	30,011.000	30,950.021	31,509.684	31,787.373	31,990.960	33,367.448

- While both categories of assets have historically received funding for state of good repair projects, the accumulated backlog of projects for linear infrastructure has been addressed at a higher rate, resulting in a proportionally lower backlog representing 3.9% of its replacement value at the end of 2018, compared to 9.2% for facilities.
- Additional condition assessments of infrastructure continue to be undertaken based on asset classes through discrete projects. The condition assessment of booster pumping stations and sewer pipes was completed in 2014 and has resulted in the addition of a pumping station rehabilitation plan to Toronto Water's 10 year Capital Plan in 2015.
- Condition assessments of sewage pumping stations continue to be undertaken on a prioritized basis and a facility condition assessment project is being undertaken and is expected to be completed in 2019.
- New methods for inspection of pressurized pipe are being explored to assess condition of assets without taking the pipes out of service during the inspection.
- It should be noted that continued trend of higher unit rates for linear infrastructure renewal projects may impact negatively on the state of good repair backlog for infrastructure renewal.

- Escalating unit rates for linear infrastructure renewal, due to additional funding requirement for those projects, have already resulted in a deferral of some previously planned capital projects by 1 to 5 years, to align with the funding availability projected by the Water and Wastewater Rate Model.

Operating Impact of Completed Capital Projects

Table 5: Net Operating Impact Summary

	2019 Budget		2020 Plan		2021 Plan		2022 Plan		2023 Plan		2019 - 2023		2019 - 2028	
Projects	$000s	Positions	$000s	Positions	$000s	Positions	$000s	Positions	$000s	Positions	$000s	Positions	$000s	Positions
Previously Approved													6,001.00	13.50
Ashbridges Bay WWTP - Blower Building & Old North Substation Improvements			99	1.0	24						123	1.0	123	1.0
Ashbridges Bay WWTP - D Building Phase 2					250		250				500		500	
Ashbridges Bay WWTP - Disinfection System					867	2.0	120				987	2.0	987	2.0
Ashbridges Bay WWTP - Liquid Treatment & Handling - Integrated Pumping Station													1,700	
Ashbridges Bay WWTP - Liquid Treatment & Handling - Waste Activated Sludge Upgrade					(620)		1,500				880		880	
Ashbridges Bay WWTP - O & M Upgrades			70	1.0	19						89	1.0	89	1.0
Ashbridges Bay WWTP - P Building Headworks	77	1.0	304	2.0	38						419	3.0	419	3.0
Basement Flooding Releif - Group 2	61	1.0	107	1.0	18						186	2.0	186	2.0
Capital Programming & Facility Asset Planning	79	1.0	30		3						112	1.0	112	1.0
Highland Creek WWTP - Proces & Facility Upgrades	50										50		50	
Humber WTP - Gas Compressor Syatem Upgrades	50										50		50	
Humber WTP - Odour Control Engineering	77	1.0	27								104	1.0	104	1.0
Island WTP - Chemical & Residuals Management					13	0.5	89		40		142	0.5	142	0.5
Island WTP - Plantwide HVAC Upgrades			(50)								(50)		(50)	
Laboratory Equipment (Warranty Expiry)	25		35		15		50		50		175		175	
North Toronto WTP - Treatment Plant Improvements					132	1.0	50				182	1.0	182	1.0
Transmission Operations Optimizer	319	1.0	30		3						352	1.0	352	1.0
Sub-Total: Previously Approved	**738**	**5.0**	**652**	**5.0**	**762**	**3.5**	**2,059**		**90**		**4,301**	**13.5**	**6,001**	**13.5**
WT&S Plantwide - Zebra Mussel Control - Construction			397								397		397	
Sub-Total: New Projects - 2019			**397**								**397**		**397**	
WT&S Plantwide - UV Disinfection - Construction					13	0.5	115		60		188	0.5	983	0.5
Sub-Total: New Projects - Future Years					**13**	**0.5**	**115**		**60**		**188**	**0.5**	**983**	**0.5**
Total (Net)	**738**	**5.0**	**1,049**	**5.0**	**775**	**4.0**	**2,174**		**150**		**4,886**	**14.0**	**7,381**	**14.0**

The 10-Year Staff Recommended Capital Plan will increase future year Operating Budgets by $7.381 million net over the 2019 - 2028 period.

- The 2019 Operating Budget includes an increase in operating costs for salaries, benefits, chemicals, energy, utilities, and contracted services from previously approved projects at the Ashbridges Bay, Humber and Highland Creek Wastewater Treatment plants ($0.254 million), Transmission Operations Optimizer (0.319 million), Basement Flooding Program, Capital Asset Programming and other projects ($0.165 million).
  - One position each (for a total of five positions) is required for maintenance of upgraded facilities at Humber and Ashbridges Bay Wastewater Treatment Plant, Basement Flooding Protection and Transmission Operations Optimizer projects, as well as capital programming and facility asset planning related to Toronto Water's Geometric Network Strategy.
- The operating costs of completed capital projects for 2020 and 2021 are projected at $1.049 million and $0.775 million respectively, reflecting an increase of 5 positions in 2020 and 4 positions in 2021, for the planned completion of new equipment and facilities at Ashbridges Bay and North Toronto Wastewater Treatment plants and Toronto Island Water Treatment Plant, as well as plant-wide implementation/construction of UV disinfection facilities.
  - In 2021, upgrades at Ashbridges Bay Treatment Plant (waste activated sludge) will generate savings of $0.620 million. These savings will partially offset estimated increase in costs, resulting in a net expenditure of $0.775 million in 2021.
- Future year operating impacts will be reviewed each year as part of the annual Operating Budget process.

Table 6: Capital Project Delivery – New Temporary Positions

Project Name	CAPTOR Project Number	Position Title	# of Positions	Project Delivery		Salary and Benefits $ Amount ($000s)					
				Start Date	End Date (m/d/yr)	2019	2020	2021	2022	2023	2024 - 2028
Business System Infrastructure	WAT906334-41	System Development Specialist/Equivivalent	1.0	04/01/2019	31/12/2021	79.2	109.2	112.5			
Environmental Health & Safety - Construction	WAS906968-72	Environmental Health and Safety Field Representative	1.0	04/01/2019	31/12/2021	93.0	128.4	131.8			
Scarborough Subway Extension	TTC Capital Program	Water Maintenance Worker 2	1.0	01/01/2020	31/12/2021		73.6	89.1			
Scarborough Subway Extension	TTC Capital Program	Water Maintenance Worker 3	1.0	01/01/2020	31/12/2021		67.3	81.1			
Total			**4.0**			**172.3**	**378.5**	**414.6**			

Approval of the 2019 – 2028 Staff Recommended Capital Budget and Plan will result in a requirement for 4 new temporary capital project delivery positions to implement the following projects:

- *Integrated Technology Management* – A System Development Specialist or equivalent position at cost of $0.079 million in 2019 (with fully annualized cost of $0.109 million in 2020), with funding provided from capital projects, will reduce reliance on external consultants to complete the project work.
- *Environmental Health and Safety* – An Environmental Health and Safety Field Representative position is recommended to manage health, safety and environmental issues related to increased construction activities at Ashbridges Bay at cost of $0.093 million in 2019 (with fully annualized cost of $0.128 million in 2020), fully funded from capital projects.

It is recommended that Council approve these 2 new temporary capital positions for the delivery of the above capital projects / sub-projects in 2019 and that the duration for each temporary position not exceed the life of the funding of its respective capital projects / sub-projects.

- *Scarborough Subway Extension* –2 Water Maintenance Worker positions will be added in 2020 (0.141 million) to the previously approved team (a Senior Engineer position and an Engineer position) to undertake reviews and address water infrastructure related issues on the Scarborough Subway Extension project. These positions will be fully funded by TTC.

2018 CAPITAL PERFORMANCE

2018 Project Delivery

In 2018, Toronto Water made significant progress and/or accomplished the following:

Water Treatment & Supply

- Approximately 27km of watermain replacement ($51million) and 33 km of structural watermain rehabilitation ($49 million).
- Water service replacement ($24 million).
- Water treatment plant upgrades ($32 million).
- Transmission watermain replacement ($15 million).
- Reservoirs and pumping station renewals ($24 million).
- Water Meter Program ($3 million); Engineering Services ($39 million); New Connections ($35 million).

Wastewater Collection and Treatment

- 4 km of sewer replacement ($15 million) and 95 km of sewer rehabilitation ($50 million); trunk sewer rehabilitation ($37 million).
- Ashbridges Bay Wastewater Treatment Plant Upgrades including P Building Headworks Upgrades, Disinfection System Construction, Biofilters Upgrade and Replacement, Integrated Pumping Station and Outfall projects and Ferrous Upgrades ($103 million).

- Highland Creek Treatment Plant Upgrades including Biosolids Master Plan Implementation, Digester System Upgrades and Odour Control Upgrades ($28 million).
- Humber Wastewater Treatment Plant Upgrades including gas compressor, HVAC, Odour Control and Secondary Treatment Upgrades ($39 million).
- Pumping station and forcemain rehabilitation ($8 million).
- Engineering Services ($39 million); Business & Technology ($8 million); Yards & Facilities ($4 million).

Stormwater Management

- Wet Weather Flow Master Plan – ongoing ($80 million).
- Basement Flooding Protection Program – ongoing ($31 million).

Status Update on Council Approved New Capital Projects in the 2018 Capital Budget

During the 2018 Budget process, Toronto Water reprioritized its capital projects based on the following factors:

- The 10-Year Capital Program was aligned with available funding as calculated by the Water and Wastewater Rate Model to ensure positive reserve balances during major capital spending years.
- Changes have also been made based on updated schedules for coordinated and sequenced delivery of projects requiring large capital funding, as well as new condition assessments.
- The 2018 Capital Budget was aligned with historical spending rates and ability to deliver future year projects.

Although new funding for variety of projects in the existing program areas of $98.519 million was added in 2018, the above factors resulted in an overall funding reduction of $146.796 million in the 2018 Budget compared to the funding commitments approved as part of the previously approved 2017-2026 Capital Plan. Another $175.137 million in project cost estimates for projects anticipated to start in 2018 was deferred to future years (beyond 2018).

- All approved projects in 2018 are underway with a projected year-end average spend rate of 75.4%. Toronto Water continues to realign project costs and cash flows with actual spending through regular reporting to Council.

2018 Financial Performance

Table 7: Budget vs. Actual by Project Category

Project Category (In $ Millions)	2017			2018			2019	
	Budget	Actual	Spending Rate %	Budget	Projected Actual *	Spending Rate %	Staff Recommended Capital Budget (**excl.** 1 Yr Carry Forward)	Staff Recommended Capital Budget (**incl.** 1 Yr Carry Forward)
Health & Safety	5.027	4.791	**95.3%**	3.998	2.953	**73.9%**	0.741	1.525
Legislated	79.521	63.112	**79.4%**	120.544	77.598	**64.4%**	83.879	116.120
SOGR	542.900	447.156	**82.4%**	582.232	428.623	**73.6%**	406.855	495.491
Service Improvement	150.713	96.925	**64.3%**	164.283	143.189	**87.2%**	218.685	251.384
Growth Related	65.373	55.330	**84.6%**	75.516	61.625	**81.6%**	86.920	95.986
Total	843.535	667.314	**79.1%**	946.572	713.988	**75.4%**	797.080	960.506

Note - 2018 projection based on the Q3 capital variance submission

As illustrated in the table above, the year-end projection of spend rate for 2018 is 75.4%.

- In 2018, Toronto Water experienced both minor and major project delays, through a combination of different factors such as extended time to address complex site conditions, operational requirements and sequencing of work at various plants, vendor performance issues, need to obtain legal agreements/easements and coordinate with third parties.
- Lower than anticipated demand for substandard water service replacement resulted in lower legislated project spending, while state of good repair project spending was mostly affected by delays in implementation of water and sewer replacement and rehabilitation projects.

- Service Improvement projects are projected to proceed ahead of schedule mostly due to the accelerated construction of the Don and Central Waterfront Phase 1 Project.

For additional information regarding the 2018 Q3 capital variances and year-end projections for Toronto Water, please refer to the attached link for the report entitled "Capital Variance Report for the Nine-Month Period Ended September 30, 2018" approved by City Council at its meeting on December 4, 5 and 6, 2018.

http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.CC1.8

Impact of the 2018 Capital Variance on the 2019 Staff Recommended Capital Budget

- As a result of the delays in the capital projects, as described in the 2018 Q3 Capital Variance Report, funding of $163.426 million is being carried forward to the 2019 Staff Recommended Capital Budget to continue the capital work.
- A detailed review of the 2019 – 2028 Staff Recommended Capital Budget and Plan has been conducted and the necessary adjustments have been made to the timing of cash flow funding for unique and major capital projects such as Ashbridges Bay, Highland Creek and Humber Wastewater Treatment Plant upgrades, Watermain and Sewer Replacement projects, Basement Flooding and Wet Weather Flow Master Plan implementation projects totalling $651.254 million in 2019.
    - By deferring the cash flow funding to future years, the 2019 Staff Recommended Capital Budget reflects readiness to proceed and will lead to a higher rate of spending.

ISSUES FOR DISCUSSION

ISSUES IMPACTING THE 2019 BUDGET

2019 Budget Overview

Operating:

- The 2019 Staff Recommended Operating Budget for Toronto Water is $463.869 million gross and $1.331 billion in revenue, resulting in an $867.368 million capital-from-current contribution. It reflects an increase of $16.617 million or 3.7% over the 2018 Approved Budget gross expenditures of $447.252 million and an increase of $41.950 million or 3.3% over the 2018 Approved Capital Contribution Budget of $842.035.
- Base pressures, which are experienced by all three services consistently, are attributable to inflationary cost increases for materials, supplies and contracted services ($6.551 million), salaries and benefits, including progression pay and step increases ($3.390 million), and additional costs to sustain the operations of completed capital projects ($0.925 million). The management of the continuously increasing salary and non-salary costs remains the challenge for Toronto Water in 2019.
  - These pressures were partially offset by production costs savings and cost adjustments in the *Water Treatment and Supply and the Wastewater Collection and Treatment services* ($0.800 million). Toronto Water also anticipates an increase in revenues and recoveries (other than sale of water) totalling $2.812 million across all services, with another $2.866 million from increased volume and price of water sold to the Region of York in the *Water Treatment and Supply Service*.
  - Service change options totaling $7.285 million, consisting mostly of efficiency savings from the optimization of water and waste water utility costs ($1.223 million), a reduction in base expenditures in materials, supplies and other non-salary costs including the reassessment of payments in lieu of taxes ($1.890 million), as well as additional draws from capital financing reserve funds to fund the existing backlog of utility cut repairs, were able to reduce initial base pressures for 2019.
  - As a result of the recommended actions above, Toronto Water was able to actually offset all base pressures, which resulted in a $2.091 million or 0.6% decrease over the 2018 Approved Operating Budget net expenditures.
- The new/enhanced services recommended for approval totaling $7.985 million gross, $5.818 million net, represent a substantial investment in the new Utility Cut Program ($5.571 million net), as well as funding for the Chamber Adjustment Program and the addition of dedicated staff to manage insurance/risk claims, clear Ontario One Call locate tickets and provide legal services. A new bulk water fill station pilot project for mobile washing operators is also recommended. An additional 31 staff position is required for the implementation of these new/enhanced services. These services are intended to improve operational processes and ultimately result in better customer satisfaction.
- The following table shows the impact of 2019 budget changes on Toronto Water's net operating budget (when the sale of water/wastewater surcharge is excluded).

Net Operating Budget Impact: 2019 Total Operating Budget

(In $000s)	2018 Budget	2019 Budget	Change $	Change %
Total Budget (Including New/Enhanced)				
Gross Expenditures	447,251.8	463,869.0	16,617.2	3.7%
Revenue Excluding Sale of Water	90,393.2	103,248.8	12,855.5	14.2%
Total Budget Net Expenditure	**356,858.6**	**360,620.2**	**3,761.6**	**1.1%**
Sale of Water/Wastewater Surcharge	1,198,893.8	1,227,987.9	29,094.2	2.4%
Total Budget Capital Contribution	**842,035.2**	**867,367.7**	**25,332.6**	**3.0%**

10-Year Capital Plan:

- The 2018 Council Approved Capital Budget for Toronto Water of $865.221 million was focused on balancing infrastructure renewal needs for State of Good Repair with Service Improvement projects, while providing the

capacity to keep pace with population growth. The year-end spending rate is projected to be 75.4% of the 2018 Capital Budget, which is lower than the 10-Year Rate Model completion target for 2018 of 85.0%.

  - The unspent cash flow funding of $163.426 million has been carried forward into 2019 to continue the capital work.

- The 2019 - 2028 Staff Recommended Capital Plan provides investments of $13.451 billion to ensure the delivery of water supply and wastewater treatment. It continues to support the same objectives of balanced approach to addressing State of Good Repair together with opportunities for service improvements and projected population growth in an increasingly stringent regulatory framework.
- This 10-Year Staff Recommended Capital Plan reflects an increase of $343.757 million or 2.9% in capital spending over the nine common years of the Capital Plans (2019-2027). Key changes are summarized as follows:

  Increases in Previously Approved Project Costs:

  - *The Ashbridges Bay Wastewater Treatment Plant* project costs have increased by $198.474 million or 10.1% from $1.961 billion to $2.160 billion to reflect updated cost estimates based on progression of pre-design or detailed design for the Integrated Pumping Station and Waste Activated Sludge construction projects and also to incorporate planned improvements to the Heating and Air Systems and East Bypass.
  - Increased funding of $138.564 or 22.6% from $613.485 million to $752.049 million has been allocated to *the Trunk Sewers and Pumping Station projects*.
  - Funding for *New Service Connection* projects has been increased by $83.981 million or 23.8% from $353.323 million to $437.304 million to provide the necessary servicing capacity based on projected population growth and for the installation of service connections for new homes and developments.
  - The allocation for *the Island Water Treatment Plant* project has increased by $39.629 million or 52.0% from $76.185 million in capital funding to $115.814 million to support planned facility upgrades and reflect a revised cost estimates for the Travelling Screen Replacement, HVAC Upgrades and Raw Water Intake Cleaning projects, and to incorporate required rehabilitation to the Cross Harbour Tunnel.
  - Additional funding of $37.618 million or 6.3% from $598.997 million to $636.615 million is required for *the Sewer System Rehabilitation projects* to reflect expanded sewer condition assessment activities.
  - Increased funding totalling $223.470 been allocated to a number of other projects including *Transmission Pumping Stations, Automated Meter Replacement Program, New Sewers, Water Service Replacement, RC Harris Water Treatment Plant projects and Linear Infrastructure Engineering* projects.

  Deferral/ Reductions in Previously Approved Capital Projects:

  - *The Wet Weather Flow Stream Restoration and Implementation* project funding (except for TRCA erosion control projects) has been reduced by $102.628 million or 8.0% from $1.290 billion to $1.187 billion to reflect the award of the Don & Central Waterfront Trunk CSO Construction Phase 1 project under budget.
  - Some of *the Basement Flooding projects* have been deferred or reduced by $45.826 million or 3.1% from $1.499 billion to $1.454 billion based on efficiency and refinement of engineering costs required to support the delivery of the Basement Flooding Protection Program.
  - The funding allocation for *Trunk Watermain projects* has been reduced by $60.914 million or 18.6%, from $326.988 million to $266.074 million to reflect updates in program prioritization.
  - A decrease in funding of $59.794 million or 16.0% from $373.305 million to $313.511 million is anticipated for *Humber* Wastew*ater Treatment capital upgrades* to reflect updated delivery timelines for the Secondary Treatment at the North Plant.
  - *The Watermain Rehabilitation project* has decreased funding of $43.777 million or 6.6%, from $662.183 million to $618.406 million reflecting estimated delivery timelines and priority.
  - Decrease in costs totalling $65.039 million for several projects including *Sewer and Watermain Replacement projects and Highland Creek Wastewater Treatment Plant upgrades.*

- Over the 2019-2028 planning period, there are also cashflow changes that reflect updated project schedules for and realignment of projects between different program areas.

- Stage gating for project delivery is regularly applied to all Toronto Water capital projects. Toronto Water also continues to monitor its expenditures throughout the year and revises projections accordingly based on the internal and external capacity to deliver. In order to improve spending rates, Toronto Water routinely realigns project costs and cash flows with actual spending through regular reporting to Council. This practice is anticipated to continue in 2019.

OTHER ISSUES IMPACTING THE 2019 BUDGET

Water Consumption Forecast

- Over the last ten years, water consumption has continued to decline, despite population growth. Besides weather conditions, the decline in water consumption is attributed to water efficiency measures and economic factors. Toronto's water consumption has declined from 374 million cubic metres in 2005 to 327 million cubic metres at the end of 2015, representing a 15% reduction over the period.
- In 2016 and 2017, water consumption levels have been impacted by extreme swings in precipitation.
  - Although 2016 water consumption was projected to decline further, due to unexpectedly dry and warm summer weather conditions actual water consumption exceeded 2015 actual consumption by almost 2%. This was the first year in over a decade with an increase in water consumption.
  - In contrast, in 2017, there was a significant drop in actual water consumption compared to the same period of 2016, as a result of a cooler, wet spring and summer, with record breaking rainfall experienced during the first 5 months. The summer consumption in 2017 was the lowest in the summer months over the last 10 years - 3% lower than in 2015 and 7% lower than in 2016.
- In order to mitigate the impact of irregular weather patterns that occurred in 2016 and 2017, the 2018 water consumption projections were based on the 2015 actual consumption, assuming that the 2018 and future year water consumption (2019-2027) will continue to decline at a moderate annual rate of 0.5%.
- Due to extremely warm weather during the 2018 summer months (June and July in particular), actual water consumption was higher than initially anticipated (approaching the 2015 levels for the same period, rather than 1.5% below 2015 actuals).
- Based on October's data, consumption was 0.2% lower compared to 2015 actuals for the same period. This indicates slow return to normalized consumption outside of the higher summer consumption caused by warm weather. It is estimated that 2019 consumption projections should remain at 2% below 2015 actuals, similar to assumptions made in previous years.

Operating Budget Funding & Water Rate Increases

- Toronto Water is fully self-sustaining and does not rely on the municipal property tax levy for service delivery funding or borrowing/debenture financing for capital program. Operating and capital investments are funded from revenues generated by water and sewage rates established each year by Council and included in the City's By-law (Municipal Code, Chapter 849: Water and Sewage Services). Other sources of funding include revenue from the sale of water to York Region, industrial waste surcharges, private water agreements, service charges, and sundry revenue.
- In 2014, City Council endorsed the direction that Toronto Water's budgets prepared for 2015 and 2016 be premised on 8% water and wastewater consumption rate increases, followed by successive 5% increases in 2017 and 2018, followed by inflationary rate increase of 3% in the remaining years of the 10-Year Capital Plan period, in order to reinstate approximately $1 billion in capital funding lost from a systematic decline in consumption and to fund emerging projects.
- For 2019, Toronto Water's 10 Year Capital Plan has been revised to allow Toronto Water to deliver on key priorities, while also addressing emerging service improvement and growth projects. In accordance with the project delivery schedule, an annual rate increase of 3% from 2019 to 2028 is recommended and incorporated in the 2019 Water and Wastewater Rate Model.
- The 2019 annualized water and wastewater rate increase of 3% or 3.98% effective rate, will generate an additional $29.094 million in revenues (net of projected consumption decline of $6.461 million in 2019).

- The following Charts show the 2019 combined water and wastewater consumption rates and the rate increase impact on average residential, as well as commercial and industrial customers, based on their average consumption.

Chart 1 - Water and Wastewater Rate Increase

Annual Consumption	Paid on or before the due date, $/m3	Paid after the due date, $/m3
Block 1 - All consumers of water, including the first 5,000 cubic metres per year consumed by Industrial users ("Block 1 rate")	3.9549	4.1630
Block 2 - Industrial process – use water consumption over 5,000 cubic metres per year, representing a 30% reduction from the Block 1 Rate ("Block 2 rate')	2.7684	2.9141

Chart 2 - 2019 Water Rate Impact

Type of Property	Average Consumption, m3/year	2018 Cost	2019 Projected Annualized Cost	2019 Rate Increase Impact	
Residential	240	$913	$940	$27	3.0%
Commercial	100,000	$380,360	$391,708	$11,348	3.0%
Industrial	100,000	$271,937	$280,049	$8,113	3.0%
Large Industrial	1,000,000	$2,668,007	$2,747,602	$79,595	3.0%

Capital Financing Reserve Balances

- Based on the above water consumption and water and wastewater rates, sufficient revenues will be generated to fund the 2019-2028 Capital Budget and Plan, leaving a positive capital financing reserve balance of $213.3 million at the end of the 10-year period.
  - The lowest reserve balance is projected for years 2023 and 2024 at approximately $23.3 million and $31.9 million respectively, as some of the largest multi-year projects are nearing completion.
- The following should be noted:
  - Although the 2019 Rate Model indicates positive reserve balance at the end of the 10-year period, it is important to emphasize that the recommended 10-Year Capital Plan allocates Toronto Water's own capital reserve funding for the growth related projects totaling approximately $603.4 million, due to insufficient development charge funding to be collected over the 10-year period (for more details please see "Planning for Growth" section below).
  - Unit rate pricing for linear infrastructure renewal has escalated in recent years, requiring additional funding to cover these increased project costs. As a result, the Program has deferred some previously planned capital projects by 1 to 5 years, to align with the Water and Wastewater Rate Model financial projections of available rate funding. This trend, if it continues, will not only significantly impact the state of good repair backlog for infrastructure renewal, but possibly create funding pressures in future years.

- Toronto Water's 10-Year Capital Plan includes forecasted funding of $76.5 million for the expanded TRCA Watercourse Erosion Control project, to be spent between 2020 and 2028. It is assumed that 2/3 ($51.0 million) will be funded by other orders of government. This funding has yet to be secured.
- The 10-Year Capital Plan does not include any funding for unmet need projects identified by TRCA during the 2019 Budget process.
- Should any of the above funding be added to the 10-Year Capital Plan, the 2028 year-end capital financing reserve fund balance would be significantly reduced, if not depleted.
- Also, based on the fact that the reserve balance decreases to approximately $23.3 million in 2024, as some of the largest multi-year projects are nearing completion, any further decline in water consumption would require an adjustment to the 10-Year Capital Plan's projects.

ISSUES REFERRED TO THE 2019 BUDGET PROCESS

Contribution to Tree Canopy Reserve

- At its meeting of February 12, 2018 In consideration of the 2018 Operating Budget for Parks, Forestry and Recreation, City Council approved the following Motion:
  - City Council request the General Manager, Toronto Water bring forward for Council consideration as part of the 2019 budget process, a one-time contribution of $3 million to the Tree Canopy Reserve which would increase Toronto Water's contribution towards tree planting and maintenance from $1.95 million to $4.95 million, to include funds for front lawn and boulevard sod repair and replacement after completion of various capital works

    http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2018.EX31.2
- This new/enhanced business case is not recommended since the Motion refers to front lawn and boulevard sod repair and replacement work that is regularly performed by Toronto Water after completion of capital projects for which no additional funding is required.

Adequate Water Reserve Levels

- As part of the 2018 Budget Process, the Budget Committee discussed and requested that the General Manager, Toronto Water, in consultation with the Chief Financial Officer, report to the Budget Committee, as part of the 2019 Budget process, on strategies to build and maintain adequate water reserve levels.
  - Toronto Water requires successive water increases to fund continued infrastructure investment and conform to the pay-as-you go financing strategy.
  - Managing positive reserve balances during major capital spending years remains to be a challenge for Toronto Water.
  - In 2019, Toronto Water's 10-Year Capital Plan has been revised to allow Toronto Water to deliver on key priorities, while also addressing emerging service improvement and growth projects. In accordance with the project delivery schedule, an annual rate increase of 3% from 2019 to 2028 is recommended and incorporated in the 2019 Water and Wastewater Rate Model.
  - Toronto Water is currently in discussions with the York Region to evaluate various pricing models and terms and conditions of the existing contract to ensure full cost recovery, fair return and reserve contribution for the shared infrastructure assets. In 2016, the Auditor General determined that since the execution of the contract in 2005, several economic and environmental factors that impact water pricing model in meeting the original business objectives have changed, including continued aging of infrastructure and changes in consumer water consumption behavior.
  - As the rapid growth in the core and mid-town are putting pressure on the existing linear infrastructure, new strategies are required to address this growth. This in particular as Toronto Water is experiencing a DC

funding shortfall resulting in additional pressure on its capital financing reserves and possible deferrals in the State of Good Repair and Service Improvement programs.

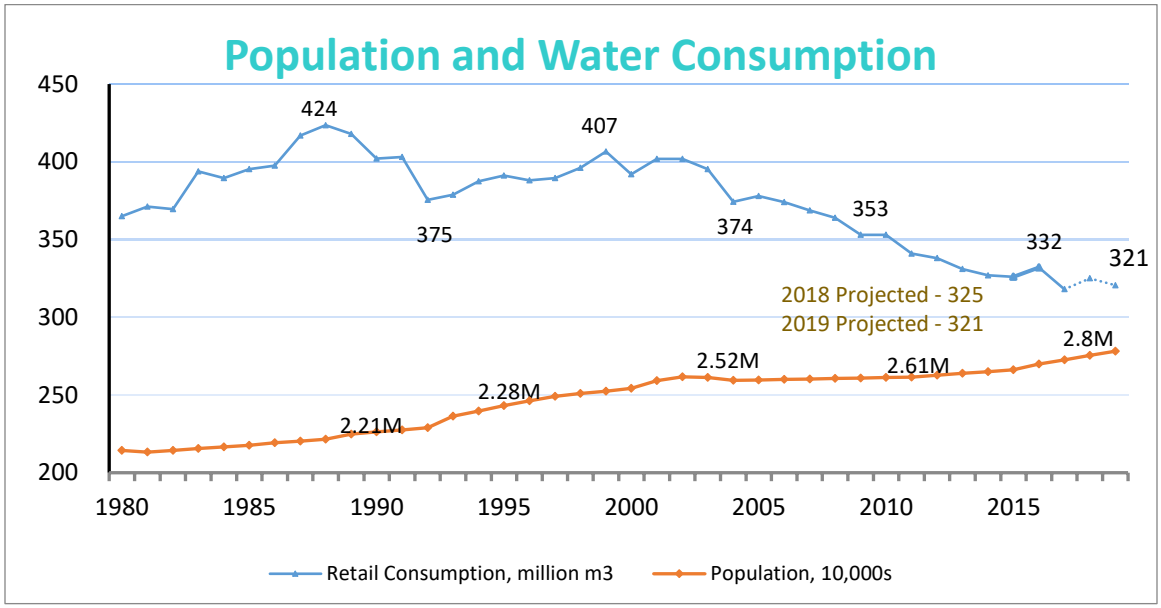
- Further details have been provided throughout 2019 Budget Notes and the 2019 Water and Wastewater Consumption and Service Fees Report.

ISSUES IMPACTING FUTURE YEARS

Impact of Lower Water Consumption Forecasts on Water and Wastewater Rate Revenues

- Over the last decade, despite the increase in population, there has been a trend towards reduced water consumption as shown in Chart 3 below. Any additional revenues generated by annual rate increases over that period have been reduced by the steady decline in water consumption predominantly attributed to water efficiency measures and economic factors.

Chart 3 - Toronto Retail Water Consumption



- A systematic and permanent decline (October to April) in baseline water consumption of 1.5% annually on average has been recorded over the last 10 year period (2008-2017). However, in the last 5 years the average annual drop in winter consumption is closer to 1%, showing a trend of reduced decline.
- Summer consumption although more weather dependent and less indicative for planning purposes, also shows an overall reduction of about 10% over the same period, with average annual summer consumption fluctuations of over 10% in each of the last 3 years.
- Given the impact of irregular weather patterns that occurred in 2016 (a year with exceptionally high consumption) and in 2017 (a year with very low consumption), 2018 and 2019 consumption projections are based on 2015 actual consumption.
  - Toronto's water consumption to 2018 year-end is estimated at 324.8 million cubic meters, and it is 0.6% lower than 2015 actual consumption, based on the billing data to the end of October 2018.
  - 2019 consumption is projected to be 2% below 2015 actual, applying a 0.5% decrease a year.
- Similar to previous years, the 2019 Water and Wastewater Model assumes that future year consumption (2020-2028) will continue to decline by 0.5% annually.

- Additional detail on historical and forecasted water consumption and production, as well as its impact on the Toronto Water Capital Reserve is available in the 2019 Water and Wastewater Consumption Rates and Service Fees report.

Legislative and Regulatory Compliance and Other Operating Cost Pressures

- One of the main challenges facing Toronto Water in future years will be the management of the continuously increasing costs from both, internal and external sources.
- Personnel costs and inflationary pressures related to costs for materials and supplies, electricity, chemicals and parts, as well as machinery and services are ongoing. In 2019 alone, non-salary inflationary increases approximate $6.551 million, with additional $3.390 million required to accommodate cost of living adjustments and progression and step increases. Some cost increases, hydro costs in particular) exceed the rate of inflation. There is also an impact of a weaker Canadian currency.
    - Toronto Water will continue to perform trials and testing to determine the optimal performance of treatment plants and pumping stations, since fluctuations in hydro costs were observed as different trials were conducted in order to stabilize hydro requirements.
    - Some of those initiatives have already resulted in significant savings in 2017 ($5.832 million), 2018 ($2.632 million), as well as 2019 ($1.223 million) that assisted Toronto Water in offsetting some of other base expenditure pressures.
    - Toronto Water continues to review these additional costs together with the existing maintenance program and determine whether there is any opportunity for efficiencies such that these amounts can be reduced.
- As a result of frequent changes in legislative requirements and the need to comply with Provincial and Federal regulations, Toronto Water continues to experience increased operating and capital costs.
    - This is particularly challenging in terms of planning and allocating appropriate staff resources to maintain legislative compliance.
- Similarly, costs resulting from the operating impact of completed capital projects for additional parts and contracted services such as Ashbridges Bay Treatment Plant Upgrades (P Building), Humber Treatment Upgrades (Gas Compressor System and Odour Control Upgrades), Highland Creek Treatment Plant Upgrades (process and facility upgrades) and Transmission Operations Optimizer project amount to $0.738 million in 2019. The incremental costs for maintenance of new equipment and facilities coming on-line (estimated at $7.381 million over the next 10 years) will remain a challenge for Toronto Water.
- In addition to its own new capital assets Toronto Water will assume responsibility for operations of capital assets completed by other programs such as Waterfront and Metrolinx. In 2019 these cost account for $0.185 million, with future incremental impacts of $0.365 million and $0.065 million in 2020 and 2021 respectively.
- Additional resources are also required to support and maintain new technology and resulting greater reliance on proprietary technologies.

Response to Severe Weather and Customer Needs

- As a result of extreme weather conditions, cold weather in particular, Toronto Water experienced a high level of watermain breaks, leaking water services and frozen water services in 2015 (approximately 2,546 in first quarter of 2015 compared to 1,094 in 2013 and 2,607 in 2014).
- Although weather conditions in subsequent years were not as extreme, Toronto Water continues to plan for emergency situations caused by the severe weather conditions, to ensure operational resilience and minimize risk to its assets.

- In order to provide more efficient and effective response to customer demands, during extreme events in particular, Toronto Water continues to implement transformational initiatives that set the stage for further improvements planned to increase customer satisfaction. The largest initiative (Customer Care Organizational Realignment) on which Toronto Water embarked in 2017 is anticipated to be completed by June 2019. It will unify all areas providing customer service under one umbrella with improved customer service culture, technology, infrastructure and the addition of a Customer Care Center.

Review of Capital Spending

- Toronto Water's spending capacity over the previous five years, from 2013 to 2017, has averaged $613.338 million or 81.9% for a capital budget of $748.709 million. The above average spending rate of 95.3% and 83.5% were achieved in 2014 and 2015 respectively.
- The 2019-2028 Staff Recommended Capital Budget and Plan represents the City's largest investment in infrastructure renewal so far totaling $13.6 Billion over 10 years. The 2019 Recommended Capital Budget of $960.500 million (including carry forward funding of $163.426 million) is higher than the historic 5-year average budget ($748.709 million) by approximately 28%, however, it is in line with the 2018 Capital Budget of $946.573 million.
- In 2019, Toronto Water will be awarding approximately $870 million in works supporting Ashbridges Bay Wastewater Treatment Plant (ABTP): Polymer Upgrade, Phase 2 of the ABTP Integrated Pumping Station Construction, Waste Activated Sludge Upgrades; Highland Creek Wastewater Treatment Plant Phase 1 Liquid Train Repairs and Aeration System Upgrades; Multiyear Sewer System Inspection works and 2021-2023 Standalone Linear Engineering to support the linear construction program; Multi-year Standalone Watermain Replacement Construction and the initiation of the remaining Basement Flooding Environmental Assessment Studies.

State of Good Repair (SOGR) Backlog

- Toronto Water currently has a significant infrastructure renewal backlog, higher than any other major Canadian urban centre. It has the largest asset base in the country, estimated at $28.561 billion with some infrastructure dating back to the 1800s.
- However, some of the City's oldest pipes (100 years or older) are still performing well. As Toronto Water plans for the renewal of aging infrastructure, a risk based mitigation approach is taken that considers infrastructure age, condition and performance assessment, and analysis on upsizing infrastructure, which may be required to service future growth, and opportunities to reduce overall costs.
- Toronto Water has undertaken some key initiatives to identify its State of Good Repair needs:
  - In 2018, Toronto Water completed an updated Watermain Breakage Reduction Study report which provides a framework for watermain renewal planning.
  - Closed camera TV (CCTV) inspection program that utilizes closed camera technology has been established to more fully assess the condition of sanitary and storm sewers.
- The projected 2018 year-end value of the infrastructure renewal backlog is estimated at $1.491 billion, reflecting 5.2% of Toronto Water's total asset value of $28.638 billion. This is based on a detailed analysis of current condition assessments and assumptions of service life by linear asset class, coupled with assessments of water and wastewater treatment facilities.
- The 10-Year Capital Plan State of Good Repair funding totals $6.744 billion that averages $674 million annually over the 10 year period. This level of funding will contribute towards reducing the watermain and sewer break rates. If the state of good repair backlog remains unchanged, the year-end backlog of $1.491 billion in 2018 will be effectively eliminated by the end of 2028.

- A continued trend in escalating unit rate pricing for linear infrastructure will significantly impact the state of good repair backlog for infrastructure renewal as project deferral is required to align with projected funding. These unit rates are mostly impacted by construction industry capacity to deliver projects across the City.
- The Program's State of Good Repair Backlog analysis excludes stormwater management facilities (stormwater ponds and underground storage tanks) as they are relatively new assets, as well as stream restoration from erosion scars. A condition assessment of stormwater ponds was undertaken to determine long term state of good repair requirements. Restoration of watercourses is planned on a priority basis to protect existing infrastructure and in coordination with the Toronto Region Conservation Authority based on site conditions resulting from extreme weather events.

Basement Flooding

- In April 2006, City Council approved a Basement Flooding Protection Work Plan (now referred to as the Basement Flooding Protection Program) to undertake comprehensive engineering studies in 31 basement flooding study areas that experienced significant flooding during extreme storms in May 2000 and August 2005.
- New service level standards were adopted, requiring storm drainage systems to accommodate a 1 in 100 year return frequency storm event, up from then current 1 in 2 to 1 in 5 year return frequency storm.
- Between 2006 and 2015, the number of study areas in the City was increased to 67 study areas and in response to additional storm events and new occurrences of basement flooding, City Council approved the city-wide expansion of the Basement Flooding Protection Program.
- In August 2014, Council approved an expanded program management capital delivery model for the Basement Flooding Protection Program that delivers more effectively a larger number of infrastructure improvements, and meets the needs of the city-wide expansion of the Program.
- As of the end of October 2018, Basement Flooding Environmental Assessment (EA) studies for 35 Basement Flooding Study Areas have been completed. These EA studies investigate the causes of basement and surface flooding and recommend sewer system improvements to reduce the risk of future basement flooding during extreme storms. Another 8 studies are ongoing; of these 6 studies are to be completed in early 2019 and 2 studies are planned for completion in 2020.
- In response to recent flooding events Toronto Water has accelerated funding for all remaining 24 study areas to begin in 2019.
- The construction of basement flooding protection projects began in 2009. Many challenges exist with the implementation of works recommended by the EA studies. Retrofitting an area to accommodate the higher level of storm drainage and overland flow controls in existing fully developed areas present the most significant challenge in terms of cost, scheduling and disruption to the local communities.
- By the end of 2018, it is projected that $370 million will have been spent on construction activities and activities supporting the construction (including engineering, design, studies and flow monitoring) of the Basement Flooding Protection projects.
- The 2019 – 2028 Capital Budget and Plan includes $1.671 billion in funding for Basement Flooding Protection Program projects. Despite this level of funding, Toronto Water will continue to face the following challenges:
  - A need to coordinate basement flooding projects with other City programs/works adds more complexity to the implementation of this Program.
  - Some of the recommended basement flooding protection projects from completed basement flooding EA studies have a cost that is greater than the Council adopted threshold of $32,000 per benefitting property, and therefore these projects are not proceeding to engineering design and construction.
  - The cost to implement basement flooding protection projects across all 67 study areas need to be continuously updated, as basement flooding EA studies are completed and new works are recommended.

Stream Restoration and Critical Erosion Projects

- As a part of its Stormwater Management Program, Toronto Water provides an annual funding contribution to the Toronto and Region Conservation Authority (TRCA) for stream restoration and erosion control projects. The 2019-2028 Capital Budget and Plan allocates a total of $155.122 million over a 10-year period, as Toronto Water continues to support the TRCA's efforts in watercourse management.
- Toronto Water's 2019-2028 Capital Budget and Plan also includes further funding of $130.958 million over the next 10 year horizon for stream restoration and erosion management to carry out work to protect its own infrastructure in valley lands.

Planning for Growth

- The City of Toronto is experiencing significant growth with many landowners submitting development applications to increase the density permitted by the zoning-by-law.
- Due to phase-in of DC rate increases and DC exemptions such as those for affordable housing and most non-residential development (as approved by City Council), projected revenues that would be otherwise collected based on the approved project eligibility criteria, are discounted from $1.487 billion to $0.884 billion (60%) over the 10-year period.
- Remaining available DC funding was not sufficient to fund TW's 10-Year Capital Plan for growth, resulting in the following adjustments which are reflected in the 2019-2028 Recommended Capital Budget and Plan:
  - several new/change in scope and future year growth related wastewater/storm water projects have been partially or wholly funded from the rate supported capital financing reserves.
  - In total the 2019-2028 Capital Budget and Plan includes $603.4 million in funding for growth related capital expenditures from capital financing reserves due to inadequate DC reserve availability related discounted DC collections and/or to lagged DC recovery of expenditures (which will be recovered in the future).
- A strategy is required that i) recognizes the impact of DC exemptions and phase-ins on funding availability, and ii) enables the program to proceed with projects where DC recoveries lag expenditures but will be available in future years.

Other Challenges

- Planning for Extreme Weather Events
  - Due to extreme cold weather events, Toronto Water experienced an unprecedented number of watermain breaks, leaking and frozen water services, not seen in 20 years, resulting in additional funding requirements in 2014 and 2015. Planning and preparing for an adequate response during extreme weather events remains to be a challenge for Toronto Water. This process is on-going.
- Impact of Transit Initiatives
  - Transit improvements across the City have had a significant impact on Toronto Water's underground infrastructure. They involve third party projects (Metrolinx, Smart Track, TTC etc.) and require additional resources.
- Need for Modernization
  - Toronto Water is investing in new technologies such as Geographic Information Systems and enhanced data management, due to an aging suite of information technology tools and databases. Toronto Water recently completed a "Technology Optimization Strategy" that highlights the increasing volume of data and use of technology within Toronto Water and the critical need for future strategic direction.

- Workforce Planning & Development
  - Hiring strategies for critical, vulnerable and hard to fill positions including on-the-job training programs, continue to present a challenge. For example, in 2018 only (January - November), Toronto Water experienced 602 staffing changes involving hires (170), exits (197) and internal movements (235).
- Asset Management
  - The Municipal Asset Management Planning Regulation (Ontario Regulation 588/17) requires every municipality to prepare an asset management plan in respect of its core municipal infrastructure assets by July 1, 2021, and in respect of all other municipal infrastructure assets by July 1, 2023. This impacts Toronto Water in particular.
  - Toronto Water is participating in the preparation of the Corporate Asset Management Policy for adoption by July 1, 2019 and aligning its data framework for the development of Asset Management Plans to meet the requirements of the provincial Asset Management Regulation by July 1, 2021.

Unmet Needs (S7) Prioritization

- Toronto Water's 10-Year Capital Plan is based on the capacity to deliver (85% spending rate included for planning purposes). Toronto Water does not have any unmet needs over the next 10-year planning horizon.

Unfunded Pressures in Other Budgets

TRCA Unfunded Projects

- As part of the 2019 Budget Process TRCA submitted an updated list of its unmet needs totaling $343.209 million over the 10 year period.
- Funding of the TRCA unmet meets continues to be a subject of on-going discussion and work on the further development of business cases/studies for each project, refinement of cost estimates and prioritization of needs. Only projects that are within Toronto Water's mandate will be considered eligible for water rate funding
- The largest project included in the list of unmet needs is the Scarborough Waterfront Project (SWP). The Scarborough Waterfront Project Environmental Assessment (EA) and Preferred Alternative has been completed and submitted to the Ministry of the Environment, Conservation and Parks (MECP) for formal review earlier this year. The estimated preliminary project costs are approximately $172 million including additional costs required for post implementation and monitoring.
  - City Council authorised the TRCA to pursue in consultation with the City eligible funding program opportunities from other orders of government. Subject to a favorable decisions from the MECP, City Council also authorised the TRCA to advance to Stage 2 Work Plan and requested a report back to the Executive Committee with preliminary costing for all segment design and implementation.

Waterfront Unfunded Projects

- There is approximately $114 million in unfunded water and stormwater capital projects related to the Port Lands Development currently shown as S7 projects in the Waterfront Budget, with further $362.3 million anticipated beyond 2028.

REPORTING ON MAJOR CAPITAL PROJECTS: STATUS UPDATE

In compliance with the Auditor General's recommendations to strengthen accountability, additional status reporting on all major capital projects is required. The following projects have been reported on a quarterly basis during 2018:

Rosehill Pumping Station

Project overview and Deliverables

- The City of Toronto is carrying out rehabilitation works to the Rosehill Pumping Station at 240 Mount Pleasant Road. These necessary upgrades will extend its service life and bring the infrastructure to a state of good repair. Upgrades to the pumping station, inclusive of the System Sustainability improvements will include: construction of a two-storey building addition; installation of diesel generators in the building addition to provide stand-by power for resilience; replacement of process valves: replacement of electrical, mechanical, lighting & HVAC systems; and structural and architectural refurbishment. This pumping station transmits drinking water to residents and businesses in Toronto and portions of York Region. This work will improve the aging infrastructure and ensure continued, uninterrupted production of clean drinking water for years to come.

Financial Update

Project name (In $000s)	Initial Approval Date	Approved Project Cost	Life to Date Expenditures as at Dec 31, 2017	2018 Budget	2018 Year-End Projection *	2019 Budget	2020 Plan	Projection To End of Project	Status	End Date Planned	End Date Revised	On Budget	On Time
Rosehill PS Rehab	Jan-15	5,812	1,239	2,890	2,294	1,464	1,197	5,812	On Track	Dec-21	Dec-21	G	G

* 2018 year-end projection based on the Q3 capital variance

On Budget		On Time
> 70% of Approved Project Cost	G	On/Ahead of Schedule
Between 50% and 70%	Y	Minor Delay < 6 months
< 50% or >100% of Approved Project Cost	R	Significant Delay > 6 months

Project Status

- The construction started in 2017 and is currently on-going.

2019 Plan

- The 2019 schedule includes: completion of the building addition; completion of architectural work; completion of electrical, mechanical, lighting and HVAC systems replacement; and installation of diesel generator equipment.

Key Project Challenges

- Key Challenges on this retro-fit project include: integration and commissioning of the diesel generators into the pumping station; coordination of construction while the pumping station is predominantly kept operational; and coordination of periodic pumping station shut-downs.

Ashbridges Bay Outfall Construction

Project overview and Deliverables

- A new outfall is being built to improve capacity and better convey and disperse the effluent from the Ashbridges Bay Wastewater Treatment Plant (ABTP) into Lake Ontario. The new outfall will replace the 70-year old existing outfall, which has insufficient capacity and is reaching the end of its service life. The new outfall will include the construction of a 14 metres internal diameter shaft approximately 85 metres deep and a 7 metres internal diameter tunnel approximately 3.5 km long mined through rock beneath the lakebed, with fifty (50) 1 metre diameter risers (for the effluent dispersion in the lake) to be built at the last 1 kilometre of the tunnel. The new outfall will help improve the City's shoreline and beaches, meeting all regulatory standards to improve water quality in Lake Ontario.

Financial Update

Project name (In $000s)	Initial Approval Date	Approved Project Cost	Life to Date Expenditures as at Dec 31, 2017	2018 Budget	2018 Year-End Projection *	2019 Budget	2020 Plan	Projection To End of Project	Status	End Date Planned	End Date Revised	On Budget	On Time
Ashbridges Bay Outfall Construction	Jan-18	327,000	2,941	5,000	5,000	35,000	60,500	327,000	On Track	Dec-25	Dec-25	G	G

* 2018 year-end projection based on the Q3 capital variance

On Budget		On Time
> 70% of Approved Project Cost	G	On/Ahead of Schedule
Between 50% and 70%	Y	Minor Delay < 6 months
< 50% or >100% of Approved Project Cost	R	Significant Delay > 6 months

Project Status

- The construction contract was awarded in November 2018. Construction started on January 7, 2019 and is currently on-going.

2019 Plan

- 2019 activities will include; contractor mobilization and establishment of the site; improvements to the intersection of Leslie and Unwin; electrical connections with Toronto Hydro power supply. The following works will also be initiated in 2019: excavation for the shaft; marine work with establishment of barge and drilling of diffusers into the lake bed.

Key Project Challenges

- Key Project Challenges include: marine work restrictions, weather, alignment of risers with future outfall tunnel; potential unforeseen adverse ground conditions during shaft excavation and tunnel boring.

Don and Central Waterfront Trunk/CSO Construction – Phase 1 (Coxwell By Pass Tunnel)

Project overview and Deliverables

- The Don and Central Waterfront Wet Weather Flow System project is the largest and most significant water quality improvement undertaken in the City of Toronto. Once fully implemented, the Program will virtually eliminate the release of combined sewer overflows into the Lower Don River, Taylor-Massey Creek and Toronto's inner Harbour. It will also provide erosion and sediment control in Ashbridges Bay.
- Phase 1 of the Don and Central Waterfront project began construction in 2018 and includes the construction of the Coxwell Bypass Tunnel. This tunnel will initially serve as a bypass tunnel for the existing Coxwell Sanitary Trunk Sewer for inspection and maintenance purposes, and carry wastewater to the Ashbridges Bay Treatment Plant for treatment. Ultimately, when all phases of the Don and Central Waterfront Project are completed, the Coxwell Bypass tunnel will principally be used for the interception and conveyance of stormwater and combined sewer overflows at 12 locations to a new high rate wet weather flow treatment facility at the Ashbridges Bay Treatment Plant. The Coxwell Bypass Tunnel construction consists of a 10.5 kilometres in length, 6.3 metre diameter, concrete-lined rock tunnel, with five storage and tunnel access shafts that range in diameter from 20 to 22 metres at depths of 52 to 59 metres, and 12 small diameter connecting tunnels to drop shafts and tunnel air vents.

Financial Update

Project name (In $000s)	Initial Approval Date	Approved Project Cost	Life to Date Expenditures as at Dec 31, 2017	2018 Budget	2018 Year-End Projection *	2019 Budget	2020 Plan	Projection To End of Project	Status	End Date Planned	End Date Revised	On Budget	On Time
Don & Waterfront Trunk/CSO Construction - PHASE 1	Jan-18	500,000	16,027	17,500	45,000	83,895	76,748	500,000	On Track	Jan-24	Jan-24	G	G

* 2018 year-end projection based on the Q3 capital variance

On Budget		On Time
> 70% of Approved Project Cost	G	On/Ahead of Schedule
Between 50% and 70%	Y	Minor Delay < 6 months
< 50% or >100% of Approved Project Cost	R	Significant Delay > 6 months

Project Status

- Construction Started in mid-2018 and is currently on-going.

2019 Plan

- 2019 activities will include; excavation of the five main shafts will continue from 2018, electrical service will be installed by Toronto Hydro to power the Tunnel Boring Machine. The Tunnel Boring Machine is expected to be delivered in 2019.

Key Project Challenges

- The project is currently proceeding well.

St Clair Reservoir

Project overview and Deliverables

- The City of Toronto is carrying out waterproofing and structure rehabilitation work to the St. Clair Reservoir at Sir Winston Churchill Park. These necessary upgrades will help to ensure the structural integrity of the reservoir, extend its service life and bring the infrastructure to a state of good repair. This 87-year-old reservoir provides storage for drinking water and fire protection for local residents. This work will improve the aging infrastructure and ensure continued, uninterrupted production of clean drinking water for years to come.

Financial Update

Project name (In $000s)	Initial Approval Date	Approved Project Cost	Life to Date Expenditures as at Dec 31, 2017	2018 Budget	2018 Year-End Projection *	2019 Budget	2020 Plan	Projection To End of Project	Status	End Date Planned	End Date Revised	On Budget	On Time
St. Clair Reservoir	Jan-14	27,442	16,642	6,984	6,984	5,300	3,029	27,442	On Track	Dec-21	Dec-21	G	G

* 2018 year-end projection based on the Q3 capital variance

On Budget		On Time
> 70% of Approved Project Cost	G	On/Ahead of Schedule
Between 50% and 70%	Y	Minor Delay < 6 months
< 50% or >100% of Approved Project Cost	R	Significant Delay > 6 months

Project Status

- Construction began in July 2016, and construction is currently on-going.

2019 Plan

- 2019 activities will include substantial completion for the construction works.

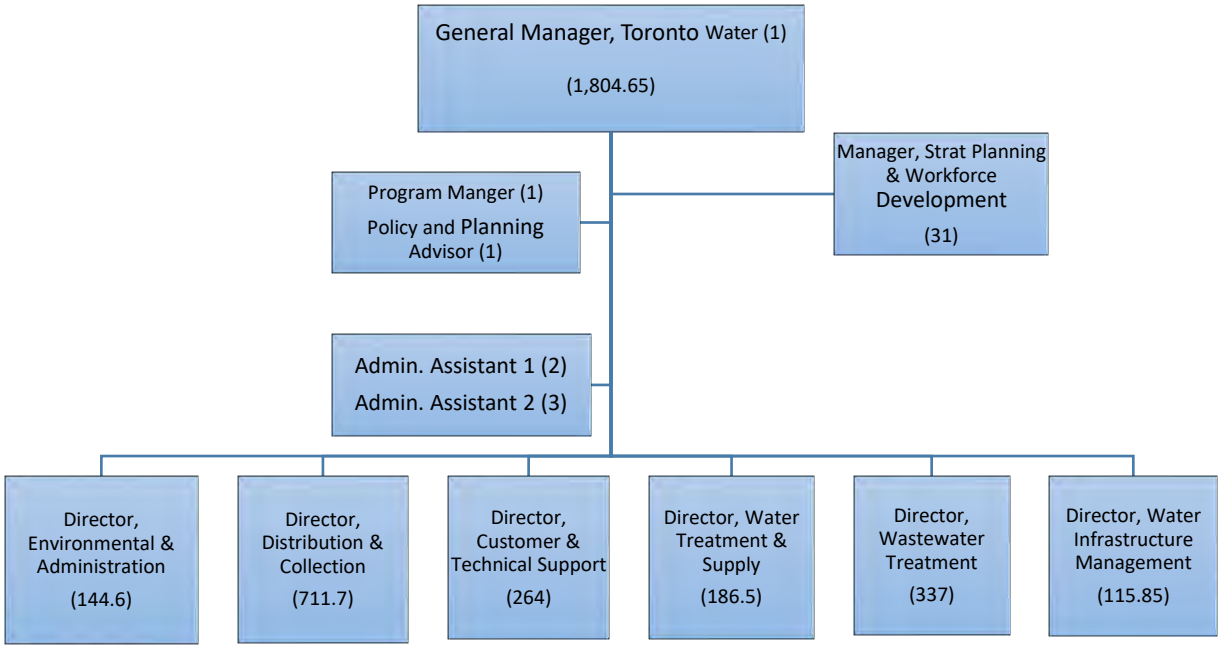
Key Project Challenges

- This project is proceeding well. Two pending issues in relation to public areas on top of the reservoirs including a Dog Off Leash Area and the consideration for additional tennis courts on top of the reservoir. Resolution of these items is pending from a December 2018 public event.

APPENDICES

Appendix 1

2019 Organization Chart



The 2019 total staff complement includes the General Manager and staff for a total 1,804.65 positions, comprising 84.4 capital positions and 1721.3 operating positions as summarized in the table below.

2019 Total Complement

	Category	Senior Management	Management with Direct Reports	Management without Direct Reports/Exempt Professional & Clerical	Union	Total
Operating	Permanent	1.0	170.0	187.0	1,304.0	1,662.0
	Temporary				59.3	59.3
	Total Operating	1.0	170.0	187.0	1,363.3	1,721.3
Capital	Permanent		1.0	4.0	30.0	35.0
	Temporary		5.0	9.0	35.4	49.4
	Total Capital		6.0	13.0	65.4	84.4
Grand Total		**1.0**	**176.0**	**200.0**	**1,428.7**	**1,805.6**

Appendix 2

2019 Operating Budget by Service

Water Treatment and Supply

(In $000s)	2018 Approved Budget	2019 Base	2019 New / Enhanced	2019 Total Staff Recommended Budget	Changes		Incremental Change 2020 Plan	Incremental Change 2021 Plan
By Service	$	$	$	$	$	%	$	$
TW-Water Distribution								
Gross Expenditures	88,092.9	92,051.7	4,837.4	96,889.1	8,796.2	10.0%	7,243.1	1,913.5
Revenue	275,891.7	283,735.2	1,293.2	285,028.4	9,136.6	3.3%	10,412.4	7,273.1
Capital Contribution	187,798.9	191,683.5	(3,544.2)	188,139.3	340.4	0.2%	3,169.3	5,359.6
Water Treatment								
Gross Expenditures	102,830.4	104,440.4	40.1	104,480.4	1,650.0	1.6%	3,463.1	2,962.9
Revenue	289,562.9	301,219.2	16.1	301,235.3	11,672.4	4.0%	9,344.9	6,723.1
Capital Contribution	186,732.5	196,778.9	(24.0)	196,754.9	10,022.4	5.4%	5,881.7	3,760.2
Total								
Gross Expenditures	190,923.3	196,492.1	4,877.4	201,369.5	10,446.3	5.5%	10,706.2	4,876.4
Revenue	565,454.7	584,954.4	1,309.3	586,263.7	20,809.1	3.7%	19,757.3	13,996.2
Total Capital Contribution	374,531.4	388,462.3	(3,568.2)	384,894.2	10,362.8	2.8%	9,051.0	9,119.8
Approved Positions	748.1	779.2	18.7	797.9	49.8	6.7%	16.8	2.0

Wastewater Collection and Treatment

(In $000s)	2018 Approved Budget	2019 Base	2019 New / Enhanced	2019 Total Staff Recommended Budget	Changes		Incremental Change 2020 Plan	Incremental Change 2021 Plan
By Service	$	$	$	$	$	%	$	$
TW-Wastewater Collection								
Gross Expenditures	59,268.8	59,634.2	2,582.8	62,216.9	2,948.1	5.0%	4,010.8	990.9
Revenue	180,321.3	185,592.1	695.7	186,287.8	5,966.5	3.3%	6,691.6	4,528.4
Capital Contribution	121,052.5	125,957.9	(1,887.1)	124,070.9	3,018.4	2.5%	2,680.8	3,537.5
TW-Wastewater Treatment								
Gross Expenditures	166,501.6	168,926.1	42.0	168,968.1	2,466.4	1.5%	4,725.0	4,374.8
Revenue	538,539.8	553,142.6	24.8	553,167.4	14,627.6	2.7%	18,450.7	13,262.5
Capital Contribution	372,038.2	384,216.5	(17.2)	384,199.3	12,161.2	3.3%	13,725.7	8,887.7
Total								
Gross Expenditures	225,770.4	228,560.3	2,624.7	231,185.0	5,414.5	2.4%	8,735.8	5,365.7
Revenue	718,861.1	738,734.7	720.5	739,455.2	20,594.1	2.9%	25,142.2	17,790.9
Total Capital Contribution	493,090.6	510,174.4	(1,904.2)	508,270.2	15,179.5	3.1%	16,406.5	12,425.2
Approved Positions	875.9	860.0	10.2	870.2	(5.7)	(0.7%)	15.9	3.9

2019 Operating Budget by Service -Continued

Stormwater Management

(In $000s)	2018 Approved Budget	2019 Base	2019 New / Enhanced	2019 Total Staff Recommended Budget	Changes		Incremental Change 2020 Plan	Incremental Change 2021 Plan
By Service	$	$	$	$	$	%	$	$
TW-Stormwater Collection								
Gross Expenditures	18,788.0	19,024.8	482.7	19,507.5	719.5	3.8%	879.3	174.7
Revenue	3,439.7	3,736.9	137.6	3,874.5	434.8	12.6%	168.2	(116.2)
Capital Contribution	(15,348.3)	(15,287.8)	(345.1)	(15,633.0)	(284.7)	1.9%	(711.0)	(290.9)
TW-Stormwater Treatment								
Gross Expenditures	11,770.1	11,806.8	0.1	11,806.9	36.8	0.3%	288.9	83.5
Revenue	1,531.5	1,643.3	0.0	1,643.3	111.8	7.3%	12.2	(160.7)
Capital Contribution	(10,238.6)	(10,163.6)	(0.1)	(10,163.7)	75.0	(0.7%)	(276.7)	(244.3)
Total								
Gross Expenditures	30,558.1	30,831.6	482.8	31,314.4	756.3	2.5%	1,168.2	258.2
Revenue	4,971.2	5,380.2	137.6	5,517.8	546.6	11.0%	180.5	(277.0)
Total Capital Contribution	(25,586.9)	(25,451.4)	(345.2)	(25,796.6)	(209.7)	0.8%	(987.7)	(535.2)
Approved Positions	140.7	135.4	2.1	137.6	(3.1)	(2.2%)	2.4	0.0

Appendix 3

2019 Service Levels

Water Treatment and Supply

Activity	Sub-Activity	Service Level Description	Status	2016	2017	2018	2019
Water Distribution	Service Connections	**% of time operating within 276 kPA to 793 kPA requirements***	Approved	Meeting the 40 to 100 psi requirement	99.5%	99.5%	99.50%
			Actual	99.5%	99.5%	99.5%	n.a
	Water Distribution System	# of mainbreaks per 100 km of pipe	Approved	20.8 mainbreaks per 100 km of pipe	23.1	23.1	**22****
			Actual	18.9	15.4	22	n.a.
Water Treatment	Water Pumping Stations	# of kWh/ML of water pumped	Approved	In compliance with aplicable legislation	340	340	**330****
			Actual	336	334	330	n.a
	Water Treatment Plants	# of non-compliance water treatment incidents	Approved	Meeting velocity and headloss design guidelines	0	0	0
			Actual	0	0	0	n.a
	Water Transmission Mains	# of transmission valve chambers inspected	Approved	In compliance with aplicable legislation	1,500	1,500	1,500
			Actual	1,280	1,550	1,500	n.a
	Water Storage Reservoirs	# of ML of storage capacity maintained	Approved	Meeting requirements for emergency storage and fire flows (consistently maintain 24 hours of storage capacity)	1,895	1,895	1,895
			Actual	1,895	1,895	1,895	n.a

* Reflects the same same service level as previously approved but expressed in the metric system units.

** Improved actual performance resulted in the revised target for 2019.

Overall, 2019 Service Levels for Water Treatment and Supply are consistent with the approved 2018 Service Levels for Water Treatment and Supply.

Wastewater Collection and Treatment

Activity	Sub-Activity	Service Level Description	Status	2016	2017	2018	2019
Wastewater Collection	Lateral Connection	% of sewer service line blocked requests resulting in repair or rehab (Work Orders)	Approved	Basement flooding being reduced through capital investment	30%	30%	30%
			Actual	35.0%	30%	33%	n.a
	Wastewater Collection System	mainline backups per 100km of pipe	Approved	5.27 mainline backups per 100 km of pipe	5.27	5.27	**4****
			Actual	4.90	3.8	4	n.a
Wastewater Treatment	Solids Management	% of samples not meeting NMA requirements	Approved	Consistently meeting compliance limits in	0%	0%	0%
			Actual	0%	0%	0%	n.a
	Wastewater Treatment Plants	# of non-compliance wastewater events	Approved	In compliance with all applicable legislation	0	0	0
			Actual	3	4	0	n.a
	Wastewater Pumping Stations*	% of wastewater pumping stations meeting legislative requirements	Approved	Meeting legislative compliance	100%	100%	100%
			Actual	100.0%	100%	100%	n.a

* In 2018 keyed in as Wastewater Treatment Plants Service Level instead of Wastewater Pumping Stations.

** Improved actual performance resulted in the revised target for 2019.

Overall, 2019 Service Levels for Wastewater Collection and Treatment are consistent with the approved 2018 Service Levels for Wastewater Collection and Treatment.

2019 Service Levels - Continued

Stormwater Management

Activity	Sub-Activity	Service Level Description	Status	2016	2017	2018	2019
Stormwater Collection	Stormwater Collection System	% of catch basins cleaned	Approved	Cost of storm pipes maintained is $1232/km	100%	100%	100%
			Actual	91.3%	85.89%	27%	n.a
	Stormwater Storage Facilities	# of ML of dedicated (designed) stormwater storage capacity	Approved	Meeting all Certificate of Approval requirements	1,248	**1275***	1,248
			Actual	1,246	1,248	1248	n.a
Stormwater Treatment	Stormwater Treatment Facilities	# of hectares of drainage area where quality control provided	Approved	Meeting all Certificate of Approval requirements	7,065	7,065	7,065
			Actual	6,990	6,990	7,065	n.a
	Stormwater Conveyance & Control System	% of stormwater conveyance & control systems meeting all Certificate of Approval Requirements	Approved	Meeting all Certificate of Approval requirements	100%	100%	100%
			Actual	100.0%	100%	100%	n.a

* The 2018 target was overstated. The 2019 target is flatlined with 2017.

Overall, 2019 Service Levels for Stormwater Management are consistent with the approved 2018 Service Levels for Stormwater Management.

Chamber Adjustment Program: Service Levels

- Commencing in 2019 Transportation Services will transfer *the Chamber Adjustment Program* to Toronto Water. The Program involves the rehabilitation of maintenance hole/valve and catch basin chambers to address deteriorated frames/covers and grade adjustment units to improve riding surface issues and overall structural integrity of the access chambers. It is required to ensure the state of good repair to Toronto Water assets.
- Associated approved service levels (currently maintained by Transportation Services) will be reviewed by Toronto Water once the Program is implemented to determine how they can be incorporated within Toronto Water's own services and activities and reported as appropriate with the 2020 Budget Process.

Appendix 4

Summary of 2019 Service Changes

Description ($000s)	Service Changes						Total Service Changes			Incremental Change			
	Water Treatment & Supply		Wastewater Collection &		Stormwater Management		$	$	#	2020 Plan		2021 Plan	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Pos.	Net	Pos.	Net	Pos.
Base Changes:													
Base Expenditure Changes													
Line By Line Review	(208.7)	(208.7)	(850.2)	(850.2)	(30.6)	(30.6)	(1,089.5)	(1,089.5)					
Payment in Lieu of Taxes Base Adjustment	(365.1)	(365.1)	(434.9)	(434.9)			(800.0)	(800.0)					
Base Revenue Changes													
Increase in Revenue from User Fees (Inflationary Factor)		(74.1)		(13.8)				(88.0)					
Increase in Contribution from Reserve Funds for Utility Cut Restoration Backlog		(1,756.0)		(2,327.7)				(4,083.6)					
Sub-Total	(573.7)	(2,403.8)	(1,285.2)	(3,626.7)	(30.6)	(30.6)	(1,889.5)	(6,061.0)					
Service Efficiencies													
Water and Wastewater Utility Efficiencies	(1,090.4)	(1,090.4)	(132.9)	(132.9)			(1,223.3)	(1,223.3)					
Sub-Total	(1,090.4)	(1,090.4)	(132.9)	(132.9)			(1,223.3)	(1,223.3)					
Total 2019 Service Changes	(1,664.1)	(3,494.2)	(1,418.1)	(3,759.6)	(30.6)	(30.6)	(3,112.8)	(7,284.4)					

2019 Operating Budget - Staff Recommended Service Changes
Summary by Service ($000's)

Form ID	Infrastructure and Development Services	Adjustments				2020 Plan Net Change	2021 Plan Net Change
Category / Equity Impact	Program - Toronto Water	Gross Expenditure	Revenue	Net	Approved Positions		
2019 Staff Recommended Base Budget Before Service Changes:		**457,107.3**	**1,329,069.3**	**(871,962.0)**	**1,774.65**	**(31,829.7)**	**(21,714.4)**
17196 / 51 No Impact	EF1: Water & Wastewater Utility Efficiencies						

Description:

Toronto Water's commitment to work on an Energy Optimization Plan with the goal to identify optimization opportunities and strategies to address all energy aspects of water and wastewater operations resulted in reduced electricity rates and consumption.

Some of these initiative include: (a) Load Shifting when pumping during off peak hours, maximizing reservoir and tank storage and taking advantage of the lower electricity prices at night; (b) Global adjustment days that involve the Hydro One/ IESO defined global adjustment days when the top electricity user's switch to on-site generators during a peak period; (c) Transmission Operations Optimizer program (TOO), which was launched in November 2015, optimizes pumping station operations and maximizes the use of reservoir storage to reduce peak electricity costs while maintaining supply to the distribution system and service delivery to Toronto Water customers; (d) As part of Toronto Water's Energy Optimization Plan, Toronto Water will also increase the FJ Horgan Water Treatment Plant's production volume to take advantage of its more efficient equipment, resulting from the recently completed upgrades.

In addition to hydro savings, Toronto Water anticipates reduced water costs, as a result of new equipment in some of its wastewater treatment plants enabling use of the effluent water in the treatment process, rather than potable water. Total savings from various initiatives are anticipated at $1.223 million and have been included in Toronto Water's 2019 Operating Budget.

Service Level Impact:

The recommended reduction will have no impact on the level of service delivered by Toronto Water. It recognizes the savings and efficiencies that Toronto Water has been able to achieve through implementation of various utility conservation oriented initiatives.

Equity Statement:

The proposal has no equity impacts.

Service: T W - Wastewater Collection & Treatment						
Total Staff Recommended Changes:	(132.9)	0.0	(132.9)	0.00	0.0	0.0
Service: T W - Water Treatment & Supply						
Total Staff Recommended Changes:	(1,090.4)	0.0	(1,090.4)	0.00	0.0	0.0
Staff Recommended Service Changes:	**(1,223.3)**	**0.0**	**(1,223.3)**	**0.00**	**0.0**	**0.0**

Category:
51 - Efficiency Change 52 - Revenue Change 59 - Service Change

2019 Operating Budget - Staff Recommended Service Changes
Summary by Service ($000's)

Form ID	Infrastructure and Development Services	Adjustments				2020 Plan Net Change	2021 Plan Net Change
Category / Equity Impact	Program - Toronto Water	Gross Expenditure	Revenue	Net	Approved Positions		
Summary:							
Staff Recommended Service Changes:		**(1,223.3)**	**0.0**	**(1,223.3)**	**0.00**	**0.0**	**0.0**
Staff Recommended Base Budget:		**455,884.0**	**1,329,069.3**	**(873,185.3)**	**1,774.65**	**(31,829.7)**	**(21,714.4)**

Category:

51 - Efficiency Change 52 - Revenue Change 59 - Service Change

Appendix 5

Summary of 2019 New / Enhanced Service Priorities

New / Enhanced Service Description (in $000s)	New and Enhanced Services Priorities						Total			Incremental Change			
	Water Treatment & Supply		Wastewater Collection & Treatment		Stormwater Management		$	$	Position	2020 Plan		2021 Plan	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net	#	Net	Pos.	Net	Pos.
Enhanced Service Priorities													
Staff Initiated:													
New Solicitor for Toronto Water (IDC/IDR TO Legal Services)	57.3	57.3	51.6	51.6	5.7	5.7	114.7	114.7		26.4		3.6	
Locates Clearing Program for Transportation Services	87.8	21.5	67.2	16.5	29.1	7.1	184.1	45.1	3.0	(2.4)		6.7	
Sub-Total Staff Initiated	**145.2**	**78.8**	**118.8**	**68.1**	**34.8**	**12.9**	**298.8**	**159.7**	**3.0**	**24.0**		**10.3**	
Total Enhanced Services	**145.2**	**78.8**	**118.8**	**68.1**	**34.8**	**12.9**	**298.8**	**159.7**	**3.0**	**24.0**		**10.3**	
New Service Priorities													
Council Directed:													
Utility Cut Program	4,540.9	3,452.3	2,403.1	1,827.0	427.6	325.1	7,371.6	5,604.4	24.0	7,645.0	11.0	691.1	
Bulk Water Fill Station Pilot New Fee	0.2	(14.9)	1.4	(18.6)	0.4	0.4	2.0	(33.0)		(342.0)			
Sub-Total Council Directed	**4,541.1**	**3,437.5**	**2,404.5**	**1,808.5**	**428.0**	**325.5**	**7,373.6**	**5,571.4**	**24.0**	**7,303.0**	**11.0**	**691.1**	
Staff Initiated:													
Dedicated Risk Insurance Staff	51.9	51.9	27.7	27.7	6.9	6.9	86.5	86.5	1.0	33.0		3.2	
Toronto Water Chamber Adjustment Program	139.3		73.7		13.1		226.1		3.0				
Sub-Total Staff Initiated	**191.2**	**51.9**	**101.4**	**27.7**	**20.0**	**6.9**	**312.6**	**86.5**	**4.0**	**33.0**		**3.2**	
Total New Service Priorities	**4,732.3**	**3,489.4**	**2,505.9**	**1,836.2**	**448.0**	**332.4**	**7,686.2**	**5,657.9**	**28.0**	**7,335.9**	**11.0**	**694.3**	
Total 2019 New / Enhanced Services	**4,877.4**	**3,568.2**	**2,624.7**	**1,904.2**	**482.8**	**345.2**	**7,985.0**	**5,817.6**	**31.0**	**7,360.0**	**11.0**	**704.6**	

2019 Operating Budget - Staff Recommended New and Enhanced Services Summary by Service ($000's)

Form ID		Infrastructure and Development Services	Adjustments				2020 Plan Net Change	2021 Plan Net Change
Category	Equity Impact	Program - Toronto Water	Gross Expenditure	Revenue	Net	Approved Positions		
17239		B11 - Locates Clearing Program for Transportation Services						
72	No Impact	**Description:**						

Toronto Water's Locates Clearing Program currently reviews of all Locate Tickets meeting a pre-determined filter criteria with Ontario One Call (ON1Call). The review process allows Toronto Water staff to clear the tickets by determining the type and quantity of municipal assets present within a proposed excavation site. Once the assets are identified and qualified, the site marking portion of the Locate is assigned to one of two Locate Service Providers (LSP) currently under contract to Toronto Water.

Due to the lack of dedicated resources in Transportation Services, ON1Call Tickets involving Transportation Services assets have been sent automatically to one of the LSPs for both clearing and site marking, frequently resulting in site markings that are not reflective of the actual presence of the City's infrastructure.

In January 2018, a pilot program was established so that Locate Tickets containing assets owned by Transportation Services were cleared and assigned to LSPs by Toronto Water staff together with Toronto Water assets. The pilot project initially involved one Engineering Technology Technician (ETT1). Based on the additional volume of tickets processed by Toronto Water staff due to this new arrangement, it was determined that the staff demand had significantly increased, resulting in a need for 3 Engineering Technologist Technicians at cost of $0.184 million gross, $0.045 million net. Transportation Services will fund these positions through an Interdepartmental Charge/Recovery (IDC/IDR) to Toronto Water. This model will provide saving opportunities by reducing the costs for Transportation Services Locate contracts. Transportation Services has included approximately $0.357 million in savings in their 2019 Staff Recommended Operating Budget to reflect this change in service delivery.

Service Level Impact:

The processing of Transportation Services Locate Tickets by Toronto Water staff, in conjunction with processing Locate Tickets for Toronto Water assets, allows the City to ensure control over the protection of municipally owned infrastructure. It will also improve on compliance and quality of service.

Equity Statement:

This proposal has no equity impacts.

Service: TW-Stormwater Management						
Total Staff Recommended Changes:	29.1	22.0	7.1	0.47	(0.4)	1.1
Service: TW-Wastewater Collection & Treatment						
Total Staff Recommended Changes:	67.2	50.7	16.5	1.09	(0.9)	2.4
Service: TW-Water Treatment & Supply						
Total Staff Recommended Changes:	87.8	66.4	21.5	1.43	(1.1)	3.2

Category:

71 - Operating Impact of New Capital Projects
72 - Enhanced Services-Service Expansion
74 - New Services
75 - New

Form ID Category	Equity Impact	Infrastructure and Development Services / Program - Toronto Water	Adjustments				2020 Plan Net Change	2021 Plan Net Change
			Gross Expenditure	Revenue	Net	Approved Positions		
		Staff Recommended New/Enhanced Services:	**184.1**	**139.1**	**45.1**	**3.00**	**(2.4)**	**6.7**

17916	New Solicitor for Toronto Water (IDC/IDR to Legal Services)
72	No Impact

Description:

Toronto Water is responding to growing community and regulatory pressures, including provision of key services (water supply, wastewater treatment and storm water management) to meet population growth and intensification in the downtown core and along the waterfront, as well as more stringent regulatory requirements for effluent quality, stewardship and environmental monitoring and protection (including the Safe Drinking Water Act, the Ontario Water Resources Act, Environmental Protection Act and the Environmental Assessment Act).

Key legal services are currently provided to Toronto Water through the Municipal Law section of the City's Legal Services by a team of three lawyers and partial services from a clerk. The demand for legal services, including preparation of contracts, procurement documents, legal notices and opinions, input to policy and regulatory development and review of staff reports is growing significantly. In addition, contractual agreements with third parties such as Enwave (in connection with the expansion of the Deep Lake Water Cooling system), and TRCA (waterfront and use agreements) require comprehensive time commitments and development of subject matter expertise. The demand growth for priority legal services has resulted in delays in operational needs including acquisition of priority equipment replacement parts and a need to establish service response procedures.

After reviewing the outstanding current legal service requests it was determined that the addition of a Solicitor 3 to the current team of lawyers providing services to Toronto Water will increase legal capacity to respond to these challenges. The new Solicitor 3 (Junior Lawyer) will support senior solicitors and Toronto Water's legal needs directly by performing variety of activities including development of contract templates for service agreements, reviewing background documents and preparing summaries, researching court decisions and case law and analyzing Federal and Provincial policy and regulatory requirements. Toronto Water will fund this position at cost of $0.115 million gross and net (with an incremental impact of $0.026 million in 2020) through an Interdepartmental Charge/Recovery (IDC/IDR) to Legal Services.

Service Level Impact:

Improved turnaround time of legal requests will allow for more efficient management of Toronto Water's staff resources. Examples include elimination of the bridging contracts or alternative procurement processes when delays are experienced in preparation of procurement documents.

Equity Statement:

This proposal has no equity impacts.

Service: TW-Stormwater Management

Total Staff Recommended Changes:	5.7	0.0	5.7	0.00	1.3	0.2

2019 Operating Budget - Staff Recommended New and Enhanced Services Summary by Service ($000's)

Form ID Category	Form ID Equity Impact	Infrastructure and Development Services / Program - Toronto Water	Adjustments: Gross Expenditure	Adjustments: Revenue	Adjustments: Net	Adjustments: Approved Positions	2020 Plan Net Change	2021 Plan Net Change
		Service: TW-Wastewater Collection & Treatment						
		Total Staff Recommended Changes:	51.6	0.0	51.6	0.00	11.9	1.6
		Service: TW-Water Treatment & Supply						
		Total Staff Recommended Changes:	57.3	0.0	57.3	0.00	13.2	1.8
		Staff Recommended New/Enhanced Services:	**114.7**	**0.0**	**114.7**	**0.00**	**26.4**	**3.6**

16546	B12: Dedicated Risk/Insurance Staff
74	No Impact

Description:

Toronto Water's historical insurance claims data (2009 to November 2015) identified approximately 10,000 claims in the top 3 causes of loss (Sewer Back-up, Water Main Break, Sidewalk Disrepair) City wide. These claims totaled $16.2 million representing about 70% of the total cost of all City claims.

Approximately 30% of the total cost of the claims are high-value, greater than $50,000 losses, and these claims are reviewed regularly by the Claims Review Group (CRG). The remaining 70% of Toronto Water claim settlements that do not reach the Claims Review Group, represent an opportunity to conduct loss control analysis and review for potential loss reductions.

A temporary Coordinator Business Support position was created in 2016 to provide dedicated risk/insurance functions in Toronto Water and to reduce the frequency and severity of Toronto Water Division claims while an organizational structure review is being conducted. This assignment has proven to meet the various business needs of both Toronto Water and Insurance and Risk Management unit. The City has realized significant cost savings via the review of large value claims where, based on the analysis of the Coordinator Business Support, numerous claims were either denied or the claim settlement reduced.

Based on the above it is recommended to convert the existing temporary Coordinator Business Support position to the permanent Coordinator Business Support position. This will increase Toronto Water's staff complement by one permanent position at cost of $0.087 million in 2019, with an incremental cost of $0.033 million in 2020.

Service Level Impact:

The addition of an insurance/risk management dedicated position increases staff capacity to review large value insurance claims through improved claims handling, data capture and improved practices leading to a reduction in claims and improved customer service for claimants, ultimately resulting in measurable savings to the City.

Form ID	Infrastructure and Development Services	Adjustments				2020 Plan Net Change	2021 Plan Net Change
Category / Equity Impact	Program - Toronto Water	Gross Expenditure	Revenue	Net	Approved Positions		
	Equity Statement:						
	This proposal has no equity impacts.						
	Service: TW-Stormwater Management						
	Total Staff Recommended Changes:	6.9	0.0	6.9	0.08	2.6	0.3
	Service: TW-Wastewater Collection & Treatment						
	Total Staff Recommended Changes:	27.7	0.0	27.7	0.32	10.5	1.0
	Service: TW-Water Treatment & Supply						
	Total Staff Recommended Changes:	51.9	0.0	51.9	0.60	19.8	1.9
	Staff Recommended New/Enhanced Services:	**86.5**	**0.0**	**86.5**	**1.00**	**33.0**	**3.2**

17833 Utility Cut Program

74 No Impact

Description:

Recommended funding for the Utility Cut Program addresses resources required to implement a transfer of responsibility for the permanent restoration of utility cuts from Transportation Services to Toronto Water. This transfer is result of the changes to the Municipal Consent Requirements approved by Council in May 2018.

The first construction contracts for permanent restoration will commence in spring of 2019 and will include approximately 6 months of work resulting from the 2018 construction season.

The staffing plan will be carried out in three phases with a gradual increase in positions from 9 positions in 2018 (already in place through a delegated authority to be converted to permanent positions in 2019), to 24 positions in 2019 and 35 in 2020, subject to further review of the staffing needs and program adjustment, if required.

The total staff complement of 24 positions being recommended in 2019 includes: one Senior Engineer, one Senior Project Manager; two Supervisor Contract Services, two Inspection Coordinator, 12 Inspector Municipal Construction (eight permanent and four temporary), one Contract Coordinator, one Research Analyst 1, and four Engineering Technologist Technical 1.

In addition to staffing costs for the 24 new positions, funding of $1.2 million is recommended for one-time costs to purchase office furniture, additional computing devices including field devices and the purchase of 24 new vehicles.

The estimated cost of the Program in 2019 is $7.372 million gross, $5.604 million net, with an incremental impact of $7.645 million net and addition of 11 positions in 2020, for a total cost of $16.095 million gross, $13.249 million net.

Form ID	Infrastructure and Development Services	Adjustments				2020 Plan Net Change	2021 Plan Net Change
Category / Equity Impact	Program - Toronto Water	Gross Expenditure	Revenue	Net	Approved Positions		

It is recommended that Toronto Water reports through the 2020 Budget process on the implementation progress of the Utility Cut Program transfer, including costs and benefits.

Service Level Impact:

Toronto Water plans to improve the current service level by shortening the time to complete the permanent cut repair resulting in less construction time thereby reducing the level of traffic congestion and impact on the general public, the number of pot holes and trip hazards caused by temporary repairs, as well as backlog of permanent restoration work. As a result it is anticipated that approximately 8,500 cuts will be delivered annually, an increase of 3,650 locations per year compared to the current service level. This will ultimately increase customer satisfaction.

Equity Statement:

This proposal has no equity impacts.

Service: TW-Stormwater Management	427.6	102.5	325.1	1.39	443.4	40.1
Service: TW-Wastewater Collection & Treatment						
Total Staff Recommended Changes:	2,403.1	576.1	1,827.0	7.82	2,492.3	225.3
Service: TW-Water Treatment & Supply						
Total Staff Recommended Changes:	4,540.9	1,088.6	3,452.3	14.78	4,709.3	425.7
Staff Recommended New/Enhanced Services:	**7,371.6**	**1,767.2**	**5,604.4**	**24.00**	**7,645.0**	**691.1**

17922	Toronto Water Chamber Adjustment Program
74 / No Impact	**Description:**

The Chamber Adjustment Program will be transferred from Transportation Services to Toronto Water commencing in 2019. This program involves the rehabilitation of maintenance hole/valve and catch basin chambers to address deteriorated frames/covers and grade adjustment units to improve riding surface issues and overall structural integrity of the access chambers.

Approximately 2,000 chamber adjustments are expected to be carried out annually. Funding for three positions (2 Inspector Municipal Construction and one Engineering Technologist Technician 1) is recommended to support and administer the delivery of the program. There will be approximately 1000 locations assigned to each inspector to generate tender estimates during winter months and inspect construction during the summer months. The Engineering Technologist Technician 1 will assist in tender creation and provide technical and administrative support to execute the construction contracts.

Form ID Category	Equity Impact	Infrastructure and Development Services / Program - Toronto Water	Adjustments: Gross Expenditure	Revenue	Net	Approved Positions	2020 Plan Net Change	2021 Plan Net Change

The total cost of the program is estimated at $0.226 million in 2019 with an incremental cost of $0.084 million in 2020, which will be fully recovered from Toronto Water's capital projects.

Service Level Impact:

The Chamber Rehabilitation Program will minimize future property damage claims resulting from chambers that have deteriorated and ensure that the state of good repair of Toronto Water's assets is maintained.

Equity Statement:

This proposal has no equity impacts.

Service: TW-Stormwater Management						
Total Staff Recommended Changes:	13.1	13.1	0.0	0.17	0.0	(0.0)
Service: TW-Wastewater Collection & Treatment						
Total Staff Recommended Changes:	73.7	73.7	0.0	0.98	0.0	(0.0)
Service: TW-Water Treatment & Supply						
Total Staff Recommended Changes:	139.3	139.3	0.0	1.85	(0.0)	(0.0)
Staff Recommended New/Enhanced Services:	**226.1**	**226.1**	**0.0**	**3.00**	**0.0**	**(0.0)**

18701	Bulk Water Fill Station Pilot
75 No Impact	**Description:**

Many neighbouring GTA municipalities provide bulk water fill station services for their business sector customers. Currently, the City does not. When water is purchased from bulk water fill stations outside of the City but used within Toronto's boundaries, those consumers are not paying the City for the treatment of that water when it flows into the City's sanitary sewer infrastructure and wastewater treatments plants.

Within City boundaries, the City has a total of 41,398 hydrants and water theft from illegal, unmetered connections to those hydrants is a significant concern resulting in the following: lost revenue from unmetered water; damaged hydrants; lost pressure from hydrants for fire suppression and potential threats to the drinking water supply due to the lack of a backflow prevention device associated with the illegal connection.

Based on extensive stake holder consultations, indicating support for the need for bulk water stations, Toronto Water proposes to conduct a pilot project and seek City Council authority to charge a bulk water fee of $3.96 per cubic metre (Block 1 Water Rate). This provides mobile washers and other bulk water haulers a viable option to obtain wash water in bulk within the City of Toronto and prevents illegal practices. Further details of this pilot project are provided in the 2019 Water and Wastewater Consumption Rates and Service Fees report.

Form ID	Infrastructure and Development Services	Adjustments				2020 Plan Net Change	2021 Plan Net Change
Category / Equity Impact	Program - Toronto Water	Gross Expenditure	Revenue	Net	Approved Positions		

An estimated $300,000 in capital funds is required for the installation of a bulk water fill station (including site preparation, purchase, water connection, etc.). Required funding is included in the 2019-2028 Staff Recommended Capital Budget and Plan for Toronto Water. It is expected that capital works will be completed sometime later in 2019, as it will take time for the procurement process and subsequent assembly and installation of the station itself.

Annual operating costs of approximately $25,000 will be required to operate and maintain bulk water fill station. It is anticipated that the bulk water fee will generate, if a City-wide network of bulk water fill stations are constructed, approximately $400,000 in annual revenues from the sale of bulk water. These revenues are intended to reduce revenue loss currently experienced by Toronto Water due to practices like unauthorized hook-ups to fire hydrants. The 2019 Staff Recommended Operating Budget for Toronto Water includes initial operating costs ($2,000) and revenues ($35,000) estimated for 2019, with fully annualized impact in 2020.

It is recommended that Toronto Water report back to the Infrastructure and Environment Committee on the outcome of the pilot project once completed.

Service Level Impact:

This pilot project will minimize/eliminate illegal accessing of hydrants and water theft as well as hydrant damages and associated repair costs. It will also protect drinking water from possible water contamination (caused by backflow). A good customer service will be provided as users have expressed need for stations.

Equity Statement:

This proposal has no equity impacts.

Service: TW-Stormwater Management						
Total Staff Recommended Changes:	0.4	0.0	0.4	0.00	4.6	0.0
Service: TW-Wastewater Collection & Treatment						
Total Staff Recommended Changes:	1.4	20.0	(18.6)	0.00	(192.0)	0.0
Service: TW-Water Treatment & Supply						
Total Staff Recommended Changes:	0.2	15.1	(14.9)	0.00	(154.6)	0.0
Staff Recommended New/Enhanced Services:	**2.0**	**35.0**	**(33.0)**	**0.00**	**(342.0)**	**0.0**

Category:
71 - Operating Impact of New Capital Projects
72 - Enhanced Services-Service Expansion
74 - New Services
75 - New

2019 Operating Budget - Staff Recommended New and Enhanced Services
Summary by Service ($000's)

Summary:

Form ID		Infrastructure and Development Services	Adjustments				2020 Plan Net Change	2021 Plan Net Change
Category	Equity Impact	Program - Toronto Water	Gross Expenditure	Revenue	Net	Approved Positions		
Staff Recommended New / Enhanced Services:			**7,985.0**	**2,167.4**	**5,817.6**	**31.00**	**7,360.0**	**704.6**

Category:

71 - Operating Impact of New Capital Projects
72 - Enhanced Services-Service Expansion
74 - New Services
75 - New

Appendix 6

2019 User Fee Rate Changes

Table 6a

User Fees Adjusted for Inflation and Other - Water

Rate Description	Service	Fee Category	Fee Basis	2018	2019		2020	2021
				Approved Rate	Inflationary Adjusted Rate	Budget Rate	Plan Rate	Plan Rate
Installing 19 mm New Residential Water Service and Meter	Water Service	Full Cost Recovery	Flat fee per connection	$4,600.00	$4,729.72	$4,729.72	$4,729.72	$4,729.72
Installing 25 mm New Residential Water Service and Meter	Water Service	Full Cost Recovery	Flat fee per connection	$5,330.00	$5,480.30	$5,480.30	$5,480.30	$5,480.30
Disconnection Fee for any residential water service less than or equal to 25 mm	Water Service	Full Cost Recovery	Flat fee per disconnection	$1,360.00	$1,398.35	$1,398.35	$1,398.35	$1,398.35
Metered water provided to construction sites	Water Service	City Policy	Consumption per cubic metre	Block 1 Water Rate	Block 1 Water Rate	Block 1 Water Rate	Block 1 Water Rate	Block 1 Water Rate
Fire hydrant Permit	Water Service	Full Cost Recovery	Flat Fee	$172.31	$177.16	$177.16	$177.16	$177.16
Water meter accuracy test; Meter less than or equal to 50mm - No Chamber - applied if meter does not over-register	Water Service	Full Cost Recovery	Flat Fee	$172.31	$177.16	$177.16	$177.16	$177.16
Water turn off fee for demolition; (disconnection of old water service not included)	Water Service	Full Cost Recovery	Flat Fee	$86.10	$88.52	$88.52	$88.52	$88.52
Cost of water consumption from last water meter reading to the date of disconnection of service	Water Service	Full Cost Recovery	Per cubic metre	Block 1 Water Rate	Block 1 Water Rate	Block 1 Water Rate	Block 1 Water Rate	Block 1 Water Rate
Water Turn-off or Turn-on	Water Service	Full Cost Recovery	Each Turn-off or Turn-on	$86.10	$88.52	$88.52	$88.52	$88.52
Single Service call Turn-off and Turn-on within 30 min	Water Service	Full Cost Recovery	Turn-off and Turn-on Service within 30 min	$86.10	$88.52	$88.52	$88.52	$88.52

Table 6a

User Fees Adjusted for Inflation and Other - Water

Rate Description	Service	Fee Category	Fee Basis	2018	2019		2020	2021
				Approved Rate	Inflationary Adjusted Rate	Budget Rate	Plan Rate	Plan Rate
Conduct fire hydrant flow test	Water Service	Full Cost Recovery	Per Flow Test	$287.23	$295.32	$295.32	295.32	295.32
Unmetered water from each unmetered hydrant-less than or equal to 50 cubic metre	Water Service	City Policy	Per 50 cubic metre	50 cubic metre @ Block 1 Water Rate	50 cubic metre @ Block 1 Water Rate	50 cubic metre @ Block 1 Water Rate	50 cubic metre @ Block 1 Water Rate	50 cubic metre @ Block 1 Water Rate
Metered water received at hydrant	Water Service	Full Cost Recovery	Per cubic meter of water	Block 1 Water Rate	Block 1 Water Rate	Block 1 Water Rate	Block 1 Water Rate	Block 1 Water Rate
Unregistered water each day order not complied	Water Service	Full Cost Recovery	Flat Rate	$57.40	$59.01	$59.01	$59.01	$59.01
Annual Seasonal Meter Activation Fee: includes replacement, removal of water meter; 1 turn on, 1 turn off	Water Service	Full Cost Recovery	Flat Fee	$220.94	$227.17	$227.17	$227.17	$227.17
Unmetered water - general or use of non-City supplied meter	Water Service	Full Cost Recovery	Estimated consumption per cubic meter	Block 1 Water Rate	Block 1 Water Rate	Block 1 Water Rate	Block 1 Water Rate	Block 1 Water Rate
Reuse of residential water service 19 mm to 25 mm	Water Service	Full Cost Recovery	Per Service to be reused	$287.00	$295.09	$295.09	$295.09	$295.09
Administrative fee to reflect a change in ownership on an existing utility account	Water Service	Full Cost Recovery	Per ownership change	$38.42	$39.19	$39.19	$39.19	$39.19
Water Special/Final Reading	Water Service	Full Cost Recovery	Per Customer Request	$16.46	$16.79	$16.79	$16.79	$16.79
Water Consumption Statements	Water Service	Full Cost Recovery	For One Year	$43.92	$44.80	$44.80	$44.80	$44.80
Water Consumption Statements	Water Service	Full Cost Recovery	For each subsequent year	$27.45	$28.00	$28.00	$28.00	$28.00
Water Collection Field Visit	Water Service	Full Cost Recovery	Per Field Visit	$27.45	$28.00	$28.00	$28.00	$28.00
Administration of MECP Municipal drinking Water Licensing Program	Water Service	Full Cost Recovery	per application	$2,598.05	$2,671.31	$2,671.31	$2,671.31	$2,671.31

Table 6a

User Fees Adjusted for Inflation and Other - Water

Rate Description	Service	Fee Category	Fee Basis	2018	2019		2020	2021
				Approved Rate	Inflationary Adjusted Rate	Budget Rate	Plan Rate	Plan Rate
Fee for lost or damaged automated meter reading transmitter	Revenues - Operational Support	Full Cost Recovery	per location	$97.00	$99.73	$99.73	$99.73	$99.73
Manual water meter reading fee for consumers with water meters refusing installation of a new water meter and associated meter reading equipment	Revenues - Operational Support	Full Cost Recovery	per visit	$88.05	$90.53	$90.53	$90.53	$90.53
Flat rate legacy fee, in addition to any existing water and wastewater flat rates charged for residential flat rate consumers who refuse the installation of an automatic water meter and associated meter reading equipment	Revenues - Operational Support	Full Cost Recovery	per year	$1,174.45	$1,207.56	$1,207.56	$1,207.56	$1,207.56
Processing annual water supply backflow prevention device testing reports	Water Service	Full Cost Recovery	per report	$53.54	$55.05	$55.05	$55.05	$55.05
Water Service Upgrade Fee - Lead Water Service Replacement Programs (19 mm to 25 mm upgrade only)	Revenues - Distribution & Collection	Full Cost Recovery	Flat fee per connection	$523.00	$537.74	$537.74	$537.74	$537.74

Table 6a –Continued

User Fees Adjusted for Inflation and Other - Wastewater

Rate Description	Service	Fee Category	Fee Basis	2018	2019		2020	2021
				Approved Rate	Inflationary Adjusted Rate	Budget Rate	Plan Rate	Plan Rate
Sewer Surcharge on private water	Wastewater Service	Full Cost Recovery	Per Cubic Meter	57% of Block 1 Water Rate	57% of Block 1 Water Rate	57% of Block 1 Water Rate	57% of Block 1 Water Rate	57% of Block 1 Water Rate
To install new residential sanitary sewer service connection in road allowance	Wastewater Service	Full Cost Recovery	Per Installation	$11,506.00	$11,830.46	$11,830.46	$11,830.46	$11,830.46
To install new residential storm sewer service connection in road allowance	Wastewater Service	Full Cost Recovery	Per Installation	$11,506.00	$11,830.46	$11,830.46	$11,830.46	$11,830.46
To disconnect residential sanitary sewer service connection in road allowance	Wastewater Service	Full Cost Recovery	Per Disconnection	$1,420.00	$1,460.04	$1,460.04	$1,460.04	$1,460.04
Inspection fee for the reuse of residential City sewer connection up to 150 mm in diameter	Wastewater Service	Full Cost Recovery	Per service to be reused	$575.20	$591.42	$591.42	$591.42	$591.42
Technical Review by Toronto Water staff - Application to Toronto Water for exemption to permit the construction of a driveway sloped downwards towards a residential building.	Wastewater Service	Full Cost Recovery	Per application	$1,724.00	$1,772.61	$1,772.61	$1,772.61	$1,772.61
Technical Review by Toronto Water staff - Application to Toronto Water for new connection or change or alteration to the existing storm connection, sanitary or water supply connection	Wastewater Service	Full Cost Recovery	Per application	$344.58 minimum fee; additional $85.00/hour for each hour after 4 hours to a maximum of $1,724.00	$354.29 minimum fee; additional $87.39/hour for each hour after 4 hours to a maximum of $1,772.61	$354.29 minimum fee; additional $87.39/hour for each hour after 4 hours to a maximum of $1,772.61	$354.29 minimum fee; additional $87.39/hour for each hour after 4 hours to a maximum of $1,772.61	$354.29 minimum fee; additional $87.39/hour for each hour after 4 hours to a maximum of $1,772.61

Table 6a –Continued

User Fees Adjusted for Inflation and Other - Wastewater

Rate Description	Service	Fee Category	Fee Basis	2018	2019		2020	2021
				Approved Rate	Inflationary Adjusted Rate	Budget Rate	Plan Rate	Plan Rate
Technical Review by Toronto Water staff - Application to Toronto Water for request to encroach within a City permanent or temporary easement (related to City water and sewer infrastructure)	Wastewater Service	Full Cost Recovery	Per application	$344.58 minimum fee; additional $85.00/hour for each hour after 4 hours to a maximum of $1,724.00	$354.29 minimum fee; additional $87.39/hour for each hour after 4 hours to a maximum of $1,772.61	$354.29 minimum fee; additional $87.39/hour for each hour after 4 hours to a maximum of $1,772.61	$354.29 minimum fee; additional $87.39/hour for each hour after 4 hours to a maximum of $1,772.61	$354.29 minimum fee; additional $87.39/hour for each hour after 4 hours to a maximum of $1,772.61
Technical Review by Toronto Water staff - Application to Toronto Water for request to release from title a City easement (related to City water and sewer infrastructure)	Wastewater Service	Full Cost Recovery	Per application	$344.58 minimum fee; additional $85.00/hour for each hour after 4 hours to a maximum of $1,724.00	$354.29 minimum fee; additional $87.39/hour for each hour after 4 hours to a maximum of $1,772.61	$354.29 minimum fee; additional $87.39/hour for each hour after 4 hours to a maximum of $1,772.61	$354.29 minimum fee; additional $87.39/hour for each hour after 4 hours to a maximum of $1,772.61	$354.29 minimum fee; additional $87.39/hour for each hour after 4 hours to a maximum of $1,772.61
Initial fee for establishment of new industrial waste surcharge agreement	Wastewater Service	Full Cost Recovery	Per agreement	$884.02	$908.95	$908.95	$908.95	$908.95
Record search for Sewers by-law and water supply by-law compliance violation	Wastewater Service	Full Cost Recovery	Per address or per water account	$104.58	$107.53	$107.53	$107.53	$107.53

Table 6a - Continued

User Fees Adjusted for Inflation and Other - Water & Wastewater Consumption Rates

Rate Description	Water & Wastewater Consumption Rates	Fee Category	Fee Basis	2018	2019		2020	2021
				Approved Rate	Other Adjustments	Budget Rate	Plan Rate	Plan Rate
Block 1 Domestic - Use General Water Service Rate Applicable to all consumers of water, including the first 5,000 cubic metres per year (m3/per year) consumed by industrial users	Metered Water Consumers	Full Cost Recovery	Per cubic metre - ($/m3)	$3.80	$0.15	$3.95	$3.95	$3.95
Block 2 - Industrial Process - Use Service Rate - Applicable to industrial process use for eligible property or portions of property and is applicable to volume of water consumed over 5,000 cubic metres per year (m3/per year) of such use	Metered Water Consumers	Full Cost Recovery	Per cubic metre - ($/m3)	$2.66	$0.11	$2.77	$2.77	$2.77
Dwelling house rate	Flat Rate Residential Consumers - Former City of Toronto	Full Cost Recovery	Per Room; Per Annum	$56.50	$2.25	$58.75	$58.75	$58.75
Rooming house rate	Flat Rate Residential Consumers - Former City of Toronto	Full Cost Recovery	Per Room, Per Annum	$109.26	$4.35	$113.61	$113.61	$113.61
Basins	Flat Rate Residential Consumers - Former City of Toronto	Full Cost Recovery	Each	$109.26	$4.35	$113.61	$113.61	$113.61
Baths	Flat Rate Residential Consumers - Former City of Toronto	City Policy	Each	$109.26	$4.35	$113.61	$113.61	$113.61
Bidets	Flat Rate Residential Consumers - Former City of Toronto	Full Cost Recovery	Each	$109.26	$4.35	$113.61	$113.61	$113.61
Saunas connected to water or drains	Flat Rate Residential Consumers - Former City of Toronto	Full Cost Recovery	Each	$109.26	$4.35	$113.61	$113.61	$113.61

Table 6a - Continued

User Fees Adjusted for Inflation and Other - Water & Wastewater Consumption Rates

Rate Description	Water & Wastewater Consumption Rates	Fee Category	Fee Basis	2018	2019		2020	2021
				Approved Rate	Other Adjustments	Budget Rate	Plan Rate	Plan Rate
Shower baths	Flat Rate Residential Consumers - Former City of Toronto	Full Cost Recovery	Not attached to bath tub - Each	$109.26	$4.35	$113.61	$113.61	$113.61
Sinks	Flat Rate Residential Consumers - Former City of Toronto	Full Cost Recovery	Sinks - Each	$109.26	$4.35	$113.61	$113.61	$113.61
Urinals	Flat Rate Residential Consumers - Former City of Toronto	Full Cost Recovery	Self-acting - Each	$129.81	$5.17	$134.98	$134.98	$134.98
Water Closets	Flat Rate Residential Consumers - Former City of Toronto	Full Cost Recovery	Self Acting - Each	$174.46	$6.94	$181.40	$181.40	$181.40
Laundry Tubs	Flat Rate Residential Consumers - Former City of Toronto	Full Cost Recovery	For pair of tubs (in one fixture)	$109.26	$4.35	$113.61	$113.61	$113.61
Laundry Tubs	Flat Rate Residential Consumers - Former City of Toronto	Full Cost Recovery	For single or additional tub - Each	$64.94	$2.58	$67.52	$67.52	$67.52
Washing Machine	Flat Rate Residential Consumers - Former City of Toronto	Full Cost Recovery	Each	$109.26	$4.35	$113.61	$113.61	$113.61
Factories, office buildings, stores, garages, warehouses and similar places of business	Flat Rate Non-Residential Consumers - Former City of Toronto	Full Cost Recovery	Per Flat - Per Annum	$174.34	$6.94	$181.28	$181.28	$181.28
Private hospitals, rest homes, schools, fraternity houses, clubs, hotels and similar places	Flat Rate Non-Residential Consumers - Former City of Toronto	Full Cost Recovery	Per room - Per Annum	$99.17	$3.95	$103.12	$103.12	$103.12
Basins	Flat Rate Non-Residential Consumers - Former City of Toronto	Full Cost Recovery	Each	$217.00	$8.64	$225.64	$225.64	$225.64

Table 6a - Continued

User Fees Adjusted for Inflation and Other - Water & Wastewater Consumption Rates

Rate Description	Water & Wastewater Consumption Rates	Fee Category	Fee Basis	2018	2019		2020	2021
				Approved Rate	Other Adjustments	Budget Rate	Plan Rate	Plan Rate
Baths	Flat Rate Non-Residential Consumers - Former City of Toronto	Full Cost Recovery	Each	$217.00	$8.64	$225.64	$225.64	$225.64
Bidets	Flat Rate Non-Residential Consumers - Former City of Toronto	Full Cost Recovery	Each	$217.00	$8.64	$225.64	$225.64	$225.64
Saunas connected to water or drains	Flat Rate Non-Residential Consumers - Former City of Toronto	Full Cost Recovery	Each	$217.00	$8.64	$225.64	$225.64	$225.64
Shower Baths	Flat Rate Non-Residential Consumers - Former City of Toronto	Full Cost Recovery	Not attached to bath tub - Each	$217.00	$8.64	$225.64	$225.64	$225.64
Sinks	Flat Rate Non-Residential Consumers - Former City of Toronto	Full Cost Recovery	Each	$217.00	$8.64	$225.64	$225.64	$225.64
Urinals	Flat Rate Non-Residential Consumers - Former City of Toronto	Full Cost Recovery	Self-acting - Each	$259.39	$10.32	$269.71	$269.71	$269.71
Water Closets	Flat Rate Non-Residential Consumers - Former City of Toronto	Full Cost Recovery	Self Acting - Each	$346.99	$13.81	$360.80	$360.80	$360.80
Laundry Tubs	Flat Rate Non-Residential Consumers - Former City of Toronto	Full Cost Recovery	For pair of tubs (in one fixture)	$217.00	$8.64	$225.64	$225.64	$225.64
Laundry Tubs	Flat Rate Non-Residential Consumers - Former City of Toronto	Full Cost Recovery	For single or additional tub - Each	$109.26	$4.35	$113.61	$113.61	$113.61
Washing Machines	Flat Rate Non-Residential Consumers - Former City of Toronto	Full Cost Recovery	Each	$217.00	$8.64	$225.64	$225.64	$225.64
Baptistries	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	Each	$73.31	$2.92	$76.23	$76.23	$76.23

Table 6a - Continued

User Fees Adjusted for Inflation and Other - Water & Wastewater Consumption Rates

Rate Description	Water & Wastewater Consumption Rates	Fee Category	Fee Basis	2018	2019		2020	2021
				Approved Rate	Other Adjustments	Budget Rate	Plan Rate	Plan Rate
Barber shop or beauty parlour	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	Each	$217.00	$8.64	$225.64	$225.64	$225.64
Church buildings used as a place of worship	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	Each for any such fixture in a church building so used coming within rows 18-30	Variable		Variable	Variable	Variable
Dental Fountains	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	Each	$538.25	$21.42	$559.67	$559.67	$559.67
Commercial dish washers	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	Each	$432.36	$17.21	$449.57	$449.57	$449.57
Drinking Fountains	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	Each	$217.00	$8.64	$225.64	$225.64	$225.64
Fountains	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	For 1.6mm orifice or less, each per season	$346.99	$13.81	$360.80	$360.80	$360.80
Fountains	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	All others, each per person	$1,380.39	$54.94	$1,435.33	$1,435.33	$1,435.33
Materials used in buildings or in alterations or repairs to buildings and other construction work	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	Bricks per 1,000	$3.72	$0.15	$3.87	$3.87	$3.87
Materials used in buildings or in alterations or repairs to buildings and other construction work	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	Other masonry, including concrete blocks, tiles, and similar materials, on basis of equivalent number	$3.72	$0.15	$3.87	$3.87	$3.87

Table 6a - Continued

User Fees Adjusted for Inflation and Other - Water & Wastewater Consumption Rates

Rate Description	Water & Wastewater Consumption Rates	Fee Category	Fee Basis	2018	2019		2020	2021
				Approved Rate	Other Adjustments	Budget Rate	Plan Rate	Plan Rate
			of bricks to replace same, per 1,000 bricks					
Materials used in buildings or in alterations or repairs to buildings and other construction work	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	Plasterin g per 1,000 sq. yd	$130.54	$5.20	$135.74	$135.74	$135.74
Materials used in buildings or in alterations or repairs to buildings and other construction work	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	Per cubic yd - Concrete	$9.06	$0.36	$9.42	$9.42	$9.42
Materials used in buildings or in alterations or repairs to buildings and other construction work	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	Minimum rate for each building or for repairs or alteration s, where any of the above material is used	$43.57	$1.73	$45.30	$45.30	$45.30
Photographic washing tanks	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	Each	$217.00	$8.64	$225.64	$225.64	$225.64
Wash racks	Flat Rate Consumers - Former City of Toronto	Full Cost Recovery	Each	$1,077.99	$42.90	$1,120. 89	$1,120. 89	$1,120. 89
Residential and commercial rates, Flat rate, Single family	Unmetered Consumers - Former City of Etobicoke	Full Cost Recovery	Tri-annual	$356.42	$14.19	$370.61	$370.61	$370.61
Hydro substations	Unmetered Consumers - Former City of Etobicoke	Full Cost Recovery	Tri-annual	$256.39	$10.20	$266.59	$266.59	$266.59
Building water and sewer service rates; not metered up to three months not refundable	Unmetered Consumers - Former City of Etobicoke	Full Cost Recovery	Each	$758.23	$30.18	$788.41	$788.41	$788.41

Table 6b

New User Fees

Rate Description	Service	Fee Category	Fee Basis	2019 Budget Rate	2020 Plan Rate	2021 Plan Rate
Metered water received at bulk water fill station.	Water Service	Full Cost Recovery	Per cubic meter	Block 1 Water and Wastewater Consumption Rate	Block 1 Water and Wastewater Consumption Rate	Block 1 Water and Wastewater Consumption Rate
	2019 User Fee Revenues - New			$35,000.00		

Appendix 7

2019 Capital Budget;
2020 - 2028 Capital Plan Including Carry Forward Funding

(In $000s)	Total App'd Cash Flows to Date*	2019 Budget	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan	2027 Plan	2028 Plan	2019 - 2028 Total	Total Project Cost
Total Expenditures by Category													
Health & Safety													
Ashbridges Bay TP		1,190	6,629	2,583	2,374	1,891	31					**14,698**	14,698
Humber TP		335	5,140	424								**5,899**	5,899
Sub-Total	-	**1,525**	**11,769**	**3,007**	**2,374**	**1,891**	**31**	-	-	-	-	**20,597**	**20,597**
Legislated													
Water Service Replacement		26,006	57,043	45,625	48,221	46,246	46,246	45,746	44,246	44,246	44,246	**447,871**	447,871
Pumping Stations		4,319	7,338	8,919	11,490	12,924	9,558	6,700	8,425	4,250		**73,923**	73,923
WT - Storage & Treatment		125	125	125								**375**	375
Ashbridges Bay TP		75,436	117,316	129,560	101,068	60,016	42,764	35,719	20,615	60		**582,554**	582,554
Highland Creek TP		5,375	9,586	10,417	7,456	37	37	400	1,000	6,500	11,300	**52,108**	52,108
Humber TP		1,500	2,676			550				550		**5,276**	5,276
RL Clark TP		2,439	700	3								**3,142**	3,142
Island TP		920	2,462	16,163	19,280	8,529	367					**47,721**	47,721
Sub-Total	-	**116,120**	**197,246**	**210,812**	**187,515**	**128,302**	**98,972**	**88,565**	**74,286**	**55,606**	**55,546**	**1,212,970**	**1,212,970**
State of Good Repair													
Business & Technology		5	79	78	80							**242**	242
Linear Eng		76,387	112,329	122,283	104,413	88,038	74,298	74,309	80,251	75,489	74,309	**882,106**	882,106
Sewer Rehabilitation		55,878	77,236	89,179	78,637	69,853	66,953	68,303	67,053	68,603	69,553	**711,248**	711,248
Sewer Replacement		15,159	19,458	21,086	16,012	17,469	15,100	15,000	15,000	15,000	15,000	**164,284**	164,284
WM Rehabilitation		56,019	68,171	83,054	71,180	71,560	70,460	70,360	70,260	65,460	65,360	**691,884**	691,884
WM Replacement		67,297	129,525	117,014	103,704	101,130	95,000	95,000	95,000	95,000	95,000	**993,670**	993,670
Water Service Replacement		5,115	7,854	7,854	675							**21,498**	21,498
Pumping Stations		4,156	8,212	7,612	8,816	7,935	7,875	6,815	4,260	3,550	4,000	**63,231**	63,231
Trunk Water Mains		5,550	5,891	2,360	14,600	25,300	27,800	22,150	25,975	25,925	25,650	**181,201**	181,201
WT - Storage & Treatment		22,741	32,061	47,276	32,227	10,712	13,737	26,385	35,830	17,155	5,610	**243,734**	243,734
Trunk Sewers & Pumping Stations		27,267	77,830	70,103	80,188	52,000	61,157	53,115	33,515	28,350	14,082	**497,607**	497,607
Ashbridges Bay TP		75,490	184,523	217,002	203,880	165,514	120,748	151,159	129,487	114,564	64,040	**1,426,407**	1,426,407
Highland Creek TP		11,493	39,327	32,880	35,157	43,890	24,610	26,255	18,640	13,927	14,314	**260,493**	260,493
Humber TP		40,587	43,676	52,590	26,529	32,487	18,057	7,585	11,235	36,360	35,000	**304,106**	304,106
RL Clark TP		7,950	4,941	315	291	200	200	200	200	200	200	**14,697**	14,697
RC Harris TP		3,598	12,808	10,648	3,437	2,024	11,550	11,500	11,500	12,550	500	**80,115**	80,115
FJ Horgan TP		584	1,701	1,281	1,321	825	202	202	200	200	200	**6,716**	6,716
Island TP		5,189	17,312	8,421	7,438	8,875	3,775	725	525	475	4,675	**57,410**	57,410
WWF-Implementation Projects		6,103	12,828	25,109	17,081	3,665	4,000	4,000	4,000	6,000	4,500	**87,286**	87,286
WWF - Stream Restoration		8,361	16,339	14,349	16,947	12,420	7,295	12,665	16,460	14,395	12,805	**132,036**	132,036
Yards & Facility		562	769	1,733	1,275	1,485	1,485	1,485	1,485	1,485	1,485	**13,249**	13,249
Sub-Total	-	**495,491**	**872,870**	**932,227**	**823,888**	**715,382**	**624,302**	**647,213**	**620,876**	**594,688**	**506,283**	**6,833,220**	**6,833,220**
Service Improvement													
Water Meter Program (AMR)		5,183	1,680	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	**18,863**	18,863
Basement Flooding		76,005	143,565	157,987	183,371	163,152	151,264	147,986	221,612	226,263	217,001	**1,688,206**	1,688,206
Business & Technology		13,141	12,584	12,572	8,506	7,769	4,769	2,914	2,014	2,014	2,014	**68,297**	68,297
Linear Eng		1,204	3,000	3,075	3,735	7,125	8,975	8,475	7,975	7,975	7,975	**59,514**	59,514
Sewer Replacement		1,549	1,825									**3,374**	3,374
Pumping Stations		193	69									**262**	262
Trunk Water Mains		470	3,568	3,327	3,333	41	92					**10,831**	10,831
WT - Storage & Treatment		4,738	8,945	5,521	4,061	60						**23,325**	23,325
Trunk Sewers & Pumping Stations		700	1,100	700	900	8,400	9,450	750				**22,000**	22,000
Ashbridges Bay TP		4,080	14,609	14,098	15,826	10,655	2,062	2,115	2,100	20,050	41,300	**126,895**	126,895
Highland Creek TP		10,205	9,757	15,005	27,652	24,150	29,920	48,125	44,080	25,150	29,290	**263,334**	263,334
Humber TP		4,706	8,070	7,849	9,277	7,500	3,500					**40,902**	40,902
RC Harris TP		1,939	5,853	864								**8,656**	8,656
FJ Horgan TP		442	750	2,360	540	760	1,011					**5,863**	5,863
Island TP		576	2,900	3,957	867	695	650	75	650	225		**10,595**	10,595
WTP-Plantwide		2,946	14,128	36,828	49,507	29,174	30,609	30,825	16,710	16,515	13,815	**241,057**	241,057
WWF-Implementation Projects		102,996	124,013	125,573	135,344	99,892	58,674	69,252	133,640	260,870	237,560	**1,347,814**	1,347,814
WWF-TRCA		14,791	14,104	14,219	14,337	15,958	16,082	16,209	16,339	16,473	16,610	**155,122**	155,122
Yards & Facility		5,520	9,888	11,722	1,677	725	605	605	605	9,055	605	**41,007**	41,007
Sub-Total	-	**251,384**	**380,408**	**417,157**	**460,433**	**377,556**	**319,163**	**328,831**	**447,225**	**586,090**	**567,670**	**4,135,917**	**4,135,917**
Growth Related													
Linear Eng		531	250	150	150	150	150	150	150	150	150	**1,981**	1,981
New Connections		41,836	52,503	54,993	49,857	45,223	48,223	48,223	48,223	48,223	48,223	**485,527**	485,527
New Sewers		6,515	9,566	20,459	27,537	12,651	3,930	2,048	1,698	1,000	1,000	**86,404**	86,404
WM Replacement		29,321	35,723	31,982	19,712	20,505	18,040	19,000	19,000	19,000	19,000	**231,283**	231,283
Pumping Stations		6,446	5,558	2,068	2,245	1,050	900					**18,267**	18,267
Trunk Water Mains		9,525	15,625	17,215	16,709	17,700	17,700	9,345	35			**103,854**	103,854
WT - Storage & Treatment		2	165	1,000	2,000	3,000						**6,167**	6,167
Trunk Sewers & Pumping Stations		465	1,347	3,545	12,400	28,150	52,400	52,400	52,200	51,900	50,000	**304,807**	304,807
Ashbridges Bay TP		550	4,850	5,300	7,900	39,000	66,000	35,350	300	200		**159,450**	159,450
Highland Creek TP		200	800	500								**1,500**	1,500
FJ Horgan TP					41							**41**	41
Island TP		100	700	2,300	3,300							**6,400**	6,400
Water Effeciency Plan		495	706	603	607	687	520	520	520	520	520	**5,698**	5,698
WWF-Implementation Projects				100	100	100	100	100				**500**	500
Sub-Total	-	**95,986**	**127,793**	**140,215**	**142,558**	**168,216**	**207,963**	**167,136**	**122,126**	**120,993**	**118,893**	**1,411,879**	**1,411,879**
Total Expenditures by Category (including carry forward from 2018)	-	**960,506**	**1,590,086**	**1,703,418**	**1,616,768**	**1,391,347**	**1,250,431**	**1,231,745**	**1,264,513**	**1,357,377**	**1,248,392**	**13,614,583**	**13,614,583**

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 7: 2019 Capital Budget;2020-2028 Capital Plan Including Carry Forward Funding

Water Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing
WAT000004	HORGAN W.T.P. EXPANSION																						
0 39	PLANT EXPANSION - CONSTRUCTION	CW	S2	05	0	0	0	41	0	41	0	41	0	0	13	0	15	0	0	13	0	0	41
0 42	PLANT EXPANSION - CONSTRUCTION-CHANGE IN SCOPE	CW	S3	05	0	0	0	0	0	0	0	0	0	0	15	0	-15	0	0	0	0	0	0
	Sub-total				0	0	0	41	0	41	0	41	0	0	28	0	0	0	0	13	0	0	41
WAT000018	CLARK RESIDUE MGMT. FACILITIES																						
0 24	RESIDUALS RETROFITS AND UPGRADES	CW	S2	02	3,102	0	0	0	0	3,102	0	3,102	0	0	0	0	3,102	0	0	0	0	0	3,102
0 31	RESIDUALS RETROFITS AND UPGRADES-CHANGE IN SCOPE	CW	S3	02	-663	700	3	0	0	40	0	40	0	0	0	0	40	0	0	0	0	0	40
	Sub-total				2,439	700	3	0	0	3,142	0	3,142	0	0	0	0	3,142	0	0	0	0	0	3,142
WAT000021	WATER EFFICIENCY PROGRAM																						
0 10	ICI INDOOR WATER AUDIT	CW	S2	05	300	300	300	300	0	1,200	0	1,200	0	0	1,200	0	0	0	0	0	0	0	1,200
0 11	PUBLIC EDUCATION & PROMOTIONS	CW	S2	05	75	75	75	75	0	300	0	300	0	0	300	0	0	0	0	0	0	0	300
0 12	ANCILLARY COSTS	CW	S2	05	70	70	70	70	0	280	0	280	0	0	280	0	0	0	0	0	0	0	280
0 82	WEP - FUTURE -ICI	CW	S6	05	0	0	0	0	520	520	2,600	3,120	0	0	3,120	0	0	0	0	0	0	0	3,120
0 97	ICI INDOOR WATER AUDIT-CHANGE IN SCOPE	CW	S3	05	50	261	158	162	167	798	0	798	0	0	798	0	0	0	0	0	0	0	798
	Sub-total				495	706	603	607	687	3,098	2,600	5,698	0	0	5,698	0	0	0	0	0	0	0	5,698
WAT000363	ENGINEERING STUDIES																						
0 2	IMPROVED TREATMENT STUDIES	CW	S2	04	66	0	0	0	0	66	0	66	0	0	0	0	46	0	0	20	0	0	66
0 18	CONTROLLED SUBSTANCES ID AND ABATEMENT	CW	S2	02	100	0	0	0	0	100	0	100	0	0	0	0	100	0	0	0	0	0	100
0 31	ENERGY EFFICIENCY IMPLEMENTATION	CW	S2	04	38	0	0	0	0	38	0	38	0	0	0	0	38	0	0	0	0	0	38
0 70	FACILITY FORECAST/SOGR FUNDING	CW	S6	03	0	0	0	0	0	0	250	250	0	0	0	0	250	0	0	0	0	0	250
0 79	ENERGY EFFICIENCY IMPLEMENTATION-CHANGE IN SCOPE	CW	S3	04	127	100	0	0	0	227	0	227	0	0	0	0	227	0	0	0	0	0	227
0 80	IMPROVED TREATMENT STUDIES-CHANGE IN SCOPE	CW	S3	04	4	50	50	50	50	204	0	204	0	0	0	0	143	0	0	61	0	0	204
0 81	CONTROLLED SUBSTANCES ID AND ABATE-CHANGE IN SCOPE	CW	S3	02	25	125	125	0	0	275	0	275	0	0	0	0	275	0	0	0	0	0	275
	Sub-total				360	275	175	50	50	910	250	1,160	0	0	0	0	1,079	0	0	81	0	0	1,160
WAT906334	BUSINESS SYSTEM INFRASTRUCTURE - PW																						
0 12	PCS LEGACY ALARM IMPROVEMENT	CW	S2	04	20	0	0	0	0	20	0	20	0	0	0	0	20	0	0	0	0	0	20

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Water Program

Sub-Priority	Project No. Sub-Proj No.	Project Name / Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906334		BUSINESS SYSTEM INFRASTRUCTURE - PW																					
0	23	RELIABILITY IMPROVEMENT PROGRAM	CW	S2	04	355	240	140	40	0	775	0	775	0	0	0	0	775	0	0	0	0	0	775
0	41	SCADA UPGRADES FOR WWT	CW	S2	04	3,326	3,052	3,880	3,185	2,825	16,268	1,800	18,068	0	0	0	0	18,068	0	0	0	0	0	18,068
0	43	BUSINESS & TECHNICAL IMPROVEMENTS - 10 YEAR PLAN	CW	S6	04	0	50	331	1,204	1,394	2,979	5,125	8,104	0	0	0	0	8,104	0	0	0	0	0	8,104
0	61	RELIABILITY IMPROVEMENT PROGRAM - FUTURE YEARS	CW	S6	04	0	50	400	400	400	1,250	2,000	3,250	0	0	0	0	3,250	0	0	0	0	0	3,250
0	67	SCADA UPGRADES FOR WWT - II	CW	S2	04	972	661	0	0	0	1,633	0	1,633	0	0	0	0	1,633	0	0	0	0	0	1,633
0	83	NETWORK IMPROVEMENTS - 10 YEAR	CW	S6	04	0	230	340	1,520	1,100	3,190	4,800	7,990	0	0	0	0	7,990	0	0	0	0	0	7,990
0	85	NETWORK IMPROVEMENTS	CW	S2	04	585	0	0	0	0	585	0	585	0	0	0	0	585	0	0	0	0	0	585
0	87	PCS UPGRADES 2017	CW	S2	04	210	105	0	0	0	315	0	315	0	0	0	0	315	0	0	0	0	0	315
0	88	TRUNK RADIO - EQUIPMENT	CW	S2	03	160	0	78	80	0	318	0	318	0	0	0	0	318	0	0	0	0	0	318
0	97	SCADA SOFTWARE	CW	S2	04	260	180	180	0	0	620	0	620	0	0	0	0	620	0	0	0	0	0	620
0	101	NETWORK EQUIPMENT LIFE CYCLE REPLACEMENT - 2018 SC	CW	S2	03	5	0	0	0	0	5	0	5	0	0	0	0	5	0	0	0	0	0	5
0	109	SCADA UPGRADES FOR WWT - II -CHANGE IN SCOPE	CW	S3	04	-123	1,218	1,060	1,000	1,000	4,155	0	4,155	0	0	0	0	4,155	0	0	0	0	0	4,155
0	110	RELIABILITY IMPROVEMENT PROGRAM-CHANGE IN SCOPE	CW	S3	04	-80	265	275	130	0	590	0	590	0	0	0	0	590	0	0	0	0	0	590
0	111	NETWORK IMPROVEMENTS-CHANGE IN SCOPE	CW	S3	04	127	209	0	0	0	336	0	336	0	0	0	0	336	0	0	0	0	0	336
0	112	SCADA UPGRADES FOR WWT-CHANGE IN SCOPE	CW	S3	04	2,677	1,315	766	102	0	4,860	0	4,860	0	0	0	0	4,860	0	0	0	0	0	4,860
0	113	TECHNOLOGY IMPROVEMENTS	CW	S4	04	1,865	970	75	50	200	3,160	0	3,160	0	0	0	0	3,160	0	0	0	0	0	3,160
0	114	SCADA SOFTWARE-CHANGE IN SCOPE	CW	S3	04	-80	100	100	50	0	170	0	170	0	0	0	0	170	0	0	0	0	0	170
0	115	NETWORK EQUIPMENT LIFE CYCLE REPLA-CHANGE IN SCOPE	CW	S3	03	0	79	0	0	0	79	0	79	0	0	0	0	79	0	0	0	0	0	79
0	116	TRUNK RADIO - EQUIPMENT-CHANGE IN SCOPE	CW	S3	03	-160	0	0	0	0	-160	0	-160	0	0	0	0	-160	0	0	0	0	0	-160
0	117	PCS UPGRADES FOR WATER SUPPLY-CHANGE IN SCOPE	CW	S3	04	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1
0	118	PCS LEGACY ALARM IMPROVEMENT -CHANGE IN SCOPE	CW	S3	04	30	0	0	0	0	30	0	30	0	0	0	0	30	0	0	0	0	0	30
		Sub-total				10,150	8,724	7,625	7,761	6,919	41,179	13,725	54,904	0	0	0	0	54,904	0	0	0	0	0	54,904
WAT906340		METERING & METER READING SYS																						
0	2	AUTOMATED METER READING SYSTEM	CW	S2	04	578	0	0	0	0	578	0	578	0	0	0	0	578	0	0	0	0	0	578

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Water Program

Sub-Priority	Project No. Sub-Proj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906340	METERING & METER READING SYS																						
0 20	AUTOMATED METER READING SYSTEM-CHANGE IN SCOPE	CW	S3	04	4,605	1,680	1,500	1,500	1,500	10,785	7,500	18,285	0	0	0	0	18,285	0	0	0	0	0	18,285
	Sub-total				5,183	1,680	1,500	1,500	1,500	11,363	7,500	18,863	0	0	0	0	18,863	0	0	0	0	0	18,863
WAT906468	HORGAN TRUNK MAIN EXPANSION																						
0 44	DOWNSVIEW MAIN-KEELE PS TO DOWNSVIEW CONS	CW	S6	05	0	0	1,000	16,000	17,000	34,000	26,000	60,000	0	0	0	0	60,000	0	0	0	0	0	60,000
0 52	DOWNSVIEW MAIN (KEELE PS TO DOWNSVIEW) Engineering	CW	S2	05	1,240	1,100	1,700	700	700	5,440	980	6,420	0	0	2,586	0	3,834	0	0	0	0	0	6,420
0 53	DOWNSVIEW MAIN (KEELE PS TO DOWNSV-CHANGE IN SCOPE	CW	S3	05	-240	0	200	0	0	-40	100	60	0	0	3,894	0	-3,834	0	0	0	0	0	60
	Sub-total				1,000	1,100	2,900	16,700	17,700	39,400	27,080	66,480	0	0	6,480	0	60,000	0	0	0	0	0	66,480
WAT906470	ISLAND W.T.P. R&R																						
0 8	CHEMICAL & RESIDUALS MANAGMENT ENGINEERING	CW	S2	02	2,407	900	980	850	200	5,337	200	5,537	0	0	0	0	5,537	0	0	0	0	0	5,537
0 11	CHEMICAL & RESIDUALS MANAGEMENT CONST	CW	S2	02	1,530	15,000	18,000	7,400	0	41,930	0	41,930	0	0	2,551	0	39,379	0	0	0	0	0	41,930
0 34	CHEMICAL & RESIDUALS MANAGMENT ENG-CHANGE IN SCOPE	CW	S3	02	-1,517	659	183	430	929	684	167	851	0	0	0	0	851	0	0	0	0	0	851
0 35	CHEMICAL & RESIDUALS MANAGEMENT CO-CHANGE IN SCOPE	CW	S3	02	-1,500	-14,097	-3,000	10,600	7,400	-597	0	-597	0	0	3,564	0	-4,161	0	0	0	0	0	-597
	Sub-total				920	2,462	16,163	19,280	8,529	47,354	367	47,721	0	0	6,115	0	41,606	0	0	0	0	0	47,721
WAT906481	DISTRICT WATERMAINS - NEW																						
0 1	NEW WATERMAIN	CW	S2	05	58	500	0	0	0	558	0	558	0	0	558	0	0	0	0	0	0	0	558
0 3	NEW WM - 10 YEAR	CW	S6	05	0	0	0	500	500	1,000	2,500	3,500	0	0	3,500	0	0	0	0	0	0	0	3,500
0 17	NEW WM -CHANGE IN SCOPE	CW	S3	05	-48	0	500	0	0	452	0	452	0	0	452	0	0	0	0	0	0	0	452
	Sub-total				10	500	500	500	500	2,010	2,500	4,510	0	0	4,510	0	0	0	0	0	0	0	4,510
WAT906483	PW ENGINEERING																						
0 2	CAPITAL PROGRAMMING & FACILITY ASSET PLANNING	CW	S2	03	3,903	2,300	0	0	0	6,203	0	6,203	0	0	0	0	6,203	0	0	0	0	0	6,203
0 5	WATERMAIN ASSET PLANNING	CW	S2	03	2,839	2,050	1,055	1,100	1,120	8,164	675	8,839	0	0	2,195	0	3,145	0	0	3,499	0	0	8,839
0 7	EASEMENT ACQUISITION	CW	S2	04	690	0	0	0	0	690	0	690	0	0	0	0	690	0	0	0	0	0	690
0 22	WATER LOSS REDUCTION STRATEGY	CW	S2	03	889	429	1,000	1,000	1,000	4,318	0	4,318	0	0	0	0	4,318	0	0	0	0	0	4,318
0 37	ASSET MGMT SYSTEM IMPLEMENTATION	CW	S2	04	1,550	1,000	1,000	1,000	1,000	5,550	1,500	7,050	0	0	1,763	0	5,287	0	0	0	0	0	7,050
0 38	WATERMAIN ASSET PLANNING - 10 YEAR	CW	S6	04	0	0	75	235	475	785	2,375	3,160	0	0	792	0	2,368	0	0	0	0	0	3,160

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Water Program

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906483	PW ENGINEERING																						
0	52	JOS UPDATE PHASE II	CW	S2	05	657	0	0	0	0	657	0	657	0	0	329	0	-1	0	0	329	0	0	657
0	53	EASEMENT ACQUISITION - 10 YEAR	CW	S6	04	0	0	0	500	500	1,000	2,500	3,500	0	0	0	0	3,500	0	0	0	0	0	3,500
0	76	WATERMAIN ASSET PLANNING-CHANGE IN SCOPE	CW	S3	03	-1,831	-45	365	265	50	-1,196	1,795	599	0	0	-770	0	1,133	0	0	236	0	0	599
0	77	CAPITAL PROGRAMMING & FACILITY ASS-CHANGE IN SCOPE	CW	S3	03	-2,585	33	4,140	2,000	1,000	4,588	0	4,588	0	0	0	0	4,588	0	0	0	0	0	4,588
0	78	JOS UPDATE PHASE II-CHANGE IN SCOPE	CW	S3	05	-301	100	0	0	0	-201	0	-201	0	0	-101	0	1	0	0	-101	0	0	-201
0	79	ASSET MGMT SYSTEM IMPLEMENTATION-CHANGE IN SCOPE	CW	S3	04	-1,300	0	0	0	0	-1,300	0	-1,300	0	0	-325	0	-975	0	0	0	0	0	-1,300
0	80	WATER LOSS REDUCTION STRATEGY-CHANGE IN SCOPE	CW	S3	03	-338	551	38	0	0	251	0	251	0	0	0	0	251	0	0	0	0	0	251
0	81	EASEMENT ACQUISITION-CHANGE IN SCOPE	CW	S3	04	114	500	500	0	0	1,114	0	1,114	0	0	0	0	1,114	0	0	0	0	0	1,114
		Sub-total				4,287	6,918	8,173	6,100	5,145	30,623	8,845	39,468	0	0	3,883	0	31,622	0	0	3,963	0	0	39,468
WAT906752	TRANSMISSION R&R																						
0	49	TRUNK WATERMAIN REHAB	CW	S2	03	260	320	250	250	0	1,080	0	1,080	0	0	0	0	1,080	0	0	0	0	0	1,080
0	50	TRUNK WATERMAIN REHAB	CW	S6	03	0	0	0	0	250	250	1,250	1,500	0	0	0	0	1,500	0	0	0	0	0	1,500
0	51	CAST IRON TRUNK REPLC - PHASE 2	CW	S2	03	512	213	0	0	0	725	0	725	0	0	0	0	725	0	0	0	0	0	725
0	52	CAST IRON TRUNK REPLC - PHASE 3 - ENGINEERING	CW	S2	03	1,051	707	0	0	0	1,758	0	1,758	0	0	0	0	1,758	0	0	0	0	0	1,758
0	58	CAST IRON TRUNK REPLC - PHASE 3 - CONSTRUCTION	CW	S2	03	1,500	0	0	0	0	1,500	0	1,500	0	0	0	0	1,500	0	0	0	0	0	1,500
0	82	CAST IRON TRUNK REPLC - PHASE 3 - -CHANGE IN SCOPE	CW	S3	03	-325	119	0	0	0	-206	0	-206	0	0	0	0	-206	0	0	0	0	0	-206
0	83	TRUNK WATERMAIN REHAB-CHANGE IN SCOPE	CW	S3	03	150	100	150	150	400	950	2,000	2,950	0	0	0	0	2,950	0	0	0	0	0	2,950
0	84	CAST IRON TRUNK REPLC - PHASE 2-CHANGE IN SCOPE	CW	S3	03	-48	57	110	0	0	119	0	119	0	0	0	0	119	0	0	0	0	0	119
0	85	CAST IRON TRUNK REPLC - PHASE 3 - -CHANGE IN SCOPE	CW	S3	03	-990	1,000	0	0	0	10	0	10	0	0	0	0	10	0	0	0	0	0	10
		Sub-total				2,110	2,516	510	400	650	6,186	3,250	9,436	0	0	0	0	9,436	0	0	0	0	0	9,436
WAT906900	TRANSMISSION R&R																						
0	1	TRANS FACILITIES REHAB	CW	S2	03	750	750	750	750	0	3,000	0	3,000	0	0	0	0	3,000	0	0	0	0	0	3,000
0	7	RESERVOIR REHAB - FUTURE	CW	S6	03	0	0	0	0	150	150	6,950	7,100	0	0	0	0	7,100	0	0	0	0	0	7,100
0	36	ST CLAIR RESERVOIR REHAB/WATER QUALITY PROTECTION	CW	S2	03	6,949	980	17	0	0	7,946	0	7,946	0	0	0	0	7,946	0	0	0	0	0	7,946

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906900	TRANSMISSION R&R																						
0	43	DOWNSVIEW PS - Construction	CW	S6	05	0	0	1,000	2,000	3,000	6,000	0	6,000	0	0	0	0	6,000	0	0	0	0	0	6,000
0	44	PUMPING STATION REHAB - Engineering	CW	S4	03	100	500	900	860	1,060	3,420	7,200	10,620	0	0	0	0	10,620	0	0	0	0	0	10,620
0	45	PUMPING STATION REHAB - Construction	CW	S6	03	0	50	4,500	5,000	2,700	12,250	40,350	52,600	0	0	0	0	52,600	0	0	0	0	0	52,600
0	48	ROSEHILL RESERVOIR	CW	S2	03	12,525	16,725	8,325	17	17	37,609	0	37,609	0	0	0	0	37,609	0	0	0	0	0	37,609
0	49	DOWNSVIEW PS & CONNECTOR EA	CW	S2	05	142	0	0	0	0	142	0	142	0	0	55	0	87	0	0	0	0	0	142
0	50	PARKDALE PS REHABILITATION	CW	S2	03	2,722	197	8	0	0	2,927	0	2,927	0	0	0	0	2,927	0	0	0	0	0	2,927
0	51	ROSEHILL PS REHAB	CW	S2	03	2,722	48	50	0	0	2,820	0	2,820	0	0	0	0	2,820	0	0	0	0	0	2,820
0	67	PUMP REPLACEMENTS	CW	S2	03	1,050	0	0	0	0	1,050	0	1,050	0	0	0	0	1,050	0	0	0	0	0	1,050
0	70	TRANS FACILITIES REHAB - 10 YEAR	CW	S6	03	0	0	0	0	0	0	3,400	3,400	0	0	0	0	3,400	0	0	0	0	0	3,400
0	72	RESERVOIR REHAB - PHASE 2 - ENG	CW	S2	03	500	688	580	10	7	1,785	0	1,785	0	0	0	0	1,785	0	0	0	0	0	1,785
0	74	PS REHAB - PHASE 2 - ENG	CW	S2	03	1,528	1,216	950	24	24	3,742	0	3,742	0	0	0	0	3,742	0	0	0	0	0	3,742
0	91	SCARBOROUGH RESERVOIR SURGE TANK	CW	S4	03	125	400	4,600	4,200	550	9,875	125	10,000	0	0	0	0	10,000	0	0	0	0	0	10,000
0	92	RESERVOIR REHAB - PHASE 2 - CONSTRUCTION	CW	S6	03	0	1,500	9,500	8,000	0	19,000	0	19,000	0	0	0	0	19,000	0	0	0	0	0	19,000
0	93	RESERVOIR REHAB - FUTURE - CONSTRUCTION	CW	S6	03	0	0	0	0	0	0	35,500	35,500	0	0	0	0	35,500	0	0	0	0	0	35,500
0	94	PS REHAB - PHASE 2 - CONSTRUCTION	CW	S2	03	4,040	10,950	6,500	0	0	21,490	0	21,490	0	0	0	0	21,490	0	0	0	0	0	21,490
0	96	DOWNSVIEW PS & CONNECTOR EA-CHANGE IN SCOPE	CW	S3	05	-140	165	0	0	0	25	0	25	0	0	112	0	-87	0	0	0	0	0	25
0	97	TRANS FACILITIES REHAB-CHANGE IN SCOPE	CW	S3	03	450	100	100	100	850	1,600	1,200	2,800	0	0	0	0	2,800	0	0	0	0	0	2,800
0	98	ST CLAIR RESERVOIR REHAB/WATER QUA-CHANGE IN SCOPE	CW	S3	03	-1,649	2,049	0	7	0	407	0	407	0	0	0	0	407	0	0	0	0	0	407
0	99	PARKDALE PS REHABILITATION-CHANGE IN SCOPE	CW	S3	03	-277	443	0	0	0	166	0	166	0	0	0	0	166	0	0	0	0	0	166
0	100	ROSEHILL RESERVOIR-CHANGE IN SCOPE	CW	S3	03	-3,728	-6,210	1,210	20	0	-8,708	0	-8,708	0	0	0	0	-8,708	0	0	0	0	0	-8,708
0	101	ELEVATED TANKS REPLACEMENT	CW	S6	03	0	0	0	0	0	0	1,075	1,075	0	0	0	0	1,075	0	0	0	0	0	1,075
0	103	ROSEHILL PS REHAB-CHANGE IN SCOPE	CW	S3	03	-1,258	1,149	240	0	0	131	0	131	0	0	0	0	131	0	0	0	0	0	131
0	104	RESERVOIR REHAB - PHASE 2 - ENG-CHANGE IN SCOPE	CW	S3	03	-150	-347	-180	460	3	-214	7	-207	0	0	0	0	-207	0	0	0	0	0	-207
0	105	PS REHAB - PHASE 2 - ENG-CHANGE IN SCOPE	CW	S3	03	-728	-180	-124	929	1	-102	0	-102	0	0	0	0	-102	0	0	0	0	0	-102

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906900	TRANSMISSION R&R																						
0	106	PS REHAB - PHASE 2 - CONSTRUCTION-CHANGE IN SCOPE	CW	S3	03	-3,240	-7,250	4,000	6,500	0	10	0	10	0	0	0	0	10	0	0	0	0	0	10
0	107	PUMP REPLACEMENTS-CHANGE IN SCOPE	CW	S3	03	-150	1,300	0	0	0	1,150	0	1,150	0	0	0	0	1,150	0	0	0	0	0	1,150
		Sub-total				22,283	25,223	42,926	28,877	8,362	127,671	95,807	223,478	0	0	167	0	223,311	0	0	0	0	0	223,478
WAT906902	HARRIS W.T.P. R&R																						
0	3	FACILITY & PROCESS UPGRADES	CW	S2	03	500	500	500	500	0	2,000	0	2,000	0	0	0	0	2,000	0	0	0	0	0	2,000
0	21	HVAC REHAB CONSTRUCTION	CW	S2	03	5,492	4,241	0	0	0	9,733	0	9,733	0	0	0	0	9,733	0	0	0	0	0	9,733
0	29	HARRIS FILTERS REHABILITATION - PILOT	CW	S2	03	6,250	948	24	0	0	7,222	0	7,222	0	0	0	0	7,222	0	0	0	0	0	7,222
0	56	REHAB OF SETTLING BASIN ROOF & SLUICE GATES	CW	S2	03	510	10	13	0	0	533	0	533	0	0	0	0	533	0	0	0	0	0	533
0	70	FILTER MEDIA UPGRADE - FUTURE	CW	S6	03	0	150	0	150	0	300	0	300	0	0	0	0	300	0	0	0	0	0	300
0	71	FACILITY & PROCESS UPGRADES - FUTURE	CW	S6	03	0	0	0	0	500	500	2,500	3,000	0	0	0	0	3,000	0	0	0	0	0	3,000
0	79	EXTERIOR SECURITY LIGHTING UPGRADES	CW	S2	03	0	100	550	550	0	1,200	0	1,200	0	0	0	0	1,200	0	0	0	0	0	1,200
0	80	FACILITY INFRASTRUCTURE REHAB	CW	S4	03	900	1,800	0	0	0	2,700	0	2,700	0	0	0	0	2,700	0	0	0	0	0	2,700
0	81	LIQUID CHEMICAL SYSTEM IMPROVEMENTS	CW	S2	04	3,282	7	0	0	0	3,289	0	3,289	0	0	0	0	3,289	0	0	0	0	0	3,289
0	85	HARRIS FILTERS REHABILITATION	CW	S6	03	0	0	0	450	500	950	44,550	45,500	0	0	0	0	45,500	0	0	0	0	0	45,500
0	98	HERITAGE MASONRY AND ARCHITECTURAL RESTORATION	CW	S2	03	200	200	200	200	0	800	0	800	0	0	0	0	800	0	0	0	0	0	800
0	99	CONTROL ROOM RELOCATION	CW	S2	04	1,345	204	0	0	0	1,549	0	1,549	0	0	0	0	1,549	0	0	0	0	0	1,549
0	100	EMERGENCY STANDBY POWER	CW	S2	04	2,339	347	0	0	0	2,686	0	2,686	0	0	0	0	2,686	0	0	0	0	0	2,686
0	102	PHONE SYSTEM UPGRADE	CW	S2	03	0	70	510	0	0	580	0	580	0	0	0	0	580	0	0	0	0	0	580
0	106	BUILDING ENVELOPE REHAB	CW	S2	03	136	0	0	0	0	136	0	136	0	0	0	0	136	0	0	0	0	0	136
0	112	TRAVELLING SCREENS 3 & 5 UPGRADE	CW	S2	03	0	300	450	0	0	750	0	750	0	0	0	0	750	0	0	0	0	0	750
0	119	ENERGY OPTIMIZATION	CW	S2	04	1,170	1,000	0	0	0	2,170	0	2,170	0	0	0	0	2,170	0	0	0	0	0	2,170
0	132	EMERGENCY STANDBY POWER-CHANGE IN SCOPE	CW	S3	04	-1,725	2,732	134	0	0	1,141	0	1,141	0	0	0	0	1,141	0	0	0	0	0	1,141
0	133	CONTROL ROOM RELOCATION-CHANGE IN SCOPE	CW	S3	04	-726	108	725	0	0	107	0	107	0	0	0	0	107	0	0	0	0	0	107
0	134	BUILDING ENVELOPE REHAB-CHANGE IN SCOPE	CW	S3	03	-136	0	0	0	0	-136	0	-136	0	0	0	0	-136	0	0	0	0	0	-136

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906902	HARRIS W.T.P. R&R																							
0	135	HARRIS FILTERS REHABILITATION - PI-CHANGE IN SCOPE	CW	S3	03	-5,200	4,822	5,751	1,050	24	6,447	0	6,447	0	0	0	0	6,447	0	0	0	0	0	6,447
0	136	LIQUID CHEMICAL SYSTEM IMPROVEMENT-CHANGE IN SCOPE	CW	S3	04	-2,856	565	0	0	0	-2,291	0	-2,291	0	0	0	0	-2,291	0	0	0	0	0	-2,291
0	137	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	CW	S3	03	139	103	55	56	0	353	0	353	0	0	0	0	353	0	0	0	0	0	353
0	138	HVAC REHAB CONSTRUCTION-CHANGE IN SCOPE	CW	S3	03	-4,854	-116	4,035	121	0	-814	0	-814	0	0	0	0	-814	0	0	0	0	0	-814
0	139	REHAB OF SETTLING BASIN ROOF & SLU-CHANGE IN SCOPE	CW	S3	03	-339	150	0	0	0	-189	0	-189	0	0	0	0	-189	0	0	0	0	0	-189
0	140	EXTERIOR SECURITY LIGHTING UPGRADE-CHANGE IN SCOPE	CW	S3	03	0	-100	-550	-450	550	-550	550	0	0	0	0	0	0	0	0	0	0	0	0
0	141	TRAVELLING SCREENS 3 & 5 UPGRADE-CHANGE IN SCOPE	CW	S3	03	0	-300	-450	300	450	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	142	PHONE SYSTEM UPGRADE-CHANGE IN SCOPE	CW	S3	03	0	-70	-440	510	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	143	ENERGY OPTIMIZATION-CHANGE IN SCOPE	CW	S3	04	-890	890	5	0	0	5	0	5	0	0	0	0	5	0	0	0	0	0	5
		Sub-total				5,537	18,661	11,512	3,437	2,024	41,171	47,600	88,771	0	0	0	0	88,771	0	0	0	0	0	88,771
WAT906903	FJ HORGAN W.T.P. R&R																							
0	5	FACILITY & PROCESS UPGRADES	CW	S2	03	1,174	550	200	200	0	2,124	0	2,124	0	0	0	0	2,124	0	0	0	0	0	2,124
0	8	RAW WATER PUMP UGRADES	CW	S2	03	321	0	0	0	0	321	0	321	0	0	0	0	321	0	0	0	0	0	321
0	15	REPLACEMENT OF MCCS	CW	S2	03	533	297	50	3	0	883	0	883	0	0	0	0	883	0	0	0	0	0	883
0	28	FACILITY & PROCESS UPGRADES - FUTURE	CW	S6	03	0	0	0	0	200	200	1,000	1,200	0	0	0	0	1,200	0	0	0	0	0	1,200
0	31	BUILDING FIRE, HVAC, LIGHTING UPGRADES	CW	S2	04	1,455	1,635	1,010	0	0	4,100	0	4,100	0	0	0	0	4,100	0	0	0	0	0	4,100
0	32	ELEC GROUNDING SYSTEM & BULK CHEM UNLOADING IMPRO	CW	S2	04	679	690	0	0	0	1,369	0	1,369	0	0	0	0	1,369	0	0	0	0	0	1,369
0	33	OFFICE RENOVATION	CW	S6	03	0	100	675	575	475	1,825	4	1,829	0	0	0	0	1,829	0	0	0	0	0	1,829
0	34	TREATED WATER PUMP UPGRADES	CW	S2	04	203	0	0	0	0	203	0	203	0	0	0	0	203	0	0	0	0	0	203
0	65	TREATED WATER PUMP UPGRADES-CHANGE IN SCOPE	CW	S3	04	-86	0	0	0	0	-86	0	-86	0	0	0	0	-86	0	0	0	0	0	-86
0	66	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	CW	S3	03	-1,011	-207	230	531	150	-307	0	-307	0	0	0	0	-307	0	0	0	0	0	-307
0	67	ELEC GROUNDING SYSTEM & BULK CHEM-CHANGE IN SCOPE	CW	S3	04	-504	-290	1,910	540	10	1,666	11	1,677	0	0	0	0	1,677	0	0	0	0	0	1,677
0	68	BUILDING FIRE, HVAC, LIGHTING UPGR-CHANGE IN SCOPE	CW	S3	04	-1,305	-1,285	-560	0	750	-2,400	1,000	-1,400	0	0	0	0	-1,400	0	0	0	0	0	-1,400
0	69	REPLACEMENT OF MCCS-CHANGE IN SCOPE	CW	S3	03	-233	321	-19	-3	0	66	0	66	0	0	0	0	66	0	0	0	0	0	66

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Sub-Priority	Project No. Sub-Proj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906903	FJ HORGAN W.T.P. R&R																						
0 70	RAW WATER PUMP UGRADES-CHANGE IN SCOPE		CW	S3	03	-200	640	145	15	0	600	0	600	0	0	0	0	600	0	0	0	0	0	600
	Sub-total					1,026	2,451	3,641	1,861	1,585	10,564	2,015	12,579	0	0	0	0	12,579	0	0	0	0	0	12,579
WAT906906	TRUNK WATERMAIN EXPANSION																						
0 25	JOS WM SCAR PS TO ST CLAIR AND MIDLAND - ENG		CW	S2	05	801	610	436	0	0	1,847	0	1,847	0	0	877	0	550	0	0	420	0	0	1,847
0 66	JOS - WM Scar PS to St. Clair&Midland (CONST)		CW	S2	05	21,393	19,000	2,000	0	0	42,393	0	42,393	0	0	20,124	0	12,637	0	0	9,632	0	0	42,393
0 72	JOS WM SCAR PS TO ST CLAIR AND MID-CHANGE IN SCOPE		CW	S3	05	-276	-85	-103	9	0	-455	0	-455	0	0	-317	0	-34	0	0	-104	0	0	-455
0 73	JOS - WM Scar PS to St. Clair&Midl-CHANGE IN SCOPE		CW	S3	05	-13,393	-5,000	11,982	0	0	-6,411	0	-6,411	0	0	-5,664	0	709	0	0	-1,456	0	0	-6,411
	Sub-total					8,525	14,525	14,315	9	0	37,374	0	37,374	0	0	15,020	0	13,862	0	0	8,492	0	0	37,374
WAT906914	SWITCH GEAR TRANSFORMER																						
0 13	INDOOR/OUTDOOR SWITCHGEAR (PHASE 3)		CW	S2	03	1,169	0	0	0	0	1,169	0	1,169	0	0	0	0	1,169	0	0	0	0	0	1,169
0 29	INDOOR/OUTDOOR SWITCHGEAR (PHASE 4)		CW	S2	03	1,104	6,250	5,250	5,250	5,250	23,104	2,675	25,779	0	0	0	0	25,779	0	0	0	0	0	25,779
0 32	INDOOR/OUTDOOR SWITCHGEAR (PHASE 3-CHANGE IN SCOPE		CW	S3	03	-1,109	1,113	0	0	0	4	0	4	0	0	0	0	4	0	0	0	0	0	4
0 33	INDOOR/OUTDOOR SWITCHGEAR (PHASE 4-CHANGE IN SCOPE		CW	S3	03	-704	-360	100	100	100	-764	-15	-779	0	0	0	0	-779	0	0	0	0	0	-779
	Sub-total					460	7,003	5,350	5,350	5,350	23,513	2,660	26,173	0	0	0	0	26,173	0	0	0	0	0	26,173
WAT906918	WATER SUSTAINABILITY PROGRAM																						
0 1	WATER SUSTAINABILITY PROGRAM		CW	S2	04	7,836	3,382	0	0	0	11,218	0	11,218	0	0	740	0	7,102	0	0	3,376	0	0	11,218
0 12	STANDBY POWER - ROSEHILL		CW	S2	04	6,036	43	33	14	0	6,126	0	6,126	0	0	416	0	3,872	0	0	1,838	0	0	6,126
0 23	WATER SUSTAINABILITY PROGRAM-CHANGE IN SCOPE		CW	S3	04	-6,486	2,195	5,457	3,997	10	5,173	0	5,173	0	0	955	0	2,660	0	0	1,558	0	0	5,173
0 24	STANDBY POWER - ROSEHILL-CHANGE IN SCOPE		CW	S3	04	-2,883	3,175	-19	0	0	273	0	273	0	0	246	0	-54	0	0	81	0	0	273
	Sub-total					4,503	8,795	5,471	4,011	10	22,790	0	22,790	0	0	2,357	0	13,580	0	0	6,853	0	0	22,790
WAT906919	RL CLARK W.T.P. R&R																						
0 1	FACILITY & PROCESS UPGRADES		CW	S2	03	200	200	200	200	0	800	0	800	0	0	0	0	800	0	0	0	0	0	800
0 8	PROCESS EQUIPMENT UPGRADE ENGINEERING		CW	S2	03	69	1,780	60	35	0	1,944	0	1,944	0	0	118	0	1,826	0	0	0	0	0	1,944
0 12	FACILITY & PROCESS UPGRADES - FUTURE		CW	S6	03	0	0	0	0	200	200	1,000	1,200	0	0	0	0	1,200	0	0	0	0	0	1,200
0 15	PROCESS EQUIPMENT UPGRADE CONSTRUCTION		CW	S2	03	7,721	2,500	0	0	0	10,221	0	10,221	0	0	621	0	9,600	0	0	0	0	0	10,221

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Water Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing
WAT906919		RL CLARK W.T.P. R&R																					
0	44	EVACUATION AND COMMUNICATION SYSTEMS	CW	S2	03	112	0	0	0	0	112	0	112	0	0	0	0	112	0	0	0	0	112
0	76	PROCESS EQUIPMENT UPGRADE CONSTRUC-CHANGE IN SCOPE	CW	S3	03	-693	1,000	0	0	0	307	0	307	0	0	937	0	-630	0	0	0	0	307
0	77	PROCESS EQUIPMENT UPGRADE ENGINEER-CHANGE IN SCOPE	CW	S3	03	602	-592	0	0	0	10	0	10	0	0	171	0	-161	0	0	0	0	10
0	78	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	CW	S3	03	51	53	55	56	0	215	0	215	0	0	0	0	215	0	0	0	0	215
0	79	EVACUATION AND COMMUNICATION SYSTE-CHANGE IN SCOPE	CW	S3	03	-112	0	0	0	0	-112	0	-112	0	0	0	0	-112	0	0	0	0	-112
		Sub-total				7,950	4,941	315	291	200	13,697	1,000	14,697	0	0	1,847	0	12,850	0	0	0	0	14,697
WAT906930		DIST W/M REPLACEMENT																					
0	4	10 YEAR WATERMAIN REPLACEMENT	CW	S6	03	0	0	0	73,500	95,000	168,500	475,000	643,500	0	0	0	0	643,500	0	0	0	0	643,500
0	21	2011 WM REPLC	CW	S2	03	3	0	0	0	0	3	0	3	0	0	0	0	3	0	0	0	0	3
0	29	DIST W/M REPLC - 2012	CW	S2	03	147	0	0	0	0	147	0	147	0	0	0	0	147	0	0	0	0	147
0	42	10 YEAR WATERMAIN UPGRADES	CW	S6	05	0	0	0	13,300	17,500	30,800	91,500	122,300	0	0	0	0	122,300	0	0	0	0	122,300
0	51	DIST W/M REPLACEMENT - 2014	CW	S2	03	365	0	0	0	0	365	0	365	0	0	57	0	308	0	0	0	0	365
0	55	WATERMAIN REPLACEMENT - METROLINX	CW	S2	03	1,090	1,796	2,456	0	0	5,342	0	5,342	0	0	0	0	5,342	0	0	0	0	5,342
0	59	2013 WM REPLC - UPGRADES	CW	S2	05	101	0	0	0	0	101	0	101	0	0	31	0	70	0	0	0	0	101
0	63	DIST W/M REPLACEMENT - 2015	CW	S2	03	2,317	0	0	0	0	2,317	0	2,317	0	0	344	0	1,973	0	0	0	0	2,317
0	64	WATERMAIN UPGRADES - 2015	CW	S2	05	390	0	0	0	0	390	0	390	0	0	124	0	266	0	0	0	0	390
0	73	DIST W/M REPLACEMENT - 2016	CW	S2	03	8,933	0	0	0	0	8,933	0	8,933	0	0	1,371	0	7,562	0	0	0	0	8,933
0	74	WATERMAIN UPGRADES - 2016	CW	S2	05	2,706	0	0	0	0	2,706	0	2,706	0	0	857	0	1,849	0	0	0	0	2,706
0	83	DIST W/M REPLACEMENT - 2017	CW	S2	03	8,289	15	0	0	0	8,304	0	8,304	0	0	1,230	0	7,074	0	0	0	0	8,304
0	84	WATERMAIN UPGRADES - 2017	CW	S2	05	1,188	0	0	0	0	1,188	0	1,188	0	0	376	0	812	0	0	0	0	1,188
0	85	DIST W/M REPLACEMENT - 2018	CW	S2	03	52,339	11,690	928	0	0	64,957	0	64,957	0	0	9,264	0	55,693	0	0	0	0	64,957
0	86	WATERMAIN UPGRADES - 2018	CW	S2	05	14,303	2,921	0	0	0	17,224	0	17,224	0	0	5,789	0	11,435	0	0	0	0	17,224
0	110	DIST W/M REPLACEMENT - 2019	CW	S2	03	55,201	18,616	8,466	253	0	82,536	0	82,536	0	0	12,834	0	69,702	0	0	0	0	82,536
0	111	WATERMAIN UPGRADES - 2019	CW	S2	05	24,014	8,368	3,688	72	0	36,142	0	36,142	0	0	11,243	0	24,899	0	0	0	0	36,142

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906930	DIST W/M REPLACEMENT																						
0	112	DIST W/M REPLACEMENT - 2014-CHANGE IN SCOPE	CW	S3	03	-350	324	0	0	0	-26	0	-26	0	0	-31	0	5	0	0	0	0	0	-26
0	113	DIST W/M REPLACEMENT - 2015-CHANGE IN SCOPE	CW	S3	03	-2,100	2,153	0	0	0	53	0	53	0	0	-162	0	215	0	0	0	0	0	53
0	114	DIST W/M REPLACEMENT - 2017-CHANGE IN SCOPE	CW	S3	03	-7,519	7,312	0	0	0	-207	0	-207	0	0	-608	0	401	0	0	0	0	0	-207
0	115	DIST W/M REPLACEMENT - 2018-CHANGE IN SCOPE	CW	S3	03	-22,804	11,182	7,179	105	0	-4,338	0	-4,338	0	0	-4,605	0	267	0	0	0	0	0	-4,338
0	116	DIST W/M REPLACEMENT - 2019-CHANGE IN SCOPE	CW	S3	03	-20,817	71,667	97,160	29,461	6,130	183,601	0	183,601	0	0	-7,030	0	190,631	0	0	0	0	0	183,601
0	117	WATERMAIN UPGRADES - 2015-CHANGE IN SCOPE	CW	S3	05	-320	321	0	0	0	1	0	1	0	0	72	0	-71	0	0	0	0	0	1
0	118	WATERMAIN UPGRADES - 2016-CHANGE IN SCOPE	CW	S3	05	-2,601	616	0	0	0	-1,985	0	-1,985	0	0	-496	0	-1,489	0	0	0	0	0	-1,985
0	119	WATERMAIN UPGRADES - 2017-CHANGE IN SCOPE	CW	S3	05	-1,156	289	0	0	0	-867	0	-867	0	0	-215	0	-652	0	0	0	0	0	-867
0	120	DIST W/M REPLACEMENT - 2016-CHANGE IN SCOPE	CW	S3	03	-8,536	3,991	0	0	0	-4,545	0	-4,545	0	0	-1,033	0	-3,512	0	0	0	0	0	-4,545
0	121	WATERMAIN UPGRADES - 2018-CHANGE IN SCOPE	CW	S3	05	-5,262	4,368	0	0	0	-894	0	-894	0	0	2,377	0	-3,271	0	0	0	0	0	-894
0	122	WATERMAIN UPGRADES - 2019-CHANGE IN SCOPE	CW	S3	05	-7,793	10,832	18,831	4,773	2,434	29,077	0	29,077	0	0	6,264	0	22,813	0	0	0	0	0	29,077
0	123	2013 WM REPLC - UPGRADES-CHANGE IN SCOPE	CW	S3	05	-101	0	0	0	0	-101	0	-101	0	0	-31	0	-70	0	0	0	0	0	-101
0	124	DIST W/M REPLC - 2012-CHANGE IN SCOPE	CW	S3	03	-10	0	0	0	0	-10	0	-10	0	0	0	0	-10	0	0	0	0	0	-10
0	127	WATERMAIN REPLACEMENT - METROLINX-CHANGE IN SCOPE	CW	S3	03	-400	114	460	20	0	194	0	194	0	0	0	0	194	0	0	0	0	0	194
0	130	2011 WM REPLC-CHANGE IN SCOPE	CW	S3	03	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1
		Sub-total				91,618	156,575	139,168	121,484	121,064	629,909	566,500	1,196,409	0	0	38,022	0	1,158,387	0	0	0	0	0	1,196,409
WAT906932	DIST W/M REHABILITATION																						
0	3	10 YEAR WATERMAIN REHABILITATION	CW	S6	03	0	1,500	54,000	69,000	70,300	194,800	335,600	530,400	0	0	0	0	530,400	0	0	0	0	0	530,400
0	4	HYDRANT & VALVE REPAIR	CW	S2	03	1,568	0	0	0	0	1,568	0	1,568	0	0	0	0	1,568	0	0	0	0	0	1,568
0	6	WATERMAIN STRUCTURAL LINING	CW	S2	03	68,624	18,594	239	175	0	87,632	0	87,632	0	0	0	0	87,632	0	0	0	0	0	87,632
0	7	CATHODIC PROTECTION	CW	S2	03	7,162	500	0	0	0	7,662	0	7,662	0	0	0	0	7,662	0	0	0	0	0	7,662
0	30	CUT REPAIR	CW	S2	03	3,549	0	0	0	0	3,549	0	3,549	0	0	0	0	3,549	0	0	0	0	0	3,549
0	34	CUT REPAIR - FUTURE	CW	S6	03	0	142	296	1,260	1,260	2,958	6,300	9,258	0	0	0	0	9,258	0	0	0	0	0	9,258
0	59	PRV INSPECTION & RENEWAL	CW	S2	03	1,600	565	0	0	0	2,165	0	2,165	0	0	0	0	2,165	0	0	0	0	0	2,165

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Water Program

Sub-Priority	Project No. Sub-Proj No.	Project Name / Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906932	DIST W/M REHABILITATION																						
0 60	INFRASTRUCTURE REHAB & UPGRADES - METROLINX		CW	S2	03	75	75	75	0	0	225	0	225	0	0	0	0	225	0	0	0	0	0	225
0 61	WATERMAIN STRUCTURAL LINING-CHANGE IN SCOPE		CW	S3	03	-20,106	37,385	25,560	0	0	42,839	0	42,839	0	0	0	0	42,839	0	0	0	0	0	42,839
0 62	PRV INSPECTION & RENEWAL-CHANGE IN SCOPE		CW	S3	03	-1,110	1,140	0	0	0	30	0	30	0	0	0	0	30	0	0	0	0	0	30
0 63	HYDRANT & VALVE REPAIR-CHANGE IN SCOPE		CW	S3	03	-368	930	0	0	0	562	0	562	0	0	0	0	562	0	0	0	0	0	562
0 64	CUT REPAIR-CHANGE IN SCOPE		CW	S3	03	-1,455	2,584	2,584	445	0	4,158	0	4,158	0	0	0	0	4,158	0	0	0	0	0	4,158
0 65	CATHODIC PROTECTION-CHANGE IN SCOPE		CW	S3	03	-3,520	4,756	300	300	0	1,836	0	1,836	0	0	0	0	1,836	0	0	0	0	0	1,836
	Sub-total					56,019	68,171	83,054	71,180	71,560	349,984	341,900	691,884	0	0	0	0	691,884	0	0	0	0	0	691,884
WAT906934	DIST WATER SERVICE REPAIR																						
0 4	10 YR WATER SERVICE REPAIR - LEAD PROGRAM		CW	S6	02	0	0	1,300	3,000	9,750	14,050	48,750	62,800	0	0	0	0	62,800	0	0	0	0	0	62,800
0 6	10 YR WATER SERVICE REPAIR - SOGR		CW	S6	02	0	0	0	10,000	15,000	25,000	90,000	115,000	0	0	0	0	115,000	0	0	0	0	0	115,000
0 12	WATER SERVICE REPAIR - LEAD PROGRAM		CW	S2	02	12,606	4,901	1	0	0	17,508	0	17,508	0	0	0	0	17,508	0	0	0	0	0	17,508
0 32	WSR CUT REPAIR		CW	S2	03	1,613	0	0	0	0	1,613	0	1,613	0	0	0	0	1,613	0	0	0	0	0	1,613
0 39	2012 WATER SERVICE REPLC - SOGR		CW	S2	02	60	0	0	0	0	60	0	60	0	0	0	0	60	0	0	0	0	0	60
0 41	2013 WATER SERVICE REPAIR		CW	S2	02	140	0	0	0	0	140	0	140	0	0	0	0	140	0	0	0	0	0	140
0 45	WSR CUT REPAIR - FUTURE		CW	S6	02	0	797	1,098	6,496	6,496	14,887	32,480	47,367	0	0	0	0	47,367	0	0	0	0	0	47,367
0 52	2014 WATER SERVICE REPLACEMENT - SOGR		CW	S2	02	148	0	0	0	0	148	0	148	0	0	0	0	148	0	0	0	0	0	148
0 59	2015 WATER SERVICE REPLACEMENT - SOGR		CW	S2	02	865	0	0	0	0	865	0	865	0	0	0	0	865	0	0	0	0	0	865
0 68	2016 WATER SERVICE REPLACEMENT - SOGR		CW	S2	02	3,992	0	0	0	0	3,992	0	3,992	0	0	0	0	3,992	0	0	0	0	0	3,992
0 71	WATER SERVICE REPAIR - WM REHAB PROGRAM		CW	S2	02	19,035	4,000	2,000	0	0	25,035	0	25,035	0	0	0	0	25,035	0	0	0	0	0	25,035
0 72	10 YR WATER SERVICE REPAIR - WITH WM SL		CW	S6	02	0	0	4,000	8,000	10,000	22,000	50,000	72,000	0	0	0	0	72,000	0	0	0	0	0	72,000
0 73	WATER SERVICE REPLACEMENT - TUNNEL		CW	S6	02	0	0	50	2,000	2,000	4,050	3,500	7,550	0	0	0	0	7,550	0	0	0	0	0	7,550
0 74	REPLACEMENT OF FROZEN SERVICES		CW	S2	02	240	0	0	0	0	240	0	240	0	0	0	0	240	0	0	0	0	0	240
0 75	WSR CUT REPAIRS WITH WM SL		CW	S2	02	1,613	0	0	0	0	1,613	0	1,613	0	0	0	0	1,613	0	0	0	0	0	1,613
0 78	2011 WATER SERVICE REPAIR		CW	S2	02	12	0	0	0	0	12	0	12	0	0	0	0	12	0	0	0	0	0	12

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Water Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By										
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906934	DIST WATER SERVICE REPAIR																							
0	84	2017 WATER SERVICE REPLACEMENT - SOGR	CW	S2	02	6,374	0	0	0	0	6,374	0	6,374	0	0	0	0	6,374	0	0	0	0	0	6,374
0	85	2018 WATER SERVICE REPLACEMENT - SOGR	CW	S2	02	10,000	3,000	0	0	0	13,000	0	13,000	0	0	0	0	13,000	0	0	0	0	0	13,000
0	108	2019 WATER SERVICE REPLACEMENT - SOGR	CW	S2	02	10,000	7,000	3,000	0	0	20,000	0	20,000	0	0	0	0	20,000	0	0	0	0	0	20,000
0	109	2015 WATER SERVICE REPLACEMENT - S-CHANGE IN SCOPE	CW	S3	02	-733	1,019	0	0	0	286	0	286	0	0	0	0	286	0	0	0	0	0	286
0	110	2016 WATER SERVICE REPLACEMENT - S-CHANGE IN SCOPE	CW	S3	02	-3,424	3,436	0	0	0	12	0	12	0	0	0	0	12	0	0	0	0	0	12
0	111	2017 WATER SERVICE REPLACEMENT - S-CHANGE IN SCOPE	CW	S3	02	-5,472	2,917	0	0	0	-2,555	0	-2,555	0	0	0	0	-2,555	0	0	0	0	0	-2,555
0	112	2018 WATER SERVICE REPLACEMENT - S-CHANGE IN SCOPE	CW	S3	02	-5,449	3,271	4,252	0	0	2,074	0	2,074	0	0	0	0	2,074	0	0	0	0	0	2,074
0	113	2019 WATER SERVICE REPLACEMENT - S-CHANGE IN SCOPE	CW	S3	02	-5,000	12,000	20,000	8,000	3,000	38,000	0	38,000	0	0	0	0	38,000	0	0	0	0	0	38,000
0	114	WATER SERVICE REPAIR - LEAD PROGRA-CHANGE IN SCOPE	CW	S3	02	-4,410	6,396	5,749	4,050	0	11,785	0	11,785	0	0	0	0	11,785	0	0	0	0	0	11,785
0	115	2012 WATER SERVICE REPLC - SOGR-CHANGE IN SCOPE	CW	S3	02	-60	0	0	0	0	-60	0	-60	0	0	0	0	-60	0	0	0	0	0	-60
0	116	WSR CUT REPAIR-CHANGE IN SCOPE	CW	S3	03	3,502	7,854	7,854	675	0	19,885	0	19,885	0	0	0	0	19,885	0	0	0	0	0	19,885
0	117	2013 WSR-CHANGE IN SCOPE	CW	S3	02	-133	0	0	0	0	-133	0	-133	0	0	0	0	-133	0	0	0	0	0	-133
0	118	WATER SERVICE REPAIR - WM REHAB PR-CHANGE IN SCOPE	CW	S3	02	-13,150	7,517	3,500	6,000	0	3,867	0	3,867	0	0	0	0	3,867	0	0	0	0	0	3,867
0	119	2014 WATER SERVICE REPLACEMENT - S-CHANGE IN SCOPE	CW	S3	02	-118	114	0	0	0	-4	0	-4	0	0	0	0	-4	0	0	0	0	0	-4
0	121	WSR CUT REPAIRS WITH WM SL-CHANGE IN SCOPE	CW	S3	02	-893	675	675	675	0	1,132	0	1,132	0	0	0	0	1,132	0	0	0	0	0	1,132
0	122	REPLACEMENT OF FROZEN SERVICES-CHANGE IN SCOPE	CW	S3	02	-240	0	0	0	0	-240	0	-240	0	0	0	0	-240	0	0	0	0	0	-240
0	123	2011 WSR-CHANGE IN SCOPE	CW	S3	02	3	0	0	0	0	3	0	3	0	0	0	0	3	0	0	0	0	0	3
		Sub-total				31,121	64,897	53,479	48,896	46,246	244,639	224,730	469,369	0	0	0	0	469,369	0	0	0	0	0	469,369
WAT906935	NEW SERVICE CONNECTIONS																							
0	2	NEW SERVICE CONNECTIONS - CUT REPAIRS	CW	S2	05	5,377	0	0	0	0	5,377	0	5,377	0	0	0	0	5,377	0	0	0	0	0	5,377
0	7	NEW SERVICE CONNECTIONS - SITE SERVICING	CW	S2	05	6,946	0	0	0	0	6,946	0	6,946	0	0	0	0	6,946	0	0	0	0	0	6,946
0	14	NEW SERVICE CONNECTIONS - 10 Year	CW	S6	05	0	0	0	32,000	32,000	64,000	175,000	239,000	0	0	0	0	239,000	0	0	0	0	0	239,000
0	15	NEW SERVICE CONNECTIONS - CUT REPAIRS - FUTURE	CW	S6	05	0	1,622	2,235	13,223	13,223	30,303	66,115	96,418	0	0	0	0	96,418	0	0	0	0	0	96,418
0	26	NEW SERVICE CONNECTIONS - SITE SER-CHANGE IN SCOPE	CW	S3	05	24,213	32,123	34,000	0	0	90,336	0	90,336	0	0	0	0	90,336	0	0	0	0	0	90,336

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Water Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906935	NEW SERVICE CONNECTIONS																						
0 27	NEW SERVICE CONNECTIONS - CUT REPA-CHANGE IN SCOPE		CW	S3	05	5,300	18,758	18,758	4,634	0	47,450	0	47,450	0	0	0	0	47,450	0	0	0	0	0	47,450
	Sub-total					41,836	52,503	54,993	49,857	45,223	244,412	241,115	485,527	0	0	0	0	485,527	0	0	0	0	0	485,527
WAT906951	ENGINEERING																						
0 2	CONSULTING FEES		CW	S2	03	21,842	8,367	4,378	2,500	1,170	38,257	2,102	40,359	0	0	0	0	40,359	0	0	0	0	0	40,359
0 5	10 YEAR ENGINEERING		CW	S6	03	0	32,534	34,618	36,591	46,054	149,797	284,282	434,079	0	0	0	0	434,079	0	0	0	0	0	434,079
0 57	PPFA SALARIES - FUTURE		CW	S6	03	0	2,292	2,292	2,292	2,292	9,168	11,460	20,628	0	0	0	0	20,628	0	0	0	0	0	20,628
0 63	ROAD RESTORATION		CW	S2	03	2,621	2,151	0	0	0	4,772	0	4,772	0	0	0	0	4,772	0	0	0	0	0	4,772
0 78	ECS SALARIES-CHANGE IN SCOPE		CW	S3	03	14,491	0	0	0	0	14,491	0	14,491	0	0	0	0	14,491	0	0	0	0	0	14,491
0 79	TW SALARIES-CHANGE IN SCOPE		CW	S3	03	2,148	0	0	0	0	2,148	0	2,148	0	0	0	0	2,148	0	0	0	0	0	2,148
0 80	LEGAL SERVICES SALARIES-CHANGE IN SCOPE		CW	S3	03	225	0	0	0	0	225	0	225	0	0	0	0	225	0	0	0	0	0	225
0 81	ROAD RESTORATION-CHANGE IN SCOPE		CW	S3	03	-1,473	-1,486	365	365	0	-2,229	0	-2,229	0	0	0	0	-2,229	0	0	0	0	0	-2,229
0 82	CONSULTING FEES-CHANGE IN SCOPE		CW	S3	03	-8,002	14,298	20,073	15,999	7,079	49,447	-438	49,009	0	0	0	0	49,009	0	0	0	0	0	49,009
0 83	PPFA SALARIES-CHANGE IN SCOPE		CW	S3	03	2,935	0	0	0	0	2,935	0	2,935	0	0	0	0	2,935	0	0	0	0	0	2,935
0 84	PMMD SALARIES-CHANGE IN SCOPE		CW	S3	03	311	0	0	0	0	311	0	311	0	0	0	0	311	0	0	0	0	0	311
	Sub-total					35,098	58,156	61,726	57,747	56,595	269,322	297,406	566,728	0	0	0	0	566,728	0	0	0	0	0	566,728
WAT906977	ISLAND W.T.P. R&R																						
0 1	FACILITY & PROCESS UPGRADES		CW	S2	03	375	375	375	375	0	1,500	0	1,500	0	0	0	0	1,500	0	0	0	0	0	1,500
0 12	FACILITY UPGRADE - FORMER MARINE YARD		CW	S2	03	2,164	0	0	0	0	2,164	0	2,164	0	0	0	0	2,164	0	0	0	0	0	2,164
0 32	TRAVELLING SCREEN REPLACEMENT		CW	S2	03	440	3,191	0	0	0	3,631	0	3,631	0	0	0	0	3,631	0	0	0	0	0	3,631
0 50	AMMONIA AND FLUORIDE SYSTEM UPGRADES		CW	S2	03	7,948	4,006	7	0	0	11,961	0	11,961	0	0	0	0	11,961	0	0	0	0	0	11,961
0 51	CHEMICAL SYSTEMS` ELECTRICAL FEED DISTRIBUTION		CW	S2	03	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1
0 53	FACILITY & PROCESS UPGRADES - FUTURE		CW	S6	03	0	0	0	0	375	375	1,875	2,250	0	0	0	0	2,250	0	0	0	0	0	2,250
0 54	FILTER MEDIA REPLC - FUTURE		CW	S4	03	300	0	0	0	0	300	450	750	0	0	0	0	750	0	0	0	0	0	750
0 69	Generators` DR3 Program		CW	S2	04	0	80	695	650	0	1,425	0	1,425	0	0	0	0	1,425	0	0	0	0	0	1,425

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Water Program

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906977	ISLAND W.T.P. R&R																						
0	70	PLANTWIDE HVAC UPGRADES	CW	S2	04	2,220	753	0	0	0	2,973	0	2,973	0	0	0	0	2,973	0	0	0	0	2,973
0	83	RAW WATER INTAKE CLEANING	CW	S2	03	1,225	0	0	0	0	1,225	0	1,225	0	0	0	0	1,225	0	0	0	0	1,225
0	100	RAW WATER INTAKE CLEANING - FUTURE	CW	S6	03	0	0	0	100	4,150	4,250	4,250	8,500	0	0	0	0	8,500	0	0	0	0	8,500
0	110	AMMONIA AND FLUORIDE SYSTEM UPGRAD-CHANGE IN SCOPE	CW	S3	03	-7,122	2,444	6,049	7	0	1,378	0	1,378	0	0	0	0	1,378	0	0	0	0	1,378
0	111	TRAVELLING SCREEN REPLACEMENT-CHANGE IN SCOPE	CW	S3	03	-10	-2,151	1,100	6,300	1,100	6,339	0	6,339	0	0	0	0	6,339	0	0	0	0	6,339
0	112	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	CW	S3	03	195	273	190	56	0	714	0	714	0	0	0	0	714	0	0	0	0	714
0	113	RAW WATER INTAKE CLEANING-CHANGE IN SCOPE	CW	S3	03	0	259	0	0	0	259	0	259	0	0	0	0	259	0	0	0	0	259
0	114	REHABILITATION OF BUILDINGS & GROUNDS	CW	S6	03	0	100	700	600	3,250	4,650	3,600	8,250	0	0	0	0	8,250	0	0	0	0	8,250
0	115	FACILITY UPGRADES	CW	S6	04	0	0	0	0	0	0	950	950	0	0	0	0	950	0	0	0	0	950
0	116	FLOW CONDITIONING STRUCTURES	CW	S6	04	0	100	1,150	650	0	1,900	0	1,900	0	0	0	0	1,900	0	0	0	0	1,900
0	117	ISLAND PHOTOVOLTAIC SYSTEM	CW	S4	05	100	700	2,300	3,300	0	6,400	0	6,400	0	0	0	0	6,400	0	0	0	0	6,400
0	118	FIS - JSPS CROSS HARBOUR TUNNEL REHABILITATION	CW	S4	03	500	8,000	0	0	0	8,500	0	8,500	0	0	0	0	8,500	0	0	0	0	8,500
0	119	FACILITY UPGRADE - FORMER MARINE Y-CHANGE IN SCOPE	CW	S3	03	-827	815	0	0	0	-12	0	-12	0	0	0	0	-12	0	0	0	0	-12
0	120	Generators` DR3 Program-CHANGE IN SCOPE	CW	S3	04	0	-80	-695	-570	695	-650	650	0	0	0	0	0	0	0	0	0	0	0
0	121	PLANTWIDE HVAC UPGRADES-CHANGE IN SCOPE	CW	S3	04	-1,644	2,047	2,807	137	0	3,347	0	3,347	0	0	0	0	3,347	0	0	0	0	3,347
		Sub-total				5,865	20,912	14,678	11,605	9,570	62,630	11,775	74,405	0	0	0	0	74,405	0	0	0	0	74,405
WAT907353	LAWRENCE ALLAN REVITALIZATION PLAN																						
0	1	LAWRENCE ALLAN REVITALIZATION PLAN - INTERNAL	CW	S2	05	11,668	5,775	473	210	0	18,126	0	18,126	0	0	18,126	0	0	0	0	0	0	18,126
0	2	LAWRENCE ALLAN REVITALIZATION PLAN - EXTERNAL	CW	S2	05	250	3,592	3,842	0	0	7,684	0	7,684	0	0	7,684	0	0	0	0	0	0	7,684
0	13	LAWRENCE ALLAN REVITALIZATION PLAN-CHANGE IN SCOPE	CW	S3	05	-8,368	-3,275	3,227	0	0	-8,416	0	-8,416	0	0	-8,416	0	0	0	0	0	0	-8,416
0	14	LAWRENCE ALLAN REVITALIZATION PLAN-CHANGE IN SCOPE	CW	S3	05	-250	0	0	806	0	556	0	556	0	0	556	0	0	0	0	0	0	556
		Sub-total				3,300	6,092	7,542	1,016	0	17,950	0	17,950	0	0	17,950	0	0	0	0	0	0	17,950
WAT907558	REGENT PARK CAPITAL CONTRIBUTION																						
0	14	REGENT PARK CAPITAL CONTRIBUTION - PHASE 3 - 5	13	S2	05	1,133	1,416	830	51	71	3,501	40	3,541	0	0	3,541	0	0	0	0	0	0	3,541

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 7: 2019 Capital Budget;2020-2028 Capital Plan Including Carry Forward Funding

Water Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT907558	REGENT PARK CAPITAL CONTRIBUTION																						
0 16	REGENT PARK CAPITAL CONTRIBUTION --CHANGE IN SCOPE	13	S3	05	-591	0	591	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sub-total				542	1,416	1,421	51	71	3,501	40	3,541	0	0	3,541	0	0	0	0	0	0	0	3,541
WAT907946	BUSINESS IT PROJECTS																						
0 7	ENTERPRISE WORK MANAGEMENT SYSTEM PROJECT	CW	S2	04	1,554	1,325	1,000	400	350	4,629	0	4,629	0	0	0	0	4,629	0	0	0	0	0	4,629
0 18	ENTERPRISE WORK MANAGEMENT SYSTEM -CHANGE IN SCOPE	CW	S3	04	-654	-400	250	400	500	96	0	96	0	0	0	0	96	0	0	0	0	0	96
	Sub-total				900	925	1,250	800	850	4,725	0	4,725	0	0	0	0	4,725	0	0	0	0	0	4,725
WAT908087	TRUNK WATERMAIN																						
0 1	TRANSMISSION SYSTEM AUTOMATION	CW	S2	04	5,801	4,575	41	92	0	10,509	0	10,509	0	0	0	0	10,509	0	0	0	0	0	10,509
0 4	JOS - REVENUE METER REPLACEMENT	CW	S2	03	4,369	1,000	0	0	0	5,369	0	5,369	0	0	0	0	2,684	0	0	2,685	0	0	5,369
0 5	CAST IRON T/M REPLACEMENT - FUTURE	CW	S6	03	0	1,200	1,850	14,200	24,650	41,900	124,250	166,150	0	0	0	0	166,150	0	0	0	0	0	166,150
0 6	3RD PARTY RELOCATIONS (METROLINX)	CW	S2	04	50	50	50	0	0	150	0	150	0	0	0	0	150	0	0	0	0	0	150
0 16	TRANSMISSION SYSTEM AUTOMATION-CHANGE IN SCOPE	CW	S3	04	-5,381	-1,057	3,236	3,241	41	80	92	172	0	0	0	0	172	0	0	0	0	0	172
0 17	JOS - REVENUE METER REPLACEMENT-CHANGE IN SCOPE	CW	S3	03	-929	1,175	0	0	0	246	0	246	0	0	0	0	123	0	0	123	0	0	246
	Sub-total				3,910	6,943	5,177	17,533	24,691	58,254	124,342	182,596	0	0	0	0	179,788	0	0	2,808	0	0	182,596
WAT908248	WT&S PLANTWIDE																						
0 1	UV DISINFECTION - CONCEPTUAL DESIGN	CW	S2	04	248	0	0	0	0	248	0	248	0	0	0	0	248	0	0	0	0	0	248
0 2	UV DISINFECTION - ENGINEERING	CW	S6	04	0	0	0	700	980	1,680	7,140	8,820	0	0	0	0	8,820	0	0	0	0	0	8,820
0 3	UV DISINFECTION - CONSTRUCTION	CW	S6	04	0	0	0	0	0	0	63,210	63,210	0	0	0	0	63,210	0	0	0	0	0	63,210
0 4	ZEBRA MUSSEL CONTROL - ENG	CW	S2	04	738	450	450	175	32	1,845	32	1,877	0	0	0	0	1,877	0	0	0	0	0	1,877
0 5	ZEBRA MUSSEL CONTROL - CONSTRUCTION	CW	S4	04	250	4,250	4,500	10,000	1,000	20,000	0	20,000	0	0	0	0	20,000	0	0	0	0	0	20,000
0 6	STANDBY POWER - PHASE 2 - ENG	CW	S2	04	1,768	2,750	3,170	1,686	760	10,134	700	10,834	0	0	655	0	6,929	0	0	3,250	0	0	10,834
0 7	STANDBY POWER - FUTURE	CW	S6	04	0	0	300	450	700	1,450	4,150	5,600	0	0	581	0	3,338	0	0	1,681	0	0	5,600
0 10	UV DISINFECTION - ISLAND WTP - ENGINEERING	CW	S2	04	1,251	500	1,000	550	150	3,451	50	3,501	0	0	0	0	3,501	0	0	0	0	0	3,501
0 11	UV DISINFECTION - ISLAND WTP - CONSTRUCTION	CW	S6	04	0	0	10,000	10,000	6,690	26,690	0	26,690	0	0	0	0	26,690	0	0	0	0	0	26,690
0 12	SCRUBBER AND TONNER CONNECTION IMPROVEMENTS AT WTP	CW	S2	04	1,956	1,168	500	470	5	4,099	0	4,099	0	0	256	0	2,613	0	0	1,230	0	0	4,099

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Gross Expenditures ($000's)

Appendix 7: 2019 Capital Budget;2020-2028 Capital Plan Including Carry Forward Funding

Water Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT908248	WT&S PLANTWIDE																						
0	18	SOURCE WATER PROTECTION-LAKE ONTARIO COLLABORATIVE	CW	S2	04	375	305	0	0	0	680	0	680	0	0	0	0	680	0	0	0	0	0	680
0	19	STANDBY POWER - PHASE 2 - CONSTRUCTION	CW	S6	04	0	3,500	16,000	22,500	15,100	57,100	6,500	63,600	0	0	0	0	44,520	0	0	19,080	0	0	63,600
0	20	STANDBY POWER - FUTURE - CONSTRUCTION	CW	S6	04	0	0	0	0	1,500	1,500	26,500	28,000	0	0	2,900	0	16,700	0	0	8,400	0	0	28,000
0	21	SCRUBBER AND TONNER CONNECTION IMP-CHANGE IN SCOPE	CW	S3	04	-1,415	1,159	1,115	1,145	1,482	3,486	58	3,544	0	0	535	0	1,945	0	0	1,064	0	0	3,544
0	22	UV DISINFECTION - CONCEPTUAL DESIG-CHANGE IN SCOPE	CW	S3	04	-248	0	0	0	0	-248	0	-248	0	0	0	0	-248	0	0	0	0	0	-248
0	23	SOURCE WATER PROTECTION-LAKE ONTAR-CHANGE IN SCOPE	CW	S3	04	-375	125	650	650	0	1,050	0	1,050	0	0	0	0	1,050	0	0	0	0	0	1,050
0	24	UV DISINFECTION - ISLAND WTP - ENG-CHANGE IN SCOPE	CW	S3	04	-606	96	-955	450	454	-561	95	-466	0	0	0	0	-466	0	0	0	0	0	-466
0	25	STANDBY POWER - PHASE 2 - ENG-CHANGE IN SCOPE	CW	S3	04	-608	-318	188	484	226	-28	60	32	0	0	471	0	-449	0	0	10	0	0	32
0	26	ZEBRA MUSSEL CONTROL - ENG-CHANGE IN SCOPE	CW	S3	04	-388	143	-90	247	95	7	-21	-14	0	0	0	0	-14	0	0	0	0	0	-14
		Sub-total				2,946	14,128	36,828	49,507	29,174	132,583	108,474	241,057	0	0	5,398	0	200,944	0	0	34,715	0	0	241,057
Total Program Expenditure						350,393	557,898	580,998	526,451	464,255	2,479,995	2,131,481	4,611,476	0	0	111,016	0	4,443,535	0	0	56,925	0	0	4,611,476

Report Phase 2 - Program 10 Water Program Program Phase 2 Sub-Project Category 01,02,03,04,05,06,07 Part B Sub-Project Status S2,S5,S6 Part C Sub-Project Status S2,S3,S4

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 7: 2019 Capital Budget;2020-2028 Capital Plan Including Carry Forward Funding

Water Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments and Estimates								Current and Future Year Cash Flow Commitments and Estimates Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
Financed By:																								
		Development Charges				28,710	32,531	27,372	7,082	4,498	100,193	10,823	111,016	0	0	111,016	0	0	0	0	0	0	0	111,016
		Reserve Funds (Ind."XR" Ref.)				315,566	514,998	541,767	509,571	453,344	2,335,246	2,108,289	4,443,535	0	0	0	0	4,443,535	0	0	0	0	0	4,443,535
		Other2 (External)				6,117	10,369	11,859	9,798	6,413	44,556	12,369	56,925	0	0	0	0	0	0	0	56,925	0	0	56,925
Total Program Financing						350,393	557,898	580,998	526,451	464,255	2,479,995	2,131,481	4,611,476	0	0	111,016	0	4,443,535	0	0	56,925	0	0	4,611,476

Status Code	Description
S2	S2 Prior Year (With 2019 and\or Future Year Cashflow)
S3	S3 Prior Year - Change of Scope 2019 and\or Future Year Cost\Cashflow)
S4	S4 New - Stand-Alone Project (Current Year Only)
S5	S5 New (On-going or Phased Projects)
S6	S6 New - Future Year (Commencing in 2020 & Beyond)

Category Code	Description
01	Health and Safety C01
02	Legislated C02
03	State of Good Repair C03
04	Service Improvement and Enhancement C04
05	Growth Related C05
06	Reserved Category 1 C06
07	Reserved Category 2 C07

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Appendix 7: 2019 Capital Budget; 2020-2028 Capital Plan Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing
WAS000007	ASHBRIDGES BAY WWTP REHAB																						
0	19	FERROUS UPGRADES	CW	S2	03	7,097	31	0	0	0	7,128	0	7,128	0	0	585	0	6,543	0	0	0	0	7,128
0	30	ELECTRICAL REHAB - ECAP	CW	S2	01	2,785	72	0	0	0	2,857	0	2,857	0	0	0	0	2,857	0	0	0	0	2,857
0	41	POLYMER UPGRADE	CW	S2	03	21,950	38,909	11,110	18,974	222	91,165	0	91,165	0	0	0	0	91,165	0	0	0	0	91,165
0	47	P BLDG HEADWORKS ENG DESIGN&CONTRACT ADMIN	CW	S2	03	2,082	275	49	0	0	2,406	0	2,406	0	0	253	0	2,153	0	0	0	0	2,406
0	49	PROCESS UPGRADES & ODOUR CONTROL ENGINEERING	CW	S2	04	81	0	0	0	0	81	0	81	0	0	8	0	73	0	0	0	0	81
0	189	PROCESS AND EQUIPMENT	CW	S2	03	1,463	1,100	1,100	1,100	0	4,763	0	4,763	0	0	0	0	4,763	0	0	0	0	4,763
0	190	GROUND AND FACILITIES	CW	S2	03	696	440	440	440	0	2,016	0	2,016	0	0	0	0	2,016	0	0	0	0	2,016
0	200	PROCESS AND FACILTIES - FUTURE	CW	S6	03	0	0	0	0	400	400	9,700	10,100	0	0	0	0	10,100	0	0	0	0	10,100
0	215	DIGESTERS CLEANING REHAB - TANKS 14, 16, 13	CW	S2	03	5,566	3,690	3,615	5	4	12,880	0	12,880	0	0	0	0	12,880	0	0	0	0	12,880
0	216	OPERATIONS CENTRE - ENGINEERING	CW	S2	03	260	0	0	0	0	260	0	260	0	0	0	0	260	0	0	0	0	260
0	225	DIGESTER CLEANING & UPGRADES - FUTURE	CW	S6	03	0	0	100	6,300	6,400	12,800	44,100	56,900	0	0	0	0	56,900	0	0	0	0	56,900
0	226	ABTP - PROCESS ROADMAP PHASE 2	CW	S2	05	1,000	500	0	0	0	1,500	0	1,500	0	0	0	0	1,500	0	0	0	0	1,500
0	227	AIR HEADER REHAB	CW	S2	03	2,637	0	0	0	0	2,637	0	2,637	0	0	0	0	2,637	0	0	0	0	2,637
0	229	D BUILDING PHASE 2	CW	S2	03	2,144	11,000	11,000	11,000	10,405	45,549	110	45,659	0	0	0	0	45,659	0	0	0	0	45,659
0	246	NEW FLEET PURCHASES	CW	S2	04	25	25	25	25	0	100	0	100	0	0	0	0	100	0	0	0	0	100
0	255	FINAL TANK UPGRADES - TANKS 10 & 11	CW	S6	03	0	0	0	100	2,200	2,300	3,300	5,600	0	0	0	0	5,600	0	0	0	0	5,600
0	256	DIGESTER CLEANING - 10 YEAR PLAN	CW	S4	03	200	500	240	350	700	1,990	21,500	23,490	0	0	0	0	23,490	0	0	0	0	23,490
0	264	HVAC CONVERSION Z-BLDG	CW	S2	03	28	0	0	0	0	28	0	28	0	0	0	0	28	0	0	0	0	28
0	284	OPERATIONS CENTRE - ENGINEERING & CONSTRUCTION	CW	S6	04	0	200	400	5,500	5,500	11,600	0	11,600	0	0	0	0	11,600	0	0	0	0	11,600
0	285	BLOWER 7-9 OVERHAUL	CW	S2	03	500	0	0	0	0	500	0	500	0	0	0	0	500	0	0	0	0	500
0	292	BLOWER STUDY	CW	S2	03	100	0	0	0	0	100	0	100	0	0	0	0	100	0	0	0	0	100
0	306	BLOWER STUDY-CHANGE IN SCOPE	CW	S3	03	-100	0	0	0	0	-100	0	-100	0	0	0	0	-100	0	0	0	0	-100
0	307	NEW FLEET PURCHASES-CHANGE IN SCOPE	CW	S3	04	0	0	0	0	25	25	0	25	0	0	0	0	25	0	0	0	0	25
0	308	D BUILDING PHASE 2-CHANGE IN SCOPE	CW	S3	03	-1,046	-4,882	-1,548	-1,600	-6,306	-15,382	-63	-15,445	0	0	0	0	-15,445	0	0	0	0	-15,445

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Gross Expenditures ($000's)

Appendix 7: 2019 Capital Budget; 2020-2028 Capital Plan Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS000007	ASHBRIDGES BAY WWTP REHAB																						
0	309	AIR HEADER REHAB-CHANGE IN SCOPE	CW	S3	03	-2,176	766	0	0	0	-1,410	0	-1,410	0	0	0	0	-1,410	0	0	0	0	-1,410
0	310	DIGESTERS CLEANING REHAB - TANKS 1-CHANGE IN SCOPE	CW	S3	03	-1,762	202	727	0	1	-832	0	-832	0	0	0	0	-832	0	0	0	0	-832
0	311	POLYMER UPGRADE-CHANGE IN SCOPE	CW	S3	03	-20,525	-8,895	17,908	4,444	17,388	10,320	371	10,691	0	0	0	0	10,691	0	0	0	0	10,691
0	312	GROUND AND FACILITIES-CHANGE IN SCOPE	CW	S3	03	-96	0	0	0	440	344	0	344	0	0	0	0	344	0	0	0	0	344
0	313	PROCESS AND EQUIPMENT-CHANGE IN SCOPE	CW	S3	03	-290	210	55	56	1,100	1,131	0	1,131	0	0	0	0	1,131	0	0	0	0	1,131
0	314	FERROUS UPGRADES-CHANGE IN SCOPE	CW	S3	03	-1,754	1,821	0	0	0	67	0	67	0	0	480	0	-413	0	0	0	0	67
0	315	ELECTRICAL REHAB - ECAP-CHANGE IN SCOPE	CW	S3	01	-2,294	2,380	224	0	0	310	0	310	0	0	0	0	310	0	0	0	0	310
0	316	P BLDG HEADWORKS ENG DESIGN&CONTRA-CHANGE IN SCOPE	CW	S3	03	-384	861	176	0	0	653	0	653	0	0	206	0	447	0	0	0	0	653
0	317	PROCESS UPGRADES & ODOUR CONTROL E-CHANGE IN SCOPE	CW	S3	04	-60	90	0	0	0	30	0	30	0	0	9	0	21	0	0	0	0	30
0	318	HEATING AND AIR SYSTEMS	CW	S4	03	705	4,095	5,755	6,005	2,555	19,115	130	19,245	0	0	0	0	19,245	0	0	0	0	19,245
0	320	EAST BYPASS	CW	S4	02	250	700	1,450	1,200	10,800	14,400	73,610	88,010	0	0	0	0	88,010	0	0	0	0	88,010
0	321	ABTP SOLAR PV PILOT PROJECT	CW	S4	04	250	2,050	75	225	0	2,600	0	2,600	0	0	0	0	2,600	0	0	0	0	2,600
0	322	SECONDARY CLARIFIER CROSS COLLECTOR UPGR TANK 2&4	CW	S4	04	75	1,800	1,100	15	10	3,000	0	3,000	0	0	0	0	3,000	0	0	0	0	3,000
0	323	BLOWER 7-9 OVERHAUL-CHANGE IN SCOPE	CW	S3	03	0	500	0	0	0	500	0	500	0	0	0	0	500	0	0	0	0	500
0	324	ABTP - PROCESS ROADMAP PHASE 2-CHANGE IN SCOPE	CW	S3	05	-500	350	850	100	0	800	0	800	0	0	0	0	800	0	0	0	0	800
0	325	HVAC CONVERSION Z-BLDG-CHANGE IN SCOPE	CW	S3	03	0	100	130	0	0	230	0	230	0	0	0	0	230	0	0	0	0	230
0	326	OPERATIONS CENTRE - ENGINEERING-CHANGE IN SCOPE	CW	S3	03	-10	0	0	0	0	-10	0	-10	0	0	0	0	-10	0	0	0	0	-10
		Sub-total				18,897	58,890	54,981	54,239	51,844	238,851	152,758	391,609	0	0	1,541	0	390,068	0	0	0	0	391,609
WAS000115	HUMBER T.P.																						
0	9	CO-GENERATION	CW	S2	04	87	0	0	0	0	87	0	87	0	0	0	0	87	0	0	0	0	87
0	64	CO-GENERATION-CHANGE IN SCOPE	CW	S3	04	33	0	0	0	0	33	0	33	0	0	0	0	33	0	0	0	0	33
		Sub-total				120	0	0	0	0	120	0	120	0	0	0	0	120	0	0	0	0	120
WAS000259	TRUNK SEWER SYSTEM																						
0	15	TRUNK SEWER REHABILITATION - 2012	CW	S2	03	1,093	87	16	0	0	1,196	0	1,196	0	0	0	0	1,196	0	0	0	0	1,196

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Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS000259	TRUNK SEWER SYSTEM																						
0 18	BLACK CREEK STS DESIGN & CONSTRUCTION		CW	S6	05	0	1,000	3,545	12,400	28,150	45,095	258,900	303,995	0	0	0	0	303,995	0	0	0	0	0	303,995
0 27	TRUNK SEWER REHABILITATION - 2014		CW	S2	03	23,755	3,380	10	14	0	27,159	0	27,159	0	0	0	0	27,159	0	0	0	0	0	27,159
0 34	BLACK CREEK STS EA		CW	S2	05	1,352	0	0	0	0	1,352	0	1,352	0	0	0	0	1,352	0	0	0	0	0	1,352
0 47	TRUNK SEWER REHABILITATION - 2016		CW	S2	03	22,085	9,047	1,535	151	0	32,818	0	32,818	0	0	0	0	32,818	0	0	0	0	0	32,818
0 53	TRUNK SEWER REHABILITATION - 2018		CW	S2	03	13,962	44,974	69,585	39,611	9,357	177,489	142	177,631	0	0	0	0	177,631	0	0	0	0	0	177,631
0 55	TRUNK SEWER REHABILITATION - FORECAST		CW	S6	03	0	300	1,400	10,965	25,230	37,895	170,117	208,012	0	0	0	0	208,012	0	0	0	0	0	208,012
0 62	TRUNK SEWER REHABILITATION - 2012-CHANGE IN SCOPE		CW	S3	03	-742	943	5	0	0	206	0	206	0	0	0	0	206	0	0	0	0	0	206
0 63	TRUNK SEWER REHABILITATION - 2016-CHANGE IN SCOPE		CW	S3	03	-10,775	1,514	-1,524	-151	0	-10,936	0	-10,936	0	0	0	0	-10,936	0	0	0	0	0	-10,936
0 64	BLACK CREEK STS EA-CHANGE IN SCOPE		CW	S3	05	-887	347	0	0	0	-540	0	-540	0	0	0	0	-540	0	0	0	0	0	-540
0 65	TRUNK SEWER REHABILITATION - 2018-CHANGE IN SCOPE		CW	S3	03	-7,439	2,360	-8,650	-3,181	8,600	-8,310	8,002	-308	0	0	0	0	-308	0	0	0	0	0	-308
0 66	TRUNK SEWER REHABILITATION - 2014-CHANGE IN SCOPE		CW	S3	03	-15,447	12,590	2,256	2	0	-599	0	-599	0	0	0	0	-599	0	0	0	0	0	-599
0 67	TRUNK SEWER REHABILITATION - 2019		CW	S4	03	775	2,635	5,470	32,777	8,813	50,470	11,958	62,428	0	0	0	0	62,428	0	0	0	0	0	62,428
0 68	LOWER SIMCOE CSO		CW	S4	04	700	1,100	700	900	8,400	11,800	10,200	22,000	0	0	0	0	22,000	0	0	0	0	0	22,000
	Sub-total					28,432	80,277	74,348	93,488	88,550	365,095	459,319	824,414	0	0	0	0	824,414	0	0	0	0	0	824,414
WAS000442	BASEMENT FLOODING RELIEF																						
0 1	BASEMENT FLOODING PROTECTION SUBSIDY PROGRAM		CW	S2	04	5,500	5,500	0	0	0	11,000	0	11,000	0	0	0	0	11,000	0	0	0	0	0	11,000
0 8	BASEMENT FLOODING STUDIES & EAS		CW	S2	04	701	0	0	0	0	701	0	701	0	0	7	0	694	0	0	0	0	0	701
0 9	BASEMENT FLOODING RELIEF - TUNNEL PROJECT		CW	S2	04	5,446	5,800	37,700	37,000	37,000	122,946	81,900	204,846	0	0	96	0	204,750	0	0	0	0	0	204,846
0 12	ROAD RESTORATION FOR BSMT FLDG PRJS		CW	S2	04	292	0	0	0	0	292	0	292	0	0	2	0	290	0	0	0	0	0	292
0 14	BASEMENT FLOODING DESIGN - GROUP 1		CW	S2	04	1,206	0	0	0	0	1,206	0	1,206	0	0	20	0	1,186	0	0	0	0	0	1,206
0 18	BASEMENT FLOODING DESIGN - GROUP 2		CW	S2	04	3,135	2,126	0	0	0	5,261	0	5,261	0	0	15	0	5,246	0	0	0	0	0	5,261
0 19	BASEMENT FLOODING RELIEF - GROUP 2		CW	S2	04	16,906	4,203	0	0	0	21,109	0	21,109	0	0	450	0	20,659	0	0	0	0	0	21,109
0 20	BASEMENT FLOODING DESIGN - GROUP 3		CW	S2	04	2,219	1,030	919	0	0	4,168	0	4,168	0	0	54	0	4,114	0	0	0	0	0	4,168
0 29	BASEMENT FLOODING RELIEF - GROUP 1		CW	S2	04	2,528	30	0	0	0	2,558	0	2,558	0	0	2	0	2,556	0	0	0	0	0	2,558

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Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing
WAS000442	BASEMENT FLOODING RELIEF																						
0	52	BASEMENT FLOODING RELIEF - FUTURE	CW	S6	04	0	0	0	0	0	0	400,000	400,000	0	0	27,000	0	373,000	0	0	0	0	400,000
0	76	BASEMENT FLOODING FLOW MONITORING	CW	S2	04	954	982	0	0	0	1,936	0	1,936	0	0	0	0	1,936	0	0	0	0	1,936
0	77	BASEMENT FLOODING DESIGN - GROUP 4 (ENGINEERING)	CW	S2	04	34,297	34,520	42,713	47,250	46,465	205,245	123,754	328,999	0	0	513	0	328,486	0	0	0	0	328,999
0	81	BASEMENT FLOODING STUDIES & EAS-CW IMPLEMENTATION	CW	S2	04	5,758	3,755	1,750	1,000	750	13,013	0	13,013	0	0	65	0	12,948	0	0	0	0	13,013
0	84	10 YEAR BASEMENT FLOODING STUDIES & EAs	CW	S6	04	0	100	186	289	291	866	1,500	2,366	0	0	355	0	2,011	0	0	0	0	2,366
0	85	10 YEAR BASEMENT FLOODING FLOW MONITORING	CW	S6	04	0	0	1,000	1,025	1,051	3,076	5,668	8,744	0	0	1,313	0	7,431	0	0	0	0	8,744
0	89	BASEMENT FLOODING RELIEF - GROUP 4 (CONSTRUCTION)	CW	S2	04	39,481	63,740	44,277	53,652	72,173	273,323	196,981	470,304	0	0	1,020	0	469,284	0	0	0	0	470,304
0	90	NEW - REFRESHING EXPIRED EA`S	CW	S6	04	0	600	1,100	1,500	1,500	4,700	15,500	20,200	0	0	3,031	0	17,169	0	0	0	0	20,200
0	91	BASEMENT FLOODING DESIGN - GROUP 5	CW	S6	04	0	0	0	0	3,000	3,000	103,000	106,000	0	0	15,900	0	90,100	0	0	0	0	106,000
0	93	BASEMENT FLOODING PROTECTION SUBSIDY PROG - FUTURE	CW	S6	04	0	0	5,500	5,500	5,500	16,500	27,500	44,000	0	0	0	0	44,000	0	0	0	0	44,000
0	107	BASEMENT FLOODING RELIEF - GROUP 3 (CONSTRUCTION)	CW	S2	04	12,443	16,744	13,978	0	0	43,165	0	43,165	0	0	396	0	42,769	0	0	0	0	43,165
0	132	BASEMENT FLOODING STUDIES & EAS-CW-CHANGE IN SCOPE	CW	S3	04	-1,238	9,861	19,915	17,940	14,505	60,983	1,100	62,083	0	0	7,146	0	54,937	0	0	0	0	62,083
0	133	BASEMENT FLOODING RELIEF - GROUP 1-CHANGE IN SCOPE	CW	S3	04	-2,407	911	0	0	0	-1,496	0	-1,496	0	0	157	0	-1,653	0	0	0	0	-1,496
0	134	BASEMENT FLOODING DESIGN - GROUP 3-CHANGE IN SCOPE	CW	S3	04	-282	529	0	0	0	247	0	247	0	0	609	0	-362	0	0	0	0	247
0	135	BASEMENT FLOODING DESIGN - GROUP 4-CHANGE IN SCOPE	CW	S3	04	-17,697	-4,557	-8,750	-1,929	-16,628	-49,561	-54,771	-104,332	0	0	33,186	0	-137,518	0	0	0	0	-104,332
0	136	BASEMENT FLOODING RELIEF - GROUP 4-CHANGE IN SCOPE	CW	S3	04	-15,156	-25,088	15,734	14,510	-2,455	-12,455	38,994	26,539	0	0	63,283	0	-36,744	0	0	0	0	26,539
0	137	BASEMENT FLOODING STUDIES & EAS-CHANGE IN SCOPE	CW	S3	04	-616	400	150	200	0	134	0	134	0	0	119	0	15	0	0	0	0	134
0	138	BASEMENT FLOODING RELIEF - GROUP 3-CHANGE IN SCOPE	CW	S3	04	-3,450	3,101	-492	6,284	0	5,443	0	5,443	0	0	6,896	0	-1,453	0	0	0	0	5,443
0	139	BASEMENT FLOODING RELIEF - TUNNEL -CHANGE IN SCOPE	CW	S3	04	-1,761	2,165	-17,693	-850	0	-18,139	23,000	4,861	0	0	31,361	0	-26,500	0	0	0	0	4,861
0	140	BASEMENT FLOODING DESIGN - GROUP 1-CHANGE IN SCOPE	CW	S3	04	-1,076	1,703	0	0	0	627	0	627	0	0	255	0	372	0	0	0	0	627
0	141	BASEMENT FLOODING RELIEF - GROUP 2-CHANGE IN SCOPE	CW	S3	04	-8,554	11,046	0	0	0	2,492	0	2,492	0	0	3,090	0	-598	0	0	0	0	2,492
0	142	BASEMENT FLOODING DESIGN - GROUP 2-CHANGE IN SCOPE	CW	S3	04	-3,032	3,854	0	0	0	822	0	822	0	0	897	0	-75	0	0	0	0	822
0	143	BASEMENT FLOODING FLOW MONITORING-CHANGE IN SCOPE	CW	S3	04	606	308	0	0	0	914	0	914	0	0	428	0	486	0	0	0	0	914

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Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS000442	BASEMENT FLOODING RELIEF																						
0	144	ROAD RESTORATION FOR BSMT FLDG PRJ-CHANGE IN SCOPE	CW	S3	04	-198	202	0	0	0	4	0	4	0	0	42	0	-38	0	0	0	0	0	4
		Sub-total				76,005	143,565	157,987	183,371	163,152	724,080	964,126	1,688,206	0	0	197,708	0	1,490,498	0	0	0	0	0	1,688,206
WAS000521	HIGHLAND CREEK WWTP - BUILDING SERV &																						
0	3	HCTP BLDG REHAB & IMPROVEMENTS	CW	S2	03	1,375	0	0	0	0	1,375	0	1,375	0	0	0	0	1,375	0	0	0	0	0	1,375
0	11	HCTP BLDG REHAB & IMPROVEMENTS-CHANGE IN SCOPE	CW	S3	03	-375	350	0	0	0	-25	0	-25	0	0	0	0	-25	0	0	0	0	0	-25
		Sub-total				1,000	350	0	0	0	1,350	0	1,350	0	0	0	0	1,350	0	0	0	0	0	1,350
WAS906322	W&WW LABORATORIES																						
0	22	LAB & EMP FACILITIES	CW	S2	04	7,550	2,500	0	0	0	10,050	8,450	18,500	0	0	0	0	18,500	0	0	0	0	0	18,500
0	27	LAB EQUIPMENT - FUTURE	CW	S2	03	337	242	458	102	210	1,349	840	2,189	0	0	0	0	2,189	0	0	0	0	0	2,189
0	33	LAB EQUIPMENT - FUTURE-CHANGE IN SCOPE	CW	S3	03	-337	2	0	-102	0	-437	210	-227	0	0	0	0	-227	0	0	0	0	0	-227
0	34	LAB EQUIPMENT-CHANGE IN SCOPE	CW	S3	03	562	0	0	0	0	562	0	562	0	0	0	0	562	0	0	0	0	0	562
0	35	LAB & EMP FACILITIES-CHANGE IN SCOPE	CW	S3	04	-6,500	1,750	4,950	0	0	200	0	200	0	0	0	0	200	0	0	0	0	0	200
		Sub-total				1,612	4,494	5,408	0	210	11,724	9,500	21,224	0	0	0	0	21,224	0	0	0	0	0	21,224
WAS906328	SWM END OF PIPE FACILITIES																						
0	6	DON VALLEY SWM	CW	S6	04	0	0	0	0	40	40	3,920	3,960	0	0	586	0	3,374	0	0	0	0	0	3,960
0	10	Etobicoke Waterfront Construction	CW	S6	04	0	0	0	0	0	0	80,500	80,500	0	0	11,911	0	68,589	0	0	0	0	0	80,500
0	11	Bonar Creek SWMF Construction	CW	S2	04	1,750	9,250	9,125	175	0	20,300	0	20,300	0	0	1,633	0	18,667	0	0	0	0	0	20,300
0	12	EARL BALES PARK SWM FACILITY - PHASE 2	CW	S2	04	1,000	0	0	0	0	1,000	0	1,000	0	0	80	0	920	0	0	0	0	0	1,000
0	38	COATSWORTH CUT WETLAND	CW	S6	04	0	0	0	0	0	0	10,260	10,260	0	0	1,518	0	8,742	0	0	0	0	0	10,260
0	57	Scarborough Waterfront Construction	CW	S2	04	0	0	0	0	0	0	47,950	47,950	0	0	3,860	0	44,090	0	0	0	0	0	47,950
0	64	HUMBER BAY POND (ETOBICOKE)	CW	S2	03	290	300	0	0	0	590	0	590	0	0	50	0	540	0	0	0	0	0	590
0	67	YR03 D1 END OF PIPE	CW	S2	04	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1
0	72	NORTH TORONTO CSO CONSTR - 2018 SC	CW	S2	04	340	500	0	0	0	840	0	840	0	0	73	0	767	0	0	0	0	0	840
0	74	Scarborough Waterfront Constructio-CHANGE IN SCOPE	CW	S3	04	0	0	0	0	0	0	-6,200	-6,200	0	0	2,318	0	-8,518	0	0	0	0	0	-6,200
0	75	Bonar Creek SWMF Construction-CHANGE IN SCOPE	CW	S3	04	-975	-7,706	175	9,602	176	1,272	0	1,272	0	0	1,559	0	-287	0	0	0	0	0	1,272

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Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By										
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906328	SWM END OF PIPE FACILITIES																							
0	76	NORTH TORONTO CSO CONSTR - 2018 SC-CHANGE IN SCOPE	CW	S3	04	-240	150	1,650	0	0	1,560	0	1,560	0	0	282	0	1,278	0	0	0	0	0	1,560
0	77	HUMBER BAY POND (ETOBICOKE)-CHANGE IN SCOPE	CW	S3	03	-40	215	2,115	1,016	115	3,421	0	3,421	0	0	543	0	2,878	0	0	0	0	0	3,421
0	78	EARL BALES PARK SWM FACILITY - PHA-CHANGE IN SCOPE	CW	S3	04	-950	951	0	0	0	1	0	1	0	0	71	0	-70	0	0	0	0	0	1
		Sub-total				1,176	3,660	13,065	10,793	331	29,025	136,430	165,455	0	0	24,484	0	140,971	0	0	0	0	0	165,455
WAS906331	SWM SOURCE CONTROL PROG																							
0	9	DOWNSPOUT DISCONNECTION PROGRAM	CW	S2	04	70	70	20	20	0	180	0	180	0	0	0	0	180	0	0	0	0	0	180
0	17	DOWNSPOUT DISCONNECTION PROGRAM-CHANGE IN SCOPE	CW	S3	04	20	-25	0	0	0	-5	0	-5	0	0	0	0	-5	0	0	0	0	0	-5
		Sub-total				90	45	20	20	0	175	0	175	0	0	0	0	175	0	0	0	0	0	175
WAS906380	HIGHLAND CREEK WWTP - ODOUR CONTROI																							
0	1	ODOUR CONTROL UPGRADES - PHASE 1 ENG	25	S2	04	190	203	56	50	20	519	0	519	0	0	42	0	477	0	0	0	0	0	519
0	2	ODOUR CONTROL UPGRADES - PHASE 1 CONSTR	25	S2	02	2,418	5,119	0	0	0	7,537	0	7,537	0	0	607	0	6,930	0	0	0	0	0	7,537
0	3	ODOUR CONTROL UPGRADES - PHASE 2	25	S6	02	0	0	0	0	0	0	19,200	19,200	0	0	2,841	0	16,359	0	0	0	0	0	19,200
0	24	ODOUR CONTROL UPGRADES - PHASE 1 E-CHANGE IN SCOPE	25	S3	04	660	261	134	6	30	1,091	20	1,111	0	0	204	0	907	0	0	0	0	0	1,111
0	25	ODOUR CONTROL UPGRADES - PHASE 1 C-CHANGE IN SCOPE	25	S3	02	2,057	-1,760	1,917	0	0	2,214	0	2,214	0	0	856	0	1,358	0	0	0	0	0	2,214
		Sub-total				5,325	3,823	2,107	56	50	11,361	19,220	30,581	0	0	4,550	0	26,031	0	0	0	0	0	30,581
WAS906487	HIGHLAND CREEK T.P. - IV YR2004																							
0	22	PCS PLANT SERVICES	CW	S2	04	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1
		Sub-total				1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1
WAS906492	WET WEATHER FLOW MP																							
0	1	SWM INA/EA	CW	S2	04	740	655	440	110	0	1,945	0	1,945	0	0	157	0	1,788	0	0	0	0	0	1,945
0	11	10YR WWFMMP PUBLIC EDUCATION	CW	S6	04	0	610	610	610	610	2,440	3,050	5,490	0	0	810	0	4,680	0	0	0	0	0	5,490
0	14	WWFMP IMPLEMENTATION - DESIGN	CW	S2	04	731	300	0	0	0	1,031	0	1,031	0	0	90	0	941	0	0	0	0	0	1,031
0	40	10YR WWFMMP IMPLEMENTATION	CW	S6	04	0	0	0	0	0	0	5,000	5,000	0	0	740	0	4,260	0	0	0	0	0	5,000
0	41	SWM CONVEYANCE 2012	CW	S2	04	37	0	0	0	0	37	0	37	0	0	3	0	34	0	0	0	0	0	37
0	58	SWM CONVEYANCE 2015	CW	S2	04	785	0	0	0	0	785	0	785	0	0	63	0	722	0	0	0	0	0	785

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906492	WET WEATHER FLOW MP																							
0	59	STORM WATER POND ASSESSMENT & CLEANING	CW	S2	03	4,394	3,000	3,000	3,000	0	13,394	0	13,394	0	0	0	0	13,394	0	0	0	0	0	13,394
0	60	ASHBRIDGES BAY LANDFORMS	CW	S2	04	3,250	6,300	6,300	5,300	5,300	26,450	6,550	33,000	0	0	0	0	33,000	0	0	0	0	0	33,000
0	65	STORM WATER POND ASSESSMENT & CLEANING - 10 YEAR	CW	S6	03	0	0	0	1,500	1,500	3,000	22,500	25,500	0	0	0	0	25,500	0	0	0	0	0	25,500
0	84	SWM CONVEYANCE 2017	CW	S2	04	2,229	1,660	646	0	0	4,535	0	4,535	0	0	408	0	4,127	0	0	0	0	0	4,535
0	86	GREEN STREETS	CW	S2	04	1,451	265	180	40	0	1,936	0	1,936	0	0	193	0	1,743	0	0	0	0	0	1,936
0	97	WATERFRONT MODELLING STUDIES	CW	S2	05	25	25	100	100	100	350	190	540	0	0	43	0	497	0	0	0	0	0	540
0	109	SWM CONVEYANCE 2012-CHANGE IN SCOPE	CW	S3	04	-37	0	0	0	0	-37	0	-37	0	0	-3	0	-34	0	0	0	0	0	-37
0	110	GREEN STREETS-CHANGE IN SCOPE	CW	S3	04	-444	973	303	85	100	1,017	0	1,017	0	0	243	0	774	0	0	0	0	0	1,017
0	111	SWM CONVEYANCE 2015-CHANGE IN SCOPE	CW	S3	04	-785	0	0	0	0	-785	0	-785	0	0	-63	0	-722	0	0	0	0	0	-785
0	112	SWM CONVEYANCE 2017-CHANGE IN SCOPE	CW	S3	04	-429	770	265	0	0	606	0	606	0	0	353	0	253	0	0	0	0	0	606
0	113	PUBLIC EDUCATION-CHANGE IN SCOPE	CW	S3	04	535	0	0	0	0	535	0	535	0	0	79	0	456	0	0	0	0	0	535
0	114	SWM INA/EA-CHANGE IN SCOPE	CW	S3	04	77	325	150	-2	0	550	0	550	0	0	212	0	338	0	0	0	0	0	550
0	115	WATERFRONT MODELLING STUDIES-CHANGE IN SCOPE	CW	S3	05	-25	-25	0	0	0	-50	10	-40	0	0	32	0	-72	0	0	0	0	0	-40
0	116	WWFMP IMPLEMENTATION - DESIGN-CHANGE IN SCOPE	CW	S3	04	-633	65	350	250	25	57	25	82	0	0	76	0	6	0	0	0	0	0	82
0	117	STORM WATER POND ASSESSMENT & CLEA-CHANGE IN SCOPE	CW	S3	03	-2,143	343	44	170	2,000	414	0	414	0	0	0	0	414	0	0	0	0	0	414
0	118	ASHBRIDGES BAY LANDFORMS-CHANGE IN SCOPE	CW	S3	04	3,750	17,359	19,984	15,029	14,049	70,171	-5,432	64,739	0	0	0	0	64,739	0	0	0	0	0	64,739
		Sub-total				13,508	32,625	32,372	26,192	23,684	128,381	31,893	160,274	0	0	3,436	0	156,838	0	0	0	0	0	160,274
WAS906495	SEWER ASSET PLANNING																							
0	5	SEWER ASSET PLANNING	CW	S2	03	11,404	8,250	8,000	8,000	2,000	37,654	0	37,654	0	0	3,028	0	34,626	0	0	0	0	0	37,654
0	7	SEWER SYSTEM INSPECTION	CW	S2	03	7,546	8,290	0	0	0	15,836	0	15,836	0	0	0	0	15,836	0	0	0	0	0	15,836
0	17	SEWER ASSET PLANNING - 10 YEAR	CW	S6	04	0	1,500	1,500	2,000	5,150	10,150	35,000	45,150	0	0	3,470	0	41,680	0	0	0	0	0	45,150
0	18	SEWER SYSTEM INSPECTION - 10 YEAR PLAN	CW	S6	03	0	0	0	0	0	0	65,700	65,700	0	0	0	0	65,700	0	0	0	0	0	65,700
0	21	PPD - INFRASTRUCTURE PLANNING STUDIES	CW	S2	05	150	0	0	0	0	150	0	150	0	0	0	0	150	0	0	0	0	0	150
0	22	PPD - INFRASTRUCTURE PLANNING STUDIES - 10 YR PLAN	CW	S6	05	0	0	150	150	150	450	750	1,200	0	0	0	0	1,200	0	0	0	0	0	1,200

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Wastewater Program

Sub-Project Priority	Project No. Sub-Project No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By										
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906495	SEWER ASSET PLANNING																							
0	39	SEWER SYSTEM INSPECTION-CHANGE IN SCOPE	CW	S3	03	2,454	12,073	20,131	15,400	15,700	65,758	10,500	76,258	0	0	0	0	76,258	0	0	0	0	0	76,258
0	40	SEWER ASSET PLANNING-CHANGE IN SCOPE	CW	S3	03	-5,828	3,696	2,757	1,145	2,850	4,620	1,000	5,620	0	0	298	0	5,322	0	0	0	0	0	5,620
0	41	PPD - INFRASTRUCTURE PLANNING STUD-CHANGE IN SCOPE	CW	S3	05	25	150	0	0	0	175	0	175	0	0	0	0	175	0	0	0	0	0	175
0	42	CORP IT - IDC-CHANGE IN SCOPE	CW	S3	04	150	0	0	0	0	150	0	150	0	0	0	0	150	0	0	0	0	0	150
		Sub-total				15,901	33,959	32,538	26,695	25,850	134,943	112,950	247,893	0	0	6,796	0	241,097	0	0	0	0	0	247,893
WAS906500	NEW SEWER CONSTRUCTION																							
0	4	NEW SEWERS - FUTURE	CW	S6	05	0	0	1,000	1,000	1,000	3,000	5,000	8,000	0	0	8,000	0	0	0	0	0	0	0	8,000
0	5	NEW SEWERS	CW	S2	05	88	500	0	0	0	588	0	588	0	0	371	0	217	0	0	0	0	0	588
0	24	WATERFRONT SANITARY MASTER SERVICING PLAN IMP	CW	S2	05	6,500	6,500	1,500	750	0	15,250	0	15,250	0	0	7,625	0	7,625	0	0	0	0	0	15,250
0	25	DOWNSVIEW LANDS EXTERNAL UPGRADES	CW	S2	05	0	1,450	5,000	1,550	0	8,000	0	8,000	0	0	8,000	0	0	0	0	0	0	0	8,000
0	36	SHEPPARD SANITARY SEWER AT EAST DON STS	CW	S2	05	2,000	1,000	0	0	0	3,000	0	3,000	0	0	1,866	0	1,134	0	0	0	0	0	3,000
0	40	WATERFRONT SANITARY MASTER SERVICI-CHANGE IN SCOPE	CW	S3	05	-5,150	1,116	11,559	22,437	10,851	40,813	4,676	45,489	0	0	11,152	0	34,337	0	0	0	0	0	45,489
0	41	SHEPPARD SANITARY SEWER AT EAST DO-CHANGE IN SCOPE	CW	S3	05	-2,000	-1,000	1,400	1,800	800	1,000	0	1,000	0	0	623	0	377	0	0	0	0	0	1,000
0	42	NEW SEWERS-CHANGE IN SCOPE	CW	S3	05	-38	0	0	0	0	-38	0	-38	0	0	179	0	-217	0	0	0	0	0	-38
		Sub-total				1,400	9,566	20,459	27,537	12,651	71,613	9,676	81,289	0	0	37,816	0	43,473	0	0	0	0	0	81,289
WAS906735	DIST SEWER REHAB OPS YR2005																							
0	10	GROUP 1 SEWAGE PUMPING STATION UPGRADES	CW	S2	03	16	20	0	0	0	36	0	36	0	0	4	0	32	0	0	0	0	0	36
0	20	GROUP 1 SEWAGE PUMPING STATION UPG-CHANGE IN SCOPE	CW	S3	03	-1	1	0	0	0	0	0	0	0	0	1	0	-1	0	0	0	0	0	0
		Sub-total				15	21	0	0	0	36	0	36	0	0	5	0	31	0	0	0	0	0	36
WAS906741	HIGHLAND CREEK TP YR2005																							
0	1	WAS THICKENING AND DEWATERING - ENG	CW	S2	03	2	0	0	0	0	2	0	2	0	0	0	0	2	0	0	0	0	0	2
0	21	WAS THICKENING AND DEWATERING - EN-CHANGE IN SCOPE	CW	S3	03	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1
		Sub-total				3	0	0	0	0	3	0	3	0	0	0	0	3	0	0	0	0	0	3
WAS906742	HUMBER TP YR2005																							
0	8	ODOUR CONTROL ENGINEERING	CW	S2	04	374	90	20	0	0	484	0	484	0	0	0	0	484	0	0	0	0	0	484

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Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By										
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906742	HUMBER TP YR2005																							
0 58	ODOUR CONTROL ENGINEERING-CHANGE IN SCOPE		CW	S3	04	383	188	-20	0	0	551	0	551	0	0	156	0	395	0	0	0	0	0	551
	Sub-total					757	278	0	0	0	1,035	0	1,035	0	0	156	0	879	0	0	0	0	0	1,035
WAS906743	ASHRIDGES BAY TP YR2005																							
0 1	MISC MECH ENGINEERING		CW	S2	03	720	80	0	0	0	800	0	800	0	0	68	0	732	0	0	0	0	0	800
0 7	SERVICE AIR UPGRADES		CW	S2	03	1,166	0	0	0	0	1,166	0	1,166	0	0	0	0	1,166	0	0	0	0	0	1,166
0 63	MISC MECH ENGINEERING-CHANGE IN SCOPE		CW	S3	03	-400	380	35	9	0	24	0	24	0	0	53	0	-29	0	0	0	0	0	24
0 64	SERVICE AIR UPGRADES-CHANGE IN SCOPE		CW	S3	03	-1,132	1,289	0	0	0	157	0	157	0	0	0	0	157	0	0	0	0	0	157
	Sub-total					354	1,749	35	9	0	2,147	0	2,147	0	0	121	0	2,026	0	0	0	0	0	2,147
WAS906755	WESTERN BEACHES RETROFIT																							
0 1	WESTERN BEACHES RETROFIT		CW	S2	03	8,902	6,377	15	86	0	15,380	0	15,380	0	0	1,481	0	13,899	0	0	0	0	0	15,380
0 17	WESTERN BEACHES RETROFIT-CHANGE IN SCOPE		CW	S3	03	-5,300	2,593	19,935	11,309	50	28,587	0	28,587	0	0	5,024	0	23,563	0	0	0	0	0	28,587
	Sub-total					3,602	8,970	19,950	11,395	50	43,967	0	43,967	0	0	6,505	0	37,462	0	0	0	0	0	43,967
WAS906926	OPERATIONAL SUPPORT																							
0 6	FACILITY RENOVATION		CW	S2	04	1,015	750	0	0	0	1,765	0	1,765	0	0	0	0	1,765	0	0	0	0	0	1,765
0 23	EMP MONITORING NEEDS		CW	S2	04	50	0	0	0	0	50	0	50	0	0	0	0	50	0	0	0	0	0	50
0 40	PCS UPGRADES FOR WASTEWATER TREATMENT		CW	S2	04	6,842	6,100	4,065	25	0	17,032	0	17,032	0	0	0	0	17,032	0	0	0	0	0	17,032
0 71	YARD & FACILITIES - 10 YEAR PLAN		CW	S6	03	0	525	1,275	1,275	1,275	4,350	6,375	10,725	0	0	0	0	10,725	0	0	0	0	0	10,725
0 95	DIVISIONAL SECURITY - BACKLOG		CW	S6	04	0	605	605	605	605	2,420	3,025	5,445	0	0	0	0	5,445	0	0	0	0	0	5,445
0 100	DIVISIONAL SECURITY		CW	S2	04	1,135	0	0	0	0	1,135	0	1,135	0	0	0	0	1,135	0	0	0	0	0	1,135
0 105	BACKUP POWER - FINCH AND DEE		CW	S2	04	0	0	500	0	0	500	0	500	0	0	0	0	500	0	0	0	0	0	500
0 107	OFFICE MODERNIZATION - MH18		CW	S2	04	450	975	0	0	0	1,425	0	1,425	0	0	0	0	1,425	0	0	0	0	0	1,425
0 114	DISTRICT OPERATIONS FACILITY UPGRADES		CW	S2	04	250	1,000	2,000	400	0	3,650	0	3,650	0	0	0	0	3,650	0	0	0	0	0	3,650
0 122	435 KIPLING AVENUE		CW	S2	04	2,020	3,750	0	0	0	5,770	0	5,770	0	0	0	0	5,770	0	0	0	0	0	5,770
0 123	PCS UPGRADES FOR WASTEWATER TREATM-CHANGE IN SCOPE		CW	S3	04	-4,746	-3,086	-290	0	0	-8,122	0	-8,122	0	0	0	0	-8,122	0	0	0	0	0	-8,122
0 124	FACILITY RENOVATION-CHANGE IN SCOPE		CW	S3	04	1,823	1,313	267	272	120	3,795	0	3,795	0	0	0	0	3,795	0	0	0	0	0	3,795

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Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906926	OPERATIONAL SUPPORT																						
0	126	DIVISIONAL SECURITY-CHANGE IN SCOPE	CW	S3	04	47	20	0	0	0	67	0	67	0	0	0	0	67	0	0	0	0	67
0	127	BACKUP POWER - FINCH AND DEE-CHANGE IN SCOPE	CW	S3	04	0	0	-400	400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	128	OFFICE MODERNIZATION - MH18-CHANGE IN SCOPE	CW	S3	04	-450	-975	0	0	0	-1,425	0	-1,425	0	0	0	0	-1,425	0	0	0	0	-1,425
0	129	435 KIPLING AVENUE-CHANGE IN SCOPE	CW	S3	04	-1,870	-1,850	3,750	0	0	30	0	30	0	0	0	0	30	0	0	0	0	30
0	130	EMP MONITORING NEEDS-CHANGE IN SCOPE	CW	S3	04	0	50	50	0	0	100	0	100	0	0	0	0	100	0	0	0	0	100
		Sub-total				6,566	9,177	11,822	2,977	2,000	32,542	9,400	41,942	0	0	0	0	41,942	0	0	0	0	41,942
WAS906958	SEWER SYSTEM REHABILITATION																						
0	2	GROUPS 2, 3 & 4 SEWAGE PUMPING STATION UPGRADES	CW	S2	03	4	0	0	0	0	4	0	4	0	0	1	0	3	0	0	0	0	4
0	5	CCTV INSPECTION	CW	S2	03	1,048	1,100	0	0	0	2,148	0	2,148	0	0	0	0	2,148	0	0	0	0	2,148
0	7	10 YEAR SEWER REHABILITATION	CW	S6	03	0	2,850	20,623	51,253	65,853	140,579	340,265	480,844	0	0	0	0	480,844	0	0	0	0	480,844
0	8	SPS SCADA UPGRADES - ENGINEERING	CW	S2	04	517	0	0	0	0	517	0	517	0	0	42	0	475	0	0	0	0	517
0	9	SEWER REHABILITATION	CW	S2	03	23,854	13,836	5,500	4,700	0	47,890	0	47,890	0	0	0	0	47,890	0	0	0	0	47,890
0	23	SEWAGE PUMPING STATION STANDBY POWER	CW	S2	02	117	0	0	0	0	117	0	117	0	0	9	0	108	0	0	0	0	117
0	24	GROUP 5 SEWAGE PUMPING STATION UPGRADES	CW	S2	05	8,700	4,507	80	0	0	13,287	0	13,287	0	0	1,214	0	12,073	0	0	0	0	13,287
0	79	SEWER REHABILITATION - CWD	CW	S2	03	55,323	21,580	2,743	2,743	0	82,389	0	82,389	0	0	0	0	82,389	0	0	0	0	82,389
0	98	SEWER REHABILITATION - CWD-CHANGE IN SCOPE	CW	S3	03	-30,270	18,983	49,496	15,000	0	53,209	0	53,209	0	0	0	0	53,209	0	0	0	0	53,209
0	99	GROUP 5 SEWAGE PUMPING STATION UPG-CHANGE IN SCOPE	CW	S3	05	-2,254	1,001	1,698	0	0	445	0	445	0	0	818	0	-373	0	0	0	0	445
0	100	SEWAGE PUMPING STATION STANDBY POW-CHANGE IN SCOPE	CW	S3	02	-102	103	0	0	0	1	0	1	0	0	8	0	-7	0	0	0	0	1
0	101	SPS SCADA UPGRADES - ENGINEERING-CHANGE IN SCOPE	CW	S3	04	-324	69	0	0	0	-255	0	-255	0	0	-3	0	-252	0	0	0	0	-255
0	102	SEWER REHABILITATION-CHANGE IN SCOPE	CW	S3	03	2,860	14,837	6,816	4,300	4,000	32,813	200	33,013	0	0	0	0	33,013	0	0	0	0	33,013
0	103	CCTV INSPECTION-CHANGE IN SCOPE	CW	S3	03	68	49	0	0	0	117	0	117	0	0	0	0	117	0	0	0	0	117
0	105	SEWER REHABILITATION - CUT REPAIRS	CW	S4	03	2,995	4,001	4,001	641	0	11,638	0	11,638	0	0	0	0	11,638	0	0	0	0	11,638
0	106	GROUPS 2, 3 & 4 SEWAGE PUMPING STA-CHANGE IN SCOPE	CW	S3	03	2	0	0	0	0	2	0	2	0	0	0	0	2	0	0	0	0	2
		Sub-total				62,538	82,916	90,957	78,637	69,853	384,901	340,465	725,366	0	0	2,089	0	723,277	0	0	0	0	725,366

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Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By										
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906960	STREAM RESTORATION & EROSION CONTRC																							
0	5	10 YEAR STREAM RESTORATION - ALL DISTRICTS	CW	S6	03	0	85	250	950	255	1,540	39,495	41,035	0	0	0	0	41,035	0	0	0	0	0	41,035
0	7	STREAM RESTORATION	CW	S2	03	73	0	0	0	0	73	0	73	0	0	6	0	67	0	0	0	0	0	73
0	41	WATERCOURSE - ENGINEERING	CW	S2	03	972	1,300	900	1,040	665	4,877	795	5,672	0	0	441	0	5,231	0	0	0	0	0	5,672
0	43	PARTNER PROJECTS	CW	S2	03	600	600	200	0	0	1,400	0	1,400	0	0	112	0	1,288	0	0	0	0	0	1,400
0	45	WATERCOURSE - CONSTRUCTION	CW	S4	03	850	5,470	2,045	1,500	1,450	11,315	1,700	13,015	0	0	0	0	13,015	0	0	0	0	0	13,015
0	51	STUDIES, EAs, MASTER PLANS	CW	S2	03	3,017	1,562	593	75	0	5,247	0	5,247	0	0	461	0	4,786	0	0	0	0	0	5,247
0	52	CRITICAL REPAIRS	CW	S2	03	3,159	1,958	2,223	673	548	8,561	30	8,591	0	0	668	0	7,923	0	0	0	0	0	8,591
0	53	EMERGENCY EROSION CONTROL	CW	S2	03	300	300	300	150	0	1,050	0	1,050	0	0	84	0	966	0	0	0	0	0	1,050
0	54	STUDY, EA, MASTER PLAN UPDATES - FUTURE	CW	S6	03	0	0	500	500	500	1,500	1,500	3,000	0	0	444	0	2,556	0	0	0	0	0	3,000
0	58	WATERCOURSE - CONSTRUCTION - FUTURE	CW	S6	03	0	250	2,750	7,600	5,650	16,250	18,000	34,250	0	0	0	0	34,250	0	0	0	0	0	34,250
0	62	STUDIES, EAs, MASTER PLANS -CHANGE IN SCOPE	CW	S3	03	-1,770	775	845	275	175	300	75	375	0	0	372	0	3	0	0	0	0	0	375
0	63	EMERGENCY EROSION CONTROL-CHANGE IN SCOPE	CW	S3	03	2,384	2,572	2,691	2,904	2,710	13,261	615	13,876	0	0	-84	0	13,960	0	0	0	0	0	13,876
0	64	STREAM RESTORATION -CHANGE IN SCOPE	CW	S3	03	-22	0	0	0	0	-22	0	-22	0	0	-6	0	-16	0	0	0	0	0	-22
0	65	CRITICAL REPAIRS-CHANGE IN SCOPE	CW	S3	03	-824	1,416	299	517	-523	885	-5	880	0	0	-668	0	1,548	0	0	0	0	0	880
0	66	PARTNER PROJECTS-CHANGE IN SCOPE	CW	S3	03	0	0	0	0	0	0	0	0	0	0	-112	0	112	0	0	0	0	0	0
0	67	WATERCOURSE - ENGINEERING-CHANGE IN SCOPE	CW	S3	03	-378	51	753	763	990	2,179	1,415	3,594	0	0	-441	0	4,035	0	0	0	0	0	3,594
		Sub-total				8,361	16,339	14,349	16,947	12,420	68,416	63,620	132,036	0	0	1,277	0	130,759	0	0	0	0	0	132,036
WAS906966	SWM TRCA FUNDING																							
0	8	10 YEAR TRCA FUNDING	CW	S6	04	0	4,604	4,719	4,837	4,958	19,118	26,713	45,831	0	0	0	0	45,831	0	0	0	0	0	45,831
0	24	TORONTO WATER TRANSFER TO TRCA CAP-CHANGE IN SCOPE	CW	S3	04	4,491	0	0	0	0	4,491	0	4,491	0	0	674	0	3,817	0	0	0	0	0	4,491
		Sub-total				4,491	4,604	4,719	4,837	4,958	23,609	26,713	50,322	0	0	674	0	49,648	0	0	0	0	0	50,322
WAS906968	ENGINEERING																							
0	2	CONSULTING FEES	CW	S2	03	16,913	6,921	2,301	1,145	710	27,990	996	28,986	0	0	0	0	28,986	0	0	0	0	0	28,986
0	59	ROAD RESTORATION	CW	S2	03	729	0	0	0	0	729	0	729	0	0	0	0	729	0	0	0	0	0	729

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Appendix 7: 2019 Capital Budget; 2020-2028 Capital Plan Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906968	ENGINEERING																						
0	70	CONSULTING FEES-CHANGE IN SCOPE	CW	S3	03	-8,509	10,290	21,135	16,976	7,013	46,905	584	47,489	0	0	0	0	47,489	0	0	0	0	0	47,489
0	71	ECS SALARIES-CHANGE IN SCOPE	CW	S3	03	14,491	0	0	0	0	14,491	0	14,491	0	0	0	0	14,491	0	0	0	0	0	14,491
0	72	TW SALARIES-CHANGE IN SCOPE	CW	S3	03	1,089	0	0	0	0	1,089	0	1,089	0	0	0	0	1,089	0	0	0	0	0	1,089
0	73	ROAD RESTORATION-CHANGE IN SCOPE	CW	S3	03	-59	0	0	0	0	-59	0	-59	0	0	0	0	-59	0	0	0	0	0	-59
		Sub-total				24,654	17,211	23,436	18,121	7,723	91,145	1,580	92,725	0	0	0	0	92,725	0	0	0	0	0	92,725
WAS906973	SEWER REPLACEMENT PROGRAM																						
0	3	10YR SEWER REPLACEMENT	CW	S6	03	0	0	0	10,500	15,000	25,500	75,000	100,500	0	0	5,765	0	94,735	0	0	0	0	0	100,500
0	25	2012 SEWER REPLC	CW	S2	03	325	0	0	0	0	325	0	325	0	0	0	0	325	0	0	0	0	0	325
0	35	2013 SEWER REPLC	CW	S2	03	10	0	0	0	0	10	0	10	0	0	1	0	9	0	0	0	0	0	10
0	36	SEWER REPLC - 2014 PROGRAM	CW	S2	03	28	0	0	0	0	28	0	28	0	0	2	0	26	0	0	0	0	0	28
0	37	FORCEMAIN REPLACEMENT - FUTURE	CW	S6	03	0	225	725	1,350	5,150	7,450	20,950	28,400	0	0	0	0	28,400	0	0	0	0	0	28,400
0	46	WATERFRONT STORMWATER INFRASTRUCTURE	CW	S2	04	3,250	0	0	0	0	3,250	0	3,250	0	0	2,017	0	1,233	0	0	0	0	0	3,250
0	47	EBF REPORT	CW	S2	04	1,070	0	0	0	0	1,070	0	1,070	0	0	701	0	369	0	0	0	0	0	1,070
0	52	SEWER REPLACEMENT - METROLINX	CW	S2	03	1,213	1,966	1,916	800	0	5,895	0	5,895	0	0	0	0	5,895	0	0	0	0	0	5,895
0	62	SEWER REPLC - 2015 PROGRAM	CW	S2	03	604	0	0	0	0	604	0	604	0	0	48	0	556	0	0	0	0	0	604
0	71	SEWER REPLC - 2016 PROGRAM	CW	S2	03	3,694	0	0	0	0	3,694	0	3,694	0	0	297	0	3,397	0	0	0	0	0	3,694
0	75	FORCEMAIN REPLACEMENT - 2016	CW	S2	03	10,354	10,514	47	0	0	20,915	0	20,915	0	0	0	0	20,915	0	0	0	0	0	20,915
0	78	SEWER REPLC - 2017 PROGRAM	CW	S2	03	879	60	0	0	0	939	0	939	0	0	75	0	864	0	0	0	0	0	939
0	79	SEWER REPLC - 2018 PROGRAM	CW	S2	03	1,938	2,820	129	30	0	4,917	0	4,917	0	0	393	0	4,524	0	0	0	0	0	4,917
0	98	SEWER REPLC - 2019 PROGRAM	CW	S2	03	18,382	5,927	2,491	0	0	26,800	0	26,800	0	0	2,158	0	24,642	0	0	0	0	0	26,800
0	100	CSP RENEWAL	CW	S2	03	5,812	1,019	0	0	0	6,831	0	6,831	0	0	543	0	6,288	0	0	0	0	0	6,831
0	102	SEWER REPLC - 2016 PROGRAM-CHANGE IN SCOPE	CW	S3	03	-3,465	1,947	0	0	0	-1,518	0	-1,518	0	0	-129	0	-1,389	0	0	0	0	0	-1,518
0	103	SEWER REPLC - 2017 PROGRAM-CHANGE IN SCOPE	CW	S3	03	-721	154	0	0	0	-567	0	-567	0	0	-47	0	-520	0	0	0	0	0	-567
0	104	SEWER REPLC - 2018 PROGRAM-CHANGE IN SCOPE	CW	S3	03	-1,427	-2,420	321	-30	0	-3,556	0	-3,556	0	0	-288	0	-3,268	0	0	0	0	0	-3,556

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Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906973	SEWER REPLACEMENT PROGRAM																						
0	105	SEWER REPLC - 2019 PROGRAM-CHANGE IN SCOPE	CW	S3	03	-9,821	6,660	15,588	4,712	2,469	19,608	100	19,708	0	0	-130	0	19,838	0	0	0	0	0	19,708
0	106	2012 SEWER REPLC-CHANGE IN SCOPE	CW	S3	03	-320	225	0	0	0	-95	0	-95	0	0	0	0	-95	0	0	0	0	0	-95
0	107	CSP RENEWAL-CHANGE IN SCOPE	CW	S3	03	-1,639	659	400	0	0	-580	0	-580	0	0	-62	0	-518	0	0	0	0	0	-580
0	108	EBF REPORT-CHANGE IN SCOPE	CW	S3	04	-521	1,000	0	0	0	479	0	479	0	0	43	0	436	0	0	0	0	0	479
0	109	WATERFRONT STORMWATER INFRASTRUCTU-CHANGE IN SCOPE	CW	S3	04	-2,250	825	0	0	0	-1,425	0	-1,425	0	0	-1,139	0	-286	0	0	0	0	0	-1,425
0	110	SEWER REPLC - 2014 PROGRAM-CHANGE IN SCOPE	CW	S3	03	-9	0	0	0	0	-9	0	-9	0	0	-1	0	-8	0	0	0	0	0	-9
0	111	SEWER REPLC - 2015 PROGRAM-CHANGE IN SCOPE	CW	S3	03	-394	150	0	0	0	-244	0	-244	0	0	-20	0	-224	0	0	0	0	0	-244
0	114	SEWER REPLACEMENT - METROLINX-CHANGE IN SCOPE	CW	S3	03	-600	291	241	0	0	-68	0	-68	0	0	0	0	-68	0	0	0	0	0	-68
0	115	FORCEMAIN REPLACEMENT - 2016-CHANGE IN SCOPE	CW	S3	03	-6,680	-3,231	5,635	5,000	0	724	0	724	0	0	0	0	724	0	0	0	0	0	724
		Sub-total				19,712	28,791	27,493	22,362	22,619	120,977	96,050	217,027	0	0	10,227	0	206,800	0	0	0	0	0	217,027
WAS906980	ASHBRIDGES BAY T.P. YR2006																						
0	9	DEWATERING EQUIPMENT UPGRADES	CW	S2	03	100	0	0	0	0	100	0	100	0	0	8	0	92	0	0	0	0	0	100
0	45	DEWATERING EQUIPMENT UPGRADES-CHANGE IN SCOPE	CW	S3	03	1	0	0	0	0	1	0	1	0	0	7	0	-6	0	0	0	0	0	1
		Sub-total				101	0	0	0	0	101	0	101	0	0	15	0	86	0	0	0	0	0	101
WAS906981	HIGHLAND CREEK WWTP UPGRADES																						
0	1	PROCESS & FACILITY UPGRADE	CW	S2	04	2,598	1,607	1,650	1,600	85	7,540	0	7,540	0	0	0	0	7,540	0	0	0	0	0	7,540
0	3	BIOSOLIDS TREATMENT UPGRADES	CW	S2	03	299	31	0	0	0	330	0	330	0	0	31	0	299	0	0	0	0	0	330
0	5	TRANSFORMERS AND SWITCHGEAR	CW	S2	05	198	800	500	0	0	1,498	0	1,498	0	0	120	0	1,378	0	0	0	0	0	1,498
0	7	MECH & ELECTRICAL UPGRADE ENGINEERING	CW	S2	03	60	0	0	0	0	60	0	60	0	0	0	0	60	0	0	0	0	0	60
0	8	DIGESTER GAS SYSTEM UPGRADES	CW	S2	03	3,668	5,482	0	0	0	9,150	0	9,150	0	0	0	0	9,150	0	0	0	0	0	9,150
0	23	ELECTRICAL UPGRADES - ECAR	CW	S2	03	5,122	0	0	0	0	5,122	0	5,122	0	0	0	0	5,122	0	0	0	0	0	5,122
0	32	CEPA COMPLIANCE - CL NOTICE - HCTP	CW	S2	02	5,561	8,900	8,532	50	0	23,043	0	23,043	0	0	0	0	23,043	0	0	0	0	0	23,043
0	80	DIGESTER CLEANING, REHAB AND IMPROVEMENTS #4-7	CW	S2	03	189	46	15	14	0	264	0	264	0	0	0	0	264	0	0	0	0	0	264
0	92	LIQUID TRAIN REPAIRS - PHASE 1	CW	S2	03	36,371	35,040	19,000	10,000	0	100,411	0	100,411	0	0	0	0	100,411	0	0	0	0	0	100,411

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Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906981	HIGHLAND CREEK WWTP UPGRADES																						
0	102	LIQUID TRAIN - ENGINEERING	CW	S2	03	4,155	5,400	5,100	2,640	2,640	19,935	26,947	46,882	0	0	0	0	46,882	0	0	0	0	0	46,882
0	103	LIQUID TRAIN - CONSTRUCTION	CW	S6	04	0	0	0	0	0	0	122,000	122,000	0	0	0	0	122,000	0	0	0	0	0	122,000
0	104	PROCESS & FACILITY UPGRADE - FUTURE	CW	S6	03	0	0	0	0	100	100	2,500	2,600	0	0	0	0	2,600	0	0	0	0	0	2,600
0	105	LIQUID TRAIN REPAIRS - PHASE 2	CW	S6	03	0	0	0	0	0	0	29,100	29,100	0	0	0	0	29,100	0	0	0	0	0	29,100
0	123	COMMUNICATION SYSTEM	CW	S2	04	600	2,250	2,220	20	10	5,100	0	5,100	0	0	0	0	5,100	0	0	0	0	0	5,100
0	152	DIGESTER CLEANING, REHAB AND IMPRO-CHANGE IN SCOPE	CW	S3	03	341	-16	52	-14	0	363	0	363	0	0	0	0	363	0	0	0	0	0	363
0	153	LIQUID TRAIN REPAIRS - PHASE 1-CHANGE IN SCOPE	CW	S3	03	-33,451	-7,110	8,650	21,817	36,150	26,056	19,690	45,746	0	0	0	0	45,746	0	0	0	0	0	45,746
0	154	BIOSOLIDS TREATMENT UPGRADES -CHANGE IN SCOPE	CW	S3	03	-240	290	0	0	0	50	0	50	0	0	26	0	24	0	0	0	0	0	50
0	155	DIGESTER GAS SYSTEM UPGRADES-CHANGE IN SCOPE	CW	S3	03	432	-347	13	0	0	98	0	98	0	0	0	0	98	0	0	0	0	0	98
0	156	TRANSFORMERS AND SWITCHGEAR-CHANGE IN SCOPE	CW	S3	05	2	0	0	0	0	2	0	2	0	0	102	0	-100	0	0	0	0	0	2
0	157	PROCESS & FACILITY UPGRADE-CHANGE IN SCOPE	CW	S3	04	-1,644	766	-45	-44	1,515	548	1,035	1,583	0	0	0	0	1,583	0	0	0	0	0	1,583
0	158	ELECTRICAL UPGRADES - ECAR-CHANGE IN SCOPE	CW	S3	03	-4,692	46	0	0	0	-4,646	0	-4,646	0	0	0	0	-4,646	0	0	0	0	0	-4,646
0	159	LIQUID TRAIN - ENGINEERING-CHANGE IN SCOPE	CW	S3	03	-1,705	115	50	700	0	-840	2,509	1,669	0	0	0	0	1,669	0	0	0	0	0	1,669
0	161	MECH & ELECTRICAL UPGRADE ENGINEER-CHANGE IN SCOPE	CW	S3	03	-60	0	0	0	0	-60	0	-60	0	0	0	0	-60	0	0	0	0	0	-60
0	162	CEPA COMPLIANCE - CL NOTICE - HCTP-CHANGE IN SCOPE	CW	S3	02	-4,661	-2,673	-32	7,406	37	77	37	114	0	0	0	0	114	0	0	0	0	0	114
0	163	COMMUNICATION SYSTEM-CHANGE IN SCOPE	CW	S3	04	-250	-1,930	-1,270	3,330	490	370	0	370	0	0	0	0	370	0	0	0	0	0	370
		Sub-total				12,893	48,697	44,435	47,519	41,027	194,571	203,818	398,389	0	0	279	0	398,110	0	0	0	0	0	398,389
WAS906982	HUMBER WWTP UPGRADES																						
0	2	CHLORINE FACILITY UPGRADE	CW	S2	01	718	0	0	0	0	718	0	718	0	0	0	0	718	0	0	0	0	0	718
0	6	NEW SUBSTATION	CW	S2	03	77	0	0	0	0	77	0	77	0	0	0	0	77	0	0	0	0	0	77
0	7	ELECTRICAL CONDITION ASSESSMENT RECOMMENDATIONS	CW	S2	01	2,285	23	23	0	0	2,331	0	2,331	0	0	0	0	2,331	0	0	0	0	0	2,331
0	29	ADMIN BUILDING EXPANSION - ENGINEERING	CW	S2	04	710	800	454	427	0	2,391	0	2,391	0	0	0	0	2,391	0	0	0	0	0	2,391
0	52	HVAC UPGRADES	CW	S2	03	5,978	2,322	17	0	0	8,317	0	8,317	0	0	0	0	8,317	0	0	0	0	0	8,317
0	81	BLOWER REPLACEMENT	CW	S2	03	5	0	0	100	200	305	12,550	12,855	0	0	0	0	12,855	0	0	0	0	0	12,855

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Wastewater Program

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906982	HUMBER WWTP UPGRADES																						
0	82	DIGESTERS CLEANING REHAB	CW	S2	04	5,400	6,500	6,000	4,000	3,000	24,900	0	24,900	0	0	0	0	24,900	0	0	0	0	0	24,900
0	84	DIGESTER CLEANING & REHAB - FUTURE	CW	S6	03	0	0	0	0	1,250	1,250	5,250	6,500	0	0	0	0	6,500	0	0	0	0	0	6,500
0	95	REPLACEMENT OF WASTE GAS BURNERS	CW	S2	03	8,211	5,500	2,770	40	0	16,521	0	16,521	0	0	0	0	16,521	0	0	0	0	0	16,521
0	99	WET WEATHER FLOW	CW	S2	04	540	600	2,500	4,750	4,500	12,890	0	12,890	0	0	0	0	12,890	0	0	0	0	0	12,890
0	107	MESI UPGRADES	CW	S2	03	600	500	500	500	0	2,100	0	2,100	0	0	0	0	2,100	0	0	0	0	0	2,100
0	114	FIELD OFFICE	CW	S2	03	324	0	0	0	0	324	0	324	0	0	0	0	324	0	0	0	0	0	324
0	115	ADMIN BUILDING EXPANSION - CONSTRUCTION	CW	S2	03	1,568	1,500	1,500	1,550	0	6,118	0	6,118	0	0	0	0	6,118	0	0	0	0	0	6,118
0	116	SERVICE REHAB AND UPGRADES	CW	S2	03	600	500	2,500	4,750	4,500	12,850	0	12,850	0	0	0	0	12,850	0	0	0	0	0	12,850
0	129	ELECTRICAL CONDITION ASSESSMENT RE-CHANGE IN SCOPE	CW	S3	01	-2,200	2,167	1	0	0	-32	0	-32	0	0	0	0	-32	0	0	0	0	0	-32
0	130	ADMIN BUILDING EXPANSION - CONSTRU-CHANGE IN SCOPE	CW	S3	03	-168	-400	-400	600	0	-368	0	-368	0	0	0	0	-368	0	0	0	0	0	-368
0	131	ADMIN BUILDING EXPANSION - ENGINEE-CHANGE IN SCOPE	CW	S3	04	69	-195	-105	-400	0	-631	0	-631	0	0	0	0	-631	0	0	0	0	0	-631
0	132	CHLORINE FACILITY UPGRADE-CHANGE IN SCOPE	CW	S3	01	-718	0	0	0	0	-718	0	-718	0	0	0	0	-718	0	0	0	0	0	-718
0	133	DIGESTERS CLEANING REHAB-CHANGE IN SCOPE	CW	S3	04	-2,400	0	1,000	1,500	0	100	0	100	0	0	0	0	100	0	0	0	0	0	100
0	134	MESI UPGRADES-CHANGE IN SCOPE	CW	S3	03	-49	53	55	56	0	115	0	115	0	0	0	0	115	0	0	0	0	0	115
0	136	SECURITY UPGRADES	CW	S4	01	250	2,950	400	0	0	3,600	0	3,600	0	0	0	0	3,600	0	0	0	0	0	3,600
0	137	NEW SUBSTATION-CHANGE IN SCOPE	CW	S3	03	29	45	0	0	0	74	0	74	0	0	0	0	74	0	0	0	0	0	74
0	138	FLOOD PROTECTION-CHANGE IN SCOPE	CW	S3	02	300	275	0	0	0	575	0	575	0	0	0	0	575	0	0	0	0	0	575
0	139	HVAC UPGRADES-CHANGE IN SCOPE	CW	S3	03	-2,038	-56	2,442	0	0	348	0	348	0	0	0	0	348	0	0	0	0	0	348
0	140	BLOWER REPLACEMENT-CHANGE IN SCOPE	CW	S3	03	0	30	0	0	0	30	0	30	0	0	0	0	30	0	0	0	0	0	30
0	141	FIELD OFFICE-CHANGE IN SCOPE	CW	S3	03	-67	110	0	0	0	43	0	43	0	0	0	0	43	0	0	0	0	0	43
0	142	REPLACEMENT OF WASTE GAS BURNERS-CHANGE IN SCOPE	CW	S3	03	-4,753	600	4,150	288	0	285	0	285	0	0	0	0	285	0	0	0	0	0	285
0	143	WET WEATHER FLOW-CHANGE IN SCOPE	CW	S3	04	-490	87	-2,000	-1,000	0	-3,403	3,500	97	0	0	0	0	97	0	0	0	0	0	97
0	144	SERVICE REHAB AND UPGRADES-CHANGE IN SCOPE	CW	S3	03	0	400	3,800	3,350	3,600	11,150	5,450	16,600	0	0	0	0	16,600	0	0	0	0	0	16,600
		Sub-total				14,781	24,311	25,607	20,511	17,050	102,260	26,750	129,010	0	0	0	0	129,010	0	0	0	0	0	129,010

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing
WAS906994	HIGHLAND CREEK WWTP - SOLIDS & GAS HA																						
0 1	HIGHLAND CREEK WWTP - BMP IMPLEMENTATION	CW	S2	04		3,220	3,000	2,200	2,000	2,000	12,420	4,450	16,870	0	0	1,407	0	15,463	0	0	0	0	16,870
0 3	WAS THICKENING - CONSTR	CW	S2	03		1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	1
0 8	HIGHLAND CREEK WWTP - BMP IMPLEMENTATION	CW	S2	04		78	3,000	25,000	25,000	25,000	78,078	28,920	106,998	0	0	8,611	0	98,387	0	0	0	0	106,998
0 21	FLUIDIZED BED INCINERATOR	CW	S6	03		0	0	0	0	5,000	5,000	17,000	22,000	0	0	3,256	0	18,744	0	0	0	0	22,000
0 22	HIGHLAND CREEK WWTP - BMP IMPLEMEN-CHANGE IN SCOPE	CW	S3	04		-1,170	-400	1,560	100	0	90	1,140	1,230	0	0	1,271	0	-41	0	0	0	0	1,230
0 23	HIGHLAND CREEK WWTP - BMP IMPLEMEN-CHANGE IN SCOPE	CW	S3	04		5,922	1,000	-16,500	-4,410	-5,000	-18,988	19,000	12	0	0	7,223	0	-7,211	0	0	0	0	12
	Sub-total					8,051	6,600	12,260	22,690	27,000	76,601	70,510	147,111	0	0	21,768	0	125,343	0	0	0	0	147,111
WAS907038	Land Acquisition for Source Water Protect																						
0 9	TRCA - CRITICAL EROSION SITES - FUTURE	CW	S6	04		0	2,000	2,000	2,000	2,000	8,000	10,000	18,000	0	0	0	0	18,000	0	0	0	0	18,000
0 21	TRCA - WATERCOURSE EROSION CONTROL	CW	S6	04		0	7,500	7,500	7,500	9,000	31,500	45,000	76,500	25,500	25,500	0	0	25,500	0	0	0	0	76,500
0 25	TRCA - SCARBOROUGH WATERFRONT WEST EA	CW	S2	04		800	0	0	0	0	800	0	800	0	0	64	0	736	0	0	0	0	800
0 33	TRCA - SCARBOROUGH WATERFRONT WEST-CHANGE IN SCOPE	CW	S3	04		0	0	0	0	0	0	0	0	0	0	54	0	-54	0	0	0	0	0
0 34	TRCA - CRITICAL EROSION SITES-CHANGE IN SCOPE	CW	S3	04		9,500	0	0	0	0	9,500	0	9,500	0	0	0	0	9,500	0	0	0	0	9,500
	Sub-total					10,300	9,500	9,500	9,500	11,000	49,800	55,000	104,800	25,500	25,500	118	0	53,682	0	0	0	0	104,800
WAS907097	ASHBRIDGES BAY WWTP - BUILDING SERVIC																						
0 7	CONTROLLED SUBSTANCE IDENTIFICATION AND ABATEMENT	CW	S2	02		100	100	0	0	0	200	0	200	0	0	0	0	200	0	0	0	0	200
0 19	BIO GAS UTILIZATION	CW	S2	04		850	1,000	1,000	2,000	2,000	6,850	1,150	8,000	0	0	0	0	8,000	0	0	0	0	8,000
0 21	BLOWER BLDG & OLD NORTH SUBSTATION IMPROVEMENTS	14	S2	04		6,321	5,474	23	0	0	11,818	0	11,818	0	0	0	0	11,818	0	0	0	0	11,818
0 40	GROVE LANDSCAPING - PHASE 2	14	S6	04		0	0	0	0	0	0	1,300	1,300	0	0	0	0	1,300	0	0	0	0	1,300
0 64	GROVE LANDSCAPING - PHASE 1	CW	S2	04		117	7	0	0	0	124	0	124	0	0	0	0	124	0	0	0	0	124
0 68	BLOWER BLDG & OLD NORTH SUBSTATION-CHANGE IN SCOPE	14	S3	04		-3,956	-1,699	3,690	0	0	-1,965	0	-1,965	0	0	0	0	-1,965	0	0	0	0	-1,965
0 69	BIO GAS UTILIZATION-CHANGE IN SCOPE	CW	S3	04		-800	-800	-200	-1,000	-1,000	-3,800	4,000	200	0	0	0	0	200	0	0	0	0	200
0 70	CONTROLLED SUBSTANCE IDENTIFICATIO-CHANGE IN SCOPE	CW	S3	02		-100	-100	0	0	0	-200	0	-200	0	0	0	0	-200	0	0	0	0	-200

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS907097	ASHBRIDGES BAY WWTP - BUILDING SERVIC																						
0	71	GROVE LANDSCAPING - PHASE 1-CHANGE IN SCOPE	CW	S3	04	-7	0	0	0	0	-7	0	-7	0	0	0	0	-7	0	0	0	0	0	-7
		Sub-total				2,525	3,982	4,513	1,000	1,000	13,020	6,450	19,470	0	0	0	0	19,470	0	0	0	0	0	19,470
WAS907098	ASHBRIDGES BAY WWTP - EFFLUENT SYSTE																						
0	1	DISINFECTION ENGINEERING	CW	S2	02	4,900	1,550	1,075	492	75	8,092	58	8,150	0	0	657	0	7,493	0	0	0	0	0	8,150
0	2	OUTFALL CONSTRUCTION	CW	S2	02	30,000	52,000	57,000	62,000	52,000	253,000	69,000	322,000	0	0	25,914	0	296,086	0	0	0	0	0	322,000
0	13	OUTFALL ASSESSMENT	CW	S2	02	57	0	0	0	0	57	0	57	0	0	5	0	52	0	0	0	0	0	57
0	14	OUTFALL ENGINEERING	CW	S2	02	5,730	5,863	3,400	2,500	3,100	20,593	4,419	25,012	0	0	2,012	0	23,000	0	0	0	0	0	25,012
0	15	DISINFECTION SYSTEM CONSTRUCTION	CW	S2	02	89,633	70,135	50,000	41,000	0	250,768	0	250,768	0	0	21,497	0	229,271	0	0	0	0	0	250,768
0	31	OUTFALL - SITE PREP	CW	S2	02	31	0	0	0	0	31	0	31	0	0	5	0	26	0	0	0	0	0	31
0	37	OUTFALL ASSESSMENT-CHANGE IN SCOPE	CW	S3	02	-57	0	0	0	0	-57	0	-57	0	0	-5	0	-52	0	0	0	0	0	-57
0	38	DISINFECTION SYSTEM CONSTRUCTION-CHANGE IN SCOPE	CW	S3	02	-54,498	-20,000	8,135	4,435	0	-61,928	0	-61,928	0	0	6,445	0	-68,373	0	0	0	0	0	-61,928
0	39	DISINFECTION ENGINEERING-CHANGE IN SCOPE	CW	S3	02	-3,006	1,131	1,000	1,000	0	125	0	125	0	0	568	0	-443	0	0	0	0	0	125
0	40	OUTFALL CONSTRUCTION-CHANGE IN SCOPE	CW	S3	02	5,000	8,500	8,000	-11,959	-6,959	2,582	-51,982	-49,400	0	0	14,421	0	-63,821	0	0	0	0	0	-49,400
0	41	OUTFALL ENGINEERING-CHANGE IN SCOPE	CW	S3	02	-2,604	-2,563	-500	400	1,000	-4,267	4,053	-214	0	0	1,658	0	-1,872	0	0	0	0	0	-214
		Sub-total				75,186	116,616	128,110	99,868	49,216	468,996	25,548	494,544	0	0	73,177	0	421,367	0	0	0	0	0	494,544
WAS907099	ASHBRIDGES BAY WWTP - LIQUID TREATMEI																						
0	1	FINE BUBBLE AERATION - TANK #2	CW	S2	03	316	0	0	0	0	316	0	316	0	0	25	0	291	0	0	0	0	0	316
0	2	ODOUR CONTROL - PRIMARY TANKS 7-9 UPGRADES	CW	S6	04	0	0	0	0	0	0	61,100	61,100	0	0	9,041	0	52,059	0	0	0	0	0	61,100
0	3	P BLDG HEADWORKS UPGRADE	CW	S2	03	10,627	0	0	0	0	10,627	0	10,627	0	0	1,235	0	9,392	0	0	0	0	0	10,627
0	6	M & T PUMPING STATION CRITICAL REPAIRS	CW	S2	03	2,085	0	0	0	0	2,085	0	2,085	0	0	0	0	2,085	0	0	0	0	0	2,085
0	10	INTEGRATED PUMPING STATION (IPS) - ENGINEERING	CW	S2	03	5,844	4,763	5,823	2,705	2,210	21,345	14,496	35,841	0	0	0	0	35,841	0	0	0	0	0	35,841
0	39	INTEGRATED PUMPING STATION (IPS) - CONSTRUCTION	CW	S2	03	19,220	26,550	47,000	25,025	65,000	182,795	197,850	380,645	0	0	225	0	380,420	0	0	0	0	0	380,645
0	77	FINE BUBBLE AERATION - ENGINEERING	CW	S2	03	449	0	0	0	0	449	10,500	10,949	0	0	903	0	10,046	0	0	0	0	0	10,949
0	78	FINE BUBBLE AERATION - CONTRUCTION	CW	S6	03	0	0	0	0	0	0	75,000	75,000	0	0	0	0	75,000	0	0	0	0	0	75,000

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS907099	ASHBRIDGES BAY WWTP - LIQUID TREATMEN																						
0	84	AERATION TANK 12 & 13	CW	S4	05	50	4,000	4,450	7,800	39,000	55,300	101,850	157,150	0	0	38,550	0	118,600	0	0	0	0	0	157,150
0	89	INTEGRATED PUMPING STATION (IPS) --CHANGE IN SCOPE	CW	S3	03	979	27,350	45,465	74,275	15,000	163,069	85,650	248,719	0	0	92,898	0	155,821	0	0	0	0	0	248,719
0	90	INTEGRATED PUMPING STATION (IPS) --CHANGE IN SCOPE	CW	S3	03	-815	870	500	0	0	555	75	630	0	0	5,471	0	-4,841	0	0	0	0	0	630
0	91	M & T PUMPING STATION CRITICAL REP-CHANGE IN SCOPE	CW	S3	03	-1,235	1,417	0	0	0	182	0	182	0	0	0	0	182	0	0	0	0	0	182
0	92	FINE BUBBLE AERATION - ENGINEERING-CHANGE IN SCOPE	CW	S3	03	1	74	0	0	0	75	3,000	3,075	0	0	1,173	0	1,902	0	0	0	0	0	3,075
0	93	FINE BUBBLE AERATION - TANK #2-CHANGE IN SCOPE	CW	S3	03	-316	0	0	0	0	-316	0	-316	0	0	-25	0	-291	0	0	0	0	0	-316
0	94	P BLDG HEADWORKS UPGRADE-CHANGE IN SCOPE	CW	S3	03	-4,992	6,727	0	0	0	1,735	0	1,735	0	0	619	0	1,116	0	0	0	0	0	1,735
		Sub-total				32,213	71,751	103,238	109,805	121,210	438,217	549,521	987,738	0	0	150,115	0	837,623	0	0	0	0	0	987,738
WAS907100	ASHBRIDGES BAY WWTP - SOLIDS & GAS HA																						
0	3	WASTE ACTIVATED SLUDGE UPGRADE - ENGINEERING	CW	S2	03	2,788	2,500	2,500	2,000	500	10,288	304	10,592	0	0	871	0	9,721	0	0	0	0	0	10,592
0	4	DIGESTERS 9-12 REFURBISH	CW	S2	03	21,933	10,767	6,485	12	80	39,277	0	39,277	0	0	3,563	0	35,714	0	0	0	0	0	39,277
0	8	BIOSOLIDS PELLETIZER RETROFIT	CW	S2	03	422	400	400	400	0	1,622	0	1,622	0	0	0	0	1,622	0	0	0	0	0	1,622
0	22	WASTE ACTIVATED SLUDGE UPGRADE - CONSTRUCTION	CW	S2	03	36,485	35,000	35,000	30,000	20,000	156,485	0	156,485	0	0	12,637	0	143,848	0	0	0	0	0	156,485
0	25	PELLETIZER TRUCK LOADING FACILITY UPGRADES	CW	S2	03	968	695	820	55	55	2,593	0	2,593	0	0	0	0	2,593	0	0	0	0	0	2,593
0	52	PRIMARY SLUDGE BUFFER TANK AND HEAT RECOVERY	CW	S4	04	50	200	1,975	3,200	350	5,775	65	5,840	0	0	0	0	5,840	0	0	0	0	0	5,840
0	53	PELLETIZER FACILITY	CW	S4	03	800	2,000	2,000	2,500	400	7,700	97,850	105,550	0	0	0	0	105,550	0	0	0	0	0	105,550
0	56	WASTE ACTIVATED SLUDGE UPGRADE - C-CHANGE IN SCOPE	CW	S3	03	-31,485	3,000	7,000	15,000	22,000	15,515	0	15,515	0	0	12,812	0	2,703	0	0	0	0	0	15,515
0	57	WASTE ACTIVATED SLUDGE UPGRADE - E-CHANGE IN SCOPE	CW	S3	03	-1,288	-1,000	0	500	1,500	-288	0	-288	0	0	675	0	-963	0	0	0	0	0	-288
0	58	DIGESTERS 9-12 REFURBISH-CHANGE IN SCOPE	CW	S3	03	-12,123	4,243	9,945	1,261	0	3,326	0	3,326	0	0	2,741	0	585	0	0	0	0	0	3,326
0	59	BIOSOLIDS PELLETIZER RETROFIT-CHANGE IN SCOPE	CW	S3	03	-22	0	0	-236	0	-258	0	-258	0	0	0	0	-258	0	0	0	0	0	-258
0	60	PELLETIZER TRUCK LOADING FACILITY -CHANGE IN SCOPE	CW	S3	03	-468	348	0	0	60	-60	125	65	0	0	0	0	65	0	0	0	0	0	65
		Sub-total				18,060	58,153	66,125	54,692	44,945	241,975	98,344	340,319	0	0	33,299	0	307,020	0	0	0	0	0	340,319
WAS907101	ASHBRIDGES BAY WWTP - O&M UPGRADES																						
0	5	BOILER #4 DESIGN	CW	S2	03	6	0	0	0	0	6	0	6	0	0	0	0	6	0	0	0	0	0	6

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS907101	ASHBRIDGES BAY WWTP - O&M UPGRADES																							
0	6	MESI UPGRADES	CW	S2	03	2,962	3,000	0	0	0	5,962	0	5,962	0	0	0	0	5,962	0	0	0	0	0	5,962
0	7	MISC MECH REHAB	CW	S2	03	3,184	0	0	0	0	3,184	0	3,184	0	0	0	0	3,184	0	0	0	0	0	3,184
0	21	MESI UPGRADES - FUTURE YEAR	CW	S6	03	0	0	0	0	0	0	16,000	16,000	0	0	0	0	16,000	0	0	0	0	0	16,000
0	38	MISC MECH REHAB-CHANGE IN SCOPE	CW	S3	03	-1,567	1,600	0	0	0	33	0	33	0	0	0	0	33	0	0	0	0	0	33
0	39	MESI UPGRADES-CHANGE IN SCOPE	CW	S3	03	0	0	3,100	3,200	3,200	9,500	0	9,500	0	0	0	0	9,500	0	0	0	0	0	9,500
		Sub-total				4,585	4,600	3,100	3,200	3,200	18,685	16,000	34,685	0	0	0	0	34,685	0	0	0	0	0	34,685
WAS907102	ASHBRIDGES BAY WWTP - ODOUR CONTROL																							
0	6	BIOFILTERS UPGRADE & REPLACEMENT	CW	S2	03	3,399	850	72	0	0	4,321	0	4,321	0	0	365	0	3,956	0	0	0	0	0	4,321
0	13	D BUILDING TREATMENT & BIOFILTER	CW	S2	03	656	0	0	0	0	656	0	656	0	0	64	0	592	0	0	0	0	0	656
0	42	D BUILDING TREATMENT & BIOFILTER-CHANGE IN SCOPE	CW	S3	03	-156	197	0	0	0	41	0	41	0	0	41	0	0	0	0	0	0	0	41
0	43	BIOFILTERS UPGRADE & REPLACEMENT-CHANGE IN SCOPE	CW	S3	03	-907	700	0	0	0	-207	0	-207	0	0	253	0	-460	0	0	0	0	0	-207
		Sub-total				2,992	1,747	72	0	0	4,811	0	4,811	0	0	723	0	4,088	0	0	0	0	0	4,811
WAS907104	HUMBER WWTP - LIQUID TREATMENT & HANI																							
0	2	SECONDARY TREATMENT UPGRADES - SOUTH - ENGINEERING	CW	S2	03	3,300	3,300	3,300	3,260	5,246	18,406	1,169	19,575	0	0	1,576	0	17,999	0	0	0	0	0	19,575
0	17	SECONDARY TREATMENT UPGRADES - NORTH PLANT	CW	S6	03	0	0	0	0	150	150	74,350	74,500	0	0	11,024	0	63,476	0	0	0	0	0	74,500
0	19	SECONDARY TREATMENT UPGRADES - SOUTH - CONS	CW	S2	03	23,000	24,000	31,000	12,000	17,290	107,290	10,000	117,290	0	0	9,443	0	107,847	0	0	0	0	0	117,290
0	28	SECONDARY TREATMENT UPGRADES - SOU-CHANGE IN SCOPE	CW	S3	03	10	90	225	0	0	325	11	336	0	0	1,413	0	-1,077	0	0	0	0	0	336
0	29	SECONDARY TREATMENT UPGRADES - SOU-CHANGE IN SCOPE	CW	S3	03	0	0	-5,000	0	210	-4,790	-596	-5,386	0	0	7,114	0	-12,500	0	0	0	0	0	-5,386
		Sub-total				26,310	27,390	29,525	15,260	22,896	121,381	84,934	206,315	0	0	30,570	0	175,745	0	0	0	0	0	206,315
WAS907105	HUMBER WWTP - O&M UPGRADES																							
0	1	GAS COMPRESSOR SYSTEM UPGRADES	CW	S2	03	813	0	0	0	0	813	0	813	0	0	0	0	813	0	0	0	0	0	813
0	2	LIQUID STREAM UPGRADES	CW	S2	03	386	0	0	0	0	386	0	386	0	0	31	0	355	0	0	0	0	0	386
0	35	LIQUID STREAM UPGRADES-CHANGE IN SCOPE	CW	S3	03	-386	0	0	0	0	-386	0	-386	0	0	-31	0	-355	0	0	0	0	0	-386
0	36	GAS COMPRESSOR SYSTEM UPGRADES-CHANGE IN SCOPE	CW	S3	03	-418	541	0	0	0	123	0	123	0	0	0	0	123	0	0	0	0	0	123
		Sub-total				395	541	0	0	0	936	0	936	0	0	0	0	936	0	0	0	0	0	936

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS907106	HUMBER WWTP - ODOUR CONTROL																							
0 1	ODOUR CONTROL IMPLEMENTATION - PHASE 1	CW	S2	02	766	0	0	0	0	766	0	766	0	0	69	0	697	0	0	0	0	0	766
0 15	ODOUR CONTROL IMPLEMENTATION - PHA-CHANGE IN SCOPE	CW	S3	02	434	2,401	0	0	550	3,385	550	3,935	0	0	637	0	3,298	0	0	0	0	0	3,935
	Sub-total				1,200	2,401	0	0	550	4,151	550	4,701	0	0	706	0	3,995	0	0	0	0	0	4,701
WAS907224	SEWAGE PUMPING STATION UPGRADES																							
0 1	SPS UPGRADES	CW	S2	02	2,212	750	0	0	0	2,962	0	2,962	0	0	292	0	2,670	0	0	0	0	0	2,962
0 4	SUNNYSIDE AND MARYPORT SPS UPGRADES	CW	S2	05	150	400	3,350	4,265	1,975	10,140	10	10,150	0	0	817	0	9,333	0	0	0	0	0	10,150
0 18	SPS UPGRADES - GROUP 6	CW	S2	02	3,891	5,250	5,356	4,390	3,598	22,485	55	22,540	0	0	1,814	0	20,726	0	0	0	0	0	22,540
0 26	SPS UPGRADES - GROUP 7	CW	S2	03	4	0	0	0	0	4	0	4	0	0	1	0	3	0	0	0	0	0	4
0 34	FACILITY & PROCESS UPGRADES	CW	S2	02	435	3,025	3,125	2,600	2,200	11,385	3,200	14,585	0	0	1,179	0	13,406	0	0	0	0	0	14,585
0 35	SCOTT ST PS & SIMCOE ST PS	CW	S2	03	400	500	500	500	0	1,900	0	1,900	0	0	0	0	1,900	0	0	0	0	0	1,900
0 36	SPS UPGRADES - GRINDERS	CW	S6	03	0	100	250	200	1,700	2,250	1,525	3,775	0	0	0	0	3,775	0	0	0	0	0	3,775
0 37	SPS UPGRADES - GROUP 8	CW	S6	02	0	0	0	100	325	425	22,925	23,350	0	0	3,456	0	19,894	0	0	0	0	0	23,350
0 38	SPS UPGRADES - VFD	CW	S6	03	0	0	0	50	675	725	4,025	4,750	0	0	0	0	4,750	0	0	0	0	0	4,750
0 39	SUNNYSIDE AND MARYPORT SPS UPGRADE-CHANGE IN SCOPE	CW	S3	05	-150	-350	-3,060	-2,020	-925	-6,505	890	-5,615	0	0	1,451	0	-7,066	0	0	0	0	0	-5,615
0 40	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	CW	S3	02	-60	-1,950	438	3,900	6,300	8,628	2,753	11,381	0	0	2,663	0	8,718	0	0	0	0	0	11,381
0 41	SCOTT ST PS & SIMCOE ST PS-CHANGE IN SCOPE	CW	S3	03	51	53	55	56	0	215	0	215	0	0	0	0	215	0	0	0	0	0	215
0 42	SPS UPGRADES - GROUP 7-CHANGE IN SCOPE	CW	S3	03	6	0	0	0	0	6	0	6	0	0	1	0	5	0	0	0	0	0	6
0 43	SPS UPGRADES - GROUP 6-CHANGE IN SCOPE	CW	S3	02	-1,068	215	0	500	501	148	0	148	0	0	1,544	0	-1,396	0	0	0	0	0	148
0 44	SPS UPGRADES-CHANGE IN SCOPE	CW	S3	02	-1,106	-55	0	0	0	-1,161	0	-1,161	0	0	-22	0	-1,139	0	0	0	0	0	-1,161
0 45	SUNNYSIDE SPS - WETWELL	CW	S6	03	0	30	400	1,660	410	2,500	0	2,500	0	0	370	0	2,130	0	0	0	0	0	2,500
	Sub-total				4,765	7,968	10,414	16,201	16,759	56,107	35,383	91,490	0	0	13,566	0	77,924	0	0	0	0	0	91,490
WAS907559	DON & WATERFRONT TRUNK CSO																							
0 1	DON & WATERFRONT TRUNK/CSO PKG 1 - DESIGN	CW	S2	04	10,946	6,475	6,475	6,475	615	30,986	461	31,447	0	0	2,566	0	28,881	0	0	0	0	0	31,447
0 4	Don & Waterfront Trunk/CSO Construction - PHASE 2	CW	S6	04	0	0	0	0	25	25	197,000	197,025	0	0	29,153	0	167,872	0	0	0	0	0	197,025

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 7: 2019 Capital Budget; 2020-2028 Capital Plan Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS907559	DON & WATERFRONT TRUNK CSO																						
0	15	DCW - PHASE 1 - ADDITIONAL SCOPE	CW	S2	04	2,850	0	0	0	0	2,850	0	2,850	0	0	229	0	2,621	0	0	0	0	0	2,850
0	17	DCW - PH1 - OFFLINE STORAGE TANK SHEPPARD/LESLIE	CW	S2	04	1,340	11,175	4,060	51	50	16,676	0	16,676	0	0	1,353	0	15,323	0	0	0	0	0	16,676
0	18	Don & Waterfront Trunk/CSO Construction - PHASE 1	CW	S2	04	80,000	85,000	85,000	85,000	85,000	420,000	62,500	482,500	0	0	33,509	0	448,991	0	0	0	0	0	482,500
0	19	DCW - MTI REGULATION/RTC	CW	S6	04	0	250	750	2,250	2,750	6,000	2,300	8,300	0	0	1,228	0	7,072	0	0	0	0	0	8,300
0	20	DCW - HRT DON & WATERFRONT TRUNK CSO	CW	S6	04	0	0	150	4,000	4,000	8,150	274,600	282,750	0	0	41,837	0	240,913	0	0	0	0	0	282,750
0	21	DCW - COXWELL CONNECTIONS	CW	S6	04	0	0	0	0	3,000	3,000	114,500	117,500	0	0	17,386	0	100,114	0	0	0	0	0	117,500
0	24	DON & WATERFRONT TRUNK/CSO PKG 1 --CHANGE IN SCOPE	CW	S3	04	-6,425	5,196	0	0	2,500	1,271	0	1,271	0	0	2,341	0	-1,070	0	0	0	0	0	1,271
0	25	DCW - PHASE 1 - ADDITIONAL SCOPE-CHANGE IN SCOPE	CW	S3	04	-1,716	1,716	0	0	0	0	0	0	0	0	193	0	-193	0	0	0	0	0	0
0	26	Don & Waterfront Trunk/CSO Constru-CHANGE IN SCOPE	CW	S3	04	3,895	-8,252	-15,000	-5,000	-26,000	-50,357	-37,038	-87,395	0	0	13,114	0	-100,509	0	0	0	0	0	-87,395
0	27	DCW - PH1 - OFFLINE STORAGE TANK S-CHANGE IN SCOPE	CW	S3	04	-715	-10,596	3,940	11,349	7,652	11,630	50	11,680	0	0	2,843	0	8,837	0	0	0	0	0	11,680
		Sub-total				90,175	90,964	85,375	104,125	79,592	450,231	614,373	1,064,604	0	0	145,752	0	918,852	0	0	0	0	0	1,064,604
WAS907700	NORTH TORONTO WTP UPGRADES																						
0	2	NTTP - ELECTRICAL UPGRADES - ECAR	CW	S2	01	3,129	1,991	1,585	31	0	6,736	0	6,736	0	0	0	0	6,736	0	0	0	0	0	6,736
0	10	OPS INTERFACE NTTP	CW	S2	04	200	0	0	0	0	200	0	200	0	0	0	0	200	0	0	0	0	0	200
0	11	NTTP - PROCESS IMPROVEMENTS	CW	S2	04	5,572	5,100	50	50	0	10,772	0	10,772	0	0	0	0	10,772	0	0	0	0	0	10,772
0	15	NTTP - ELECTRICAL UPGRADES - ECAR-CHANGE IN SCOPE	CW	S3	01	-2,430	2,186	774	2,343	1,891	4,764	31	4,795	0	0	0	0	4,795	0	0	0	0	0	4,795
0	16	NTTP - PROCESS IMPROVEMENTS-CHANGE IN SCOPE	CW	S3	04	-4,638	1,162	5,960	5,811	3,770	12,065	12	12,077	0	0	0	0	12,077	0	0	0	0	0	12,077
		Sub-total				1,833	10,439	8,369	8,235	5,661	34,537	43	34,580	0	0	0	0	34,580	0	0	0	0	0	34,580
WAS908143	Georgetown South City Infrastructure Upgrades																						
0	1	GEORGETOWN SOUTH CITY INFRASTRUCTURE UPGRADES	CW	S2	05	5,115	0	0	0	0	5,115	0	5,115	0	0	412	0	4,703	0	0	0	0	0	5,115
0	9	GEORGETOWN SOUTH CITY INFRASTRUCTU-CHANGE IN SCOPE	CW	S3	05	0	0	0	0	0	0	0	0	0	0	4,703	0	-4,703	0	0	0	0	0	0
		Sub-total				5,115	0	0	0	0	5,115	0	5,115	0	0	5,115	0	0	0	0	0	0	0	5,115
WASWP003	EMERY CREEK POND																						
0	1	EMERY CREEK POND	CW	S2	04	1,097	94	0	0	0	1,191	0	1,191	0	0	97	0	1,094	0	0	0	0	0	1,191

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 7: 2019 Capital Budget; 2020-2028 Capital Plan Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WASWP003	EMERY CREEK POND																						
0	17	EMERY CREEK POND-CHANGE IN SCOPE	CW	S3	04	-549	483	0	0	0	-66	0	-66	0	0	72	0	-138	0	0	0	0	0	-66
		Sub-total				548	577	0	0	0	1,125	0	1,125	0	0	169	0	956	0	0	0	0	0	1,125
WASWP050	EQUIPMENT REPLACEMENT & REHABILITATI(																						
0	78	EQUIPMENT REPLACEMENT	CW	S2	03	10,297	6,100	695	40	53	17,185	0	17,185	0	0	0	0	17,185	0	0	0	0	0	17,185
0	137	EQUIPMENT REPLACEMENT-CHANGE IN SCOPE	CW	S3	03	-6,732	-1,459	5,036	-5	-12	-3,172	53	-3,119	0	0	0	0	-3,119	0	0	0	0	0	-3,119
		Sub-total				3,565	4,641	5,731	35	41	14,013	53	14,066	0	0	0	0	14,066	0	0	0	0	0	14,066
Total Program Expenditure						610,113	1,032,188	1,122,420	1,090,317	927,092	4,782,130	4,220,977	9,003,107	25,500	25,500	772,757	0	8,179,350	0	0	0	0	0	9,003,107

Report Phase 2 - Program 11 Wastewater Program Program Phase 2 Sub-Project Category 01,02,03,04,05,06,07 Part B Sub-Project Status S2,S5,S6 Part C Sub-Project Status S2,S3,S4

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 7: 2019 Capital Budget; 2020-2028 Capital Plan Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments and Estimates								Current and Future Year Cash Flow Commitments and Estimates Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
Financed By:																								
		Provincial Grants & Subsidies				0	2,500	2,500	2,500	3,000	10,500	15,000	25,500	25,500	0	0	0	0	0	0	0	0	0	25,500
		Federal Subsidy				0	2,500	2,500	2,500	3,000	10,500	15,000	25,500	0	25,500	0	0	0	0	0	0	0	0	25,500
		Development Charges				62,065	93,364	105,577	72,122	78,081	411,209	361,548	772,757	0	0	772,757	0	0	0	0	0	0	0	772,757
		Reserve Funds (Ind."XR" Ref.)				548,048	933,824	1,011,843	1,013,195	843,011	4,349,921	3,829,429	8,179,350	0	0	0	0	8,179,350	0	0	0	0	0	8,179,350
Total Program Financing						610,113	1,032,188	1,122,420	1,090,317	927,092	4,782,130	4,220,977	9,003,107	25,500	25,500	772,757	0	8,179,350	0	0	0	0	0	9,003,107

Status Code	Description
S2	S2 Prior Year (With 2019 and\or Future Year Cashflow)
S3	S3 Prior Year - Change of Scope 2019 and\or Future Year Cost\Cashflow)
S4	S4 New - Stand-Alone Project (Current Year Only)
S5	S5 New (On-going or Phased Projects)
S6	S6 New - Future Year (Commencing in 2020 & Beyond)

Category Code	Description
01	Health and Safety C01
02	Legislated C02
03	State of Good Repair C03
04	Service Improvement and Enhancement C04
05	Growth Related C05
06	Reserved Category 1 C06
07	Reserved Category 2 C07

Appendix 8

2019 Cash Flow and Future Year Commitments Including Carry Forward Funding

(In $000s)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019 Cash Flow & FY Commits
Expenditures:											
Previously Approved											
Water Meter Program (AMR)	578										578
Basement Flooding	130,866	138,430	141,337	138,902	156,388	147,270	148,000	92,065	15,300		1,108,558
Business & Technology	14,289	11,663	9,343	3,730	3,175	1,800					44,000
Linear Eng	68,383	37,607	17,734	14,745	7,000	2,429	705	2,139			150,742
New Connections	12,323										12,323
New Sewers	13,703	9,450	6,500	2,300							31,953
Sewer Rehabilitation	80,225	36,516	8,243	7,443							132,427
Sewer Replacement	37,934	11,792	4,536	830							55,092
WM Rehabilitation	82,578	19,734	314	175							102,801
WM Replacement	187,116	56,840	20,683	586	71	40					265,336
Water Service Replacement	66,698	18,901	5,001								90,600
Pumping Stations	26,800	24,966	12,458	11,755	7,773	3,165	100				87,017
Trunk Water Mains	36,977	27,575	4,477	1,042	700	700	245	35			71,751
WT - Storage & Treatment	49,277	41,229	22,463	6,065	5,298	2,650	25				127,007
Trunk Sewers & Pumping Stations	62,247	57,488	71,146	39,776	9,357	142					240,156
Ashbridges Bay TP	308,384	283,867	239,572	199,814	155,651	107,726	106,250	73,527	10,384		1,485,175
Highland Creek TP	66,106	70,878	64,273	41,374	29,755	21,340	19,155	18,460	1,362		332,703
Humber TP	66,039	51,735	51,279	31,417	34,789	10,900	4,900	4,910	3,009		258,978
RL Clark TP	11,204	4,480	260	235							16,179
RC Harris TP	21,224	7,927	2,247	1,250							32,648
FJ Horgan TP	4,365	3,172	1,260	244							9,041
Island TP	18,310	24,305	20,057	9,275	200	200					72,347
WTP-Plantwide	6,336	5,173	5,120	2,881	947	732	50				21,239
Water Effeciency Plan	445	445	445	445							1,780
WWF-Implementation Projects	122,228	131,446	115,361	100,357	91,065	69,511	5,340	9,600	33,200		678,108
WWF-TRCA	800										800
WWF - Stream Restoration	8,121	5,720	4,216	1,938	1,213	470	180	105	70		22,033
Yards & Facility	12,807	9,217	2,958	502	210	210	210	210	8,660		34,984
Subtotal	**1,516,363**	**1,090,556**	**831,283**	**617,081**	**503,592**	**369,285**	**285,160**	**201,051**	**71,985**	**-**	**5,486,356**
Change in Scope											
Water Meter Program (AMR)	4,605	1,680	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	18,285
Basement Flooding	(54,861)	4,435	8,864	36,155	(4,578)	(19,627)	(30,665)	18,615	20,000	20,000	(1,662)
Business & Technology	(3,008)	(300)	2,161	1,682	1,500						2,035
Linear Eng	9,739	41,646	69,139	51,785	33,692	12,315	2,395	(1,269)			219,442
New Connections	29,513	50,881	52,758	4,634							137,786
New Sewers	(7,188)	116	12,959	24,237	11,651	2,930	1,048	698			46,451
Sewer Rehabilitation	(27,342)	33,869	56,312	19,300	4,000	200					86,339
Sewer Replacement	(21,226)	9,491	16,550	4,682	2,469	100					12,066
WM Rehabilitation	(26,559)	46,795	28,444	745							49,425
WM Replacement	(90,498)	108,408	128,313	35,530	8,564						190,317
Water Service Replacement	(35,577)	45,199	42,030	19,400	3,000						74,052
Pumping Stations	(11,686)	(4,144)	4,766	7,436	5,876	3,643					5,891
Trunk Water Mains	(21,432)	(3,691)	15,575	3,400	441	492	500	400	400	400	(3,515)
WT - Storage & Treatment	(21,896)	(2,383)	10,959	12,163	1,014	1,192					1,049
Trunk Sewers & Pumping Stations	(35,290)	17,754	(7,913)	(3,330)	8,600	8,002					(12,177)
Ashbridges Bay TP	(154,018)	28,515	111,426	98,039	53,110	4,624	(14,227)	(16,815)	40,165	31,525	182,344
Highland Creek TP	(38,833)	(11,408)	(5,471)	28,891	33,222	20,727	15,725	(6,240)	5,215	8,004	49,832
Humber TP	(19,161)	4,877	9,184	4,389	4,348	8,357	35	25	551		12,605
RL Clark TP	(815)	1,161	58	56							460
RC Harris TP	(16,587)	8,784	9,265	1,587	1,024	550					4,623
FJ Horgan TP	(3,339)	(821)	1,706	1,083	910	1,011					550
Island TP	(12,425)	(9,831)	6,634	16,960	10,124	817					12,279
WTP-Plantwide	(3,640)	1,205	908	2,976	2,257	187	5				3,898
Water Effeciency Plan	50	261	158	162	167						798
WWF-Implementation Projects	(13,129)	4,535	33,911	43,808	667	(42,757)	(3,428)	(6,500)	(23,900)	28,000	21,207
WWF-TRCA	13,991										13,991
WWF - Stream Restoration	(610)	4,814	4,588	4,459	3,352	1,560	380	90	50	20	18,703
Yards & Facility	(6,725)	310	8,617	570	120					210	3,102
Subtotal	**(567,947)**	**382,158**	**623,401**	**422,299**	**187,030**	**5,823**	**(26,732)**	**(9,496)**	**43,981**	**89,659**	**1,150,176**
New w/Future Year											
Business & Technology	1,865	970	75	50	200						3,160
Sewer Rehabilitation	2,995	4,001	4,001	641							11,638
WT - Storage & Treatment	225	900	5,500	5,060	1,610	1,920	2,430	1,575	950	450	20,620
Trunk Sewers & Pumping Stations	1,475	3,735	6,170	33,677	17,213	18,218	3,860	80			84,428
Ashbridges Bay TP	2,380	15,345	17,045	21,295	53,815	105,215	101,530	55,150	24,735	8,375	404,885
Humber TP	250	2,950	400								3,600
RC Harris TP	900	1,800									2,700
Island TP	900	8,700	2,300	3,300		150		150		150	15,650
WTP-Plantwide	250	4,250	4,500	10,000	1,000						20,000
WWF - Stream Restoration	850	5,470	2,045	1,500	1,450	1,000	700				13,015
Subtotal	**12,090**	**48,121**	**42,036**	**75,523**	**75,288**	**126,503**	**108,520**	**56,955**	**25,685**	**8,975**	**579,696**
Total Expenditure	**960,506**	**1,520,835**	**1,496,720**	**1,114,903**	**765,910**	**501,611**	**366,948**	**248,510**	**141,651**	**98,634**	**7,216,228**
Financing:											
Other (Region of York)	6,117	9,319	6,969	2,913	1,223	585	373	265			27,764
Reserves/Res Funds	863,614	1,385,972	1,358,666	1,036,318	688,236	438,718	309,702	220,930	127,080	86,783	6,516,019
Development Charges	90,775	125,544	131,085	75,672	76,451	62,308	56,873	27,315	14,571	11,851	672,445
Total Financing	**960,506**	**1,520,835**	**1,496,720**	**1,114,903**	**765,910**	**501,611**	**366,948**	**248,510**	**141,651**	**98,634**	**7,216,228**

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 8: 2019 Cash Flow and Future Year Commitments Including Carry Forward Funding

Water Program

Sub-Priority	Project No. Sub-Proj No.	Project Name / Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing
WAT000004	HORGAN W.T.P. EXPANSION																						
0	39	PLANT EXPANSION - CONSTRUCTION	CW	S2	05	0	0	0	41	0	41	0	41	0	0	13	0	15	0	0	13	0	41
0	42	PLANT EXPANSION - CONSTRUCTION-CHANGE IN SCOPE	CW	S3	05	0	0	0	0	0	0	0	0	0	0	15	0	-15	0	0	0	0	0
		Sub-total				0	0	0	41	0	41	0	41	0	0	28	0	0	0	0	13	0	41
WAT000018	CLARK RESIDUE MGMT. FACILITIES																						
0	24	RESIDUALS RETROFITS AND UPGRADES	CW	S2	02	3,102	0	0	0	0	3,102	0	3,102	0	0	0	0	3,102	0	0	0	0	3,102
0	31	RESIDUALS RETROFITS AND UPGRADES-CHANGE IN SCOPE	CW	S3	02	-663	700	3	0	0	40	0	40	0	0	0	0	40	0	0	0	0	40
		Sub-total				2,439	700	3	0	0	3,142	0	3,142	0	0	0	0	3,142	0	0	0	0	3,142
WAT000021	WATER EFFICIENCY PROGRAM																						
0	10	ICI INDOOR WATER AUDIT	CW	S2	05	300	300	300	300	0	1,200	0	1,200	0	0	1,200	0	0	0	0	0	0	1,200
0	11	PUBLIC EDUCATION & PROMOTIONS	CW	S2	05	75	75	75	75	0	300	0	300	0	0	300	0	0	0	0	0	0	300
0	12	ANCILLARY COSTS	CW	S2	05	70	70	70	70	0	280	0	280	0	0	280	0	0	0	0	0	0	280
0	97	ICI INDOOR WATER AUDIT-CHANGE IN SCOPE	CW	S3	05	50	261	158	162	167	798	0	798	0	0	798	0	0	0	0	0	0	798
		Sub-total				495	706	603	607	167	2,578	0	2,578	0	0	2,578	0	0	0	0	0	0	2,578
WAT000363	ENGINEERING STUDIES																						
0	2	IMPROVED TREATMENT STUDIES	CW	S2	04	66	0	0	0	0	66	0	66	0	0	0	0	46	0	0	20	0	66
0	18	CONTROLLED SUBSTANCES ID AND ABATEMENT	CW	S2	02	100	0	0	0	0	100	0	100	0	0	0	0	100	0	0	0	0	100
0	31	ENERGY EFFICIENCY IMPLEMENTATION	CW	S2	04	38	0	0	0	0	38	0	38	0	0	0	0	38	0	0	0	0	38
0	79	ENERGY EFFICIENCY IMPLEMENTATION-CHANGE IN SCOPE	CW	S3	04	127	100	0	0	0	227	0	227	0	0	0	0	227	0	0	0	0	227
0	80	IMPROVED TREATMENT STUDIES-CHANGE IN SCOPE	CW	S3	04	4	50	50	50	50	204	0	204	0	0	0	0	143	0	0	61	0	204
0	81	CONTROLLED SUBSTANCES ID AND ABATE-CHANGE IN SCOPE	CW	S3	02	25	125	125	0	0	275	0	275	0	0	0	0	275	0	0	0	0	275
		Sub-total				360	275	175	50	50	910	0	910	0	0	0	0	829	0	0	81	0	910
WAT906334	BUSINESS SYSTEM INFRASTRUCTURE - PW																						
0	12	PCS LEGACY ALARM IMPROVEMENT	CW	S2	04	20	0	0	0	0	20	0	20	0	0	0	0	20	0	0	0	0	20
0	23	RELIABILITY IMPROVEMENT PROGRAM	CW	S2	04	355	240	140	40	0	775	0	775	0	0	0	0	775	0	0	0	0	775
0	41	SCADA UPGRADES FOR WWT	CW	S2	04	3,326	3,052	3,880	3,185	2,825	16,268	1,800	18,068	0	0	0	0	18,068	0	0	0	0	18,068

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Water Program

Sub-Priority	Project No. Sub-Proj No.	Project Name / Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By										
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906334		BUSINESS SYSTEM INFRASTRUCTURE - PW																						
0	67	SCADA UPGRADES FOR WWT - II	CW	S2	04	972	661	0	0	0	1,633	0	1,633	0	0	0	0	1,633	0	0	0	0	0	1,633
0	85	NETWORK IMPROVEMENTS	CW	S2	04	585	0	0	0	0	585	0	585	0	0	0	0	585	0	0	0	0	0	585
0	87	PCS UPGRADES 2017	CW	S2	04	210	105	0	0	0	315	0	315	0	0	0	0	315	0	0	0	0	0	315
0	88	TRUNK RADIO - EQUIPMENT	CW	S2	03	160	0	78	80	0	318	0	318	0	0	0	0	318	0	0	0	0	0	318
0	97	SCADA SOFTWARE	CW	S2	04	260	180	180	0	0	620	0	620	0	0	0	0	620	0	0	0	0	0	620
0	101	NETWORK EQUIPMENT LIFE CYCLE REPLACEMENT - 2018 SC	CW	S2	03	5	0	0	0	0	5	0	5	0	0	0	0	5	0	0	0	0	0	5
0	109	SCADA UPGRADES FOR WWT - II -CHANGE IN SCOPE	CW	S3	04	-123	1,218	1,060	1,000	1,000	4,155	0	4,155	0	0	0	0	4,155	0	0	0	0	0	4,155
0	110	RELIABILITY IMPROVEMENT PROGRAM-CHANGE IN SCOPE	CW	S3	04	-80	265	275	130	0	590	0	590	0	0	0	0	590	0	0	0	0	0	590
0	111	NETWORK IMPROVEMENTS-CHANGE IN SCOPE	CW	S3	04	127	209	0	0	0	336	0	336	0	0	0	0	336	0	0	0	0	0	336
0	112	SCADA UPGRADES FOR WWT-CHANGE IN SCOPE	CW	S3	04	2,677	1,315	766	102	0	4,860	0	4,860	0	0	0	0	4,860	0	0	0	0	0	4,860
0	113	TECHNOLOGY IMPROVEMENTS	CW	S4	04	1,865	970	75	50	200	3,160	0	3,160	0	0	0	0	3,160	0	0	0	0	0	3,160
0	114	SCADA SOFTWARE-CHANGE IN SCOPE	CW	S3	04	-80	100	100	50	0	170	0	170	0	0	0	0	170	0	0	0	0	0	170
0	115	NETWORK EQUIPMENT LIFE CYCLE REPLA-CHANGE IN SCOPE	CW	S3	03	0	79	0	0	0	79	0	79	0	0	0	0	79	0	0	0	0	0	79
0	116	TRUNK RADIO - EQUIPMENT-CHANGE IN SCOPE	CW	S3	03	-160	0	0	0	0	-160	0	-160	0	0	0	0	-160	0	0	0	0	0	-160
0	117	PCS UPGRADES FOR WATER SUPPLY-CHANGE IN SCOPE	CW	S3	04	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1
0	118	PCS LEGACY ALARM IMPROVEMENT -CHANGE IN SCOPE	CW	S3	04	30	0	0	0	0	30	0	30	0	0	0	0	30	0	0	0	0	0	30
		Sub-total				10,150	8,394	6,554	4,637	4,025	33,760	1,800	35,560	0	0	0	0	35,560	0	0	0	0	0	35,560
WAT906340		METERING & METER READING SYS																						
0	2	AUTOMATED METER READING SYSTEM	CW	S2	04	578	0	0	0	0	578	0	578	0	0	0	0	578	0	0	0	0	0	578
0	20	AUTOMATED METER READING SYSTEM-CHANGE IN SCOPE	CW	S3	04	4,605	1,680	1,500	1,500	1,500	10,785	7,500	18,285	0	0	0	0	18,285	0	0	0	0	0	18,285
		Sub-total				5,183	1,680	1,500	1,500	1,500	11,363	7,500	18,863	0	0	0	0	18,863	0	0	0	0	0	18,863
WAT906468		HORGAN TRUNK MAIN EXPANSION																						
0	52	DOWNSVIEW MAIN (KEELE PS TO DOWNSVIEW) Engineering	CW	S2	05	1,240	1,100	1,700	700	700	5,440	980	6,420	0	0	2,586	0	3,834	0	0	0	0	0	6,420

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Water Program

Sub-Priority	Project No. / Sub-Proj No.	Project Name / Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906468		HORGAN TRUNK MAIN EXPANSION																					
0	53	DOWNSVIEW MAIN (KEELE PS TO DOWNSV-CHANGE IN SCOPE	CW	S3	05	-240	0	200	0	0	-40	100	60	0	0	3,894	0	-3,834	0	0	0	0	0	60
		Sub-total				1,000	1,100	1,900	700	700	5,400	1,080	6,480	0	0	6,480	0	0	0	0	0	0	0	6,480
WAT906470		ISLAND W.T.P. R&R																					
0	8	CHEMICAL & RESIDUALS MANAGMENT ENGINEERING	CW	S2	02	2,407	900	980	850	200	5,337	200	5,537	0	0	0	0	5,537	0	0	0	0	0	5,537
0	11	CHEMICAL & RESIDUALS MANAGEMENT CONST	CW	S2	02	1,530	15,000	18,000	7,400	0	41,930	0	41,930	0	0	2,551	0	39,379	0	0	0	0	0	41,930
0	34	CHEMICAL & RESIDUALS MANAGMENT ENG-CHANGE IN SCOPE	CW	S3	02	-1,517	659	183	430	929	684	167	851	0	0	0	0	851	0	0	0	0	0	851
0	35	CHEMICAL & RESIDUALS MANAGEMENT CO-CHANGE IN SCOPE	CW	S3	02	-1,500	-14,097	-3,000	10,600	7,400	-597	0	-597	0	0	3,564	0	-4,161	0	0	0	0	0	-597
		Sub-total				920	2,462	16,163	19,280	8,529	47,354	367	47,721	0	0	6,115	0	41,606	0	0	0	0	0	47,721
WAT906481		DISTRICT WATERMAINS - NEW																					
0	1	NEW WATERMAIN	CW	S2	05	58	500	0	0	0	558	0	558	0	0	558	0	0	0	0	0	0	0	558
0	17	NEW WM -CHANGE IN SCOPE	CW	S3	05	-48	0	500	0	0	452	0	452	0	0	452	0	0	0	0	0	0	0	452
		Sub-total				10	500	500	0	0	1,010	0	1,010	0	0	1,010	0	0	0	0	0	0	0	1,010
WAT906483		PW ENGINEERING																					
0	2	CAPITAL PROGRAMMING & FACILITY ASSET PLANNING	CW	S2	03	3,903	2,300	0	0	0	6,203	0	6,203	0	0	0	0	6,203	0	0	0	0	0	6,203
0	5	WATERMAIN ASSET PLANNING	CW	S2	03	2,839	2,050	1,055	1,100	1,120	8,164	675	8,839	0	0	2,195	0	3,145	0	0	3,499	0	0	8,839
0	7	EASEMENT ACQUISITION	CW	S2	04	690	0	0	0	0	690	0	690	0	0	0	0	690	0	0	0	0	0	690
0	22	WATER LOSS REDUCTION STRATEGY	CW	S2	03	889	429	1,000	1,000	1,000	4,318	0	4,318	0	0	0	0	4,318	0	0	0	0	0	4,318
0	37	ASSET MGMT SYSTEM IMPLEMENTATION	CW	S2	04	1,550	1,000	1,000	1,000	1,000	5,550	1,500	7,050	0	0	1,763	0	5,287	0	0	0	0	0	7,050
0	52	JOS UPDATE PHASE II	CW	S2	05	657	0	0	0	0	657	0	657	0	0	329	0	-1	0	0	329	0	0	657
0	76	WATERMAIN ASSET PLANNING-CHANGE IN SCOPE	CW	S3	03	-1,831	-45	365	265	50	-1,196	1,795	599	0	0	-770	0	1,133	0	0	236	0	0	599
0	77	CAPITAL PROGRAMMING & FACILITY ASS-CHANGE IN SCOPE	CW	S3	03	-2,585	33	4,140	2,000	1,000	4,588	0	4,588	0	0	0	0	4,588	0	0	0	0	0	4,588
0	78	JOS UPDATE PHASE II-CHANGE IN SCOPE	CW	S3	05	-301	100	0	0	0	-201	0	-201	0	0	-101	0	1	0	0	-101	0	0	-201
0	79	ASSET MGMT SYSTEM IMPLEMENTATION-CHANGE IN SCOPE	CW	S3	04	-1,300	0	0	0	0	-1,300	0	-1,300	0	0	-325	0	-975	0	0	0	0	0	-1,300
0	80	WATER LOSS REDUCTION STRATEGY-CHANGE IN SCOPE	CW	S3	03	-338	551	38	0	0	251	0	251	0	0	0	0	251	0	0	0	0	0	251

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906483	PW ENGINEERING																						
0	81	EASEMENT ACQUISITION-CHANGE IN SCOPE	CW	S3	04	114	500	500	0	0	1,114	0	1,114	0	0	0	0	1,114	0	0	0	0	0	1,114
		Sub-total				4,287	6,918	8,098	5,365	4,170	28,838	3,970	32,808	0	0	3,091	0	25,754	0	0	3,963	0	0	32,808
WAT906752	TRANSMISSION R&R																						
0	49	TRUNK WATERMAIN REHAB	CW	S2	03	260	320	250	250	0	1,080	0	1,080	0	0	0	0	1,080	0	0	0	0	0	1,080
0	51	CAST IRON TRUNK REPLC - PHASE 2	CW	S2	03	512	213	0	0	0	725	0	725	0	0	0	0	725	0	0	0	0	0	725
0	52	CAST IRON TRUNK REPLC - PHASE 3 - ENGINEERING	CW	S2	03	1,051	707	0	0	0	1,758	0	1,758	0	0	0	0	1,758	0	0	0	0	0	1,758
0	58	CAST IRON TRUNK REPLC - PHASE 3 - CONSTRUCTION	CW	S2	03	1,500	0	0	0	0	1,500	0	1,500	0	0	0	0	1,500	0	0	0	0	0	1,500
0	82	CAST IRON TRUNK REPLC - PHASE 3 - -CHANGE IN SCOPE	CW	S3	03	-325	119	0	0	0	-206	0	-206	0	0	0	0	-206	0	0	0	0	0	-206
0	83	TRUNK WATERMAIN REHAB-CHANGE IN SCOPE	CW	S3	03	150	100	150	150	400	950	2,000	2,950	0	0	0	0	2,950	0	0	0	0	0	2,950
0	84	CAST IRON TRUNK REPLC - PHASE 2-CHANGE IN SCOPE	CW	S3	03	-48	57	110	0	0	119	0	119	0	0	0	0	119	0	0	0	0	0	119
0	85	CAST IRON TRUNK REPLC - PHASE 3 - -CHANGE IN SCOPE	CW	S3	03	-990	1,000	0	0	0	10	0	10	0	0	0	0	10	0	0	0	0	0	10
		Sub-total				2,110	2,516	510	400	400	5,936	2,000	7,936	0	0	0	0	7,936	0	0	0	0	0	7,936
WAT906900	TRANSMISSION R&R																						
0	1	TRANS FACILITIES REHAB	CW	S2	03	750	750	750	750	0	3,000	0	3,000	0	0	0	0	3,000	0	0	0	0	0	3,000
0	36	ST CLAIR RESERVOIR REHAB/WATER QUALITY PROTECTION	CW	S2	03	6,949	980	17	0	0	7,946	0	7,946	0	0	0	0	7,946	0	0	0	0	0	7,946
0	44	PUMPING STATION REHAB - Engineering	CW	S4	03	100	500	900	860	1,060	3,420	7,200	10,620	0	0	0	0	10,620	0	0	0	0	0	10,620
0	48	ROSEHILL RESERVOIR	CW	S2	03	12,525	16,725	8,325	17	17	37,609	0	37,609	0	0	0	0	37,609	0	0	0	0	0	37,609
0	49	DOWNSVIEW PS & CONNECTOR EA	CW	S2	05	142	0	0	0	0	142	0	142	0	0	55	0	87	0	0	0	0	0	142
0	50	PARKDALE PS REHABILITATION	CW	S2	03	2,722	197	8	0	0	2,927	0	2,927	0	0	0	0	2,927	0	0	0	0	0	2,927
0	51	ROSEHILL PS REHAB	CW	S2	03	2,722	48	50	0	0	2,820	0	2,820	0	0	0	0	2,820	0	0	0	0	0	2,820
0	67	PUMP REPLACEMENTS	CW	S2	03	1,050	0	0	0	0	1,050	0	1,050	0	0	0	0	1,050	0	0	0	0	0	1,050
0	72	RESERVOIR REHAB - PHASE 2 - ENG	CW	S2	03	500	688	580	10	7	1,785	0	1,785	0	0	0	0	1,785	0	0	0	0	0	1,785
0	74	PS REHAB - PHASE 2 - ENG	CW	S2	03	1,528	1,216	950	24	24	3,742	0	3,742	0	0	0	0	3,742	0	0	0	0	0	3,742
0	91	SCARBOROUGH RESERVOIR SURGE TANK	CW	S4	03	125	400	4,600	4,200	550	9,875	125	10,000	0	0	0	0	10,000	0	0	0	0	0	10,000

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906900		TRANSMISSION R&R																					
0	94	PS REHAB - PHASE 2 - CONSTRUCTION	CW	S2	03	4,040	10,950	6,500	0	0	21,490	0	21,490	0	0	0	0	21,490	0	0	0	0	0	21,490
0	96	DOWNSVIEW PS & CONNECTOR EA-CHANGE IN SCOPE	CW	S3	05	-140	165	0	0	0	25	0	25	0	0	112	0	-87	0	0	0	0	0	25
0	97	TRANS FACILITIES REHAB-CHANGE IN SCOPE	CW	S3	03	450	100	100	100	850	1,600	1,200	2,800	0	0	0	0	2,800	0	0	0	0	0	2,800
0	98	ST CLAIR RESERVOIR REHAB/WATER QUA-CHANGE IN SCOPE	CW	S3	03	-1,649	2,049	0	7	0	407	0	407	0	0	0	0	407	0	0	0	0	0	407
0	99	PARKDALE PS REHABILITATION-CHANGE IN SCOPE	CW	S3	03	-277	443	0	0	0	166	0	166	0	0	0	0	166	0	0	0	0	0	166
0	100	ROSEHILL RESERVOIR-CHANGE IN SCOPE	CW	S3	03	-3,728	-6,210	1,210	20	0	-8,708	0	-8,708	0	0	0	0	-8,708	0	0	0	0	0	-8,708
0	103	ROSEHILL PS REHAB-CHANGE IN SCOPE	CW	S3	03	-1,258	1,149	240	0	0	131	0	131	0	0	0	0	131	0	0	0	0	0	131
0	104	RESERVOIR REHAB - PHASE 2 - ENG-CHANGE IN SCOPE	CW	S3	03	-150	-347	-180	460	3	-214	7	-207	0	0	0	0	-207	0	0	0	0	0	-207
0	105	PS REHAB - PHASE 2 - ENG-CHANGE IN SCOPE	CW	S3	03	-728	-180	-124	929	1	-102	0	-102	0	0	0	0	-102	0	0	0	0	0	-102
0	106	PS REHAB - PHASE 2 - CONSTRUCTION-CHANGE IN SCOPE	CW	S3	03	-3,240	-7,250	4,000	6,500	0	10	0	10	0	0	0	0	10	0	0	0	0	0	10
0	107	PUMP REPLACEMENTS-CHANGE IN SCOPE	CW	S3	03	-150	1,300	0	0	0	1,150	0	1,150	0	0	0	0	1,150	0	0	0	0	0	1,150
		Sub-total				22,283	23,673	27,926	13,877	2,512	90,271	8,532	98,803	0	0	167	0	98,636	0	0	0	0	0	98,803
WAT906902		HARRIS W.T.P. R&R																					
0	3	FACILITY & PROCESS UPGRADES	CW	S2	03	500	500	500	500	0	2,000	0	2,000	0	0	0	0	2,000	0	0	0	0	0	2,000
0	21	HVAC REHAB CONSTRUCTION	CW	S2	03	5,492	4,241	0	0	0	9,733	0	9,733	0	0	0	0	9,733	0	0	0	0	0	9,733
0	29	HARRIS FILTERS REHABILITATION - PILOT	CW	S2	03	6,250	948	24	0	0	7,222	0	7,222	0	0	0	0	7,222	0	0	0	0	0	7,222
0	56	REHAB OF SETTLING BASIN ROOF & SLUICE GATES	CW	S2	03	510	10	13	0	0	533	0	533	0	0	0	0	533	0	0	0	0	0	533
0	79	EXTERIOR SECURITY LIGHTING UPGRADES	CW	S2	03	0	100	550	550	0	1,200	0	1,200	0	0	0	0	1,200	0	0	0	0	0	1,200
0	80	FACILITY INFRASTRUCTURE REHAB	CW	S4	03	900	1,800	0	0	0	2,700	0	2,700	0	0	0	0	2,700	0	0	0	0	0	2,700
0	81	LIQUID CHEMICAL SYSTEM IMPROVEMENTS	CW	S2	04	3,282	7	0	0	0	3,289	0	3,289	0	0	0	0	3,289	0	0	0	0	0	3,289
0	98	HERITAGE MASONRY AND ARCHITECTURAL RESTORATION	CW	S2	03	200	200	200	200	0	800	0	800	0	0	0	0	800	0	0	0	0	0	800
0	99	CONTROL ROOM RELOCATION	CW	S2	04	1,345	204	0	0	0	1,549	0	1,549	0	0	0	0	1,549	0	0	0	0	0	1,549
0	100	EMERGENCY STANDBY POWER	CW	S2	04	2,339	347	0	0	0	2,686	0	2,686	0	0	0	0	2,686	0	0	0	0	0	2,686
0	102	PHONE SYSTEM UPGRADE	CW	S2	03	0	70	510	0	0	580	0	580	0	0	0	0	580	0	0	0	0	0	580

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Appendix 8: 2019 Cash Flow and Future Year Commitments Including Carry Forward Funding

Water Program

Sub-Priority	Project No. Sub-Proj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906902	HARRIS W.T.P. R&R																						
0	106	BUILDING ENVELOPE REHAB	CW	S2	03	136	0	0	0	0	136	0	136	0	0	0	0	136	0	0	0	0	0	136
0	112	TRAVELLING SCREENS 3 & 5 UPGRADE	CW	S2	03	0	300	450	0	0	750	0	750	0	0	0	0	750	0	0	0	0	0	750
0	119	ENERGY OPTIMIZATION	CW	S2	04	1,170	1,000	0	0	0	2,170	0	2,170	0	0	0	0	2,170	0	0	0	0	0	2,170
0	132	EMERGENCY STANDBY POWER-CHANGE IN SCOPE	CW	S3	04	-1,725	2,732	134	0	0	1,141	0	1,141	0	0	0	0	1,141	0	0	0	0	0	1,141
0	133	CONTROL ROOM RELOCATION-CHANGE IN SCOPE	CW	S3	04	-726	108	725	0	0	107	0	107	0	0	0	0	107	0	0	0	0	0	107
0	134	BUILDING ENVELOPE REHAB-CHANGE IN SCOPE	CW	S3	03	-136	0	0	0	0	-136	0	-136	0	0	0	0	-136	0	0	0	0	0	-136
0	135	HARRIS FILTERS REHABILITATION - PI-CHANGE IN SCOPE	CW	S3	03	-5,200	4,822	5,751	1,050	24	6,447	0	6,447	0	0	0	0	6,447	0	0	0	0	0	6,447
0	136	LIQUID CHEMICAL SYSTEM IMPROVEMENT-CHANGE IN SCOPE	CW	S3	04	-2,856	565	0	0	0	-2,291	0	-2,291	0	0	0	0	-2,291	0	0	0	0	0	-2,291
0	137	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	CW	S3	03	139	103	55	56	0	353	0	353	0	0	0	0	353	0	0	0	0	0	353
0	138	HVAC REHAB CONSTRUCTION-CHANGE IN SCOPE	CW	S3	03	-4,854	-116	4,035	121	0	-814	0	-814	0	0	0	0	-814	0	0	0	0	0	-814
0	139	REHAB OF SETTLING BASIN ROOF & SLU-CHANGE IN SCOPE	CW	S3	03	-339	150	0	0	0	-189	0	-189	0	0	0	0	-189	0	0	0	0	0	-189
0	140	EXTERIOR SECURITY LIGHTING UPGRADE-CHANGE IN SCOPE	CW	S3	03	0	-100	-550	-450	550	-550	550	0	0	0	0	0	0	0	0	0	0	0	0
0	141	TRAVELLING SCREENS 3 & 5 UPGRADE-CHANGE IN SCOPE	CW	S3	03	0	-300	-450	300	450	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	142	PHONE SYSTEM UPGRADE-CHANGE IN SCOPE	CW	S3	03	0	-70	-440	510	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	143	ENERGY OPTIMIZATION-CHANGE IN SCOPE	CW	S3	04	-890	890	5	0	0	5	0	5	0	0	0	0	5	0	0	0	0	0	5
		Sub-total				5,537	18,511	11,512	2,837	1,024	39,421	550	39,971	0	0	0	0	39,971	0	0	0	0	0	39,971
WAT906903	FJ HORGAN W.T.P. R&R																						
0	5	FACILITY & PROCESS UPGRADES	CW	S2	03	1,174	550	200	200	0	2,124	0	2,124	0	0	0	0	2,124	0	0	0	0	0	2,124
0	8	RAW WATER PUMP UGRADES	CW	S2	03	321	0	0	0	0	321	0	321	0	0	0	0	321	0	0	0	0	0	321
0	15	REPLACEMENT OF MCCS	CW	S2	03	533	297	50	3	0	883	0	883	0	0	0	0	883	0	0	0	0	0	883
0	31	BUILDING FIRE, HVAC, LIGHTING UPGRADES	CW	S2	04	1,455	1,635	1,010	0	0	4,100	0	4,100	0	0	0	0	4,100	0	0	0	0	0	4,100
0	32	ELEC GROUNDING SYSTEM & BULK CHEM UNLOADING IMPRO	CW	S2	04	679	690	0	0	0	1,369	0	1,369	0	0	0	0	1,369	0	0	0	0	0	1,369
0	34	TREATED WATER PUMP UPGRADES	CW	S2	04	203	0	0	0	0	203	0	203	0	0	0	0	203	0	0	0	0	0	203
0	65	TREATED WATER PUMP UPGRADES-CHANGE IN SCOPE	CW	S3	04	-86	0	0	0	0	-86	0	-86	0	0	0	0	-86	0	0	0	0	0	-86

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Water Program

Sub-Priority	Project No. Sub-Proj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing
WAT906903		FJ HORGAN W.T.P. R&R																					
0	66	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	CW	S3	03	-1,011	-207	230	531	150	-307	0	-307	0	0	0	0	-307	0	0	0	0	-307
0	67	ELEC GROUNDING SYSTEM & BULK CHEM-CHANGE IN SCOPE	CW	S3	04	-504	-290	1,910	540	10	1,666	11	1,677	0	0	0	0	1,677	0	0	0	0	1,677
0	68	BUILDING FIRE, HVAC, LIGHTING UPGR-CHANGE IN SCOPE	CW	S3	04	-1,305	-1,285	-560	0	750	-2,400	1,000	-1,400	0	0	0	0	-1,400	0	0	0	0	-1,400
0	69	REPLACEMENT OF MCCS-CHANGE IN SCOPE	CW	S3	03	-233	321	-19	-3	0	66	0	66	0	0	0	0	66	0	0	0	0	66
0	70	RAW WATER PUMP UGRADES-CHANGE IN SCOPE	CW	S3	03	-200	640	145	15	0	600	0	600	0	0	0	0	600	0	0	0	0	600
		Sub-total				1,026	2,351	2,966	1,286	910	8,539	1,011	9,550	0	0	0	0	9,550	0	0	0	0	9,550
WAT906906		TRUNK WATERMAIN EXPANSION																					
0	25	JOS WM SCAR PS TO ST CLAIR AND MIDLAND - ENG	CW	S2	05	801	610	436	0	0	1,847	0	1,847	0	0	877	0	550	0	0	420	0	1,847
0	66	JOS - WM Scar PS to St. Clair&Midland (CONST)	CW	S2	05	21,393	19,000	2,000	0	0	42,393	0	42,393	0	0	20,124	0	12,637	0	0	9,632	0	42,393
0	72	JOS WM SCAR PS TO ST CLAIR AND MID-CHANGE IN SCOPE	CW	S3	05	-276	-85	-103	9	0	-455	0	-455	0	0	-317	0	-34	0	0	-104	0	-455
0	73	JOS - WM Scar PS to St. Clair&Midl-CHANGE IN SCOPE	CW	S3	05	-13,393	-5,000	11,982	0	0	-6,411	0	-6,411	0	0	-5,664	0	709	0	0	-1,456	0	-6,411
		Sub-total				8,525	14,525	14,315	9	0	37,374	0	37,374	0	0	15,020	0	13,862	0	0	8,492	0	37,374
WAT906914		SWITCH GEAR TRANSFORMER																					
0	13	INDOOR/OUTDOOR SWITCHGEAR (PHASE 3)	CW	S2	03	1,169	0	0	0	0	1,169	0	1,169	0	0	0	0	1,169	0	0	0	0	1,169
0	29	INDOOR/OUTDOOR SWITCHGEAR (PHASE 4)	CW	S2	03	1,104	6,250	5,250	5,250	5,250	23,104	2,675	25,779	0	0	0	0	25,779	0	0	0	0	25,779
0	32	INDOOR/OUTDOOR SWITCHGEAR (PHASE 3-CHANGE IN SCOPE	CW	S3	03	-1,109	1,113	0	0	0	4	0	4	0	0	0	0	4	0	0	0	0	4
0	33	INDOOR/OUTDOOR SWITCHGEAR (PHASE 4-CHANGE IN SCOPE	CW	S3	03	-704	-360	100	100	100	-764	-15	-779	0	0	0	0	-779	0	0	0	0	-779
		Sub-total				460	7,003	5,350	5,350	5,350	23,513	2,660	26,173	0	0	0	0	26,173	0	0	0	0	26,173
WAT906918		WATER SUSTAINABILITY PROGRAM																					
0	1	WATER SUSTAINABILITY PROGRAM	CW	S2	04	7,836	3,382	0	0	0	11,218	0	11,218	0	0	740	0	7,102	0	0	3,376	0	11,218
0	12	STANDBY POWER - ROSEHILL	CW	S2	04	6,036	43	33	14	0	6,126	0	6,126	0	0	416	0	3,872	0	0	1,838	0	6,126
0	23	WATER SUSTAINABILITY PROGRAM-CHANGE IN SCOPE	CW	S3	04	-6,486	2,195	5,457	3,997	10	5,173	0	5,173	0	0	955	0	2,660	0	0	1,558	0	5,173
0	24	STANDBY POWER - ROSEHILL-CHANGE IN SCOPE	CW	S3	04	-2,883	3,175	-19	0	0	273	0	273	0	0	246	0	-54	0	0	81	0	273
		Sub-total				4,503	8,795	5,471	4,011	10	22,790	0	22,790	0	0	2,357	0	13,580	0	0	6,853	0	22,790
WAT906919		RL CLARK W.T.P. R&R																					

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Water Program

Sub-Priority	Project No. Sub-Proj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906919	RL CLARK W.T.P. R&R																						
0 1	FACILITY & PROCESS UPGRADES		CW	S2	03	200	200	200	200	0	800	0	800	0	0	0	0	800	0	0	0	0	0	800
0 8	PROCESS EQUIPMENT UPGRADE ENGINEERING		CW	S2	03	69	1,780	60	35	0	1,944	0	1,944	0	0	118	0	1,826	0	0	0	0	0	1,944
0 15	PROCESS EQUIPMENT UPGRADE CONSTRUCTION		CW	S2	03	7,721	2,500	0	0	0	10,221	0	10,221	0	0	621	0	9,600	0	0	0	0	0	10,221
0 44	EVACUATION AND COMMUNICATION SYSTEMS		CW	S2	03	112	0	0	0	0	112	0	112	0	0	0	0	112	0	0	0	0	0	112
0 76	PROCESS EQUIPMENT UPGRADE CONSTRUC-CHANGE IN SCOPE		CW	S3	03	-693	1,000	0	0	0	307	0	307	0	0	937	0	-630	0	0	0	0	0	307
0 77	PROCESS EQUIPMENT UPGRADE ENGINEER-CHANGE IN SCOPE		CW	S3	03	602	-592	0	0	0	10	0	10	0	0	171	0	-161	0	0	0	0	0	10
0 78	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE		CW	S3	03	51	53	55	56	0	215	0	215	0	0	0	0	215	0	0	0	0	0	215
0 79	EVACUATION AND COMMUNICATION SYSTE-CHANGE IN SCOPE		CW	S3	03	-112	0	0	0	0	-112	0	-112	0	0	0	0	-112	0	0	0	0	0	-112
	Sub-total					7,950	4,941	315	291	0	13,497	0	13,497	0	0	1,847	0	11,650	0	0	0	0	0	13,497
WAT906930	DIST W/M REPLACEMENT																						
0 21	2011 WM REPLC		CW	S2	03	3	0	0	0	0	3	0	3	0	0	0	0	3	0	0	0	0	0	3
0 29	DIST W/M REPLC - 2012		CW	S2	03	147	0	0	0	0	147	0	147	0	0	0	0	147	0	0	0	0	0	147
0 51	DIST W/M REPLACEMENT - 2014		CW	S2	03	365	0	0	0	0	365	0	365	0	0	57	0	308	0	0	0	0	0	365
0 55	WATERMAIN REPLACEMENT - METROLINX		CW	S2	03	1,090	1,796	2,456	0	0	5,342	0	5,342	0	0	0	0	5,342	0	0	0	0	0	5,342
0 59	2013 WM REPLC - UPGRADES		CW	S2	05	101	0	0	0	0	101	0	101	0	0	31	0	70	0	0	0	0	0	101
0 63	DIST W/M REPLACEMENT - 2015		CW	S2	03	2,317	0	0	0	0	2,317	0	2,317	0	0	344	0	1,973	0	0	0	0	0	2,317
0 64	WATERMAIN UPGRADES - 2015		CW	S2	05	390	0	0	0	0	390	0	390	0	0	124	0	266	0	0	0	0	0	390
0 73	DIST W/M REPLACEMENT - 2016		CW	S2	03	8,933	0	0	0	0	8,933	0	8,933	0	0	1,371	0	7,562	0	0	0	0	0	8,933
0 74	WATERMAIN UPGRADES - 2016		CW	S2	05	2,706	0	0	0	0	2,706	0	2,706	0	0	857	0	1,849	0	0	0	0	0	2,706
0 83	DIST W/M REPLACEMENT - 2017		CW	S2	03	8,289	15	0	0	0	8,304	0	8,304	0	0	1,230	0	7,074	0	0	0	0	0	8,304
0 84	WATERMAIN UPGRADES - 2017		CW	S2	05	1,188	0	0	0	0	1,188	0	1,188	0	0	376	0	812	0	0	0	0	0	1,188
0 85	DIST W/M REPLACEMENT - 2018		CW	S2	03	52,339	11,690	928	0	0	64,957	0	64,957	0	0	9,264	0	55,693	0	0	0	0	0	64,957
0 86	WATERMAIN UPGRADES - 2018		CW	S2	05	14,303	2,921	0	0	0	17,224	0	17,224	0	0	5,789	0	11,435	0	0	0	0	0	17,224
0 110	DIST W/M REPLACEMENT - 2019		CW	S2	03	55,201	18,616	8,466	253	0	82,536	0	82,536	0	0	12,834	0	69,702	0	0	0	0	0	82,536

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906930		DIST W/M REPLACEMENT																					
0	111	WATERMAIN UPGRADES - 2019	CW	S2	05	24,014	8,368	3,688	72	0	36,142	0	36,142	0	0	11,243	0	24,899	0	0	0	0	0	36,142
0	112	DIST W/M REPLACEMENT - 2014-CHANGE IN SCOPE	CW	S3	03	-350	324	0	0	0	-26	0	-26	0	0	-31	0	5	0	0	0	0	0	-26
0	113	DIST W/M REPLACEMENT - 2015-CHANGE IN SCOPE	CW	S3	03	-2,100	2,153	0	0	0	53	0	53	0	0	-162	0	215	0	0	0	0	0	53
0	114	DIST W/M REPLACEMENT - 2017-CHANGE IN SCOPE	CW	S3	03	-7,519	7,312	0	0	0	-207	0	-207	0	0	-608	0	401	0	0	0	0	0	-207
0	115	DIST W/M REPLACEMENT - 2018-CHANGE IN SCOPE	CW	S3	03	-22,804	11,182	7,179	105	0	-4,338	0	-4,338	0	0	-4,605	0	267	0	0	0	0	0	-4,338
0	116	DIST W/M REPLACEMENT - 2019-CHANGE IN SCOPE	CW	S3	03	-20,817	71,667	97,160	29,461	6,130	183,601	0	183,601	0	0	-7,030	0	190,631	0	0	0	0	0	183,601
0	117	WATERMAIN UPGRADES - 2015-CHANGE IN SCOPE	CW	S3	05	-320	321	0	0	0	1	0	1	0	0	72	0	-71	0	0	0	0	0	1
0	118	WATERMAIN UPGRADES - 2016-CHANGE IN SCOPE	CW	S3	05	-2,601	616	0	0	0	-1,985	0	-1,985	0	0	-496	0	-1,489	0	0	0	0	0	-1,985
0	119	WATERMAIN UPGRADES - 2017-CHANGE IN SCOPE	CW	S3	05	-1,156	289	0	0	0	-867	0	-867	0	0	-215	0	-652	0	0	0	0	0	-867
0	120	DIST W/M REPLACEMENT - 2016-CHANGE IN SCOPE	CW	S3	03	-8,536	3,991	0	0	0	-4,545	0	-4,545	0	0	-1,033	0	-3,512	0	0	0	0	0	-4,545
0	121	WATERMAIN UPGRADES - 2018-CHANGE IN SCOPE	CW	S3	05	-5,262	4,368	0	0	0	-894	0	-894	0	0	2,377	0	-3,271	0	0	0	0	0	-894
0	122	WATERMAIN UPGRADES - 2019-CHANGE IN SCOPE	CW	S3	05	-7,793	10,832	18,831	4,773	2,434	29,077	0	29,077	0	0	6,264	0	22,813	0	0	0	0	0	29,077
0	123	2013 WM REPLC - UPGRADES-CHANGE IN SCOPE	CW	S3	05	-101	0	0	0	0	-101	0	-101	0	0	-31	0	-70	0	0	0	0	0	-101
0	124	DIST W/M REPLC - 2012-CHANGE IN SCOPE	CW	S3	03	-10	0	0	0	0	-10	0	-10	0	0	0	0	-10	0	0	0	0	0	-10
0	127	WATERMAIN REPLACEMENT - METROLINX-CHANGE IN SCOPE	CW	S3	03	-400	114	460	20	0	194	0	194	0	0	0	0	194	0	0	0	0	0	194
0	130	2011 WM REPLC-CHANGE IN SCOPE	CW	S3	03	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1
		Sub-total				91,618	156,575	139,168	34,684	8,564	430,609	0	430,609	0	0	38,022	0	392,587	0	0	0	0	0	430,609
WAT906932		DIST W/M REHABILITATION																					
0	4	HYDRANT & VALVE REPAIR	CW	S2	03	1,568	0	0	0	0	1,568	0	1,568	0	0	0	0	1,568	0	0	0	0	0	1,568
0	6	WATERMAIN STRUCTURAL LINING	CW	S2	03	68,624	18,594	239	175	0	87,632	0	87,632	0	0	0	0	87,632	0	0	0	0	0	87,632
0	7	CATHODIC PROTECTION	CW	S2	03	7,162	500	0	0	0	7,662	0	7,662	0	0	0	0	7,662	0	0	0	0	0	7,662
0	30	CUT REPAIR	CW	S2	03	3,549	0	0	0	0	3,549	0	3,549	0	0	0	0	3,549	0	0	0	0	0	3,549
0	59	PRV INSPECTION & RENEWAL	CW	S2	03	1,600	565	0	0	0	2,165	0	2,165	0	0	0	0	2,165	0	0	0	0	0	2,165
0	60	INFRASTRUCTURE REHAB & UPGRADES - METROLINX	CW	S2	03	75	75	75	0	0	225	0	225	0	0	0	0	225	0	0	0	0	0	225

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing
WAT906932	DIST W/M REHABILITATION																						
0	61	WATERMAIN STRUCTURAL LINING-CHANGE IN SCOPE	CW	S3	03	-20,106	37,385	25,560	0	0	42,839	0	42,839	0	0	0	0	42,839	0	0	0	0	42,839
0	62	PRV INSPECTION & RENEWAL-CHANGE IN SCOPE	CW	S3	03	-1,110	1,140	0	0	0	30	0	30	0	0	0	0	30	0	0	0	0	30
0	63	HYDRANT & VALVE REPAIR-CHANGE IN SCOPE	CW	S3	03	-368	930	0	0	0	562	0	562	0	0	0	0	562	0	0	0	0	562
0	64	CUT REPAIR-CHANGE IN SCOPE	CW	S3	03	-1,455	2,584	2,584	445	0	4,158	0	4,158	0	0	0	0	4,158	0	0	0	0	4,158
0	65	CATHODIC PROTECTION-CHANGE IN SCOPE	CW	S3	03	-3,520	4,756	300	300	0	1,836	0	1,836	0	0	0	0	1,836	0	0	0	0	1,836
		Sub-total				56,019	66,529	28,758	920	0	152,226	0	152,226	0	0	0	0	152,226	0	0	0	0	152,226
WAT906934	DIST WATER SERVICE REPAIR																						
0	12	WATER SERVICE REPAIR - LEAD PROGRAM	CW	S2	02	12,606	4,901	1	0	0	17,508	0	17,508	0	0	0	0	17,508	0	0	0	0	17,508
0	32	WSR CUT REPAIR	CW	S2	03	1,613	0	0	0	0	1,613	0	1,613	0	0	0	0	1,613	0	0	0	0	1,613
0	39	2012 WATER SERVICE REPLC - SOGR	CW	S2	02	60	0	0	0	0	60	0	60	0	0	0	0	60	0	0	0	0	60
0	41	2013 WATER SERVICE REPAIR	CW	S2	02	140	0	0	0	0	140	0	140	0	0	0	0	140	0	0	0	0	140
0	52	2014 WATER SERVICE REPLACEMENT - SOGR	CW	S2	02	148	0	0	0	0	148	0	148	0	0	0	0	148	0	0	0	0	148
0	59	2015 WATER SERVICE REPLACEMENT - SOGR	CW	S2	02	865	0	0	0	0	865	0	865	0	0	0	0	865	0	0	0	0	865
0	68	2016 WATER SERVICE REPLACEMENT - SOGR	CW	S2	02	3,992	0	0	0	0	3,992	0	3,992	0	0	0	0	3,992	0	0	0	0	3,992
0	71	WATER SERVICE REPAIR - WM REHAB PROGRAM	CW	S2	02	19,035	4,000	2,000	0	0	25,035	0	25,035	0	0	0	0	25,035	0	0	0	0	25,035
0	74	REPLACEMENT OF FROZEN SERVICES	CW	S2	02	240	0	0	0	0	240	0	240	0	0	0	0	240	0	0	0	0	240
0	75	WSR CUT REPAIRS WITH WM SL	CW	S2	02	1,613	0	0	0	0	1,613	0	1,613	0	0	0	0	1,613	0	0	0	0	1,613
0	78	2011 WATER SERVICE REPAIR	CW	S2	02	12	0	0	0	0	12	0	12	0	0	0	0	12	0	0	0	0	12
0	84	2017 WATER SERVICE REPLACEMENT - SOGR	CW	S2	02	6,374	0	0	0	0	6,374	0	6,374	0	0	0	0	6,374	0	0	0	0	6,374
0	85	2018 WATER SERVICE REPLACEMENT - SOGR	CW	S2	02	10,000	3,000	0	0	0	13,000	0	13,000	0	0	0	0	13,000	0	0	0	0	13,000
0	108	2019 WATER SERVICE REPLACEMENT - SOGR	CW	S2	02	10,000	7,000	3,000	0	0	20,000	0	20,000	0	0	0	0	20,000	0	0	0	0	20,000
0	109	2015 WATER SERVICE REPLACEMENT - S-CHANGE IN SCOPE	CW	S3	02	-733	1,019	0	0	0	286	0	286	0	0	0	0	286	0	0	0	0	286
0	110	2016 WATER SERVICE REPLACEMENT - S-CHANGE IN SCOPE	CW	S3	02	-3,424	3,436	0	0	0	12	0	12	0	0	0	0	12	0	0	0	0	12
0	111	2017 WATER SERVICE REPLACEMENT - S-CHANGE IN SCOPE	CW	S3	02	-5,472	2,917	0	0	0	-2,555	0	-2,555	0	0	0	0	-2,555	0	0	0	0	-2,555

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906934	DIST WATER SERVICE REPAIR																							
0	112	2018 WATER SERVICE REPLACEMENT - S-CHANGE IN SCOPE	CW	S3	02	-5,449	3,271	4,252	0	0	2,074	0	2,074	0	0	0	0	2,074	0	0	0	0	0	2,074
0	113	2019 WATER SERVICE REPLACEMENT - S-CHANGE IN SCOPE	CW	S3	02	-5,000	12,000	20,000	8,000	3,000	38,000	0	38,000	0	0	0	0	38,000	0	0	0	0	0	38,000
0	114	WATER SERVICE REPAIR - LEAD PROGRA-CHANGE IN SCOPE	CW	S3	02	-4,410	6,396	5,749	4,050	0	11,785	0	11,785	0	0	0	0	11,785	0	0	0	0	0	11,785
0	115	2012 WATER SERVICE REPLC - SOGR-CHANGE IN SCOPE	CW	S3	02	-60	0	0	0	0	-60	0	-60	0	0	0	0	-60	0	0	0	0	0	-60
0	116	WSR CUT REPAIR-CHANGE IN SCOPE	CW	S3	03	3,502	7,854	7,854	675	0	19,885	0	19,885	0	0	0	0	19,885	0	0	0	0	0	19,885
0	117	2013 WSR-CHANGE IN SCOPE	CW	S3	02	-133	0	0	0	0	-133	0	-133	0	0	0	0	-133	0	0	0	0	0	-133
0	118	WATER SERVICE REPAIR - WM REHAB PR-CHANGE IN SCOPE	CW	S3	02	-13,150	7,517	3,500	6,000	0	3,867	0	3,867	0	0	0	0	3,867	0	0	0	0	0	3,867
0	119	2014 WATER SERVICE REPLACEMENT - S-CHANGE IN SCOPE	CW	S3	02	-118	114	0	0	0	-4	0	-4	0	0	0	0	-4	0	0	0	0	0	-4
0	121	WSR CUT REPAIRS WITH WM SL-CHANGE IN SCOPE	CW	S3	02	-893	675	675	675	0	1,132	0	1,132	0	0	0	0	1,132	0	0	0	0	0	1,132
0	122	REPLACEMENT OF FROZEN SERVICES-CHANGE IN SCOPE	CW	S3	02	-240	0	0	0	0	-240	0	-240	0	0	0	0	-240	0	0	0	0	0	-240
0	123	2011 WSR-CHANGE IN SCOPE	CW	S3	02	3	0	0	0	0	3	0	3	0	0	0	0	3	0	0	0	0	0	3
		Sub-total				31,121	64,100	47,031	19,400	3,000	164,652	0	164,652	0	0	0	0	164,652	0	0	0	0	0	164,652
WAT906935	NEW SERVICE CONNECTIONS																							
0	2	NEW SERVICE CONNECTIONS - CUT REPAIRS	CW	S2	05	5,377	0	0	0	0	5,377	0	5,377	0	0	0	0	5,377	0	0	0	0	0	5,377
0	7	NEW SERVICE CONNECTIONS - SITE SERVICING	CW	S2	05	6,946	0	0	0	0	6,946	0	6,946	0	0	0	0	6,946	0	0	0	0	0	6,946
0	26	NEW SERVICE CONNECTIONS - SITE SER-CHANGE IN SCOPE	CW	S3	05	24,213	32,123	34,000	0	0	90,336	0	90,336	0	0	0	0	90,336	0	0	0	0	0	90,336
0	27	NEW SERVICE CONNECTIONS - CUT REPA-CHANGE IN SCOPE	CW	S3	05	5,300	18,758	18,758	4,634	0	47,450	0	47,450	0	0	0	0	47,450	0	0	0	0	0	47,450
		Sub-total				41,836	50,881	52,758	4,634	0	150,109	0	150,109	0	0	0	0	150,109	0	0	0	0	0	150,109
WAT906951	ENGINEERING																							
0	2	CONSULTING FEES	CW	S2	03	21,842	8,367	4,378	2,500	1,170	38,257	2,102	40,359	0	0	0	0	40,359	0	0	0	0	0	40,359
0	63	ROAD RESTORATION	CW	S2	03	2,621	2,151	0	0	0	4,772	0	4,772	0	0	0	0	4,772	0	0	0	0	0	4,772
0	78	ECS SALARIES-CHANGE IN SCOPE	CW	S3	03	14,491	0	0	0	0	14,491	0	14,491	0	0	0	0	14,491	0	0	0	0	0	14,491
0	79	TW SALARIES-CHANGE IN SCOPE	CW	S3	03	2,148	0	0	0	0	2,148	0	2,148	0	0	0	0	2,148	0	0	0	0	0	2,148
0	80	LEGAL SERVICES SALARIES-CHANGE IN SCOPE	CW	S3	03	225	0	0	0	0	225	0	225	0	0	0	0	225	0	0	0	0	0	225

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906951		ENGINEERING																					
0	81	ROAD RESTORATION-CHANGE IN SCOPE	CW	S3	03	-1,473	-1,486	365	365	0	-2,229	0	-2,229	0	0	0	0	-2,229	0	0	0	0	0	-2,229
0	82	CONSULTING FEES-CHANGE IN SCOPE	CW	S3	03	-8,002	14,298	20,073	15,999	7,079	49,447	-438	49,009	0	0	0	0	49,009	0	0	0	0	0	49,009
0	83	PPFA SALARIES-CHANGE IN SCOPE	CW	S3	03	2,935	0	0	0	0	2,935	0	2,935	0	0	0	0	2,935	0	0	0	0	0	2,935
0	84	PMMD SALARIES-CHANGE IN SCOPE	CW	S3	03	311	0	0	0	0	311	0	311	0	0	0	0	311	0	0	0	0	0	311
		Sub-total				35,098	23,330	24,816	18,864	8,249	110,357	1,664	112,021	0	0	0	0	112,021	0	0	0	0	0	112,021
WAT906977		ISLAND W.T.P. R&R																					
0	1	FACILITY & PROCESS UPGRADES	CW	S2	03	375	375	375	375	0	1,500	0	1,500	0	0	0	0	1,500	0	0	0	0	0	1,500
0	12	FACILITY UPGRADE - FORMER MARINE YARD	CW	S2	03	2,164	0	0	0	0	2,164	0	2,164	0	0	0	0	2,164	0	0	0	0	0	2,164
0	32	TRAVELLING SCREEN REPLACEMENT	CW	S2	03	440	3,191	0	0	0	3,631	0	3,631	0	0	0	0	3,631	0	0	0	0	0	3,631
0	50	AMMONIA AND FLUORIDE SYSTEM UPGRADES	CW	S2	03	7,948	4,006	7	0	0	11,961	0	11,961	0	0	0	0	11,961	0	0	0	0	0	11,961
0	51	CHEMICAL SYSTEMS` ELECTRICAL FEED DISTRIBUTION	CW	S2	03	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1
0	54	FILTER MEDIA REPLC - FUTURE	CW	S4	03	300	0	0	0	0	300	450	750	0	0	0	0	750	0	0	0	0	0	750
0	69	Generators` DR3 Program	CW	S2	04	0	80	695	650	0	1,425	0	1,425	0	0	0	0	1,425	0	0	0	0	0	1,425
0	70	PLANTWIDE HVAC UPGRADES	CW	S2	04	2,220	753	0	0	0	2,973	0	2,973	0	0	0	0	2,973	0	0	0	0	0	2,973
0	83	RAW WATER INTAKE CLEANING	CW	S2	03	1,225	0	0	0	0	1,225	0	1,225	0	0	0	0	1,225	0	0	0	0	0	1,225
0	110	AMMONIA AND FLUORIDE SYSTEM UPGRAD-CHANGE IN SCOPE	CW	S3	03	-7,122	2,444	6,049	7	0	1,378	0	1,378	0	0	0	0	1,378	0	0	0	0	0	1,378
0	111	TRAVELLING SCREEN REPLACEMENT-CHANGE IN SCOPE	CW	S3	03	-10	-2,151	1,100	6,300	1,100	6,339	0	6,339	0	0	0	0	6,339	0	0	0	0	0	6,339
0	112	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	CW	S3	03	195	273	190	56	0	714	0	714	0	0	0	0	714	0	0	0	0	0	714
0	113	RAW WATER INTAKE CLEANING-CHANGE IN SCOPE	CW	S3	03	0	259	0	0	0	259	0	259	0	0	0	0	259	0	0	0	0	0	259
0	117	ISLAND PHOTOVOLTAIC SYSTEM	CW	S4	05	100	700	2,300	3,300	0	6,400	0	6,400	0	0	0	0	6,400	0	0	0	0	0	6,400
0	118	FIS - JSPS CROSS HARBOUR TUNNEL REHABILITATION	CW	S4	03	500	8,000	0	0	0	8,500	0	8,500	0	0	0	0	8,500	0	0	0	0	0	8,500
0	119	FACILITY UPGRADE - FORMER MARINE Y-CHANGE IN SCOPE	CW	S3	03	-827	815	0	0	0	-12	0	-12	0	0	0	0	-12	0	0	0	0	0	-12
0	120	Generators` DR3 Program-CHANGE IN SCOPE	CW	S3	04	0	-80	-695	-570	695	-650	650	0	0	0	0	0	0	0	0	0	0	0	0

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT906977	ISLAND W.T.P. R&R																						
0	121	PLANTWIDE HVAC UPGRADES-CHANGE IN SCOPE	CW	S3	04	-1,644	2,047	2,807	137	0	3,347	0	3,347	0	0	0	0	3,347	0	0	0	0	0	3,347
		Sub-total				5,865	20,712	12,828	10,255	1,795	51,455	1,100	52,555	0	0	0	0	52,555	0	0	0	0	0	52,555
WAT907353	LAWRENCE ALLAN REVITALIZATION PLAN																						
0	1	LAWRENCE ALLAN REVITALIZATION PLAN - INTERNAL	CW	S2	05	11,668	5,775	473	210	0	18,126	0	18,126	0	0	18,126	0	0	0	0	0	0	0	18,126
0	2	LAWRENCE ALLAN REVITALIZATION PLAN - EXTERNAL	CW	S2	05	250	3,592	3,842	0	0	7,684	0	7,684	0	0	7,684	0	0	0	0	0	0	0	7,684
0	13	LAWRENCE ALLAN REVITALIZATION PLAN-CHANGE IN SCOPE	CW	S3	05	-8,368	-3,275	3,227	0	0	-8,416	0	-8,416	0	0	-8,416	0	0	0	0	0	0	0	-8,416
0	14	LAWRENCE ALLAN REVITALIZATION PLAN-CHANGE IN SCOPE	CW	S3	05	-250	0	0	806	0	556	0	556	0	0	556	0	0	0	0	0	0	0	556
		Sub-total				3,300	6,092	7,542	1,016	0	17,950	0	17,950	0	0	17,950	0	0	0	0	0	0	0	17,950
WAT907558	REGENT PARK CAPITAL CONTRIBUTION																						
0	14	REGENT PARK CAPITAL CONTRIBUTION - PHASE 3 - 5	13	S2	05	1,133	1,416	830	51	71	3,501	40	3,541	0	0	3,541	0	0	0	0	0	0	0	3,541
0	16	REGENT PARK CAPITAL CONTRIBUTION --CHANGE IN SCOPE	13	S3	05	-591	0	591	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Sub-total				542	1,416	1,421	51	71	3,501	40	3,541	0	0	3,541	0	0	0	0	0	0	0	3,541
WAT907946	BUSINESS IT PROJECTS																						
0	7	ENTERPRISE WORK MANAGEMENT SYSTEM PROJECT	CW	S2	04	1,554	1,325	1,000	400	350	4,629	0	4,629	0	0	0	0	4,629	0	0	0	0	0	4,629
0	18	ENTERPRISE WORK MANAGEMENT SYSTEM -CHANGE IN SCOPE	CW	S3	04	-654	-400	250	400	500	96	0	96	0	0	0	0	96	0	0	0	0	0	96
		Sub-total				900	925	1,250	800	850	4,725	0	4,725	0	0	0	0	4,725	0	0	0	0	0	4,725
WAT908087	TRUNK WATERMAIN																						
0	1	TRANSMISSION SYSTEM AUTOMATION	CW	S2	04	5,801	4,575	41	92	0	10,509	0	10,509	0	0	0	0	10,509	0	0	0	0	0	10,509
0	4	JOS - REVENUE METER REPLACEMENT	CW	S2	03	4,369	1,000	0	0	0	5,369	0	5,369	0	0	0	0	2,684	0	0	2,685	0	0	5,369
0	6	3RD PARTY RELOCATIONS (METROLINX)	CW	S2	04	50	50	50	0	0	150	0	150	0	0	0	0	150	0	0	0	0	0	150
0	16	TRANSMISSION SYSTEM AUTOMATION-CHANGE IN SCOPE	CW	S3	04	-5,381	-1,057	3,236	3,241	41	80	92	172	0	0	0	0	172	0	0	0	0	0	172
0	17	JOS - REVENUE METER REPLACEMENT-CHANGE IN SCOPE	CW	S3	03	-929	1,175	0	0	0	246	0	246	0	0	0	0	123	0	0	123	0	0	246
		Sub-total				3,910	5,743	3,327	3,333	41	16,354	92	16,446	0	0	0	0	13,638	0	0	2,808	0	0	16,446
WAT908248	WT&S PLANTWIDE																						
0	1	UV DISINFECTION - CONCEPTUAL DESIGN	CW	S2	04	248	0	0	0	0	248	0	248	0	0	0	0	248	0	0	0	0	0	248

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAT908248		WT&S PLANTWIDE																					
0	4	ZEBRA MUSSEL CONTROL - ENG	CW	S2	04	738	450	450	175	32	1,845	32	1,877	0	0	0	0	1,877	0	0	0	0	1,877
0	5	ZEBRA MUSSEL CONTROL - CONSTRUCTION	CW	S4	04	250	4,250	4,500	10,000	1,000	20,000	0	20,000	0	0	0	0	20,000	0	0	0	0	20,000
0	6	STANDBY POWER - PHASE 2 - ENG	CW	S2	04	1,768	2,750	3,170	1,686	760	10,134	700	10,834	0	0	655	0	6,929	0	0	3,250	0	10,834
0	10	UV DISINFECTION - ISLAND WTP - ENGINEERING	CW	S2	04	1,251	500	1,000	550	150	3,451	50	3,501	0	0	0	0	3,501	0	0	0	0	3,501
0	12	SCRUBBER AND TONNER CONNECTION IMPROVEMENTS AT WTP	CW	S2	04	1,956	1,168	500	470	5	4,099	0	4,099	0	0	256	0	2,613	0	0	1,230	0	4,099
0	18	SOURCE WATER PROTECTION-LAKE ONTARIO COLLABORATIVE	CW	S2	04	375	305	0	0	0	680	0	680	0	0	0	0	680	0	0	0	0	680
0	21	SCRUBBER AND TONNER CONNECTION IMP-CHANGE IN SCOPE	CW	S3	04	-1,415	1,159	1,115	1,145	1,482	3,486	58	3,544	0	0	535	0	1,945	0	0	1,064	0	3,544
0	22	UV DISINFECTION - CONCEPTUAL DESIG-CHANGE IN SCOPE	CW	S3	04	-248	0	0	0	0	-248	0	-248	0	0	0	0	-248	0	0	0	0	-248
0	23	SOURCE WATER PROTECTION-LAKE ONTAR-CHANGE IN SCOPE	CW	S3	04	-375	125	650	650	0	1,050	0	1,050	0	0	0	0	1,050	0	0	0	0	1,050
0	24	UV DISINFECTION - ISLAND WTP - ENG-CHANGE IN SCOPE	CW	S3	04	-606	96	-955	450	454	-561	95	-466	0	0	0	0	-466	0	0	0	0	-466
0	25	STANDBY POWER - PHASE 2 - ENG-CHANGE IN SCOPE	CW	S3	04	-608	-318	188	484	226	-28	60	32	0	0	471	0	-449	0	0	10	0	32
0	26	ZEBRA MUSSEL CONTROL - ENG-CHANGE IN SCOPE	CW	S3	04	-388	143	-90	247	95	7	-21	-14	0	0	0	0	-14	0	0	0	0	-14
		Sub-total				2,946	10,628	10,528	15,857	4,204	44,163	974	45,137	0	0	1,917	0	37,666	0	0	5,554	0	45,137
Total Program Expenditure						350,393	511,981	433,288	170,055	56,121	1,521,838	33,340	1,555,178	0	0	100,123	0	1,427,291	0	0	27,764	0	1,555,178

Report Phase 2 - Program 10 Water Program Program Phase 2 Part B Sub-Project Status S2 Part C Sub-Project Status S2,S3,S4,S5 Sub-Project Category 01,02,03,04,05,06,07 User Fields ALL

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 8: 2019 Cash Flow and Future Year Commitments Including Carry Forward Funding

Water Program

Sub-Priority	Project No. / SubProj No.	Project Name / Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments and Estimates								Current and Future Year Cash Flow Commitments and Estimates Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
Financed By:																								
		Development Charges				28,710	32,531	27,322	6,476	3,131	98,170	1,953	100,123	0	0	100,123	0	0	0	0	0	0	0	100,123
		Reserve Funds (Ind."XR" Ref.)				315,566	470,131	398,997	160,666	51,767	1,397,127	30,164	1,427,291	0	0	0	0	1,427,291	0	0	0	0	0	1,427,291
		Other2 (External)				6,117	9,319	6,969	2,913	1,223	26,541	1,223	27,764	0	0	0	0	0	0	0	27,764	0	0	27,764
Total Program Financing						350,393	511,981	433,288	170,055	56,121	1,521,838	33,340	1,555,178	0	0	100,123	0	1,427,291	0	0	27,764	0	0	1,555,178

Status Code	Description
S2	S2 Prior Year (With 2019 and\or Future Year Cashflow)
S3	S3 Prior Year - Change of Scope 2019 and\or Future Year Cost\Cashflow)
S4	S4 New - Stand-Alone Project (Current Year Only)
S5	S5 New (On-going or Phased Projects)

Category Code	Description
01	Health and Safety C01
02	Legislated C02
03	State of Good Repair C03
04	Service Improvement and Enhancement C04
05	Growth Related C05
06	Reserved Category 1 C06
07	Reserved Category 2 C07

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 8: 2019 Cash Flow and Future Year Commitments Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. Sub-Proj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing
WAS000007	ASHBRIDGES BAY WWTP REHAB																						
0	19	FERROUS UPGRADES	CW	S2	03	7,097	31	0	0	0	7,128	0	7,128	0	0	585	0	6,543	0	0	0	0	7,128
0	30	ELECTRICAL REHAB - ECAP	CW	S2	01	2,785	72	0	0	0	2,857	0	2,857	0	0	0	0	2,857	0	0	0	0	2,857
0	41	POLYMER UPGRADE	CW	S2	03	21,950	38,909	11,110	18,974	222	91,165	0	91,165	0	0	0	0	91,165	0	0	0	0	91,165
0	47	P BLDG HEADWORKS ENG DESIGN&CONTRACT ADMIN	CW	S2	03	2,082	275	49	0	0	2,406	0	2,406	0	0	253	0	2,153	0	0	0	0	2,406
0	49	PROCESS UPGRADES & ODOUR CONTROL ENGINEERING	CW	S2	04	81	0	0	0	0	81	0	81	0	0	8	0	73	0	0	0	0	81
0	189	PROCESS AND EQUIPMENT	CW	S2	03	1,463	1,100	1,100	1,100	0	4,763	0	4,763	0	0	0	0	4,763	0	0	0	0	4,763
0	190	GROUND AND FACILITIES	CW	S2	03	696	440	440	440	0	2,016	0	2,016	0	0	0	0	2,016	0	0	0	0	2,016
0	215	DIGESTERS CLEANING REHAB - TANKS 14, 16, 13	CW	S2	03	5,566	3,690	3,615	5	4	12,880	0	12,880	0	0	0	0	12,880	0	0	0	0	12,880
0	216	OPERATIONS CENTRE - ENGINEERING	CW	S2	03	260	0	0	0	0	260	0	260	0	0	0	0	260	0	0	0	0	260
0	226	ABTP - PROCESS ROADMAP PHASE 2	CW	S2	05	1,000	500	0	0	0	1,500	0	1,500	0	0	0	0	1,500	0	0	0	0	1,500
0	227	AIR HEADER REHAB	CW	S2	03	2,637	0	0	0	0	2,637	0	2,637	0	0	0	0	2,637	0	0	0	0	2,637
0	229	D BUILDING PHASE 2	CW	S2	03	2,144	11,000	11,000	11,000	10,405	45,549	110	45,659	0	0	0	0	45,659	0	0	0	0	45,659
0	246	NEW FLEET PURCHASES	CW	S2	04	25	25	25	25	0	100	0	100	0	0	0	0	100	0	0	0	0	100
0	256	DIGESTER CLEANING - 10 YEAR PLAN	CW	S4	03	200	500	240	350	700	1,990	21,500	23,490	0	0	0	0	23,490	0	0	0	0	23,490
0	264	HVAC CONVERSION Z-BLDG	CW	S2	03	28	0	0	0	0	28	0	28	0	0	0	0	28	0	0	0	0	28
0	285	BLOWER 7-9 OVERHAUL	CW	S2	03	500	0	0	0	0	500	0	500	0	0	0	0	500	0	0	0	0	500
0	292	BLOWER STUDY	CW	S2	03	100	0	0	0	0	100	0	100	0	0	0	0	100	0	0	0	0	100
0	306	BLOWER STUDY-CHANGE IN SCOPE	CW	S3	03	-100	0	0	0	0	-100	0	-100	0	0	0	0	-100	0	0	0	0	-100
0	307	NEW FLEET PURCHASES-CHANGE IN SCOPE	CW	S3	04	0	0	0	0	25	25	0	25	0	0	0	0	25	0	0	0	0	25
0	308	D BUILDING PHASE 2-CHANGE IN SCOPE	CW	S3	03	-1,046	-4,882	-1,548	-1,600	-6,306	-15,382	-63	-15,445	0	0	0	0	-15,445	0	0	0	0	-15,445
0	309	AIR HEADER REHAB-CHANGE IN SCOPE	CW	S3	03	-2,176	766	0	0	0	-1,410	0	-1,410	0	0	0	0	-1,410	0	0	0	0	-1,410
0	310	DIGESTERS CLEANING REHAB - TANKS 1-CHANGE IN SCOPE	CW	S3	03	-1,762	202	727	0	1	-832	0	-832	0	0	0	0	-832	0	0	0	0	-832
0	311	POLYMER UPGRADE-CHANGE IN SCOPE	CW	S3	03	-20,525	-8,895	17,908	4,444	17,388	10,320	371	10,691	0	0	0	0	10,691	0	0	0	0	10,691
0	312	GROUND AND FACILITIES-CHANGE IN SCOPE	CW	S3	03	-96	0	0	0	440	344	0	344	0	0	0	0	344	0	0	0	0	344

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 8: 2019 Cash Flow and Future Year Commitments Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS000007	ASHBRIDGES BAY WWTP REHAB																						
0	313	PROCESS AND EQUIPMENT-CHANGE IN SCOPE	CW	S3	03	-290	210	55	56	1,100	1,131	0	1,131	0	0	0	0	1,131	0	0	0	0	0	1,131
0	314	FERROUS UPGRADES-CHANGE IN SCOPE	CW	S3	03	-1,754	1,821	0	0	0	67	0	67	0	0	480	0	-413	0	0	0	0	0	67
0	315	ELECTRICAL REHAB - ECAP-CHANGE IN SCOPE	CW	S3	01	-2,294	2,380	224	0	0	310	0	310	0	0	0	0	310	0	0	0	0	0	310
0	316	P BLDG HEADWORKS ENG DESIGN&CONTRA-CHANGE IN SCOPE	CW	S3	03	-384	861	176	0	0	653	0	653	0	0	206	0	447	0	0	0	0	0	653
0	317	PROCESS UPGRADES & ODOUR CONTROL E-CHANGE IN SCOPE	CW	S3	04	-60	90	0	0	0	30	0	30	0	0	9	0	21	0	0	0	0	0	30
0	318	HEATING AND AIR SYSTEMS	CW	S4	03	705	4,095	5,755	6,005	2,555	19,115	130	19,245	0	0	0	0	19,245	0	0	0	0	0	19,245
0	320	EAST BYPASS	CW	S4	02	250	700	1,450	1,200	10,800	14,400	73,610	88,010	0	0	0	0	88,010	0	0	0	0	0	88,010
0	321	ABTP SOLAR PV PILOT PROJECT	CW	S4	04	250	2,050	75	225	0	2,600	0	2,600	0	0	0	0	2,600	0	0	0	0	0	2,600
0	322	SECONDARY CLARIFIER CROSS COLLECTOR UPGR TANK 2&4	CW	S4	04	75	1,800	1,100	15	10	3,000	0	3,000	0	0	0	0	3,000	0	0	0	0	0	3,000
0	323	BLOWER 7-9 OVERHAUL-CHANGE IN SCOPE	CW	S3	03	0	500	0	0	0	500	0	500	0	0	0	0	500	0	0	0	0	0	500
0	324	ABTP - PROCESS ROADMAP PHASE 2-CHANGE IN SCOPE	CW	S3	05	-500	350	850	100	0	800	0	800	0	0	0	0	800	0	0	0	0	0	800
0	325	HVAC CONVERSION Z-BLDG-CHANGE IN SCOPE	CW	S3	03	0	100	130	0	0	230	0	230	0	0	0	0	230	0	0	0	0	0	230
0	326	OPERATIONS CENTRE - ENGINEERING-CHANGE IN SCOPE	CW	S3	03	-10	0	0	0	0	-10	0	-10	0	0	0	0	-10	0	0	0	0	0	-10
		Sub-total				18,897	58,690	54,481	42,339	37,344	211,751	95,658	307,409	0	0	1,541	0	305,868	0	0	0	0	0	307,409
WAS000115	HUMBER T.P.																						
0	9	CO-GENERATION	CW	S2	04	87	0	0	0	0	87	0	87	0	0	0	0	87	0	0	0	0	0	87
0	64	CO-GENERATION-CHANGE IN SCOPE	CW	S3	04	33	0	0	0	0	33	0	33	0	0	0	0	33	0	0	0	0	0	33
		Sub-total				120	0	0	0	0	120	0	120	0	0	0	0	120	0	0	0	0	0	120
WAS000259	TRUNK SEWER SYSTEM																						
0	15	TRUNK SEWER REHABILITATION - 2012	CW	S2	03	1,093	87	16	0	0	1,196	0	1,196	0	0	0	0	1,196	0	0	0	0	0	1,196
0	27	TRUNK SEWER REHABILITATION - 2014	CW	S2	03	23,755	3,380	10	14	0	27,159	0	27,159	0	0	0	0	27,159	0	0	0	0	0	27,159
0	34	BLACK CREEK STS EA	CW	S2	05	1,352	0	0	0	0	1,352	0	1,352	0	0	0	0	1,352	0	0	0	0	0	1,352
0	47	TRUNK SEWER REHABILITATION - 2016	CW	S2	03	22,085	9,047	1,535	151	0	32,818	0	32,818	0	0	0	0	32,818	0	0	0	0	0	32,818
0	53	TRUNK SEWER REHABILITATION - 2018	CW	S2	03	13,962	44,974	69,585	39,611	9,357	177,489	142	177,631	0	0	0	0	177,631	0	0	0	0	0	177,631

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Gross Expenditures ($000's)

Appendix 8: 2019 Cash Flow and Future Year Commitments Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS000259	TRUNK SEWER SYSTEM																						
0	62	TRUNK SEWER REHABILITATION - 2012-CHANGE IN SCOPE	CW	S3	03	-742	943	5	0	0	206	0	206	0	0	0	0	206	0	0	0	0	0	206
0	63	TRUNK SEWER REHABILITATION - 2016-CHANGE IN SCOPE	CW	S3	03	-10,775	1,514	-1,524	-151	0	-10,936	0	-10,936	0	0	0	0	-10,936	0	0	0	0	0	-10,936
0	64	BLACK CREEK STS EA-CHANGE IN SCOPE	CW	S3	05	-887	347	0	0	0	-540	0	-540	0	0	0	0	-540	0	0	0	0	0	-540
0	65	TRUNK SEWER REHABILITATION - 2018-CHANGE IN SCOPE	CW	S3	03	-7,439	2,360	-8,650	-3,181	8,600	-8,310	8,002	-308	0	0	0	0	-308	0	0	0	0	0	-308
0	66	TRUNK SEWER REHABILITATION - 2014-CHANGE IN SCOPE	CW	S3	03	-15,447	12,590	2,256	2	0	-599	0	-599	0	0	0	0	-599	0	0	0	0	0	-599
0	67	TRUNK SEWER REHABILITATION - 2019	CW	S4	03	775	2,635	5,470	32,777	8,813	50,470	11,958	62,428	0	0	0	0	62,428	0	0	0	0	0	62,428
0	68	LOWER SIMCOE CSO	CW	S4	04	700	1,100	700	900	8,400	11,800	10,200	22,000	0	0	0	0	22,000	0	0	0	0	0	22,000
		Sub-total				28,432	78,977	69,403	70,123	35,170	282,105	30,302	312,407	0	0	0	0	312,407	0	0	0	0	0	312,407
WAS000442	BASEMENT FLOODING RELIEF																						
0	1	BASEMENT FLOODING PROTECTION SUBSIDY PROGRAM	CW	S2	04	5,500	5,500	0	0	0	11,000	0	11,000	0	0	0	0	11,000	0	0	0	0	0	11,000
0	8	BASEMENT FLOODING STUDIES & EAS	CW	S2	04	701	0	0	0	0	701	0	701	0	0	7	0	694	0	0	0	0	0	701
0	9	BASEMENT FLOODING RELIEF - TUNNEL PROJECT	CW	S2	04	5,446	5,800	37,700	37,000	37,000	122,946	81,900	204,846	0	0	96	0	204,750	0	0	0	0	0	204,846
0	12	ROAD RESTORATION FOR BSMT FLDG PRJS	CW	S2	04	292	0	0	0	0	292	0	292	0	0	2	0	290	0	0	0	0	0	292
0	14	BASEMENT FLOODING DESIGN - GROUP 1	CW	S2	04	1,206	0	0	0	0	1,206	0	1,206	0	0	20	0	1,186	0	0	0	0	0	1,206
0	18	BASEMENT FLOODING DESIGN - GROUP 2	CW	S2	04	3,135	2,126	0	0	0	5,261	0	5,261	0	0	15	0	5,246	0	0	0	0	0	5,261
0	19	BASEMENT FLOODING RELIEF - GROUP 2	CW	S2	04	16,906	4,203	0	0	0	21,109	0	21,109	0	0	450	0	20,659	0	0	0	0	0	21,109
0	20	BASEMENT FLOODING DESIGN - GROUP 3	CW	S2	04	2,219	1,030	919	0	0	4,168	0	4,168	0	0	54	0	4,114	0	0	0	0	0	4,168
0	29	BASEMENT FLOODING RELIEF - GROUP 1	CW	S2	04	2,528	30	0	0	0	2,558	0	2,558	0	0	2	0	2,556	0	0	0	0	0	2,558
0	76	BASEMENT FLOODING FLOW MONITORING	CW	S2	04	954	982	0	0	0	1,936	0	1,936	0	0	0	0	1,936	0	0	0	0	0	1,936
0	77	BASEMENT FLOODING DESIGN - GROUP 4 (ENGINEERING)	CW	S2	04	34,297	34,520	42,713	47,250	46,465	205,245	123,754	328,999	0	0	513	0	328,486	0	0	0	0	0	328,999
0	81	BASEMENT FLOODING STUDIES & EAS-CW IMPLEMENTATION	CW	S2	04	5,758	3,755	1,750	1,000	750	13,013	0	13,013	0	0	65	0	12,948	0	0	0	0	0	13,013
0	89	BASEMENT FLOODING RELIEF - GROUP 4 (CONSTRUCTION)	CW	S2	04	39,481	63,740	44,277	53,652	72,173	273,323	196,981	470,304	0	0	1,020	0	469,284	0	0	0	0	0	470,304
0	107	BASEMENT FLOODING RELIEF - GROUP 3 (CONSTRUCTION)	CW	S2	04	12,443	16,744	13,978	0	0	43,165	0	43,165	0	0	396	0	42,769	0	0	0	0	0	43,165
0	132	BASEMENT FLOODING STUDIES & EAS-CW-CHANGE IN SCOPE	CW	S3	04	-1,238	9,861	19,915	17,940	14,505	60,983	1,100	62,083	0	0	7,146	0	54,937	0	0	0	0	0	62,083

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Gross Expenditures ($000's)

Appendix 8: 2019 Cash Flow and Future Year Commitments Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. / Sub-Proj No.	Project Name / Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS000442	BASEMENT FLOODING RELIEF																						
0	133	BASEMENT FLOODING RELIEF - GROUP 1-CHANGE IN SCOPE	CW	S3	04	-2,407	911	0	0	0	-1,496	0	-1,496	0	0	157	0	-1,653	0	0	0	0	0	-1,496
0	134	BASEMENT FLOODING DESIGN - GROUP 3-CHANGE IN SCOPE	CW	S3	04	-282	529	0	0	0	247	0	247	0	0	609	0	-362	0	0	0	0	0	247
0	135	BASEMENT FLOODING DESIGN - GROUP 4-CHANGE IN SCOPE	CW	S3	04	-17,697	-4,557	-8,750	-1,929	-16,628	-49,561	-54,771	-104,332	0	0	33,186	0	-137,518	0	0	0	0	0	-104,332
0	136	BASEMENT FLOODING RELIEF - GROUP 4-CHANGE IN SCOPE	CW	S3	04	-15,156	-25,088	15,734	14,510	-2,455	-12,455	38,994	26,539	0	0	63,283	0	-36,744	0	0	0	0	0	26,539
0	137	BASEMENT FLOODING STUDIES & EAS-CHANGE IN SCOPE	CW	S3	04	-616	400	150	200	0	134	0	134	0	0	119	0	15	0	0	0	0	0	134
0	138	BASEMENT FLOODING RELIEF - GROUP 3-CHANGE IN SCOPE	CW	S3	04	-3,450	3,101	-492	6,284	0	5,443	0	5,443	0	0	6,896	0	-1,453	0	0	0	0	0	5,443
0	139	BASEMENT FLOODING RELIEF - TUNNEL -CHANGE IN SCOPE	CW	S3	04	-1,761	2,165	-17,693	-850	0	-18,139	23,000	4,861	0	0	31,361	0	-26,500	0	0	0	0	0	4,861
0	140	BASEMENT FLOODING DESIGN - GROUP 1-CHANGE IN SCOPE	CW	S3	04	-1,076	1,703	0	0	0	627	0	627	0	0	255	0	372	0	0	0	0	0	627
0	141	BASEMENT FLOODING RELIEF - GROUP 2-CHANGE IN SCOPE	CW	S3	04	-8,554	11,046	0	0	0	2,492	0	2,492	0	0	3,090	0	-598	0	0	0	0	0	2,492
0	142	BASEMENT FLOODING DESIGN - GROUP 2-CHANGE IN SCOPE	CW	S3	04	-3,032	3,854	0	0	0	822	0	822	0	0	897	0	-75	0	0	0	0	0	822
0	143	BASEMENT FLOODING FLOW MONITORING-CHANGE IN SCOPE	CW	S3	04	606	308	0	0	0	914	0	914	0	0	428	0	486	0	0	0	0	0	914
0	144	ROAD RESTORATION FOR BSMT FLDG PRJ-CHANGE IN SCOPE	CW	S3	04	-198	202	0	0	0	4	0	4	0	0	42	0	-38	0	0	0	0	0	4
		Sub-total				76,005	142,865	150,201	175,057	151,810	695,938	410,958	1,106,896	0	0	150,109	0	956,787	0	0	0	0	0	1,106,896
WAS000521	HIGHLAND CREEK WWTP - BUILDING SERV &																						
0	3	HCTP BLDG REHAB & IMPROVEMENTS	CW	S2	03	1,375	0	0	0	0	1,375	0	1,375	0	0	0	0	1,375	0	0	0	0	0	1,375
0	11	HCTP BLDG REHAB & IMPROVEMENTS-CHANGE IN SCOPE	CW	S3	03	-375	350	0	0	0	-25	0	-25	0	0	0	0	-25	0	0	0	0	0	-25
		Sub-total				1,000	350	0	0	0	1,350	0	1,350	0	0	0	0	1,350	0	0	0	0	0	1,350
WAS906322	W&WW LABORATORIES																						
0	22	LAB & EMP FACILITIES	CW	S2	04	7,550	2,500	0	0	0	10,050	8,450	18,500	0	0	0	0	18,500	0	0	0	0	0	18,500
0	27	LAB EQUIPMENT - FUTURE	CW	S2	03	337	242	458	102	210	1,349	840	2,189	0	0	0	0	2,189	0	0	0	0	0	2,189
0	33	LAB EQUIPMENT - FUTURE-CHANGE IN SCOPE	CW	S3	03	-337	2	0	-102	0	-437	210	-227	0	0	0	0	-227	0	0	0	0	0	-227
0	34	LAB EQUIPMENT-CHANGE IN SCOPE	CW	S3	03	562	0	0	0	0	562	0	562	0	0	0	0	562	0	0	0	0	0	562
0	35	LAB & EMP FACILITIES-CHANGE IN SCOPE	CW	S3	04	-6,500	1,750	4,950	0	0	200	0	200	0	0	0	0	200	0	0	0	0	0	200
		Sub-total				1,612	4,494	5,408	0	210	11,724	9,500	21,224	0	0	0	0	21,224	0	0	0	0	0	21,224
WAS906328	SWM END OF PIPE FACILITIES																						

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Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906328	SWM END OF PIPE FACILITIES																						
0	11	Bonar Creek SWMF Construction	CW	S2	04	1,750	9,250	9,125	175	0	20,300	0	20,300	0	0	1,633	0	18,667	0	0	0	0	0	20,300
0	12	EARL BALES PARK SWM FACILITY - PHASE 2	CW	S2	04	1,000	0	0	0	0	1,000	0	1,000	0	0	80	0	920	0	0	0	0	0	1,000
0	57	Scarborough Waterfront Construction	CW	S2	04	0	0	0	0	0	0	47,950	47,950	0	0	3,860	0	44,090	0	0	0	0	0	47,950
0	64	HUMBER BAY POND (ETOBICOKE)	CW	S2	03	290	300	0	0	0	590	0	590	0	0	50	0	540	0	0	0	0	0	590
0	67	YR03 D1 END OF PIPE	CW	S2	04	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1
0	72	NORTH TORONTO CSO CONSTR - 2018 SC	CW	S2	04	340	500	0	0	0	840	0	840	0	0	73	0	767	0	0	0	0	0	840
0	74	Scarborough Waterfront Constructio-CHANGE IN SCOPE	CW	S3	04	0	0	0	0	0	0	-6,200	-6,200	0	0	2,318	0	-8,518	0	0	0	0	0	-6,200
0	75	Bonar Creek SWMF Construction-CHANGE IN SCOPE	CW	S3	04	-975	-7,706	175	9,602	176	1,272	0	1,272	0	0	1,559	0	-287	0	0	0	0	0	1,272
0	76	NORTH TORONTO CSO CONSTR - 2018 SC-CHANGE IN SCOPE	CW	S3	04	-240	150	1,650	0	0	1,560	0	1,560	0	0	282	0	1,278	0	0	0	0	0	1,560
0	77	HUMBER BAY POND (ETOBICOKE)-CHANGE IN SCOPE	CW	S3	03	-40	215	2,115	1,016	115	3,421	0	3,421	0	0	543	0	2,878	0	0	0	0	0	3,421
0	78	EARL BALES PARK SWM FACILITY - PHA-CHANGE IN SCOPE	CW	S3	04	-950	951	0	0	0	1	0	1	0	0	71	0	-70	0	0	0	0	0	1
		Sub-total				1,176	3,660	13,065	10,793	291	28,985	41,750	70,735	0	0	10,469	0	60,266	0	0	0	0	0	70,735
WAS906331	SWM SOURCE CONTROL PROG																						
0	9	DOWNSPOUT DISCONNECTION PROGRAM	CW	S2	04	70	70	20	20	0	180	0	180	0	0	0	0	180	0	0	0	0	0	180
0	17	DOWNSPOUT DISCONNECTION PROGRAM-CHANGE IN SCOPE	CW	S3	04	20	-25	0	0	0	-5	0	-5	0	0	0	0	-5	0	0	0	0	0	-5
		Sub-total				90	45	20	20	0	175	0	175	0	0	0	0	175	0	0	0	0	0	175
WAS906380	HIGHLAND CREEK WWTP - ODOUR CONTROI																						
0	1	ODOUR CONTROL UPGRADES - PHASE 1 ENG	25	S2	04	190	203	56	50	20	519	0	519	0	0	42	0	477	0	0	0	0	0	519
0	2	ODOUR CONTROL UPGRADES - PHASE 1 CONSTR	25	S2	02	2,418	5,119	0	0	0	7,537	0	7,537	0	0	607	0	6,930	0	0	0	0	0	7,537
0	24	ODOUR CONTROL UPGRADES - PHASE 1 E-CHANGE IN SCOPE	25	S3	04	660	261	134	6	30	1,091	20	1,111	0	0	204	0	907	0	0	0	0	0	1,111
0	25	ODOUR CONTROL UPGRADES - PHASE 1 C-CHANGE IN SCOPE	25	S3	02	2,057	-1,760	1,917	0	0	2,214	0	2,214	0	0	856	0	1,358	0	0	0	0	0	2,214
		Sub-total				5,325	3,823	2,107	56	50	11,361	20	11,381	0	0	1,709	0	9,672	0	0	0	0	0	11,381
WAS906487	HIGHLAND CREEK T.P. - IV YR2004																						
0	22	PCS PLANT SERVICES	CW	S2	04	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1
		Sub-total				1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906492	WET WEATHER FLOW MP																							
0	1	SWM INA/EA	CW	S2	04	740	655	440	110	0	1,945	0	1,945	0	0	157	0	1,788	0	0	0	0	0	1,945
0	14	WWFMP IMPLEMENTATION - DESIGN	CW	S2	04	731	300	0	0	0	1,031	0	1,031	0	0	90	0	941	0	0	0	0	0	1,031
0	41	SWM CONVEYANCE 2012	CW	S2	04	37	0	0	0	0	37	0	37	0	0	3	0	34	0	0	0	0	0	37
0	58	SWM CONVEYANCE 2015	CW	S2	04	785	0	0	0	0	785	0	785	0	0	63	0	722	0	0	0	0	0	785
0	59	STORM WATER POND ASSESSMENT & CLEANING	CW	S2	03	4,394	3,000	3,000	3,000	0	13,394	0	13,394	0	0	0	0	13,394	0	0	0	0	0	13,394
0	60	ASHBRIDGES BAY LANDFORMS	CW	S2	04	3,250	6,300	6,300	5,300	5,300	26,450	6,550	33,000	0	0	0	0	33,000	0	0	0	0	0	33,000
0	84	SWM CONVEYANCE 2017	CW	S2	04	2,229	1,660	646	0	0	4,535	0	4,535	0	0	408	0	4,127	0	0	0	0	0	4,535
0	86	GREEN STREETS	CW	S2	04	1,451	265	180	40	0	1,936	0	1,936	0	0	193	0	1,743	0	0	0	0	0	1,936
0	97	WATERFRONT MODELLING STUDIES	CW	S2	05	25	25	100	100	100	350	190	540	0	0	43	0	497	0	0	0	0	0	540
0	109	SWM CONVEYANCE 2012-CHANGE IN SCOPE	CW	S3	04	-37	0	0	0	0	-37	0	-37	0	0	-3	0	-34	0	0	0	0	0	-37
0	110	GREEN STREETS-CHANGE IN SCOPE	CW	S3	04	-444	973	303	85	100	1,017	0	1,017	0	0	243	0	774	0	0	0	0	0	1,017
0	111	SWM CONVEYANCE 2015-CHANGE IN SCOPE	CW	S3	04	-785	0	0	0	0	-785	0	-785	0	0	-63	0	-722	0	0	0	0	0	-785
0	112	SWM CONVEYANCE 2017-CHANGE IN SCOPE	CW	S3	04	-429	770	265	0	0	606	0	606	0	0	353	0	253	0	0	0	0	0	606
0	113	PUBLIC EDUCATION-CHANGE IN SCOPE	CW	S3	04	535	0	0	0	0	535	0	535	0	0	79	0	456	0	0	0	0	0	535
0	114	SWM INA/EA-CHANGE IN SCOPE	CW	S3	04	77	325	150	-2	0	550	0	550	0	0	212	0	338	0	0	0	0	0	550
0	115	WATERFRONT MODELLING STUDIES-CHANGE IN SCOPE	CW	S3	05	-25	-25	0	0	0	-50	10	-40	0	0	32	0	-72	0	0	0	0	0	-40
0	116	WWFMP IMPLEMENTATION - DESIGN-CHANGE IN SCOPE	CW	S3	04	-633	65	350	250	25	57	25	82	0	0	76	0	6	0	0	0	0	0	82
0	117	STORM WATER POND ASSESSMENT & CLEA-CHANGE IN SCOPE	CW	S3	03	-2,143	343	44	170	2,000	414	0	414	0	0	0	0	414	0	0	0	0	0	414
0	118	ASHBRIDGES BAY LANDFORMS-CHANGE IN SCOPE	CW	S3	04	3,750	17,359	19,984	15,029	14,049	70,171	-5,432	64,739	0	0	0	0	64,739	0	0	0	0	0	64,739
		Sub-total				13,508	32,015	31,762	24,082	21,574	122,941	1,343	124,284	0	0	1,886	0	122,398	0	0	0	0	0	124,284
WAS906495	SEWER ASSET PLANNING																							
0	5	SEWER ASSET PLANNING	CW	S2	03	11,404	8,250	8,000	8,000	2,000	37,654	0	37,654	0	0	3,028	0	34,626	0	0	0	0	0	37,654
0	7	SEWER SYSTEM INSPECTION	CW	S2	03	7,546	8,290	0	0	0	15,836	0	15,836	0	0	0	0	15,836	0	0	0	0	0	15,836
0	21	PPD - INFRASTRUCTURE PLANNING STUDIES	CW	S2	05	150	0	0	0	0	150	0	150	0	0	0	0	150	0	0	0	0	0	150

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906495	SEWER ASSET PLANNING																							
0	39	SEWER SYSTEM INSPECTION-CHANGE IN SCOPE	CW	S3	03	2,454	12,073	20,131	15,400	15,700	65,758	10,500	76,258	0	0	0	0	76,258	0	0	0	0	0	76,258
0	40	SEWER ASSET PLANNING-CHANGE IN SCOPE	CW	S3	03	-5,828	3,696	2,757	1,145	2,850	4,620	1,000	5,620	0	0	298	0	5,322	0	0	0	0	0	5,620
0	41	PPD - INFRASTRUCTURE PLANNING STUD-CHANGE IN SCOPE	CW	S3	05	25	150	0	0	0	175	0	175	0	0	0	0	175	0	0	0	0	0	175
0	42	CORP IT - IDC-CHANGE IN SCOPE	CW	S3	04	150	0	0	0	0	150	0	150	0	0	0	0	150	0	0	0	0	0	150
		Sub-total				15,901	32,459	30,888	24,545	20,550	124,343	11,500	135,843	0	0	3,326	0	132,517	0	0	0	0	0	135,843
WAS906500	NEW SEWER CONSTRUCTION																							
0	5	NEW SEWERS	CW	S2	05	88	500	0	0	0	588	0	588	0	0	371	0	217	0	0	0	0	0	588
0	24	WATERFRONT SANITARY MASTER SERVICING PLAN IMP	CW	S2	05	6,500	6,500	1,500	750	0	15,250	0	15,250	0	0	7,625	0	7,625	0	0	0	0	0	15,250
0	25	DOWNSVIEW LANDS EXTERNAL UPGRADES	CW	S2	05	0	1,450	5,000	1,550	0	8,000	0	8,000	0	0	8,000	0	0	0	0	0	0	0	8,000
0	36	SHEPPARD SANITARY SEWER AT EAST DON STS	CW	S2	05	2,000	1,000	0	0	0	3,000	0	3,000	0	0	1,866	0	1,134	0	0	0	0	0	3,000
0	40	WATERFRONT SANITARY MASTER SERVICI-CHANGE IN SCOPE	CW	S3	05	-5,150	1,116	11,559	22,437	10,851	40,813	4,676	45,489	0	0	11,152	0	34,337	0	0	0	0	0	45,489
0	41	SHEPPARD SANITARY SEWER AT EAST DO-CHANGE IN SCOPE	CW	S3	05	-2,000	-1,000	1,400	1,800	800	1,000	0	1,000	0	0	623	0	377	0	0	0	0	0	1,000
0	42	NEW SEWERS-CHANGE IN SCOPE	CW	S3	05	-38	0	0	0	0	-38	0	-38	0	0	179	0	-217	0	0	0	0	0	-38
		Sub-total				1,400	9,566	19,459	26,537	11,651	68,613	4,676	73,289	0	0	29,816	0	43,473	0	0	0	0	0	73,289
WAS906735	DIST SEWER REHAB OPS YR2005																							
0	10	GROUP 1 SEWAGE PUMPING STATION UPGRADES	CW	S2	03	16	20	0	0	0	36	0	36	0	0	4	0	32	0	0	0	0	0	36
0	20	GROUP 1 SEWAGE PUMPING STATION UPG-CHANGE IN SCOPE	CW	S3	03	-1	1	0	0	0	0	0	0	0	0	1	0	-1	0	0	0	0	0	0
		Sub-total				15	21	0	0	0	36	0	36	0	0	5	0	31	0	0	0	0	0	36
WAS906741	HIGHLAND CREEK TP YR2005																							
0	1	WAS THICKENING AND DEWATERING - ENG	CW	S2	03	2	0	0	0	0	2	0	2	0	0	0	0	2	0	0	0	0	0	2
0	21	WAS THICKENING AND DEWATERING - EN-CHANGE IN SCOPE	CW	S3	03	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1
		Sub-total				3	0	0	0	0	3	0	3	0	0	0	0	3	0	0	0	0	0	3
WAS906742	HUMBER TP YR2005																							
0	8	ODOUR CONTROL ENGINEERING	CW	S2	04	374	90	20	0	0	484	0	484	0	0	0	0	484	0	0	0	0	0	484

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906742	HUMBER TP YR2005																						
0 58	ODOUR CONTROL ENGINEERING-CHANGE IN SCOPE		CW	S3	04	383	188	-20	0	0	551	0	551	0	0	156	0	395	0	0	0	0	0	551
	Sub-total					757	278	0	0	0	1,035	0	1,035	0	0	156	0	879	0	0	0	0	0	1,035
WAS906743	ASHRIDGES BAY TP YR2005																						
0 1	MISC MECH ENGINEERING		CW	S2	03	720	80	0	0	0	800	0	800	0	0	68	0	732	0	0	0	0	0	800
0 7	SERVICE AIR UPGRADES		CW	S2	03	1,166	0	0	0	0	1,166	0	1,166	0	0	0	0	1,166	0	0	0	0	0	1,166
0 63	MISC MECH ENGINEERING-CHANGE IN SCOPE		CW	S3	03	-400	380	35	9	0	24	0	24	0	0	53	0	-29	0	0	0	0	0	24
0 64	SERVICE AIR UPGRADES-CHANGE IN SCOPE		CW	S3	03	-1,132	1,289	0	0	0	157	0	157	0	0	0	0	157	0	0	0	0	0	157
	Sub-total					354	1,749	35	9	0	2,147	0	2,147	0	0	121	0	2,026	0	0	0	0	0	2,147
WAS906755	WESTERN BEACHES RETROFIT																						
0 1	WESTERN BEACHES RETROFIT		CW	S2	03	8,902	6,377	15	86	0	15,380	0	15,380	0	0	1,481	0	13,899	0	0	0	0	0	15,380
0 17	WESTERN BEACHES RETROFIT-CHANGE IN SCOPE		CW	S3	03	-5,300	2,593	19,935	11,309	50	28,587	0	28,587	0	0	5,024	0	23,563	0	0	0	0	0	28,587
	Sub-total					3,602	8,970	19,950	11,395	50	43,967	0	43,967	0	0	6,505	0	37,462	0	0	0	0	0	43,967
WAS906926	OPERATIONAL SUPPORT																						
0 6	FACILITY RENOVATION		CW	S2	04	1,015	750	0	0	0	1,765	0	1,765	0	0	0	0	1,765	0	0	0	0	0	1,765
0 23	EMP MONITORING NEEDS		CW	S2	04	50	0	0	0	0	50	0	50	0	0	0	0	50	0	0	0	0	0	50
0 40	PCS UPGRADES FOR WASTEWATER TREATMENT		CW	S2	04	6,842	6,100	4,065	25	0	17,032	0	17,032	0	0	0	0	17,032	0	0	0	0	0	17,032
0 100	DIVISIONAL SECURITY		CW	S2	04	1,135	0	0	0	0	1,135	0	1,135	0	0	0	0	1,135	0	0	0	0	0	1,135
0 105	BACKUP POWER - FINCH AND DEE		CW	S2	04	0	0	500	0	0	500	0	500	0	0	0	0	500	0	0	0	0	0	500
0 107	OFFICE MODERNIZATION - MH18		CW	S2	04	450	975	0	0	0	1,425	0	1,425	0	0	0	0	1,425	0	0	0	0	0	1,425
0 114	DISTRICT OPERATIONS FACILITY UPGRADES		CW	S2	04	250	1,000	2,000	400	0	3,650	0	3,650	0	0	0	0	3,650	0	0	0	0	0	3,650
0 122	435 KIPLING AVENUE		CW	S2	04	2,020	3,750	0	0	0	5,770	0	5,770	0	0	0	0	5,770	0	0	0	0	0	5,770
0 123	PCS UPGRADES FOR WASTEWATER TREATM-CHANGE IN SCOPE		CW	S3	04	-4,746	-3,086	-290	0	0	-8,122	0	-8,122	0	0	0	0	-8,122	0	0	0	0	0	-8,122
0 124	FACILITY RENOVATION-CHANGE IN SCOPE		CW	S3	04	1,823	1,313	267	272	120	3,795	0	3,795	0	0	0	0	3,795	0	0	0	0	0	3,795
0 126	DIVISIONAL SECURITY-CHANGE IN SCOPE		CW	S3	04	47	20	0	0	0	67	0	67	0	0	0	0	67	0	0	0	0	0	67
0 127	BACKUP POWER - FINCH AND DEE-CHANGE IN SCOPE		CW	S3	04	0	0	-400	400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906926	OPERATIONAL SUPPORT																						
0	128	OFFICE MODERNIZATION - MH18-CHANGE IN SCOPE	CW	S3	04	-450	-975	0	0	0	-1,425	0	-1,425	0	0	0	0	-1,425	0	0	0	0	-1,425
0	129	435 KIPLING AVENUE-CHANGE IN SCOPE	CW	S3	04	-1,870	-1,850	3,750	0	0	30	0	30	0	0	0	0	30	0	0	0	0	30
0	130	EMP MONITORING NEEDS-CHANGE IN SCOPE	CW	S3	04	0	50	50	0	0	100	0	100	0	0	0	0	100	0	0	0	0	100
		Sub-total				6,566	8,047	9,942	1,097	120	25,772	0	25,772	0	0	0	0	25,772	0	0	0	0	25,772
WAS906958	SEWER SYSTEM REHABILITATION																						
0	2	GROUPS 2, 3 & 4 SEWAGE PUMPING STATION UPGRADES	CW	S2	03	4	0	0	0	0	4	0	4	0	0	1	0	3	0	0	0	0	4
0	5	CCTV INSPECTION	CW	S2	03	1,048	1,100	0	0	0	2,148	0	2,148	0	0	0	0	2,148	0	0	0	0	2,148
0	8	SPS SCADA UPGRADES - ENGINEERING	CW	S2	04	517	0	0	0	0	517	0	517	0	0	42	0	475	0	0	0	0	517
0	9	SEWER REHABILITATION	CW	S2	03	23,854	13,836	5,500	4,700	0	47,890	0	47,890	0	0	0	0	47,890	0	0	0	0	47,890
0	23	SEWAGE PUMPING STATION STANDBY POWER	CW	S2	02	117	0	0	0	0	117	0	117	0	0	9	0	108	0	0	0	0	117
0	24	GROUP 5 SEWAGE PUMPING STATION UPGRADES	CW	S2	05	8,700	4,507	80	0	0	13,287	0	13,287	0	0	1,214	0	12,073	0	0	0	0	13,287
0	79	SEWER REHABILITATION - CWD	CW	S2	03	55,323	21,580	2,743	2,743	0	82,389	0	82,389	0	0	0	0	82,389	0	0	0	0	82,389
0	98	SEWER REHABILITATION - CWD-CHANGE IN SCOPE	CW	S3	03	-30,270	18,983	49,496	15,000	0	53,209	0	53,209	0	0	0	0	53,209	0	0	0	0	53,209
0	99	GROUP 5 SEWAGE PUMPING STATION UPG-CHANGE IN SCOPE	CW	S3	05	-2,254	1,001	1,698	0	0	445	0	445	0	0	818	0	-373	0	0	0	0	445
0	100	SEWAGE PUMPING STATION STANDBY POW-CHANGE IN SCOPE	CW	S3	02	-102	103	0	0	0	1	0	1	0	0	8	0	-7	0	0	0	0	1
0	101	SPS SCADA UPGRADES - ENGINEERING-CHANGE IN SCOPE	CW	S3	04	-324	69	0	0	0	-255	0	-255	0	0	-3	0	-252	0	0	0	0	-255
0	102	SEWER REHABILITATION-CHANGE IN SCOPE	CW	S3	03	2,860	14,837	6,816	4,300	4,000	32,813	200	33,013	0	0	0	0	33,013	0	0	0	0	33,013
0	103	CCTV INSPECTION-CHANGE IN SCOPE	CW	S3	03	68	49	0	0	0	117	0	117	0	0	0	0	117	0	0	0	0	117
0	105	SEWER REHABILITATION - CUT REPAIRS	CW	S4	03	2,995	4,001	4,001	641	0	11,638	0	11,638	0	0	0	0	11,638	0	0	0	0	11,638
0	106	GROUPS 2, 3 & 4 SEWAGE PUMPING STA-CHANGE IN SCOPE	CW	S3	03	2	0	0	0	0	2	0	2	0	0	0	0	2	0	0	0	0	2
		Sub-total				62,538	80,066	70,334	27,384	4,000	244,322	200	244,522	0	0	2,089	0	242,433	0	0	0	0	244,522
WAS906960	STREAM RESTORATION & EROSION CONTRC																						
0	7	STREAM RESTORATION	CW	S2	03	73	0	0	0	0	73	0	73	0	0	6	0	67	0	0	0	0	73
0	41	WATERCOURSE - ENGINEERING	CW	S2	03	972	1,300	900	1,040	665	4,877	795	5,672	0	0	441	0	5,231	0	0	0	0	5,672

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Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By										
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906960	STREAM RESTORATION & EROSION CONTRC																							
0	43	PARTNER PROJECTS	CW	S2	03	600	600	200	0	0	1,400	0	1,400	0	0	112	0	1,288	0	0	0	0	0	1,400
0	45	WATERCOURSE - CONSTRUCTION	CW	S4	03	850	5,470	2,045	1,500	1,450	11,315	1,700	13,015	0	0	0	0	13,015	0	0	0	0	0	13,015
0	51	STUDIES, EAs, MASTER PLANS	CW	S2	03	3,017	1,562	593	75	0	5,247	0	5,247	0	0	461	0	4,786	0	0	0	0	0	5,247
0	52	CRITICAL REPAIRS	CW	S2	03	3,159	1,958	2,223	673	548	8,561	30	8,591	0	0	668	0	7,923	0	0	0	0	0	8,591
0	53	EMERGENCY EROSION CONTROL	CW	S2	03	300	300	300	150	0	1,050	0	1,050	0	0	84	0	966	0	0	0	0	0	1,050
0	62	STUDIES, EAs, MASTER PLANS -CHANGE IN SCOPE	CW	S3	03	-1,770	775	845	275	175	300	75	375	0	0	372	0	3	0	0	0	0	0	375
0	63	EMERGENCY EROSION CONTROL-CHANGE IN SCOPE	CW	S3	03	2,384	2,572	2,691	2,904	2,710	13,261	615	13,876	0	0	-84	0	13,960	0	0	0	0	0	13,876
0	64	STREAM RESTORATION -CHANGE IN SCOPE	CW	S3	03	-22	0	0	0	0	-22	0	-22	0	0	-6	0	-16	0	0	0	0	0	-22
0	65	CRITICAL REPAIRS-CHANGE IN SCOPE	CW	S3	03	-824	1,416	299	517	-523	885	-5	880	0	0	-668	0	1,548	0	0	0	0	0	880
0	66	PARTNER PROJECTS-CHANGE IN SCOPE	CW	S3	03	0	0	0	0	0	0	0	0	0	0	-112	0	112	0	0	0	0	0	0
0	67	WATERCOURSE - ENGINEERING-CHANGE IN SCOPE	CW	S3	03	-378	51	753	763	990	2,179	1,415	3,594	0	0	-441	0	4,035	0	0	0	0	0	3,594
		Sub-total				8,361	16,004	10,849	7,897	6,015	49,126	4,625	53,751	0	0	833	0	52,918	0	0	0	0	0	53,751
WAS906966	SWM TRCA FUNDING																							
0	24	TORONTO WATER TRANSFER TO TRCA CAP-CHANGE IN SCOPE	CW	S3	04	4,491	0	0	0	0	4,491	0	4,491	0	0	674	0	3,817	0	0	0	0	0	4,491
		Sub-total				4,491	0	0	0	0	4,491	0	4,491	0	0	674	0	3,817	0	0	0	0	0	4,491
WAS906968	ENGINEERING																							
0	2	CONSULTING FEES	CW	S2	03	16,913	6,921	2,301	1,145	710	27,990	996	28,986	0	0	0	0	28,986	0	0	0	0	0	28,986
0	59	ROAD RESTORATION	CW	S2	03	729	0	0	0	0	729	0	729	0	0	0	0	729	0	0	0	0	0	729
0	70	CONSULTING FEES-CHANGE IN SCOPE	CW	S3	03	-8,509	10,290	21,135	16,976	7,013	46,905	584	47,489	0	0	0	0	47,489	0	0	0	0	0	47,489
0	71	ECS SALARIES-CHANGE IN SCOPE	CW	S3	03	14,491	0	0	0	0	14,491	0	14,491	0	0	0	0	14,491	0	0	0	0	0	14,491
0	72	TW SALARIES-CHANGE IN SCOPE	CW	S3	03	1,089	0	0	0	0	1,089	0	1,089	0	0	0	0	1,089	0	0	0	0	0	1,089
0	73	ROAD RESTORATION-CHANGE IN SCOPE	CW	S3	03	-59	0	0	0	0	-59	0	-59	0	0	0	0	-59	0	0	0	0	0	-59
		Sub-total				24,654	17,211	23,436	18,121	7,723	91,145	1,580	92,725	0	0	0	0	92,725	0	0	0	0	0	92,725
WAS906973	SEWER REPLACEMENT PROGRAM																							
0	25	2012 SEWER REPLC	CW	S2	03	325	0	0	0	0	325	0	325	0	0	0	0	325	0	0	0	0	0	325

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906973	SEWER REPLACEMENT PROGRAM																							
0	35	2013 SEWER REPLC	CW	S2	03	10	0	0	0	0	10	0	10	0	0	1	0	9	0	0	0	0	0	10
0	36	SEWER REPLC - 2014 PROGRAM	CW	S2	03	28	0	0	0	0	28	0	28	0	0	2	0	26	0	0	0	0	0	28
0	46	WATERFRONT STORMWATER INFRASTRUCTURE	CW	S2	04	3,250	0	0	0	0	3,250	0	3,250	0	0	2,017	0	1,233	0	0	0	0	0	3,250
0	47	EBF REPORT	CW	S2	04	1,070	0	0	0	0	1,070	0	1,070	0	0	701	0	369	0	0	0	0	0	1,070
0	52	SEWER REPLACEMENT - METROLINX	CW	S2	03	1,213	1,966	1,916	800	0	5,895	0	5,895	0	0	0	0	5,895	0	0	0	0	0	5,895
0	62	SEWER REPLC - 2015 PROGRAM	CW	S2	03	604	0	0	0	0	604	0	604	0	0	48	0	556	0	0	0	0	0	604
0	71	SEWER REPLC - 2016 PROGRAM	CW	S2	03	3,694	0	0	0	0	3,694	0	3,694	0	0	297	0	3,397	0	0	0	0	0	3,694
0	75	FORCEMAIN REPLACEMENT - 2016	CW	S2	03	10,354	10,514	47	0	0	20,915	0	20,915	0	0	0	0	20,915	0	0	0	0	0	20,915
0	78	SEWER REPLC - 2017 PROGRAM	CW	S2	03	879	60	0	0	0	939	0	939	0	0	75	0	864	0	0	0	0	0	939
0	79	SEWER REPLC - 2018 PROGRAM	CW	S2	03	1,938	2,820	129	30	0	4,917	0	4,917	0	0	393	0	4,524	0	0	0	0	0	4,917
0	98	SEWER REPLC - 2019 PROGRAM	CW	S2	03	18,382	5,927	2,491	0	0	26,800	0	26,800	0	0	2,158	0	24,642	0	0	0	0	0	26,800
0	100	CSP RENEWAL	CW	S2	03	5,812	1,019	0	0	0	6,831	0	6,831	0	0	543	0	6,288	0	0	0	0	0	6,831
0	102	SEWER REPLC - 2016 PROGRAM-CHANGE IN SCOPE	CW	S3	03	-3,465	1,947	0	0	0	-1,518	0	-1,518	0	0	-129	0	-1,389	0	0	0	0	0	-1,518
0	103	SEWER REPLC - 2017 PROGRAM-CHANGE IN SCOPE	CW	S3	03	-721	154	0	0	0	-567	0	-567	0	0	-47	0	-520	0	0	0	0	0	-567
0	104	SEWER REPLC - 2018 PROGRAM-CHANGE IN SCOPE	CW	S3	03	-1,427	-2,420	321	-30	0	-3,556	0	-3,556	0	0	-288	0	-3,268	0	0	0	0	0	-3,556
0	105	SEWER REPLC - 2019 PROGRAM-CHANGE IN SCOPE	CW	S3	03	-9,821	6,660	15,588	4,712	2,469	19,608	100	19,708	0	0	-130	0	19,838	0	0	0	0	0	19,708
0	106	2012 SEWER REPLC-CHANGE IN SCOPE	CW	S3	03	-320	225	0	0	0	-95	0	-95	0	0	0	0	-95	0	0	0	0	0	-95
0	107	CSP RENEWAL-CHANGE IN SCOPE	CW	S3	03	-1,639	659	400	0	0	-580	0	-580	0	0	-62	0	-518	0	0	0	0	0	-580
0	108	EBF REPORT-CHANGE IN SCOPE	CW	S3	04	-521	1,000	0	0	0	479	0	479	0	0	43	0	436	0	0	0	0	0	479
0	109	WATERFRONT STORMWATER INFRASTRUCTU-CHANGE IN SCOPE	CW	S3	04	-2,250	825	0	0	0	-1,425	0	-1,425	0	0	-1,139	0	-286	0	0	0	0	0	-1,425
0	110	SEWER REPLC - 2014 PROGRAM-CHANGE IN SCOPE	CW	S3	03	-9	0	0	0	0	-9	0	-9	0	0	-1	0	-8	0	0	0	0	0	-9
0	111	SEWER REPLC - 2015 PROGRAM-CHANGE IN SCOPE	CW	S3	03	-394	150	0	0	0	-244	0	-244	0	0	-20	0	-224	0	0	0	0	0	-244
0	114	SEWER REPLACEMENT - METROLINX-CHANGE IN SCOPE	CW	S3	03	-600	291	241	0	0	-68	0	-68	0	0	0	0	-68	0	0	0	0	0	-68

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Sub-Priority	Project No. / Sub-Proj No.	Project Name / Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906973	SEWER REPLACEMENT PROGRAM																						
0	115	FORCEMAIN REPLACEMENT - 2016-CHANGE IN SCOPE	CW	S3	03	-6,680	-3,231	5,635	5,000	0	724	0	724	0	0	0	0	724	0	0	0	0	0	724
		Sub-total				19,712	28,566	26,768	10,512	2,469	88,027	100	88,127	0	0	4,462	0	83,665	0	0	0	0	0	88,127
WAS906980	ASHBRIDGES BAY T.P. YR2006																						
0	9	DEWATERING EQUIPMENT UPGRADES	CW	S2	03	100	0	0	0	0	100	0	100	0	0	8	0	92	0	0	0	0	0	100
0	45	DEWATERING EQUIPMENT UPGRADES-CHANGE IN SCOPE	CW	S3	03	1	0	0	0	0	1	0	1	0	0	7	0	-6	0	0	0	0	0	1
		Sub-total				101	0	0	0	0	101	0	101	0	0	15	0	86	0	0	0	0	0	101
WAS906981	HIGHLAND CREEK WWTP UPGRADES																						
0	1	PROCESS & FACILITY UPGRADE	CW	S2	04	2,598	1,607	1,650	1,600	85	7,540	0	7,540	0	0	0	0	7,540	0	0	0	0	0	7,540
0	3	BIOSOLIDS TREATMENT UPGRADES	CW	S2	03	299	31	0	0	0	330	0	330	0	0	31	0	299	0	0	0	0	0	330
0	5	TRANSFORMERS AND SWITCHGEAR	CW	S2	05	198	800	500	0	0	1,498	0	1,498	0	0	120	0	1,378	0	0	0	0	0	1,498
0	7	MECH & ELECTRICAL UPGRADE ENGINEERING	CW	S2	03	60	0	0	0	0	60	0	60	0	0	0	0	60	0	0	0	0	0	60
0	8	DIGESTER GAS SYSTEM UPGRADES	CW	S2	03	3,668	5,482	0	0	0	9,150	0	9,150	0	0	0	0	9,150	0	0	0	0	0	9,150
0	23	ELECTRICAL UPGRADES - ECAR	CW	S2	03	5,122	0	0	0	0	5,122	0	5,122	0	0	0	0	5,122	0	0	0	0	0	5,122
0	32	CEPA COMPLIANCE - CL NOTICE - HCTP	CW	S2	02	5,561	8,900	8,532	50	0	23,043	0	23,043	0	0	0	0	23,043	0	0	0	0	0	23,043
0	80	DIGESTER CLEANING, REHAB AND IMPROVEMENTS #4-7	CW	S2	03	189	46	15	14	0	264	0	264	0	0	0	0	264	0	0	0	0	0	264
0	92	LIQUID TRAIN REPAIRS - PHASE 1	CW	S2	03	36,371	35,040	19,000	10,000	0	100,411	0	100,411	0	0	0	0	100,411	0	0	0	0	0	100,411
0	102	LIQUID TRAIN - ENGINEERING	CW	S2	03	4,155	5,400	5,100	2,640	2,640	19,935	26,947	46,882	0	0	0	0	46,882	0	0	0	0	0	46,882
0	123	COMMUNICATION SYSTEM	CW	S2	04	600	2,250	2,220	20	10	5,100	0	5,100	0	0	0	0	5,100	0	0	0	0	0	5,100
0	152	DIGESTER CLEANING, REHAB AND IMPRO-CHANGE IN SCOPE	CW	S3	03	341	-16	52	-14	0	363	0	363	0	0	0	0	363	0	0	0	0	0	363
0	153	LIQUID TRAIN REPAIRS - PHASE 1-CHANGE IN SCOPE	CW	S3	03	-33,451	-7,110	8,650	21,817	36,150	26,056	19,690	45,746	0	0	0	0	45,746	0	0	0	0	0	45,746
0	154	BIOSOLIDS TREATMENT UPGRADES -CHANGE IN SCOPE	CW	S3	03	-240	290	0	0	0	50	0	50	0	0	26	0	24	0	0	0	0	0	50
0	155	DIGESTER GAS SYSTEM UPGRADES-CHANGE IN SCOPE	CW	S3	03	432	-347	13	0	0	98	0	98	0	0	0	0	98	0	0	0	0	0	98
0	156	TRANSFORMERS AND SWITCHGEAR-CHANGE IN SCOPE	CW	S3	05	2	0	0	0	0	2	0	2	0	0	102	0	-100	0	0	0	0	0	2
0	157	PROCESS & FACILITY UPGRADE-CHANGE IN SCOPE	CW	S3	04	-1,644	766	-45	-44	1,515	548	1,035	1,583	0	0	0	0	1,583	0	0	0	0	0	1,583

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906981	HIGHLAND CREEK WWTP UPGRADES																						
0	158	ELECTRICAL UPGRADES - ECAR-CHANGE IN SCOPE	CW	S3	03	-4,692	46	0	0	0	-4,646	0	-4,646	0	0	0	0	-4,646	0	0	0	0	0	-4,646
0	159	LIQUID TRAIN - ENGINEERING-CHANGE IN SCOPE	CW	S3	03	-1,705	115	50	700	0	-840	2,509	1,669	0	0	0	0	1,669	0	0	0	0	0	1,669
0	161	MECH & ELECTRICAL UPGRADE ENGINEER-CHANGE IN SCOPE	CW	S3	03	-60	0	0	0	0	-60	0	-60	0	0	0	0	-60	0	0	0	0	0	-60
0	162	CEPA COMPLIANCE - CL NOTICE - HCTP-CHANGE IN SCOPE	CW	S3	02	-4,661	-2,673	-32	7,406	37	77	37	114	0	0	0	0	114	0	0	0	0	0	114
0	163	COMMUNICATION SYSTEM-CHANGE IN SCOPE	CW	S3	04	-250	-1,930	-1,270	3,330	490	370	0	370	0	0	0	0	370	0	0	0	0	0	370
		Sub-total				12,893	48,697	44,435	47,519	40,927	194,471	50,218	244,689	0	0	279	0	244,410	0	0	0	0	0	244,689
WAS906982	HUMBER WWTP UPGRADES																						
0	2	CHLORINE FACILITY UPGRADE	CW	S2	01	718	0	0	0	0	718	0	718	0	0	0	0	718	0	0	0	0	0	718
0	6	NEW SUBSTATION	CW	S2	03	77	0	0	0	0	77	0	77	0	0	0	0	77	0	0	0	0	0	77
0	7	ELECTRICAL CONDITION ASSESSMENT RECOMMENDATIONS	CW	S2	01	2,285	23	23	0	0	2,331	0	2,331	0	0	0	0	2,331	0	0	0	0	0	2,331
0	29	ADMIN BUILDING EXPANSION - ENGINEERING	CW	S2	04	710	800	454	427	0	2,391	0	2,391	0	0	0	0	2,391	0	0	0	0	0	2,391
0	52	HVAC UPGRADES	CW	S2	03	5,978	2,322	17	0	0	8,317	0	8,317	0	0	0	0	8,317	0	0	0	0	0	8,317
0	81	BLOWER REPLACEMENT	CW	S2	03	5	0	0	100	200	305	12,550	12,855	0	0	0	0	12,855	0	0	0	0	0	12,855
0	82	DIGESTERS CLEANING REHAB	CW	S2	04	5,400	6,500	6,000	4,000	3,000	24,900	0	24,900	0	0	0	0	24,900	0	0	0	0	0	24,900
0	95	REPLACEMENT OF WASTE GAS BURNERS	CW	S2	03	8,211	5,500	2,770	40	0	16,521	0	16,521	0	0	0	0	16,521	0	0	0	0	0	16,521
0	99	WET WEATHER FLOW	CW	S2	04	540	600	2,500	4,750	4,500	12,890	0	12,890	0	0	0	0	12,890	0	0	0	0	0	12,890
0	107	MESI UPGRADES	CW	S2	03	600	500	500	500	0	2,100	0	2,100	0	0	0	0	2,100	0	0	0	0	0	2,100
0	114	FIELD OFFICE	CW	S2	03	324	0	0	0	0	324	0	324	0	0	0	0	324	0	0	0	0	0	324
0	115	ADMIN BUILDING EXPANSION - CONSTRUCTION	CW	S2	03	1,568	1,500	1,500	1,550	0	6,118	0	6,118	0	0	0	0	6,118	0	0	0	0	0	6,118
0	116	SERVICE REHAB AND UPGRADES	CW	S2	03	600	500	2,500	4,750	4,500	12,850	0	12,850	0	0	0	0	12,850	0	0	0	0	0	12,850
0	129	ELECTRICAL CONDITION ASSESSMENT RE-CHANGE IN SCOPE	CW	S3	01	-2,200	2,167	1	0	0	-32	0	-32	0	0	0	0	-32	0	0	0	0	0	-32
0	130	ADMIN BUILDING EXPANSION - CONSTRU-CHANGE IN SCOPE	CW	S3	03	-168	-400	-400	600	0	-368	0	-368	0	0	0	0	-368	0	0	0	0	0	-368
0	131	ADMIN BUILDING EXPANSION - ENGINEE-CHANGE IN SCOPE	CW	S3	04	69	-195	-105	-400	0	-631	0	-631	0	0	0	0	-631	0	0	0	0	0	-631
0	132	CHLORINE FACILITY UPGRADE-CHANGE IN SCOPE	CW	S3	01	-718	0	0	0	0	-718	0	-718	0	0	0	0	-718	0	0	0	0	0	-718

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Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS906982	HUMBER WWTP UPGRADES																						
0	133	DIGESTERS CLEANING REHAB-CHANGE IN SCOPE	CW	S3	04	-2,400	0	1,000	1,500	0	100	0	100	0	0	0	0	100	0	0	0	0	100
0	134	MESI UPGRADES-CHANGE IN SCOPE	CW	S3	03	-49	53	55	56	0	115	0	115	0	0	0	0	115	0	0	0	0	115
0	136	SECURITY UPGRADES	CW	S4	01	250	2,950	400	0	0	3,600	0	3,600	0	0	0	0	3,600	0	0	0	0	3,600
0	137	NEW SUBSTATION-CHANGE IN SCOPE	CW	S3	03	29	45	0	0	0	74	0	74	0	0	0	0	74	0	0	0	0	74
0	138	FLOOD PROTECTION-CHANGE IN SCOPE	CW	S3	02	300	275	0	0	0	575	0	575	0	0	0	0	575	0	0	0	0	575
0	139	HVAC UPGRADES-CHANGE IN SCOPE	CW	S3	03	-2,038	-56	2,442	0	0	348	0	348	0	0	0	0	348	0	0	0	0	348
0	140	BLOWER REPLACEMENT-CHANGE IN SCOPE	CW	S3	03	0	30	0	0	0	30	0	30	0	0	0	0	30	0	0	0	0	30
0	141	FIELD OFFICE-CHANGE IN SCOPE	CW	S3	03	-67	110	0	0	0	43	0	43	0	0	0	0	43	0	0	0	0	43
0	142	REPLACEMENT OF WASTE GAS BURNERS-CHANGE IN SCOPE	CW	S3	03	-4,753	600	4,150	288	0	285	0	285	0	0	0	0	285	0	0	0	0	285
0	143	WET WEATHER FLOW-CHANGE IN SCOPE	CW	S3	04	-490	87	-2,000	-1,000	0	-3,403	3,500	97	0	0	0	0	97	0	0	0	0	97
0	144	SERVICE REHAB AND UPGRADES-CHANGE IN SCOPE	CW	S3	03	0	400	3,800	3,350	3,600	11,150	5,450	16,600	0	0	0	0	16,600	0	0	0	0	16,600
		Sub-total				14,781	24,311	25,607	20,511	15,800	101,010	21,500	122,510	0	0	0	0	122,510	0	0	0	0	122,510
WAS906994	HIGHLAND CREEK WWTP - SOLIDS & GAS HA																						
0	1	HIGHLAND CREEK WWTP - BMP IMPLEMENTATION	CW	S2	04	3,220	3,000	2,200	2,000	2,000	12,420	4,450	16,870	0	0	1,407	0	15,463	0	0	0	0	16,870
0	3	WAS THICKENING - CONSTR	CW	S2	03	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	1
0	8	HIGHLAND CREEK WWTP - BMP IMPLEMENTATION	CW	S2	04	78	3,000	25,000	25,000	25,000	78,078	28,920	106,998	0	0	8,611	0	98,387	0	0	0	0	106,998
0	22	HIGHLAND CREEK WWTP - BMP IMPLEMEN-CHANGE IN SCOPE	CW	S3	04	-1,170	-400	1,560	100	0	90	1,140	1,230	0	0	1,271	0	-41	0	0	0	0	1,230
0	23	HIGHLAND CREEK WWTP - BMP IMPLEMEN-CHANGE IN SCOPE	CW	S3	04	5,922	1,000	-16,500	-4,410	-5,000	-18,988	19,000	12	0	0	7,223	0	-7,211	0	0	0	0	12
		Sub-total				8,051	6,600	12,260	22,690	22,000	71,601	53,510	125,111	0	0	18,512	0	106,599	0	0	0	0	125,111
WAS907038	Land Acquisition for Source Water Protect																						
0	25	TRCA - SCARBOROUGH WATERFRONT WEST EA	CW	S2	04	800	0	0	0	0	800	0	800	0	0	64	0	736	0	0	0	0	800
0	33	TRCA - SCARBOROUGH WATERFRONT WEST-CHANGE IN SCOPE	CW	S3	04	0	0	0	0	0	0	0	0	0	0	54	0	-54	0	0	0	0	0
0	34	TRCA - CRITICAL EROSION SITES-CHANGE IN SCOPE	CW	S3	04	9,500	0	0	0	0	9,500	0	9,500	0	0	0	0	9,500	0	0	0	0	9,500
		Sub-total				10,300	0	0	0	0	10,300	0	10,300	0	0	118	0	10,182	0	0	0	0	10,300
WAS907097	ASHBRIDGES BAY WWTP - BUILDING SERVIC																						

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS907097	ASHBRIDGES BAY WWTP - BUILDING SERVIC																						
0	7	CONTROLLED SUBSTANCE IDENTIFICATION AND ABATEMENT	CW	S2	02	100	100	0	0	0	200	0	200	0	0	0	0	200	0	0	0	0	0	200
0	19	BIO GAS UTILIZATION	CW	S2	04	850	1,000	1,000	2,000	2,000	6,850	1,150	8,000	0	0	0	0	8,000	0	0	0	0	0	8,000
0	21	BLOWER BLDG & OLD NORTH SUBSTATION IMPROVEMENTS	14	S2	04	6,321	5,474	23	0	0	11,818	0	11,818	0	0	0	0	11,818	0	0	0	0	0	11,818
0	64	GROVE LANDSCAPING - PHASE 1	CW	S2	04	117	7	0	0	0	124	0	124	0	0	0	0	124	0	0	0	0	0	124
0	68	BLOWER BLDG & OLD NORTH SUBSTATION-CHANGE IN SCOPE	14	S3	04	-3,956	-1,699	3,690	0	0	-1,965	0	-1,965	0	0	0	0	-1,965	0	0	0	0	0	-1,965
0	69	BIO GAS UTILIZATION-CHANGE IN SCOPE	CW	S3	04	-800	-800	-200	-1,000	-1,000	-3,800	4,000	200	0	0	0	0	200	0	0	0	0	0	200
0	70	CONTROLLED SUBSTANCE IDENTIFICATIO-CHANGE IN SCOPE	CW	S3	02	-100	-100	0	0	0	-200	0	-200	0	0	0	0	-200	0	0	0	0	0	-200
0	71	GROVE LANDSCAPING - PHASE 1-CHANGE IN SCOPE	CW	S3	04	-7	0	0	0	0	-7	0	-7	0	0	0	0	-7	0	0	0	0	0	-7
		Sub-total				2,525	3,982	4,513	1,000	1,000	13,020	5,150	18,170	0	0	0	0	18,170	0	0	0	0	0	18,170
WAS907098	ASHBRIDGES BAY WWTP - EFFLUENT SYSTE																						
0	1	DISINFECTION ENGINEERING	CW	S2	02	4,900	1,550	1,075	492	75	8,092	58	8,150	0	0	657	0	7,493	0	0	0	0	0	8,150
0	2	OUTFALL CONSTRUCTION	CW	S2	02	30,000	52,000	57,000	62,000	52,000	253,000	69,000	322,000	0	0	25,914	0	296,086	0	0	0	0	0	322,000
0	13	OUTFALL ASSESSMENT	CW	S2	02	57	0	0	0	0	57	0	57	0	0	5	0	52	0	0	0	0	0	57
0	14	OUTFALL ENGINEERING	CW	S2	02	5,730	5,863	3,400	2,500	3,100	20,593	4,419	25,012	0	0	2,012	0	23,000	0	0	0	0	0	25,012
0	15	DISINFECTION SYSTEM CONSTRUCTION	CW	S2	02	89,633	70,135	50,000	41,000	0	250,768	0	250,768	0	0	21,497	0	229,271	0	0	0	0	0	250,768
0	31	OUTFALL - SITE PREP	CW	S2	02	31	0	0	0	0	31	0	31	0	0	5	0	26	0	0	0	0	0	31
0	37	OUTFALL ASSESSMENT-CHANGE IN SCOPE	CW	S3	02	-57	0	0	0	0	-57	0	-57	0	0	-5	0	-52	0	0	0	0	0	-57
0	38	DISINFECTION SYSTEM CONSTRUCTION-CHANGE IN SCOPE	CW	S3	02	-54,498	-20,000	8,135	4,435	0	-61,928	0	-61,928	0	0	6,445	0	-68,373	0	0	0	0	0	-61,928
0	39	DISINFECTION ENGINEERING-CHANGE IN SCOPE	CW	S3	02	-3,006	1,131	1,000	1,000	0	125	0	125	0	0	568	0	-443	0	0	0	0	0	125
0	40	OUTFALL CONSTRUCTION-CHANGE IN SCOPE	CW	S3	02	5,000	8,500	8,000	-11,959	-6,959	2,582	-51,982	-49,400	0	0	14,421	0	-63,821	0	0	0	0	0	-49,400
0	41	OUTFALL ENGINEERING-CHANGE IN SCOPE	CW	S3	02	-2,604	-2,563	-500	400	1,000	-4,267	4,053	-214	0	0	1,658	0	-1,872	0	0	0	0	0	-214
		Sub-total				75,186	116,616	128,110	99,868	49,216	468,996	25,548	494,544	0	0	73,177	0	421,367	0	0	0	0	0	494,544
WAS907099	ASHBRIDGES BAY WWTP - LIQUID TREATMEN																						
0	1	FINE BUBBLE AERATION - TANK #2	CW	S2	03	316	0	0	0	0	316	0	316	0	0	25	0	291	0	0	0	0	0	316

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS907099	ASHBRIDGES BAY WWTP - LIQUID TREATMEN																							
0	3	P BLDG HEADWORKS UPGRADE	CW	S2	03	10,627	0	0	0	0	10,627	0	10,627	0	0	1,235	0	9,392	0	0	0	0	0	10,627
0	6	M & T PUMPING STATION CRITICAL REPAIRS	CW	S2	03	2,085	0	0	0	0	2,085	0	2,085	0	0	0	0	2,085	0	0	0	0	0	2,085
0	10	INTEGRATED PUMPING STATION (IPS) - ENGINEERING	CW	S2	03	5,844	4,763	5,823	2,705	2,210	21,345	14,496	35,841	0	0	0	0	35,841	0	0	0	0	0	35,841
0	39	INTEGRATED PUMPING STATION (IPS) - CONSTRUCTION	CW	S2	03	19,220	26,550	47,000	25,025	65,000	182,795	197,850	380,645	0	0	225	0	380,420	0	0	0	0	0	380,645
0	77	FINE BUBBLE AERATION - ENGINEERING	CW	S2	03	449	0	0	0	0	449	10,500	10,949	0	0	903	0	10,046	0	0	0	0	0	10,949
0	84	AERATION TANK 12 & 13	CW	S4	05	50	4,000	4,450	7,800	39,000	55,300	101,850	157,150	0	0	38,550	0	118,600	0	0	0	0	0	157,150
0	89	INTEGRATED PUMPING STATION (IPS) --CHANGE IN SCOPE	CW	S3	03	979	27,350	45,465	74,275	15,000	163,069	85,650	248,719	0	0	92,898	0	155,821	0	0	0	0	0	248,719
0	90	INTEGRATED PUMPING STATION (IPS) --CHANGE IN SCOPE	CW	S3	03	-815	870	500	0	0	555	75	630	0	0	5,471	0	-4,841	0	0	0	0	0	630
0	91	M & T PUMPING STATION CRITICAL REP-CHANGE IN SCOPE	CW	S3	03	-1,235	1,417	0	0	0	182	0	182	0	0	0	0	182	0	0	0	0	0	182
0	92	FINE BUBBLE AERATION - ENGINEERING-CHANGE IN SCOPE	CW	S3	03	1	74	0	0	0	75	3,000	3,075	0	0	1,173	0	1,902	0	0	0	0	0	3,075
0	93	FINE BUBBLE AERATION - TANK #2-CHANGE IN SCOPE	CW	S3	03	-316	0	0	0	0	-316	0	-316	0	0	-25	0	-291	0	0	0	0	0	-316
0	94	P BLDG HEADWORKS UPGRADE-CHANGE IN SCOPE	CW	S3	03	-4,992	6,727	0	0	0	1,735	0	1,735	0	0	619	0	1,116	0	0	0	0	0	1,735
		Sub-total				32,213	71,751	103,238	109,805	121,210	438,217	413,421	851,638	0	0	141,074	0	710,564	0	0	0	0	0	851,638
WAS907100	ASHBRIDGES BAY WWTP - SOLIDS & GAS HA																							
0	3	WASTE ACTIVATED SLUDGE UPGRADE - ENGINEERING	CW	S2	03	2,788	2,500	2,500	2,000	500	10,288	304	10,592	0	0	871	0	9,721	0	0	0	0	0	10,592
0	4	DIGESTERS 9-12 REFURBISH	CW	S2	03	21,933	10,767	6,485	12	80	39,277	0	39,277	0	0	3,563	0	35,714	0	0	0	0	0	39,277
0	8	BIOSOLIDS PELLETIZER RETROFIT	CW	S2	03	422	400	400	400	0	1,622	0	1,622	0	0	0	0	1,622	0	0	0	0	0	1,622
0	22	WASTE ACTIVATED SLUDGE UPGRADE - CONSTRUCTION	CW	S2	03	36,485	35,000	35,000	30,000	20,000	156,485	0	156,485	0	0	12,637	0	143,848	0	0	0	0	0	156,485
0	25	PELLETIZER TRUCK LOADING FACILITY UPGRADES	CW	S2	03	968	695	820	55	55	2,593	0	2,593	0	0	0	0	2,593	0	0	0	0	0	2,593
0	52	PRIMARY SLUDGE BUFFER TANK AND HEAT RECOVERY	CW	S4	04	50	200	1,975	3,200	350	5,775	65	5,840	0	0	0	0	5,840	0	0	0	0	0	5,840
0	53	PELLETIZER FACILITY	CW	S4	03	800	2,000	2,000	2,500	400	7,700	97,850	105,550	0	0	0	0	105,550	0	0	0	0	0	105,550
0	56	WASTE ACTIVATED SLUDGE UPGRADE - C-CHANGE IN SCOPE	CW	S3	03	-31,485	3,000	7,000	15,000	22,000	15,515	0	15,515	0	0	12,812	0	2,703	0	0	0	0	0	15,515
0	57	WASTE ACTIVATED SLUDGE UPGRADE - E-CHANGE IN SCOPE	CW	S3	03	-1,288	-1,000	0	500	1,500	-288	0	-288	0	0	675	0	-963	0	0	0	0	0	-288
0	58	DIGESTERS 9-12 REFURBISH-CHANGE IN SCOPE	CW	S3	03	-12,123	4,243	9,945	1,261	0	3,326	0	3,326	0	0	2,741	0	585	0	0	0	0	0	3,326

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						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS907100	ASHBRIDGES BAY WWTP - SOLIDS & GAS HA																						
0 59	BIOSOLIDS PELLETIZER RETROFIT-CHANGE IN SCOPE	CW	S3	03	-22	0	0	-236	0	-258	0	-258	0	0	0	0	-258	0	0	0	0	0	-258
0 60	PELLETIZER TRUCK LOADING FACILITY -CHANGE IN SCOPE	CW	S3	03	-468	348	0	0	60	-60	125	65	0	0	0	0	65	0	0	0	0	0	65
	Sub-total				18,060	58,153	66,125	54,692	44,945	241,975	98,344	340,319	0	0	33,299	0	307,020	0	0	0	0	0	340,319
WAS907101	ASHBRIDGES BAY WWTP - O&M UPGRADES																						
0 5	BOILER #4 DESIGN	CW	S2	03	6	0	0	0	0	6	0	6	0	0	0	0	6	0	0	0	0	0	6
0 6	MESI UPGRADES	CW	S2	03	2,962	3,000	0	0	0	5,962	0	5,962	0	0	0	0	5,962	0	0	0	0	0	5,962
0 7	MISC MECH REHAB	CW	S2	03	3,184	0	0	0	0	3,184	0	3,184	0	0	0	0	3,184	0	0	0	0	0	3,184
0 38	MISC MECH REHAB-CHANGE IN SCOPE	CW	S3	03	-1,567	1,600	0	0	0	33	0	33	0	0	0	0	33	0	0	0	0	0	33
0 39	MESI UPGRADES-CHANGE IN SCOPE	CW	S3	03	0	0	3,100	3,200	3,200	9,500	0	9,500	0	0	0	0	9,500	0	0	0	0	0	9,500
	Sub-total				4,585	4,600	3,100	3,200	3,200	18,685	0	18,685	0	0	0	0	18,685	0	0	0	0	0	18,685
WAS907102	ASHBRIDGES BAY WWTP - ODOUR CONTROL																						
0 6	BIOFILTERS UPGRADE & REPLACEMENT	CW	S2	03	3,399	850	72	0	0	4,321	0	4,321	0	0	365	0	3,956	0	0	0	0	0	4,321
0 13	D BUILDING TREATMENT & BIOFILTER	CW	S2	03	656	0	0	0	0	656	0	656	0	0	64	0	592	0	0	0	0	0	656
0 42	D BUILDING TREATMENT & BIOFILTER-CHANGE IN SCOPE	CW	S3	03	-156	197	0	0	0	41	0	41	0	0	41	0	0	0	0	0	0	0	41
0 43	BIOFILTERS UPGRADE & REPLACEMENT-CHANGE IN SCOPE	CW	S3	03	-907	700	0	0	0	-207	0	-207	0	0	253	0	-460	0	0	0	0	0	-207
	Sub-total				2,992	1,747	72	0	0	4,811	0	4,811	0	0	723	0	4,088	0	0	0	0	0	4,811
WAS907104	HUMBER WWTP - LIQUID TREATMENT & HANI																						
0 2	SECONDARY TREATMENT UPGRADES - SOUTH - ENGINEERING	CW	S2	03	3,300	3,300	3,300	3,260	5,246	18,406	1,169	19,575	0	0	1,576	0	17,999	0	0	0	0	0	19,575
0 19	SECONDARY TREATMENT UPGRADES - SOUTH - CONS	CW	S2	03	23,000	24,000	31,000	12,000	17,290	107,290	10,000	117,290	0	0	9,443	0	107,847	0	0	0	0	0	117,290
0 28	SECONDARY TREATMENT UPGRADES - SOU-CHANGE IN SCOPE	CW	S3	03	10	90	225	0	0	325	11	336	0	0	1,413	0	-1,077	0	0	0	0	0	336
0 29	SECONDARY TREATMENT UPGRADES - SOU-CHANGE IN SCOPE	CW	S3	03	0	0	-5,000	0	210	-4,790	-596	-5,386	0	0	7,114	0	-12,500	0	0	0	0	0	-5,386
	Sub-total				26,310	27,390	29,525	15,260	22,746	121,231	10,584	131,815	0	0	19,546	0	112,269	0	0	0	0	0	131,815
WAS907105	HUMBER WWTP - O&M UPGRADES																						
0 1	GAS COMPRESSOR SYSTEM UPGRADES	CW	S2	03	813	0	0	0	0	813	0	813	0	0	0	0	813	0	0	0	0	0	813
0 2	LIQUID STREAM UPGRADES	CW	S2	03	386	0	0	0	0	386	0	386	0	0	31	0	355	0	0	0	0	0	386

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 8: 2019 Cash Flow and Future Year Commitments Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. / Sub-Proj No.	Project Name / Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS907105		HUMBER WWTP - O&M UPGRADES																					
0	35	LIQUID STREAM UPGRADES-CHANGE IN SCOPE	CW	S3	03	-386	0	0	0	0	-386	0	-386	0	0	-31	0	-355	0	0	0	0	0	-386
0	36	GAS COMPRESSOR SYSTEM UPGRADES-CHANGE IN SCOPE	CW	S3	03	-418	541	0	0	0	123	0	123	0	0	0	0	123	0	0	0	0	0	123
		Sub-total				395	541	0	0	0	936	0	936	0	0	0	0	936	0	0	0	0	0	936
WAS907106		HUMBER WWTP - ODOUR CONTROL																					
0	1	ODOUR CONTROL IMPLEMENTATION - PHASE 1	CW	S2	02	766	0	0	0	0	766	0	766	0	0	69	0	697	0	0	0	0	0	766
0	15	ODOUR CONTROL IMPLEMENTATION - PHA-CHANGE IN SCOPE	CW	S3	02	434	2,401	0	0	550	3,385	550	3,935	0	0	637	0	3,298	0	0	0	0	0	3,935
		Sub-total				1,200	2,401	0	0	550	4,151	550	4,701	0	0	706	0	3,995	0	0	0	0	0	4,701
WAS907224		SEWAGE PUMPING STATION UPGRADES																					
0	1	SPS UPGRADES	CW	S2	02	2,212	750	0	0	0	2,962	0	2,962	0	0	292	0	2,670	0	0	0	0	0	2,962
0	4	SUNNYSIDE AND MARYPORT SPS UPGRADES	CW	S2	05	150	400	3,350	4,265	1,975	10,140	10	10,150	0	0	817	0	9,333	0	0	0	0	0	10,150
0	18	SPS UPGRADES - GROUP 6	CW	S2	02	3,891	5,250	5,356	4,390	3,598	22,485	55	22,540	0	0	1,814	0	20,726	0	0	0	0	0	22,540
0	26	SPS UPGRADES - GROUP 7	CW	S2	03	4	0	0	0	0	4	0	4	0	0	1	0	3	0	0	0	0	0	4
0	34	FACILITY & PROCESS UPGRADES	CW	S2	02	435	3,025	3,125	2,600	2,200	11,385	3,200	14,585	0	0	1,179	0	13,406	0	0	0	0	0	14,585
0	35	SCOTT ST PS & SIMCOE ST PS	CW	S2	03	400	500	500	500	0	1,900	0	1,900	0	0	0	0	1,900	0	0	0	0	0	1,900
0	39	SUNNYSIDE AND MARYPORT SPS UPGRADE-CHANGE IN SCOPE	CW	S3	05	-150	-350	-3,060	-2,020	-925	-6,505	890	-5,615	0	0	1,451	0	-7,066	0	0	0	0	0	-5,615
0	40	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	CW	S3	02	-60	-1,950	438	3,900	6,300	8,628	2,753	11,381	0	0	2,663	0	8,718	0	0	0	0	0	11,381
0	41	SCOTT ST PS & SIMCOE ST PS-CHANGE IN SCOPE	CW	S3	03	51	53	55	56	0	215	0	215	0	0	0	0	215	0	0	0	0	0	215
0	42	SPS UPGRADES - GROUP 7-CHANGE IN SCOPE	CW	S3	03	6	0	0	0	0	6	0	6	0	0	1	0	5	0	0	0	0	0	6
0	43	SPS UPGRADES - GROUP 6-CHANGE IN SCOPE	CW	S3	02	-1,068	215	0	500	501	148	0	148	0	0	1,544	0	-1,396	0	0	0	0	0	148
0	44	SPS UPGRADES-CHANGE IN SCOPE	CW	S3	02	-1,106	-55	0	0	0	-1,161	0	-1,161	0	0	-22	0	-1,139	0	0	0	0	0	-1,161
		Sub-total				4,765	7,838	9,764	14,191	13,649	50,207	6,908	57,115	0	0	9,740	0	47,375	0	0	0	0	0	57,115
WAS907559		DON & WATERFRONT TRUNK CSO																					
0	1	DON & WATERFRONT TRUNK/CSO PKG 1 - DESIGN	CW	S2	04	10,946	6,475	6,475	6,475	615	30,986	461	31,447	0	0	2,566	0	28,881	0	0	0	0	0	31,447
0	15	DCW - PHASE 1 - ADDITIONAL SCOPE	CW	S2	04	2,850	0	0	0	0	2,850	0	2,850	0	0	229	0	2,621	0	0	0	0	0	2,850
0	17	DCW - PH1 - OFFLINE STORAGE TANK SHEPPARD/LESLIE	CW	S2	04	1,340	11,175	4,060	51	50	16,676	0	16,676	0	0	1,353	0	15,323	0	0	0	0	0	16,676

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 8: 2019 Cash Flow and Future Year Commitments Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WAS907559	DON & WATERFRONT TRUNK CSO																						
0	18	Don & Waterfront Trunk/CSO Construction - PHASE 1	CW	S2	04	80,000	85,000	85,000	85,000	85,000	420,000	62,500	482,500	0	0	33,509	0	448,991	0	0	0	0	0	482,500
0	24	DON & WATERFRONT TRUNK/CSO PKG 1 --CHANGE IN SCOPE	CW	S3	04	-6,425	5,196	0	0	2,500	1,271	0	1,271	0	0	2,341	0	-1,070	0	0	0	0	0	1,271
0	25	DCW - PHASE 1 - ADDITIONAL SCOPE-CHANGE IN SCOPE	CW	S3	04	-1,716	1,716	0	0	0	0	0	0	0	0	193	0	-193	0	0	0	0	0	0
0	26	Don & Waterfront Trunk/CSO Constru-CHANGE IN SCOPE	CW	S3	04	3,895	-8,252	-15,000	-5,000	-26,000	-50,357	-37,038	-87,395	0	0	13,114	0	-100,509	0	0	0	0	0	-87,395
0	27	DCW - PH1 - OFFLINE STORAGE TANK S-CHANGE IN SCOPE	CW	S3	04	-715	-10,596	3,940	11,349	7,652	11,630	50	11,680	0	0	2,843	0	8,837	0	0	0	0	0	11,680
		Sub-total				90,175	90,714	84,475	97,875	69,817	433,056	25,973	459,029	0	0	56,148	0	402,881	0	0	0	0	0	459,029
WAS907700	NORTH TORONTO WTP UPGRADES																						
0	2	NTTP - ELECTRICAL UPGRADES - ECAR	CW	S2	01	3,129	1,991	1,585	31	0	6,736	0	6,736	0	0	0	0	6,736	0	0	0	0	0	6,736
0	10	OPS INTERFACE NTTP	CW	S2	04	200	0	0	0	0	200	0	200	0	0	0	0	200	0	0	0	0	0	200
0	11	NTTP - PROCESS IMPROVEMENTS	CW	S2	04	5,572	5,100	50	50	0	10,772	0	10,772	0	0	0	0	10,772	0	0	0	0	0	10,772
0	15	NTTP - ELECTRICAL UPGRADES - ECAR-CHANGE IN SCOPE	CW	S3	01	-2,430	2,186	774	2,343	1,891	4,764	31	4,795	0	0	0	0	4,795	0	0	0	0	0	4,795
0	16	NTTP - PROCESS IMPROVEMENTS-CHANGE IN SCOPE	CW	S3	04	-4,638	1,162	5,960	5,811	3,770	12,065	12	12,077	0	0	0	0	12,077	0	0	0	0	0	12,077
		Sub-total				1,833	10,439	8,369	8,235	5,661	34,537	43	34,580	0	0	0	0	34,580	0	0	0	0	0	34,580
WAS908143	Georgetown South City Infrastructure Upgrades																						
0	1	GEORGETOWN SOUTH CITY INFRASTRUCTURE UPGRADES	CW	S2	05	5,115	0	0	0	0	5,115	0	5,115	0	0	412	0	4,703	0	0	0	0	0	5,115
0	9	GEORGETOWN SOUTH CITY INFRASTRUCTU-CHANGE IN SCOPE	CW	S3	05	0	0	0	0	0	0	0	0	0	0	4,703	0	-4,703	0	0	0	0	0	0
		Sub-total				5,115	0	0	0	0	5,115	0	5,115	0	0	5,115	0	0	0	0	0	0	0	5,115
WASWP003	EMERY CREEK POND																						
0	1	EMERY CREEK POND	CW	S2	04	1,097	94	0	0	0	1,191	0	1,191	0	0	97	0	1,094	0	0	0	0	0	1,191
0	17	EMERY CREEK POND-CHANGE IN SCOPE	CW	S3	04	-549	483	0	0	0	-66	0	-66	0	0	72	0	-138	0	0	0	0	0	-66
		Sub-total				548	577	0	0	0	1,125	0	1,125	0	0	169	0	956	0	0	0	0	0	1,125
WASWP050	EQUIPMENT REPLACEMENT & REHABILITATI(																						
0	78	EQUIPMENT REPLACEMENT	CW	S2	03	10,297	6,100	695	40	53	17,185	0	17,185	0	0	0	0	17,185	0	0	0	0	0	17,185

Report Phase 2 - Program 11 Wastewater Program Program Phase 2 Part B Sub-Project Status S2 Part C Sub-Project Status S2,S3,S4,S5 Sub-Project Category 01,02,03,04,05,06,07 User Fields ALL

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 8: 2019 Cash Flow and Future Year Commitments Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By										
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
WASWP050	EQUIPMENT REPLACEMENT & REHABILITATI(																							
0	137	EQUIPMENT REPLACEMENT-CHANGE IN SCOPE	CW	S3	03	-6,732	-1,459	5,036	-5	-12	-3,172	53	-3,119	0	0	0	0	-3,119	0	0	0	0	-3,119
		Sub-total				3,565	4,641	5,731	35	41	14,013	53	14,066	0	0	0	0	14,066	0	0	0	0	14,066
Total Program Expenditure						610,113	1,008,854	1,063,432	944,848	709,789	4,337,036	1,324,014	5,661,050	0	0	572,322	0	5,088,728	0	0	0	0	5,661,050

Report Phase 2 - Program 11 Wastewater Program Program Phase 2 Part B Sub-Project Status S2 Part C Sub-Project Status S2,S3,S4,S5 Sub-Project Category 01,02,03,04,05,06,07 User Fields ALL

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 8: 2019 Cash Flow and Future Year Commitments Including Carry Forward Funding

Wastewater Program

Sub-Priority	Project No. / SubProj No.	Project Name / Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments and Estimates								Current and Future Year Cash Flow Commitments and Estimates Financed By									
						2019	2020	2021	2022	2023	Total 2019-2023	Total 2024-2028	Total 2019-2028	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
Financed By:																								
		Development Charges				62,065	93,013	103,763	69,196	73,320	401,357	170,965	572,322	0	0	572,322	0	0	0	0	0	0	0	572,322
		Reserve Funds (Ind."XR" Ref.)				548,048	915,841	959,669	875,652	636,469	3,935,679	1,153,049	5,088,728	0	0	0	0	5,088,728	0	0	0	0	0	5,088,728
Total Program Financing						610,113	1,008,854	1,063,432	944,848	709,789	4,337,036	1,324,014	5,661,050	0	0	572,322	0	5,088,728	0	0	0	0	0	5,661,050

Status Code	Description
S2	S2 Prior Year (With 2019 and\or Future Year Cashflow)
S3	S3 Prior Year - Change of Scope 2019 and\or Future Year Cost\Cashflow)
S4	S4 New - Stand-Alone Project (Current Year Only)
S5	S5 New (On-going or Phased Projects)

Category Code	Description
01	Health and Safety C01
02	Legislated C02
03	State of Good Repair C03
04	Service Improvement and Enhancement C04
05	Growth Related C05
06	Reserved Category 1 C06
07	Reserved Category 2 C07

Appendix 9

2019 Capital Budget with Financing Detail

(Phase 2) 10-Water Program Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5

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Appendix 9: 2019 Capital Budget with Financing Detail

Water Program

Sub-Project Summary

Project/Financing Priority	Project	Project Name	Start Date	Completion Date	2019 Cash Flow	Financing									
						Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**WAT000018**	**CLARK RESIDUE MGMT. FACILITIES**													
0	24	RESIDUALS RETROFITS AND UPGRADES	01/01/2013	12/31/2019	3,102	0	0	0	0	3,102	0	0	0	0	0
0	31	RESIDUALS RETROFITS AND UPGRADES-CHANGE IN SC	01/01/2019	12/31/2021	-663	0	0	0	0	-663	0	0	0	0	0
		Project Sub-total:			2,439	0	0	0	0	2,439	0	0	0	0	0
0	**WAT000021**	**WATER EFFICIENCY PROGRAM**													
0	10	ICI INDOOR WATER AUDIT	01/01/2005	12/31/2022	300	0	0	300	0	0	0	0	0	0	0
0	11	PUBLIC EDUCATION & PROMOTIONS	01/01/2005	12/31/2022	75	0	0	75	0	0	0	0	0	0	0
0	12	ANCILLARY COSTS	01/01/2005	12/31/2022	70	0	0	70	0	0	0	0	0	0	0
0	97	ICI INDOOR WATER AUDIT-CHANGE IN SCOPE	01/01/2019	12/31/2023	50	0	0	50	0	0	0	0	0	0	0
		Project Sub-total:			495	0	0	495	0	0	0	0	0	0	0
0	**WAT000363**	**ENGINEERING STUDIES**													
0	2	IMPROVED TREATMENT STUDIES	01/01/2005	12/31/2019	66	0	0	0	0	46	0	0	20	0	0
0	18	CONTROLLED SUBSTANCES ID AND ABATEMENT	01/01/2007	12/31/2019	100	0	0	0	0	100	0	0	0	0	0
0	31	ENERGY EFFICIENCY IMPLEMENTATION	01/01/2008	12/31/2019	38	0	0	0	0	38	0	0	0	0	0
0	79	ENERGY EFFICIENCY IMPLEMENTATION-CHANGE IN SCO	01/01/2019	12/31/2020	127	0	0	0	0	127	0	0	0	0	0
0	80	IMPROVED TREATMENT STUDIES-CHANGE IN SCOPE	08/28/2018	12/31/2023	4	0	0	0	0	3	0	0	1	0	0
0	81	CONTROLLED SUBSTANCES ID AND ABATE-CHANGE IN S	01/01/2019	12/31/2021	25	0	0	0	0	25	0	0	0	0	0
		Project Sub-total:			360	0	0	0	0	339	0	0	21	0	0
0	**WAT906334**	**BUSINESS SYSTEM INFRASTRUCTURE - PW**													
0	12	PCS LEGACY ALARM IMPROVEMENT	01/01/2011	12/31/2019	20	0	0	0	0	20	0	0	0	0	0
0	23	RELIABILITY IMPROVEMENT PROGRAM	01/01/2013	12/31/2019	355	0	0	0	0	355	0	0	0	0	0
0	41	SCADA UPGRADES FOR WWT	01/01/2012	12/31/2019	3,326	0	0	0	0	3,326	0	0	0	0	0
0	67	SCADA UPGRADES FOR WWT - II	01/01/2012	12/31/2019	972	0	0	0	0	972	0	0	0	0	0
0	85	NETWORK IMPROVEMENTS	01/01/2016	12/31/2019	585	0	0	0	0	585	0	0	0	0	0
0	87	PCS UPGRADES 2017	01/01/2016	12/31/2020	210	0	0	0	0	210	0	0	0	0	0
0	88	TRUNK RADIO - EQUIPMENT	01/01/2016	12/31/2022	160	0	0	0	0	160	0	0	0	0	0
0	97	SCADA SOFTWARE	01/01/2016	12/31/2019	260	0	0	0	0	260	0	0	0	0	0
0	101	NETWORK EQUIPMENT LIFE CYCLE REPLACEMENT - 201	01/01/2018	12/31/2019	5	0	0	0	0	5	0	0	0	0	0
0	109	SCADA UPGRADES FOR WWT - II -CHANGE IN SCOPE	01/01/2019	12/31/2023	-123	0	0	0	0	-123	0	0	0	0	0
0	110	RELIABILITY IMPROVEMENT PROGRAM-CHANGE IN SCOP	01/01/2019	12/31/2022	-80	0	0	0	0	-80	0	0	0	0	0
0	111	NETWORK IMPROVEMENTS-CHANGE IN SCOPE	01/01/2019	12/31/2020	127	0	0	0	0	127	0	0	0	0	0
0	112	SCADA UPGRADES FOR WWT-CHANGE IN SCOPE	01/01/2019	12/31/2022	2,677	0	0	0	0	2,677	0	0	0	0	0
0	113	TECHNOLOGY IMPROVEMENTS	01/01/2019	12/31/2023	1,865	0	0	0	0	1,865	0	0	0	0	0
0	114	SCADA SOFTWARE-CHANGE IN SCOPE	01/01/2019	12/31/2022	-80	0	0	0	0	-80	0	0	0	0	0

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Appendix 9: 2019 Capital Budget with Financing Detail

Water Program

Sub-Project Summary

Project/Financing Priority	Project	Project Name	Start Date	Completion Date	2019 Cash Flow	Financing									
						Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**WAT906334**	**BUSINESS SYSTEM INFRASTRUCTURE - PW**													
0	116	TRUNK RADIO - EQUIPMENT-CHANGE IN SCOPE	01/01/2019	12/31/2019	-160	0	0	0	0	-160	0	0	0	0	0
0	117	PCS UPGRADES FOR WATER SUPPLY-CHANGE IN SCOPE	01/01/2019	12/31/2019	1	0	0	0	0	1	0	0	0	0	0
0	118	PCS LEGACY ALARM IMPROVEMENT -CHANGE IN SCOPE	01/01/2019	12/31/2019	30	0	0	0	0	30	0	0	0	0	0
		Project Sub-total:			10,150	0	0	0	0	10,150	0	0	0	0	0
0	**WAT906340**	**METERING & METER READING SYS**													
0	2	AUTOMATED METER READING SYSTEM	01/01/2005	12/31/2019	578	0	0	0	0	578	0	0	0	0	0
0	20	AUTOMATED METER READING SYSTEM-CHANGE IN SCOI	01/01/2019	12/31/2028	4,605	0	0	0	0	4,605	0	0	0	0	0
		Project Sub-total:			5,183	0	0	0	0	5,183	0	0	0	0	0
0	**WAT906468**	**HORGAN TRUNK MAIN EXPANSION**													
0	52	DOWNSVIEW MAIN (KEELE PS TO DOWNSVIEW) Engineeri	01/01/2018	12/31/2019	1,240	0	0	620	0	620	0	0	0	0	0
0	53	DOWNSVIEW MAIN (KEELE PS TO DOWNSV-CHANGE IN S	01/01/2019	12/31/2026	-240	0	0	380	0	-620	0	0	0	0	0
		Project Sub-total:			1,000	0	0	1,000	0	0	0	0	0	0	0
0	**WAT906470**	**ISLAND W.T.P. R&R**													
0	8	CHEMICAL & RESIDUALS MANAGMENT ENGINEERING	01/01/2013	12/31/2019	2,407	0	0	0	0	2,407	0	0	0	0	0
0	11	CHEMICAL & RESIDUALS MANAGEMENT CONST	01/01/2015	12/31/2019	1,530	0	0	95	0	1,435	0	0	0	0	0
0	34	CHEMICAL & RESIDUALS MANAGMENT ENG-CHANGE IN S	01/01/2019	12/31/2024	-1,517	0	0	0	0	-1,517	0	0	0	0	0
0	35	CHEMICAL & RESIDUALS MANAGEMENT CO-CHANGE IN S	01/01/2019	12/31/2023	-1,500	0	0	-91	0	-1,409	0	0	0	0	0
		Project Sub-total:			920	0	0	4	0	916	0	0	0	0	0
0	**WAT906481**	**DISTRICT WATERMAINS - NEW**													
0	1	NEW WATERMAIN	01/01/2005	12/31/2019	58	0	0	58	0	0	0	0	0	0	0
0	17	NEW WM -CHANGE IN SCOPE	01/01/2019	12/31/2021	-48	0	0	-48	0	0	0	0	0	0	0
		Project Sub-total:			10	0	0	10	0	0	0	0	0	0	0
0	**WAT906483**	**PW ENGINEERING**													
0	2	CAPITAL PROGRAMMING & FACILITY ASSET PLANNING	01/01/2005	12/31/2020	3,903	0	0	0	0	3,903	0	0	0	0	0
0	5	WATERMAIN ASSET PLANNING	01/01/2007	12/31/2019	2,839	0	0	694	0	1,021	0	0	1,124	0	0
0	7	EASEMENT ACQUISITION	01/01/2007	12/31/2019	690	0	0	0	0	690	0	0	0	0	0
0	22	WATER LOSS REDUCTION STRATEGY	01/01/2012	12/31/2023	889	0	0	0	0	889	0	0	0	0	0
0	37	ASSET MGMT SYSTEM IMPLEMENTATION	01/01/2016	12/31/2019	1,550	0	0	388	0	1,162	0	0	0	0	0
0	52	JOS UPDATE PHASE II	01/01/2015	12/31/2019	657	0	0	329	0	-1	0	0	329	0	0
0	76	WATERMAIN ASSET PLANNING-CHANGE IN SCOPE	01/01/2019	12/31/2026	-1,831	0	0	-542	0	-564	0	0	-725	0	0
0	77	CAPITAL PROGRAMMING & FACILITY ASS-CHANGE IN SC	01/01/2019	12/31/2023	-2,585	0	0	0	0	-2,585	0	0	0	0	0
0	78	JOS UPDATE PHASE II-CHANGE IN SCOPE	01/01/2019	12/31/2020	-301	0	0	-151	0	1	0	0	-151	0	0
0	79	ASSET MGMT SYSTEM IMPLEMENTATION-CHANGE IN SC	01/01/2019	12/31/2019	-1,300	0	0	-325	0	-975	0	0	0	0	0

(Phase 2) 10-Water Program Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5

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Sub-Project Summary

Project/Financing Priority	Project	Project Name	Start Date	Completion Date	2019 Cash Flow	Financing									
						Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**WAT906483**	**PW ENGINEERING**													
0	80	WATER LOSS REDUCTION STRATEGY-CHANGE IN SCOPE	01/01/2019	12/31/2021	-338	0	0	0	0	-338	0	0	0	0	0
0	81	EASEMENT ACQUISITION-CHANGE IN SCOPE	01/01/2019	12/31/2021	114	0	0	0	0	114	0	0	0	0	0
		Project Sub-total:			4,287	0	0	393	0	3,317	0	0	577	0	0
0	**WAT906752**	**TRANSMISSION R&R**													
0	49	TRUNK WATERMAIN REHAB	01/01/2013	12/31/2022	260	0	0	0	0	260	0	0	0	0	0
0	51	CAST IRON TRUNK REPLC - PHASE 2	01/01/2013	12/31/2019	512	0	0	0	0	512	0	0	0	0	0
0	52	CAST IRON TRUNK REPLC - PHASE 3 - ENGINEERING	01/01/2014	12/31/2020	1,051	0	0	0	0	1,051	0	0	0	0	0
0	58	CAST IRON TRUNK REPLC - PHASE 3 - CONSTRUCTION	01/01/2016	12/31/2019	1,500	0	0	0	0	1,500	0	0	0	0	0
0	82	CAST IRON TRUNK REPLC - PHASE 3 - -CHANGE IN SCOP	01/01/2019	12/31/2020	-325	0	0	0	0	-325	0	0	0	0	0
0	83	TRUNK WATERMAIN REHAB-CHANGE IN SCOPE	01/01/2019	12/31/2028	150	0	0	0	0	150	0	0	0	0	0
0	84	CAST IRON TRUNK REPLC - PHASE 2-CHANGE IN SCOPE	01/01/2019	12/31/2021	-48	0	0	0	0	-48	0	0	0	0	0
0	85	CAST IRON TRUNK REPLC - PHASE 3 - -CHANGE IN SCOP	01/01/2019	12/31/2020	-990	0	0	0	0	-990	0	0	0	0	0
		Project Sub-total:			2,110	0	0	0	0	2,110	0	0	0	0	0
0	**WAT906900**	**TRANSMISSION R&R**													
0	1	TRANS FACILITIES REHAB	01/01/2006	12/31/2022	750	0	0	0	0	750	0	0	0	0	0
0	36	ST CLAIR RESERVOIR REHAB/WATER QUALITY PROTECT	01/01/2014	12/31/2021	6,949	0	0	0	0	6,949	0	0	0	0	0
0	44	PUMPING STATION REHAB - Engineering	01/01/2019	12/31/2028	100	0	0	0	0	100	0	0	0	0	0
0	48	ROSEHILL RESERVOIR	01/01/2015	12/31/2023	12,525	0	0	0	0	12,525	0	0	0	0	0
0	49	DOWNSVIEW PS & CONNECTOR EA	01/01/2015	12/31/2019	142	0	0	55	0	87	0	0	0	0	0
0	50	PARKDALE PS REHABILITATION	01/01/2015	12/31/2019	2,722	0	0	0	0	2,722	0	0	0	0	0
0	51	ROSEHILL PS REHAB	01/01/2015	12/31/2019	2,722	0	0	0	0	2,722	0	0	0	0	0
0	67	PUMP REPLACEMENTS	01/01/2016	12/31/2019	1,050	0	0	0	0	1,050	0	0	0	0	0
0	72	RESERVOIR REHAB - PHASE 2 - ENG	01/01/2016	12/31/2023	500	0	0	0	0	500	0	0	0	0	0
0	74	PS REHAB - PHASE 2 - ENG	01/01/2016	12/31/2019	1,528	0	0	0	0	1,528	0	0	0	0	0
0	91	SCARBOROUGH RESERVOIR SURGE TANK	01/01/2019	12/31/2025	125	0	0	0	0	125	0	0	0	0	0
0	94	PS REHAB - PHASE 2 - CONSTRUCTION	01/01/2018	12/31/2019	4,040	0	0	0	0	4,040	0	0	0	0	0
0	96	DOWNSVIEW PS & CONNECTOR EA-CHANGE IN SCOPE	01/01/2019	12/31/2020	-140	0	0	-53	0	-87	0	0	0	0	0
0	97	TRANS FACILITIES REHAB-CHANGE IN SCOPE	01/01/2019	12/31/2024	450	0	0	0	0	450	0	0	0	0	0
0	98	ST CLAIR RESERVOIR REHAB/WATER QUA-CHANGE IN SC	01/01/2019	12/31/2022	-1,649	0	0	0	0	-1,649	0	0	0	0	0
0	99	PARKDALE PS REHABILITATION-CHANGE IN SCOPE	01/01/2019	12/31/2020	-277	0	0	0	0	-277	0	0	0	0	0
0	100	ROSEHILL RESERVOIR-CHANGE IN SCOPE	01/01/2019	12/31/2022	-3,728	0	0	0	0	-3,728	0	0	0	0	0
0	103	ROSEHILL PS REHAB-CHANGE IN SCOPE	01/01/2019	12/31/2021	-1,258	0	0	0	0	-1,258	0	0	0	0	0
0	104	RESERVOIR REHAB - PHASE 2 - ENG-CHANGE IN SCOPE	01/01/2019	12/31/2024	-150	0	0	0	0	-150	0	0	0	0	0
0	105	PS REHAB - PHASE 2 - ENG-CHANGE IN SCOPE	01/01/2019	12/31/2023	-728	0	0	0	0	-728	0	0	0	0	0

(Phase 2) 10-Water Program Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5

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Sub-Project Summary

Project/Financing Priority	Project	Project Name	Start Date	Completion Date	2019 Cash Flow	Financing									
						Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**WAT906900**	**TRANSMISSION R&R**													
0	106	PS REHAB - PHASE 2 - CONSTRUCTION-CHANGE IN SCOI	01/01/2019	12/31/2022	-3,240	0	0	0	0	-3,240	0	0	0	0	0
0	107	PUMP REPLACEMENTS-CHANGE IN SCOPE	01/01/2019	12/31/2020	-150	0	0	0	0	-150	0	0	0	0	0
		Project Sub-total:			22,283	0	0	2	0	22,281	0	0	0	0	0
0	**WAT906902**	**HARRIS W.T.P. R&R**													
0	3	FACILITY & PROCESS UPGRADES	01/01/2006	12/31/2022	500	0	0	0	0	500	0	0	0	0	0
0	21	HVAC REHAB CONSTRUCTION	01/01/2010	12/31/2019	5,492	0	0	0	0	5,492	0	0	0	0	0
0	29	HARRIS FILTERS REHABILITATION - PILOT	01/01/2015	12/31/2019	6,250	0	0	0	0	6,250	0	0	0	0	0
0	56	REHAB OF SETTLING BASIN ROOF & SLUICE GATES	01/01/2014	12/31/2021	510	0	0	0	0	510	0	0	0	0	0
0	80	FACILITY INFRASTRUCTURE REHAB	01/01/2019	12/31/2020	900	0	0	0	0	900	0	0	0	0	0
0	81	LIQUID CHEMICAL SYSTEM IMPROVEMENTS	01/01/2015	12/31/2019	3,282	0	0	0	0	3,282	0	0	0	0	0
0	98	HERITAGE MASONRY AND ARCHITECTURAL RESTORATIC	01/01/2016	12/31/2022	200	0	0	0	0	200	0	0	0	0	0
0	99	CONTROL ROOM RELOCATION	01/01/2016	12/31/2019	1,345	0	0	0	0	1,345	0	0	0	0	0
0	100	EMERGENCY STANDBY POWER	01/01/2016	12/31/2019	2,339	0	0	0	0	2,339	0	0	0	0	0
0	106	BUILDING ENVELOPE REHAB	01/01/2016	12/31/2019	136	0	0	0	0	136	0	0	0	0	0
0	119	ENERGY OPTIMIZATION	01/01/2018	12/31/2019	1,170	0	0	0	0	1,170	0	0	0	0	0
0	132	EMERGENCY STANDBY POWER-CHANGE IN SCOPE	01/01/2019	12/31/2021	-1,725	0	0	0	0	-1,725	0	0	0	0	0
0	133	CONTROL ROOM RELOCATION-CHANGE IN SCOPE	01/01/2019	12/31/2021	-726	0	0	0	0	-726	0	0	0	0	0
0	134	BUILDING ENVELOPE REHAB-CHANGE IN SCOPE	01/01/2019	12/31/2019	-136	0	0	0	0	-136	0	0	0	0	0
0	135	HARRIS FILTERS REHABILITATION - PI-CHANGE IN SCOPE	01/01/2019	12/31/2023	-5,200	0	0	0	0	-5,200	0	0	0	0	0
0	136	LIQUID CHEMICAL SYSTEM IMPROVEMENT-CHANGE IN S	01/01/2019	12/31/2020	-2,856	0	0	0	0	-2,856	0	0	0	0	0
0	137	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2022	139	0	0	0	0	139	0	0	0	0	0
0	138	HVAC REHAB CONSTRUCTION-CHANGE IN SCOPE	01/01/2019	12/31/2022	-4,854	0	0	0	0	-4,854	0	0	0	0	0
0	139	REHAB OF SETTLING BASIN ROOF & SLU-CHANGE IN SC	01/01/2019	12/31/2020	-339	0	0	0	0	-339	0	0	0	0	0
0	143	ENERGY OPTIMIZATION-CHANGE IN SCOPE	01/01/2019	12/31/2021	-890	0	0	0	0	-890	0	0	0	0	0
		Project Sub-total:			5,537	0	0	0	0	5,537	0	0	0	0	0
0	**WAT906903**	**FJ HORGAN W.T.P. R&R**													
0	5	FACILITY & PROCESS UPGRADES	01/01/2006	12/31/2022	1,174	0	0	0	0	1,174	0	0	0	0	0
0	8	RAW WATER PUMP UGRADES	01/01/2016	12/31/2019	321	0	0	0	0	321	0	0	0	0	0
0	15	REPLACEMENT OF MCCS	01/01/2013	12/31/2019	533	0	0	0	0	533	0	0	0	0	0
0	31	BUILDING FIRE, HVAC, LIGHTING UPGRADES	01/01/2016	12/31/2019	1,455	0	0	0	0	1,455	0	0	0	0	0
0	32	ELEC GROUNDING SYSTEM & BULK CHEM UNLOADING I	01/01/2015	12/31/2019	679	0	0	0	0	679	0	0	0	0	0
0	34	TREATED WATER PUMP UPGRADES	01/01/2015	12/31/2019	203	0	0	0	0	203	0	0	0	0	0
0	65	TREATED WATER PUMP UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2019	-86	0	0	0	0	-86	0	0	0	0	0
0	66	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2023	-1,011	0	0	0	0	-1,011	0	0	0	0	0

(Phase 2) 10-Water Program Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5

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Project/Financing Priority	Project	Project Name	Start Date	Completion Date	2019 Cash Flow	Financing									
						Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**WAT906903**	**FJ HORGAN W.T.P. R&R**													
0	67	ELEC GROUNDING SYSTEM & BULK CHEM-CHANGE IN S	01/01/2019	12/31/2024	-504	0	0	0	0	-504	0	0	0	0	0
0	68	BUILDING FIRE, HVAC, LIGHTING UPGR-CHANGE IN SCOP	01/01/2019	12/31/2024	-1,305	0	0	0	0	-1,305	0	0	0	0	0
0	69	REPLACEMENT OF MCCS-CHANGE IN SCOPE	01/01/2019	12/31/2022	-233	0	0	0	0	-233	0	0	0	0	0
0	70	RAW WATER PUMP UGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2022	-200	0	0	0	0	-200	0	0	0	0	0
		Project Sub-total:			1,026	0	0	0	0	1,026	0	0	0	0	0
0	**WAT906906**	**TRUNK WATERMAIN EXPANSION**													
0	25	JOS WM SCAR PS TO ST CLAIR AND MIDLAND - ENG	01/01/2009	12/31/2019	801	0	0	376	0	243	0	0	182	0	0
0	66	JOS - WM Scar PS to St. Clair&Midland (CONST)	01/01/2016	12/31/2019	21,393	0	0	10,064	0	6,468	0	0	4,861	0	0
0	72	JOS WM SCAR PS TO ST CLAIR AND MID-CHANGE IN SCO	01/01/2019	12/31/2022	-276	0	0	-165	0	-48	0	0	-63	0	0
0	73	JOS - WM Scar PS to St. Clair&Midl-CHANGE IN SCOPE	01/01/2019	12/31/2021	-13,393	0	0	-6,849	0	-3,501	0	0	-3,043	0	0
		Project Sub-total:			8,525	0	0	3,426	0	3,162	0	0	1,937	0	0
0	**WAT906914**	**SWITCH GEAR TRANSFORMER**													
0	13	INDOOR/OUTDOOR SWITCHGEAR (PHASE 3)	01/01/2012	12/31/2019	1,169	0	0	0	0	1,169	0	0	0	0	0
0	29	INDOOR/OUTDOOR SWITCHGEAR (PHASE 4)	01/01/2018	12/31/2019	1,104	0	0	0	0	1,104	0	0	0	0	0
0	32	INDOOR/OUTDOOR SWITCHGEAR (PHASE 3-CHANGE IN S	01/01/2019	12/31/2020	-1,109	0	0	0	0	-1,109	0	0	0	0	0
0	33	INDOOR/OUTDOOR SWITCHGEAR (PHASE 4-CHANGE IN S	01/01/2019	12/31/2024	-704	0	0	0	0	-704	0	0	0	0	0
		Project Sub-total:			460	0	0	0	0	460	0	0	0	0	0
0	**WAT906918**	**WATER SUSTAINABILITY PROGRAM**													
0	1	WATER SUSTAINABILITY PROGRAM	01/01/2013	12/31/2019	7,836	0	0	534	0	4,944	0	0	2,358	0	0
0	12	STANDBY POWER - ROSEHILL	01/01/2015	12/31/2019	6,036	0	0	410	0	3,815	0	0	1,811	0	0
0	23	WATER SUSTAINABILITY PROGRAM-CHANGE IN SCOPE	01/01/2019	12/31/2023	-6,486	0	0	-394	0	-4,140	0	0	-1,952	0	0
0	24	STANDBY POWER - ROSEHILL-CHANGE IN SCOPE	01/01/2019	12/31/2021	-2,883	0	0	-83	0	-1,935	0	0	-865	0	0
		Project Sub-total:			4,503	0	0	467	0	2,684	0	0	1,352	0	0
0	**WAT906919**	**RL CLARK W.T.P. R&R**													
0	1	FACILITY & PROCESS UPGRADES	01/01/2006	12/31/2022	200	0	0	0	0	200	0	0	0	0	0
0	8	PROCESS EQUIPMENT UPGRADE ENGINEERING	01/01/2008	12/31/2022	69	0	0	4	0	65	0	0	0	0	0
0	15	PROCESS EQUIPMENT UPGRADE CONSTRUCTION	01/01/2010	12/31/2020	7,721	0	0	469	0	7,252	0	0	0	0	0
0	44	EVACUATION AND COMMUNICATION SYSTEMS	01/01/2013	12/31/2019	112	0	0	0	0	112	0	0	0	0	0
0	76	PROCESS EQUIPMENT UPGRADE CONSTRUC-CHANGE IN	01/01/2019	12/31/2020	-693	0	0	571	0	-1,264	0	0	0	0	0
0	77	PROCESS EQUIPMENT UPGRADE ENGINEER-CHANGE IN	01/01/2019	12/31/2022	602	0	0	95	0	507	0	0	0	0	0
0	78	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2022	51	0	0	0	0	51	0	0	0	0	0
0	79	EVACUATION AND COMMUNICATION SYSTE-CHANGE IN S	01/01/2019	12/31/2019	-112	0	0	0	0	-112	0	0	0	0	0
		Project Sub-total:			7,950	0	0	1,139	0	6,811	0	0	0	0	0

(Phase 2) 10-Water Program Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5

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Sub-Project Summary

Project/Financing Priority	Project	Project Name	Start Date	Completion Date	2019 Cash Flow	Financing									
						Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**WAT906930**	**DIST W/M REPLACEMENT**													
0	21	2011 WM REPLC	01/01/2011	12/31/2019	3	0	0	0	0	3	0	0	0	0	0
0	29	DIST W/M REPLC - 2012	01/01/2011	12/31/2019	147	0	0	0	0	147	0	0	0	0	0
0	51	DIST W/M REPLACEMENT - 2014	01/01/2014	12/31/2019	365	0	0	57	0	308	0	0	0	0	0
0	55	WATERMAIN REPLACEMENT - METROLINX	01/01/2014	12/31/2021	1,090	0	0	0	0	1,090	0	0	0	0	0
0	59	2013 WM REPLC - UPGRADES	01/01/2015	12/31/2019	101	0	0	31	0	70	0	0	0	0	0
0	63	DIST W/M REPLACEMENT - 2015	01/01/2015	12/31/2019	2,317	0	0	344	0	1,973	0	0	0	0	0
0	64	WATERMAIN UPGRADES - 2015	01/01/2015	12/31/2019	390	0	0	124	0	266	0	0	0	0	0
0	73	DIST W/M REPLACEMENT - 2016	01/01/2016	12/31/2019	8,933	0	0	1,371	0	7,562	0	0	0	0	0
0	74	WATERMAIN UPGRADES - 2016	01/01/2016	12/31/2019	2,706	0	0	857	0	1,849	0	0	0	0	0
0	83	DIST W/M REPLACEMENT - 2017	01/01/2016	12/31/2019	8,289	0	0	1,228	0	7,061	0	0	0	0	0
0	84	WATERMAIN UPGRADES - 2017	01/01/2016	12/31/2019	1,188	0	0	376	0	812	0	0	0	0	0
0	85	DIST W/M REPLACEMENT - 2018	01/01/2018	12/31/2019	52,339	0	0	7,302	0	45,037	0	0	0	0	0
0	86	WATERMAIN UPGRADES - 2018	01/01/2018	12/31/2019	14,303	0	0	4,880	0	9,423	0	0	0	0	0
0	110	DIST W/M REPLACEMENT - 2019	01/01/2019	12/31/2022	55,201	0	0	8,584	0	46,617	0	0	0	0	0
0	111	WATERMAIN UPGRADES - 2019	01/01/2019	12/31/2022	24,014	0	0	7,471	0	16,543	0	0	0	0	0
0	112	DIST W/M REPLACEMENT - 2014-CHANGE IN SCOPE	01/01/2019	12/31/2020	-350	0	0	-56	0	-294	0	0	0	0	0
0	113	DIST W/M REPLACEMENT - 2015-CHANGE IN SCOPE	01/01/2019	12/31/2020	-2,100	0	0	-327	0	-1,773	0	0	0	0	0
0	114	DIST W/M REPLACEMENT - 2017-CHANGE IN SCOPE	01/01/2019	12/31/2020	-7,519	0	0	-1,169	0	-6,350	0	0	0	0	0
0	115	DIST W/M REPLACEMENT - 2018-CHANGE IN SCOPE	01/01/2019	12/31/2022	-22,804	0	0	-5,032	0	-17,772	0	0	0	0	0
0	116	DIST W/M REPLACEMENT - 2019-CHANGE IN SCOPE	01/01/2019	12/31/2023	-20,817	0	0	-5,942	0	-14,875	0	0	0	0	0
0	117	WATERMAIN UPGRADES - 2015-CHANGE IN SCOPE	01/01/2019	12/31/2020	-320	0	0	-89	0	-231	0	0	0	0	0
0	118	WATERMAIN UPGRADES - 2016-CHANGE IN SCOPE	01/01/2019	12/31/2020	-2,601	0	0	-804	0	-1,797	0	0	0	0	0
0	119	WATERMAIN UPGRADES - 2017-CHANGE IN SCOPE	01/01/2019	12/31/2020	-1,156	0	0	-360	0	-796	0	0	0	0	0
0	120	DIST W/M REPLACEMENT - 2016-CHANGE IN SCOPE	01/01/2019	12/31/2020	-8,536	0	0	-1,340	0	-7,196	0	0	0	0	0
0	121	WATERMAIN UPGRADES - 2018-CHANGE IN SCOPE	01/01/2019	12/31/2020	-5,262	0	0	-359	0	-4,903	0	0	0	0	0
0	122	WATERMAIN UPGRADES - 2019-CHANGE IN SCOPE	01/01/2019	12/31/2023	-7,793	0	0	640	0	-8,433	0	0	0	0	0
0	123	2013 WM REPLC - UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2019	-101	0	0	-31	0	-70	0	0	0	0	0
0	124	DIST W/M REPLC - 2012-CHANGE IN SCOPE	01/01/2019	12/31/2019	-10	0	0	0	0	-10	0	0	0	0	0
0	127	WATERMAIN REPLACEMENT - METROLINX-CHANGE IN SC	01/01/2019	12/31/2022	-400	0	0	0	0	-400	0	0	0	0	0
0	130	2011 WM REPLC-CHANGE IN SCOPE	11/08/2018	12/31/2019	1	0	0	0	0	1	0	0	0	0	0
		Project Sub-total:			91,618	0	0	17,756	0	73,862	0	0	0	0	0
0	**WAT906932**	**DIST W/M REHABILITATION**													
0	4	HYDRANT & VALVE REPAIR	01/01/2007	12/31/2019	1,568	0	0	0	0	1,568	0	0	0	0	0
0	6	WATERMAIN STRUCTURAL LINING	01/01/2007	12/31/2019	68,624	0	0	0	0	68,624	0	0	0	0	0

(Phase 2) 10-Water Program Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5

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Water Program

Sub-Project Summary

Project/Financing Priority	Project	Project Name	Start Date	Completion Date	2019 Cash Flow	Financing									
						Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**WAT906932**	**DIST W/M REHABILITATION**													
0	7	CATHODIC PROTECTION	01/01/2007	12/31/2019	7,162	0	0	0	0	7,162	0	0	0	0	0
0	30	CUT REPAIR	01/01/2007	12/31/2019	3,549	0	0	0	0	3,549	0	0	0	0	0
0	59	PRV INSPECTION & RENEWAL	01/01/2018	12/31/2020	1,600	0	0	0	0	1,600	0	0	0	0	0
0	60	INFRASTRUCTURE REHAB & UPGRADES - METROLINX	01/01/2018	12/31/2021	75	0	0	0	0	75	0	0	0	0	0
0	61	WATERMAIN STRUCTURAL LINING-CHANGE IN SCOPE	01/01/2019	12/31/2021	-20,106	0	0	0	0	-20,106	0	0	0	0	0
0	62	PRV INSPECTION & RENEWAL-CHANGE IN SCOPE	01/01/2019	12/31/2020	-1,110	0	0	0	0	-1,110	0	0	0	0	0
0	63	HYDRANT & VALVE REPAIR-CHANGE IN SCOPE	01/01/2019	12/31/2020	-368	0	0	0	0	-368	0	0	0	0	0
0	64	CUT REPAIR-CHANGE IN SCOPE	01/01/2019	12/31/2022	-1,455	0	0	0	0	-1,455	0	0	0	0	0
0	65	CATHODIC PROTECTION-CHANGE IN SCOPE	01/01/2019	12/31/2022	-3,520	0	0	0	0	-3,520	0	0	0	0	0
		Project Sub-total:			56,019	0	0	0	0	56,019	0	0	0	0	0
0	**WAT906934**	**DIST WATER SERVICE REPAIR**													
0	12	WATER SERVICE REPAIR - LEAD PROGRAM	01/01/2008	12/31/2019	12,606	0	0	0	0	12,606	0	0	0	0	0
0	32	WSR CUT REPAIR	01/01/2012	12/31/2019	1,613	0	0	0	0	1,613	0	0	0	0	0
0	39	2012 WATER SERVICE REPLC - SOGR	01/01/2012	12/31/2019	60	0	0	0	0	60	0	0	0	0	0
0	41	2013 WATER SERVICE REPAIR	01/01/2013	12/31/2019	140	0	0	0	0	140	0	0	0	0	0
0	52	2014 WATER SERVICE REPLACEMENT - SOGR	01/01/2014	12/31/2019	148	0	0	0	0	148	0	0	0	0	0
0	59	2015 WATER SERVICE REPLACEMENT - SOGR	01/01/2015	12/31/2019	865	0	0	0	0	865	0	0	0	0	0
0	68	2016 WATER SERVICE REPLACEMENT - SOGR	01/01/2016	12/31/2019	3,992	0	0	0	0	3,992	0	0	0	0	0
0	71	WATER SERVICE REPAIR - WM REHAB PROGRAM	01/01/2016	12/31/2019	19,035	0	0	0	0	19,035	0	0	0	0	0
0	74	REPLACEMENT OF FROZEN SERVICES	01/01/2016	12/31/2019	240	0	0	0	0	240	0	0	0	0	0
0	75	WSR CUT REPAIRS WITH WM SL	01/01/2016	12/31/2019	1,613	0	0	0	0	1,613	0	0	0	0	0
0	78	2011 WATER SERVICE REPAIR	01/01/2016	12/31/2019	12	0	0	0	0	12	0	0	0	0	0
0	84	2017 WATER SERVICE REPLACEMENT - SOGR	01/01/2016	12/31/2019	6,374	0	0	0	0	6,374	0	0	0	0	0
0	85	2018 WATER SERVICE REPLACEMENT - SOGR	01/01/2018	12/31/2020	10,000	0	0	0	0	10,000	0	0	0	0	0
0	108	2019 WATER SERVICE REPLACEMENT - SOGR	01/01/2019	12/31/2021	10,000	0	0	0	0	10,000	0	0	0	0	0
0	109	2015 WATER SERVICE REPLACEMENT - S-CHANGE IN SC	01/01/2019	12/31/2020	-733	0	0	0	0	-733	0	0	0	0	0
0	110	2016 WATER SERVICE REPLACEMENT - S-CHANGE IN SC	01/01/2019	12/31/2020	-3,424	0	0	0	0	-3,424	0	0	0	0	0
0	111	2017 WATER SERVICE REPLACEMENT - S-CHANGE IN SC	01/01/2019	12/31/2020	-5,472	0	0	0	0	-5,472	0	0	0	0	0
0	112	2018 WATER SERVICE REPLACEMENT - S-CHANGE IN SC	01/01/2019	12/31/2021	-5,449	0	0	0	0	-5,449	0	0	0	0	0
0	113	2019 WATER SERVICE REPLACEMENT - S-CHANGE IN SC	01/01/2019	12/31/2021	-5,000	0	0	0	0	-5,000	0	0	0	0	0
0	114	WATER SERVICE REPAIR - LEAD PROGRA-CHANGE IN SC	01/01/2019	12/31/2022	-4,410	0	0	0	0	-4,410	0	0	0	0	0
0	115	2012 WATER SERVICE REPLC - SOGR-CHANGE IN SCOPE	01/01/2019	12/31/2019	-60	0	0	0	0	-60	0	0	0	0	0
0	116	WSR CUT REPAIR-CHANGE IN SCOPE	01/01/2019	12/31/2022	3,502	0	0	0	0	3,502	0	0	0	0	0
0	117	2013 WSR-CHANGE IN SCOPE	01/01/2019	12/31/2019	-133	0	0	0	0	-133	0	0	0	0	0

(Phase 2) 10-Water Program Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5

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Sub-Project Summary

Project/Financing Priority	Project	Project Name	Start Date	Completion Date	2019 Cash Flow	Financing									
						Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**WAT906934**	**DIST WATER SERVICE REPAIR**													
0	118	WATER SERVICE REPAIR - WM REHAB PR-CHANGE IN SC	01/01/2019	12/31/2022	-13,150	0	0	0	0	-13,150	0	0	0	0	0
0	119	2014 WATER SERVICE REPLACEMENT - S-CHANGE IN SC	01/01/2019	12/31/2020	-118	0	0	0	0	-118	0	0	0	0	0
0	121	WSR CUT REPAIRS WITH WM SL-CHANGE IN SCOPE	01/01/2019	12/31/2022	-893	0	0	0	0	-893	0	0	0	0	0
0	122	REPLACEMENT OF FROZEN SERVICES-CHANGE IN SCOP	01/01/2019	12/31/2019	-240	0	0	0	0	-240	0	0	0	0	0
0	123	2011 WSR-CHANGE IN SCOPE	11/08/2018	12/31/2019	3	0	0	0	0	3	0	0	0	0	0
		Project Sub-total:			31,121	0	0	0	0	31,121	0	0	0	0	0
0	**WAT906935**	**NEW SERVICE CONNECTIONS**													
0	2	NEW SERVICE CONNECTIONS - CUT REPAIRS	01/01/2008	12/31/2019	5,377	0	0	0	0	5,377	0	0	0	0	0
0	7	NEW SERVICE CONNECTIONS - SITE SERVICING	01/01/2010	12/31/2019	6,946	0	0	0	0	6,946	0	0	0	0	0
0	26	NEW SERVICE CONNECTIONS - SITE SER-CHANGE IN SC	01/01/2019	12/31/2021	24,213	0	0	0	0	24,213	0	0	0	0	0
0	27	NEW SERVICE CONNECTIONS - CUT REPA-CHANGE IN SC	01/01/2019	12/31/2022	5,300	0	0	0	0	5,300	0	0	0	0	0
		Project Sub-total:			41,836	0	0	0	0	41,836	0	0	0	0	0
0	**WAT906951**	**ENGINEERING**													
0	2	CONSULTING FEES	01/01/2006	12/31/2019	21,842	0	0	0	0	21,842	0	0	0	0	0
0	63	ROAD RESTORATION	01/01/2006	12/31/2020	2,621	0	0	0	0	2,621	0	0	0	0	0
0	78	ECS SALARIES-CHANGE IN SCOPE	01/01/2019	12/31/2019	14,491	0	0	0	0	14,491	0	0	0	0	0
0	79	TW SALARIES-CHANGE IN SCOPE	01/01/2019	12/31/2019	2,148	0	0	0	0	2,148	0	0	0	0	0
0	80	LEGAL SERVICES SALARIES-CHANGE IN SCOPE	01/01/2019	12/31/2019	225	0	0	0	0	225	0	0	0	0	0
0	81	ROAD RESTORATION-CHANGE IN SCOPE	01/01/2019	12/31/2022	-1,473	0	0	0	0	-1,473	0	0	0	0	0
0	82	CONSULTING FEES-CHANGE IN SCOPE	01/01/2019	12/31/2026	-8,002	0	0	0	0	-8,002	0	0	0	0	0
0	83	PPFA SALARIES-CHANGE IN SCOPE	01/01/2019	12/31/2019	2,935	0	0	0	0	2,935	0	0	0	0	0
0	84	PMMD SALARIES-CHANGE IN SCOPE	01/01/2019	12/31/2019	311	0	0	0	0	311	0	0	0	0	0
		Project Sub-total:			35,098	0	0	0	0	35,098	0	0	0	0	0
0	**WAT906977**	**ISLAND W.T.P. R&R**													
0	1	FACILITY & PROCESS UPGRADES	01/01/2006	12/31/2022	375	0	0	0	0	375	0	0	0	0	0
0	12	FACILITY UPGRADE - FORMER MARINE YARD	01/01/2011	12/31/2019	2,164	0	0	0	0	2,164	0	0	0	0	0
0	32	TRAVELLING SCREEN REPLACEMENT	01/01/2015	12/31/2019	440	0	0	0	0	440	0	0	0	0	0
0	50	AMMONIA AND FLUORIDE SYSTEM UPGRADES	01/01/2014	12/31/2019	7,948	0	0	0	0	7,948	0	0	0	0	0
0	51	CHEMICAL SYSTEMS` ELECTRICAL FEED DISTRIBUTION	01/01/2014	12/31/2019	1	0	0	0	0	1	0	0	0	0	0
0	54	FILTER MEDIA REPLC - FUTURE	01/01/2019	12/31/2028	300	0	0	0	0	300	0	0	0	0	0
0	70	PLANTWIDE HVAC UPGRADES	01/01/2015	12/31/2019	2,220	0	0	0	0	2,220	0	0	0	0	0
0	83	RAW WATER INTAKE CLEANING	01/01/2016	12/31/2019	1,225	0	0	0	0	1,225	0	0	0	0	0
0	110	AMMONIA AND FLUORIDE SYSTEM UPGRAD-CHANGE IN S	01/01/2019	12/31/2022	-7,122	0	0	0	0	-7,122	0	0	0	0	0

(Phase 2) 10-Water Program Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5

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Water Program

Sub-Project Summary

Project/Financing Priority	Project	Project Name	Start Date	Completion Date	2019 Cash Flow	Financing									
						Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**WAT906977**	**ISLAND W.T.P. R&R**													
0	111	TRAVELLING SCREEN REPLACEMENT-CHANGE IN SCOPE	01/01/2019	12/31/2023	-10	0	0	0	0	-10	0	0	0	0	0
0	112	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2022	195	0	0	0	0	195	0	0	0	0	0
0	117	ISLAND PHOTOVOLTAIC SYSTEM	01/01/2019	12/31/2022	100	0	0	0	0	100	0	0	0	0	0
0	118	FIS - JSPS CROSS HARBOUR TUNNEL REHABILITATION	08/27/2018	12/31/2020	500	0	0	0	0	500	0	0	0	0	0
0	119	FACILITY UPGRADE - FORMER MARINE Y-CHANGE IN SC	01/01/2019	12/31/2020	-827	0	0	0	0	-827	0	0	0	0	0
0	121	PLANTWIDE HVAC UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2022	-1,644	0	0	0	0	-1,644	0	0	0	0	0
		Project Sub-total:			5,865	0	0	0	0	5,865	0	0	0	0	0
0	**WAT907353**	**LAWRENCE ALLAN REVITALIZATION PLAN**													
0	1	LAWRENCE ALLAN REVITALIZATION PLAN - INTERNAL	01/01/2013	12/31/2022	11,668	0	0	11,668	0	0	0	0	0	0	0
0	2	LAWRENCE ALLAN REVITALIZATION PLAN - EXTERNAL	01/01/2013	12/31/2021	250	0	0	250	0	0	0	0	0	0	0
0	13	LAWRENCE ALLAN REVITALIZATION PLAN-CHANGE IN SC	01/01/2019	12/31/2021	-8,368	0	0	-8,368	0	0	0	0	0	0	0
0	14	LAWRENCE ALLAN REVITALIZATION PLAN-CHANGE IN SC	01/01/2019	12/31/2022	-250	0	0	-250	0	0	0	0	0	0	0
		Project Sub-total:			3,300	0	0	3,300	0	0	0	0	0	0	0
0	**WAT907558**	**REGENT PARK CAPITAL CONTRIBUTION**													
0	14	REGENT PARK CAPITAL CONTRIBUTION - PHASE 3 - 5	01/01/2016	12/31/2024	1,133	0	0	1,133	0	0	0	0	0	0	0
0	16	REGENT PARK CAPITAL CONTRIBUTION --CHANGE IN SC	01/01/2019	12/31/2021	-591	0	0	-591	0	0	0	0	0	0	0
		Project Sub-total:			542	0	0	542	0	0	0	0	0	0	0
0	**WAT907946**	**BUSINESS IT PROJECTS**													
0	7	ENTERPRISE WORK MANAGEMENT SYSTEM PROJECT	01/01/2014	12/31/2019	1,554	0	0	0	0	1,554	0	0	0	0	0
0	18	ENTERPRISE WORK MANAGEMENT SYSTEM -CHANGE IN	01/01/2019	12/31/2023	-654	0	0	0	0	-654	0	0	0	0	0
		Project Sub-total:			900	0	0	0	0	900	0	0	0	0	0
0	**WAT908087**	**TRUNK WATERMAIN**													
0	1	TRANSMISSION SYSTEM AUTOMATION	01/01/2015	12/31/2019	5,801	0	0	0	0	5,801	0	0	0	0	0
0	4	JOS - REVENUE METER REPLACEMENT	01/01/2016	12/31/2019	4,369	0	0	0	0	2,184	0	0	2,185	0	0
0	6	3RD PARTY RELOCATIONS (METROLINX)	01/01/2015	12/31/2021	50	0	0	0	0	50	0	0	0	0	0
0	16	TRANSMISSION SYSTEM AUTOMATION-CHANGE IN SCOP	01/01/2019	12/31/2024	-5,381	0	0	0	0	-5,381	0	0	0	0	0
0	17	JOS - REVENUE METER REPLACEMENT-CHANGE IN SCOI	01/01/2019	12/31/2020	-929	0	0	0	0	-464	0	0	-465	0	0
		Project Sub-total:			3,910	0	0	0	0	2,190	0	0	1,720	0	0
0	**WAT908248**	**WT&S PLANTWIDE**													
0	1	UV DISINFECTION - CONCEPTUAL DESIGN	01/01/2016	12/31/2019	248	0	0	0	0	248	0	0	0	0	0
0	4	ZEBRA MUSSEL CONTROL - ENG	01/01/2016	12/31/2019	738	0	0	0	0	738	0	0	0	0	0
0	5	ZEBRA MUSSEL CONTROL - CONSTRUCTION	01/01/2019	12/31/2023	250	0	0	0	0	250	0	0	0	0	0
0	6	STANDBY POWER - PHASE 2 - ENG	01/01/2016	12/31/2019	1,768	0	0	111	0	1,127	0	0	530	0	0

(Phase 2) 10-Water Program Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5

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Sub-Project Summary

Project/Financing Priority	Project	Project Name	Start Date	Completion Date	2019 Cash Flow	Financing									
						Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**WAT908248**	**WT&S PLANTWIDE**													
0	10	UV DISINFECTION - ISLAND WTP - ENGINEERING	01/01/2016	12/31/2019	1,251	0	0	0	0	1,251	0	0	0	0	0
0	12	SCRUBBER AND TONNER CONNECTION IMPROVEMENTS	01/01/2016	12/31/2019	1,956	0	0	128	0	1,241	0	0	587	0	0
0	18	SOURCE WATER PROTECTION-LAKE ONTARIO COLLABOI	01/01/2018	12/31/2020	375	0	0	0	0	375	0	0	0	0	0
0	21	SCRUBBER AND TONNER CONNECTION IMP-CHANGE IN S	01/01/2019	12/31/2025	-1,415	0	0	-72	0	-918	0	0	-425	0	0
0	22	UV DISINFECTION - CONCEPTUAL DESIG-CHANGE IN SC(	01/01/2019	12/31/2019	-248	0	0	0	0	-248	0	0	0	0	0
0	23	SOURCE WATER PROTECTION-LAKE ONTAR-CHANGE IN	01/01/2019	12/31/2022	-375	0	0	0	0	-375	0	0	0	0	0
0	24	UV DISINFECTION - ISLAND WTP - ENG-CHANGE IN SCOP	01/01/2019	12/31/2024	-606	0	0	0	0	-606	0	0	0	0	0
0	25	STANDBY POWER - PHASE 2 - ENG-CHANGE IN SCOPE	01/01/2019	12/31/2025	-608	0	0	9	0	-435	0	0	-182	0	0
0	26	ZEBRA MUSSEL CONTROL - ENG-CHANGE IN SCOPE	01/01/2019	12/31/2024	-388	0	0	0	0	-388	0	0	0	0	0
		Project Sub-total:			2,946	0	0	176	0	2,260	0	0	510	0	0
Program Total:					350,393	0	0	28,710	0	315,566	0	0	6,117	0	0

Status Code	Description
S2	S2 Prior Year (With 2019 and\or Future Year Cashflow)
S3	S3 Prior Year - Change of Scope 2019 and\or Future Year Cost\Cashflow)
S4	S4 New - Stand-Alone Project (Current Year Only)
S5	S5 New (On-going or Phased Projects)

Category Code	Description
01	Health and Safety C01
02	Legislated C02
03	State of Good Repair C03
04	Service Improvement and Enhancement C04
05	Growth Related C05
06	Reserved Category 1 C06
07	Reserved Category 2 C07

(Phase 2) 11-Wastewater Program Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5

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Sub-Project Summary

Project/Financing Priority	Project	Project Name	Start Date	Completion Date	2019 Cash Flow	Financing									
						Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**WAS000007**	**ASHBRIDGES BAY WWTP REHAB**													
0	19	FERROUS UPGRADES	01/01/2013	12/31/2019	7,097	0	0	583	0	6,514	0	0	0	0	0
0	30	ELECTRICAL REHAB - ECAP	01/01/2005	12/31/2020	2,785	0	0	0	0	2,785	0	0	0	0	0
0	41	POLYMER UPGRADE	01/01/2014	12/31/2019	21,950	0	0	0	0	21,950	0	0	0	0	0
0	47	P BLDG HEADWORKS ENG DESIGN&CONTRACT ADMIN	01/01/2005	12/31/2019	2,082	0	0	227	0	1,855	0	0	0	0	0
0	49	PROCESS UPGRADES & ODOUR CONTROL ENGINEERIN(	01/01/2005	12/31/2019	81	0	0	8	0	73	0	0	0	0	0
0	189	PROCESS AND EQUIPMENT	01/01/2013	12/31/2019	1,463	0	0	0	0	1,463	0	0	0	0	0
0	190	GROUND AND FACILITIES	01/01/2013	12/31/2019	696	0	0	0	0	696	0	0	0	0	0
0	215	DIGESTERS CLEANING REHAB - TANKS 14, 16, 13	01/01/2014	12/31/2019	5,566	0	0	0	0	5,566	0	0	0	0	0
0	216	OPERATIONS CENTRE - ENGINEERING	01/01/2016	12/31/2019	260	0	0	0	0	260	0	0	0	0	0
0	226	ABTP - PROCESS ROADMAP PHASE 2	01/01/2015	12/31/2019	1,000	0	0	0	0	1,000	0	0	0	0	0
0	227	AIR HEADER REHAB	01/01/2015	12/31/2019	2,637	0	0	0	0	2,637	0	0	0	0	0
0	229	D BUILDING PHASE 2	01/01/2015	12/31/2019	2,144	0	0	0	0	2,144	0	0	0	0	0
0	246	NEW FLEET PURCHASES	01/01/2016	12/31/2022	25	0	0	0	0	25	0	0	0	0	0
0	256	DIGESTER CLEANING - 10 YEAR PLAN	01/01/2019	12/31/2027	200	0	0	0	0	200	0	0	0	0	0
0	264	HVAC CONVERSION Z-BLDG	01/01/2016	12/31/2019	28	0	0	0	0	28	0	0	0	0	0
0	285	BLOWER 7-9 OVERHAUL	01/01/2016	12/31/2019	500	0	0	0	0	500	0	0	0	0	0
0	292	BLOWER STUDY	01/01/2018	12/31/2019	100	0	0	0	0	100	0	0	0	0	0
0	306	BLOWER STUDY-CHANGE IN SCOPE	01/01/2019	12/31/2019	-100	0	0	0	0	-100	0	0	0	0	0
0	308	D BUILDING PHASE 2-CHANGE IN SCOPE	01/01/2019	12/31/2024	-1,046	0	0	0	0	-1,046	0	0	0	0	0
0	309	AIR HEADER REHAB-CHANGE IN SCOPE	01/01/2019	12/31/2020	-2,176	0	0	0	0	-2,176	0	0	0	0	0
0	310	DIGESTERS CLEANING REHAB - TANKS 1-CHANGE IN SC(	01/01/2019	12/31/2023	-1,762	0	0	0	0	-1,762	0	0	0	0	0
0	311	POLYMER UPGRADE-CHANGE IN SCOPE	01/01/2019	12/31/2025	-20,525	0	0	0	0	-20,525	0	0	0	0	0
0	312	GROUND AND FACILITIES-CHANGE IN SCOPE	01/01/2019	12/31/2023	-96	0	0	0	0	-96	0	0	0	0	0
0	313	PROCESS AND EQUIPMENT-CHANGE IN SCOPE	01/01/2019	12/31/2023	-290	0	0	0	0	-290	0	0	0	0	0
0	314	FERROUS UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2020	-1,754	0	0	208	0	-1,962	0	0	0	0	0
0	315	ELECTRICAL REHAB - ECAP-CHANGE IN SCOPE	01/01/2019	12/31/2021	-2,294	0	0	0	0	-2,294	0	0	0	0	0
0	316	P BLDG HEADWORKS ENG DESIGN&CONTRA-CHANGE IN	01/01/2019	12/31/2021	-384	0	0	28	0	-412	0	0	0	0	0
0	317	PROCESS UPGRADES & ODOUR CONTROL E-CHANGE IN	01/01/2019	12/31/2020	-60	0	0	-5	0	-55	0	0	0	0	0
0	318	HEATING AND AIR SYSTEMS	01/01/2019	12/31/2025	705	0	0	0	0	705	0	0	0	0	0
0	320	EAST BYPASS	01/01/2019	12/31/2027	250	0	0	0	0	250	0	0	0	0	0
0	321	ABTP SOLAR PV PILOT PROJECT	01/01/2019	12/31/2022	250	0	0	0	0	250	0	0	0	0	0
0	322	SECONDARY CLARIFIER CROSS COLLECTOR UPGR TANI	01/01/2019	12/31/2023	75	0	0	0	0	75	0	0	0	0	0
0	324	ABTP - PROCESS ROADMAP PHASE 2-CHANGE IN SCOPE	01/01/2019	12/31/2022	-500	0	0	0	0	-500	0	0	0	0	0

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0	**WAS000007**	**ASHBRIDGES BAY WWTP REHAB**													
0	326	OPERATIONS CENTRE - ENGINEERING-CHANGE IN SCOP	01/01/2019	12/31/2019	-10	0	0	0	0	-10	0	0	0	0	0
		Project Sub-total:			18,897	0	0	1,049	0	17,848	0	0	0	0	0
0	**WAS000115**	**HUMBER T.P.**													
0	9	CO-GENERATION	01/01/2005	12/31/2019	87	0	0	0	0	87	0	0	0	0	0
0	64	CO-GENERATION-CHANGE IN SCOPE	11/08/2018	12/31/2019	33	0	0	0	0	33	0	0	0	0	0
		Project Sub-total:			120	0	0	0	0	120	0	0	0	0	0
0	**WAS000259**	**TRUNK SEWER SYSTEM**													
0	15	TRUNK SEWER REHABILITATION - 2012	01/01/2012	12/31/2019	1,093	0	0	0	0	1,093	0	0	0	0	0
0	27	TRUNK SEWER REHABILITATION - 2014	01/01/2014	12/31/2019	23,755	0	0	0	0	23,755	0	0	0	0	0
0	34	BLACK CREEK STS EA	01/01/2008	12/31/2019	1,352	0	0	0	0	1,352	0	0	0	0	0
0	47	TRUNK SEWER REHABILITATION - 2016	01/01/2016	12/31/2019	22,085	0	0	0	0	22,085	0	0	0	0	0
0	53	TRUNK SEWER REHABILITATION - 2018	01/01/2016	12/31/2024	13,962	0	0	0	0	13,962	0	0	0	0	0
0	62	TRUNK SEWER REHABILITATION - 2012-CHANGE IN SCOP	01/01/2019	12/31/2021	-742	0	0	0	0	-742	0	0	0	0	0
0	63	TRUNK SEWER REHABILITATION - 2016-CHANGE IN SCOP	01/01/2019	12/31/2022	-10,775	0	0	0	0	-10,775	0	0	0	0	0
0	64	BLACK CREEK STS EA-CHANGE IN SCOPE	01/01/2019	12/31/2020	-887	0	0	0	0	-887	0	0	0	0	0
0	65	TRUNK SEWER REHABILITATION - 2018-CHANGE IN SCOP	01/01/2019	12/31/2024	-7,439	0	0	0	0	-7,439	0	0	0	0	0
0	66	TRUNK SEWER REHABILITATION - 2014-CHANGE IN SCOP	01/01/2019	12/31/2022	-15,447	0	0	0	0	-15,447	0	0	0	0	0
0	67	TRUNK SEWER REHABILITATION - 2019	01/01/2019	12/31/2026	775	0	0	0	0	775	0	0	0	0	0
0	68	LOWER SIMCOE CSO	01/01/2019	12/31/2025	700	0	0	0	0	700	0	0	0	0	0
		Project Sub-total:			28,432	0	0	0	0	28,432	0	0	0	0	0
0	**WAS000442**	**BASEMENT FLOODING RELIEF**													
0	1	BASEMENT FLOODING PROTECTION SUBSIDY PROGRAM	01/01/2005	12/31/2020	5,500	0	0	0	0	5,500	0	0	0	0	0
0	8	BASEMENT FLOODING STUDIES & EAS	01/01/2006	12/31/2019	701	0	0	7	0	694	0	0	0	0	0
0	9	BASEMENT FLOODING RELIEF - TUNNEL PROJECT	01/01/2013	12/31/2019	5,446	0	0	96	0	5,350	0	0	0	0	0
0	12	ROAD RESTORATION FOR BSMT FLDG PRJS	01/01/2012	12/31/2019	292	0	0	2	0	290	0	0	0	0	0
0	14	BASEMENT FLOODING DESIGN - GROUP 1	01/01/2008	12/31/2019	1,206	0	0	20	0	1,186	0	0	0	0	0
0	18	BASEMENT FLOODING DESIGN - GROUP 2	01/01/2011	12/31/2019	3,135	0	0	15	0	3,120	0	0	0	0	0
0	19	BASEMENT FLOODING RELIEF - GROUP 2	01/01/2014	12/31/2019	16,906	0	0	450	0	16,456	0	0	0	0	0
0	20	BASEMENT FLOODING DESIGN - GROUP 3	01/01/2014	12/31/2019	2,219	0	0	54	0	2,165	0	0	0	0	0
0	29	BASEMENT FLOODING RELIEF - GROUP 1	01/01/2010	12/31/2019	2,528	0	0	2	0	2,526	0	0	0	0	0
0	76	BASEMENT FLOODING FLOW MONITORING	01/01/2016	12/31/2020	954	0	0	0	0	954	0	0	0	0	0
0	77	BASEMENT FLOODING DESIGN - GROUP 4 (ENGINEERIN	01/01/2015	12/31/2019	34,297	0	0	513	0	33,784	0	0	0	0	0
0	81	BASEMENT FLOODING STUDIES & EAS-CW IMPLEMENTA	01/01/2014	12/31/2019	5,758	0	0	65	0	5,693	0	0	0	0	0

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0	**WAS000442**	**BASEMENT FLOODING RELIEF**													
0	89	BASEMENT FLOODING RELIEF - GROUP 4 (CONSTRUCTI	01/01/2016	12/31/2019	39,481	0	0	1,020	0	38,461	0	0	0	0	0
0	107	BASEMENT FLOODING RELIEF - GROUP 3 (CONSTRUCTI	01/01/2016	12/31/2019	12,443	0	0	396	0	12,047	0	0	0	0	0
0	132	BASEMENT FLOODING STUDIES & EAS-CW-CHANGE IN S	01/01/2019	12/31/2024	-1,238	0	0	613	0	-1,851	0	0	0	0	0
0	133	BASEMENT FLOODING RELIEF - GROUP 1-CHANGE IN SC	01/01/2019	12/31/2020	-2,407	0	0	16	0	-2,423	0	0	0	0	0
0	134	BASEMENT FLOODING DESIGN - GROUP 3-CHANGE IN SC	01/01/2019	12/31/2021	-282	0	0	237	0	-519	0	0	0	0	0
0	135	BASEMENT FLOODING DESIGN - GROUP 4-CHANGE IN SC	01/01/2019	12/31/2027	-17,697	0	0	1,977	0	-19,674	0	0	0	0	0
0	136	BASEMENT FLOODING RELIEF - GROUP 4-CHANGE IN SC	01/01/2019	12/31/2028	-15,156	0	0	2,629	0	-17,785	0	0	0	0	0
0	137	BASEMENT FLOODING STUDIES & EAS-CHANGE IN SCOP	01/01/2019	12/31/2022	-616	0	0	6	0	-622	0	0	0	0	0
0	138	BASEMENT FLOODING RELIEF - GROUP 3-CHANGE IN SC	01/01/2019	12/31/2022	-3,450	0	0	953	0	-4,403	0	0	0	0	0
0	139	BASEMENT FLOODING RELIEF - TUNNEL -CHANGE IN SC	01/01/2019	12/31/2027	-1,761	0	0	457	0	-2,218	0	0	0	0	0
0	140	BASEMENT FLOODING DESIGN - GROUP 1-CHANGE IN SC	01/01/2020	12/31/2020	-1,076	0	0	0	0	-1,076	0	0	0	0	0
0	141	BASEMENT FLOODING RELIEF - GROUP 2-CHANGE IN SC	01/01/2019	12/31/2020	-8,554	0	0	803	0	-9,357	0	0	0	0	0
0	142	BASEMENT FLOODING DESIGN - GROUP 2-CHANGE IN SC	01/01/2020	12/31/2020	-3,032	0	0	0	0	-3,032	0	0	0	0	0
0	143	BASEMENT FLOODING FLOW MONITORING-CHANGE IN S	01/01/2019	12/31/2020	606	0	0	234	0	372	0	0	0	0	0
0	144	ROAD RESTORATION FOR BSMT FLDG PRJ-CHANGE IN S	01/01/2019	12/31/2020	-198	0	0	12	0	-210	0	0	0	0	0
		Project Sub-total:			76,005	0	0	10,577	0	65,428	0	0	0	0	0
0	**WAS000521**	**HIGHLAND CREEK WWTP - BUILDING SERV & SITE DEV**													
0	3	HCTP BLDG REHAB & IMPROVEMENTS	01/01/2012	12/31/2019	1,375	0	0	0	0	1,375	0	0	0	0	0
0	11	HCTP BLDG REHAB & IMPROVEMENTS-CHANGE IN SCOP	01/01/2019	12/31/2020	-375	0	0	0	0	-375	0	0	0	0	0
		Project Sub-total:			1,000	0	0	0	0	1,000	0	0	0	0	0
0	**WAS906322**	**W&WW LABORATORIES**													
0	22	LAB & EMP FACILITIES	01/01/2018	12/31/2019	7,550	0	0	0	0	7,550	0	0	0	0	0
0	27	LAB EQUIPMENT - FUTURE	01/01/2018	12/31/2027	337	0	0	0	0	337	0	0	0	0	0
0	33	LAB EQUIPMENT - FUTURE-CHANGE IN SCOPE	01/01/2019	12/31/2028	-337	0	0	0	0	-337	0	0	0	0	0
0	34	LAB EQUIPMENT-CHANGE IN SCOPE	01/01/2019	12/31/2019	562	0	0	0	0	562	0	0	0	0	0
0	35	LAB & EMP FACILITIES-CHANGE IN SCOPE	01/01/2019	12/31/2021	-6,500	0	0	0	0	-6,500	0	0	0	0	0
		Project Sub-total:			1,612	0	0	0	0	1,612	0	0	0	0	0
0	**WAS906328**	**SWM END OF PIPE FACILITIES**													
0	11	Bonar Creek SWMF Construction	01/01/2014	12/31/2022	1,750	0	0	141	0	1,609	0	0	0	0	0
0	12	EARL BALES PARK SWM FACILITY - PHASE 2	01/01/2012	12/31/2019	1,000	0	0	80	0	920	0	0	0	0	0
0	64	HUMBER BAY POND (ETOBICOKE)	01/01/2016	12/31/2019	290	0	0	26	0	264	0	0	0	0	0
0	67	YR03 D1 END OF PIPE	01/01/2016	12/31/2019	1	0	0	0	0	1	0	0	0	0	0
0	72	NORTH TORONTO CSO CONSTR - 2018 SC	01/01/2018	12/31/2019	340	0	0	33	0	307	0	0	0	0	0

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0	**WAS906328**	**SWM END OF PIPE FACILITIES**													
0	75	Bonar Creek SWMF Construction-CHANGE IN SCOPE	01/01/2019	12/31/2023	-975	0	0	-26	0	-949	0	0	0	0	0
0	76	NORTH TORONTO CSO CONSTR - 2018 SC-CHANGE IN SC	01/01/2019	12/31/2021	-240	0	0	-18	0	-222	0	0	0	0	0
0	77	HUMBER BAY POND (ETOBICOKE)-CHANGE IN SCOPE	01/01/2019	12/31/2023	-40	0	0	11	0	-51	0	0	0	0	0
0	78	EARL BALES PARK SWM FACILITY - PHA-CHANGE IN SCO	01/01/2019	12/31/2020	-950	0	0	-72	0	-878	0	0	0	0	0
		Project Sub-total:			1,176	0	0	175	0	1,001	0	0	0	0	0
0	**WAS906331**	**SWM SOURCE CONTROL PROG**													
0	9	DOWNSPOUT DISCONNECTION PROGRAM	01/01/2005	12/31/2022	70	0	0	0	0	70	0	0	0	0	0
0	17	DOWNSPOUT DISCONNECTION PROGRAM-CHANGE IN S	01/01/2019	12/31/2020	20	0	0	0	0	20	0	0	0	0	0
		Project Sub-total:			90	0	0	0	0	90	0	0	0	0	0
0	**WAS906380**	**HIGHLAND CREEK WWTP - ODOUR CONTROL**													
0	1	ODOUR CONTROL UPGRADES - PHASE 1 ENG	01/01/2008	12/31/2023	190	0	0	15	0	175	0	0	0	0	0
0	2	ODOUR CONTROL UPGRADES - PHASE 1 CONSTR	01/01/2013	12/31/2020	2,418	0	0	195	0	2,223	0	0	0	0	0
0	24	ODOUR CONTROL UPGRADES - PHASE 1 E-CHANGE IN S	01/01/2019	12/31/2024	660	0	0	113	0	547	0	0	0	0	0
0	25	ODOUR CONTROL UPGRADES - PHASE 1 C-CHANGE IN S	01/01/2019	12/31/2021	2,057	0	0	476	0	1,581	0	0	0	0	0
		Project Sub-total:			5,325	0	0	799	0	4,526	0	0	0	0	0
0	**WAS906487**	**HIGHLAND CREEK T.P. - IV YR2004**													
0	22	PCS PLANT SERVICES	01/01/2017	12/31/2019	1	0	0	0	0	1	0	0	0	0	0
		Project Sub-total:			1	0	0	0	0	1	0	0	0	0	0
0	**WAS906492**	**WET WEATHER FLOW MP**													
0	1	SWM INA/EA	01/01/2005	12/31/2022	740	0	0	60	0	680	0	0	0	0	0
0	14	WWFMP IMPLEMENTATION - DESIGN	01/01/2008	12/31/2019	731	0	0	66	0	665	0	0	0	0	0
0	41	SWM CONVEYANCE 2012	01/01/2012	12/31/2019	37	0	0	3	0	34	0	0	0	0	0
0	58	SWM CONVEYANCE 2015	01/01/2015	12/31/2019	785	0	0	63	0	722	0	0	0	0	0
0	59	STORM WATER POND ASSESSMENT & CLEANING	01/01/2015	12/31/2019	4,394	0	0	0	0	4,394	0	0	0	0	0
0	60	ASHBRIDGES BAY LANDFORMS	01/01/2015	12/31/2025	3,250	0	0	0	0	3,250	0	0	0	0	0
0	84	SWM CONVEYANCE 2017	01/01/2016	12/31/2019	2,229	0	0	222	0	2,007	0	0	0	0	0
0	86	GREEN STREETS	01/01/2016	12/31/2019	1,451	0	0	155	0	1,296	0	0	0	0	0
0	97	WATERFRONT MODELLING STUDIES	01/01/2016	12/31/2025	25	0	0	2	0	23	0	0	0	0	0
0	109	SWM CONVEYANCE 2012-CHANGE IN SCOPE	01/01/2019	12/31/2019	-37	0	0	-3	0	-34	0	0	0	0	0
0	110	GREEN STREETS-CHANGE IN SCOPE	01/01/2019	12/31/2023	-444	0	0	-6	0	-438	0	0	0	0	0
0	111	SWM CONVEYANCE 2015-CHANGE IN SCOPE	01/01/2019	12/31/2019	-785	0	0	-63	0	-722	0	0	0	0	0
0	112	SWM CONVEYANCE 2017-CHANGE IN SCOPE	01/01/2019	12/31/2021	-429	0	0	44	0	-473	0	0	0	0	0
0	113	PUBLIC EDUCATION-CHANGE IN SCOPE	01/01/2019	12/31/2019	535	0	0	79	0	456	0	0	0	0	0

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0	**WAS906492**	**WET WEATHER FLOW MP**													
0	114	SWM INA/EA-CHANGE IN SCOPE	01/01/2019	12/31/2022	77	0	0	61	0	16	0	0	0	0	0
0	115	WATERFRONT MODELLING STUDIES-CHANGE IN SCOPE	01/01/2019	12/31/2025	-25	0	0	-2	0	-23	0	0	0	0	0
0	116	WWFMP IMPLEMENTATION - DESIGN-CHANGE IN SCOPE	01/01/2019	12/31/2024	-633	0	0	-51	0	-582	0	0	0	0	0
0	117	STORM WATER POND ASSESSMENT & CLEA-CHANGE IN	01/01/2019	12/31/2023	-2,143	0	0	0	0	-2,143	0	0	0	0	0
0	118	ASHBRIDGES BAY LANDFORMS-CHANGE IN SCOPE	01/01/2019	12/31/2025	3,750	0	0	0	0	3,750	0	0	0	0	0
		Project Sub-total:			13,508	0	0	630	0	12,878	0	0	0	0	0
0	**WAS906495**	**SEWER ASSET PLANNING**													
0	5	SEWER ASSET PLANNING	01/01/2007	12/31/2019	11,404	0	0	915	0	10,489	0	0	0	0	0
0	7	SEWER SYSTEM INSPECTION	01/01/2010	12/31/2020	7,546	0	0	0	0	7,546	0	0	0	0	0
0	21	PPD - INFRASTRUCTURE PLANNING STUDIES	01/01/2014	12/31/2019	150	0	0	0	0	150	0	0	0	0	0
0	39	SEWER SYSTEM INSPECTION-CHANGE IN SCOPE	01/01/2019	12/31/2024	2,454	0	0	0	0	2,454	0	0	0	0	0
0	40	SEWER ASSET PLANNING-CHANGE IN SCOPE	01/01/2019	12/31/2026	-5,828	0	0	-486	0	-5,342	0	0	0	0	0
0	41	PPD - INFRASTRUCTURE PLANNING STUD-CHANGE IN SC	01/01/2019	12/31/2020	25	0	0	0	0	25	0	0	0	0	0
0	42	CORP IT - IDC-CHANGE IN SCOPE	01/01/2019	12/31/2019	150	0	0	0	0	150	0	0	0	0	0
		Project Sub-total:			15,901	0	0	429	0	15,472	0	0	0	0	0
0	**WAS906500**	**NEW SEWER CONSTRUCTION**													
0	5	NEW SEWERS	01/01/2008	12/31/2019	88	0	0	60	0	28	0	0	0	0	0
0	24	WATERFRONT SANITARY MASTER SERVICING PLAN IMP	01/01/2015	12/31/2019	6,500	0	0	3,250	0	3,250	0	0	0	0	0
0	36	SHEPPARD SANITARY SEWER AT EAST DON STS	01/01/2018	12/31/2020	2,000	0	0	1,244	0	756	0	0	0	0	0
0	40	WATERFRONT SANITARY MASTER SERVICI-CHANGE IN S	01/01/2019	12/31/2026	-5,150	0	0	-2,575	0	-2,575	0	0	0	0	0
0	41	SHEPPARD SANITARY SEWER AT EAST DO-CHANGE IN S	01/01/2019	12/31/2023	-2,000	0	0	-1,244	0	-756	0	0	0	0	0
0	42	NEW SEWERS-CHANGE IN SCOPE	01/01/2019	12/31/2020	-38	0	0	-10	0	-28	0	0	0	0	0
		Project Sub-total:			1,400	0	0	725	0	675	0	0	0	0	0
0	**WAS906735**	**DIST SEWER REHAB OPS YR2005**													
0	10	GROUP 1 SEWAGE PUMPING STATION UPGRADES	01/01/2005	12/31/2019	16	0	0	2	0	14	0	0	0	0	0
0	20	GROUP 1 SEWAGE PUMPING STATION UPG-CHANGE IN S	01/01/2020	12/31/2020	-1	0	0	0	0	-1	0	0	0	0	0
		Project Sub-total:			15	0	0	2	0	13	0	0	0	0	0
0	**WAS906741**	**HIGHLAND CREEK TP YR2005**													
0	1	WAS THICKENING AND DEWATERING - ENG	01/01/2005	12/31/2019	2	0	0	0	0	2	0	0	0	0	0
0	21	WAS THICKENING AND DEWATERING - EN-CHANGE IN SC	01/01/2019	12/31/2019	1	0	0	0	0	1	0	0	0	0	0
		Project Sub-total:			3	0	0	0	0	3	0	0	0	0	0
0	**WAS906742**	**HUMBER TP YR2005**													
0	8	ODOUR CONTROL ENGINEERING	01/01/2008	12/31/2021	374	0	0	0	0	374	0	0	0	0	0

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0	**WAS906742**	**HUMBER TP YR2005**													
0	58	ODOUR CONTROL ENGINEERING-CHANGE IN SCOPE	01/01/2019	12/31/2020	383	0	0	114	0	269	0	0	0	0	0
		Project Sub-total:			757	0	0	114	0	643	0	0	0	0	0
0	**WAS906743**	**ASHRIDGES BAY TP YR2005**													
0	1	MISC MECH ENGINEERING	01/01/2005	12/31/2019	720	0	0	62	0	658	0	0	0	0	0
0	7	SERVICE AIR UPGRADES	01/01/2006	12/31/2019	1,166	0	0	0	0	1,166	0	0	0	0	0
0	63	MISC MECH ENGINEERING-CHANGE IN SCOPE	01/01/2019	12/31/2022	-400	0	0	-15	0	-385	0	0	0	0	0
0	64	SERVICE AIR UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2020	-1,132	0	0	0	0	-1,132	0	0	0	0	0
		Project Sub-total:			354	0	0	47	0	307	0	0	0	0	0
0	**WAS906755**	**WESTERN BEACHES RETROFIT**													
0	1	WESTERN BEACHES RETROFIT	01/01/2005	12/31/2019	8,902	0	0	960	0	7,942	0	0	0	0	0
0	17	WESTERN BEACHES RETROFIT-CHANGE IN SCOPE	01/01/2019	12/31/2023	-5,300	0	0	-427	0	-4,873	0	0	0	0	0
		Project Sub-total:			3,602	0	0	533	0	3,069	0	0	0	0	0
0	**WAS906926**	**OPERATIONAL SUPPORT**													
0	6	FACILITY RENOVATION	01/01/2006	12/31/2019	1,015	0	0	0	0	1,015	0	0	0	0	0
0	23	EMP MONITORING NEEDS	01/01/2010	12/31/2019	50	0	0	0	0	50	0	0	0	0	0
0	40	PCS UPGRADES FOR WASTEWATER TREATMENT	01/01/2013	12/31/2019	6,842	0	0	0	0	6,842	0	0	0	0	0
0	100	DIVISIONAL SECURITY	01/01/2016	12/31/2019	1,135	0	0	0	0	1,135	0	0	0	0	0
0	107	OFFICE MODERNIZATION - MH18	01/01/2016	12/31/2020	450	0	0	0	0	450	0	0	0	0	0
0	114	DISTRICT OPERATIONS FACILITY UPGRADES	01/01/2016	12/31/2022	250	0	0	0	0	250	0	0	0	0	0
0	122	435 KIPLING AVENUE	01/01/2018	12/31/2019	2,020	0	0	0	0	2,020	0	0	0	0	0
0	123	PCS UPGRADES FOR WASTEWATER TREATM-CHANGE IN	01/01/2019	12/31/2021	-4,746	0	0	0	0	-4,746	0	0	0	0	0
0	124	FACILITY RENOVATION-CHANGE IN SCOPE	01/01/2019	12/31/2023	1,823	0	0	0	0	1,823	0	0	0	0	0
0	126	DIVISIONAL SECURITY-CHANGE IN SCOPE	01/01/2019	12/31/2020	47	0	0	0	0	47	0	0	0	0	0
0	128	OFFICE MODERNIZATION - MH18-CHANGE IN SCOPE	01/01/2019	12/31/2020	-450	0	0	0	0	-450	0	0	0	0	0
0	129	435 KIPLING AVENUE-CHANGE IN SCOPE	01/01/2019	12/31/2021	-1,870	0	0	0	0	-1,870	0	0	0	0	0
		Project Sub-total:			6,566	0	0	0	0	6,566	0	0	0	0	0
0	**WAS906958**	**SEWER SYSTEM REHABILITATION**													
0	2	GROUPS 2, 3 & 4 SEWAGE PUMPING STATION UPGRADES	01/01/2005	12/31/2019	4	0	0	1	0	3	0	0	0	0	0
0	5	CCTV INSPECTION	01/01/2007	12/31/2019	1,048	0	0	0	0	1,048	0	0	0	0	0
0	8	SPS SCADA UPGRADES - ENGINEERING	01/01/2008	12/31/2019	517	0	0	42	0	475	0	0	0	0	0
0	9	SEWER REHABILITATION	01/01/2008	12/31/2022	23,854	0	0	0	0	23,854	0	0	0	0	0
0	23	SEWAGE PUMPING STATION STANDBY POWER	01/01/2009	12/31/2019	117	0	0	9	0	108	0	0	0	0	0
0	24	GROUP 5 SEWAGE PUMPING STATION UPGRADES	01/01/2013	12/31/2019	8,700	0	0	845	0	7,855	0	0	0	0	0

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0	**WAS906958**	**SEWER SYSTEM REHABILITATION**													
0	79	SEWER REHABILITATION - CWD	01/01/2016	12/31/2019	55,323	0	0	0	0	55,323	0	0	0	0	0
0	98	SEWER REHABILITATION - CWD-CHANGE IN SCOPE	01/01/2019	12/31/2022	-30,270	0	0	0	0	-30,270	0	0	0	0	0
0	99	GROUP 5 SEWAGE PUMPING STATION UPG-CHANGE IN S	01/01/2019	12/31/2021	-2,254	0	0	109	0	-2,363	0	0	0	0	0
0	100	SEWAGE PUMPING STATION STANDBY POW-CHANGE IN S	01/01/2019	12/31/2020	-102	0	0	-7	0	-95	0	0	0	0	0
0	101	SPS SCADA UPGRADES - ENGINEERING-CHANGE IN SCO	01/01/2019	12/31/2020	-324	0	0	-13	0	-311	0	0	0	0	0
0	102	SEWER REHABILITATION-CHANGE IN SCOPE	01/01/2019	12/31/2024	2,860	0	0	0	0	2,860	0	0	0	0	0
0	103	CCTV INSPECTION-CHANGE IN SCOPE	01/01/2019	12/31/2020	68	0	0	0	0	68	0	0	0	0	0
0	105	SEWER REHABILITATION - CUT REPAIRS	01/01/2019	12/31/2022	2,995	0	0	0	0	2,995	0	0	0	0	0
0	106	GROUPS 2, 3 & 4 SEWAGE PUMPING STA-CHANGE IN SC	01/01/2019	12/31/2019	2	0	0	0	0	2	0	0	0	0	0
		Project Sub-total:			62,538	0	0	986	0	61,552	0	0	0	0	0
0	**WAS906960**	**STREAM RESTORATION & EROSION CONTROL**													
0	7	STREAM RESTORATION	01/01/2008	12/31/2019	73	0	0	6	0	67	0	0	0	0	0
0	41	WATERCOURSE - ENGINEERING	01/01/2016	12/31/2019	972	0	0	61	0	911	0	0	0	0	0
0	43	PARTNER PROJECTS	01/01/2016	12/31/2021	600	0	0	48	0	552	0	0	0	0	0
0	45	WATERCOURSE - CONSTRUCTION	01/01/2019	12/31/2025	850	0	0	0	0	850	0	0	0	0	0
0	51	STUDIES, EAs, MASTER PLANS	01/01/2016	12/31/2019	3,017	0	0	281	0	2,736	0	0	0	0	0
0	52	CRITICAL REPAIRS	01/01/2016	12/31/2019	3,159	0	0	230	0	2,929	0	0	0	0	0
0	53	EMERGENCY EROSION CONTROL	01/01/2016	12/31/2022	300	0	0	24	0	276	0	0	0	0	0
0	62	STUDIES, EAs, MASTER PLANS -CHANGE IN SCOPE	01/01/2019	12/31/2024	-1,770	0	0	-96	0	-1,674	0	0	0	0	0
0	63	EMERGENCY EROSION CONTROL-CHANGE IN SCOPE	01/01/2019	12/31/2022	2,384	0	0	-24	0	2,408	0	0	0	0	0
0	64	STREAM RESTORATION -CHANGE IN SCOPE	01/01/2019	12/31/2019	-22	0	0	-6	0	-16	0	0	0	0	0
0	65	CRITICAL REPAIRS-CHANGE IN SCOPE	01/01/2019	12/31/2026	-824	0	0	-230	0	-594	0	0	0	0	0
0	66	PARTNER PROJECTS-CHANGE IN SCOPE	01/01/2019	12/31/2021	0	0	0	-48	0	48	0	0	0	0	0
0	67	WATERCOURSE - ENGINEERING-CHANGE IN SCOPE	01/01/2019	12/31/2027	-378	0	0	-61	0	-317	0	0	0	0	0
		Project Sub-total:			8,361	0	0	185	0	8,176	0	0	0	0	0
0	**WAS906966**	**SWM TRCA FUNDING**													
0	24	TORONTO WATER TRANSFER TO TRCA CAP-CHANGE IN S	01/01/2019	12/31/2019	4,491	0	0	674	0	3,817	0	0	0	0	0
		Project Sub-total:			4,491	0	0	674	0	3,817	0	0	0	0	0
0	**WAS906968**	**ENGINEERING**													
0	2	CONSULTING FEES	01/01/2006	12/31/2019	16,913	0	0	0	0	16,913	0	0	0	0	0
0	59	ROAD RESTORATION	01/01/2006	12/31/2019	729	0	0	0	0	729	0	0	0	0	0
0	70	CONSULTING FEES-CHANGE IN SCOPE	01/01/2019	12/31/2026	-8,509	0	0	0	0	-8,509	0	0	0	0	0
0	71	ECS SALARIES-CHANGE IN SCOPE	01/01/2019	12/31/2019	14,491	0	0	0	0	14,491	0	0	0	0	0

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0	**WAS906968**	**ENGINEERING**													
0	72	TW SALARIES-CHANGE IN SCOPE	01/01/2019	12/31/2019	1,089	0	0	0	0	1,089	0	0	0	0	0
0	73	ROAD RESTORATION-CHANGE IN SCOPE	01/01/2019	12/31/2019	-59	0	0	0	0	-59	0	0	0	0	0
		Project Sub-total:			24,654	0	0	0	0	24,654	0	0	0	0	0
0	**WAS906973**	**SEWER REPLACEMENT PROGRAM**													
0	25	2012 SEWER REPLC	01/01/2012	12/31/2019	325	0	0	0	0	325	0	0	0	0	0
0	35	2013 SEWER REPLC	01/01/2013	12/31/2019	10	0	0	1	0	9	0	0	0	0	0
0	36	SEWER REPLC - 2014 PROGRAM	01/01/2014	12/31/2019	28	0	0	2	0	26	0	0	0	0	0
0	46	WATERFRONT STORMWATER INFRASTRUCTURE	01/01/2013	12/31/2019	3,250	0	0	2,017	0	1,233	0	0	0	0	0
0	47	EBF REPORT	01/01/2013	12/31/2019	1,070	0	0	701	0	369	0	0	0	0	0
0	52	SEWER REPLACEMENT - METROLINX	01/01/2014	12/31/2022	1,213	0	0	0	0	1,213	0	0	0	0	0
0	62	SEWER REPLC - 2015 PROGRAM	01/01/2015	12/31/2019	604	0	0	48	0	556	0	0	0	0	0
0	71	SEWER REPLC - 2016 PROGRAM	01/01/2016	12/31/2019	3,694	0	0	297	0	3,397	0	0	0	0	0
0	75	FORCEMAIN REPLACEMENT - 2016	01/01/2016	12/31/2019	10,354	0	0	0	0	10,354	0	0	0	0	0
0	78	SEWER REPLC - 2017 PROGRAM	01/01/2016	12/31/2019	879	0	0	70	0	809	0	0	0	0	0
0	79	SEWER REPLC - 2018 PROGRAM	01/01/2018	12/31/2019	1,938	0	0	154	0	1,784	0	0	0	0	0
0	98	SEWER REPLC - 2019 PROGRAM	01/01/2019	12/31/2021	18,382	0	0	1,480	0	16,902	0	0	0	0	0
0	100	CSP RENEWAL	01/01/2018	12/31/2019	5,812	0	0	461	0	5,351	0	0	0	0	0
0	102	SEWER REPLC - 2016 PROGRAM-CHANGE IN SCOPE	01/01/2019	12/31/2020	-3,465	0	0	-279	0	-3,186	0	0	0	0	0
0	103	SEWER REPLC - 2017 PROGRAM-CHANGE IN SCOPE	01/01/2019	12/31/2020	-721	0	0	-58	0	-663	0	0	0	0	0
0	104	SEWER REPLC - 2018 PROGRAM-CHANGE IN SCOPE	01/01/2019	12/31/2022	-1,427	0	0	-115	0	-1,312	0	0	0	0	0
0	105	SEWER REPLC - 2019 PROGRAM-CHANGE IN SCOPE	01/01/2019	12/31/2023	-9,821	0	0	-822	0	-8,999	0	0	0	0	0
0	106	2012 SEWER REPLC-CHANGE IN SCOPE	01/01/2019	12/31/2020	-320	0	0	0	0	-320	0	0	0	0	0
0	107	CSP RENEWAL-CHANGE IN SCOPE	01/01/2019	12/31/2021	-1,639	0	0	-140	0	-1,499	0	0	0	0	0
0	108	EBF REPORT-CHANGE IN SCOPE	01/01/2019	12/31/2020	-521	0	0	-437	0	-84	0	0	0	0	0
0	109	WATERFRONT STORMWATER INFRASTRUCTU-CHANGE II	01/01/2019	12/31/2020	-2,250	0	0	-1,536	0	-714	0	0	0	0	0
0	110	SEWER REPLC - 2014 PROGRAM-CHANGE IN SCOPE	01/01/2019	12/31/2019	-9	0	0	-1	0	-8	0	0	0	0	0
0	111	SEWER REPLC - 2015 PROGRAM-CHANGE IN SCOPE	01/01/2019	12/31/2020	-394	0	0	-32	0	-362	0	0	0	0	0
0	114	SEWER REPLACEMENT - METROLINX-CHANGE IN SCOPE	01/01/2019	12/31/2021	-600	0	0	0	0	-600	0	0	0	0	0
0	115	FORCEMAIN REPLACEMENT - 2016-CHANGE IN SCOPE	01/01/2019	12/31/2022	-6,680	0	0	0	0	-6,680	0	0	0	0	0
		Project Sub-total:			19,712	0	0	1,811	0	17,901	0	0	0	0	0
0	**WAS906980**	**ASHBRIDGES BAY T.P. YR2006**													
0	9	DEWATERING EQUIPMENT UPGRADES	01/01/2006	12/31/2019	100	0	0	8	0	92	0	0	0	0	0

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0	**WAS906980**	**ASHBRIDGES BAY T.P. YR2006**													
0	45	DEWATERING EQUIPMENT UPGRADES-CHANGE IN SCOP	01/01/2019	12/31/2019	1	0	0	7	0	-6	0	0	0	0	0
		Project Sub-total:			101	0	0	15	0	86	0	0	0	0	0
0	**WAS906981**	**HIGHLAND CREEK WWTP UPGRADES**													
0	1	PROCESS & FACILITY UPGRADE	01/01/2006	12/31/2019	2,598	0	0	0	0	2,598	0	0	0	0	0
0	3	BIOSOLIDS TREATMENT UPGRADES	01/01/2006	12/31/2019	299	0	0	28	0	271	0	0	0	0	0
0	5	TRANSFORMERS AND SWITCHGEAR	01/01/2006	12/31/2019	198	0	0	16	0	182	0	0	0	0	0
0	7	MECH & ELECTRICAL UPGRADE ENGINEERING	01/01/2006	12/31/2019	60	0	0	0	0	60	0	0	0	0	0
0	8	DIGESTER GAS SYSTEM UPGRADES	01/01/2011	12/31/2020	3,668	0	0	0	0	3,668	0	0	0	0	0
0	23	ELECTRICAL UPGRADES - ECAR	01/01/2012	12/31/2019	5,122	0	0	0	0	5,122	0	0	0	0	0
0	32	CEPA COMPLIANCE - CL NOTICE - HCTP	01/01/2009	12/31/2019	5,561	0	0	0	0	5,561	0	0	0	0	0
0	80	DIGESTER CLEANING, REHAB AND IMPROVEMENTS #4-7	01/01/2014	12/31/2022	189	0	0	0	0	189	0	0	0	0	0
0	92	LIQUID TRAIN REPAIRS - PHASE 1	01/01/2015	12/31/2019	36,371	0	0	0	0	36,371	0	0	0	0	0
0	102	LIQUID TRAIN - ENGINEERING	01/01/2015	12/31/2027	4,155	0	0	0	0	4,155	0	0	0	0	0
0	123	COMMUNICATION SYSTEM	01/01/2016	12/31/2019	600	0	0	0	0	600	0	0	0	0	0
0	152	DIGESTER CLEANING, REHAB AND IMPRO-CHANGE IN SC	01/01/2019	12/31/2022	341	0	0	0	0	341	0	0	0	0	0
0	153	LIQUID TRAIN REPAIRS - PHASE 1-CHANGE IN SCOPE	01/01/2019	12/31/2025	-33,451	0	0	0	0	-33,451	0	0	0	0	0
0	154	BIOSOLIDS TREATMENT UPGRADES -CHANGE IN SCOPE	01/01/2019	12/31/2020	-240	0	0	-19	0	-221	0	0	0	0	0
0	155	DIGESTER GAS SYSTEM UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2021	432	0	0	0	0	432	0	0	0	0	0
0	156	TRANSFORMERS AND SWITCHGEAR-CHANGE IN SCOPE	01/01/2019	12/31/2021	2	0	0	14	0	-12	0	0	0	0	0
0	157	PROCESS & FACILITY UPGRADE-CHANGE IN SCOPE	01/01/2019	12/31/2025	-1,644	0	0	0	0	-1,644	0	0	0	0	0
0	158	ELECTRICAL UPGRADES - ECAR-CHANGE IN SCOPE	01/01/2019	12/31/2020	-4,692	0	0	0	0	-4,692	0	0	0	0	0
0	159	LIQUID TRAIN - ENGINEERING-CHANGE IN SCOPE	01/01/2019	12/31/2028	-1,705	0	0	0	0	-1,705	0	0	0	0	0
0	161	MECH & ELECTRICAL UPGRADE ENGINEER-CHANGE IN S	01/01/2019	12/31/2019	-60	0	0	0	0	-60	0	0	0	0	0
0	162	CEPA COMPLIANCE - CL NOTICE - HCTP-CHANGE IN SCO	01/01/2019	12/31/2024	-4,661	0	0	0	0	-4,661	0	0	0	0	0
0	163	COMMUNICATION SYSTEM-CHANGE IN SCOPE	01/01/2019	12/31/2023	-250	0	0	0	0	-250	0	0	0	0	0
		Project Sub-total:			12,893	0	0	39	0	12,854	0	0	0	0	0
0	**WAS906982**	**HUMBER WWTP UPGRADES**													
0	2	CHLORINE FACILITY UPGRADE	01/01/2006	12/31/2019	718	0	0	0	0	718	0	0	0	0	0
0	6	NEW SUBSTATION	01/01/2006	12/31/2019	77	0	0	0	0	77	0	0	0	0	0
0	7	ELECTRICAL CONDITION ASSESSMENT RECOMMENDATI	01/01/2006	12/31/2019	2,285	0	0	0	0	2,285	0	0	0	0	0
0	29	ADMIN BUILDING EXPANSION - ENGINEERING	01/01/2010	12/31/2022	710	0	0	0	0	710	0	0	0	0	0
0	52	HVAC UPGRADES	01/01/2013	12/31/2019	5,978	0	0	0	0	5,978	0	0	0	0	0
0	81	BLOWER REPLACEMENT	01/01/2016	12/31/2019	5	0	0	0	0	5	0	0	0	0	0
0	82	DIGESTERS CLEANING REHAB	01/01/2018	12/31/2019	5,400	0	0	0	0	5,400	0	0	0	0	0

(Phase 2) 11-Wastewater Program Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5

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						Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**WAS906982**	**HUMBER WWTP UPGRADES**													
0	95	REPLACEMENT OF WASTE GAS BURNERS	01/01/2016	12/31/2019	8,211	0	0	0	0	8,211	0	0	0	0	0
0	99	WET WEATHER FLOW	01/01/2016	12/31/2019	540	0	0	0	0	540	0	0	0	0	0
0	107	MESI UPGRADES	01/01/2016	12/31/2019	600	0	0	0	0	600	0	0	0	0	0
0	114	FIELD OFFICE	01/01/2017	12/31/2019	324	0	0	0	0	324	0	0	0	0	0
0	115	ADMIN BUILDING EXPANSION - CONSTRUCTION	01/01/2018	12/31/2019	1,568	0	0	0	0	1,568	0	0	0	0	0
0	116	SERVICE REHAB AND UPGRADES	01/01/2016	12/31/2023	600	0	0	0	0	600	0	0	0	0	0
0	129	ELECTRICAL CONDITION ASSESSMENT RE-CHANGE IN S	01/01/2019	12/31/2021	-2,200	0	0	0	0	-2,200	0	0	0	0	0
0	130	ADMIN BUILDING EXPANSION - CONSTRU-CHANGE IN SC	01/01/2019	12/31/2022	-168	0	0	0	0	-168	0	0	0	0	0
0	131	ADMIN BUILDING EXPANSION - ENGINEE-CHANGE IN SCC	01/01/2019	12/31/2022	69	0	0	0	0	69	0	0	0	0	0
0	132	CHLORINE FACILITY UPGRADE-CHANGE IN SCOPE	01/01/2019	12/31/2019	-718	0	0	0	0	-718	0	0	0	0	0
0	133	DIGESTERS CLEANING REHAB-CHANGE IN SCOPE	01/01/2019	12/31/2022	-2,400	0	0	0	0	-2,400	0	0	0	0	0
0	134	MESI UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2022	-49	0	0	0	0	-49	0	0	0	0	0
0	136	SECURITY UPGRADES	01/01/2019	12/31/2021	250	0	0	0	0	250	0	0	0	0	0
0	137	NEW SUBSTATION-CHANGE IN SCOPE	01/01/2019	12/31/2020	29	0	0	0	0	29	0	0	0	0	0
0	138	FLOOD PROTECTION-CHANGE IN SCOPE	01/01/2019	12/31/2020	300	0	0	0	0	300	0	0	0	0	0
0	139	HVAC UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2021	-2,038	0	0	0	0	-2,038	0	0	0	0	0
0	141	FIELD OFFICE-CHANGE IN SCOPE	01/01/2019	12/31/2020	-67	0	0	0	0	-67	0	0	0	0	0
0	142	REPLACEMENT OF WASTE GAS BURNERS-CHANGE IN SC	01/01/2019	12/31/2022	-4,753	0	0	0	0	-4,753	0	0	0	0	0
0	143	WET WEATHER FLOW-CHANGE IN SCOPE	01/01/2019	12/31/2024	-490	0	0	0	0	-490	0	0	0	0	0
		Project Sub-total:			14,781	0	0	0	0	14,781	0	0	0	0	0
0	**WAS906994**	**HIGHLAND CREEK WWTP - SOLIDS & GAS HANDLING**													
0	1	HIGHLAND CREEK WWTP - BMP IMPLEMENTATION	01/01/2012	12/31/2019	3,220	0	0	308	0	2,912	0	0	0	0	0
0	3	WAS THICKENING - CONSTR	01/01/2010	12/31/2019	1	0	0	0	0	1	0	0	0	0	0
0	8	HIGHLAND CREEK WWTP - BMP IMPLEMENTATION	01/01/2018	12/31/2019	78	0	0	7	0	71	0	0	0	0	0
0	22	HIGHLAND CREEK WWTP - BMP IMPLEMEN-CHANGE IN S	01/01/2019	12/31/2028	-1,170	0	0	-5	0	-1,165	0	0	0	0	0
0	23	HIGHLAND CREEK WWTP - BMP IMPLEMEN-CHANGE IN S	01/01/2019	12/31/2026	5,922	0	0	881	0	5,041	0	0	0	0	0
		Project Sub-total:			8,051	0	0	1,191	0	6,860	0	0	0	0	0
0	**WAS907038**	**Land Acquisition for Source Water Protect**													
0	25	TRCA - SCARBOROUGH WATERFRONT WEST EA	01/01/2016	12/31/2019	800	0	0	64	0	736	0	0	0	0	0
0	33	TRCA - SCARBOROUGH WATERFRONT WEST-CHANGE IN	01/01/2019	12/31/2019	0	0	0	54	0	-54	0	0	0	0	0
0	34	TRCA - CRITICAL EROSION SITES-CHANGE IN SCOPE	01/01/2019	12/31/2019	9,500	0	0	0	0	9,500	0	0	0	0	0
		Project Sub-total:			10,300	0	0	118	0	10,182	0	0	0	0	0

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0	**WAS907097**	**ASHBRIDGES BAY WWTP - BUILDING SERVICES & SITE DE**													
0	7	CONTROLLED SUBSTANCE IDENTIFICATION AND ABATEM	01/01/2007	12/31/2020	100	0	0	0	0	100	0	0	0	0	0
0	19	BIO GAS UTILIZATION	01/01/2009	12/31/2019	850	0	0	0	0	850	0	0	0	0	0
0	21	BLOWER BLDG & OLD NORTH SUBSTATION IMPROVEMEN	01/01/2010	12/31/2019	6,321	0	0	0	0	6,321	0	0	0	0	0
0	64	GROVE LANDSCAPING - PHASE 1	01/01/2016	12/31/2019	117	0	0	0	0	117	0	0	0	0	0
0	68	BLOWER BLDG & OLD NORTH SUBSTATION-CHANGE IN S	01/01/2019	12/31/2021	-3,956	0	0	0	0	-3,956	0	0	0	0	0
0	69	BIO GAS UTILIZATION-CHANGE IN SCOPE	01/01/2019	12/31/2027	-800	0	0	0	0	-800	0	0	0	0	0
0	70	CONTROLLED SUBSTANCE IDENTIFICATIO-CHANGE IN S	01/01/2019	12/31/2020	-100	0	0	0	0	-100	0	0	0	0	0
0	71	GROVE LANDSCAPING - PHASE 1-CHANGE IN SCOPE	01/01/2019	12/31/2019	-7	0	0	0	0	-7	0	0	0	0	0
		Project Sub-total:			2,525	0	0	0	0	2,525	0	0	0	0	0
0	**WAS907098**	**ASHBRIDGES BAY WWTP - EFFLUENT SYSTEM**													
0	1	DISINFECTION ENGINEERING	01/01/2009	12/31/2024	4,900	0	0	394	0	4,506	0	0	0	0	0
0	2	OUTFALL CONSTRUCTION	01/01/2018	12/31/2025	30,000	0	0	2,414	0	27,586	0	0	0	0	0
0	13	OUTFALL ASSESSMENT	01/01/2012	12/31/2019	57	0	0	5	0	52	0	0	0	0	0
0	14	OUTFALL ENGINEERING	01/01/2015	12/31/2026	5,730	0	0	461	0	5,269	0	0	0	0	0
0	15	DISINFECTION SYSTEM CONSTRUCTION	01/01/2016	12/31/2019	89,633	0	0	8,529	0	81,104	0	0	0	0	0
0	31	OUTFALL - SITE PREP	01/01/2016	12/31/2019	31	0	0	5	0	26	0	0	0	0	0
0	37	OUTFALL ASSESSMENT-CHANGE IN SCOPE	01/01/2019	12/31/2019	-57	0	0	-5	0	-52	0	0	0	0	0
0	38	DISINFECTION SYSTEM CONSTRUCTION-CHANGE IN SC	01/01/2019	12/31/2022	-54,498	0	0	-3,330	0	-51,168	0	0	0	0	0
0	39	DISINFECTION ENGINEERING-CHANGE IN SCOPE	01/01/2019	12/31/2024	-3,006	0	0	-114	0	-2,892	0	0	0	0	0
0	40	OUTFALL CONSTRUCTION-CHANGE IN SCOPE	01/01/2019	12/31/2025	5,000	0	0	2,765	0	2,235	0	0	0	0	0
0	41	OUTFALL ENGINEERING-CHANGE IN SCOPE	01/01/2019	12/31/2026	-2,604	0	0	2	0	-2,606	0	0	0	0	0
		Project Sub-total:			75,186	0	0	11,126	0	64,060	0	0	0	0	0
0	**WAS907099**	**ASHBRIDGES BAY WWTP - LIQUID TREATMENT & HANDLIN**													
0	1	FINE BUBBLE AERATION - TANK #2	01/01/2009	12/31/2019	316	0	0	25	0	291	0	0	0	0	0
0	3	P BLDG HEADWORKS UPGRADE	01/01/2010	12/31/2019	10,627	0	0	1,235	0	9,392	0	0	0	0	0
0	6	M & T PUMPING STATION CRITICAL REPAIRS	01/01/2014	12/31/2019	2,085	0	0	0	0	2,085	0	0	0	0	0
0	10	INTEGRATED PUMPING STATION (IPS) - ENGINEERING	01/01/2011	12/31/2027	5,844	0	0	0	0	5,844	0	0	0	0	0
0	39	INTEGRATED PUMPING STATION (IPS) - CONSTRUCTION	01/01/2012	12/31/2019	19,220	0	0	225	0	18,995	0	0	0	0	0
0	77	FINE BUBBLE AERATION - ENGINEERING	01/01/2016	12/31/2019	449	0	0	56	0	393	0	0	0	0	0
0	84	AERATION TANK 12 & 13	01/01/2019	12/31/2027	50	0	0	50	0	0	0	0	0	0	0
0	89	INTEGRATED PUMPING STATION (IPS) --CHANGE IN SCOF	01/01/2019	12/31/2028	979	0	0	2,764	0	-1,785	0	0	0	0	0
0	90	INTEGRATED PUMPING STATION (IPS) --CHANGE IN SCOF	01/01/2019	12/31/2028	-815	0	0	754	0	-1,569	0	0	0	0	0
0	91	M & T PUMPING STATION CRITICAL REP-CHANGE IN SCO	01/01/2019	12/31/2020	-1,235	0	0	0	0	-1,235	0	0	0	0	0
0	92	FINE BUBBLE AERATION - ENGINEERING-CHANGE IN SC	01/01/2019	12/31/2028	1	0	0	11	0	-10	0	0	0	0	0

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0	**WAS907099**	**ASHBRIDGES BAY WWTP - LIQUID TREATMENT & HANDLIN**													
0	93	FINE BUBBLE AERATION - TANK #2-CHANGE IN SCOPE	01/01/2019	12/31/2019	-316	0	0	-25	0	-291	0	0	0	0	0
0	94	P BLDG HEADWORKS UPGRADE-CHANGE IN SCOPE	01/01/2019	12/31/2020	-4,992	0	0	-390	0	-4,602	0	0	0	0	0
		Project Sub-total:			32,213	0	0	4,705	0	27,508	0	0	0	0	0
0	**WAS907100**	**ASHBRIDGES BAY WWTP - SOLIDS & GAS HANDLING**													
0	3	WASTE ACTIVATED SLUDGE UPGRADE - ENGINEERING	01/01/2014	12/31/2019	2,788	0	0	244	0	2,544	0	0	0	0	0
0	4	DIGESTERS 9-12 REFURBISH	01/01/2011	12/31/2019	21,933	0	0	2,167	0	19,766	0	0	0	0	0
0	8	BIOSOLIDS PELLETIZER RETROFIT	01/01/2013	12/31/2019	422	0	0	0	0	422	0	0	0	0	0
0	22	WASTE ACTIVATED SLUDGE UPGRADE - CONSTRUCTION	01/01/2016	12/31/2019	36,485	0	0	2,979	0	33,506	0	0	0	0	0
0	25	PELLETIZER TRUCK LOADING FACILITY UPGRADES	01/01/2014	12/31/2019	968	0	0	0	0	968	0	0	0	0	0
0	52	PRIMARY SLUDGE BUFFER TANK AND HEAT RECOVERY	01/01/2019	12/31/2025	50	0	0	0	0	50	0	0	0	0	0
0	53	PELLETIZER FACILITY	01/01/2019	12/31/2028	800	0	0	0	0	800	0	0	0	0	0
0	56	WASTE ACTIVATED SLUDGE UPGRADE - C-CHANGE IN SC	01/01/2019	12/31/2023	-31,485	0	0	-2,239	0	-29,246	0	0	0	0	0
0	57	WASTE ACTIVATED SLUDGE UPGRADE - E-CHANGE IN SC	01/01/2019	12/31/2025	-1,288	0	0	-19	0	-1,269	0	0	0	0	0
0	58	DIGESTERS 9-12 REFURBISH-CHANGE IN SCOPE	01/01/2019	12/31/2023	-12,123	0	0	-715	0	-11,408	0	0	0	0	0
0	59	BIOSOLIDS PELLETIZER RETROFIT-CHANGE IN SCOPE	01/01/2019	12/31/2022	-22	0	0	0	0	-22	0	0	0	0	0
0	60	PELLETIZER TRUCK LOADING FACILITY -CHANGE IN SCO	01/01/2019	12/31/2024	-468	0	0	0	0	-468	0	0	0	0	0
		Project Sub-total:			18,060	0	0	2,417	0	15,643	0	0	0	0	0
0	**WAS907101**	**ASHBRIDGES BAY WWTP - O&M UPGRADES**													
0	5	BOILER #4 DESIGN	01/01/2010	12/31/2019	6	0	0	0	0	6	0	0	0	0	0
0	6	MESI UPGRADES	01/01/2012	12/31/2020	2,962	0	0	0	0	2,962	0	0	0	0	0
0	7	MISC MECH REHAB	01/01/2010	12/31/2019	3,184	0	0	0	0	3,184	0	0	0	0	0
0	38	MISC MECH REHAB-CHANGE IN SCOPE	01/01/2019	12/31/2020	-1,567	0	0	0	0	-1,567	0	0	0	0	0
		Project Sub-total:			4,585	0	0	0	0	4,585	0	0	0	0	0
0	**WAS907102**	**ASHBRIDGES BAY WWTP - ODOUR CONTROL**													
0	6	BIOFILTERS UPGRADE & REPLACEMENT	01/01/2012	12/31/2019	3,399	0	0	291	0	3,108	0	0	0	0	0
0	13	D BUILDING TREATMENT & BIOFILTER	01/01/2009	12/31/2019	656	0	0	64	0	592	0	0	0	0	0
0	42	D BUILDING TREATMENT & BIOFILTER-CHANGE IN SCOPE	01/01/2019	12/31/2020	-156	0	0	11	0	-167	0	0	0	0	0
0	43	BIOFILTERS UPGRADE & REPLACEMENT-CHANGE IN SCC	01/01/2019	12/31/2021	-907	0	0	83	0	-990	0	0	0	0	0
		Project Sub-total:			2,992	0	0	449	0	2,543	0	0	0	0	0
0	**WAS907104**	**HUMBER WWTP - LIQUID TREATMENT & HANDLING**													
0	2	SECONDARY TREATMENT UPGRADES - SOUTH - ENGINE	01/01/2009	12/31/2027	3,300	0	0	266	0	3,034	0	0	0	0	0
0	19	SECONDARY TREATMENT UPGRADES - SOUTH - CONS	01/01/2015	12/31/2024	23,000	0	0	1,852	0	21,148	0	0	0	0	0
0	28	SECONDARY TREATMENT UPGRADES - SOU-CHANGE IN	01/01/2019	12/31/2027	10	0	0	231	0	-221	0	0	0	0	0

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0	**WAS907104**	**HUMBER WWTP - LIQUID TREATMENT & HANDLING**													
0	29	SECONDARY TREATMENT UPGRADES - SOU-CHANGE IN	01/01/2019	12/31/2024	0	0	0	1,551	0	-1,551	0	0	0	0	0
		Project Sub-total:			26,310	0	0	3,900	0	22,410	0	0	0	0	0
0	**WAS907105**	**HUMBER WWTP - O&M UPGRADES**													
0	1	GAS COMPRESSOR SYSTEM UPGRADES	01/01/2008	12/31/2019	813	0	0	0	0	813	0	0	0	0	0
0	2	LIQUID STREAM UPGRADES	01/01/2010	12/31/2019	386	0	0	31	0	355	0	0	0	0	0
0	35	LIQUID STREAM UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2019	-386	0	0	-31	0	-355	0	0	0	0	0
0	36	GAS COMPRESSOR SYSTEM UPGRADES-CHANGE IN SC	01/01/2019	12/31/2020	-418	0	0	0	0	-418	0	0	0	0	0
		Project Sub-total:			395	0	0	0	0	395	0	0	0	0	0
0	**WAS907106**	**HUMBER WWTP - ODOUR CONTROL**													
0	1	ODOUR CONTROL IMPLEMENTATION - PHASE 1	01/01/2013	12/31/2019	766	0	0	69	0	697	0	0	0	0	0
0	15	ODOUR CONTROL IMPLEMENTATION - PHA-CHANGE IN S	01/01/2019	12/31/2027	434	0	0	111	0	323	0	0	0	0	0
		Project Sub-total:			1,200	0	0	180	0	1,020	0	0	0	0	0
0	**WAS907224**	**SEWAGE PUMPING STATION UPGRADES**													
0	1	SPS UPGRADES	01/01/2011	12/31/2019	2,212	0	0	232	0	1,980	0	0	0	0	0
0	4	SUNNYSIDE AND MARYPORT SPS UPGRADES	01/01/2018	12/31/2024	150	0	0	12	0	138	0	0	0	0	0
0	18	SPS UPGRADES - GROUP 6	01/01/2016	12/31/2024	3,891	0	0	313	0	3,578	0	0	0	0	0
0	26	SPS UPGRADES - GROUP 7	01/01/2012	12/31/2019	4	0	0	1	0	3	0	0	0	0	0
0	34	FACILITY & PROCESS UPGRADES	01/01/2018	12/31/2019	435	0	0	39	0	396	0	0	0	0	0
0	35	SCOTT ST PS & SIMCOE ST PS	01/01/2018	12/31/2022	400	0	0	0	0	400	0	0	0	0	0
0	39	SUNNYSIDE AND MARYPORT SPS UPGRADE-CHANGE IN	01/01/2019	12/31/2024	-150	0	0	-12	0	-138	0	0	0	0	0
0	40	FACILITY & PROCESS UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2025	-60	0	0	16	0	-76	0	0	0	0	0
0	41	SCOTT ST PS & SIMCOE ST PS-CHANGE IN SCOPE	01/01/2019	12/31/2022	51	0	0	0	0	51	0	0	0	0	0
0	42	SPS UPGRADES - GROUP 7-CHANGE IN SCOPE	01/01/2019	12/31/2019	6	0	0	1	0	5	0	0	0	0	0
0	43	SPS UPGRADES - GROUP 6-CHANGE IN SCOPE	01/01/2019	12/31/2024	-1,068	0	0	105	0	-1,173	0	0	0	0	0
0	44	SPS UPGRADES-CHANGE IN SCOPE	01/01/2019	12/31/2020	-1,106	0	0	-66	0	-1,040	0	0	0	0	0
		Project Sub-total:			4,765	0	0	641	0	4,124	0	0	0	0	0
0	**WAS907559**	**DON & WATERFRONT TRUNK CSO**													
0	1	DON & WATERFRONT TRUNK/CSO PKG 1 - DESIGN	01/01/2013	12/31/2019	10,946	0	0	917	0	10,029	0	0	0	0	0
0	15	DCW - PHASE 1 - ADDITIONAL SCOPE	01/01/2018	12/31/2019	2,850	0	0	229	0	2,621	0	0	0	0	0
0	17	DCW - PH1 - OFFLINE STORAGE TANK SHEPPARD/LESLIE	01/01/2016	12/31/2019	1,340	0	0	118	0	1,222	0	0	0	0	0
0	18	Don & Waterfront Trunk/CSO Construction - PHASE 1	01/01/2018	12/31/2024	80,000	0	0	6,438	0	73,562	0	0	0	0	0
0	24	DON & WATERFRONT TRUNK/CSO PKG 1 --CHANGE IN SC	01/01/2019	12/31/2024	-6,425	0	0	-239	0	-6,186	0	0	0	0	0
0	25	DCW - PHASE 1 - ADDITIONAL SCOPE-CHANGE IN SCOPE	01/01/2019	12/31/2020	-1,716	0	0	-61	0	-1,655	0	0	0	0	0

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0	**WAS907559**	**DON & WATERFRONT TRUNK CSO**													
0	26	Don & Waterfront Trunk/CSO Constru-CHANGE IN SCOPE	01/01/2019	12/31/2024	3,895	0	0	5,975	0	-2,080	0	0	0	0	0
0	27	DCW - PH1 - OFFLINE STORAGE TANK S-CHANGE IN SCO	01/01/2019	12/31/2025	-715	0	0	-26	0	-689	0	0	0	0	0
		Project Sub-total:			90,175	0	0	13,351	0	76,824	0	0	0	0	0
0	**WAS907700**	**NORTH TORONTO WTP UPGRADES**													
0	2	NTTP - ELECTRICAL UPGRADES - ECAR	01/01/2012	12/31/2019	3,129	0	0	0	0	3,129	0	0	0	0	0
0	10	OPS INTERFACE NTTP	01/01/2016	12/31/2019	200	0	0	0	0	200	0	0	0	0	0
0	11	NTTP - PROCESS IMPROVEMENTS	01/01/2016	12/31/2019	5,572	0	0	0	0	5,572	0	0	0	0	0
0	15	NTTP - ELECTRICAL UPGRADES - ECAR-CHANGE IN SCO	01/01/2019	12/31/2024	-2,430	0	0	0	0	-2,430	0	0	0	0	0
0	16	NTTP - PROCESS IMPROVEMENTS-CHANGE IN SCOPE	01/01/2019	12/31/2024	-4,638	0	0	0	0	-4,638	0	0	0	0	0
		Project Sub-total:			1,833	0	0	0	0	1,833	0	0	0	0	0
0	**WAS908143**	**Georgetown South City Infrastructure Upgrades**													
0	1	GEORGETOWN SOUTH CITY INFRASTRUCTURE UPGRAD	01/01/2015	12/31/2019	5,115	0	0	412	0	4,703	0	0	0	0	0
0	9	GEORGETOWN SOUTH CITY INFRASTRUCTU-CHANGE IN	01/01/2019	12/31/2019	0	0	0	4,703	0	-4,703	0	0	0	0	0
		Project Sub-total:			5,115	0	0	5,115	0	0	0	0	0	0	0
0	**WASWP003**	**EMERY CREEK POND**													
0	1	EMERY CREEK POND	01/01/2005	12/31/2020	1,097	0	0	89	0	1,008	0	0	0	0	0
0	17	EMERY CREEK POND-CHANGE IN SCOPE	01/01/2019	12/31/2020	-549	0	0	-7	0	-542	0	0	0	0	0
		Project Sub-total:			548	0	0	82	0	466	0	0	0	0	0
0	**WASWP050**	**EQUIPMENT REPLACEMENT & REHABILITATION**													
0	78	EQUIPMENT REPLACEMENT	01/01/2012	12/31/2019	10,297	0	0	0	0	10,297	0	0	0	0	0
0	137	EQUIPMENT REPLACEMENT-CHANGE IN SCOPE	01/01/2019	12/31/2024	-6,732	0	0	0	0	-6,732	0	0	0	0	0
		Project Sub-total:			3,565	0	0	0	0	3,565	0	0	0	0	0
Program Total:					610,113	0	0	62,065	0	548,048	0	0	0	0	0

Status Code	Description
S2	S2 Prior Year (With 2019 and\or Future Year Cashflow)
S3	S3 Prior Year - Change of Scope 2019 and\or Future Year Cost\Cashflow)
S4	S4 New - Stand-Alone Project (Current Year Only)
S5	S5 New (On-going or Phased Projects)

Category Code	Description
01	Health and Safety C01
02	Legislated C02
03	State of Good Repair C03
04	Service Improvement and Enhancement C04
05	Growth Related C05
06	Reserved Category 1 C06
07	Reserved Category 2 C07

Appendix 10

Inflows and Outflows to/from Reserves and Reserve Funds

2019 Operating Budget

Program Specific Reserve / Reserve Funds

Reserve / Reserve Fund Name (In $000s)	Reserve / Reserve Fund Number	Projected Balance as of Dec. 31, 2018 *	Withdrawals (-) / Contributions (+)		
			2019	2020	2021
		$	$	$	$
Beginning Balance		**18,547.6**	**16,097.6**	**10,248.0**	**5,332.7**
Vechicle Replacement Reserve	XQ1012				
Withdrawals (-)		(8,239.3)	(11,638.9)	(10,704.6)	(10,450.1)
Contributions (+)		5,789.3	5,789.3	5,789.3	5,789.3
Total Reserve / Reserve Fund Draws / Contributions		**16,097.6**	**10,248.0**	**5,332.7**	**671.9**
Balance at Year-End		**16,097.6**	**10,248.0**	**5,332.7**	**671.9**

* Based on 9-month 2018 Reserve Fund Variance Report

Reserve / Reserve Fund Name (In $000s)	Reserve / Reserve Fund Number	Projected Balance as of Dec. 31, 2018 *	Withdrawals (-) / Contributions (+)		
			2019	2020	2021
		$	$	$	$
Beginning Balance		**910,629.3**	**1,119,149.8**	**1,252,945.5**	**919,598.7**
Water & Waste Water Capital Reserves	XR6003 & XR6004				
Withdrawals (-)					
- TW Capital Program		(674,914.7)	(734,071.9)	(1,231,498.7)	(1,320,568.5)
- Other		(3,287.5)	(4,252.8)	(7,353.2)	(7,653.3)
Contributions (+)					
- From Operations		882,663.2	867,367.7	901,145.3	923,177.8
- Other: Interest		4,059.6	4,752.7	4,359.8	2,889.4
Total Reserve / Reserve Fund Draws / Contributions		**1,119,149.8**	**1,252,945.5**	**919,598.7**	**517,444.1**
Balance at Year-End		**1,119,149.8**	**1,252,945.5**	**919,598.7**	**517,444.1**

* Based on 9-month 2018 Reserve Fund Variance Report

Corporate Reserve / Reserve Funds

Reserve / Reserve Fund Name (In $000s)	Reserve / Reserve Fund Number	Projected Balance as of Dec. 31, 2018 *	Withdrawals (-) / Contributions (+)		
			2019	2020	2021
		$	$	$	$
Beginning Balance		**35,866.3**	**40,207.4**	**44,548.5**	**48,889.6**
Insurance Reserve Fund	XR1010				
Withdrawals (-)					
Contributions (+)		4,341.1	4,341.1	4,341.1	4,341.1
Total Reserve / Reserve Fund Draws / Contributions		**40,207.4**	**44,548.5**	**48,889.6**	**53,230.7**
Other Program / Agency Net Withdrawals & Contributions					
Balance at Year-End		**40,207.4**	**44,548.5**	**48,889.6**	**53,230.7**

* Based on 9-month 2018 Reserve Fund Variance Report

2019 Operating Budget

Corporate Reserve / Reserve Funds -Continued

Reserve / Reserve Fund Name (In $000s)	Reserve / Reserve Fund Number	Projected Balance as of Dec. 31, 2018 *	Withdrawals (-) / Contributions (+)		
			2019	2020	2021
		$	$	$	$
Beginning Balance		**19,294.9**	**17,935.7**	**16,580.8**	**14,917.6**
Development Charge Stormwater Management	XR2404 & XR2113				
Withdrawals (-)					
-TW: Operating		(195.0)	(195.0)	(195.0)	(195.0)
-TW: Capital		(1,902.0)	(2,382.0)	(3,039.0)	(5,378.0)
Contributions (+)		737.8	1,222.1	1,570.8	1,693.9
Total Reserve / Reserve Fund Draws / Contributions		**17,935.7**	**16,580.8**	**14,917.6**	**11,038.5**
Other Program / Agency Net Withdrawals & Contributions					
Balance at Year-End		**17,935.7**	**16,580.8**	**14,917.6**	**11,038.5**

2019 – 2028 Capital Budget and Plan

Corporate Reserve / Reserve Funds

Reserve / Reserve Fund Name (In $000s)	Project / Sub Project Name and Number	Projected Balance as at Dec 31, 2018 *	Contributions / (Withdrawals)										
			2019 Budget	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan	2027 Plan	2028 Plan	Total
Water DC Reserve Fund XR2111 DC - Water (2011)	Beginning Balance	53,136	66,511	65,828	62,669	63,634	84,934	108,694	133,797	159,432	183,630	208,963	
	Withdrawals (-)												
	DIST W/M REPLACEMENT		(17,756)	(13,881)	(5,831)	(140)	(414)						(38,022)
	DISTRICT WATERMAINS - NEW		(10)	(500)	(500)	(500)	(500)	(500)	(500)	(500)	(500)	(500)	(4,510)
	HORGAN TRUNK MAIN EXPANSION		(1,000)	(1,100)	(1,900)	(700)	(700)	(700)	(345)	(35)			(6,480)
	HORGAN W.T.P. EXPANSION					(28)							(28)
	ISLAND W.T.P. R&R		(4)	(134)	(2,219)	(2,663)	(1,095)						(6,115)
	LAWRENCE ALLAN REVITALIZATION PLAN		(3,300)	(6,092)	(7,542)	(1,016)							(17,950)
	PW ENGINEERING		(393)	(603)	(483)	(515)	(546)	(505)	(380)	(220)	(119)	(119)	(3,883)
	REGENT PARK CAPITAL CONTRIBUTION		(542)	(1,416)	(1,421)	(51)	(71)	(40)					(3,541)
	RL CLARK W.T.P. R&R		(1,139)	(694)	(9)	(5)							(1,847)
	TRANSMISSION R&R		(2)	(165)									(167)
	TRUNK WATERMAIN EXPANSION		(3,426)	(5,837)	(5,753)	(4)							(15,020)
	PROGRAM		(495)	(706)	(603)	(607)	(687)	(520)	(520)	(520)	(520)	(520)	(5,698)
	WATER SUSTAINABILITY PROGRAM		(467)	(910)	(565)	(414)	(1)						(2,357)
	WT&S PLANTWIDE		(176)	(493)	(546)	(439)	(484)	(891)	(941)	(1,073)	(350)	(5)	(5,398)
	Total Withdrawals	(15,729)	(28,710)	(32,531)	(27,372)	(7,082)	(4,498)	(3,156)	(2,686)	(2,348)	(1,489)	(1,144)	**(111,016)**
	Contributions (+)												
	Projected Contributions	29,104	28,027	29,372	28,337	28,382	28,257	28,259	28,322	26,546	26,821	27,358	**279,681**
	Total Contributions	**29,104**	**28,027**	**29,372**	**28,337**	**28,382**	**28,257**	**28,259**	**28,322**	**26,546**	**26,821**	**27,358**	**279,681**
Other Program/Agency Net Withdrawals and Contributions													-
Balance at Year-End		**66,511**	**65,828**	**62,669**	**63,634**	**84,934**	**108,694**	**133,797**	**159,432**	**183,630**	**208,963**	**235,177**	**168,665**

* Based on 9-month 2018 Reserve Fund Variance Report

2019 – 2028 Capital Budget and Plan

Corporate Reserve / Reserve Funds - Continued

Reserve / Reserve Fund Name (In $000s)	Project / Sub Project Name and Number	Projected Balance as at Dec 31, 2018 *	Contributions / (Withdrawals)										
			2019 Budget	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan	2027 Plan	2028 Plan	Total
Sanitary Sewer DC Reserve Fund XR2026 DC - Sewer (2004) XR2112 DC - Sewer (2009)	Beginning Balance	52,602	58,305	33,444	(12,967)	(66,234)	(87,765)	(118,760)	(144,094)	(170,757)	(191,501)	(213,133)	
	Withdrawals (-)												
	ASHBRIDGES BAY T.P. YR2006		(15)										(15)
	ASHBRIDGES BAY WWTP - EFFLUENT SYSTEM		(11,126)	(17,255)	(18,956)	(14,777)	(7,282)	(3,147)	(624)	(10)			(73,177)
	ASHBRIDGES BAY WWTP - LIQUID TREATMENT & HANDLING		(4,705)	(12,840)	(14,629)	(15,099)	(12,169)	(26,629)	(34,141)	(8,672)	(10,647)	(10,584)	(150,115)
	ASHBRIDGES BAY WWTP - ODOUR CONTROL		(449)	(263)	(11)								(723)
	ASHBRIDGES BAY WWTP - SOLIDS & GAS HANDLING		(2,417)	(8,069)	(9,020)	(7,221)	(6,526)	(15)	(31)				(33,299)
	ASHBRIDGES BAY WWTP REHAB		(1,049)	(458)	(34)								(1,541)
	ASHRIDGES BAY TP YR2005		(47)	(68)	(5)	(1)							(121)
	BASEMENT FLOODING RELIEF		(10,577)	(20,859)	(21,386)	(14,587)	(22,332)	(22,337)	(21,374)	(32,417)	(14,114)	(17,725)	(197,708)
	DIST SEWER REHAB OPS YR2005		(2)	(3)									(5)
	DON & WATERFRONT TRUNK CSO		(13,351)	(13,484)	(12,645)	(3,583)	(11,784)	(8,093)	(9,052)	(16,180)	(32,064)	(25,516)	(145,752)
	Georgetown South City Infrastructure Upgrades		(5,115)										(5,115)
	HIGHLAND CREEK WWTP - ODOUR CONTROL		(799)	(574)	(317)	(8)	(8)	(3)	(59)	(148)	(962)	(1,672)	(4,550)
	HIGHLAND CREEK WWTP - SOLIDS & GAS HANDLING		(1,191)	(977)	(1,814)	(3,358)	(3,995)	(4,291)	(3,845)	(2,232)	(22)	(43)	(21,768)
	HIGHLAND CREEK WWTP UPGRADES		(39)	(166)	(74)								(279)
	HUMBER TP YR2005		(114)	(42)									(156)
	HUMBER WWTP - LIQUID TREATMENT & HANDLING		(3,900)	(4,060)	(4,376)	(2,265)	(3,398)	(1,562)	(224)	(764)	(4,842)	(5,179)	(30,570)
	HUMBER WWTP - ODOUR CONTROL		(180)	(360)			(83)				(83)		(706)
	NEW SEWER CONSTRUCTION		(725)	(5,758)	(13,401)	(3,670)	(6,924)	(2,465)	(1,524)	(1,349)	(1,000)	(1,000)	(37,816)
	SEWAGE PUMPING STATION UPGRADES		(641)	(1,101)	(1,523)	(3,070)	(2,499)	(1,864)	(992)	(1,247)	(629)		(13,566)
	SEWER ASSET PLANNING		(429)	(1,033)	(942)	(857)	(769)	(584)	(553)	(553)	(538)	(538)	(6,796)
	SEWER REPLACEMENT PROGRAM		(1,811)	(2,019)	(559)	(41)	(32)	(1,153)	(1,153)	(1,153)	(1,153)	(1,153)	(10,227)
	SEWER SYSTEM REHABILITATION		(986)	(840)	(263)								(2,089)
	SWM END OF PIPE FACILITIES		(15)	(96)	(244)								(355)
	Total Withdrawals	(16,859)	(59,683)	(90,325)	(100,199)	(68,537)	(77,801)	(72,143)	(73,572)	(64,725)	(66,054)	(63,410)	**(736,449)**
	Contributions (+)												
	Projected Contributions	22,562	34,822	43,914	46,932	47,006	46,807	46,808	46,910	43,981	44,422	45,311	**446,912**
	Total Contributions	**22,562**	**34,822**	**43,914**	**46,932**	**47,006**	**46,807**	**46,808**	**46,910**	**43,981**	**44,422**	**45,311**	**446,912**
Other Program/Agency Net Withdrawals and Contributions													-
Balance at Year-End		**58,305**	**33,444**	**(12,967)**	**(66,234)**	**(87,765)**	**(118,760)**	**(144,094)**	**(170,757)**	**(191,501)**	**(213,133)**	**(231,232)**	**(289,537)**

* Based on 9-month 2018 Reserve Fund Variance Report

Reserve / Reserve Fund Name (In $000s)	Project / Sub Project Name and Number	Projected Balance as at Dec 31, 2018 *	Contributions / (Withdrawals)										
			2019 Budget	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan	2027 Plan	2028 Plan	Total
Storm Water Management DC Reserve Fund XR2113 DC - SWM (2009) XR2404 DC - SWM (2004)	Beginning Balance	19,295	18,131	16,971	15,503	11,819	9,930	11,339	12,419	12,915	10,834	5,903	
	Withdrawals (-)												
	EMERY CREEK POND		(82)	(87)									(169)
	Land Acquisition for Source Water Protect		(118)										(118)
	STREAM RESTORATION & EROSION CONTROL		(185)	(346)	(287)	(126)	(100)	(85)	(74)	(74)			(1,277)
	SWM TRCA FUNDING		(674)										(674)
	SWM END OF PIPE FACILITIES		(160)	(447)	(1,689)	(1,597)	(49)	(46)	(648)	(3,504)	(6,445)	(9,544)	(24,129)
	RETROFIT		(533)	(1,327)	(2,952)	(1,686)	(7)						(6,505)
	WET WEATHER FLOW MP		(630)	(832)	(450)	(176)	(124)	(479)	(475)	(90)	(90)	(90)	(3,436)
	Total Withdrawals	(1,902)	(2,382)	(3,039)	(5,378)	(3,585)	(280)	(610)	(1,197)	(3,668)	(6,535)	(9,634)	**(36,308)**
	Contributions (+)												
	Projected Contributions	738	1,222	1,571	1,694	1,696	1,689	1,689	1,693	1,587	1,603	1,635	**16,081**
	Total Contributions	**738**	**1,222**	**1,571**	**1,694**	**1,696**	**1,689**	**1,689**	**1,693**	**1,587**	**1,603**	**1,635**	**16,081**
Other Program/Agency Net Withdrawals and Contributions													-
Balance at Year-End		**18,131**	**16,971**	**15,503**	**11,819**	**9,930**	**11,339**	**12,419**	**12,915**	**10,834**	**5,903**	**(2,096)**	**(20,227)**

* Based on 9-month 2018 Reserve Fund Variance Report

TAB 5

DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER

CTC Source Protection Region

Credit Valley Source Protection Area

Toronto and Region Source Protection Area

Central Lake Ontario Source Protection Area

Approved Source Protection Plan: CTC Source Protection Region

Prepared by:
CTC Source Protection Region

Ontario

Made possible through funding support from the Government of Ontario

Approved July 28, 2015
Effective Dec. 31, 2015

CTC Source Protection Region

Credit Valley Source Protection Area

Toronto and Region Source Protection Area

Central Lake Ontario Source Protection Area

Approved Source Protection Plan: CTC Source Protection Region

July 28, 2015
Plan comes into effect December 31, 2015

Property of
CTC Source Protection Committee

Prepared by
CTC Source Protection Region

PREFACE

This document was prepared by staff at the CTC (Credit Valley-Toronto and Region-Central Lake Ontario) Source Protection Region. The policies have been developed by the Source Protection Committee (SPC). This Source Protection Plan was submitted jointly by the respective Source Protection Authorities (SPAs) to the Minister of the Environment and Climate Change and has received approval.

The objective of this document is to provide the approved policies that the CTC SPC has developed, which when implemented, are to protect existing and future municipal drinking water sources.

The policies contained within this document are approved. If you have any questions about this document or the CTC Source Protection Region, please contact the source protection staff at

(416) 661.6600 ext. 5752, sourcewater@trca.on.ca, or go to www.ctcswp.ca for more information.

Note to readers: In June 2014 the Ministry of the Environment (MOE) was renamed the Ministry of the Environment and Climate Change (MOECC). Where the document references MOE, it indicates activities/ milestones which occurred before the name change.

Approved: July 28, 2015

Effective: December 31, 2015

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1 WHAT IS SOURCE WATER PROTECTION?

In order to understand what a Source (water) Protection Plan is one must first understand the basic term upon which it is derived. Source water is any untreated water found in rivers, lakes and underground aquifers which is used for the supply of raw water for municipal drinking water systems. Source water protection is the action taken to protect that raw source of municipal drinking water from overuse and contamination.

1.1 WHAT IS A SOURCE PROTECTION PLAN?

A Source Protection Plan (SPP) is a strategy and suite of policies developed by residents, businesses and the municipalities within a watershed or series of watersheds, which outlines how water quality and quantity for municipal drinking water systems will be protected.

A Source Protection Plan sets out policies to:

- safeguard human health;
- ensure adequate safe, clean water is available; and
- protect current and future sources of municipal drinking water from significant threats.

A watershed is the area of land where all of the water that drains off of it goes into the same body of water (i.e., lake, ocean). Its boundaries are defined by ridges of high land.

The SPP is based on a foundation of scientific knowledge.

But there is more than science to the SPP. It is, in large part about land use and the impact of that land use on drinking water quality and quantity.

The chapters that follow provide a more detailed history around source protection planning in Ontario, information about the Credit Valley-Toronto and Region-Central Lake Ontario (CTC) Source Protection Region, and the policy development process. Chapter 10 of this document outlines the proposed policies developed to protect municipal drinking water supplies.

1.2 WALKERTON, THE CATALYST FOR SOURCE WATER PROTECTION IN ONTARIO

In May 2000, heavy rains washed *Escherichia coli* (*E. coli*) bacteria into a well that provided water to the municipal water system in the small town of Walkerton, Ontario. A series of human and mechanical failures allowed the bacteria to get through the treatment system and into the municipal water supply. As a result, seven people died and more than 2,300 became ill. The tragedy received international

attention and instigated a public inquiry, led by Justice Dennis O'Connor of the Supreme Court of Ontario. Justice O'Connor's investigation resulted in two reports, with 121 total recommendations, released in early 2002.

> *The best way to achieve a healthy public water supply is to put in place multiple barriers that keep water contaminants from reaching people.*
>
> *- Justice Dennis O'Connor*

He identified five parts to the multi-barrier system:

1 source water protection
2 adequate treatment
3 a secure distribution system
4 proper monitoring and warning systems
5 strategic responses to adverse conditions

With the exception of source water protection, four of the five barriers relate directly to 'end of pipe' municipal water treatment systems. The government's response to put in place these four barriers was by implementing new legislation: the *Safe Drinking Water Act, 2002* and the *Sustainable Water and Sewage Systems Act*, *2002*.

Justice O'Connor felt that the first barrier in the multi-barrier system, source protection, had to be addressed differently. He saw it as a local planning process to be done, "as much as possible at a local (watershed) level by those who will be most directly affected (municipalities and other affected local groups)."

Justice O'Connor felt that the first barrier in the multi-barrier system, source water protection, had to be addressed differently. He saw it as a local planning process to be done, "as much as possible at a local (watershed) level by those who will be most directly affected (municipalities and other affected local groups)." He outlined a broad framework for a Source Protection Plan. Justice O'Connor recommended protecting municipal water supplies on a watershed basis, an area of land where all surface water drains into the same lake or river. Groundwater and surface water systems are linked and activities upstream can affect water downstream, regardless of political boundaries. Thus, developing a SPP on a watershed basis made economic and scientific sense. This recommendation led the Province of Ontario to embark on the development of the *Clean Water Act, 2006.*

1.3 THE CLEAN WATER ACT

The *Clean Water Act, 2006* (*CWA*) introduced a new level of protection for Ontario's drinking water resources that focuses on protecting water before it enters the municipal drinking water treatment system. The *CWA* established a locally driven, science-based, multi-stakeholder process to protect municipal residential drinking water sources and designated private drinking water sources. This process is meant to promote the shared responsibility of all stakeholders to protect local sources of drinking water from threats to both water quantity and water quality.

The *Clean Water Act, 2006* is not designed to protect all of the province's water resources. The *CWA* has a more narrow focus – sources of water that have been designated by a municipality as being a current or future source of residential municipal drinking water for the community. The *Ontario Water Resources Act*, *1990* and the *Environmental Protection Act, 1990* and other provincial and federal laws remain the chief vehicles for protecting the quality and quantity of Ontario's water resources; the *CWA* and the source protection planning process it establishes, provides additional protection to select sources of water.

> The *Clean Water Act*, *2006* has a more narrow focus than other rules governing water resources. This legislation is dedicated to sources of water that have been designated by a municipality as being a current or future source of residential municipal drinking water.

Prior to the Walkerton tragedy, the Province focused on protecting water resources on the basis of the resources' ecological and recreational values, not on the basis of the critical public health goal of maintaining secure water supplies for public consumption. The *CWA* puts the goal of public health protection and preserving present and future sources of drinking water front and centre.

1.4 PRIVATE DRINKING WATER SYSTEMS

Maintaining safe and secure private drinking water systems is the responsibility of homeowners, institutions and businesses that own their water systems and are regulated separately under the *Safe Drinking Water Act, 2002* and the *Health Protection and Promotion Act, 1990*. Private drinking water systems can be included in a SPP if a municipality expressly designates a private system, for example, if there is a known concern with a private drinking water source. The Minister of the Environment and

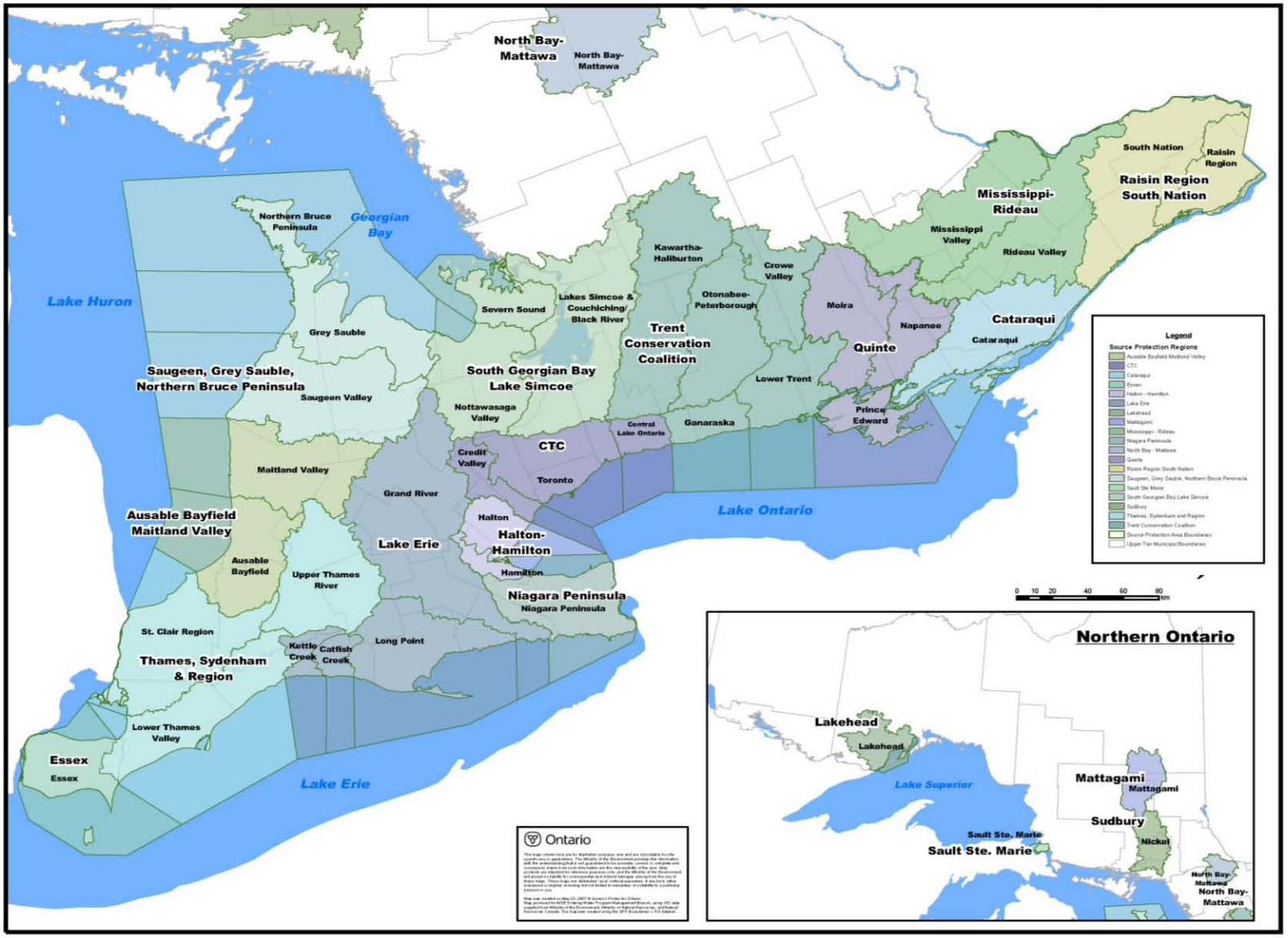
Climate Change also has the authority to designate a private drinking water system for inclusion into a SPP. During this round of source protection planning, the only designated system added in the CTC Source Protection Region is owned and operated by the Region of Durham serving an industrial park in the Township of Uxbridge.

2 SOURCE PROTECTION REGIONS IN ONTARIO

With the *Clean Water Act, 2006* and its first regulations coming into force in 2006, Source Protection Areas, Source Protection Regions (SPR) and the 19 corresponding Source Protection Committees (SPC) were established. Source Protection Regions were initially established using the existing Conservation Authority boundaries as outlined under the *Conservation Authorities Act*, *1990.* Ontario Regulation 284/07 made under the *CWA*, alters the boundaries of each of these Source Protection Areas so that they better encompass watersheds. The *CWA* allows for one SPC for each SPR. It is the members of the SPCs who are ultimately responsible for preparing local SPPs – plans which establish local policies on how significant drinking water threats will be prevented, reduced or eliminated, who is responsible for taking action, when action must be taken and how progress will be measured. **Figure 2-1** shows the 19 SPRs in Ontario.

It is the source protection committees who are ultimately responsible for preparing local source protection plans.

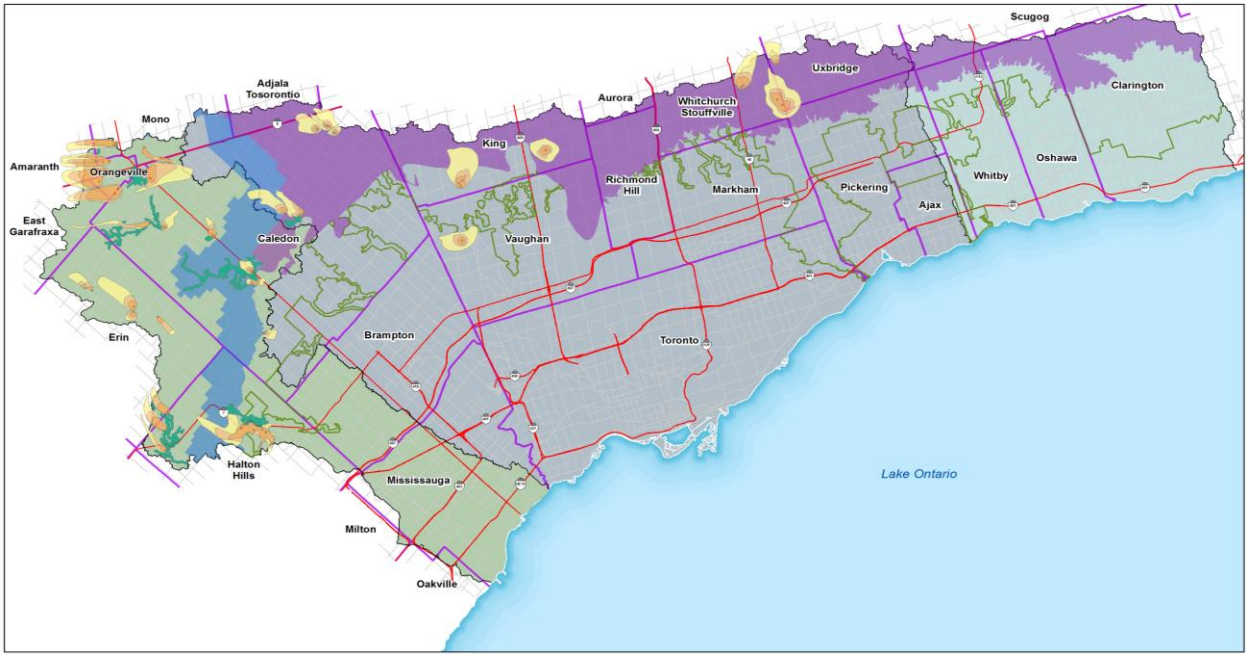
Figure 2-1: Source Protection Areas and Regions in Ontario



2.1 CTC SOURCE PROTECTION REGION

The CTC Source Protection Region **(Figure 2-2)** contains 25 large and small watersheds and spans over 10,000 km^2, from the Oak Ridges Moraine in the north to Lake Ontario in the south. The region contains portions of the Niagara Escarpment, Oak Ridges Moraine, Greenbelt, Lake Ontario and the most densely populated region of Canada.

Figure 2-2: Map of CTC Source Protection Region



The CTC Source Protection Region includes:

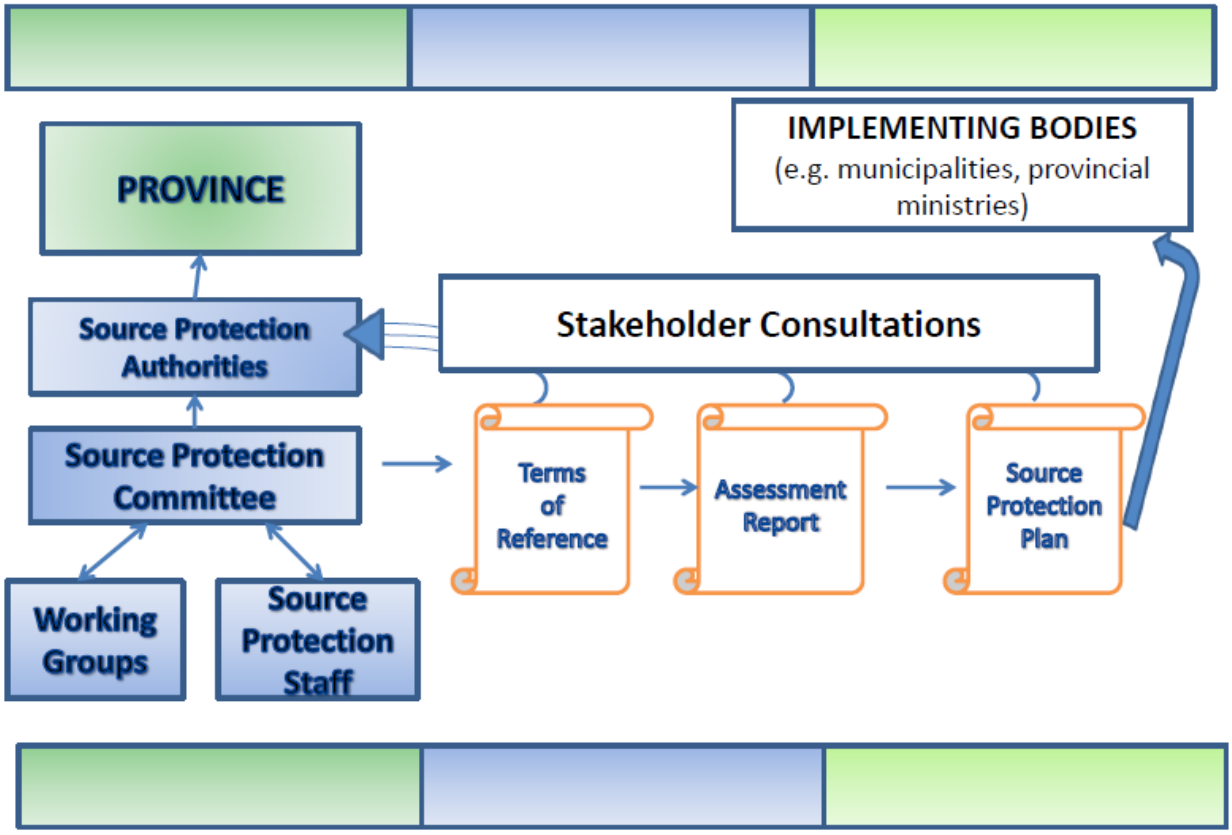
- 25 local municipalities and eight single tier, regional or county municipalities;
- 66 municipal supply wells; and
- 16 municipal surface water intakes on Lake Ontario.

The region is complex and diverse in terms of geology, physiology, population, and development pressures, with many, often conflicting, water uses including drinking water supply, recreation, irrigation, agriculture, commercial and industrial uses, as well as ecosystem needs. This diverse setting represents a significant challenge for the development of the SPP because of the variability of available information upon which to base the technical work, the differing stresses on water resources related to development pressure and population growth, and the differences in the nature, density and locations of threats to the quality and quantity of water resources.

3 ROLES AND RESPONSIBILITIES

Figure 3-1 provides an illustration of the relationship between the various groups in the source protection planning process. Each groups' role and support was critical to developing the SPP.

Figure 3-1: Roles and Responsibilities



3.1 PROVINCE: MINISTRY OF THE ENVIRONMENT AND CLIMATE CHANGE (MOECC)

The Province sets the rules (largely through the *Clean Water Act, 2006*), provides ongoing guidance, approves the documents produced by the SPC (Terms of Reference, Assessment Reports and Source Protection Plans) and is responsible for implementation of significant threat policies associated with prescribed provincial approvals or permits of provincially regulated facilities and activities.

3.2 SOURCE PROTECTION AUTHORITY (SPA)

The Source Protection Authority is a new body created under the *Clean Water Act, 2006*. The SPAs are made-up of the members of the boards of existing conservation authorities. Initially, it had the

important role of laying the groundwork for the new source protection process in each source protection area. This included creating the SPCs and engaging municipalities in that process.
In the CTC SPR, there are three Source Protection Authorities:

- Credit Valley
- Toronto and Region (lead SPA)
- Central Lake Ontario

The SPAs role has changed over time. Once the SPC was created, the SPAs role focused on supporting the SPC in its duties. The SPA will continue to have a role in monitoring and reporting on progress in implementing the Approved Source Protection Plan.

3.3 SOURCE PROTECTION COMMITTEE (SPC)

In addition to the SPA, the *Clean Water Act, 2006* created a second watershed-level body, the Source Protection Committee. The SPC is the primary driver of the process at the watershed level. The *Clean Water Act, 2006* and associated regulation establishes one SPC for each SPR and sets the size of the SPC. The lead SPA appoints the members of the SPC. The chair of the SPC, however, is appointed by the Minister of Environment. The SPC is made up of a mix of local citizens, who live or work in the watershed, and who applied for that role and were selected by the SPA based on a competitive process. Each municipal member of the SPC was selected by the group municipal councils represented by the member and endorsed by council resolutions. The number of committee members varies by region. In the CTC SPR, there are 21 committee members, plus the chair **(Table 3-1)**. Of the 21 members, one third represent the economic sector, one third represent the municipal sector, and one third represent the general public (includes environmental group representation). The SPC is responsible for preparing the Terms of Reference, the Assessment Reports and the Source Protection Plan. The SPC is also responsible for ensuring that stakeholders and the public are consulted throughout the process.

Table 3-1: SPC Membership

Chair: Susan Self		
Economic	**Municipal**	**Public**
Andrea Bourrie Aggregate	**Bob Burnside** Dufferin County	**Julie Abouchar** Public at large
Doug Brown Energy	**Michael D'Andrea** City of Toronto	**Michael Garrett** Public at large
Wendy Burgess Golf Course	**David Kentner** Region of Halton and County of Wellington	**Jessica Ginsburg** Environmental
Louise Foster Development	**Laura McDowell/Don Goodyear** Region of York	**Bob Goodings** Public at large
Heather Laidlaw Agriculture	**John Presta** Region of Durham	**Irv Harrell** Public at large
Peter Miasek Petroleum Products	**Mark Schiller** Region of Peel	**Peter Orphanos** (deceased) Environmental
Lynne Moore Agriculture	**Howard Shapiro** City of Toronto	**Fred Ruf** Public at large

3.4 CONSERVATION AUTHORITY

Through agreement with the SPA, the Conservation Authority provides staff and other expertise. With their experience in watershed-based work and an understanding of local stakeholders, they are able to facilitate cooperation among communities and stakeholders and help prepare the Terms of Reference, Assessment Reports and Source Protection Plan, under the guidance of the SPC.

In the CTC SPR, the Conservation Authority partners are:

- Credit Valley Conservation Authority
- Toronto and Region Conservation Authority (lead)
- Central Lake Ontario Conservation Authority

3.5 MUNICIPALITY

Municipalities are a key partner in the source protection process and work closely with the SPC and SPAs. Municipalities have a primary role of implementing the SPP once it's in place. The municipalities in the CTC Source Protection Region are outlined in **Table 3-2.**

Table 3-2: Municipalities in the CTC Source Protection Region

Dufferin County	**Peel Region**	**York Region**	**Durham Region**
Town of Mono	City of Brampton	Town of Whitchurch-Stouffville	Municipality of Clarington
Township of Amaranth	Town of Caledon	City of Markham	City of Oshawa
Township of East Garafraxa	City of Mississauga	Town of Richmond Hill	Town of Whitby
Town of Orangeville	**Halton Region**	City of Vaughan	Township of Scugog
Wellington County	Town of Halton Hills	Town of Aurora	City of Pickering
Town of Erin	Town of Oakville	Township of King	Town of Ajax
Simcoe County	Town of Milton	**City of Toronto**	Township of Uxbridge
Township of Adjala-Tosorontio			

*municipalities in **bold** are responsible for providing water services; those shown with shading are the upper or single tier.

4 PURPOSE AND OBJECTIVES OF THE SOURCE PROTECTION PLAN

The policies in this SPP have been written to achieve the objectives identified in the *General Regulation* under the *CWA*. These objectives are as follows:

1. To protect existing and future drinking water sources in the SPA.
2. To ensure that, for every area identified in an Assessment Report as an area where an activity is, or would be, a significant drinking water threat:
    - the activity never becomes a significant drinking water threat,
    - if the activity is occurring when the SPP takes effect, the activity ceases to be a significant drinking water threat.

4.1 RELATIONSHIP TO OTHER SOURCE PROTECTION PLANNING DOCUMENTS

While the SPP is a stand-alone document, there are supplementary documents that have been developed for those who may wish to obtain more information about source water protection. These documents are:

- Terms of Reference
- Assessment Reports
- Explanatory Document

4.1.1 Terms of Reference

There are three Terms of Reference documents; one for each watershed area within the CTC SPR:

- Credit Valley Source Protection Area (CVSPA)
- Toronto and Region Source Protection Area (TRSPA)
- Central Lake Ontario Source Protection Area (CLOSPA)

The Terms of Reference documents were the first documents to be completed. They are the work plans that describe the responsibilities of involved groups and stakeholders, timelines and projected costs. The Terms of Reference were submitted to the Ministry of the Environment in December 2008 and approved in August 2009.

4.1.2 The Assessment Reports

There are three Assessment Reports **(see Appendix A)** – one for each SPA within the CTC SPR:

- Credit Valley Source Protection Area
- Toronto and Region Source Protection Area
- Central Lake Ontario Source Protection Area

The Assessment Reports are technical documents that provide the scientific understanding that is the basis of the SPP. The Assessment Reports describe:

- the local watershed and assess available water supply
- the vulnerable areas and risks to drinking water
- the maps of the vulnerable areas
- the vulnerability of those areas
- the water quality and quantity issues related to water sources
- an assessment of the risk to water systems

The Assessment Reports are 'living documents' that will be continually updated and amended as new information becomes available. The Assessment Reports also identify the work that must be undertaken before the SPP is completed. The Assessment Reports are based on the completion of detailed technical studies. These reports underwent a peer review process that enabled scientists and other experts to evaluate the technical work for technical completeness and whether it met the provincial rules and guidelines.

The CTC proposed Assessment Reports were submitted to the Ministry of the Environment for approval in December 2010. At that time, additional research was being carried out. The new information was then used to update the reports which were submitted to the Ministry of the Environment in July 2011 and were approved in January 2012 **(Appendix A)**. Further updates to portions of the Assessment Reports were submitted in late 2014 and early 2015 and were approved in July 2015. The latest update includes revised Wellhead Protection Areas (WHPAs) and updates the threats assessment and identification around wells owned and operated by the Region of Halton near Georgetown and Acton (Town of Halton Hills). Other updates to the Assessment Reports include the results of the Tier 3 Water

Budget studies for both Region of Halton wells serving Halton Hills; and all of the Region of York wells and Region of Durham wells in Uxville. The maps for these wells contained in this Approved Source Protection Plan showing where policies apply **(Appendix F)** are based on the new vulnerable areas delineated in the Approved Assessment Reports.

4.1.3 The Explanatory Document

The Explanatory Document explains how the policies in the Source Protection Plan were developed and provides a rationale and guide as to what the SPC intends each policy to do to protect the sources of drinking water. The Explanatory Document is not a legally binding document, but is required by legislation to support the SPP. It includes a record of the rationale that was used to develop the policies in the SPP. In short, it documents the 'thinking' behind the SPP. The Explanatory Document will be of interest to implementing bodies, the Source Protection Authority, stakeholders, the Minister and members of the general public who may wish to understand the intent that the SPC used to prepare the SPP. By disclosing the underlying rationale that was used to develop specific policy approaches, the Explanatory Document supports a transparent decision making process. The Explanatory Document also includes the comments received by stakeholders throughout the development of the Source Protection Plan, and how the Source Protection Committee addressed these comments in the drafting of the SPP. The Explanatory Document and Summary of Consultation Comments can be found at www.ctcswp.ca.

5 CONSULTATION PROCESS: OVERVIEW

Public involvement and consultation has been a strong priority in this program with many legislated requirements. A variety of approaches and different media were used to engage the public, including:

- media releases
- newspaper advertisements
- letters to landowners
- public open houses
- the publication and distribution of newsletters and other informational brochures
- hosting and maintaining a website
- presentations to municipal councils, community and business groups
- attendance at trade shows, environmental fairs and festivals

Public consultation on the Terms of Reference was held in the summer of 2008 and included seven public meetings. The public consultation on the three Assessment Reports was held in the spring of 2010 (CLOSPA) and the fall of 2010 (TRSPA and CVSPA). The three reports were posted on the CTC website and paper copies were made available at Conservation Authority offices. Letters were sent to approximately 15,000 residents identified as owning property in vulnerable areas. All local and regional/county municipalities were also notified. Ten public open houses were held throughout the CTC to consult on the draft Assessment Reports. These open houses were advertised in local newspapers and electronic newsletters were emailed to subscribers. When all three Assessment Reports were updated or amended in the spring of 2011, municipalities and potentially affected landowners were notified and provided an opportunity to comment.

For the 2014 update, consultation began in the fall of 2013 with a mail out to residents affected by the Tier 3 Water Budget in Halton Hills. Staff also set up a booth at the Georgetown fall fair. In the spring of 2014 a public open house was held in Whitchurch-Stouffville to inform the public about the results of the Tier 3 Water Budget study for York and Durham Regions.

5.1 SOURCE PROTECTION PLAN CONSULTATION

5.1.1 Notice of Commencement of Source Protection Planning

In April 2011, letters advising of the commencement of source protection planning were distributed to municipal Clerks and 15,000 persons who were identified as potentially engaging in significant threat activities. The letters advised of the commencement of source protection planning, that the plans have the potential to impact them and that there was funding available through the Ontario Drinking Water Stewardship Program (ODWSP), a funding program designed to assist property owners address significant threats.

5.1.2 Pre-Consultation

After draft Source Protection Plan policies were developed, municipalities and provincial ministries that were identified to implement policies were provided the opportunity to comment on the policies in a 'pre-consultation' process. A letter was sent in August 2011 to all municipal contacts to provide them with advance notice of the impending pre-consultation that was set to begin in October 2011. The contents of this letter were coordinated with staff at neighbouring Source Protection Regions so that municipalities straddling more than one SPR received coordinated messaging. Official notice of pre-consultation was distributed to all municipal Clerks in mid-October and was followed by a series of municipal workshops that took place as follows:

- November 15, 2011: Durham Region (with Trent Conservation Coalition (TCC) and South Georgian Bay Lake Simcoe (SGBLS))
- November 23, 2011: York Region (with SGBLS)
- November 30, 2011: Peel Region (with SGBLS)
- December 6, 2011: Dufferin County (with Lake Erie and SGBLS)
- December 9, 2011: Lake Ontario policies (with TCC and Halton-Hamilton)
- December 13, 2011: Halton Region (with Halton-Hamilton)
- December 13, 2011: Wellington County (with Lake Erie)

The purpose of these workshops was to provide municipal staff and councillors the opportunity to meet with source protection staff and SPC members from all the Source Protection Areas within their municipality in an informal workshop to review the draft policies and Explanatory Document. The workshops also provided an opportunity for municipal staff/councillors to ask questions to ensure their

formal comments on the policies were as well informed as possible. The joint workshops also helped source protection staff and SPC members to hear feedback on both the CTC policies and those being proposed by adjacent SPCs in an effort to harmonize the policies to the greatest extent possible. A summary of the comments received during pre-consultation and how they were considered in preparing the Draft Proposed Source Protection Plan is found in the Summary of Consultation Comments.

5.1.3 Formal Consultation on the Draft Proposed Source Protection Plan

The first formal consultation on the Draft Proposed Source Protection Plan and Explanatory Document began on March 19, 2012 and ended May 1, 2012. The legislation required a consultation period of a minimum of 35 days, however the SPC provided a 43 day consultation period.

The first formal consultation involved sending notices to all municipal Clerks, implementing bodies and adjacent Source Protection Regions advising of the start of formal consultation. In addition to sending notice to municipalities and other implementing bodies and industries identified as significant threats to municipal drinking water systems in Lake Ontario, approximately 22,000 direct mailings were sent to residents and landowners potentially affected by significant threat policies. These mailings contained:

- notification of Draft Proposed Source Protection Plan public consultation
- map of nearby vulnerable areas
- magazine describing the Assessment Report process and findings
- brochure about the Source Protection Plan process
- a comment form and a postage paid envelope to submit comments

These materials and a copy of the Draft Proposed Source Protection Plan were also posted online. Subscribers to the CTC electronic mailing lists were notified. Advertisements were placed in 17 local and regional newspapers covering the CTC Source Protection Region with information on open houses and where to view copies of the SPP. Printed copies of the Draft Proposed Source Protection Plan were available at four Conservation Authority offices, and at 24 local libraries. A series of seven evening open houses took place as follows (a minimum of three meetings was required, one in each SPA):

- April 3, 2012: Town of Halton Hills
- April 5, 2012: Nobleton
- April 10, 2012: Durham Region

- April 11, 2012: Town of Whitchurch-Stouffville
- April 17, 2012: Town of Mono
- April 19, 2012: City of Brampton
- April 26, 2012: Town of Erin

At the May 1, 2012, CTC SPC meeting, members received six invited deputations from representatives of industry and agriculture, and the municipalities impacted by water quantity policies in Dufferin County. Comments submitted during the first formal consultation period were considered by the SPC in revising policies to prepare the Proposed Source Protection Plan. A summary of the comments received during this first consultation and how they were considered in preparing the Proposed Source Protection Plan can be found in the Summary of Consultation Comments. The Proposed Source Protection Plan was then subject to a second 30 day formal consultation as required by legislation.

This second formal consultation ran between September 7, 2012 to October 8, 2012 under the direction of the respective Source Protection Authorities who were required to send notice to all municipal Clerks, other implementing bodies, adjacent Source Protection Regions, and anyone who submitted written comments during the first formal consultation period. The Proposed Source Protection Plan and Explanatory Document were posted online and written comments were due by the deadline of October 8, 2012.

The Proposed Source Protection Plan was not further revised to address comments submitted during the second formal consultation. However, the comments were submitted to the Minister of the Environment for his approval decision along with the Proposed Source Protection Plan and Explanatory Document on October 22, 2012.

5.1.4 Informal Consultation on the Amended Proposed Source Protection Plan

In the fall of 2013, consultation was undertaken to engage implementing bodies and inform affected property owners in Halton Region and the County of Wellington who, due to completed technical work, were newly included in a vulnerable area subject to SPP policies. This consultation included notification to Clerks of affected municipalities (Region of Halton, Town of Halton Hills, County of Wellington, and Town of Erin). Approximately 3,100 letters were mailed to properties in the Significant Water Quantity Threat Area, where no consultation or communication had previously taken place. A public open house

was held on Saturday October 19, 2013 from 8 AM to 12 noon at the Downtown Georgetown Farmers' Market.

In the spring of 2014, the results of the Tier 3 Water Budget for York and Durham Regions were approved for public consultation. This included public consultation on water quantity policies that would apply in this area. This public consultation was held jointly with the South Georgian Bay Lake Simcoe Source Protection Region (York is in both the CTC and SGBLS SPRs) and took place from April 24 to May 23, 2014 and consisted of newspaper advertising, posting of material online, as well as a public open house held May 7, 2014 in Whitchurch-Stouffville. Notices were also provided to the Clerks of each affected municipality (Region of York, City of Vaughan, Township of King, Town of Aurora, Town of Richmond Hill, Town of Markham, Town of Whitchurch-Stouffville; Region of Durham, Township of Uxbridge).

5.1.5 Formal Consultation on the Amended Source Protection Plan

On June 24, 2014, the CTC Source Protection Committee met and endorsed the Amended Proposed Source Protection Plan policies for a 35-day public consultation period. The consultation took place from July 18 to August 22, 2014. The Amended Proposed Source Protection Plan and new explanatory material was posted on the CTC Source Protection Committee website (www.ctcswp.ca) along with telephone and email contact information to reach staff. Newspaper advertisements were placed in local weekly papers across the CTC Source Protection Region and in publications which target the agricultural community**.** In addition, notices and copies of the SPP and explanatory materials were sent to all implementing bodies (municipal, provincial, source protection authority, federal and industry). Copies of materials were available for viewing at each source protection office.

Following the Source Protection Committee endorsement of the Amended Proposed Source Protection Plan on November 13, 2014, the Chairs of the Source Protection Authority jointly submitted the Amended Proposed Source Protection Plan and Explanatory Document to the Minister of the Environment and Climate Change on December 15, 2014.

6 DRINKING WATER VULNERABILITY ANALYSIS AND THREATS EVALUATION

6.1 TYPES OF VULNERABLE AREAS

This chapter provides an overview of the methodology and definitions developed by the Ministry of the Environment to identify drinking water threats. The ministry developed mandatory *Technical Rules* that must be followed by all Source Protection Committees, as well as extensive guidance and full funding to carry out this technical assessment. These processes are important components in the multi-barrier approach to protecting drinking water sources from contamination and overuse. Source protection technical work is focused on the identification and assessment of drinking water quality and quantity threats and issues affecting four different types of vulnerable areas.

6.1.1 Wellhead Protection Areas (WHPA)

Wellhead Protection Areas are areas on the land around a municipal well, the size of which is determined by how quickly water travels underground to the well, measured in years. For source protection planning, the *Clean Water Act, 2006* required that a standard 100-metre radius circle be provided around each municipal well; this is called WHPA-A. WHPA-B represents the 2-year time of travel; WHPA-C represents the 5-year time of travel; and WHPA-D represents the 25-year time of travel. WHPA-E represents municipal wells that are under the direct influence of surface water. The size and shape of each WHPA (B, C, D or E) is a function of how water travels underground. Time of travel is important because it is an indication of how quickly a contaminant can move from a WHPA into a municipal well. Time of travel can be influenced by a number of factors such as the slope of land, and the type of soil (for example, water travels faster through sand than it does through clay). Wellhead Protection Areas are drawn based on scientific research that took all these factors into consideration. **Table 6-1** provides a list of the number of WHPAs throughout the CTC Source Protection Region. This research was undertaken in the development of the Assessment Reports and details about each specific well can be found in those documents. The maps in **Appendix F** of this document show where significant drinking water threat polices will apply in the specific WHPAs in the CTC Source Protection Region.

Table 6-1: Well Count by Municipality

Source Protection Area	Upper Tier Municipality	Lower Tier Municipality (Water System)	Well Count
Credit Valley	Dufferin County	Mono (Island Lake)	2
		Mono (Coles)	2
		Mono (Cardinal Wood)	3
		Amaranth (Amaranth-Pullen)	1
		Orangeville (Orangeville)	12
	Wellington County	Erin (Bel-Erin)	2
		Erin (Erin)	2
		Erin (Hillsburgh)	2
	Halton Region	Halton Hills (Acton)	5
		Halton Hills (Georgetown)	7
	Peel Region	Caledon (Alton, Caledon Village)	4
		Caledon (Cheltenham)	2
		Caledon (Inglewood)	2
Toronto and Region	Peel Region	Caledon (Caledon East)	3
		Caledon (Palgrave)	3
	York Region	Whitchurch-Stouffville	5
		King (King City)	2
		King (Nobleton)	3
		Vaughan (Kleinburg)	2
	Durham Region	Uxbridge (Uxville Well)	2
Central Lake Ontario	No municipal wells		
TOTAL			**66**

6.1.2 Intake Protection Zones (IPZ)

Intake Protection Zones are the area on the water and land surrounding a municipal surface water intake. The size of each zone is determined by how quickly water flows to the intake, in hours. Because surface water travels much faster than groundwater, the IPZ is drawn primarily for emergency response purposes. There are three categories of IPZs; the IPZ-1 is a one-kilometre circle around the intake if it is located in one of the Great Lakes; the IPZ-2 is the area where water can reach the intake in a specified time, two hours was used in the CTC. According to the MOE *Technical Rules*, there can be no significant

threats in an IPZ-1 or IPZ-2 if it is located in one of the Great Lakes (e.g., Lake Ontario). An IPZ-3 is delineated if modelling demonstrates that spills from a specific activity that is located outside IPZ-1 and IPZ-2 may be transported to an intake and result in a deterioration of the water quality at an intake. Since the vulnerability scores of IPZ-1 and IPZ-2 are not high enough to identify significant threats, the modelling approach can also be used for activities within IPZ-1 and IPZ-2 to determine if spills from a specific activity within these zones may reach the intake and result in deterioration of the water quality at an intake. If modelling in IPZ-1, -2, or -3 demonstrates this deterioration, the modelled threats are deemed significant drinking water threats under the provincial rules. The modelling results are also used to delineate event based areas within IPZs where modelled activities are deemed significant. **Table 6-2** provides a list of the surface water intakes (all are located in Lake Ontario) in the CTC Source Protection Region.

Table 6-2: Intake Protection Zones-3 by Municipality

Source Protection Area	Upper Tier Municipality	Water System	Number of Intakes
Credit Valley	Peel Region	Lorne Park	1
		Lakeview	1
Toronto and Region	City of Toronto	R.C. Harris	2
		R.L. Clark	1
		F.J. Horgan	1
		Island	5
	Durham Region	Ajax	1
Central Lake Ontario	Durham Region	Oshawa	2
		Whitby	1
		Bowmanville	1
TOTAL			**16**

6.1.3 Highly Vulnerable Aquifers (HVA)

An aquifer is an area underground that is highly saturated with water – enough water that it can be withdrawn for human use. A Highly Vulnerable Aquifer is one that is particularly susceptible to contamination because of its location near the ground's surface or where the types of materials in the ground around it are highly permeable. For example, clay is more impermeable and typically acts to

protect the aquifer below it, compared to sand and fractured bedrock which are both highly permeable and do not have these protective characteristics.

6.1.4 Significant Groundwater Recharge Areas (SGRA)

Significant Groundwater Recharge Areas are areas on the landscape that are characterized by porous soils, such as sand or gravel, which allows water to seep easily into the ground and flow to an aquifer. A recharge area is considered significant when it helps maintain the water level in an aquifer that supplies a community or private residence with drinking water. Numerical thresholds are used to calculate where these significant recharge areas are located.

6.1.5 Wellhead Protection Area-Q (Water Quantity)

Water quantity vulnerable areas are determined differently than other vulnerable areas. Through a tiered process of water budget analyses as set out in the *Technical Rules* under O. Reg. 287/07, SPCs are required to identify any areas with water quantity stress, determine the stress level in the Wellhead Protection Area-Q (WHPA-Q), and where the level is deemed significant or moderate, also identify the type and location of the activities that pose a drinking water quantity threat. At the final stage (Tier 3 Water Budget analysis), any WHPA-Q areas where significant or moderate drinking water stress has been identified is an area where significant drinking water quantity threat activities can occur. Within these areas, future activities which take water without returning it to the same source or which reduce recharge to the aquifer are significant water quantity threats. If the area has a significant risk level assigned then existing activities are also significant water quantity threats. There are two types of WHPA-Q; WHPA-Q1, and WHPA-Q2. WHPA-Q1 refers to the area where activities that take water without returning it to the same source may be a threat. WHPA-Q2 refers to the area where activities that reduce recharge may be a threat. Source Protection Plan policies must be developed to address significant water quantity threats. See **Chapter 10.13** for more details on the water quantity policies.

7 PRESCRIBED THREATS

A drinking water threat is defined in the *Clean Water Act, 2006* (Section 2(1)) as:

> *an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water.*

O. Reg. 287/07 under the *Clean Water Act, 2006* has prescribed 21 threats for which the Source Protection Committee must write policies in areas where these threats could be significant.

Just because an activity is a significant threat does not mean that it is currently harming water sources. It has the potential to cause harm if something should go wrong, such as an accidental spill or leak.

1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act*.
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.
3. The application of agricultural source material to land.
4. The storage of agricultural source material.
5. The management of agricultural source material.
6. The application of non-agricultural source material to land.
7. The handling and storage of non-agricultural source material.
8. The application of commercial fertilizer to land.
9. The handling and storage of commercial fertilizer.
10. The application of pesticide to land.
11. The handling and storage of pesticide.
12. The application of road salt.
13. The handling and storage of road salt.
14. The storage of snow.
15. The handling and storage of fuel.
16. The handling and storage of a dense non-aqueous phase liquid.
17. The handling and storage of an organic solvent.

18. The management of runoff that contains chemicals used in the de-icing of aircraft.
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
20. An activity that reduces the recharge of an aquifer.
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area, or a farm-animal yard.

In addition to the prescribed threats listed above, a SPC may determine that there are other activities in their area that they think pose a risk to drinking water. Where this is the case, the SPC may ask the Director at the Ministry of the Environment and Climate Change if the activity can be considered as a local threat to drinking water. In 2009, the Lake Ontario Collaborative (LOC) project initiated event based modelling for the purpose of identifying if certain prescribed or local activities posed a significant risk to the LOC municipal partners' Lake Ontario intakes. A list of proposed spill scenario simulations for existing facilities was developed in consultation with municipal partners, SPC Chairs and Project Managers, and MOE. The selected LOC spill scenarios are based on 'real' events that have occurred in the past and are therefore not representative of extreme events. The following spills scenarios resulted in the identification of five different significant drinking water threat activities to Lake Ontario water treatments plants (WTP). Three of these activities fall under the MOE prescribed drinking water quality threats (*Tables of Drinking Water Threats, Clean Water Act, 2006*):

- Threat # 2. The establishment, operation, or maintenance of a system that collects, stores, transmits, treats, or disposes of sewage (relates to two activities).
- Threat # 15. The handling and storage of fuel.

Two of the activities required MOE approval of additional 'Local' drinking water threats:

- Pipeline transporting petroleum products (containing benzene) crossing tributaries of Lake Ontario; and
- Spill of tritium from nuclear generating station.

Both of these 'local threats' only apply to specific Lake Ontario intakes **(Table 6-2)** identified in the respective Assessment Reports.

7.1 IDENTIFYING AND ENUMERATING POTENTIAL SIGNIFICANT THREATS

Land use activities have been inventoried in vulnerable areas and potential significant threats have been identified using desktop information but have not been confirmed through site visits. All of this information can be found in the Assessment Reports. Just because one of the 21 activities is identified as a significant threat does not mean that it is currently harming the water or that it will in the future. Determining whether or not a threat actually exists is a complex process. The MOE has ranked drinking water threats as being significant, moderate or low. The SPP must, at a minimum, include policies for all areas where significant threats could occur. There are three possible approaches to identifying drinking water threats.

7.1.1 Vulnerability Scoring/Threats-Based Approach

The vulnerability scoring approach relies upon the *Tables of Drinking Water Threats* created by MOE to identify and rank drinking water threats. A variety of specific circumstances are outlined in the *Tables of Drinking Water Threats* for each of the 21 prescribed drinking water threats. These tables were created to provide a consistent approach across all Source Protection Regions in Ontario. The *Tables of Drinking Water Threats* provide the list of circumstances where provincially prescribed activities are low, moderate or significant threats to drinking water. The tables can be accessed through the Ministry of the Environment and Climate Change's website.

To understand how each circumstance applies within the vulnerable areas, it is necessary to understand how the *Tables of Drinking Water Threats* were set up. The tables link the hazard rating of an activity under a specific circumstance and for a specific source of water, with the vulnerability scores needed to make the activity/circumstance a significant, moderate or low drinking water threat. The risk score is determined through the use of the following equation:

R = V x HR

Where:

R is Risk Score

V is Vulnerability of the source water area (scale of 1 – 10)

HR is the Hazard Rating of the threat (scale of 1 – 10)

Risk Score Range	Drinking Water Threat Classification
80 – 100	Significant
60 - < 80	Moderate
> 40 - < 60	Low

The hazard ratings are not provided in the *Tables of Drinking Water Threats*, but the threat level is identified based on the vulnerable area and vulnerability score where the activity is or would be located. The chemical hazard ratings were determined by considering factors such as toxicity, environmental fate, quantity and method of release. The vulnerability scores for different parts of the vulnerable areas described in Chapter 6 are calculated based on provincially mandated factors applied to site specific information about the area, for example how permeable the soil is above the aquifer. The Assessment Reports describe the information and approach used to calculate the vulnerability scores for around each well or intake. The maps **(Appendix F)** included in this SPP show the vulnerability scores for areas around wells or intakes where significant drinking water threats may occur.

The *Tables of Drinking Water Threats* separate circumstances into chemical and pathogen based contaminants. It should be noted that the presence of a DNAPL (dense non-aqueous phase liquid) is considered a significant threat if it occurs anywhere within the five year time of travel (WHPA-A to WHPA-C), regardless of the vulnerability score.

7.1.2 Issues Approach

A drinking water Issue is a documented, existing problem with the quality of the source water. An Issue exists if a contaminant is present at a concentration that may result in the deterioration of the quality of water used as a source of drinking water, or if there is a trend of increasing concentrations of the contaminant. Every elevated contaminant in the raw water is not necessarily considered an Issue.

Elevated parameters are not considered an Issue when they are known to be naturally occurring and do not present a problem for the water treatment plant operator. For Issues caused by human activities, the Assessment Report must delineate the area contributing to an Issue or include a plan to delineate the Issue Contributing Area. Once a drinking water Issue is identified, then any activities or conditions

that may be causing that Issue need to be identified. This is called the Issue approach to identifying drinking water threats.

The first step is to identify an Issue Contributing Area (ICA) in the vicinity of the location at which the Issue has been observed. The ICA may be different than the vulnerable area (WHPA or IPZ). In the second step, specific drinking water threats that could reasonably be expected to contribute to the Issue are identified. All such threats are automatically classified as significant.

7.1.3 Event-Based Approach

The event-based modelling approach was included in the *Technical Rules* to identify threats to drinking water in systems drawing water from larger surface water bodies where the vulnerability scores are generally low. In the CTC Source Protection Region, this approach was used to delineate an event based area (EBA) where a spill from a specific activity within this EBA would cause a significant risk to the drinking water source and hence the modelled activity would be identified as a significant threat; this modelling approach also informed the delineation of IPZ-3s where the EBA extends beyond IPZ-1 and IPZ-2 for the drinking water systems in Lake Ontario.

7.1.4 Enumerating Drinking Water Threats

The minimum requirement for the preparation of the Assessment Reports involved counting the potential significant drinking water threats within WHPAs or IPZs where the risk could be 'significant' based on the vulnerability score of the area. Policies must be developed to mitigate existing significant drinking water threats and ensure activities do not become a significant drinking water threat. The threats identified in the Assessment Reports are *potential* threats only. If an identified property does not have a specific threat activity being carried out on it then the 'existing' threat policies in the SPP for that threat would not apply. Conversely, even though a threat activity is not identified on a property, the relevant SPP policies apply if the threat activity is being carried out now or in the future.

A "condition" is defined as a past land use activity which may pose a problem to water quality.
An "issue" is defined as a documented water quality problem.

7.2 TRANSPORT PATHWAYS

The vulnerability of an aquifer may be increased by any land use activity or feature that disturbs the surface above the aquifer, or which artificially enhances flow to that aquifer. Man-made transport pathways include pits, quarries, mines, road cuts, ditches, storm water, pipelines, sewers, and poorly constructed wells. These pathways can bypass the natural system, resulting in faster pathways for contamination to reach the well or intake. For groundwater drinking water wells, if any of these constructed pathways exist in a water source, the vulnerability score increases by one or two steps (i.e., from low to medium, from medium to high, or from low to high). The decision by the SPC to increase the vulnerability score for an area should be supported by data, and use professional judgment. When determining whether the vulnerability of an area has increased, the following factors shall be considered, as per *Technical Rule 41*.

Hydrogeological conditions:

- The type and design of any transport pathways;
- The cumulative impact of any transport pathways; and
- The extent of any assumptions used in the assessment of the vulnerability of the groundwater.

Examples of features that may provide a transport pathway that could result in an increase in vulnerability of a water supply source include:

- Existing wells or boreholes
- Unused or abandoned wells
- Pits and quarries
- Mines

The *Technical Rules* indicate that a Source Protection Committee may conclude that the data available may be insufficient or of too poor quality to justify an increase in vulnerability.
Several datasets for pathway features were reviewed in an attempt to assess transport pathways within the CTC Source Protection Region. Only the data for pits and quarries were deemed sufficient to adjust the vulnerability score within WHPAs and HVAs.

8 POLICY DEVELOPMENT

8.1 DRAFT PROPOSED SOURCE PROTECTION PLAN

Before the Source Protection Committee could begin the task of researching and creating policies to protect water, a full understanding of the vulnerable areas within the CTC Source Protection Region and what threats existed in those vulnerable areas needed to take place. All the research was compiled into the Assessment Reports which were completed and submitted to the Province in 2010, with updated versions submitted in July 2011 and approval by the Province in January 2012. Further updates to portions of the Assessment Reports were submitted in late 2014 and early 2015 and were approved in July 2015 **(see Chapter 4.1.2)**. The maps for these wells contained in this Approved Source Protection Plan showing where policies apply **(Appendix F)** are based on the Approved Assessment Reports.

With the vulnerable areas identified and the threats enumerated, the next step for the SPC was to develop policies. In order to do this, a Source Protection Planning Working Group (comprised of SPC members) and a Source Protection Planning Steering Committee (comprised of municipal staff) were established to begin the detailed research and consultation needed to inform the work on policy development. The Working Group and Steering Committee worked with planning consultants to develop a series of background reports which summarized each of the threats, where they are significant and what tools were available to address them. These reports were presented and discussed at six workshops held between January and April 2011. These workshops were attended by SPC members, municipal staff and subject-area experts (i.e., Ontario Farm Environment Coalition, TSSA) where small groups discussed appropriate policies to address the threats to drinking water sources, and to determine how these policies would be implemented. Under the SPC's authority, there are a number of different pieces of legislation, and planning tools available that were selected, as the most suitable approach to achieving its objectives. These workshops resulted in a set of draft policy options that were presented to the SPC at a two-day workshop in June 2011. The SPC members reviewed each threat and selected (by consensus or vote if consensus not achieved) what they believed was the most appropriate policy option to stop an activity from being a significant threat and to prevent an activity from becoming a significant threat in the future. Additional workshops for groundwater quantity threats and Lake Ontario threats were held in August and September 2011, respectively, and followed a similar process.

The CTC Source Protection Committee approved the draft policies for pre-consultation with implementing bodies in September 2011.

Chapter 5.1 of this document describes the process followed by the SPC to assess and revise the policies during the pre-consultation and first public consultation stages taking into account the comments made and reviewing what other SPCs were proposing for similar threats.

8.2 AMENDED PROPOSED SOURCE PROTECTION PLAN

Throughout 2012-2013, between submission of the Proposed Source Protection Plan and receipt of comments from the Ministry of the Environment, the CTC Source Protection Region continued to engage implementing bodies in preparations for implementation of the Source Protection Plan. This included workshops on using the maps and determining if policies apply for municipal and conservation authority staff; launching an online map tool with searching functions to identify if a property was located in a vulnerable area and linked to the policies that could apply, as well as the verification of significant threats in parts of the Credit Valley Source Protection Area in the CTC Source Protection Region. New policies were drafted to address new water quantity threats in vulnerable areas around wells serving Georgetown and Acton in Halton Region and around wells in York Region and parts of western Durham Region.

Although the formal review comments on the Proposed Source Protection Plan which was submitted in October 2012 were not received until June 18, 2014, Ministry of the Environment and Climate Change staff provided an iterative series of draft comments to the CTC beginning in October 2013 with initial comments during the public consultation in Halton Region on draft water quantity policies. The initial groundwater quality comments were received in February 2014 and initial Lake Ontario policy comments in April 2014. This allowed the CTC Source Protection Committee to begin revisions of the Source Protection Plan.

8.2.1 Water Quantity Policies

Draft comments on the water quantity policies were received from MOE in October 2013 and a revised version in January 2014. The CTC Source Protection Committee considered revisions to these policies to respond to the comments on February 4, 2014. Planning staff initiated revisions to the water quantity

policies based on SPC direction and delegations received. On March 20, 2014 CTC staff hosted a consultation working session on the water quantity policies to review any outstanding concerns with affected implementing bodies. Following this session and taking the discussion into consideration staff made further revisions to the water quantity policies in preparation for further public consultation.

Pre-consultation with the MOE, the CTC and neighbouring Source Protection Committees, affected municipalities and any other implementing body on the proposed revisions to water quantity policies was held prior to a joint public consultation with South Georgian Bay Lake Simcoe Source Protection Region (see **Chapter 5** for full details).

8.2.2 Water Quality Policies

On February 7, 2014 CTC staff received initial comments from the MOE on the water quality policies. On April 23, 2014, the CTC Source Protection Committee reviewed and provided direction to staff on the MOE comments received on the water quality policies. While the Source Protection Committee made decisions on many of the comments at that meeting, a number of policies required further information prior to a formal Source Protection Committee decisions.

On May 7, 2014, water quality policies were discussed with Halton Region, Towns of Halton Hills and Erin, and County of Wellington staff. Staff attended another meeting with Halton Region and MOE staff on May 22, 2014 to discuss prohibition policies in portions of Issue Contributing Areas.

Following these discussions, the Amended Proposed water quality policies were approved by the CTC Source Protection Committee for public consultation at the June 24, 2014 meeting (see **Chapter 5** for full details).

8.2.3 Lake Ontario Policies

On April 11, 2014 CTC staff received initial comments from MOE on the Lake Ontario policies which were submitted in the Proposed Source Protection Plan on October 22, 2012 to the Minister of the Environment. Staff and members of the Lake Ontario Working Group met to review the comments on April 24, 2014. At this meeting, Working Group members discussed the comments and provided direction to staff to move forward with policy revisions in preparation for the May 27, 2014 Source Protection Committee meeting.

Following these discussions, the Amended Proposed Lake Ontario Policies were approved by the CTC Source Protection Committee for public consultation at the June 24, 2014 meeting. However it was recognized that due to the late receipt of the formal comments from the Ministry on June 18, 2014, that the SPC had not had sufficient time to fully explore and discuss with ministry staff resolutions to their concerns with the Lake Ontario policies. Therefore the SPC undertook to revisit the comments on these policies in the fall of 2014 along with any additional comments received during the public consultation.

In September 2014, the SPC directed the formation of a Lake Ontario Working Group to revisit MOECC concerns on the Lake Ontario policies. Prior to the Lake Ontario Working Group meeting, the SPC member for Toronto, and CTC staff met with MOECC to discuss options to address outstanding issues. Policy revisions were provided to the Lake Ontario Working Group which, along with staff and MOECC met several times over the following two weeks to discuss the new policy suggestions along with the other referred policies. Staff were directed to make revisions to all the deferred policies based on Working Group direction. On October 29, 2014 the Working Group met by teleconference, and after discussion of the revisions, approved the Lake Ontario policies and explanatory notes as their recommendations to the CTC SPC for formal approval.

8.2.4 Receipt of Formal Comments and Resubmission

On June 18, 2014, the three Source Protection Authority Chairs received the formal comments on the CTC Proposed Source Protection Plan from the Director, Source Protection Programs Branch. These comments built on the earlier draft comments. As detailed above, the Source Protection Committee had begun to, or had addressed many comments the Director outlined in her letter. On June 24, 2014, the CTC Source Protection Committee met and endorsed the Amended Proposed Source Protection Plan policies for a 35-day public consultation period and also posted the Director's letter as part of the consultation material.

Chapter 5.1 of this document describes the process followed by the SPC to assess and revise the policies during the pre-consultation and formal consultation on the Amended Source Protection Plan policies. Following the consultation period, comments were considered and taken to the SPC in September 2014. SPC directed staff to make changes, resolve any outstanding Lake Ontario policy concerns (as detailed,

above), and bring the Amended Source Protection Plan to the SPC for final endorsement and approval in November 2014.

Following the Source Protection Committee endorsement of the Amended Proposed Source Protection Plan on November 13, 2014, the Chairs of the Source Protection Authority jointly submitted the Amended Proposed Source Protection Plan and Explanatory Document to the Minister of the Environment and Climate Change on December 15, 2014.

9 RANGE OF POLICY TOOLS AVAILABLE

The Source Protection Committee had a variety of policy tools available to use to develop Source Protection Plan policies, including specific prescribed instruments and land use planning powers under specific provincial legislation (described below). The *Clean Water Act, 2006* also introduces new powers that can be used in a SPP which would be implemented by the municipalities responsible for supplying drinking water. These are known as 'Part IV Powers' and these authorities allow specific activities to be regulated (prohibited or managed) in areas where these activities are, or could be, a significant drinking water threat. The SPC can also choose 'softer' tools such as education and outreach programs alone or in combination with other tools. Where existing legislation is available to address a threat, the SPC chose to use tools based on the existing legislation to avoid duplication or conflict. The SPC also chose in many cases to develop new policies/programs to complement the existing controls.

9.1 PRESCRIBED INSTRUMENTS

Prescribed instruments are existing, regulatory tools under specific pieces of provincial legislation. These prescribed instruments allow the regulatory authority to impose conditions on existing and/or future activities that can be used to protect drinking water. Using existing regulatory tools such as Environmental Compliance Approvals under the *Environmental Protection Act*, *1990*, avoids regulatory duplication. This means that, rather than creating a new tool, a policy in a SPP would point to an already-existing tool that fulfills the objective of the policy. The *Clean Water Act, 2006* recognizes certain existing instruments that can be used to meet SPP objectives. The instruments that have been prescribed are:

***The Aggregate Resources Act*, 1990**

- Section 8 with respect to site plans included in applications for licenses
- Section 11 and 13 with respect to licenses to remove aggregate from pits or quarries
- Section 25 with respect to site plans accompanying applications for wayside permits
- Section 30 with respect to wayside permits to operate pits or quarries
- Section 36 with respect to site plans included in applications for aggregate permits
- Section 37 with respect to aggregate permits to excavate aggregate or topsoil

***The Environmental Protection Act*, 1990**

- Section 29 with respect to certificate of approval or provisional certificates of approval issued by the Director for the use, operation, establishment, alteration, enlargement or extension of waste disposal sites or waste management systems
- Section 47.5 with respect to renewable energy approvals issued or renewed by the Director

***The Nutrient Management Act*, 2002**

- Section 10 with respect to nutrient management strategies
- Section 14 with respect to nutrient management plans
- Section 28 with respect to approvals of nutrient management strategies or nutrient management plans
- Section 15.2 with respect to NASM plans

***The Ontario Water Resources Act*, 1990**

- Section 34 with respect to Permits to Take Water
- Section 53 with respect to approvals to establish, alter, extend or replace new or existing sewage works

***The Pesticides Act*, 1990**

- Sections 7 and 11 with respect to permits for land exterminations, structural exterminations and water exterminations issued by the Director

***The Safe Drinking Water Act*, 2002**

- Section 40 with respect to drinking water works permits issued by the Director
- Section 44 with respect to municipal drinking water licenses issued by the Director

9.2 RISK MANAGEMENT PLANS (PART IV TOOL, SECTION 58)

A Risk Management Plan (RMP) is a new tool introduced in the *Clean Water Act*, *2006* which sets out a plan to manage a threat activity in an area where it is, or could be, a significant drinking water threat, which may include responsibilities and protocols of the person engaged in the threat activity. Risk Management Plans are intended to be negotiated between a Risk Management Official (RMO) and a person engaging in the threat activity. If agreement cannot be achieved, a RMP may be ordered, so that

the user complies. The Risk Management Official must be satisfied that a RMP will reduce the potential for adverse effects to a drinking water source, so that the activity ceases to be, or does not become, a significant threat.

9.3 PROHIBITION (PART IV TOOL, SECTION 57)

The Source Protection Committee may choose to prohibit certain activities, including existing activities which pose a particularly significant threat to drinking water sources, using another new tool introduced in the *Clean Water Act, 2006.* Prohibition of existing activities is meant to be a 'tool of last resort', meaning that the SPC may only do so if they are convinced no other method will reduce the risk, or the degree/level of risk that the activity poses is unacceptably high or severe that it may not be permitted to continue. The companion Explanatory Document to this SPP provides the rationale for the SPC's decisions to use these tools to address some existing significant drinking water threats.

9.4 RESTRICTED LAND USES (PART IV TOOL, SECTION 59)

Restricted Land Uses policies are complementary tools under the *Clean Water Act, 2006* which are used with either s.58 Risk Management Plans or s.57 Prohibition of activities. They do not eliminate a land use (and do not have the same meaning as in the *Planning Act, 1990*), but ensure that activities in the designated area are assessed by the RMO to ensure compliance with s.58 Risk Management Plan or s.57 Prohibition policies before the municipality issues a building permit or planning approvals. This tool acts as a screening tool for municipalities when reviewing applications, to prevent the unintentional approval of activities that are a significant threat to municipal drinking water.

9.5 LAND USE PLANNING

These are policies that affect land use planning decisions. Land use planning policies could fall under the *Planning Act, 1990* or the *Condominium Act, 1998*. These policies may manage or eliminate (through prohibiting it from being established) a future threat activity through a land use policy that is implemented through land use planning decisions (such as Official Plans, Zoning By-laws and Site Plan Controls).

9.6 EDUCATION AND OUTREACH

Considered a non-regulatory or 'soft' tool, the SPC may use education and outreach policies in conjunction with other types of policies. If the SPC decides to use only a soft tool to address a significant

drinking water threat as a stand-alone tool, it must be explained why the policy is sufficient to ensure that the threat does not become, or ceases to be significant. The companion Explanatory Document to this SPP provides the rationale for the SPCs decisions to use these tools as the only tool to address some significant drinking water threats.

9.7 SPECIFY ACTION

These policies specify an action to be taken to achieve the SPP objectives. These policies may be mandatory depending on the body responsible for implementation. 'Other' approaches include policies that:

- specify certain actions be taken by a particular person or body to implement the Source Protection Plan or achieve the SPP's objectives;
- establish stewardship programs;
- specify and promote best management practices;
- establish pilot programs; and/or
- govern research.

Additional research may be required to determine new, innovative methods or technologies for addressing certain threats, or to better understand where targeted actions to address threats would have the most benefit to source water (e.g., Issues Contributing Area).

9.8 STRATEGIC ACTIONS

Strategic Action policies are a non-legally binding commitment. They assign a discretionary obligation on the implementing body to achieve the objectives of the SPP. Any policy set out in the SPP that is NOT one of the following policies is a Strategic Action policy:

- a significant threat policy;
- a designated Great Lakes policy;
- a policy to which section 45 of the Act applies (Monitoring);
- a policy to which clause 39 (1) (b) of the Act applies (Land Use Planning – Have Regard For); and/or
- a policy to which clause 39 (7) (b) of the Act applies (Prescribed Instruments – Have Regard For).

Strategic Action policies can apply to moderate and low threats ONLY, not significant threats.

9.9 MONITORING POLICIES

Generally speaking, monitoring policies **(Chapter 10.14)** are provided to track the implementation of a threat policy to determine, over time, the effectiveness of the policy. These policies generally require annual reporting to the Source Protection Authority on the actions taken to implement the policy. Every significant threat policy must have an associated monitoring policy.

9.10 LEGAL EFFECT

The Approved Source Protection Plan policies have a variety of legal effect in the Province. The requirements of the implementing bodies named in each policy vary according to the degree of threat the policy is addressing. It should be noted that the decisions of the Ontario Municipal Board (OMB) and the Environmental Review Tribunal are also required to conform to relevant significant threat policies and have regard for moderate and low threat policies. There are 11 lists that organize all proposed policies according to the legal effect for implementing bodies **(Table 9-1 and Appendix B)**. Implementing bodies include municipalities, planning authorities, provincial ministries, Conservation Authorities, and the Source Protection Authority. The policies are located in tables in **Chapter 10** of this document and include a column that corresponds to the legal effect table below.

Table 9-1: Legal Effect of Source Protection Plan Policies

List	Legal Effect
List A: Significant threat policies that affect decisions under the *Planning Act* and *Condominium Act, 1998*	Legally binding - must conform with
List B: Moderate and low threat policies that affect decisions under the *Planning Act* and *Condominium Act, 1998*	Legally binding - have regard to
List C: Significant threat policies that affect prescribed instrument decisions	Legally binding - must conform with
List D: Moderate and low threat policies that affect prescribed instrument decisions	Legally binding - have regard to
List E: Significant threat policies that impose obligations on municipalities, source protection authorities and local boards	Legally binding - must comply with
List F: Monitoring policies referred to in subsection 22(2) of the *Clean Water Act, 2006*	Legally binding - must comply with
List G: Policies related to section 57 of the *Clean Water Act, 2006* (Prohibition)	Legally binding - must comply with
List H: Policies related to section 58 of the *Clean Water Act, 2006* (Risk Management Plans)	Legally binding - must comply with
List I: Policies related to section 59 of the *Clean Water Act, 2006* (Restricted Land Use)	Legally binding - must comply with
List J: Strategic Action policies	Non legally binding
List K: Significant threat policies that identify a body other than a municipality, source protection authority or local board as responsible for implementing the policy	Non legally binding

10 THE POLICIES

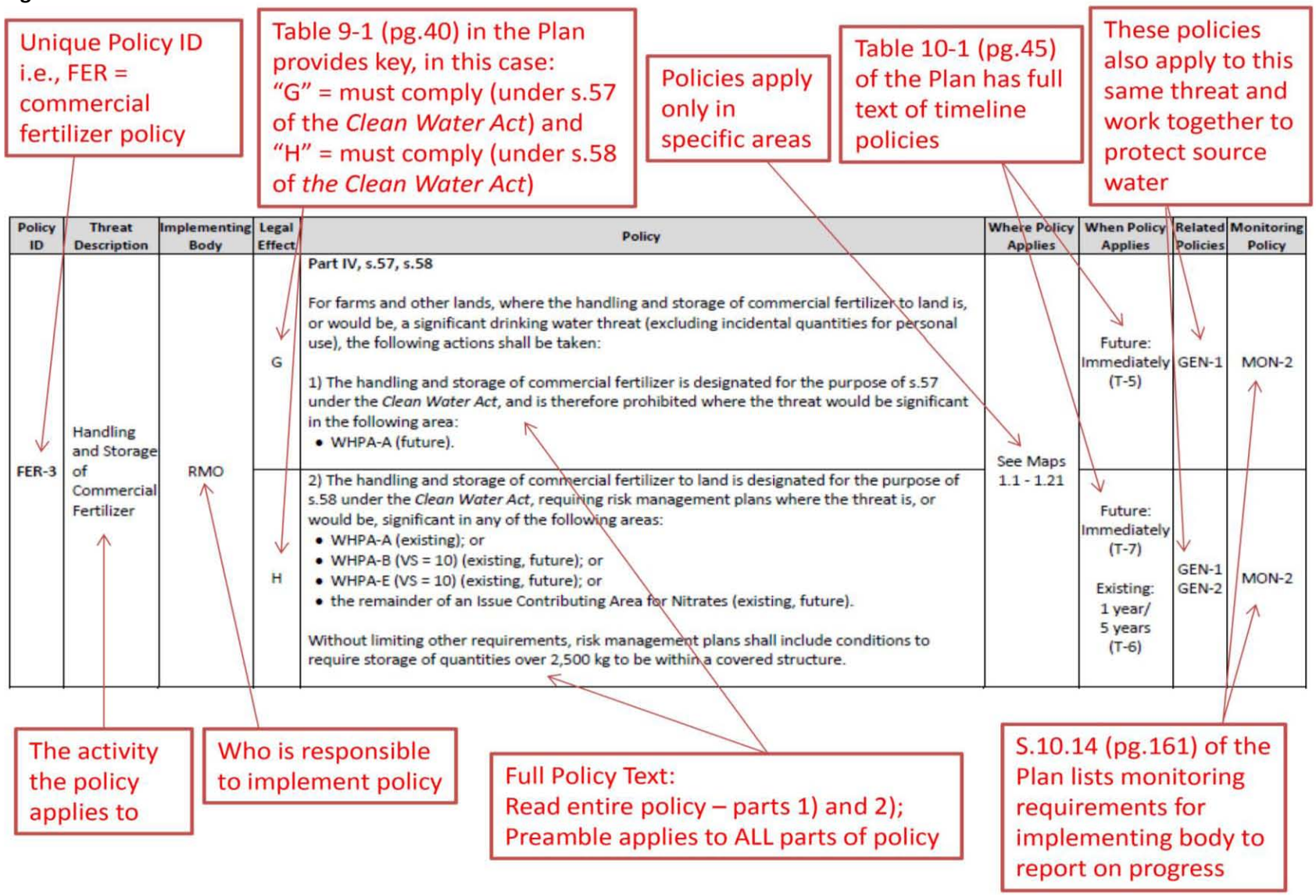
10.1 ORGANIZATION OF POLICIES

The policies are organized by threat activity. Each threat activity begins with a brief description of the threat, and a summary of where the threat is significant based on the vulnerable area and vulnerability score. Included in the description of the threat are specific circumstance numbers which will help when determining the threat classification of a specific threat activity. In order to determine whether a specific threat activity is subject to a policy, you must refer to the Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* available on the CTC website at www.ctcswp.ca to determine if the activity meets the specific circumstances to be a significant drinking water threat. If the activity is taking place in an Issue Contributing Area, and is releasing one of the chemicals identified as an issue in the *Tables of Drinking Water Threats*, the activity is a significant drinking water threat, regardless of vulnerability score. Following the description is a table listing the threat policies applicable to the threat. All policies are for significant threats, unless noted directly in the policy.

10.1.1 How to Read the Policies

Each threat activity is organized into a table (see **Figure 10-1** for example). Policies that have multiple parts must be read in their entirety. For questions on how to read the policies, contact CTC SPR staff for information (www.ctcswp.ca).

Figure 10-1: How to Read the Plan



10.1.2 Definitions

Existing Threat Activity

An existing threat activity shall mean the following, unless expressly stated in a policy:

a) an existing use, activity, building or structure at a location in a vulnerable area that is in compliance with all applicable requirements, and that was being used or had been established for the purposes of undertaking the threat activity, at any time within ten years prior to the date of approval of the Source Protection Plan, or
b) an expansion of an existing use or activity that reduces the risk of contaminating drinking water nor depletes drinking water sources, or
c) an expansion, alteration or replacement of an existing building or structure that does not increase the risk of contaminating drinking water nor depletes drinking water sources.

For clarity, the definition of an existing threat activity includes a change in land ownership and the rotation of agricultural lands among crops or fallow conditions, and allows for alternating between sources of nitrates (agricultural source material, commercial fertilizer, and Category 1 non-agricultural source material).

Future threat activities are anything not covered under existing.

Transition

"Existing Threat" policies apply to prescribed drinking water threat activities under the following circumstances:

1) A drinking water threat activity that is part of a development proposal where a Complete Application (as determined by the municipality or Niagara Escarpment Commission) was made under the *Planning Act*, *Condominium Act* or *Niagara Escarpment Planning and Development Act* (NEPDA) prior to the day the Source Protection Plan comes into effect. The policy for "existing" drinking water threats also applies to any further applications required under the *Planning Act*, *Condominium Act*, Prescribed Instruments, or a development permit under the NEPDA, to implement the development proposal.

2) A drinking water threat activity that is part of an application accepted for a Building Permit, which has been submitted in compliance with Division C 1.3.1.3 (5) of the *Ontario Building Code* prior to the day the Source Protection Plan comes into effect.

3) A drinking water threat activity that is part of an application accepted for the issuance or amendment of a Prescribed Instrument prior to the day the Source Protection Plan comes into effect.

10.1.3 Timelines for Implementation

The following table **(Table 10-1)** outlines the implementation timelines for the policies in the Source Protection Plan. In the policy tables organized by threat, the third column from the right called "When Policy Applies" contains a brief description of the timeline associated with the existing or future policy and the timeline code (i.e., T-1, T-2), that corresponds to the timelines outlined in the following table. These timeline policies **(Table 10-1)** provide greater detail on when the policy applies than the short reference contained within the threat specific policy.

Table 10-1: Timelines for Policy Implementation

Policy ID	Timelines for Policy Implementation
Prescribed Instruments	
T-1	Prescribed Instruments (existing) shall be reviewed (and amended, as necessary) within 3 years of the date the Source Protection Plan takes effect, or such other date as the Director determines.
T-2	Prescribed Instruments (existing), where prohibited, shall not be renewed when the current Prescribed Instrument expires, and the significant threat activity to which the Prescribed Instrument pertains, shall cease no later than 5 years from the date the Source Protection Plan takes effect.
T-3	The relevant Ministry shall comply with the Prescribed Instrument policy (future) immediately upon the date the Source Protection Plan takes effect.
Part IV Tools	
T-4	Activities (existing) designated for the purpose of s.57 under the Clean Water Act as prohibited, shall be prohibited by the Risk Management Official within 180 days from the date the Source Protection Plan takes effect as per s.57(2) under the Clean Water Act, unless otherwise specified within the policy.
T-5	Activities (future) designated for the purpose of s.57 under the Clean Water Act are prohibited immediately upon the date the Source Protection Plan takes effect.
T-6	Activities (existing) designated for the purpose of s.58 under the Clean Water Act, requiring risk management plans, shall be identified and confirmed within 1 year by the Risk Management Official. Risk management plans shall be established within 5 years from the date the Source Protection Plan takes effect.
T-7	Activities (future) designated for the purpose of s.58 under the Clean Water Act, requiring risk management plans, are prohibited until such time as a risk management plan is approved by the Risk Management Official, immediately upon the date the Source Protection Plan takes effect.
Land Use Planning	
T-8	Official plans shall be amended for conformity with the Source Protection Plan within 5 years from the date the Source Protection Plan takes effect, or at the time of the next review in accordance with s.26 of the Planning Act, whichever occurs first. Zoning by-laws shall be amended within 3 years after the approval of the official plan.
T-9	Decisions on planning matters shall conform with the policy immediately upon the date the Source Protection Plan takes effect.
Education and Outreach, Incentives, Research	
T-10	Education and outreach (materials, programs, etc.) shall be developed and implemented within 2 years from the date the Source Protection Plan takes effect.
T-11	Incentives shall be considered within 2 years from the date the Source Protection Plan takes effect.
T-12	Research shall be initiated within 2 years from the date the Source Protection Plan takes effect, contingent on funding.
Specify Action	
T-13	A prioritized maintenance inspection program shall be in effect no later than January 2017.
T-14	The policy shall be complied with within 180 days from the date the Source Protection Plan takes effect.
T-15	The policy shall be considered within 2 years from the date the Source Protection Plan takes effect.
T-16	The policy shall be initiated within 2 years from the date the Source Protection Plan takes effect.
T-17	The policy shall be implemented within 2 years from the date the Source Protection Plan takes effect.
T-18	The policy shall be implemented immediately upon the date the Source Protection Plan takes effect.

10.1.4 General and Other Policies

"General" policies apply to more than one group of threat activities, while "Other" policies only apply to specific threats or locations.

Policy ID	Implementing Body	Legal Effect	Policy	When Policy Applies	Related Policies	Monitoring Policy
GEN-1	Municipality RMO	A I	**s.59 Restricted Land Uses** All land uses are designated for the purpose of Section 59 Restricted Land Uses under the *Clean Water Act, 2006*, with the exception of residential uses, in all areas where the following activities are, or would be, a significant drinking water threat: • The establishment, operation or maintenance of a waste disposal site (within the meaning of Part V of the *Environmental Protection Act)* that does not require approval under the *Environmental Protection Act* or the *Ontario Water Resources Act* (excluding wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste) • The application or storage of agricultural source material • The application or storage of non-agricultural source material (Category 1) • The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard • The application, handling or storage of commercial fertilizer • The application of pesticide to land • The handling and storage of pesticide at a manufacturing, processing or wholesaling facility, retail outlet or custom applicator's storage yard • The application, handling and storage of road salt • The storage of snow (snow dumps) • The handling and storage of fuel that requires s.57 Prohibition or s.58 Risk Management Plan • The handling and storage of DNAPLs and organic solvents • The management of runoff that contains chemicals used in the de-icing of aircraft • An activity that reduces recharge of an aquifer	Immediately (T-9) Amend OPs for conformity within 5 years and ZBLs within 3 years of OP approval (T-8)	WST-1 WST-6 ASM-2 ASM-4 NASM-1 NASM-2 LIV-1 LIV-3 FER-2 FER-3 PES-1 PES-2 SAL-1 SAL-2 SAL-7 SNO-1 FUEL-3 DNAP-1 OS-1 DI-1 REC-2	MON-1 MON-2

Policy ID	Implementing Body	Legal Effect	Policy	When Policy Applies	Related Policies	Monitoring Policy
GEN-2	Municipality	E	**Specify Action** Where an activity requires a Risk Management Plan, the municipality shall ensure through their authority that the RMO and RMI responsible for enforcement will establish a priority for how inspections will be conducted to ensure that the activity ceases to be, or does not become, a significant drinking water threat. Ongoing inspections should be conducted at least once every five 5 years or on a basis deemed appropriate by the RMO and RMI.	See Policy	WST-1 PES-2 WST-6 SAL-1 ASM-2 SAL-2 ASM-4 SAL-7 NASM-1 SNO-1 NASM-2 FUEL-3 LIV-1 DNAP-1 LIV-3 OS-1 FER-2 DI-1 FER-3 REC-2 PES-1	MON-1
GEN-3	Provincial Ministry	K	**Specify Action** Where an activity requires approval using a Prescribed Instrument, the regulatory authority shall undertake compliance/verification inspections to confirm that any new or amended conditions of approval are, or have been, implemented by the facility owner within 3 years of the date of the new or amended approval to ensure that the activity ceases to be, or does not become, a significant drinking water threat. Ongoing inspections should be conducted at least once every 5 years or on a basis deemed appropriate by the Issuing Director.	See Policy	WST-4 ASM-3 WST-7 LIV-2 SWG-8 FER-1 SWG-11 FUEL-1 SWG-13 FUEL-2 SWG-15 LO-SEW-1 SWG-17 LO-SEW-2 ASM-1 DEM-1	MON-4

Policy ID	Implementing Body	Legal Effect	Policy	When Policy Applies	Related Policies	Monitoring Policy
GEN-4	MOECC	K	**Incentive** The Ministry of the Environment and Climate Change should maintain and expand the Ontario Drinking Water Stewardship Program and/or fund other relevant programs to enable local delivery to implement risk management measures for the following activities where they are a significant drinking water threats: a) Septic systems governed under the *Building Code Act*; b) Application and storage of ASM; c) Application, handling and storage of NASM; d) Use of land as livestock grazing or pasturing land, an outdoor confinement area or farm-animal yard; e) Application, handling and storage of fertilizer; and f) Application, handling and storage of pesticide.	Existing: Consider within 2 years (T-15)	SWG ASM NASM LIV FER PES	MON-4
GEN-5	Municipality	E	**Incentive** Where an activity is a significant drinking water threat, the municipality shall consider providing incentive programs to encourage actions to reduce the risks to source water.	Existing: Consider within 2 years (T-15)	All Threats	MON-1
GEN-6	MOECC	K	**Specify Action** The Ministry of the Environment and Climate Change is requested to continue its funding to municipalities and Source Protection Authorities under source protection programs to continue local research into Issues (nitrogen, pathogen, sodium, chloride) to determine where the following activities are a contributing source of the contaminant in Issue Contributing Areas: a) Application of untreated septage to land; b) The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage; c) Application and storage of ASM; d) Application, handling and storage of NASM; e) Use of land as livestock grazing or pasturing land, an outdoor confinement area or farm-animal yard; f) Application, handling and storage of fertilizer; g) Application, handling and storage of road salt; and h) Storage of snow.	Existing: Consider within 2 years (T-15)	WST SWG ASM NASM LIV FER SAL SNO	MON-4

Policy ID	Implementing Body	Legal Effect	Policy	When Policy Applies	Related Policies	Monitoring Policy
GEN-7	Municipality	E	**Specify Action** Where municipal groundwater monitoring shows increasing or decreasing trends and/or exceeds Ontario Drinking Water Standards, the municipality shall investigate and share the information with the RMO, the Ministry of the Environment and Climate Change, the Ministry of Agriculture, Food and Rural Affairs (for nitrates or pathogens) and the Source Protection Authority.	Existing & Future: Initiate within 2 years (T-12)	All ICA Threats (Nitrogen, Pathogen, Sodium or Chloride) WST SWG ASM NASM LIV FER SAL SNO	MON-1
GEN-8	Municipality	J	**Specify Action** Where education and outreach materials are prepared and delivered to significant drinking water threat areas, the municipality is encouraged to deliver those materials to affected properties and businesses in moderate and low threat areas.	Existing & Future: Consider within 2 years (T-15)	WST-2 SWG-2 SWG-7 SWG-10 NASM-5 FER-4 PES-3 SAL-8 FUEL-4 DNAP-2 OS-2 DEM-5 REC-3	MON-1
OTHER-1	Niagara Escarpment Commission	K	**Specify Action** The Niagara Escarpment Commission is requested to initiate amendments to the Niagara Escarpment Plan (NEP), no later than in their next scheduled plan review cycle, to incorporate from the Source Protection Plans the relevant policies, restrictions and conditions into appropriate sections of the NEP, in order to protect existing and future drinking water sources in Source Protection Areas by ensuring activities cease to be or do not become significant drinking water threats.	Existing & Future: Initiate within 2 years (T-16)	N/A	MON-4

10.2 WASTE

Definition

Waste means the establishment or operation of a waste disposal site. Waste includes domestic, industrial or municipal waste or refuse, ashes, garbage and other materials designated under the *Environmental Protection Act*, *1990* (*EPA*).

A "waste disposal site" means:

- Any land upon, into, in or through which, or building or structure in which, waste is deposited, disposed of, handled, stored, transferred, treated or processed;
- Any operation carried out or machinery or equipment used in connection with the depositing, disposal, handling, storage, transfer, treatment or processing of waste.

Ontario Regulation 347 under the *EPA* deals with waste handling, storage and disposal.

Why is Waste a Threat to Drinking Water Sources?

A number of chemicals and pathogens from the application, handling and storage of waste, could make their way into drinking water sources. There are ten potential sub-categories of this threat, three of which have been identified as existing significant threats in the CVSPA and TRSPA:

- Storage of hazardous or liquid industrial waste at disposal sites (see circumstances #1884-1913)
- Storage of waste described in clauses (p), (q), (r), (s), (t), or (u) of the definition of hazardous waste in O. Reg. 347 of *EPA* (small quantity wastes) [1] (see circumstances #1914-1943)
- Application of untreated septage to land (see circumstances #96-101, 1969)

[1] These refer to small quantities of hazardous waste, empty hazardous waste containers, and cleanup materials from small spills. The small quantity thresholds have been established by the Ministry of the Environment and Climate Change in the waste regulation and procedures.

The other seven sub-categories of waste threats are:

- Storage, treatment and discharge of tailings from mines (see circumstances #1533-1584)
- Landfarming of petroleum refining waste (see circumstances #1585-1602)
- Landfilling (hazardous waste) (see circumstances #1603-1638)
- Landfilling (municipal waste) (see circumstances #1639-1674)
- Landfilling (solid non-hazardous industrial or commercial) (see circumstances #1675-1710)
- Liquid industrial waste injection into a well (see circumstances #1711-1878)
- PCB waste storage (see circumstances #1879-1883)

The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identify a number of chemicals that could make their way from waste disposal sites into the groundwater and/or surface water under certain conditions. Pathogens may also be a concern, for example from untreated septage. Contaminants of concern for drinking water sources that may occur in waste include:

- Arsenic
- Barium
- Cadmium
- Chromium VI
- Copper
- Dichlorophenoxy acetic-acid
- Lead
- Mercury
- Nitrogen
- Phosphorus
- Selenium
- Silver
- Trichlophenoxyacetic acid-2,4,5
- Vinyl Chloride
- Pathogens

See **Table 10-2** for when and where waste may be a significant drinking water threat.
Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat. In the case of the application of untreated septage to land, this activity may also be a significant drinking water threat anywhere in an Issue Contributing Area (ICA) for nitrates or pathogens. If the activity meets the description in Column 2 of the *Tables of Drinking Water Threats* it is a significant drinking water threat irrespective of vulnerability score.

Table 10-2: When/where waste may be a significant drinking water threat

Prescribed Drinking Water Threat	Waste Threat Sub-Category	Area and Vulnerability Score (VS)
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act*	Storage of hazardous or liquid industrial wastes (excluding those described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste)	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9)
	Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS = 10)
	Application of untreated septage to land	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 8) • Anywhere in an ICA for Nitrates or Pathogens
	Storage, treatment and discharge of tailings from mines	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9)
	Landfarming of petroleum refining waste	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9)
	Landfilling of hazardous waste	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9)
	Landfilling of municipal waste or solid non-hazardous industrial or commercial waste	• WHPA-A • WHPA-B (VS ≥ 8) • WHPA-C (VS = 8) • WHPA-E (VS ≥ 9)
	Liquid industrial waste injection into a well	• WHPA-A • WHPA-B (VS ≥ 8) • WHPA-C (VS = 8)
	PCB waste storage	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS = 10)

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
WST-1	Storage of Hazardous or Liquid Industrial Wastes (not included in the small quantity exemptions)	RMO	H	**Part IV, s.58** The establishment, operation, or maintenance of a site used by the generator to store hazardous or liquid industrial waste which is not included in the small quantity exemption in Ontario Regulation 347 under the *Environmental Protection Act* is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) (existing, future).	See Maps 1.1 – 1.21	Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2
WST-2	Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste	Municipality MOECC	E K	**Education and Outreach** The municipality shall deliver education and outreach materials and programs where the storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste is, or would be, a significant drinking water threat targeted towards ensuring that facilities that generate small quantities of waste manage the storage of these wastes so that they cease to be, or do not become, a significant drinking water threat in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future). Where appropriate education and outreach materials prepared by the Ministry of the Environment and Climate Change are available, the municipality shall deliver those materials.	See Maps 1.1 – 1.21	Existing & Future: 2 years (T-10)	GEN-8	MON-1 MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
WST-3	Application of Untreated Septage to Land	MOECC	C	**Prescribed Instrument** 1) The application of untreated septage to land shall be prohibited where the activity is, or would be, a significant drinking water threat in the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS ≥ 8) (future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-3) Existing: Upon expiry or within 5 years (T-2)	N/A	MON-4
				2) The application of untreated septage to land may continue only until the expiry of the current approval, after which time it shall be considered a future activity in any of the following areas: • WHPA-B (VS = 10) (existing); or • WHPA-E (VS ≥ 8) (existing); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing).		Existing: Upon expiry or within 5 years (T-2)	N/A	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Polices	Monitoring Policy
WST-4	• Storage, Treatment, and Discharge of Tailings from Mines • Landfarming of Petroleum Refining Waste • Landfilling (Hazardous Waste) • Landfilling (Municipal Waste) • Landfilling (Solid Non-Hazardous Industrial or Commercial Waste) • Liquid Industrial Waste Injection into a Well • Storage of Hazardous or Liquid Industrial Waste (at large facilities such as landfills and transfer stations) • Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste (at large facilities such as landfills and transfer stations)	MOECC	C	**Prescribed Instrument** 1) Waste disposal sites (future) shall be prohibited where the storage, generation or management of waste would be a significant drinking water threat, where these activities include: a) Storage, treatment, and discharge of tailings from mines; b) Landfarming of petroleum refining waste; c) Landfilling (hazardous waste); d) Landfilling (municipal waste); e) Landfilling (solid non-hazardous industrial or commercial waste); f) Liquid industrial waste injection into a well; g) Storage of hazardous or liquid industrial waste (large facilities such as landfills and transfer stations); and h) Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste (at large facilities such as landfills and transfer stations).	See Maps 1.1 - 1.21	Future: Immediately (T-3)	WST-5	MON-4
				2) Where a waste disposal site (existing) is in an area where the storage, generation or management of waste is a significant drinking water threat, the Environmental Compliance Approval that governs the activity shall be reviewed to ensure appropriate terms and conditions are included so that the activity ceases to be a significant drinking water threat, where waste disposal sites include: a) Storage, treatment, and discharge of tailings from mines; b) Landfarming of petroleum refining waste; c) Landfilling (hazardous waste); d) Landfilling (municipal waste); e) Landfilling (solid non-hazardous industrial or commercial waste); f) Liquid industrial waste injection into a well; g) Storage of hazardous or liquid industrial waste (at large facilities such as landfills and transfer stations); and h) Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste (at large facilities such as landfills and transfer stations).		Existing: 3 years (T-1)	GEN-3	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Polices	Monitoring Policy
WST-5	•Storage, Treatment, and Discharge of Tailings from Mines •Landfarming of Petroleum Refining Waste •Landfilling (Hazardous Waste) •Landfilling (Municipal Waste) •Landfilling (Solid Non-Hazardous Industrial or Commercial Waste) •Liquid Industrial Waste Injection into a Well •Storage of Hazardous or Liquid Industrial Waste (at large facilities such as landfills and transfer stations) •Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste (at large facilities such as landfills and transfer stations)	Planning Approval Authority	A	**Land Use Planning** The use of land for waste disposal (future) shall be prohibited where the storage or generation of waste would be a significant drinking water threat at the following types of waste disposal sites: a) Storage, treatment, and discharge of tailings from mines; b) Landfarming of petroleum refining waste; c) Landfilling (hazardous waste); d) Landfilling (municipal waste); e) Landfilling (solid non-hazardous industrial or commercial waste); f) Liquid industrial waste injection into a well; g) Storage of hazardous or liquid industrial waste (at large facilities such as landfills and transfer stations); h) Storage of wastes described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste (at large facilities such as landfills and transfer stations).	See Maps 1.1 - 1.21	Future: Immediately (T-9) Amend OPs for conformity within 5 years and ZBLs within 3 years of OP approval (T-8)	WST-4	MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Polices	Monitoring Policy
WST-6	PCB Waste Storage	RMO	G	**Part IV, s.57, s.58** Where an approval under the *Environmental Protection Act* is not required, the establishment, operation or maintenance of a waste disposal site, including for the storage of PCB waste where it is, or would be, a significant drinking water threat, will require the following actions to be taken: 1) The storage of PCB waste is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat would be significant in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS = 10) (future).	See Maps 1.1 - 1.21	Future: Immediately (T-5)	GEN-1	MON-2
			H	2) The storage of PCB waste is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is significant in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) (existing); or • WHPA-E (VS = 10) (existing).		Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2
WST-7	PCB Waste Storage (temporary waste destruction units)	MOECC	C	**Prescribed Instrument** Where a temporary waste destruction unit for PCBs is required in an area where the storage of PCB waste is, or would be, a significant drinking water threat, the Environmental Compliance Approval that governs the activity shall be reviewed or established to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, a significant drinking water threat in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future).	See Maps 1.1 - 1.21	Future: Immediately (T-3) Existing: 3 years (T-1)	GEN-3	MON-4

10.3 SEWAGE

Definition

Sewage is the establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage. Sewage includes drainage, storm water, commercial and industrial wastes, and other matters or substances defined in the *Ontario Water Resources Act, 1990*. Sewage systems include stormwater retention pond discharges, sewage treatment plant bypasses, septic systems that service individual properties and others as identified below.

Why is Sewage a Threat to Drinking Water Sources?

A number of chemicals and pathogens from sewage could make their way into drinking water sources. There are nine potential sub-categories of this threat, five of which have been identified as existing significant threats in the CTC:

- Septic systems (see circumstances #695-706, 1956)
- Septic system holding tanks (see circumstances #707-718, 1957)
- A storm water management facility designed to discharge storm water to land or surface water (see circumstances #277-504, 1949)
- Sanitary sewers and related pipes (see circumstances #631-694, 1958)
- Storage of sewage (e.g., sewage treatment plant storage tanks) (see circumstances #904-1097, 1960)

The remaining four sub-categories are:

- Combined sewer discharge from a stormwater outlet to surface water (see circumstances #212- 276, 1947)
- Industrial effluent discharge (see circumstances #505-630, 1950-1954)
- Sewage treatment plant bypass discharge to surface water (see circumstances #719-783, 1948)
- Sewage treatment plant effluent discharge (includes lagoons) (see circumstances #784-903, 1959)

Small septic systems (for single family homes) are regulated under the *Ontario Building Code Act, 1992.* Multi-residential septic systems and large systems (greater than 10,000 litres per day (L/day)) are regulated under the *Ontario Water Resources Act, 1990*. From the sub-threat activities mentioned above, the specific chemicals and pathogens that threaten drinking water sources include:

- Acetone
- Aluminum
- BTEX
- Cadmium
- Chloride
- Chromium
- Dichlorobenzene-1,4(para)
- Haxachlorobenzene
- Lead
- Mecoprop
- Mercury
- NDMA
- Nitrate
- Petroleum hydrocarbons
- Total phosphorus
- PAHs
- PCBs
- Sodium
- Trichloroethylene
- Vinyl chloride
- Pathogen

**Note: Total phosphorus is not considered to be a threat for groundwater. It is a threat for surface water because excessive amounts of total phosphorus in surface water can result in eutrophication and toxic algae blooms.

See **Table 10-3** for when and where sewage may be a significant drinking water threat.

Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat. A number of these activities may also be significant drinking water threats anywhere within an Issue Contributing Area (ICA). If the activity meets the description in Column 2 of the *Tables of Drinking Water Threats* it is a significant drinking water threat irrespective of vulnerability score. The exception to this is for septic systems subject to the *Ontario Building Code Act, 1992* in an Issue Contributing Area for Sodium or Chloride.

Table 10-3: When/where sewage may be a significant drinking water threat

Prescribed Drinking Water Threat	Sewage Threat Sub-Category	Area and Vulnerability Score (VS)
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Septic system	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS = 10) • Anywhere in an ICA for Nitrates, Pathogens, Sodium* or Chloride* *subject to the *Ontario Water Resources Act* only
	Septic system holding tank	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS = 10) • Anywhere in an ICA for Nitrates, Pathogens, Sodium* or Chloride* *subject to the *Ontario Water Resources Act* only
	Combined sewer discharge from a stormwater outlet to surface water	• WHPA-E (VS ≥ 8) • Anywhere in a WHPA-E in an ICA for Nitrates or Pathogens
	A storm water management facility designed to discharge storm water to land or surface water	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 8) • Anywhere in an ICA for Nitrates, Pathogens or Chloride
	Industrial effluent discharges	• WHPA-E (VS ≥ 8) • Anywhere in a WHPA-E in an ICA for Nitrates, Pathogens or Chloride
	Sanitary sewers and related pipes	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS = 10) • Anywhere in an ICA for Nitrates or Pathogens
	Sewage treatment plant bypass discharge to surface water	• WHPA-E (VS ≥ 8) • Anywhere in an ICA for Nitrates or Pathogens
	Sewage treatment plant effluent discharges (Includes lagoons)	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 8) • Anywhere in an ICA for Nitrates or Pathogens
	Storage of sewage (e.g., treatment plant tanks)	• WHPA-A • WHPA-B (VS ≥ 8) • WHPA-C (VS = 8) • WHPA-E (VS ≥ 9) • Anywhere in an ICA for Nitrates or Pathogens

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SWG-1	Septic Systems Governed under the *Building Code Act*	Municipality	E	**Specify Action** A prioritized maintenance inspection program for septic systems, including holding tanks, governed under the *Building Code Act* in locations where the threat is, or would be significant, shall be implemented by the municipality or Principal Authority under the Ontario Building Code no later than January 2017. Inspection efforts should be prioritized based on systems that pose the greatest risk to sources of drinking water, such as the oldest systems or those in any of the areas of highest vulnerability: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing, future).	See Maps 1.1 - 1.21	January 2017 (T-13)	N/A	MON-1
SWG-2	Septic Systems Governed under the *Building Code Act*	MOECC Municipality	K E	**Education and Outreach** The Ministry of the Environment and Climate Change should develop and produce education and outreach materials which shall be delivered by local municipalities to landowners with septic systems, including holding tanks, governed under the *Building Code Act* within significant threat areas that explains the rationale for the maintenance inspection program and the benefits of regular maintenance and properly functioning septic systems where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing, future).	See Map 1.1 - 1.21	Existing & Future: Implement within 2 years (T-10)	GEN-8	MON-4 MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SWG-3	Septic Systems Governed under the *Building Code Act*	Planning Approval Authority	A	**Land Use Planning** Where septic systems, including holding tanks, governed under the *Building Code Act* (vacant existing lot of record) would be a significant drinking water threat, vacant lots of record shall be subject to site plan control so that the location of the individual on-site sewage systems and replacement beds only be permitted if they are sited to ensure they do not become a significant drinking water threat in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS = 10) (future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-9) Amend OPs for conformity within 5 years and ZBLs within 3 years of OP approval (T-8)	N/A	MON-1
SWG-4	Septic Systems Governed under the *Building Code Act*	Planning Approval Authority	A	**Land Use Planning** 1) No new lots requiring septic systems, including holding tanks, governed under the *Building Code Act* shall be created where the activity would be a significant drinking water threat in the following area: • WHPA-A (future). 2) New lots requiring septic systems, including holding tanks, governed under the *Building Code Act* in an area where the activity would be a significant drinking water threat shall only be permitted if the municipality is satisfied that the activity will not become a significant drinking water threat. The hydrogeological assessment to determine appropriate development density shall be conducted by a professional licensed to carry out that work in any of the following areas: • WHPA-B (VS = 10) (future); or • WHPA-E (VS = 10) (future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-9) Amend OPs for conformity within 5 years and ZBLs within 3 years of OP approval (T-8)	N/A	MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SWG-5	Septic Systems Governed under the *Building Code Act*	MMAH	K	**Specify Action** The Ministry of Municipal Affairs and Housing is requested to amend the *Building Code Act* to permit municipalities to require higher standards for septic systems governed under the *Building Code Act* to deal with nitrate and pathogen threats where they would be a significant drinking water threat in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS = 10) (future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-18)	N/A	MON-4
SWG-6	Septic Systems Governed under the *Building Code Act* and *Ontario Water Resources Act*	Municipality	E	**Specify Action** Where municipal sanitary sewers and capacity are available, the municipality is encouraged to pass by-laws under the *Municipal Act* to require mandatory connections to the municipal sewer system for new development and existing septic systems, including holding tanks, governed under the *Building Code Act* and the *Ontario Water Resources Act*, and the decommissioning of existing systems, where they are a significant drinking water threat located in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates, Pathogens, Sodium* or Chloride* (existing, future) (*not applicable to systems subject to *BCA*).	See Maps 1.1 - 1.21	Existing & Future: Consider within 2 years (T-15)	N/A	MON-1
SWG-7	Septic Systems Governed under the *Ontario Water Resources Act*	Municipality SPA	E	**Specify Action** The municipality in cooperation with local health units and Source Protection Authorities shall provide education and outreach materials for septic systems governed under the *Ontario Water Resources Act* (existing) to landowners in the entire Issue Contributing Area for Sodium or Chloride regarding: a) the use of more efficient water softeners to reduce the discharge of salt to the septic system; and b) promoting best management practices to ensure outdoor taps are not connected to the softened water line.	See Maps 1.2 1.3 1.16	Existing: Implement within 2 years (T-10)	GEN-8	MON-1 MON-3

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SWG-8	Septic Systems Governed under the *Ontario Water Resources Act*	MOECC	C	**Prescribed Instrument** 1) Septic systems with subsurface disposal of effluent, as regulated by the *Ontario Water Resources Act*, shall be prohibited where the activity would be a significant drinking water threat in the following area: • WHPA-A (future).	See Maps 1.1 - 1.21	Future: Immediately (T-3)	SWG-9	MON-4
				2) Where septic systems with subsurface disposal of effluent, as regulated by the *Ontario Water Resources Act*, are in an area where the activity is, or would be, a significant drinking water threat, the Environmental Compliance Approval that governs the activity shall be reviewed or established to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, a significant drinking water threat in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates, Pathogens, Sodium or Chloride (existing, future).		Future: Immediately (T-3) Existing: 3 years (T-1)	GEN-3 SWG-9	MON-4
SWG-9	Septic Systems Governed under the *Ontario Water Resources Act*	Planning Approval Authority	A	**Land Use Planning** 1) New development dependent on septic systems with subsurface disposal of effluent, as regulated by the *Ontario Water Resources Act*, shall be prohibited where the activity would be a significant drinking water threat in the following area: • WHPA-A (future).	See Maps 1.1 - 1.21	Future: Immediately (T-9) Amend OPs for conformity within 5 years and ZBLs within 3 years of OP approval (T-8)	SWG-8	MON-1
				2) New development dependent on septic systems with subsurface disposal of effluent, as regulated by the *Ontario Water Resources Act*, in an area where the activity would be a significant drinking water threat, shall only be permitted where it has been demonstrated by the proponent through an approved Environmental Assessment or similar planning process that the location for the septic system is the preferred alternative and the safety of the drinking water system has been assured in any of the following areas: • WHPA-B (VS = 10) (future); or • WHPA-E (VS = 10) (future); or • the remainder of an Issue Contributing Area for Nitrates, Pathogens, Sodium or Chloride (future).				

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SWG-10	Septic Systems Governed under the *Ontario Water Resources Act*	MOECC	K	**Specify Action** The Ministry of the Environment and Climate Change is requested to develop guidelines for managing significant drinking water threats from septic systems with subsurface disposal of effluent, as regulated by the *Ontario Water Resources Act*, for distribution to developers, municipalities and other interested or affected parties in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates, Pathogens, Sodium or Chloride (existing, future).	See Maps 1.1 - 1.21	Existing & Future: Consider within 2 years (T-15)	GEN-8	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SWG-11	A Storm Water Management Facility Designed to Discharge Storm Water to Land or Surface Water	MOECC	C	**Prescribed Instrument** 1) Discharge, including infiltration, from a stormwater management facility shall be prohibited into an area where the discharge would be a significant drinking water threat in the following area: • WHPA-A (future).	See Maps 1.1 - 1.21	Future: Immediately (T-3)	SWG-12	MON-4
				2) Where the discharge from a stormwater management facility is into an area where the activity is, or would be, a significant drinking water threat, the Environmental Compliance Approval that governs the activity shall be reviewed or established to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, a significant drinking water threat in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 8) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates, Pathogens or Chloride (existing, future). Not limiting any other conditions to be included in the Environmental Compliance Approval, the Issuing Director should include the following conditions, where possible: • no stormwater is discharged from the pond into a WHPA-E where it would be classified as a significant drinking water threat; • existing infiltration ponds are lined to prevent infiltration of contaminants; and • in an Issue Contributing Area for Chloride, require actions to reduce salt loading into the pond from upstream lands where the application of road salt occurs.		Future: Immediately (T-3) Existing: 3 years (T-1)	GEN-3 SWG-12	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SWG-12	A Storm Water Management Facility Designed to Discharge Storm Water to Land or Surface Water	Planning Approval Authority	A	**Land Use Planning** 1) The use of land for the establishment of a new stormwater management facility shall be prohibited where the discharge (including infiltration) of stormwater would be into a significant threat area in: • WHPA-A (future). 2) The use of land for the discharge from a stormwater management facility into an area where the activity would be a significant drinking water threat shall only be permitted where it has been demonstrated by the proponent through an approved Environmental Assessment or similar planning process that the location of discharge from a stormwater retention pond is the preferred alternative and the safety of the drinking water system has been assured in any of the following areas: • WHPA-B (VS = 10) (future); or • WHPA-E (VS ≥ 8) (future); or • the remainder of an Issue Contributing Area for Nitrates, Pathogens or Chloride (future).	See Maps 1.1 - 1.21	Future: Immediately (T-9) Amend OPs for conformity within 5 years and ZBLs within 3 years of OP approval (T-8)	SWG-11	MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SWG-13	Sanitary Sewers and Related Pipes	MOECC	C	**Prescribed Instrument** Where sanitary sewers and related pipes are in an area where the activity is, or would be, a significant drinking water threat, the Environmental Compliance Approval that governs the activity shall be reviewed or established to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, a significant drinking water threat in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing, future). Not limiting any other conditions to be included in the Environmental Compliance Approval, the Issuing Director should include the following conditions, where possible: • requiring higher construction standards; and • inspections by the owner for leaks.	See Maps 1.1 - 1.21	Future: Immediately (T-3) Existing: 3 years (T-1)	GEN-3 SWG-14	MON-4
SWG-14	Sanitary Sewers and Related Pipes	Planning Approval Authority	A	**Land Use Planning** New development dependent on sanitary sewers and related pipes, in an area where the activity would be a significant drinking water threat, shall only be permitted where it has been demonstrated by the proponent through an approved Environmental Assessment or similar planning process that the location for the sanitary sewer and related pipes is the preferred alternative and the safety of the drinking water system has been assured in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS = 10) (future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-9) Amend OPs for conformity within 5 years and ZBLs within 3 years of OP approval (T-8)	SWG-13	MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Polices	Monitoring Policy
SWG-15	Storage of Sewage	MOECC	C	**Prescribed Instrument** 1) The storage of sewage shall be prohibited where the activity would be a significant drinking water threat in any of the following areas: • WHPA-A (future); or • WHPA-E (VS ≥ 9) (future); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-3)	SWG-16	MON-4
				2) Where facilities for the storage of sewage are in an area where the activity is, or would be, a significant drinking water threat, the Environmental Compliance Approval that governs the activity shall be reviewed or established to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, a significant drinking water threat in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS ≥ 8) (existing, future); or • WHPA-C (VS = 8) (existing, future); or • WHPA-E (VS ≥ 9) (existing); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (existing); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing, future).		Future: Immediately (T-3) Existing: 3 years (T-1)	GEN-3 SWG-16	MON-4
SWG-16	Storage of Sewage	Planning Approval Authority	A	**Land Use Planning** 1) The use of land for the establishment of facilities for the storage of sewage shall be prohibited where the activity would be a significant drinking water threat in any of the following areas: • WHPA-A (future); or • WHPA-E (VS ≥ 9) (future); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-9) Amend OPs for conformity within 5 years and ZBLs within 3 years of OP approval (T-8)	SWG-15	MON-1
				2) The use of land for the establishment of facilities for the storage of sewage, in an area where the activity would be a significant drinking water threat, shall only be permitted where it has been demonstrated by the proponent through an approved Environmental Assessment or similar planning process that the location for the storage of sewage is the preferred alternative and the safety of the drinking water system has been assured in any of the following areas: • WHPA-B (VS ≥ 8) (future); or • WHPA-C (VS = 8) (future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (future).				

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Polices	Monitoring Policy
SWG-17	Combined Sewer Discharge from a Storm-water Outlet to Surface Water Sewage Treatment Plant Bypass Discharge to Surface Water Industrial Effluent Discharges Sewage Treatment Plant Effluent Discharges (Includes Lagoons)	MOECC	C	**Prescribed Instrument** 1) Future sewage works shall be prohibited where the establishment, operation and maintenance of sewage works would be a significant drinking water threat, where the sewage works discharge is to surface water from: a) Combined sewer discharge from a stormwater outlet to surface water; and b) Sewage treatment plant bypass discharge to surface water, in any of the following areas: • WHPA-E (VS ≥ 8) (future); or • In any WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future). c) Industrial effluent discharges, in any of the following areas: • WHPA-E (VS ≥ 8) (future); or • In any WHPA-E in an Issue Contributing Area for Nitrates, Pathogens or Chloride (future). d) Sewage treatment plant effluent discharges (includes lagoons), in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS ≥ 8) (future); or • In any WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-3)	SWG-18	MON-4
				2) Where sewage works are in an area where the activity is a significant drinking water threat, the Environmental Compliance Approval that governs the activity shall be reviewed to ensure appropriate terms and conditions are included so that the activity ceases to be a significant drinking water threat, where the sewage works discharge is to surface water from: a) Combined sewer discharge from a stormwater outlet to surface water; and b) Sewage treatment plant bypass discharge to surface water, in any of the following areas: • WHPA-E (VS ≥ 8) (existing); or • In any WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (existing). c) Industrial effluent discharges, in any of the following areas: • WHPA-E (VS ≥ 8) (existing); or • In any WHPA-E in an Issue Contributing Area for Nitrates, Pathogens or Chloride (existing). d) Sewage treatment plant effluent discharges (includes lagoons), in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) (existing); or • WHPA-E (VS ≥ 8) (existing); or • In any WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (existing).		Existing: 3 years (T-1)	GEN-3	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Polices	Monitoring Policy
SWG-18	Combined Sewer Discharge from a Stormwater Outlet to Surface Water Sewage Treatment Plant Bypass Discharge to Surface Water Industrial Effluent Discharges Sewage Treatment Plant Effluent Discharges (Includes Lagoons)	Planning Approval Authority	A	**Land Use Planning** Development dependent on the establishment of sewage works shall be prohibited where sewage works would be a significant drinking water threat where the sewage works discharge is to surface water from: a) Combined sewer discharge from a stormwater outlet to surface water; and b) Sewage treatment plant bypass discharge to surface water, in any of the following areas: • WHPA-E (VS ≥ 8) (future); or • In any WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future). c) Industrial effluent discharges, in any of the following areas: • WHPA-E (VS ≥ 8) (future); or • In any WHPA-E in an Issue Contributing Area for Nitrates, Pathogens or Chloride (future). d) Sewage treatment plant effluent discharges (includes lagoons), in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS ≥ 8) (future); or • In any WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-9) Amend OPs for conformity within 5 years and ZBLs within 3 years of OP approval (T-8)	SWG-17	MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Polices	Monitoring Policy
SWG-19	Combined Sewer Discharge from a Stormwater Outlet to Surface Water Sewage Treatment Plant Bypass Discharge to Surface Water Sewage Treatment Plant Effluent Discharges (Includes Lagoons)	Town of Orangeville CVSPA	E	**Research** The Town of Orangeville shall undertake research to determine the extent to which the sodium and chloride loading from the Town's Water Pollution Control Plant (WPCP) outfall into WHPA-E for Well 10 influences the rising sodium and chloride levels measured at this well and report back to the Credit Valley Source Protection Authority (CVSPA) within 2 years from the date the Source Protection Plan takes effect. The CVSPA in partnership with the Town of Orangeville shall provide the report along with recommendations to the CTC Source Protection Committee to determine whether to make a formal request to the Director pursuant to section 119 of the Technical Rules: Assessment Report under the *Clean Water Act, 2006* dated November 2009 to add this WPCP outfall as a Local Threat. If the WPCP outfall is added as a Local Threat then policies SWG-17 and SWG-18 shall apply.	See Map 1.3	See Policy	SWG-17 SWG-18	MON-1 MON-3

10.4 AGRICULTURAL THREATS

10.4.1 Agricultural Source Material (ASM)

Definition

Agricultural Source Material (ASM) is a class of nutrients that can be applied to land for the purpose of improving the growth of agricultural crops and soil conditioning. Ontario Regulation 267/03 under the *Nutrient Management Act, 2002*, lists the following sources of ASM that may be produced, applied, stored, handled, or used on a farm:

- manure produced by farm animals (includes bedding materials);
- runoff from farm-animal yards and manure storages;
- wash water that has not been mixed with human body waste (e.g., from the milking centre);
- organic materials produced by intermediate operations that process the above materials (e.g., mushroom compost);
- anaerobic digestion output that does not include sewage biosolids or human body waste; and
- regulated compost (which contains dead farm animals).

Storing ASM can be at or above grade in a permanent nutrient storage facility or on a temporary field nutrient storage site (solid ASM only).

Why is ASM a Threat to Drinking Water Sources?

A number of chemicals and pathogens from ASM could make their way into drinking water sources. The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following sub-threat activities:

- The application of ASM to land (see circumstances #1-18, 1944)
- The storage of ASM (see circumstances #1201-1224, 1962-1964)
- The management of ASM – aquaculture (see circumstance #1955)
  (Note: there are no existing or future significant threats possible for management of ASM)

ASM threats can occur on large or small farms – those regulated by the *Nutrient Management Act, 2002* (producing more than 300 nutrient units or phased-in) and those not regulated by the *Act* (producing less than 5 nutrient units or not yet phased-in). ASM is produced on farms with livestock, and under certain conditions, there are specific chemicals and pathogens that are able to make their way from ASM application and storage sites into groundwater drinking sources. The Ministry of the Environment

and Climate Change's *Tables of Drinking Water Threats* identifies the following chemicals and pathogens as potential concerns:

- Nitrogen
- Total phosphorus
- Pathogens

Nitrogen is a concern for surface and groundwater, while phosphorus is only a concern for surface water, for example, in WHPAs where the wells are assessed as GUDI (groundwater under the influence of surface water). Permanent nutrient storage facilities are generally (but not always) located near barns and outdoor confinement areas. Temporary field nutrient storage facilities can be located near barns and outdoor confinement areas, as well as on fields where the ASM will be applied. The storage and application of ASM as potential threats to drinking water sources, is dependent on the vulnerability score of the specific area, and the combination of the percentage of managed land[2] and density[3] of livestock in the vulnerable area.

See **Table 10-4** for when and where application and storage of ASM may be a significant drinking water threat. Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat. These activities may also be <u>significant</u> drinking water threats anywhere within an Issue Contributing Area (ICA) for Nitrates or Pathogens. If the activity meets the description in Column 2 of the *Tables of Drinking Water Threats* it is a significant drinking water threat irrespective of vulnerability score.

[2] "Managed land": includes cropland, fallow land, improved pasture, golf course, sports fields and lawns to which ASM, NASM or commercial fertilizer could be applied.

[3] "Livestock density" is the number of farm animals in a given area. It is standardized to **nutrient units per acre** to account for the fact that different types of animals produce different amounts of manure with different nutrient values. One (1) nutrient unit is the equivalent of 43 kilograms of nitrogen or 55 kilograms of phosphorus fertilizer. Please consult the local source protection authority to obtain information on the above calculations for a specific property.

Table 10-4: When/where ASM may be a significant drinking water threat

Prescribed Drinking Water Threat	ASM Threat Sub-Category	Area and Vulnerability Score (VS)
The application, storage and management of agricultural source material	The application of agricultural source material to land	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 8) • Anywhere in an ICA for Nitrates or Pathogens
	The storage of agricultural source material	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 8) • Anywhere in an ICA for Nitrates or Pathogens
	The management of agricultural source material – aquaculture	• Anywhere in WHPA-E in an ICA for Pathogens

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
ASM-1	Application of Agricultural Source Material (ASM) to Land	OMAFRA	C	**Prescribed Instrument** 1) The application of ASM to land shall be prohibited where the activity is, or would be, a significant drinking water threat in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Pathogens (future); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-3) Existing: Upon expiry or within 5 years (T-2)	N/A	MON-4
				2) Where the application of ASM to land is in an area where the activity is, or would be, a significant drinking water threat, the Nutrient Management Plan or Strategy that governs the activity shall be reviewed or established to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, a significant drinking water threat. In addition to any other risk management measures required through the Prescribed Instrument, the Prescribed Instrument shall as a minimum ensure: a) the application of ASM is not applied during restricted periods, or any other time when the soil is snow covered or frozen consistent with the limitations of subsection 52.2 – 52.4 of Ontario Regulation 267/03 under the *Nutrient Management Act, 2002* to avoid runoff; and b) soil testing is required for plant available nitrogen each year prior to application of ASM to determine appropriate application rates, in any of the following areas: • WHPA-B (VS = 10) which is not in an Issue Contributing Area for Nitrates or Pathogens (existing, future); or • WHPA-E (VS ≥ 8) which is not in an Issue Contributing Area for Nitrates or Pathogens (existing, future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Nitrates (existing, future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Pathogens (existing); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (existing); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing, future).		Future: Immediately (T-3) Existing: 3 years (T-1)	GEN-3	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
ASM-2	Application of Agricultural Source Material (ASM) to Land	RMO	G	**Part IV, s.57, s.58** For farms that do not require a Nutrient Management Plan or Strategy, where the application of ASM is, or would be, a significant drinking water threat, the following actions shall be taken: 1) The application of ASM is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Pathogens (future); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-5) Existing: 180 days (T-4)	GEN-1	MON-2
			H	2) The application of ASM is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant. In addition to any other risk management measures required through the risk management plan, the risk management plan shall as a minimum ensure: a) the application of ASM is not applied during restricted periods, or any other time when the soil is snow covered or frozen consistent with the limitations of subsection 52.2 – 52.4 of Ontario Regulation 267/03 under the Nutrient Management Act, 2002 to avoid runoff; and b) soil testing is required for plant available nitrogen each year prior to application of ASM to determine appropriate application rates, in any of the following areas: • WHPA-B (VS = 10) which is not in an Issue Contributing Area for Nitrates or Pathogens (existing, future); or • WHPA-E (VS ≥ 8) which is not in an Issue Contributing Area for Nitrates or Pathogens (existing, future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Nitrates (existing, future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Pathogens (existing); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (existing); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing, future).		Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
ASM-3	Storage of Agricultural Source Material (ASM)	OMAFRA	C	**Prescribed Instrument** 1) The storage of ASM shall be prohibited where the activity would be a significant drinking water threat in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Nitrates or Pathogens (future); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-3)	N/A	MON-4
				2) Where the storage of ASM is in an area where the activity is, or would be, a significant drinking water threat, the Nutrient Management Plan or Strategy that governs the activity shall be reviewed or established to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, a significant drinking water threat in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) which is not in an Issue Contributing Area for Nitrates or Pathogens (existing, future); or • WHPA-E (VS ≥ 8) which is not in an Issue Contributing Area for Nitrates or Pathogens (existing, future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Nitrates or Pathogens (existing); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (existing); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing, future).		Future: Immediately (T-3) Existing: 3 years (T-1)	GEN-3	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
ASM-4	Storage of Agricultural Source Material (ASM)	RMO	G	**Part IV, s.57, s.58** For farms that do not require a Nutrient Management Plan or Strategy, where the storage of ASM would be a significant drinking water threat, the following actions shall be taken: 1) The storage of ASM is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat would be significant in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Nitrates or Pathogens (future); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-5)	GEN-1	MON-2
			H	2) The storage of ASM is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) which is not in an Issue Contributing Area for Nitrates or Pathogens (existing, future); or • WHPA-E (VS ≥ 8) which is not in an Issue Contributing Area for Nitrates or Pathogens (existing, future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Nitrates or Pathogens (existing); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (existing); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing, future).		Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2
ASM-5	Management of Agricultural Source Material (ASM) (Aquaculture)	MOECC	C	**Prescribed Instrument** The management of ASM (aquaculture) shall be prohibited where the activity is, or would be, a significant drinking water threat in the following areas: • An Issue Contributing Area for Pathogens (existing, future).	See Map 1.9	Future: Immediately (T-3) Existing: Upon expiry or within 5 years (T-2)	N/A	MON-4

10.4.2 Non-Agricultural Source Material (NASM)

Definition

The application to land, handling and storage of non-agricultural source material (NASM) are prescribed drinking water threats listed in Regulation 287/07 under the *Clean Water Act, 2006*. NASM is one class of nutrients that are not produced on a farm, and can be applied to land for the purpose of improving the growth of agricultural crops and for soil conditioning. NASM includes the following materials that are intended to be applied to land as nutrients:

- pulp and paper biosolids;
- sewage biosolids;
- anaerobic digestion output, where less than 50% of the total material is on-farm anaerobic digestion materials (anaerobic digestion is a process used to decompose organic matter by bacteria in an oxygen-limited environment); and
- any other material that is not from an agricultural source and that is capable of being applied to land as a nutrient (such as materials from dairy product or animal food manufacturing).

Furthermore, the Categories of NASM are broken into 3 groups:

- Category 1 – unprocessed plant based materials such as fruit and vegetable peels;
- Category 2 – processed plant based materials such as bakery washwater;
- Category 3 – animal based materials such as meat and dairy washwater, sewage biosolids, and any material that is not listed in the other categories.

NASM can be applied to both agricultural and non-agricultural lands for nutrient enhancement and soil conditioning purposes. NASM that will be applied to fields on a farm can be stored in a permanent nutrient storage facility (usually a steel or concrete tank), or on a temporary field nutrient storage site (only for solid NASM stored for more than 24 hours). There are restrictions about what types of NASM can be stored on a farm and for how long.

Why is NASM a Threat to Drinking Water Sources?

Chemicals and pathogens from NASM could make their way into drinking water sources. The Ministry of the Environment's *Tables of Drinking Water Threats* identifies the following sub-threat activities:

- The application of NASM to land (includes treated septage) (see circumstances #37-54, 1970-1971)
- The handling and storage of NASM (see circumstances #1409-1432, 1965-1968)

Under certain conditions, specific chemicals and pathogens can make their way from NASM application, handling or storage sites into groundwater drinking sources. The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following chemicals and pathogens as potential concerns:

- Nitrogen
- Total phosphorus
- Pathogens

Nitrogen is a concern for both surface and groundwater, but phosphorus is mainly a concern for surface water. Nitrogen and phosphorus, are typically associated with human waste, household and personal care products (such as soap and detergents), and animal by-products.

Pathogens are associated with the following sources of NASM:

- seafood processing operations
- dairy producers
- dairy product manufacturing operations
- pulp and paper mills
- animal food manufacturing operations (from animal sources)
- meat plants
- sewage works

The assessment of chemical threats for the application of NASM to land considered the geographic location, percentage of managed land and livestock density. The assessment of pathogen threats for the application of NASM to land considered the geographic location and the source of the material. The assessment of NASM storage sites, considered the geographic location, whether the storage facility is

temporary or permanent, the source of the material, and whether the material is stored above or below grade.

See **Table 10-5** for when and where application and storage of NASM may be a significant drinking water threat. Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat. These activities may also be significant drinking water threats anywhere within an Issue Contributing Area (ICA) for nitrates or pathogens. If the activity meets the description in Column 2 of the *Tables of Drinking Water Threats* it is a significant drinking water threat irrespective of vulnerability score.

Table 10-5: When/where NASM may be a significant drinking water threat

Prescribed Drinking Water Threat	NASM Threat Sub-Category	Area and Vulnerability Score (VS)
The application, handling and storage of non-agricultural source material to land	The application of non-agricultural source material to land (including treated septage)	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 8) • Anywhere in an ICA for Nitrates or Pathogens
	The storage of non-agricultural source material	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 8) • Anywhere in an ICA for Nitrates or Pathogens

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
NASM-1	Application of Non-Agricultural Source Material (NASM) to Land (Category 1)	RMO	G	**Part IV, s.57, s.58** Where the application of NASM (Category 1) to land is, or would be, a significant drinking water threat, the following actions shall be taken: 1) The application of NASM (Category 1) to land is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat is, or would be significant, in the following area: • WHPA-A (existing, future).	See Maps 1.1 - 1.21	Future: Immediately (T-5) Existing: 180 days (T-4)	GEN-1	MON-2
			H	2) The application of NASM (Category 1) to land is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant, in any of the following areas: • WHPA-B (VS = 10) which is not in an Issue Contributing Area for Nitrates (existing, future); or • WHPA-E (VS ≥ 8) which is not in an Issue Contributing Area for Nitrates (existing, future); or • the remainder of an Issue Contributing Area for Nitrates (existing, future).		Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2 NASM-5	MON-2
NASM-2	Handling and Storage of Non-Agricultural Source Material (NASM) (Category 1)	RMO	G	**Part IV, s.57, s.58** Where the handling and storage of NASM (Category 1) is, or would be, a significant drinking water threat, the following actions shall be taken: 1) The handling and storage of NASM (Category 1) is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat would be significant in the following area: • WHPA-A (future).	See Maps 1.1 - 1.21	Future: Immediately (T-5)	GEN-1	MON-2
			H	2) The handling and storage of NASM (Category 1) is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 8) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates (existing, future).		Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2 NASM-5	MON-2

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
NASM-3	Application of Non-Agricultural Source Material (NASM) to Land (Category 2 and 3)	OMAFRA MOECC	C	**Prescribed Instrument** 1) The application of NASM (Category 2 and 3) to land shall be prohibited where the activity would be a significant drinking water threat in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS ≥ 8) (future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-3)	N/A	MON-4
				2) The application of NASM to land (existing) may continue only until the expiry of the current approval, after which time it would be considered as a future activity.		Existing: Upon expiry or within 5 years (T-2)	NASM-5	MON-4
NASM-4	Handling and Storage of Non-Agricultural Source Material (NASM) (Category 2 and 3)	OMAFRA MOECC	C	**Prescribed Instrument** The handling and storage of NASM (Category 2 and 3) shall be prohibited where the activity is, or would be, a significant drinking water threat in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 8) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing, future).	See Maps 1.1 - 1.21	Future: Immediately (T-3) Existing: Upon expiry or within 5 years (T-2)	N/A	MON-4
NASM-5	Application of NASM to Land Handling and Storage of NASM	OMAFRA MOECC	K	**Education and Outreach** The Ministry of the Environment and Climate Change and the Ministry of Agriculture, Food and Rural Affairs are requested to provide to landowners and haulers that have a Prescribed Instrument or Risk Management Plan to haul, store or apply NASM, information on the importance of protecting source water and the location of the nearby municipal wells where the application, handling and storage of NASM is, or would be, a significant drinking water threat in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 8) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing, future).	See Maps 1.1 - 1.21	Existing & Future: Consider within 2 years (T-15)	GEN-8 NASM-1 NASM-2 NASM-3	MON-4

10.4.3 Livestock

Definition

The use of land for livestock grazing or pasturing, an outdoor confinement area or a farm-animal yard are prescribed drinking water threats listed in Regulation 287/07 under the *Clean Water Act, 2006* and are defined as follows:

- **Livestock** includes dairy, beef, swine, poultry, horses, goats, sheep, ratites (flightless birds), fur-bearing animals, deer, elk, game animals and birds, and other animals identified in the Minimum Distance Separation Guidelines (http://www.omafra.gov.on.ca/english/landuse/guide_toc.htm).
- **Grazing and pasturing land** is considered to be the land on which livestock eat growing herbaceous plants.
- An **outdoor confinement area** is an enclosure for livestock, deer, elk or game animals, and is further defined in O. Reg. 267/03 under the *Nutrient Management Act, 2002* as follows:
    1. It has no roof, except as described below in #3;
    2. It is composed of fences, pens, corrals or similar structures;
    3. It may contain a shelter to protect the animals from the wind or another shelter with a roof of an area of less than 20 square metres;
    4. It has permanent or portable feeding or watering equipment;
    5. The animals are fed or watered at the enclosure;
    6. The animals may or may not have access to other buildings or structures for shelter, feeding or watering; and
    7. Grazing and foraging provides less than 50 percent of dry matter intake.
- **Farm-animal yards** are outdoor livestock areas lined with concrete other than those meeting the definition of an outdoor confinement area. Food and water are not provided in farm-animal yards. They are generally used as outdoor exercise areas or as holding areas when barns are being cleaned.

Why is Livestock Grazing, Pasturing and Outdoor Confinement a Threat to Drinking Water Sources?

Livestock threats can be on large or small farms – those regulated by the *Nutrient Management Act, 2002* (producing more than 300[4] nutrient units or phased-in) and those not regulated by the *NMA* (less than 5 nutrient units). Chemicals and pathogens from the use of land as livestock grazing, pasturing, outdoor confinement, or farm-animal yards could make their way into drinking water sources. The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following sub-threat activities:

- Use of land as livestock grazing or pasturing, an outdoor confinement area or farm-animal yard
    - Livestock/grazing (see circumstances #200-205, 1945)
    - Outdoor confinement (see circumstances #206-211, 1946)

Under certain conditions, specific chemicals and pathogens can make their way from livestock grazing, pasturing, outdoor confinement, or farm-animal yards into groundwater drinking sources. The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following chemicals and pathogens as potential concerns:

- Nitrogen
- Total phosphorus
- Pathogens

Nitrogen is a concern for both surface and groundwater, while phosphorus is a concern primarily for surface water. Generally speaking, the greater the number of livestock kept in a space, the greater the accumulation of manure, and the greater the risk of contaminating water sources with these nutrients and pathogens. Accordingly, the assessment of the potential threat to drinking water sources from use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard is dependent on the concentration of manure in a given area.

[4] The requirements of the *Nutrient Management Act, 2002* are being phased in by the province. Initially all farms with more than 300 nutrient units were required to comply. Remaining farms with more than 5 nutrient units become subject when they undertake a change which requires a municipal approval such as a building permit for a new structure or expansion.

See **Table 10-6** for when and where livestock may be a significant drinking water threat.

Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat. These activities may also be significant drinking water threats anywhere within an Issue Contributing Area (ICA) for Nitrates or Pathogens. If the activity meets the description in Column 2 of the *Tables of Drinking Water Threats* it is a significant drinking water threat irrespective of vulnerability score.

Table 10-6: When/where livestock may be a significant drinking water threat

Prescribed Drinking Water Threat	Livestock Threat Sub-Category	Area and Vulnerability Score (VS)
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard	The use of land as livestock grazing or pasturing land	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 8) • Anywhere in an ICA for Nitrates or Pathogens
	The use of land as an outdoor confinement area or a farm-animal yard	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 8) • Anywhere in an ICA for Nitrates or Pathogens

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LIV-1	The Use of Land as Livestock Grazing or Pasturing Land (O. Reg. 385/08, s.3)	RMO	G	**Part IV, s.57, s.58** Where the use of land as livestock grazing or pasturing land is, or would be, a significant drinking water threat, the following actions shall be taken: 1) The use of land as livestock grazing or pasturing land (with an animal density >1 Nutrient Unit per acre) is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat is, or would be significant, in any of the following areas: • WHPA-A in an Issue Contributing Area for Nitrates or Pathogens (existing, future).	See Maps 1.1 - 1.21	Future: Immediately (T-5) Existing: 180 days (T-4)	GEN-1	MON-2
			H	2) The use of land as livestock grazing or pasturing land is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant, in any of the following areas: • WHPA-A not in an Issue Contributing Area for Nitrates or Pathogens (existing, future); or • WHPA-A in an Issue Contributing Area for Nitrates or Pathogens with an animal density <1 Nutrient Unit per acre (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 8) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing, future).		Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LIV-2	The Use of Land as an Outdoor Confinement Area or a Farm-Animal Yard (O. Reg. 385/08, s.3)	OMAFRA	C	**Prescribed Instrument** 1) The use of land as an outdoor confinement area or farm-animal yard shall be prohibited where the activity would be a significant drinking water threat in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Nitrates or Pathogens (future); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-3)	N/A	MON-4
				2) Where the use of land as an outdoor confinement area or farm-animal yard is in an area where the activity is, or would be, a significant drinking water threat, the Nutrient Management Plan or Strategy that governs the activity shall be reviewed or established to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, a significant drinking water threat in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) which is not in an Issue Contributing Area for Nitrates or Pathogens (existing, future); or • WHPA-E (VS ≥ 8) which is not in an Issue Contributing Area for Nitrates or Pathogens (existing, future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Nitrates or Pathogens (existing); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (existing); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing, future).		Future: Immediately (T-3) Existing: 3 years (T-1)	GEN-3	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LIV-3	The Use of Land as an Outdoor Confinement Area or a Farm-Animal Yard (O. Reg. 385/08, s.3)	RMO	G	**Part IV, s.57, s.58** For lands that do not require a Nutrient Management Plan or Strategy, where the use of land as an outdoor confinement area or farm-animal yard is, or would be, a significant drinking water threat, the following actions shall be taken: 1) The use of land for an outdoor confinement area or farm-animal yard is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat would be significant in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Nitrates or Pathogens (future); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (future).	See Maps 1.1 - 1.21	Future: Immediately (T-5)	GEN-1	MON-2
			H	2) The use of land as an outdoor confinement area or farm-animal yard is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) which is not in an Issue Contributing Area for Nitrates or Pathogens (existing, future); or • WHPA-E (VS ≥ 8) which is not in an Issue Contributing Area for Nitrates or Pathogens (existing, future); or • WHPA-B (VS = 10) in an Issue Contributing Area for Nitrates or Pathogens (existing); or • WHPA-E in an Issue Contributing Area for Nitrates or Pathogens (existing); or • the remainder of an Issue Contributing Area for Nitrates or Pathogens (existing, future).		Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2

10.5 COMMERCIAL FERTILIZER

Definition

Commercial fertilizer is one of the prescribed drinking water threats listed in Regulation 287/07 under the *Clean Water Act, 2006*. Commercial fertilizer is a manufactured compound containing nitrogen, phosphorus, potassium or other minerals intended for use as a plant nutrient. In the drinking water source protection process, commercial fertilizer is distinguished from other nutrient sources – agricultural source material (ASM) and non-agricultural source material (NASM).

Why is Fertilizer a Threat to Drinking Water Sources?

Chemicals from the application, handling and storage of fertilizer could make their way into drinking water sources. The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following sub-threat activities:

- The application of commercial fertilizer to land (see circumstances #19-36)
- The handling and storage of commercial fertilizer (see circumstances #1273-1288)

The nitrogen and phosphorus in commercial fertilizer can enter drinking water sources due to the improper use and storage of the fertilizer. The improper use of fertilizer includes the application of fertilizer without consideration for nutrients already available in the soil and plant requirements, or the inappropriate timing of application for plant growth cycles and weather conditions. Potential impacts of storing fertilizer relate to leaks and spills from aging infrastructure or improper storage techniques. Phosphorus is often associated with runoff and soil erosion from both the storage and application of commercial fertilizer.

The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following chemicals as potential concerns:

- Nitrogen
- Total phosphorus

Nitrogen is a concern for both surface and groundwater, but phosphorus is primarily a concern for surface water. The assessment of potential threats to drinking water sources from commercial fertilizer application is dependent on the location and the combination of the percentage of managed land, and

livestock density in the vulnerable area and where the fertilizer is applied. The potential threat to drinking water from the storage of fertilizer depends on the location, type of facility where it is stored, and the quantity stored.

See **Table 10-7** for when and where application and storage of commercial fertilizer may be a significant drinking water threat. Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat. These activities may also be significant drinking water threats anywhere within an Issue Contributing Area (ICA) for Nitrates. If the activity meets the description in Column 2 of the *Tables of Drinking Water Threats* it is a significant drinking water threat irrespective of vulnerability score.

Table 10-7: When/where commercial fertilizer may be a significant drinking water threat

Prescribed Drinking Water Threat	Commercial Fertilizer Threat Sub-Category	Area and Vulnerability Score (VS)
The application, handling and storage of commercial fertilizer	The application of commercial fertilizer to land	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9) • Anywhere in an ICA for Nitrates
	The storage of commercial fertilizer	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS = 10) • Anywhere in an ICA for Nitrates

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
FER-1	Application of Commercial Fertilizer to Land	OMAFRA	C	**Prescribed Instrument** 1) The application of commercial fertilizer (containing nitrogen) to land shall be prohibited where the activity is, or would be, a significant drinking water threat in any of the following areas: • WHPA-A (existing, future); or • WHPA-E in an Issue Contributing Area for Nitrates (future).	See Maps 1.1 - 1.21	Future: Immediately (T-3) Existing: Upon expiry or within 5 years (T-2)	N/A	MON-4
				2) Where the application of commercial fertilizer (containing nitrogen or phosphorus) to land is in an area where the activity is, or would be, a significant drinking water threat, the Nutrient Management Plan or Strategy that governs the activity shall be reviewed or established to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, a significant drinking water threat in any of the following areas: • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) which is not in an Issue Contributing Area for Nitrates (existing, future); or • WHPA-E in an Issue Contributing Area for Nitrates (existing); or • the remainder of an Issue Contributing Area for Nitrates (existing, future).		Future: Immediately (T-3) Existing: 3 years (T-1)	GEN-3	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
FER-2	Application of Commercial Fertilizer to Land	RMO	G	**Part IV, s.57, s.58** For lands that do not require a Nutrient Management Plan or Strategy, where the application of commercial fertilizer to land is, or would be, a significant drinking water threat (excluding incidental quantities for personal use), the following actions shall be taken: 1) The application of commercial fertilizer (containing nitrogen) is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing, future); or • WHPA-E in an Issue Contributing Area for Nitrates (future).	See Maps 1.1 - 1.21	Future: Immediately (T-5) Existing: 180 days (T-4)	GEN-1	MON-2
			H	2) The application of commercial fertilizer (containing nitrogen or phosphorus) to land is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant, in any of the following areas: • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) which is not in an Issue Contributing Area for Nitrates (existing, future); or • WHPA-E in an Issue Contributing Area for Nitrates (existing); or • the remainder of an Issue Contributing Area for Nitrates (existing, future).		Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
FER-3	Handling and Storage of Commercial Fertilizer	RMO	G	**Part IV, s.57, s.58** For farms and other lands, where the handling and storage of commercial fertilizer to land is, or would be, a significant drinking water threat (excluding incidental quantities for personal use), the following actions shall be taken: 1) The handling and storage of commercial fertilizer is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat would be significant in the following area: • WHPA-A (future).	See Maps 1.1 - 1.21	Future: Immediately (T-5)	GEN-1	MON-2
			H	2) The handling and storage of commercial fertilizer to land is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates (existing, future). Without limiting other requirements, risk management plans shall include conditions to require storage of quantities over 2,500 kg to be within a covered structure.		Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
FER-4	Application of Commercial Fertilizer to Land Handling and Storage of Commercial Fertilizer	Municipality MOECC	E K	**Education and Outreach** The municipality shall deliver education and outreach materials and programs where the application, handling and storage of commercial fertilizer is, or would be, a significant drinking water threat, targeted towards: a) an individual for personal use to promote timely fertilizer application and best management practices in urban settings; and b) owners/tenants of non-agriculturally zoned lands to promote best management practices to safeguard water supplies from drinking water threats; in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9 for application; VS = 10 for handling and storage) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates (existing, future). Where appropriate education and outreach materials prepared by the Ministry of the Environment and Climate Change are available, the municipality shall deliver those materials.	See Maps 1.1 - 1.21	Existing & Future: Implement within 2 years (T-10)	GEN-8	MON-1 MON-4

10.6 PESTICIDES

Definition

The application of pesticide to land and the handling and storage of pesticide are prescribed drinking water threats listed in Regulation 287/07 under the *Clean Water Act, 2006*. Pesticide is defined in the Ontario *Pesticides Act, 1990* as, "any organism, substance or thing that is manufactured, represented, sold or used as a means of directly or indirectly controlling, preventing, destroying, mitigating, attracting or repelling any pest or of altering the growth, development or characteristics of any plant life that is not a pest and includes any organism, substance or thing registered under the federal *Pest Control Products Act, 2002*." Pesticides are typically chemicals, but could be organisms, that are used to control undesirable pests such as weeds, insects, and fungi. Eleven pesticides are considered drinking water threats under the *Clean Water Act, 2006* (see below).

Why is Pesticide a Threat to Drinking Water Sources?

The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identify the following sub-threat activities:

- The application of pesticide to land (circumstances #55-87)
- The handling and storage of pesticide (circumstances #1113-1200)

The 11 chemicals that could make their way, under certain conditions, from the application, storage or handling of pesticide into drinking water sources, are:

- Atrazine
- Dicamba
- Dichlorophenoxy Acetic Acid (2,4-D)
- Dichloropropene-1,3
- Glyphosate
- MCPA (2-methyl-4-chlorophenoxyacetic acid)
- MCPB (4-(4-chloro-2-methylphenoxy) butanoic acid)
- Mecoprop
- Metalaxyl
- Metolachlor or s-Metolachlor
- Pendimethalin

These substances are herbicides except for dichloropropene-1, 3, which is a nematicide (used to control nematodes) and Metalaxyl, which is a fungicide. Other pesticides are not considered to be drinking water threats.

Pesticide has historically been applied to agricultural, recreational, institutional, industrial, commercial and residential land uses. Since 2009, there has been a ban on the cosmetic use of pesticide in Ontario on lawns, vegetable and ornamental gardens, patios, driveways, cemeteries, parks and school yards. The major uses for pesticide will continue to be in agriculture and on golf courses.

The assessment of potential threats to drinking water sources from the application of commercial pesticide to land is dependent on the area of land to which the pesticide is applied: less than 1 hectare; between 1 and 10 hectares; or greater than 10 hectares. In general, the greater the application area, the greater the risk to drinking water. The assessment of potential threats to drinking water sources from the handling and storage of pesticide is dependent on the location, the type of storage (whether at a facility where it is manufactured or processed, or at a facility for retail sale or extermination), and the amount of pesticide stored.

See **Table 10-8** for when and where application, handling and storage of pesticides may be a significant drinking water threat. Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat.

Table 10-8: When/where pesticide may be a significant drinking water threat

Prescribed Drinking Water Threat	Pesticide Threat Sub-Category	Area and Vulnerability Score (VS)
The application, handling and storage of pesticide	The application of pesticide to land	WHPA-A WHPA-B (VS = 10) WHPA-E (VS ≥ 8.1)
	The handling and storage of pesticide	WHPA-A WHPA-B (VS = 10) WHPA-E (VS ≥ 9)

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
PES-1	Application of Pesticide to Land	RMO	H	**Part IV, s.58** The application of pesticide to land is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 8.1) (existing, future). Without limiting other requirements, risk management plans shall incorporate appropriate agri-environmental best management practices and standards to ensure the activity ceases to be, or does not become, a significant drinking water threat.	See Maps 1.1 - 1.21	Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2
PES-2	Handling and Storage of Pesticide	RMO	G	**Part IV, s.57, s.58** Where the handling and storage of pesticide is, or would be, a significant drinking water threat, the following actions shall be taken: 1) The handling and storage of pesticide is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat would be significant in the following area: • WHPA-A (future); or	See Maps 1.1 - 1.21	Future: Immediately (T-5)	GEN-1	MON-2
			H	2) The handling and storage of pesticide is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) (existing, future). Without limiting other requirements, risk management plans shall incorporate appropriate agri-environmental best management practices and standards to ensure the activity ceases to be, or does not become, a significant drinking water threat.		Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
PES-3	Application of Pesticide to Land Handling and Storage of Pesticide	MOECC	K	**Education and Outreach** Where the application, handling and storage of pesticide is, or would be, a significant drinking water threat, the Ministry of the Environment and Climate Change should develop education, training and outreach programs promoting integrated pest management and alternative pest control best management practices, particularly for farms, golf courses and sports fields where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 8.1 for application; VS ≥ 9 for handling and storage) (existing, future).	See Maps 1.1 - 1.21	Existing & Future: Consider within 2 years (T-15)	GEN-8	MON-4
PES-4	Application of Pesticide to Land Handling and Storage of Pesticide	Municipality	E	**Incentive** Where the application, handling and storage of pesticide is a significant drinking water threat, the municipality shall consider providing incentive programs to encourage best management practices for agricultural/rural landowners to reduce the risks to groundwater where the threat is significant in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) (existing); or • WHPA-E (VS ≥ 8.1 for application; VS ≥ 9 for handling and storage) (existing).	See Maps 1.1 - 1.21	Existing: Consider within 2 years (T-11)	N/A	MON-1

10.7 ROAD SALT

Definition

The application, handling and storage of road salt is a prescribed drinking water threat listed in O. Reg. 287/07 under the *Clean Water Act, 2006.* Road salt is any product containing sodium and/or chloride that is used to maintain roads, parking lots and pedestrian areas. Most road salt is used as a de-icer or an ice prevention agent, but can also be used for dust suppression. The most commonly used products for de-icing and preventing ice formation on roads are sodium chloride and calcium chloride because they are effective and inexpensive. Road salt application works by breaking the bond formed between the pavement and the ice/compacted snow. Salt prevents this bond from forming because it reacts with moisture to create a layer of salty water (brine) which has a freezing point below zero degrees Celsius.

Why is Road Salt a Threat to Drinking Water Sources?

Chemicals from the application, handling and storage of road salt could make their way into drinking water sources. The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following sub-threat activities:

- The application of road salt (see circumstances #88-95)
- The handling and storage of road salt (see circumstances #1433-1444)

The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identify the chemicals that could make their way from the application or storage and handling of road salt under certain conditions into drinking water sources. Sodium and chloride can threaten drinking water sources in certain situations by making it unpalatable or unsafe. The aesthetic Ontario Drinking Water Objective (ODWO) for sodium is 200 milligrams per litre (mg/L). However, since sodium intake can present a health issue for some people, the local Medical Officer of Health must be notified by the municipality when concentrations are greater than 20 mg/L. At concentrations above 250 mg/L, chloride imparts a salty taste to drinking water.

See **Table 10-9** for when and where the application, handling and storage of road salt may be a significant drinking water threat. Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat. These activities may also be significant drinking water threats anywhere within an Issue Contributing Area (ICA) for Sodium or Chloride. If the activity meets the description in Column 2 of the *Tables of Drinking Water Threats* it is a significant drinking water threat irrespective of vulnerability score.

Table 10-9: When/where road salt may be a significant drinking water threat

Prescribed Drinking Water Threat	Road Salt Threat Sub-Category	Area and Vulnerability Score (VS)
The application, handling and storage of road salt	The application of road salt	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9) • Anywhere in an ICA for Sodium or Chloride
	The storage of road salt	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9) • Anywhere in an ICA for Sodium or Chloride

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SAL-1	Application of Road Salt (Unassumed Roads and Private Parking Lots)	RMO	H	**Part IV, s.58** For unassumed roads and private parking lots with greater than 200 square metres, the application of road salt is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) (existing, future); or • the remainder of an Issue Contributing Area for Sodium or Chloride (existing, future). Without limiting other requirements, risk management plans shall include a goal to minimize salt usage through alternative measures, while maintaining roadway safety for users.	See Maps 1.1 - 1.21	Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2 SAL-3 SAL-9	MON-2
SAL-2	Application of Road Salt (Public Roads)	RMO	H	**Part IV, s.58** For public roads, the application of road salt is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) (existing, future); or • the remainder of an Issue Contributing Area for Sodium or Chloride (existing, future). Without limiting other requirements, risk management plans shall include provisions for: a) the reduction of salt usage through best management practices such as alternative de-icer materials (with lower sodium and chloride) and/or contemporary technology; and b) the use of trained individuals in the application of road salt (could include technicians and technologists and others responsible for salt management plans, winter maintenance supervisors, patrollers, equipment operators, mechanics, and contract employees).	See Maps 1.1 - 1.21	Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2 SAL-3 SAL-9	MON-2

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SAL-3	Application of Road Salt	Planning Approval Authority	A	**Land Use Planning** Where the application of road salt to roads and parking lots would be a significant drinking water threat, the planning approval authority shall: 1) Prohibit the establishment of new parking lots with greater than 2000 square metres in: • WHPA-A not in an Issue Contributing Area for Sodium or Chloride (future); 2) Prohibit the establishment of new parking lots with greater than 200 square metres in: • WHPA-A in an Issue Contributing Area for Sodium or Chloride (future); and 3) Require a salt management plan, which includes a reduction in the future use of salt, as part of a complete application for development which includes new roads and parking lots where the application of road salt is significant in any of the following areas: • WHPA-B (VS = 10) (future); or • WHPA-E (VS ≥ 9) (future); or • the remainder of an Issue Contributing Area for Sodium or Chloride (future). Such plans should include but not be limited to mitigation measures regarding design of parking lots, roadways and sidewalks to minimize the need for repeat application of road salt such as reducing ponding in parking areas; and directing stormwater discharge outside of vulnerable areas where possible.	See Maps 1.1 - 1.21	Future: Immediately (T-9) Amend OPs for conformity within 5 years and ZBLs within 3 years of OP approval (T-8)	SAL-1 SAL-2 SAL-9	MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SAL-4	Application of Road Salt	MOECC	K	**Specify Action** Where the application of road salt is, or would be, a significant drinking water threat, the Ministry of the Environment and Climate Change in consultation with other provincial ministries and municipal associations should promote best management practices for the application of road salt, to protect sources of municipal drinking water in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) (existing, future); or • the remainder of an Issue Contributing Area for Sodium or Chloride (existing, future).	See Maps 1.1 - 1.21	Existing & Future: Consider within 2 years (T-15)	SAL-9	MON-4
SAL-5	Application of Road Salt	MOECC	K	**Specify Action** Where the application of road salt is, or would be, a significant drinking water threat, the Ministry of the Environment and Climate Change in consultation with other provincial ministries and municipal associations should develop a licensing and accreditation program for Snow and Ice Contractors for the application of road salt, to protect sources of municipal drinking water in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) (existing, future); or • the remainder of an Issue Contributing Area for Sodium or Chloride (existing, future).	See Maps 1.1 - 1.21	Existing & Future: Consider within 2 years (T-15)	SAL-9	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SAL-6	Application of Road Salt (Provincial Highways)	Ministry of Transportation	K	**Specify Action** For provincial highways where the application of road salt is, or would be, a significant drinking water threat in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) (existing, future); or • the remainder of an Issue Contributing Area for Sodium or Chloride (existing, future); the Ministry of Transportation should: a) continue the proactive implementation of their salt management plans with their supporting de-icing contactors and the use of best management practices within wellhead protection areas; b) update their salt management plan, as required, to ensure consistency with the most current versions of Environment Canada's Code of Practice for the Environmental Management of Road Salts and Transportation Association of Canada's Synthesis of Best Practices; c) investigate and implement where practical, alternative products and mitigation practices and technologies for road salt application and the management of highway runoff and infiltration; d) in consultation with the Source Protection Authority, consider the information contained in the CTC Source Protection Assessment Reports for the siting and prioritization of future assessments related to road salt application and the management of highway runoff and infiltration. In particular, an assessment of application rates and options for reducing the application of salt should be undertaken at those wells in Orangeville immediately adjacent to Highways 9 and 10; and e) forward upon request to the Source Protection Authority the results of monitoring data on specific pilot projects.	See Maps 1.1 - 1.21	Existing & Future: Consider within 2 years (T-15)	SAL-9	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SAL-7	Handling and Storage of Road Salt	RMO	G	**Part IV, s.57, s.58** Where the handling and storage of road salt is, or would be, a significant drinking water threat (excluding incidental quantities for personal use), the following actions shall be taken: 1) The handling and storage of road salt is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat would be significant in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS ≥ 9) (future); or • the remainder of an Issue Contributing Area for Sodium or Chloride (future).	See Maps 1.1 - 1.21	Future: Immediately (T-5)	GEN-1	MON-2
			H	2) The handling and storage of road salt is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is significant in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) (existing); or • WHPA-E (VS ≥ 9) (existing); or • the remainder of an Issue Contributing Area for Sodium or Chloride (existing).		Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2 SAL-9	MON-2

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SAL-8	Application of Road Salt Handling and Storage of Road Salt	Municipality MOECC	E K	**Education and Outreach** The municipality shall deliver education and outreach materials and programs where the application, handling and storage of road salt is, or would be, a significant drinking water threat, targeted towards: a) owners/tenants of residences and small businesses where the application, handling and storage of road salt (existing, future) is, or would be, a significant drinking water threat about the impact of salt on municipal drinking water and what they can do to reduce their use of salt to ensure that the activity ceases to be, or does not become, a significant drinking water threat; and b) commercial and industrial sectors to address the importance of source protection planning and the impacts of road salt on drinking water sources, with the key message being responsible salt storage and application, and the use of contemporary technology; in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) (existing, future); or • the remainder of an Issue Contributing Area for Sodium or Chloride (existing, future). Where appropriate education and outreach materials prepared by the Ministry of the Environment and Climate Change are available, the municipality shall deliver those materials.	See Maps 1.1 - 1.21	Existing & Future: Implement within 2 years (T-10)	GEN-8 SAL-9	MON-1 MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SAL-9	Application of Road Salt Handling and Storage of Road Salt	SPA Municipality	F	**Monitoring** Where the application, handling and storage of road salt (existing, future) is, or would be, a significant drinking water threat in an Issue Contributing Area for Sodium or Chloride the following actions shall be taken: a) the responsible Source Protection Authority, in partnership with affected municipalities, shall conduct an investigation on the source and nature of sodium or chloride threats, contingent on funding; b) the municipality shall undertake monthly sampling of sodium and chloride levels in raw water at affected wells and report the results to the Source Protection Authority; and c) the Source Protection Authority in partnership with affected municipalities shall assess the information for any increasing trends and advise the Source Protection Committee on the need for new source protection plan policies to be developed to prevent future drinking water Issues.	See Maps 1.2 1.3 1.16	Existing & Future: Initiate within 2 years (T-16)	SAL-1 SAL-2 SAL-3 SAL-4 SAL-5 SAL-6 SAL-7 SAL-8	MON-3 MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SAL-10	**Moderate/ Low Threats** Application of Road Salt	Planning Approval Authority	B	**Land Use Planning** Where the application of road salt would be a moderate or low drinking water threat, the planning approval authority is encouraged to require a salt management plan, which includes a reduction in the future use of salt, as part of a complete application for development which includes new roads and parking lots in any of the following areas: • WHPA-B (VS < 10) (future); or • WHPA-C (future); or • WHPA-D (future); or • WHPA-E (VS ≥ 4.5 and <9) (future); or • HVA (future); or • SGRA (VS ≥ 6) (future). Such plans should include, but not be limited to, mitigation measures regarding design of parking lots, roadways and sidewalks to minimize the need for repeat application of road salt such as reducing ponding in parking areas, directing stormwater discharge outside of vulnerable areas where possible, and provisions to hire certified contractors.	See Chapter 5 of the respective Assessment Report	Future: Immediately (T-9) Amend OPs for conformity within 5 years and ZBLs within 3 years of OP approval (T-8)	N/A	N/A
SAL-11	**Moderate/ Low Threats** Application of Road Salt	MOECC	J	**Specify Action** Where the application of road salt is, or would be, a moderate or low drinking water threat, the Ministry of the Environment and Climate Change in consultation with other provincial ministries and municipal associations should promote best management practices for the application of road salt, to protect sources of municipal drinking water in any of the following areas: • WHPA-B (VS < 10) (existing, future); or • WHPA-C (existing, future); or • WHPA-D (existing, future); or • WHPA-E (VS ≥ 4.5 and <9) (existing, future); or • HVA (existing, future); or • SGRA (VS ≥ 6) (existing, future).	See Chapter 5 of the respective Assessment Report	Existing & Future: Consider within 2 years (T-15)	N/A	N/A

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SAL-12	**Moderate/ Low Threats** Application of Road Salt	Municipality	J	**Specify Action** Where the application of road salt on unassumed roads and private parking lots with greater than 200 square metres is, or would be, a moderate or low drinking water threat in any of the following areas: • WHPA-B (VS < 10) (existing, future); or • WHPA-C (existing, future); or • WHPA-D (existing, future); or • WHPA-E (VS ≥ 4.5 and <9) (existing, future); or • HVA (existing, future); or • SGRA (VS ≥ 6) (existing, future); the municipality is encouraged to: a) require implementation of a salt management plan which includes the goal to minimize salt usage through alternative measures, while maintaining public safety; and b) require the use of trained individuals in the application of road salt (could include technicians and technologists and others responsible for salt management plans, winter maintenance supervisors, patrollers, equipment operators, mechanics, and contract employees).	See Chapter 5 of the respective Assessment Report	Existing & Future: Consider within 2 years (T-15)	N/A	N/A
SAL-13	**Moderate/ Low Threats** Application of Road Salt Handling and Storage of Road Salt	SPA Municipality	J	**Specify Action** Where the application, handling and storage of road salt is, or would be, a moderate or low drinking water threat, the municipality is requested to report the results of its sodium and chloride monitoring conducted under the *Safe Drinking Water Act* and any other monitoring programs annually to the Source Protection Authority. The Source Protection Authority shall assess the information for any increasing trends and advise the Source Protection Committee on the need for new source protection plan policies to be developed to prevent future drinking water Issues, in any of the following areas: • WHPA-B (VS < 10) (existing, future); or • WHPA-C (existing, future); or • WHPA-D (existing, future); or • WHPA-E (VS ≥ 4.5 and <9) (existing, future); or • HVA (existing, future); or • SGRA (VS ≥ 6) (existing, future).	See Chapter 5 of the respective Assessment Report	Existing & Future: Consider within 2 years (T-15)	N/A	N/A

10.8 SNOW

Definition

The storage of snow is a prescribed drinking water threat under O. Reg. 287/07 under the *Clean Water Act, 2006*. Under heavy winter weather conditions, the accumulation of snow inhibits traffic flow on the roads. Snow is able to pick up and hold any contaminants that are on roadways as it is being transferred to another location for storage.

Why is Snow Storage a Threat to Drinking Water Sources?

Snow removed from roads and parking lots can be contaminated with salt, oil, grease and heavy metals from vehicles, litter and airborne pollutants. The activities around snow storage and handling include:

- Snow that is pushed into large piles on a property (e.g., stored in parking lots);
- Snow transported to a central site from other locations (e.g., snow disposal sites); and
- Large snow banks along roads that are close to municipal wellheads or surface water intakes (if accumulation meets area circumstances identified below).

To determine if a road side snow bank meets the area circumstances it will be necessary to multiply the length of the roadway and average width of the snow bank to calculate the size of the area. Snow banks on roads and parking areas either melt on site or are transported elsewhere to be melted or stockpiled. Snow that stays on site must be handled and stored in ways that protect water sources. A number of chemicals from the storage of snow could make their way into drinking water sources. The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following sub-threat activity:

- The storage of snow (see circumstances #1445-1532)

The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following chemicals as potential concerns:

- Chloride
- Copper
- Cyanide
- Lead
- Nitrogen
- Petroleum hydrocarbons F1 to F4
- Sodium
- Zinc

This threat is closely linked to the application, handling and storage of road salt, because snow is able to pick up the salt that has been applied to roads. A reduction in the amount of salt applied to roads and parking areas could reduce the amount of road salt that contaminates snow. The main source of sodium, chloride and cyanide in snow is road salt; the other contaminants are generally from vehicle fluids, exhaust, brake linings, and tire and engine wear. The assessment of the threat from a snow storage area is dependent on its specific location (vulnerability score) to drinking water sources, whether the snow is stored above or below grade, and the size of the storage area. In general, the greater the snow storage area (and therefore the volume of snow stored), the greater the risk to drinking water.

See **Table 10-10** for when and where the storage of snow may be a significant drinking water threat. Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat. These activities may also be significant drinking water threats anywhere within an Issue Contributing Area (ICA) for Sodium or Chloride. If the activity meets the description in Column 2 of the *Tables of Drinking Water Threats* it is a significant drinking water threat irrespective of vulnerability score.

Table 10-10: When/where snow may be a significant drinking water threat

Prescribed Drinking Water Threat	Snow Threat Sub-Category	Area and Vulnerability Score (VS)
The storage of snow	The storage of snow	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9) • Anywhere in an ICA for Sodium or Chloride

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
SNO-1	Storage of Snow	RMO	G	**Part IV, s.57, s.58** Where the storage of snow is, or would be, a significant drinking water threat, the following actions shall be taken: 1) The storage of snow is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS ≥ 9) (future); or • the remainder of an Issue Contributing Area for Sodium or Chloride (future). Notwithstanding the above, emergency snow storage may be permitted outside of WHPA-A as determined by the risk management official and the municipality responsible for snow storage.	See Maps 1.1 - 1.21	Future: Immediately (T-5) Existing: 180 days (T-4)	GEN-1	MON-2
			H	2) The storage of snow is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is significant in any of the following areas: • WHPA-B (VS = 10) (existing); or • WHPA-E (VS ≥ 9) (existing); or • The remainder of an Issue Contributing Area for Sodium or Chloride (existing). Without limiting other requirements, risk management plans shall include appropriate terms and conditions to ensure the storage of snow, and associated runoff, ceases to be a significant drinking water threat.		Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2

10.9 FUEL

Definition

The handling and storage of fuels is a prescribed drinking water threat under O. Reg. 287/07 under the *Clean Water Act, 2006*. Fuels include diesel, kerosene and hydrocarbon fuel (e.g., gasoline). The main activities that pose a threat to drinking water sources includes the handling of liquid fuel in relation to its storage and the storage of fuel. The types of fuel storage facilities include:

- bulk plants or facilities where fuels are manufactured or refined;
- permanent or mobile retail outlets;
- marinas;
- cardlocks/keylocks;
- private outlets (e.g., public works yard, contractor yard);
- farms; and
- furnace oil tanks for home and business heating purposes.

Most of these storage facilities are defined in O. Reg. 213/01 (Fuel Oil) or O. Reg. 217/01 (Liquid Fuels) which are made under the *Technical Standards and Safety Act, 2000* as regulated by the Technical Standards and Safety Authority (TSSA). Facilities where fuel is manufactured or refined are not included in the TSSA Regulations because they are regulated under the *Environmental Protection Act, 1990* and *Ontario Water Resources Act, 1990*.

Why is Fuel a Threat to Drinking Water Sources?

A number of chemicals from the handling and storage of fuel could make their way into drinking water sources. The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following sub-threat activities:

- The handling of fuel (see circumstances #112-191)
- The storage of fuel (see circumstances #1289-1408)

The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following chemicals as potential concerns:

- Benzene, Toluene, Ethylbenzene and Xylene (referred to as BTEX)
- Petroleum hydrocarbons F1 to F4 (referred to as PHC)

BTEX compounds have strong odours and tastes, which generally discourages any accidental consumption of drinking water. However, benzene is a known carcinogen, and some research has suggested that ethylbenzene may be carcinogenic and produce birth defects. BTEX is a non-aqueous phase liquid that does not easily dissolve into water and persists in the environment. It can lead to contamination of groundwater over a long period of time and the BTEX contaminated water can travel over long distances. Petroleum hydrocarbons can cause an array of negative health effects to the reproductive, respiratory, immune and nervous systems and can also harm the kidneys, liver, skin, eyes, and blood. PHCs may also affect the odour, taste, and appearance of water. The assessment of potential threats to drinking water sources from handling and storage of fuel is dependent on the location; the chemicals of concern in the fuel; whether it is stored above, below or partially below grade; the type of facility where it is stored; and the quantity stored.

See **Table 10-11** for when and where the handling and/or storage of fuel may be a significant drinking water threat. Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat.

Table 10-11: When/where fuel may be a significant drinking water threat

Prescribed Drinking Water Threat	Fuel Threat Sub-Category	Area and Vulnerability Score (VS)
The handling and storage of fuel	The handling of fuel	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS = 10)
	The storage of fuel	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS = 10)

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
FUEL-1	Handling and Storage of Fuel (Municipal Wellheads)	MOECC	C	**Prescribed Instrument** Where the handling and storage of fuel at a municipal wellhead is in an area where the activity is, or would be, a significant drinking water threat, drinking water licences under the *Safe Drinking Water Act* shall be reviewed or established to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, a significant drinking water threat in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future).	See Maps 1.1 - 1.21	Future: Immediately (T-3) Existing: 3 years (T-1)	GEN-3	MON-4
FUEL-2	Handling and Storage of Fuel (Aggregate Extraction Sites)	MNRF	C	**Prescribed Instrument** 1) The handling and storage of fuel at an aggregate extraction site shall be prohibited where the activity would be a significant drinking water threat in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS = 10) (future).	See Maps 1.1 - 1.21	Future: Immediately (T-3)	N/A	MON-4
				2) Where the handling and storage of fuel at an aggregate extraction site is in an area where the activity is a significant drinking water threat, the license, site plan or permit that governs the activity shall be reviewed to ensure appropriate terms and conditions are included so that the activity ceases to be a significant drinking water threat in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) (existing); or • WHPA-E (VS = 10) (existing).		Existing: 3 years (T-1)	GEN-3	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
FUEL-3	Handling and Storage of Fuel (Liquid Fuel and Fuel Oil in Non-Residential (includes ICI, Farm), Multi-unit Residential and Small Business in quantities ≥2500 litres above or below grade)	RMO	G	**Part IV, s.57, s.58** Where the handling and storage of liquid fuel and fuel oil at non-residential properties, multi-unit residential properties or small businesses (in quantities ≥ 2500 litres above or below grade) is in an area where the activity is, or would be, a significant drinking water threat, the following actions shall be taken: 1) The handling and storage of fuel is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat would be significant in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS = 10) (future).	See Maps 1.1 - 1.21	Future: Immediately (T-5)	GEN-1	MON-2
			H	2) The handling and storage of fuel is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is significant in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) (existing); or • WHPA-E (VS = 10) (existing). Without limiting other requirements, risk management plans shall incorporate appropriate provisions of Ontario Regulations 213/01 and 217/01 and their codes, best management practices and standards as amended from time to time to ensure the activity ceases to be a significant drinking water threat.		Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2
		SPA	E	3) The Source Protection Authority shall: a) request inspection reports from the Technical Standards and Safety Authority (TSSA) on Private Fuel Outlets (PFOs) in areas where the handling and storage of fuel is a significant threat as requested by the SPA; and b) provide this information to the Risk Management Official to aid in prioritizing the development of the risk management plans for those that pose the greatest risk first; and c) provide to TSSA any data about leaks and other concerns observed, as they relate to TSSA's mandate to enforce O. Reg. 213/217 (as amended) and their corresponding codes, at PFOs from risk management officials or through SPA staff work that would support TSSA's enforcement of regulatory requirements for PFOs.		Existing: 180 days (T-14)	N/A	MON-3

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
FUEL-4	Handling and Storage of Fuel (Liquid Fuel and Fuel Oil in Non-Residential (includes ICI, Farm), Multi-unit Residential, Residential, and Small Business)	Municipality MOECC TSSA	E K	**Education and Outreach** 1) The municipality shall prepare and deliver education and outreach materials and programs to residences and small businesses where the handling and storage of liquid fuel and fuel oil is, or would be, a significant drinking water threat to advise the owner/tenant about the actions to take to ensure that the activity ceases to be, or does not become, a significant drinking water threat, in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future). Where appropriate education and outreach materials prepared by the Ministry of the Environment and Climate Change, the Technical Standards and Safety Authority or other parties are available, the municipality shall deliver those materials.	See Maps 1.1 - 1.21	Existing & Future: Implement within 2 years (T-10)	GEN-8	MON-1 MON-4
		MOECC TSSA MGCS	K	2) The Ministry of the Environment and Climate Change shall collaborate with the Technical Standards and Safety Authority (TSSA) and the Ministry of Government and Consumer Services to: a) provide education and outreach materials for delivery by local municipalities to residences and small businesses about how to prevent spills or leaks from contaminating water and what to do if a spill happens or is suspected; b) include source water safety information into current public education vehicles, such as TSSA's website and seasonal brochures; c) work with fuel industry associations to facilitate distribution of educational materials to fuel suppliers; and d) provide colleges with source water awareness information that can be integrated into fuel technician training programs.				MON-4

10.10 DENSE NON-AQUEOUS PHASE LIQUID (DNAPL) AND ORGANIC SOLVENT

Definition of DNAPLs

The handling and storage of a dense non-aqueous phase liquid (DNAPL) is a prescribed drinking water threat under O. Reg. 287/07 under the *Clean Water Act, 2006*.

A DNAPL is an organic liquid that is denser than water and tends to be insoluble in water, meaning that it does not mix with water. When released into the environment, DNAPLs sink through to the bottom of groundwater aquifers (until they hit bedrock, for example) as well as through surface water bodies. However, after 'sinking', a DNAPL will continue to flow through the ground, at which time it will only then start to mix with water. Water that is contaminated with DNAPLs can spread over a number of kilometres and persist over a long period of time, as DNAPLs can be present in the aquifer for decades or centuries before they have been completely depleted. This accounts for their 'special' status in Source Water Protection evaluation (i.e., the fact that they are considered to be a significant threat in the 5-year time of travel zone or WHPA-C).

DNAPLs have been readily used in vast quantities for decades in industrial and commercial applications such as dry cleaning, cleaning/degreasing solvents, electronics, aerosols, plastics, pesticides, pharmaceuticals, wood preservation, asphalt operations, varnishes and the repair of motor vehicles and equipment. These chemicals can also be found in small quantities in common household products such as adhesives and cleaners. 'Handling' of DNAPLs is not specifically defined in regulations.

Why are DNAPLs a Threat to Drinking Water Sources?

A number of chemicals from the handling and storage of DNAPLs could make their way into drinking water sources. The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following sub-threat activities:

- The handling of a DNAPL (see circumstances #102-111)
- The storage of a DNAPL (see circumstances #1098-1112)

The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identify the specific chemicals that could make their way from DNAPL handling and storage into drinking water sources, which include:

- Dioxane-1,4 (a stabilizer)
- Polycyclic aromatic hydrocarbons (PAHs)
- Tetrachloroethylene (also known as Perchloroethylene or PCE) (dry cleaning solvent, de-grease metals, paint strippers)
- Trichloroethylene (TCE) (industrial applications)
- Vinyl chloride (VC) (polymer production)

There is no minimum quantity for a DNAPL – any amount of a DNAPL is considered a significant drinking water threat in specific vulnerable areas.

See **Table 10-12** for when and where the handling and/or storage of a DNAPL may be a significant drinking water threat. Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat.

Table 10-12: When/where a DNAPL may be a significant drinking water threat

Prescribed Drinking Water Threat	DNAPL Threat Sub-Category	Area and Vulnerability Score (VS)
The handling and storage of a dense non-aqueous phase liquid	The handling of a dense non-aqueous phase liquid	• WHPA-A • WHPA-B • WHPA-C • WHPA-E (VS = 10)
	The storage of a dense non-aqueous phase liquid	• WHPA-A • WHPA-B • WHPA-C • WHPA-E (VS = 10)

Definition of Organic Solvents

The handling and storage of an organic solvent is a prescribed drinking water threat under O. Reg. 287/07 under the *Clean Water Act, 2006*.

Organic solvents are liquid organic compounds (i.e., containing carbon) with the power to dissolve solids, gases, or liquids. Most organic solvents have a lower density than water, which means they are lighter and will sit as a separate layer on top of water. Organic solvents have been readily used in vast quantities for decades in industrial and commercial applications such as paints, cleaning/degreasing, dry cleaning, electronics, aerosols, plastics, pesticides, pharmaceuticals, wood preservation, asphalt operations, varnishes and the repair of motor vehicles and equipment. Organic solvents can also be found in small quantities in common household products such as cleaners.

Why are Organic Solvents a Threat to Drinking Water Sources?

Chemicals from organic solvents could make their way into drinking water sources. The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following sub-threat activity:

- The handling and storage of an organic solvent (see circumstances #1225-1272)

The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identify the following four chemicals that could make their way from the handling and storage of organic solvents into water sources, which include:

- Carbon tetrachloride
- Chloroform
- Dichloromethane
- Pentachlorophenol

The assessment of potential threats to drinking water sources from the handling and storage of organic solvents is dependent on the location; the chemicals of concern in the solvent; where it is stored above, below, or partially below grade; and the quantity stored.

See **Table 10-13** for when and where the handling and/or storage of an organic solvent may be a significant drinking water threat. Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat.

Table 10-13: When/where an organic solvent may be a significant drinking water threat

Prescribed Drinking Water Threat	Organic Solvent Threat Sub-Category	Area and Vulnerability Score (VS)
The handling and storage of an organic solvent	The handling and storage of an organic solvent	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS = 10)

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
DNAP-1	Handling and Storage of a Dense Non-Aqueous Phase Liquid	RMO	G	**Part IV, s.57, s.58** Where the handling and storage of a DNAPL is, or would be, a significant drinking water threat, the following actions shall be taken: 1) The handling and storage of a DNAPL in any quantity (excluding incidental quantities for personal use) is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat would be significant in any of the following areas: • WHPA-A (future); or • WHPA-B (future); or • WHPA-C (future); or • WHPA-E (VS = 10) (future).	See Maps 2.1 - 2.21	Future: Immediately (T-5)	GEN-1	MON-2
			H	2) The handling and storage of a DNAPL in any quantity (excluding incidental quantities for personal use) is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is significant in any of the following areas: • WHPA-A (existing); or • WHPA-B (existing); or • WHPA-C (existing); or • WHPA-E (VS = 10) (existing).		Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
DNAP-2	Handling and Storage of a Dense Non-Aqueous Phase Liquid	Municipality MOECC	E K	**Education and Outreach** The municipality shall deliver education and outreach materials and programs where the handling and storage of a DNAPL is, or would be, a significant drinking water threat, targeted towards: a) an individual for personal use to promote the use of non-toxic products and additional opportunities for participation in household hazardous waste disposal and to advise the owner/tenant about the actions to take to ensure that the activity ceases to be, or does not become, a significant drinking water threat; and b) industrial and commercial users to promote the use of alternatives to DNAPLs (including non-toxic products), pollution prevention approaches, best management practices, and safe disposal; in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (existing, future); or • WHPA-C (existing, future); or • WHPA-E (VS = 10) (existing, future). Where appropriate education and outreach materials prepared by the Ministry of the Environment and Climate Change are available, the municipality shall deliver those materials.	See Maps 2.1 - 2.21	Existing & Future: Implement within 2 years (T-10)	GEN-8	MON-1 MON-4
DNAP-3	**Moderate/ Low Threats** Handling and Storage of a Dense Non-Aqueous Phase Liquid	Municipality	J	**Specify Action** Where the handling and storage of a DNAPL is, or would be, a moderate or low drinking water threat, the municipality is encouraged to specify and promote best management practices for the handling and storage of a DNAPL for Industrial, Commercial and Institutional (ICI) land uses in any of the following areas: • WHPA-D (existing, future); or • WHPA-E (VS ≥ 4.8 and <10) (existing, future); or • HVA (existing, future); or • SGRA (VS = 6) (existing, future).	See Chapter 5 of the respective Assessment Report	Existing & Future: Consider within 2 years (T-15)	N/A	N/A

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
OS-1	Handling and Storage of an Organic Solvent	RMO	G	**Part IV, s.57, s.58** Where the handling and storage of an organic solvent is, or would be, a significant drinking water threat, the following actions shall be taken: 1) The handling and storage of an organic solvent is designated for the purpose of s.57 under the *Clean Water Act*, and is therefore prohibited where the threat would be significant in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS = 10) (future).	See Maps 1.1 - 1.21	Future: Immediately (T-5)	GEN-1	MON-2
			H	2) The handling and storage of an organic solvent is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is significant in any of the following areas: • WHPA-A (existing); or • WHPA-B (VS = 10) (existing); or • WHPA-E (VS = 10) (existing).		Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
OS-2	Handling and Storage of an Organic Solvent	Municipality MOECC	E K	**Education and Outreach** The municipality shall deliver education and outreach materials and programs where the handling and storage of an organic solvent is, or would be, a significant drinking water threat, targeted towards: a) an individual for personal use to promote the use of non-toxic products and additional opportunities for participation in household hazardous waste disposal and to advise the owner/tenant about the actions to take to ensure that the activity ceases to be, or does not become, a significant drinking water threat; and b) industrial and commercial users to promote the use of alternatives to these chemicals (including non-toxic products), pollution prevention approaches, best management practices, and safe disposal; in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future). Where appropriate education and outreach materials prepared by the Ministry of the Environment and Climate Change are available, the municipality shall deliver those materials.	See Maps 1.1 - 1.21	Existing & Future: Implement within 2 years (T-10)	GEN-8	MON-1 MON-4
OS-3	**Moderate/ Low Threats** Handling and Storage of an Organic Solvent	Municipality	J	**Specify Action** Where the handling and storage of an organic solvent is, or would be, a moderate or low drinking water threat, the municipality is encouraged to specify and promote best management practices for the handling and storage of an organic solvent for Industrial, Commercial and Institutional (ICI) land uses in any of the following areas: • WHPA-B (VS < 10) (existing, future); or • WHPA-C (existing, future); or • WHPA-D (existing, future); or • WHPA-E (VS ≥ 4.8 and <10) (existing, future); or • HVA (existing, future); or • SGRA (VS ≥ 6) (existing, future).	See Chapter 5 of the respective Assessment Report	Existing & Future: Consider within 2 years (T-15)	N/A	N/A

10.11 AIRCRAFT DE-ICING

Definition

An aircraft that has frost, ice or snow on any of its critical structures (e.g., wings) is not permitted to attempt take-off under the Canadian Aviation Regulations. During weather conditions that would result in frost, ice or snow, the aircraft may be sprayed with de-icing and/or anti-icing fluids prior to take-off to remove or prevent ice or snow accumulation.

Why are Chemicals that De-ice Aircraft a Threat to Drinking Water Sources?

A number of chemicals used in the de-icing of aircraft, could make their way into drinking water sources. The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following sub-threat activity:

- The management of runoff that contains chemicals used in the de-icing of aircraft (see circumstances #192-199)

The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following chemicals as potential concerns:

- Dioxane-1, 4
- Ethylene Glycol

Ethylene glycol is the active ingredient in de-icing fluids, and dioxane-1, 4 may be used as an additive for its wetting or dispersing properties. These chemicals could threaten the safety of drinking water sources in certain situations. The classification of this activity as a significant, moderate or low drinking water threat is dependent on the classification of the airport as a remote, small, regional or national airport. The activity is classified as a significant threat only for airports that:

i) have passenger traffic as part of the definition of 'regional' or 'national' airport; and

ii) lie within an Intake Protection Zone or Wellhead Protection Area.

There are currently none of these threat activities in the CTC Source Protection Region.

See **Table 10-14** for when and where the management of runoff that contains chemicals used in the de-icing of aircraft may be a significant drinking water threat. Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat.

Table 10-14: When/where the management of runoff that contains chemicals used in the de-icing of aircraft may be a significant drinking water threat

Prescribed Drinking Water Threat	Aircraft De-Icing Threat Sub-Category	Area and Vulnerability Score (VS)
The management of runoff containing chemicals used in the de-icing of aircrafts	The management of runoff containing chemicals used in the de-icing of aircrafts	• WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9)

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
DI-1	Management of runoff that contains chemicals used in the de-icing of aircraft	RMO	H	**Part IV, s.58** The management of runoff that contains chemicals used in the de-icing of aircraft is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat is, or would be significant, in any of the following areas: • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) (existing, future).	See Maps 1.1 - 1.21	Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2
DI-2	Management of runoff that contains chemicals used in the de-icing of aircraft	Municipality	E	**Specify Action** When developing new airports, the municipality shall encourage the federal and other government agencies to locate facilities for the de-icing of aircraft and the management of de-icing fluid runoff outside of areas where the activity would be a significant drinking water threat in any of the following areas: • WHPA-A (future); or • WHPA-B (VS = 10) (future); or • WHPA-E (VS ≥ 9) (future).	See Maps 1.1 - 1.21	Future: Immediately (T-18)	N/A	MON-1

10.12 LAKE ONTARIO THREATS

The Ministry of the Environment under the Director's *Technical Rules* for the preparation of assessment reports provided for the use of an event based modelling approach as a tool to identify activities that could be significant threats to drinking water sources in the Great Lakes. Any modelled activity which exceeds the threshold established by the local Source Protection Committee is deemed to be a significant threat. There is also a requirement to delineate an area known as an event based area (EBA) where the modelling approach supports the identification of the modelled activity as a significant threat within the entire EBA. Each modelled threat activity deemed significant has its own relevant EBA on land and is associated with one or more drinking water intakes. EBAs can exist in IPZ-1, -2 or -3 or a combination of these. Where the EBA extends beyond IPZ-1 and IPZ-2, an IPZ-3 must be created to capture this extent as EBAs must be within an IPZ. Source Protection Committees must develop policies to address these significant drinking water threats from existing or future threat activities within the delineated EBAs.

Where the activity was located near a tributary upstream from Lake Ontario, a separate assessment was done to estimate the travel of the contaminant to the lake. The three-dimensional model was used to simulate the contaminant pathway within Lake Ontario to assess potential concentrations at the intakes. In carrying out the events based modelling, no consideration was made to determine whether there are existing risk management measures in place to manage the threat or to assess the adequacy of any such measures. The SPC did consider the current regulatory controls in place in developing policies to address the threat. Using the events based modelling approach, the storage and handling of fuel and sewage systems have been identified as significant threat activities to Lake Ontario drinking water sources in specific event based areas within the CTC. The CTC SPC received approval from the MOE Director to add two additional local threats relating to Lake Ontario intakes. These activities were also assessed using the events based modelling approach:

- Pipeline transporting petroleum products (containing benzene) crossing tributaries of Lake Ontario; and
- Spill of tritium from a nuclear generating station.

10.12.1 All Threats

The following are general policies that apply to all significant threat activities identified for Lake Ontario intakes in the CTC.

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-G-1	All Lake Ontario Threats	MOECC	K	**Specify Action** (Spill Prevention, Contingency Plans and Emergency Response) To protect drinking water sources from potential spills along highways, shipping lanes and railways, the Ministry of the Environment and Climate Change shall: a) in consultation with the Spills Action Centre and other appropriate bodies, update notification protocols for spills to ensure direct notification of all potentially affected water treatment plant operators and appropriate communication to the public and media; b) in consultation with the Spills Action Centre and the affected municipalities, review the notification protocol for significant threat activities and adjust the protocols as required to ensure that water plant operators are notified appropriately for a given magnitude of spill; c) ensure that information is communicated to all responsible parties (e.g., the originators of the spill, emergency response/clean-up personnel, medical officer of health, municipal water system owner and water system operating authority) who are responding to the spill; d) in consultation with the owners and operators of municipal drinking water systems, require that a Contingency Plan is developed, reviewed and/or updated under the Drinking Water Quality Management Standard to ensure that significant drinking water threats identified in the Assessment Report are included and amend the municipal drinking water license, as required; e) in consultation with the Office of the Fire Marshal and Emergency Management and other appropriate bodies, ensure that testing of the Contingency Plan is carried out within 3 years from the date the Source Protection Plan takes effect, followed by regular (frequency and priority to be determined in consultation) emergency response preparedness exercises to address the significant threats identified; and f) in consultation with appropriate bodies, promote spill prevention and share information about source protection with the public.	EBA See Map 4.1	Existing & Future: Consider within 2 years (T-15) unless otherwise specified in the policy	LO-NGS-1 LO-SEW-1 LO-SEW-2 LO-PIPE-1 LO-FUEL-1	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-G-2	**Significant/ Moderate/ Low Threats** All Lake Ontario Threats	MOECC	J K	**Specify Action** (Lake Ontario Collaborative Group) The Ministry of the Environment and Climate Change will work in partnership with Environment Canada and municipalities responsible for providing water from systems with intakes in the western basin of Lake Ontario to establish and chair a Lake Ontario Collaborative Group (LOCG) focused on the western basin to undertake actions to support the implementation of policies to protect this source of drinking water. Within 1 year from the date the Source Protection Plan takes effect the LOCG should develop and approve Terms of Reference. The Terms of Reference should include but not be limited to defining roles, tasks, and responsibilities of the LOCG partners with respect to: 1) Sharing information about Lake Ontario circulation and water quality monitoring, and where technically feasible: a) install permanent instrumentation (e.g., continuous recording current meters with wireless telephone link to MOECC Environmental Monitoring and Reporting Branch and the LOCG members) to provide real-time monitoring of current speed, direction and temperature throughout the water column for use with a 3-D Hydrodynamic Circulation Model for future forecasting of spills impact assessments and assessing spill prevention strategies; b) ensure that the real-time data are available to municipalities and conservation authorities; and c) undertake annual Lake Ontario nearshore water quality monitoring, and make the data available to municipalities and conservation authorities. 2) Maintaining and further developing a 3-D Hydrodynamic Circulation Model or more advanced models as appropriate, with particular focus to the nearshore of Lake Ontario, to assess activities to determine their potential to be significant drinking water threats, including: a) maintaining specialized modelling expertise to undertake spills scenario modelling; and b) leading the development of typical lake circulation spill base cases to provide tools for quick assessments of spills, in real time, to provide early warning for emergency response and remedial action, including determining the parties to be notified in the event of a spill. (**LO-G-2** continued on next page)	EBA See Map 4.1 IPZ-1, 2 See Map 4.2	See Policy	LO-G-3 LO-SEW-1 LO-SEW-2 LO-NGS-1 LO-PIPE-1 LO-FUEL-1	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-G-2 Cont'd	**Significant/ Moderate/ Low Threats** All Lake Ontario Threats	MOECC	J K	(**LO-G-2** continued from previous page) 3) Using the model as a consistent approach to assess potential drinking water threats from: a) other existing activities which might be a drinking water threat to one or more municipal drinking water system; b) assessing newly proposed activities which may pose a threat to one or more municipal drinking water systems at the proposal stage; and c) assessing impacts of climate change. 4) In the event of a spill use the model to assess and respond to potential water quality impacts at municipal water treatment plant intakes. 5) Sharing environmental monitoring data and using modelling to inform research on topics such as, but not limited to: a) the effectiveness of risk management measures and spill contingency measures; b) cumulative impacts of point and non-point sources of contaminants on nearshore water quality; and c) the effectiveness of Source Protection Plan policies in reducing the risk related to pathogens (not limited to *E. coli*), including identifying the pathogens and the respective densities at different times; assessing the associated risk at intakes due to pathogens in non-disinfected wastewater and other known specific sources of these pathogens; and undertaking quantitative microbial risk assessments, using a structured research and development design (such as based on the protocols established by the US EPA), to assess the threat and adequacy of existing treatment on a plant-by-plant basis.	EBA See Map 4.1 IPZ-1, 2 See Map 4.2	See Policy	LO-G-3 LO-NGS-1 LO-SEW-1 LO-SEW-2 LO-PIPE-1 LO-FUEL-1	MON-4
LO-G-3	**Significant/ Moderate/ Low Threats** All Lake Ontario Threats	Municipality (Peel, Toronto, Durham)	E	**Specify Action** (Lake Ontario Collaborative Group) The municipalities of Peel, Toronto and Durham shall participate as members of the Lake Ontario Collaborative Group (LOCG) and shall undertake tasks (including funding portions) as agreed to in the Terms of Reference established by the LOCG.	EBA See Map 4.1 IPZ-1, 2 See Map 4.2	See Policy	LO-G-2	MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-G-4	**Significant/ Moderate/ Low Threats** All Lake Ontario Threats	MOECC	J K	**Education and Outreach** The Ministry of the Environment and Climate Change is requested to establish an outreach program to discuss the findings and policies arising from the source water protection program with the National Energy Board, Ontario Energy Board, Environment Canada, Health Canada, New York State and US government agencies in order to: a) encourage collaboration on protecting our shared drinking water sources; and b) raise profile of the importance of Lake Ontario as a source of drinking water for Ontario.	See Maps 4.1 and 4.2	Existing & Future: Consider within 2 years (T-15)	N/A	MON-4

10.12.2 Nuclear Generating Station (Local Threat)

Model scenarios were undertaken to determine if a spill of tritium in water from the Pickering or Darlington nuclear power plants would cause deterioration of the quality of raw water for the intakes located in Lake Ontario. The modelled parameter of concern was tritium and the threshold selected by the SPC to identify a significant drinking water threat was the Ontario Drinking Water Standard (ODWS) for tritium (7000 Bacquerels per litre (Bq/L)). The scenario was based on the volume and duration of a 1992 spill event which was a release of 2900 kg of wastewater with a tritium level of 7.9×10^{11} Bq/L and using a series of wind and lake current conditions normally found in the vicinity of these two facilities. These were not extreme weather conditions. The model was used to simulate the contaminant pathway within Lake Ontario and the concentrations at the nearby municipal drinking water intakes to determine if the tritium levels could exceed the current ODWS. More details on this work can be found in each of Assessment Reports for the CTC Source Protection Areas.

Why is a Tritium Spill a Threat to Drinking Water Sources?

Tritium is not removed in the treatment process in municipal drinking water plants. In order to meet the ODWS in the finished water municipal operators may need to shut off pumps at the intake during a spill event to avoid bringing raw water containing elevated tritium levels into the treatment plant.

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-NGS-1	Spill of Tritium From NGS	MOECC	K	**Specify Action** (Risk Mitigation Plan/Risk Reduction Plan) Where event based modelling has shown that a spill from a nuclear generating station would cause the storage and/or use of tritium contaminated heavy water to be a significant drinking water threat, the Ministry of the Environment and Climate Change should, in consultation with the appropriate authorities: a) update spill notification protocols jointly with the Spills Action Centre to ensure direct notification to all potentially affected water treatment plant operators and appropriate communication to the public and media; b) review the reporting thresholds jointly with affected municipalities, including consideration to lower the spill notification threshold to municipalities for significant threat activities and adjust the reporting threshold as required; c) ensure that information is communicated to all responsible parties (e.g., the originators of the spill, emergency response/clean-up personnel, medical officer of health, municipal water owner and water operating authority) who are responding to the spill; d) investigate and evaluate existing Risk Mitigation Plans and/or Risk Reduction Plans and make modifications where necessary, with priority on reducing the likelihood of spills (such as potential additional design and operational best management practices and operational procedures), which would impair drinking water sources; and e) work with the Office of the Fire Marshal and Emergency Management to ensure that testing of the Risk Mitigation Plan and/or Risk Reduction Plan is carried out within 3 years from the date the Source Protection Plan takes effect, followed by regular (frequency and priority to be determined in consultation) emergency response preparedness exercises to address the significant threats identified.	EBA See Map 4.1	Existing & Future: Consider within 2 years (T-15) unless otherwise specified in the policy	LO-G-1 LO-G-2	MON-4

10.12.3 Sewage

Waste Water Treatment Plant (WWTP) Disinfection Failure

Modelling scenarios were undertaken to determine if disinfection failures at waste water treatment plants would cause deterioration of the quality of raw water above the normal range observed at the nearby municipal drinking water intakes. The modelled parameter of concern for these scenarios was *E. coli* and the recreational standard for *E. coli* (100 colony forming units per 100 millilitres (CFU/100 ml)) was selected by the SPC as the threshold to identify a significant drinking water threat. The scenarios were modelled for each waste water treatment plant using a series of wind and lake current conditions normally found in the vicinity of the facilities. These were not extreme weather conditions. The model was used to simulate the contaminant pathway within Lake Ontario and to determine the concentrations of the contaminant at the intakes. More details on this work can be found in each of Assessment Reports for the CTC Source Protection Areas.

Sanitary Trunk Sewer Breaks

A series of scenarios were modelled to determine if a large trunk sewer break along the shoreline of Lake Ontario could result in *E. coli* levels above the normal range observed at the nearby municipal drinking water intakes. Four trunk sewer break locations were modelled within the Toronto and Region Source Protection Area. The modelled parameter of concern for these scenarios was *E. coli* and the recreational standard for *E. coli* (100 colony forming units per 100 millilitres (CFU/100ml)) was selected by the SPC as the threshold to identify a significant drinking water threat. The scenarios were modelled for each waste water treatment plant using a series of wind and lake current conditions normally found in the vicinity of the facilities. These were not extreme weather conditions. The model was used to simulate the contaminant pathway within Lake Ontario and to determine the concentrations of the contaminant at the intakes. More details on this work can be found in each of Assessment Reports for the CTC Source Protection Areas.

Why are Elevated *E. coli* Levels a Threat to Drinking Water Sources?

Water treatment plant operators are required to regularly measure the *E. coli* level in raw water in order to make adjustments to their disinfection process to ensure that all pathogens are killed. The *E. coli* levels normally found in the vicinity of the Lake Ontario intakes in the CTC are below 10 CFU/100 ml. The

Ontario Drinking Water Standard for *E. coli* in drinking water is zero CFU/100 ml. Since *E. coli* are living organisms and the test requires growing a culture for a period of time, monitoring results require approximately 24 hours. It is not an immediate result. When *E. coli* levels increase quickly due to a spill, it can make the proper disinfection treatment process more difficult.

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-SEW-1	The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	MOECC	C	**Prescribed Instrument** (Spill Prevention and Contingency Plans) Where event based modelling has shown that a disinfection interruption at a Waste Water Treatment Plant (WWTP Diffuser) would cause a sewage treatment plant by-pass discharge to surface water or sewage treatment plant effluent to be a significant drinking water threat, the Ministry of the Environment and Climate Change should: a) review, amend or establish Environmental Compliance Approvals to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, significant. Terms and conditions shall include a Spill Prevention and Contingency Plan. Consideration should also be given to the need for a year-round disinfection system and sufficient redundancy in the disinfection system to minimize the length of time that the disinfection system would not be working; b) update spill notification protocols jointly with the Spills Action Centre to ensure direct notification to all potentially affected water treatment plant operators and appropriate communication to the public and media; c) review the notification protocols for significant threat activities and adjust the reporting protocols as required to ensure the water plant operators are notified appropriately for a given magnitude of spill; d) ensure that information is communicated to all responsible parties (e.g., the originators of the spill, emergency response/clean-up personnel, medical officer of health, municipal water owner and water operating authority) who are responding to the spill; and e) work with the Office of the Fire Marshal and Emergency Management to ensure that testing of the Contingency Plan is carried out within 3 years from the date the Source Protection Plan takes effect, followed by regular (frequency and priority to be determined in consultation) emergency response preparedness exercises to address the significant threats identified.	EBA See Map 4.1	Existing: 3 years (T-1) Future: Immediately (T-3) unless otherwise specified in the policy	GEN-3 LO-G-1 LO-G-2	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-SEW-2	Spill from a Sanitary Trunk Sewer Break	MOECC	C	**Prescribed Instrument** (Spill Prevention and Contingency Plans) Where event based modelling has shown that a spill from a sanitary trunk sewer break would be a significant drinking water threat, the Ministry of the Environment and Climate Change shall: a) review, amend or establish Environmental Compliance Approvals to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, significant. Terms and conditions shall include a Spill Prevention and Contingency Plan incorporating a requirement for assessment of erosion and flooding risks in tributaries which could jeopardize the integrity of the sanitary sewer systems identified as a significant threat. Re-inspections shall also be required with the frequency commensurate with the level of risk identified during the initial inspection; b) update spill notification protocols jointly with the Spills Action Centre to ensure direct notification to all potentially affected water treatment plant operators and appropriate communication to the public and media; c) review the notification protocols for significant threat activities and adjust the reporting protocols as required to ensure that water plant operators are notified appropriately for a given magnitude of spill; d) ensure that information is communicated to all responsible parties (e.g., the originators of the spill, emergency response/clean-up personnel, medical officer of health, municipal water owner and water operating authority) who are responding to the spill; e) work with the Office of the Fire Marshal and Emergency Management to ensure that testing of the Contingency Plan is carried out within 3 years from the date the Source Protection Plan takes effect, followed by regular (frequency and priority to be determined in consultation) emergency response preparedness exercises to address the significant threats identified; and f) direct the responsible municipality to undertake a review and report on the depth of ground cover over the pipeline at each crossing including an assessment of erosion, flood risk and the integrity of their infrastructure. MOECC shall consider this information in determining the risk mitigation measures required to ensure that the drinking water threat ceases to be, or does not become, significant. The inspection report should be shared with the Source Protection Authority.	EBA See Map 4.1	Existing: 3 years (T-1) Future: Immediately (T-3) unless otherwise specified in the policy	GEN-3 LO-G-1 LO-G-2	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-SEW-3	**Significant/ Moderate/ Low Threats** All Threats that are Linked to Storm Sewers	MOECC	J K	**Specify Action** (Storm Sewers) Where a spill from a facility could reach an off-site storm sewer such that it would be a significant drinking water threat, or moderate or low drinking water threat as identified in the *Tables of Drinking Water Threats*, the Ministry of the Environment and Climate Change should enact the necessary regulation and/or instrument to require such facility owners to be subject to provincial approvals for Spill Prevention and Risk Mitigation Plans.	EBA See Map 4.1 IPZ-1, 2 See Map 4.2	Future: Consider within 2 years (T-15)	N/A	MON-4

10.12.4 Petroleum Product Spills

Oil/Gas Pipelines (Local Threat)

Modelling scenarios were undertaken to determine if petroleum products spilled from a pipeline rupture as it crosses various rivers (tributaries) would reach any of the drinking water intakes and cause deterioration of the quality of raw water. The contaminant of concern in the petroleum product for these scenarios was benzene and the threshold selected by the SPC to identify a significant threat from benzene was the Ontario Drinking Water Standard (ODWS) of 0.005 milligrams per litre (mg/L). The spill parameters used in the scenario was based on the pipeline spill that occurred near Kalamazoo, Michigan in the summer of 2010, adjusted for the size and product volumes carried in the specific portions of the Ontario pipelines. More details on this work can be found in each of Assessment Reports for the CTC Source Protection Areas.

Petroleum Tank Farm (Fuel)

Two modelling scenarios were undertaken to determine if the release of gasoline containing benzene from bulk petroleum storage and handling facilities in Oakville or North York would reach water treatment plant intakes and cause deterioration of the quality of raw water. One scenario involved was based on a complete loss of product from a tank and the second estimated losses of smaller volumes during loading/unloading from shore to ship at the Oakville location. The modelled contaminant of concern for these scenarios was benzene and the threshold selected by the SPC to identify a significant threat from benzene was the ODWS (0.005 mg/L). More details on this work can be found in each of Assessment Reports for the CTC Source Protection Areas.

Why is a Spill Containing Benzene a Threat to Drinking Water Sources?

Benzene is a hazard to human health and is not removed in the conventional treatment process in municipal drinking water plants. In order to meet the ODWS in the finished water, municipal operators may need to shut off pumps at the intake during a spill event to avoid bringing raw water containing elevated benzene levels into the treatment plant.

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-PIPE-1	Pipelines Transporting Petroleum Product (Containing Benzene) Crossing Tributaries of Lake Ontario	MOECC	K	**Specify Action** (Spill Prevention, Contingency Plans and Emergency Response) Where event based modelling has shown that a spill from a petroleum pipeline system reaching a tributary would be a significant drinking water threat, the Ministry of the Environment and Climate Change should work with facility owners and provincial and federal regulators to develop, review and recommend necessary improvements to existing spill prevention, spill management, risk reduction, and Contingency Plans to ensure the following: a) plans are based on the depth of ground cover at surface water crossings; b) spill response time frames are established; c) responsibilities of first responders are established to ensure a prompt unified regulatory command structure to manage the spill response; d) notification protocols are established jointly with the Spills Action Centre to ensure direct notification to all potentially affected water treatment plant operators and appropriate communication to the public and media; e) notification protocols are established for significant threat activities to ensure the water plant operators are notified appropriately for a given magnitude of spill; f) that information is communicated to all responsible parties (e.g., the originators of the spill, emergency response/clean-up personnel, medical officer of health, municipal water owner and water operating authority) who are responding to the spill; g) that there are appropriate spills response plans for each crossing; h) that appropriate pipeline system failure and shut down measures and policies are included; i) a review is undertaken on the depth of ground cover over the pipeline at each crossing, including an assessment of erosion and flood risk; j) that the facility owner provides assurance concerning the integrity of their infrastructure to prevent spills where these could be a significant drinking water threat; k) that a report on the inspection of the pipeline crossings at each tributary is provided to the Source Protection Authority; l) that the pipeline design and operational best management practices are in place (including potential additional design and operational best management practices); m) that any new or expansions or pipeline replacements are constructed to meet current best design criteria; and n) a provision is included in the Contingency Plan that the facility owner work with the Office of the Fire Marshal and Emergency Management to ensure that testing of the Contingency Plan is carried out within 3 years from the date the Source Protection Plan takes effect, followed by regular (frequency and priority to be determined in consultation) emergency response preparedness exercises to address the significant threats identified.	EBA See Map 4.1	Existing & Future: Consider within 2 years (T-15) unless otherwise specified in the policy	LO-G-1 LO-G-2	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-FUEL-1	Handling and Storage of Fuel (Petroleum Tank Farm Spill)	MOECC	K	**Specify Action** (Spill Prevention and Contingency Plans) Where event based modelling of a spill from a petroleum tank farm has shown that it would be a significant drinking water threat, the Ministry of the Environment and Climate Change will work with applicable regulating authorities (e.g., Ministry of Government and Consumer Services and Technical Standards and Safety Authority) to ensure consideration is given to the following actions related to spill prevention contingency measures: a) investigate and evaluate existing Spills Prevention and Contingency Plans; b) recommend additional measures to reduce the likelihood that a spill from a storage facility would impair drinking water source quality; c) incorporate all applicable provisions of Ontario Regulations 213/01 and 217/01 and their codes as well as other measures to ensure the protection of drinking water sources into a Risk Management Plan for the facility, which may include but not be limited to: i. best management practices ii. site characterization as necessary iii. proof of ability to pay for clean-up of potential contamination iv. the appropriate frequency of inspections d) review existing Environmental Compliance Approvals for discharges to surface water at the identified sites to determine if there are adequate safeguards to protect drinking water sources; e) determine if additional works or procedures are required to reduce the likelihood of contaminants discharging to Lake Ontario in the event of a spill or equipment failure/malfunction; f) ensure provisions for spill notification protocols are established jointly with the Spills Action Centre to ensure direct notification to all potentially affected water treatment plant operators and appropriate communication to the public and media; g) establish notification protocols for significant threat activities to ensure that water plant operators are notified appropriately for a given magnitude of spill; (**LO-FUEL-1** continued on next page)	EBA See Map 4.1	Existing & Future: Consider within 2 years (T-15) unless otherwise specified in the policy	LO-G-1 LO-G-2	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-FUEL-1 Cont'd	Handling and Storage of Fuel (Petroleum Tank Farm Spill)	MOECC	K	(**LO-FUEL-1** continued from previous page) h) ensure that information is communicated to all responsible parties (e.g., the originators of the spill, emergency response/clean-up personnel, medical officer of health, municipal water owner and water operating authority) who are responding to the spill; and i) include a provision that the facility owner work with the Office of the Fire Marshal and Emergency Management to ensure that testing of the Contingency Plan is carried out within 3 years from the date the Source Protection Plan takes effect, followed by regular (frequency and priority to be determined in consultation) emergency response preparedness exercises to address the significant threats identified.	EBA See Map 4.1	Existing & Future: Consider within 2 years (T-15) unless otherwise specified in the policy	LO-G-1 LO-G-2	MON-4
LO-FUEL-2	**Significant/ Moderate/ Low Threats** Handling and Storage of Fuel (Spill from Petroleum Storage Tanks)	MOECC	J K	**Education and Outreach** (Fuel Tank Farms) Where event based modelling has identified activities that are significant drinking water threats or where the *Tables of Drinking Water Threats* (Ontario Regulation 287/07 under the *Clean Water Act, 2006*) identifies moderate or low drinking water threats, the Ministry of the Environment and Climate Change shall, in consultation with appropriate authorities, work with the facility owner to: a) support the investigation and evaluation of existing Spill Prevention and Contingency Plans; and b) identify the need for potential additional design and operational best management practices which would reduce the likelihood that a spill from a storage facility would impair drinking water source quality for tanks located on federal lands.	EBA See Map 4.1 IPZ-1, 2 See Map 4.2	Existing & Future: Consider within 2 years (T-15)	N/A	MON-4

10.13 WATER QUANTITY

All of the drinking water quantity threats identified in the CTC Source Protection Region are threats to groundwater-sourced municipal drinking water supplies. Through a tiered process of water budget analyses as set out in the *Technical Rules* under section 107 of the *Clean Water Act, 2006*, SPCs are required to identify the vulnerable areas, enumerate the activities that pose a drinking water threat, and determine the threat level of the activity. At the final stage (Tier 3 Water Budget analysis), specific vulnerable areas (Wellhead Protection Areas for Quantity called WHPA-Q) are delineated and significant drinking water threat activities are identified. WHPA-Q1 refers to the area where activities that take water without returning it to the same source may be a threat. WHPA-Q2 refers to the area where activities that reduce recharge may be a threat.

The Tier 3 Water Budget for the areas around municipal wells in Orangeville, Mono and Amaranth was completed in early 2011. One WHPA-Q1, -Q2 was assigned a significant risk level which means that existing and future threat activities (see below) in this area can be significant quantity threats. In late 2013 the Tier 3 Water Budget was completed for the Region of Halton's wells serving Acton and Georgetown in the Town of Halton Hills. Two WHPA-Q1, -Q2 vulnerable areas where identified where activities can be significant quantity threats. The WHPA-Q1, -Q2 around the wells serving Acton was assigned a significant risk level. The WHPA-Q1, -Q2 vulnerable area around wells serving Georgetown was assigned a moderate risk level which means that only future activities can be significant quantity threats. In 2013, the Tier 3 Water Budget was completed for the Regions of York and Durham wells in the Toronto and Region Source Protection Area. This WHPA-Q1, -Q2 was assigned a moderate risk level.

Some of the policies outlined below apply only to specific municipalities while the majority apply to the WHPA-Q1, -Q2 vulnerable areas throughout the CTC Source Protection Region.

10.13.1 Taking Water Without Returning It to the Same Aquifer

Definition

Any activity that takes water from an aquifer without returning the water to that aquifer is a threat if it results in a depletion of available supply which could impair the long-term viability of a water system. Municipal and private wells are typical examples of such water taking activities, along with industrial uses such as agriculture irrigation and aggregate extraction below the water table which requires pumping operations. When a Permit to Take Water (PTTW) is required, the province assesses the request to determine if the water taking is sustainable and issues a PTTW with appropriate conditions, to protect the ecosystem and other users. A PTTW is not generally required for private domestic wells as the amount of water taken is generally less than 50,000 litres per day which is the minimum threshold requiring approval.

Why is this Activity a Threat to Drinking Water Sources?

Taking water without returning it to the same aquifer can lead to the depletion of water in the aquifer, which reduces the amount of water available for municipal water supplies. If the available water in the aquifer drops below the safe threshold levels, municipal wells cannot produce enough to supply water demands which can lead to a water shortage.

10.13.2 Recharge Reduction

Definition

When recharge to an aquifer is reduced, the available water supply becomes depleted and can impair the long-term viability of a water system. Typical examples which reduce recharge include existing and planned land use developments, such as residential subdivisions, employment areas and undifferentiated suburban lands. Any conversions of land to an impervious surface, such as paved parking lots, do not let water travel through the ground to recharge the aquifer.

Why is this Activity a Threat to Drinking Water Sources?

Activities that reduce the recharge of an aquifer reduce the water available for municipal water supplies. Impervious surfaces impede the ability for the aquifer to recharge and continue to provide water over the long term.

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
DEM-1	An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body	MOECC	C	**Prescribed Instrument** (Permit to Take Water Policies in WHPA-Q1 with Significant Water Quantity Threats) Within the Tier 3 Water Budget WHPA-Q1 where a water taking is or would be a significant water quantity threat, the Ministry of the Environment and Climate Change shall ensure each water taking threat ceases to be, or does not become significant, through actions the Director considers appropriate on a case by case basis, such as: 1) Reviewing all existing Permits to Take Water, located within WHPA-Q1 with a significant risk level, in consultation with other Ministries (as required), the affected municipality, relevant conservation authorities, and permit holders, and amend the permits where necessary to ensure that: a) municipal water supply requirements for the allocated and planned quantity (per the current approved population and employment projections of the most recent Growth Plan for the Greater Golden Horseshoe) will be met on a sustainable basis; and b) the hydrological integrity of municipal wells in the vulnerable areas will be maintained. 2) Issuing Permits to Take Water for new or increased takings, located within WHPA-Q1 with moderate or significant risk levels, only if it can be satisfactorily demonstrated, using the findings of the most recently approved Tier 3 Water Budget Model and other available data, where appropriate, that the taking: a) can be maintained on a sustainable basis; b) will not affect the ability of the aquifer to meet the municipal water supply requirements for the current and planned service capacity; and c) will ensure the hydrological integrity of municipal wells will be maintained.	Existing & Future: WHPA-Q1 with a significant risk level See Maps 3.1 3.2 Future: WHPA-Q1 with a moderate risk level See Maps 3.3 3.4	Future: Immediately (T-3) Existing: 3 years (T-1)	GEN-3 DEM-2 DEM-8	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
DEM-2	An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body	Planning Approval Authority	A	**Land Use Planning** (Planning Policies in WHPA-Q1 with Significant Water Quantity Threats) Within the Tier 3 Water Budget WHPA-Q1 where a water taking is or would be a significant water quantity threat, the relevant Planning Approval Authority shall ensure water taking does not become a significant drinking water threat by: 1) Only permitting new development if the new development does not require a new or amended Permit to Take Water; 2) Only providing final approval for new development that requires a new or amended Permit to Take Water once the Ministry of the Environment and Climate Change has determined that the proposed taking will not become a significant water quantity threat; 3) Only approving settlement area expansions within WHPA-Q1 as part of a municipal comprehensive review where the applicable provincial planning criteria have been met and the following has been demonstrated: a) the aquifer has sufficient capacity to sustainably provide municipal water services to the expanded settlement area; b) the expansion will not adversely impact the aquifers ability to meet the municipal water supply requirements for current and planned service capacity, for other permitted takings, or for wastewater receiving bodies; and c) the hydrological integrity of municipal wells will be maintained.	Existing & Future: WHPA-Q1 with a significant risk level See Maps 3.1 3.2 Future: WHPA-Q1 with a moderate risk level See Maps 3.3 3.4	Future: Immediately (T-9) Amend OPs for conformity within 5 years and ZBLs within 3 years of OP approval (T-8)	DEM-1 DEM-9	MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
DEM-3	An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body	MMAH MOECC	K	**Specify Action** (Growth Management/Planning Ministries to Review Growth in WHPA-Q1 with Significant Water Quantity Threats) Within a Tier 3 Water Budget WHPA-Q1 identified as having significant water quantity threats, the Provincial Ministries specified below should undertake the following to ensure the provision and distribution of water supply for municipal population and employment growth forecasts does not create a new, or increase an existing, significant water quantity threat: 1) The Ministry of Municipal Affairs and Housing in consultation with the Ministry of the Environment and Climate Change and any affected municipalities should use the Tier 3 Water Budget information and other available data to ensure that municipal Official Plan growth forecasts and distributions will not result in creating or worsening a significant water quantity threat, given water quantity constraints identified in Tier 3 Water Budget model areas; and 2) The Ministry of Municipal Affairs and Housing should take into consideration water quantity constraints identified through Tier 3 Water Budgets, and other available data, during its review of the population forecasts contained in the Growth Plan for the Greater Golden Horseshoe, in consultation with relevant municipalities.	Existing & Future: WHPA-Q1 with a significant risk level See Maps 3.1 3.2 Future: WHPA-Q1 with a moderate risk level See Maps 3.3 3.4	Existing & Future: Consider within 2 years (T-15)	DEM-8	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
DEM-4	An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body	Municipality	E	**Specify Action** (Municipal Water Conservation Plans) Municipalities responsible for the production, treatment, and storage of water, who have a municipal well and/or whose residents are served by a municipal water supply within the Tier 3 Water Budget WHPA-Q1 shall develop and/or update Water Conservation Plans to ensure they are an effective tool to support sustainable water quantity by reducing consumption and therefore the demand for water.	Existing & Future: WHPA-Q1 with a significant risk level See Maps 3.1 3.2 Future: WHPA-Q1 with a moderate risk level See Maps 3.3 3.4	Existing & Future: Initiate within 2 years (T-16)	N/A	MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
DEM-5	An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body	Municipality	E	**Education and Outreach** Municipalities responsible for the production, treatment, and storage of water and/or with jurisdictional lands within a Tier 3 Water Budget WHPA-Q1 identified as having significant water quantity threats shall undertake the following education and outreach initiatives to help ensure water supplies are protected and increase the effectiveness of water conservation efforts in their jurisdictions to reduce consumption and demand by: 1) Implementing education and outreach programs to ensure that property owners and businesses are aware of: a) their role in protecting water supplies and conserving water; b) actions that can be taken to protect water supplies and use less water; and c) financial incentive programs and projects that may be eligible for funding under future funding of the Ontario Drinking Water Stewardship Program; or	Existing & Future: WHPA-Q1 with a significant risk level See Maps 3.1 3.2	Existing & Future: Implement within 2 years (T-10)	GEN-8	MON-1
				2) Reviewing any similar programs that may already exist and update them where necessary to ensure their effectiveness.				
		MOECC	K	3) The Ministry of the Environment and Climate Change should provide municipalities with a list of appropriate education and outreach materials that provide information and guide actions that can be taken to reduce the usage of drinking water for delivery by the municipality.				MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
DEM-6	An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body	Municipality	E	**Specify Action** (Joint Municipal Water Management) The Dufferin County municipalities that share a water source within a Tier 3 Water Budget WHPA-Q1 identified as having significant water quantity threats shall develop a Joint Municipal Water Supply Management Model, and implement within 3 years from the date the Source Protection Plan takes effect. This management model shall facilitate the planning and management of water supply sources to ensure sustainability of a long term water supply in each municipality and ensure that water quality and quantity is maintained or improved such that activities cease to be, or do not become, significant drinking water threats in the WHPA-Q1. The municipalities shall report to the Ministry of the Environment and Climate Change and the Ministry of Municipal Affairs and Housing on the options and proposed management model within 1 year from the date the Source Protection Plan takes effect.	WHPA-Q1 with a significant risk level (Orangeville, Amaranth, East Garafraxa and Mono) See Map 3.1	See Policy	DEM-7	MON-1
DEM-7	An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body	MOECC MMAH	K	**Specify Action** (Province to Support Joint Municipal Water Management System or Authority) The Ministry of the Environment and Climate Change, in collaboration with the Ministry of Municipal Affairs and Housing and other affected provincial ministries and agencies, as required, should initiate meetings with the Dufferin County municipalities that share a water source within a Tier 3 Water Budget WHPA-Q1 identified as having significant water quality and quantity threats, to support the municipalities in developing mutually beneficial solutions to address water quantity and quality constraints within 1 year from the date the Source Protection Plan takes effect. And further, the Ministry of the Environment and Climate Change should provide technical support to the municipalities.	WHPA-Q1 with a significant risk level (Orangeville, Amaranth, East Garafraxa and Mono) See Map 3.1	See Policy	DEM-6	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
DEM-8	An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body	MOECC	K	**Specify Action** (MOECC to Adopt and Fund Maintenance of the Tier 3 Water Budget Model) The Ministry of the Environment and Climate Change should adopt and fund a Tier 3 Water Budget Model in a WHPA-Q1 identified as having a moderate or significant risk level and undertake the following to ensure it is maintained as the primary model to review existing and future Permits to Take Water, to allow municipalities and other provincial ministries (i.e., Ministry of Municipal Affairs and Housing and Ministry of Infrastructure) to evaluate growth projections and distributions, and to facilitate the review of planning applications by municipalities, where necessary, to ensure that these activities cease to be, or do not become, significant drinking water threats: 1) Through the Permit to Take Water program, require municipal takers in WHPA-Q1 to monitor water quantity and supply data on a regular basis to assist in the upkeep of the model to determine any increase or reduction in significant water quantity threats; 2) Use the model with the most up-to-date data as an analysis and decision making tool; and 3) When necessary, contribute to funding for new continuous flow gauging stations in key surface water features and enhance conservation authorities existing Hydrometric Network in WHPA-Q1 to monitor long term trends in surface water quantity, study impacts of urbanization and climate change on aquifer recharge, and facilitate calibration of the model.	Existing & Future: WHPA-Q1 with a significant risk level See Maps 3.1 3.2 Future: WHPA-Q1 with a moderate risk level See Maps 3.3 3.4	Existing & Future: Consider within 2 years (T-15)	DEM-1 DEM-3	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
DEM-9	An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body	Municipality	E	**Specify Action** (Identifying Additional Water Supplies) Municipalities located within a Tier 3 Water Budget WHPA-Q1 with a significant risk level are encouraged to identify additional water sources outside of the WHPA-Q1 to reduce demand from well systems which have been identified with significant water quantity stress and to report to the Source Protection Authority on their progress within 3 years from the date the Source Protection Plan takes effect.	WHPA-Q1 with a significant risk level See Maps 3.1 3.2	See Policy	DEM-2	MON-1
DEM-10	An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body	Municipality	E	**Specify Action** York Region shall develop and implement a drought management plan using the Tier 3 water quantity risk assessment findings and modelling tool to prevent consumptive demand from becoming significant.	Future: WHPA-Q1 with a moderate risk level See Map 3.4	Existing & Future: Immediately (T-18)	N/A	MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
REC-1	An activity that reduces recharge to an aquifer	Planning Approval Authority	A	**Land Use Planning** (Planning Policies for Protecting Groundwater Recharge) For applications under the Planning Act within the Tier 3 Water Budget WHPA-Q2 identified as having significant water quantity threats, the relevant Planning Approval Authority shall ensure recharge reduction does not become a significant drinking water threat by: 1) Requiring new development for lands zoned Low Density Residential (excluding subdivisions) or zoned Agricultural to implement best management practices such as Low Impact Development (LID) with the goal to maintain predevelopment recharge. 2) Requiring that all site plan (excluding an application for one single family dwelling) and subdivision applications for new residential, commercial, industrial and institutional uses provide a water balance assessment for the proposed development to the satisfaction of the Planning Approval Authority which addresses each of the following requirements: a) maintain pre-development recharge to the greatest extent feasible through best management practices such as LID, minimizing impervious surfaces, and lot level infiltration; b) where pre-development recharge cannot be maintained on site, implement and maximize off-site recharge enhancement (within the same WHPA-Q2) to compensate for any predicted loss of recharge from the development; and c) for new development (excluding a minor variance) within the WHPA-Q2 and within an Issue Contributing Area (for sodium, chloride or nitrates), the water balance assessment shall consider water quality when recommending best management practices and address how recharge will be maintained and water quality will be protected. 3) Only approving settlement area expansions as part of a municipal comprehensive review where it has been demonstrated that recharge functions will be maintained on lands designated Significant Groundwater Recharge Areas within WHPA-Q2. 4) Amending municipal planning documents to reference most current Assessment Reports in regards to the Significant Groundwater Recharge Areas within WHPA-Q2.	Future: WHPA-Q2 with a significant risk level See Maps 3.1 3.2 Future: WHPA-Q2 with a moderate risk level See Maps 3.3 3.4	Future: Immediately (T-9) Amend OPs for conformity within 5 years and ZBLs within 3 years of OP approval (T-8)	N/A	MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
REC-2	An activity that reduces recharge to an aquifer	RMO	H	**Part IV, s.58** When a Building Permit that is not subject to a site specific Planning Act application (excluding lands zoned Low Density Residential) is located within a Tier 3 Water Budget WHPA-Q2 identified as having a significant risk level, an activity that reduces the recharge to an aquifer is designated for the purpose of s.58 under the *Clean Water Act*, requiring risk management plans, where the threat would be significant. Without limiting other requirements, risk management plans shall require implementation of downspout disconnections and other best management practices to increase infiltration of clean water whenever modifications, additions or renovations are undertaken at existing properties or in new developments, with the goal of restoring or maintaining pre-development recharge.	Future: WHPA-Q2 with a significant risk level See Maps 3.1 3.2	Future: Immediately (T-7)	GEN-1 GEN-2	MON-2
REC-3	An activity that reduces recharge to an aquifer	Municipality	E	**Specify Action** 1) Within a Tier 3 Water Budget WHPA-Q2 with a significant risk level, the municipality shall develop and implement actions to be taken and an implementation schedule, to ensure that an activity which reduces aquifer recharge ceases to be a significant water quantity threat; such actions may include: a) reviewing options to maximize aquifer recharge; b) delivering an education and outreach program to inform property owners about actions that can be taken to protect aquifer recharge (e.g., site grading, rain gardens). The program may include incentives (such as rebates) to encourage best management practices; c) requiring the use of Low Impact Development in new development or retrofits; and d) passing a by-law to require downspout disconnection.	Existing: WHPA-Q2 with a significant risk level See Maps 3.1 3.2	Existing: Implement within 2 years (T-17)	GEN-8	MON-1
		MOECC	K	2) The Ministry of the Environment and Climate Change should provide municipalities with a list of appropriate education and outreach materials that provide information and guide actions that can be taken to protect aquifer recharge for delivery by the municipality.				MON-4

10.14 MONITORING OF POLICY IMPLEMENTATION

Policy ID	Implementing Body	Legal Effect	Monitoring Policy
MON-1	Municipality	F	The municipality or planning approval authority shall, by February 1 of each year, prepare and submit a report equivalent to s. 65 of O. Reg. 287/07 under the *Clean Water Act, 2006* to the Source Protection Authority on the actions taken in the previous calendar year to achieve the outcomes of the source protection policy. Where applicable, municipal planning authorities shall provide a copy of the notice of adoption of amendments to official plans and/or zoning by laws. Reporting shall include information related to the effectiveness of the policies in ensuring a threat ceases to be, or does not become significant, and any actions required to respond to a drinking water threat during the reporting period.
MON-2	RMO	F	The Risk Management Official shall, by February 1 of each year, undertake the reporting requirements specified in s. 65 of O. Reg. 287/07 under the *Clean Water Act*, *2006* on the actions taken in the previous calendar year to achieve the outcomes of the source protection policy. Reporting shall include information related to the effectiveness of the policies in ensuring a threat ceases to be, or does not become significant, and any actions required to respond to a drinking water threat during the reporting period.
MON-3	SPA	F	The source protection authority shall include in the annual report pursuant to s. 46 under the *Clean Water Act, 2006*, documentation on the risk reduction efforts they administered throughout the year. Reporting shall include information related to the effectiveness of the policies in ensuring a threat ceases to be, or does not become significant, and any actions required to respond to a drinking water threat during the reporting period.
MON-4	Provincial Ministry	F	The provincial ministry shall, by February 1 of each year, prepare and submit a report to the Source Protection Authority on the actions taken in the previous calendar year to achieve the outcomes of the source protection policy. Reporting shall include information related to the effectiveness of the policies in ensuring a threat ceases to be, or does not become significant, and any actions required to respond to a drinking water threat during the reporting period.

11 LIST OF ACRONYMS

ASM	Agricultural Source Material
BCA	*Building Code Act, 1992*
BMP	Best Management Practices
Bq	Bacquerel
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
CA	Conservation Authority
C of A	Certificate of Approval (now called an Environmental Compliance Approval)
CFU	Colony Forming Units
CLOSPA	Central Lake Ontario Source Protection Area
CTC	Credit Valley-Toronto and Region-Central Lake Ontario
CVSPA	Credit Valley Source Protection Area
CWA	*Clean Water Act, 2006*
DNAPL	Dense Non-Aqueous Phase Liquid
EBA	Event Based Area
ECA	Environmental Compliance Approval (formerly called Certificate of Approval)
EPA	*Environmental Protection Act, 1990*
GUDI	Groundwater Under the Direct Influence of Surface Water
HVA	Highly Vulnerable Aquifer
ICA	Issue Contributing Area
IPZ	Intake Protection Zone
LID	Low Impact Development
LOC	Lake Ontario Collaborative
LOCG	Lake Ontario Collaborative Group
LUP	Land Use Planning
MGCS	Ministry of Government and Consumer Services
MMAH	Ministry of Municipal Affairs and Housing
MNRF	Ministry of Natural Resources and Forestry
MOE	Ministry of the Environment (prior to name change in June 2014)

MOECC	Ministry of the Environment and Climate Change
MOI	Ministry of Infrastructure
MTO	Ministry of Transportation
NASM	Non-Agricultural Source Material
NEC	Niagara Escarpment Commission
NEP	Niagara Escarpment Plan
NEPDA	*Niagara Escarpment Planning and Development Act*
NGS	Nuclear Generating Station
NMA	*Nutrient Management Act*
NMP	Nutrient Management Plan
NMS	Nutrient Management Strategy
ODWO	Ontario Drinking Water Objective
ODWS	Ontario Drinking Water Standard
OMAFRA	Ontario Ministry of Agriculture, Food and Rural Affairs
OMB	Ontario Municipal Board
OP	Official Plan
OWRA	*Ontario Water Resources Act, 1990*
PCB	Polychlorinated Biphenyl
PFO	Private Fuel Outlet
PHC	Petroleum Hydrocarbons
PTTW	Permit to Take Water
RMI	Risk Management Inspector
RMO	Risk Management Official
RMP	Risk Management Plan
SGBLS	South Georgian Bay Lake Simcoe
SGRA	Significant Groundwater Recharge Area
SPA	Source Protection Authority
SPC	Source Protection Committee
SPR	Source Protection Region
STP	Sewage Treatment Plant

SWM	Stormwater Management
SWP	Source Water Protection
TCC	Trent Conservation Coalition
TOT	Time of Travel
TRSPA	Toronto and Region Source Protection Area
TSSA	Technical Standards and Safety Authority
VS	Vulnerability Score
WHPA	Wellhead Protection Area
WPCP	Water Pollution Control Plan
WTP	Water Treatment Plant
WWTP	Waste Water Treatment Plant
ZBL	Zoning By-Law

12 GLOSSARY OF TERMS

Abandoned Well

A well that is deserted because it is dry, contains unpotable water, discontinued before completion, not being properly maintained, constructed poorly, or determined that natural gas may pose a hazard.

Activity

One or a series of related processes, natural or anthropogenic that occurs within a geographical area and may be related to a particular land use.

Aquifer

An underground saturated permeable geological formation that is capable of transmitting water in sufficient quantities under ordinary hydraulic gradients to serve as a source of groundwater supply.

Chemical

A substance used in conjunction with, or associated with, a land use activity or a particular entity, and with the potential to adversely affect water quality.

Condition

A drinking water condition refers to contamination that exists already and is associated with past activities.

Consumptive Water Demand

The net amount of water that is taken from a source and not returned locally to the same source in a reasonable time.

Contaminant of Concern

A chemical or pathogen that is, or may be, discharged from a drinking water threat activity that could contaminate a drinking water source.

Designated System

A drinking water system that is included in a Terms of Reference for developing source protection plans, pursuant to resolution passed by a municipal council under subsection 8(3) of the *Clean Water Act, 2006* or added by the Minister.

Development (as defined by the Provincial Policy Statement, 2014)

Means the creation of a new lot, a change in land use, or the construction of buildings and structures requiring approval under the *Planning Act*, but does not include:

a) activities that create or maintain *infrastructure* authorized under an environmental assessment process;

b) works subject to the *Drainage Act*; or

c) underground or surface mining of *minerals* or advanced exploration on mining lands in *significant areas of mineral potential* in Ecoregion 5E, where advanced exploration has the same meaning as under the *Mining Act*.

Drinking Water Issue

A substantiated (through scientific means) condition relating to the quality of water that interferes or is anticipated to soon interfere with the use of a drinking water source by a municipal residential system or designated system.

Drinking Water Threat

An existing activity, possible future activity or existing condition that results from a past activity that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water.

Environmental Compliance Approval (ECA)

A new approval that has replaced the Certificate of Approval (C of A) and the section 53 Ontario Water Resources Act (OWRA) approvals. This change came into effect October 31, 2011.

Event

The occurrence of an incident (isolated or frequent) with the potential to promote the introduction of a threat into the environment. An event can be intentional as in the case of licensed discharge or accidental as in the case of a spill.

Event Based Area (EBA)

See Chapters 7.1.3 and 10.12 for more information.

Existing Drinking Water Source

The aquifer or surface water body from which municipal residential systems or other designated systems currently obtain their drinking water. This includes the aquifer or surface water body from which back-up wells or intakes for municipal residential systems or other designated systems obtain their drinking water when their current source is unavailable or in the event of an emergency.

Groundwater

Subsurface water that occurs beneath the water table in soils and geological formations that are fully saturated.

Groundwater Recharge Area

The area where an aquifer is replenished from (a) natural processes, such as the infiltration of rainfall and snowmelt and the seepage of surface water from lakes, streams and wetlands, (b) from human interventions, such as the use of storm water management systems, and (c) whose recharge rate exceeds a threshold specified in the regulations. The Director's rules will specify the acceptable methodologies to determine groundwater recharge rates i.e., what qualifies as significant.

Hazard

In the context of this guidance, a hazard is equivalent to a contaminant and pathogen threat.

Hazard Rating

The numeric value which represents the relative potential for a contaminant of concern to impact drinking water sources at concentrations significant enough to cause human illness. This numeric value is determined for each contaminant of concern in the Threats Inventory and Issues Evaluation of the Assessment Report.

Highly Vulnerable Aquifer (HVA)

An aquifer that can be easily changed or affected by contamination from both human activities and natural processes as a result of (a) its intrinsic susceptibility, as a function of the thickness and permeability of overlaying layers, or (b) by preferential pathways to the aquifer. The Director's rules will permit the use of various methods, such as the Intrinsic Susceptibility Index (ISI), to determine those aquifers that are highly vulnerable. Ontario's ISI defines a highly vulnerable aquifer as having a value of less than 30. An ISI is a numerical indicator that helps to indicate where contamination of groundwater is more or less likely to occur as a result of surface contamination due to natural hydrogeological

features. The ISI is the most commonly used method of index mapping and was the prescribed method set out in the provincial 2001/2002 Groundwater Studies.

Hydrogeology

Hydrogeology is the study of the movement and interactions of groundwater in geological materials.

Hydrologic Integrity

The condition of ecosystems in which hydrological features and hydrological functions are unimpaired by stresses from human activity.

Impervious

Not allowing something to pass through or penetrate. Impervious surfaces are mainly artificial structures such as paved roads, sidewalks, driveways and parking lots.

Incidental Quantities for Personal Use

Means standard size containers that are used for personal or domestic activities. This will exclude larger quantities used in activities, such as hobbies, businesses/home businesses.

Intake Protection Zone (IPZ)

The contiguous area of land and water immediately surrounding a surface water intake, which includes:

- the distance from the intake;
- a minimum travel time of the water associated with the intake of a municipal residential system or other designated system, based on the minimum response time for the water treatment plant operator to respond to adverse conditions or an emergency;
- the remaining watershed area upstream of the minimum travel time area (also referred to as the Total Water Contributing Area) – applicable to inland water courses and inland lakes only.

Intrinsic Vulnerability

The potential for the movement of a contaminant(s) through the subsurface based on the properties of natural geological materials.

Issues Contributing Area (ICA)

The area of land where drinking water threats may contribute to a known drinking water issue. For example, if Trichloroethylene (TCE) is determined to be an Issue, the area from which the source of TCE is determined is called the Issues Contributing Area.

Land Use

A particular use of space at or near the earth's surface with associated activities, substances and events related to a particular land use designation.

Local Area

Specific area around a wellhead or surface water intake as determined through analysis. This area must encompass a drinking water system and surrounding potential quantity threats.

Low Density Residential

Equivalent to one single family dwelling. Municipalities will be required to determine what the equivalent terminology is in their respective Official Plans and Zoning By-Laws.

Model

An assembly of concepts in the form of mathematical equations or statistical terms that portrays a behaviour of an object, process or natural phenomenon

Municipal Residential System

All municipal drinking-water systems that serve or are planned to serve a major residential development (i.e., six or more private residencies).

Municipality

Refers to the appropriate municipality responsible for the actions described in the policies. Pursuant to the *Municipal Act, 2001*, in a two-tier municipal structure, different municipalities are assigned responsibilities for a number of municipal services. Likewise the *Planning Act,* and *Building Code Act* assign responsibilities to the upper and lower-tier municipality, which will provide guidance as to which municipality is responsible for the actions. In some cases, both tiers will take complementary actions, for example, the upper-tier may amend the Official Plan to include vulnerable areas and policies and the lower-tier will pass zoning by-laws to implement the Official Plan policies. While the municipality responsible for water treatment will typically be the lead implementing body, it is expected that upper and lower-tier regional municipalities will work together to develop their implementation roles and expectations. Note that under the *Clean Water Act, 2006*, only the municipality responsible for passing by-laws respecting water production, treatment and storage under the *Municipal Act, 2001* is responsible for establishing the Risk Management Office and the powers under Part IV as well as

enforcement. It is possible to enter into agreement with another municipality to jointly enforce or to transfer enforcement responsibilities.

Nutrient Unit

Nutrient units are calculated based on the number of livestock housed on a farm unit. One (1) nutrient unit is the equivalent of 43 kilograms of nitrogen or 55 kilograms of phosphorus fertilizer. Please consult the local source protection authority to obtain information on the above calculations for a specific property.

Parcel Level

A parcel is a conveyable property, in accordance with the provisions of the *Land Titles Act*. The parcel is the smallest geographic scale at which risk assessment and risk management are conducted.

Pathogen

A disease causing organism.

Provincial Tables of Circumstances

Were developed by the province to determine if an activity is or would be a significant, moderate or low drinking water threat in a specific area to ensure consistency across the province. The tables list the various scores for which there are provincially prescribed threats and circumstances within the *Tables of Drinking Water Threats*.

Raw Water

Water that is in a drinking-water system or in plumbing that has not been treated in accordance with, (a) the prescribed standards and requirements that apply to the system, or (b) such additional treatment requirements that are imposed by the license or approval for the system.

Recharge

Recharge is the process by which water moves from the ground surface, through the unsaturated zone, to arrive at the water table.

Reserve Amounts

Minimum flows in streams that are required for the maintenance of the ecology of the ecosystem.

Risk

The likelihood of a drinking water threat (a) rendering an existing or planned drinking water source impaired, unusable or unsustainable, or (b) compromising the effectiveness of a drinking water treatment process, resulting in the potential for adverse human health effects.

Risk Management Inspector (RMI)

The Risk Management Inspector is responsible for enforcing Part IV powers, similar to the way in which a building inspector enforces the provisions of the Building Code Act. An individual cannot be appointed as a Risk Management Inspector unless they have the qualifications prescribed by the regulation, which state that the individual completes a ministry-approved training course.

Risk Management Official (RMO)

The Risk Management Official is responsible for preparing, negotiating and establishing risk management plans and evaluating risk assessments under Part IV of the Clean Water Act, 2006, similar to the way in which building officials make decisions on building permits. An individual cannot be appointed as a Risk Management Official unless they have the qualifications prescribed by the regulations, which state that the individual completes a ministry-approved training course.

Sensitivity Area

That portion of a defined vulnerable area that has been assigned a vulnerability score.

Sub-Watershed

An area that is drained by an individual tributary into the main watercourse of a watershed.

Surface Water

Water that is present on the earth's surface and may occur as rivers, lakes, wetlands, ponds, etc.

Tier 1, 2, and 3 Water Budgets

Numerical analysis at the watershed/subwatershed (Tier 1 and 2) or local area (Tier 3) level considering existing and anticipated amounts or water use within the watershed, as well as quantitative flow between the groundwater and surface water systems.

Time of Travel (TOT)

An estimate of the time required for a particle of water to move in the saturated zone from a specific point in an aquifer into the well intake.

Transport Pathway

Transport pathways are features or activities occurring at the surface that disturb the surface above the aquifer, or which artificially enhances flow to an aquifer. The presence of a transport pathway can increase the vulnerability rate of an area.

Unassumed

Publicly accessible road allowances owned by the municipality which usually do not meet the minimum standards that the municipality considers acceptable for assumption, thus the municipality absolves itself of liability in connection to these roads.

Vulnerable Area

An area referring to a groundwater recharge area, a highly vulnerable aquifer, and a surface water intake protection zone or wellhead protection area.

Water Intake Reliability

The probability that a wellhead or surface water intake can meet demand.

Water Reserve

A proportion of surface water flow that must be sustained to support anthropogenic or ecological requirements.

Water Source

An aquifer or surface water body being used to supply drinking water.

Water Source Supply

The total amount of water flowing through a surface water or groundwater system.

Water Supply System

The group of surface water intakes and/or groundwater wells that pump water to supply a municipal water distribution system.

Watershed

A watershed is the area of land where all of the water that is under it or drains off of it goes into the same place. Its boundaries are defined by ridges of high land.

Wellhead Protection Area (WHPA)

The surface and subsurface area surrounding a water well or well field that supplies a municipal residential system or other designated system through which contaminants are reasonably likely to move so as to eventually reach the water well or well.

Wellhead Protection Area-Q1 (WHPA-Q1)

An area delineated through a Tier 3 Water Budget and Water Quantity Risk Assessment as being the combined area that is the cone of influence of the well and the whole of the cones of influence of all other wells that interest that area.

Wellhead Protection Area-Q2 (WHPA-Q2)

An area delineated through a Tier 3 Water Budget and Water Quantity Risk Assessment as being the area that includes the WHPA-Q1 and any area where a future reduction in recharge would significantly impact that area.

APPENDIX A: ASSESSMENT REPORT

As per Section 22 (2) of the *Clean Water Act*, *2006*, the Approved Assessment Report is available for review online at www.ctcswp.ca or at the offices of Credit Valley Conservation Authority, Toronto and Region Conservation Authority and Central Lake Ontario Conservation Authority.

APPENDIX B: APPLICABLE LEGAL PROVISIONS OF POLICIES

LIST A				
Title:	Significant threat policies that affect decisions under the Planning Act and Condominium Act, 1998			
Preamble:	• By including a significant threat policy in this list, decisions under the Planning Act and Condominium Act, 1998 will be required to conform with the listed policy (Clause 39 (1) (a) of the CWA). • Official plans and zoning by-laws will be required to be amended and brought into conformity with the listed significant threat policy by the dates specified in the source protection plan (Section 40 and 42 of the CWA). • In cases of conflict between a listed significant threat policy and an official plan or zoning by-law, the significant threat policy prevails (subsection 39 (2) of the CWA). • By including a significant threat policy in List A, if there is a conflict between this significant threat policy and a policy in another provincial plan (e.g. the Green belt Plan), the policy that provides the greatest protection to drinking water prevails (subsection 39 (4) of the CWA). • A municipality or municipal planning authority must not undertake any public work, improvement of a structural nature or other undertaking or pass a by-law for any purpose that conflicts with a significant threat policy in List A (subsection 39 (6) of the CWA).			
Opening Statement:	"Clause 39 (1)(a), subsections 39 (2), (4) and (6), and sections 40 and 42 of the Clean Water Act, 2006 apply to the following policies:"			
Policy ID #:	Transition Provision	T-8	T-9	GEN-1
	WST-5	SWG-3	SWG-4	SWG-9
	SWG-12	SWG-14	SWG-16	SWG-18
	SAL-3	DEM-2	REC-1	

LIST B				
Title:	Moderate and low threat policies that affect decisions under the Planning Act and Condominium Act, 1998			
Preamble:	• By including a moderate or low threat policy in this list, decisions under the Planning Act and Condominium Act, 1998 will be required have regard to the policy (Clause 39 (1) (b) of the CWA).			
Opening Statement:	"Subsection 39 (1)(b) of the Clean Water Act, 2006 applies to the following policies:"			
Policy ID #:	SAL-10			

<table>
<tr><th colspan="5">LIST C</th></tr>
<tr><td>Title:</td><td colspan="4">Significant threat policies that affect prescribed instrument decisions</td></tr>
<tr><td>Preamble:</td><td colspan="4">• By including a significant threat policy in this list, a decision to issue, otherwise create or amend a prescribed instrument must conform to the listed policy (clause 39 (7) (a) of the CWA).
• A person or body that has issued or otherwise created a prescribed instrument before the source protection plan took effect will be required to amend the instrument to conform with the listed significant threat policies before the date specified in the source protection plan (section 43 of the CWA).
• A municipality or municipal planning authority must not undertake any public work, improvement of a structural nature or other undertaking or pass a by-law for any purpose that conflicts with a significant threat policy in List C (subsection 39 (6) of the CWA).</td></tr>
<tr><td>Opening Statement:</td><td colspan="4">“Subsection 39 (6), clause 39 (7) (a), section 43 and subsection 44 (1) of the Clean Water Act, 2006 apply to the following policies:”</td></tr>
<tr><td rowspan="7">Policy ID #:</td><td>Transition Provision</td><td>T-1</td><td>T-2</td><td>T-3</td></tr>
<tr><td>WST-3</td><td>WST-4</td><td>WST-7</td><td>SWG-8</td></tr>
<tr><td>SWG-11</td><td>SWG-13</td><td>SWG-15</td><td>SWG-17</td></tr>
<tr><td>ASM-1</td><td>ASM-3</td><td>ASM-5</td><td>NASM-3</td></tr>
<tr><td>NASM-4</td><td>LIV-2</td><td>FER-1</td><td>FUEL-1</td></tr>
<tr><td>FUEL-2</td><td>LO-SEW-1</td><td>LO-SEW-2</td><td>DEM-1</td></tr>
</table>

<table>
<tr><th colspan="2">LIST D</th></tr>
<tr><td>Title:</td><td>Moderate and low threat policies that affect prescribed instrument decisions</td></tr>
<tr><td>Preamble:</td><td>• By including a moderate or low threat policy in List D, a decision to issue, otherwise create or amend a prescribed instrument must have regard to the listed policy (clause 39 (7) (b) of the CWA).</td></tr>
<tr><td>Opening Statement:</td><td>“Clause 39 (7)(b) of the Clean Water Act, 2006 applies to the following policies:”</td></tr>
<tr><td>Policy ID #:</td><td>No applicable policies.</td></tr>
</table>

<table>
<tr><th colspan="5">LIST E</th></tr>
<tr><td>Title:</td><td colspan="4">Significant threat policies that impose obligations on municipalities, source protection authorities and local boards[5]</td></tr>
<tr><td>Preamble:</td><td colspan="4">• Requires a municipality, a source protection authority or a local board to comply with any obligation that is imposed on it by significant threat policy (section 38 of the CWA).
• If the policy relates to education, outreach and incentive programs, stewardship programs, the promotion of best management practices, pilot programs, research, and other specified actions to be taken to implement the source protection plan or achieve the plan's objectives, section 30 of the regulation requires that the policy designate (identify) the person or body responsible for implementing the policy.
• By including a significant threat policy in List E, the person or body identified for implementing the policy will be required to comply with the obligations specified in the policy.
• A municipality or municipal planning authority must not undertake any public work, improvement of a structural nature or other undertaking or pass a by-law for any purpose that conflicts with a significant threat policy in List E (subsection 39 (6) of the CWA).</td></tr>
<tr><td>Opening Statement:</td><td colspan="4">"Section 38 and subsection 39 (6) of the Clean Water Act, 2006 applies to the following policies:"</td></tr>
<tr><td rowspan="11">Policy ID #:</td><td>Transition Provision</td><td>T-10</td><td>T-11</td><td>T-12</td></tr>
<tr><td>T-13</td><td>T-14</td><td>T-15</td><td>T-16</td></tr>
<tr><td>T-17</td><td>T-18</td><td>GEN-2</td><td>GEN-5</td></tr>
<tr><td>GEN-7</td><td>WST-2</td><td>SWG-1</td><td>SWG-2</td></tr>
<tr><td>SWG-6</td><td>SWG-7</td><td>SWG-19</td><td>FER-4</td></tr>
<tr><td>PES-4</td><td>SAL-8</td><td>FUEL-3 (3)</td><td>FUEL-4 (1)</td></tr>
<tr><td>DNAP-2</td><td>OS-2</td><td>DI-2</td><td>LO-G-3</td></tr>
<tr><td>DEM-4</td><td>DEM-5 (1) (2)</td><td>DEM-6</td><td>DEM-9</td></tr>
<tr><td>DEM-10</td><td>REC-3 (1)</td><td></td><td></td></tr>
</table>

[5] Under the *CWA*, "Local board" has the same meaning as in the Municipal Affairs Act. Local board means a school board, municipal service board, transportation commission, public library board, board of health, police services board, planning board, or any other board, commission, committee, body or local authority established or exercising any power or authority under any general or special Act with respect to any of the affairs or purposes, including school purposes, of a municipality or of two or more municipalities or parts thereof.

LIST F				
Title:	Monitoring policies referred to in subsection 22 (2) of the Clean Water Act, 2006			
Preamble:	• By including monitoring policies in List F, the public body[6] that is designated in the monitoring policy will be required to implement a monitoring program in accordance with the policy.			
Opening Statement:	"Subsection 45 of the Clean Water Act, 2006 applies to the following policies:"			
Policy ID #:	T-16	SAL-9	MON-1	MON-2
	MON-3	MON-4		

LIST G				
Title:	Policies related to section 57 of the Clean Water Act, 2006			
Preamble:	• By including a policy in List G, no one is permitted to engage in any of the specified activities within the vulnerable areas set out in the policy after the date by which existing activities must be phased out or new activities prohibited in accordance with the policy. • The reader should refer to the actual policy text for information pertaining to the designated prohibited activity(ies), their respective designated areas, and other details related to the sec section 57 prohibition – for instance the date by which existing activities must be phased out in accordance with subsection 57(2) of the CWA.			
Opening Statement:	"The following policies relate to section 57 (prohibition) of the Clean Water Act."			
Policy ID #:	T-4	T-5	WST-6 (1)	ASM-2 (1)
	ASM-4 (1)	NASM-1 (1)	NASM-2 (1)	LIV-1 (1)
	LIV-3 (1)	FER-2 (1)	FER-3 (1)	PES-2 (1)
	SAL-7 (1)	SNO-1 (1)	FUEL-3 (1)	DNAP-1 (1)
	OS-1 (1)			

[6] Under the CWA, "public body" means, (a) a municipality, local board or conservation authority, (b) a ministry, board, commission, agency or official of the Government of Ontario, or (c) a body prescribed by the regulations or an official of a body prescribed by the regulations.

LIST H				
Title:	Policies related to section 58 of the Clean Water Act, 2006			
Preamble:	• By including a policy in List H, no one is permitted to engage in any of the specified activities within the vulnerable areas set out in the policy after the date specified without conforming to the Risk Management Plan developed in accordance with the policy, the Act and regulations and approved by the Risk Management Official. • The reader should refer to the actual policy text for information pertaining to the designated regulated activity(ies), their respective designated areas, and any other details related to the regulation of the activity under section 58 – for instance – the policies governing the content of risk management plans.			
Opening Statement:	"The following policies relate to section 58 (risk management plans) of the Clean Water Act."			
Policy ID #:	T-6	T-7	WST-1	WST-6 (2)
	ASM-2 (2)	ASM-4 (2)	NASM-1 (2)	NASM-2 (2)
	LIV-1 (2)	LIV-3 (2)	FER-2 (2)	FER-3 (2)
	PES-1	PES-2 (2)	SAL-1	SAL-2
	SAL-7 (2)	SNO-1 (2)	FUEL-3 (2)	DNAP-1 (2)
	OS-1 (2)	DI-1	REC-2	

LIST I				
Title:	Policies related to section 59 of the Clean Water Act, 2006			
Preamble:	• Purpose of which is to ensure that a development proposal complies with section 57 or 58 of the CWA before it is given other municipal approvals. • The reader should refer to the actual policy text for details related to each policy, including the designated land uses and their respective designated areas.			
Opening Statement:	"The following policies relate to section 59 (restricted land use) of the Clean Water Act."			
Policy ID #:	GEN-1			

LIST J				
Title:	Strategic Action policies			
Opening Statement:	For the purposes of section 33 of Ontario regulation 287/07, the following policies are identified as strategic action policies:			
Policy ID #:	T-15	GEN-8	SAL-11	SAL-12
	SAL-13	DNAP-3	OS-3	LO-G-2
	LO-G-4	LO-SEW-3	LO-FUEL-2	

LIST K				
Title:	Significant threat policies that identify a body other than a municipality, source protection authority or local board as responsible for implementing the policy, and which represent a non-legally binding commitment			
Policy ID #:	T-10	T-15	T-16	T-17
	T-18	GEN-3	GEN-4	GEN-6
	OTHER-1	WST-2	SWG-2	SWG-5
	SWG-10	NASM-5	FER-4	PES-3
	SAL-4	SAL-5	SAL-6	SAL-8
	FUEL-4	DNAP-2	OS-2	LO-G-1
	LO-G-2	LO-G-4	LO-NGS-1	LO-SEW-3
	LO-PIPE-1	LO-FUEL-1	LO-FUEL-2	DEM-3
	DEM-5 (3)	DEM-7	DEM-8	REC-3 (2)

APPENDIX C: PRESCRIBED INSTRUMENTS WHICH APPLY TO SOURCE PROTECTION PLAN POLICIES IN LISTS C AND D (s. 34(4) OF O. REG. 287/07)

Policy ID	Legal Effect	Aggregate Resources Act: Licenses, Wayside Pit Permits, Aggregate Permits, and Site Plans	Environmental Protection Act: Waste Sites and Systems	Nutrient Management Act: Nutrient Management Plans/Strategies	Nutrient Management Act: NASM Plans	Ontario Water Resources Act: Permits to Take Water	Ontario Water Resources Act: Sewage Works	Safe Drinking Water Act: Permits, Licenses
WST-3	Must conform		X					
WST-4	Must conform		X					
WST-7	Must conform		X					
SWG-8	Must conform						X	
SWG-11	Must conform						X	
SWG-13	Must conform						X	
SWG-15	Must conform						X	
SWG-17	Must conform						X	
ASM-1	Must conform			X				
ASM-3	Must conform			X				
ASM-5	Must conform						X	
NASM-3	Must conform				X			
NASM-4	Must conform				X			
LIV-2	Must conform			X				
FER-1	Must conform			X				
FUEL-1	Must conform							X
FUEL-2	Must conform	X						
LO-SEW-1	Must conform		X					
LO-SEW-2	Must conform		X					
DEM-1	Must conform					X		

APPENDIX D: POLICY SUMMARY MATRIX

Policy ID	Legal Effect	Policy affects decisions under the *Planning Act and Condominium Act, 1998* **(Lists A & B)**	Policy affects Prescribed Instruments decisions **(Lists C & D)**	Significant threat policies that impose obligations on municipalities, SPA's and local boards **(List E)**	Monitoring Policies referred to in s.22(2) of the *CWA* **(List F)**	Part IV Policies - Significant threat policies that are designated in the plan as requiring a RMP, are prohibited under s.57, or to which s.59 of the *CWA* applies **(Lists G, H & I)**	Strategic Action Policies **(Lists J)**	**(List K)**
Transition	Must Comply	X	X	X				
T-1	Must Comply		X					
T-2	Must Comply		X					
T-3	Must Comply		X					
T-4	Must Comply					X		
T-5	Must Comply					X		
T-6	Must Comply					X		
T-7	Must Comply					X		
T-8	Must Comply	X						
T-9	Must Comply	X						
T-10	Must Comply			X				
	Strategic							X
T-11	Must Comply			X				
T-12	Must Comply			X				
T-13	Must Comply			X				
T-14	Must Comply			X				
T-15	Must Comply			X				
	Strategic						X	X
T-16	Must Comply			X	X			
	Strategic							X
T-17	Must Comply			X				
	Strategic							X
T-18	Must Comply			X				
	Strategic							X

Policy ID	Legal Effect	Policy affects decisions under the *Planning Act and Condominium Act, 1998* **(Lists A & B)**	Policy affects Prescribed Instruments decisions **(Lists C & D)**	Significant threat policies that impose obligations on municipalities, SPA's and local boards **(List E)**	Monitoring Policies referred to in s.22(2) of the *CWA* **(List F)**	Part IV Policies - Significant threat policies that are designated in the plan as requiring a RMP, are prohibited under s.57, or to which s.59 of the *CWA* applies **(Lists G, H & I)**	Strategic Action Policies **(Lists J)**	**(List K)**
GEN-1	Must Comply	X				X		
GEN-2	Must Comply			X				
GEN-3	Strategic							X
GEN-4	Strategic							X
GEN-5	Must Comply			X				
GEN-6	Strategic							X
GEN-7	Must Comply			X				
GEN-8	Strategic						X	
OTHER-1	Strategic							X
WST-1	Must Comply					X		
WST-2	Must Comply			X				
	Strategic							X
WST-3	Must Comply		X					
WST-4	Must Comply		X					
WST-5	Must Comply	X						
WST-6	Must Comply					X		
WST-7	Must Comply		X					
SWG-1	Must Comply			X				
SWG-2	Must Comply			X				
	Strategic							X
SWG-3	Must Comply	X						
SWG-4	Must Comply	X						
SWG-5	Strategic							X
SWG-6	Must Comply			X				
SWG-7	Must Comply			X				

Policy ID	Legal Effect	Policy affects decisions under the *Planning Act and Condominium Act, 1998* **(Lists A & B)**	Policy affects Prescribed Instruments decisions **(Lists C & D)**	Significant threat policies that impose obligations on municipalities, SPA's and local boards **(List E)**	Monitoring Policies referred to in s.22(2) of the *CWA* **(List F)**	Part IV Policies - Significant threat policies that are designated in the plan as requiring a RMP, are prohibited under s.57, or to which s.59 of the *CWA* applies **(Lists G, H & I)**	Strategic Action Policies **(Lists J)**	**(List K)**
SWG-8	Must Comply		X					
SWG-9	Must Comply	X						
SWG-10	Strategic							X
SWG-11	Must Comply		X					
SWG-12	Must Comply	X						
SWG-13	Must Comply		X					
SWG-14	Must Comply	X						
SWG-15	Must Comply		X					
SWG-16	Must Comply	X						
SWG-17	Must Comply		X					
SWG-18	Must Comply	X						
SWG-19	Must Comply			X				
ASM-1	Must Comply		X					
ASM-2	Must Comply					X		
ASM-3	Must Comply		X					
ASM-4	Must Comply					X		
ASM-5	Must Comply		X					
NASM-1	Must Comply					X		
NASM-2	Must Comply					X		
NASM-3	Must Comply		X					
NASM-4	Must Comply		X					
NASM-5	Strategic							X
LIV-1	Must Comply					X		
LIV-2	Must Comply		X					
LIV-3	Must Comply					X		

Policy ID	Legal Effect	Policy affects decisions under the *Planning Act and Condominium Act, 1998* **(Lists A & B)**	Policy affects Prescribed Instruments decisions **(Lists C & D)**	Significant threat policies that impose obligations on municipalities, SPA's and local boards **(List E)**	Monitoring Policies referred to in s.22(2) of the *CWA* **(List F)**	Part IV Policies - Significant threat policies that are designated in the plan as requiring a RMP, are prohibited under s.57, or to which s.59 of the *CWA* applies **(Lists G, H & I)**	Strategic Action Policies **(Lists J)**	**(List K)**
FER-1	Must Comply		X					
FER-2	Must Comply					X		
FER-3	Must Comply					X		
FER-4	Must Comply			X				
	Strategic							X
PES-1	Must Comply					X		
PES-2	Must Comply					X		
PES-3	Strategic							X
PES-4	Must Comply			X				
SAL-1	Must Comply					X		
SAL-2	Must Comply					X		
SAL-3	Must Comply	X						
SAL-4	Strategic							X
SAL-5	Strategic							X
SAL-6	Strategic							X
SAL-7	Must Comply					X		
SAL-8	Must Comply			X				
	Strategic							X
SAL-9	Must Comply				X			
SAL-10	Strategic	X						
SAL-11	Strategic						X	
SAL-12	Strategic						X	
SAL-13	Strategic						X	
SNO-1	Must Comply					X		
FUEL-1	Must Comply		X					

Policy ID	Legal Effect	Policy affects decisions under the *Planning Act and Condominium Act, 1998* **(Lists A & B)**	Policy affects Prescribed Instruments decisions **(Lists C & D)**	Significant threat policies that impose obligations on municipalities, SPA's and local boards **(List E)**	Monitoring Policies referred to in s.22(2) of the *CWA* **(List F)**	Part IV Policies - Significant threat policies that are designated in the plan as requiring a RMP, are prohibited under s.57, or to which s.59 of the *CWA* applies **(Lists G, H & I)**	Strategic Action Policies **(Lists J)**	**(List K)**
FUEL-2	Must Comply		X					
FUEL-3	Must Comply			X		X		
FUEL-4	Must Comply			X				
	Strategic							X
DNAP-1	Must Comply					X		
DNAP-2	Must Comply			X				
	Strategic							X
DNAP-3	Strategic						X	
OS-1	Must Comply					X		
OS-2	Must Comply			X				
	Strategic							X
OS-3	Strategic						X	
DI-1	Must Comply					X		
DI-2	Must Comply			X				
LO-G-1	Strategic							X
LO-G-2	Strategic						X	X
LO-G-3	Must Comply			X				
LO-G-4	Strategic						X	X
LO-NGS-1	Strategic							X
LO-SEW-1	Must Comply		X					
LO-SEW-2	Must Comply		X					
LO-SEW-3	Strategic						X	X
LO-PIPE-1	Strategic							X
LO-FUEL-1	Strategic							X
LO-FUEL-2	Strategic						X	X

Policy ID	Legal Effect	Policy affects decisions under the *Planning Act and Condominium Act, 1998* **(Lists A & B)**	Policy affects Prescribed Instruments decisions **(Lists C & D)**	Significant threat policies that impose obligations on municipalities, SPA's and local boards **(List E)**	Monitoring Policies referred to in s.22(2) of the *CWA* **(List F)**	Part IV Policies - Significant threat policies that are designated in the plan as requiring a RMP, are prohibited under s.57, or to which s.59 of the *CWA* applies **(Lists G, H & I)**	Strategic Action Policies **(Lists J)**	**(List K)**
DEM-1	Must Comply		X					
DEM-2	Must Comply	X						
DEM-3	Strategic							X
DEM-4	Must Comply			X				
DEM-5	Must Comply			X				
	Strategic							X
DEM-6	Must Comply			X				
DEM-7	Strategic							X
DEM-8	Strategic							X
DEM-9	Must Comply			X				
DEM-10	Must Comply			X				
REC-1	Must Comply	X						
REC-2	Must Comply					X		
REC-3	Must Comply			X				
	Strategic							X
MON-1	Must Comply				X			
MON-2	Must Comply				X			
MON-3	Must Comply				X			
MON-4	Must Comply				X			

APPENDIX E: POLICIES BY IMPLEMENTER

The following table lists the policies in the CTC Source Protection Plan by implementing body.

Implementer	Policies	
MGCS	Fuel	FUEL-4
MMAH	Sewage Systems	SWG-5
	Quantity - Demand	DEM-3; DEM-7
MNRF	General	GEN-3
	Fuel	FUEL-2
MOECC	General	GEN-3; GEN-4; GEN-6
	Waste	WST-2; WST-3; WST-4; WST-7
	Sewage Systems	SWG-2; SWG-8; SWG-10; SWG-11; SWG-13; SWG-15; SWG-17
	Agricultural Source Material	ASM-5
	Non-Agricultural Source Material	NASM-3; NASM-4; NASM-5
	Fertilizer	FER-4
	Pesticide	PES-3
	Road Salt	SAL-4; SAL-5; SAL-8; SAL-11
	Fuel	FUEL-1; FUEL-4
	Dense Non-Aqueous Phase Liquids	DNAP-2
	Organic Solvents	OS-2
	Lake Ontario - All Threats	LO-G-1; LO-G-2; LO-G-4
	Lake Ontario - NGS	LO-NGS-1
	Lake Ontario - Sewage	LO-SEW-1; LO-SEW-2; LO-SEW-3
	Lake Ontario - Pipe	LO-PIPE-1
	Lake Ontario - Fuel	LO-FUEL-1; LO-FUEL-2
	Quantity - Demand	DEM-1; DEM-3; DEM-5; DEM-7; DEM-8
	Quantity - Recharge	REC-3
MTO	Road Salt	SAL-6

Implementer	Policies	
Municipality	General	GEN-1; GEN-2; GEN-5; GEN-7; GEN-8
	Waste	WST-2
	Sewage Systems	SWG-1; SWG-2; SWG-6 SWG-7 (only applicable to municipalities with Sodium or Chloride ICAs) SWG-19 (only applicable to Town of Orangeville)
	Fertilizer	FER-4
	Pesticide	PES-4
	Road Salt	SAL-8 SAL-9 (only applicable to municipalities with Sodium or Chloride ICAs) SAL-12; SAL-13
	Fuel	FUEL-4
	Dense Non-Aqueous Phase Liquids	DNAP-2; DNAP-3
	Organic Solvents	OS-2; OS-3
	Aircraft De-icing	DI-2
	Lake Ontario - All Threats	LO-G-3 (only applicable to the Regions of Peel and Durham, and the City of Toronto)
	Quantity - Demand	DEM-4; DEM-5; DEM-6; DEM-9 DEM-10 (only applicable to York Region)
	Quantity - Recharge	REC-3
Niagara Escarpment Commission	Other	OTHER-1
OMAFRA	General	GEN-3
	Agricultural Source Material	ASM-1; ASM-3
	Non-Agricultural Source Material	NASM-3; NASM-4; NASM-5
	Livestock	LIV-2
	Fertilizer	FER-1
Planning Approval Authority	Waste	WST-5
	Sewage Systems	SWG-3; SWG-4; SWG-9; SWG-12; SWG-14; SWG-16; SWG-18
	Road Salt	SAL-3; SAL-10
	Quantity - Demand	DEM-2
	Quantity - Recharge	REC-1

Implementer	Policies	
Risk Management Official	General	GEN-1 GEN-2 (through municipality)
	Waste	WST-1; WST-6
	Agricultural Source Material	ASM-2; ASM-4
	Non-Agricultural Source Material	NASM-1; NASM-2
	Livestock	LIV-1; LIV-3
	Fertilizer	FER-2; FER-3
	Pesticide	PES-1; PES-2
	Road Salt	SAL-1; SAL-2; SAL-7
	Snow	SNO-1
	Fuel	FUEL-3
	Dense Non-Aqueous Phase Liquids	DNAP-1
	Organic Solvents	OS-1
	Aircraft De-icing	DI-1
	Quantity - Recharge	REC-2
Source Protection Authority	Sewage Systems	SWG-7 (only applicable to CVSPA) SWG-19 (only applicable to CVSPA)
	Road Salt	SAL-9 (only applicable to CVSPA) SAL-13
	Fuel	FUEL-3
TSSA	Fuel	FUEL-4

APPENDIX F: MAPS OF THREAT AREAS WHERE POLICIES APPLY

Maps organized by location of well or intake

DUFFERIN COUNTY

Map 1.1: Mono – Significant Groundwater Quality Threat Areas 193
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WELLINGTON COUNTY

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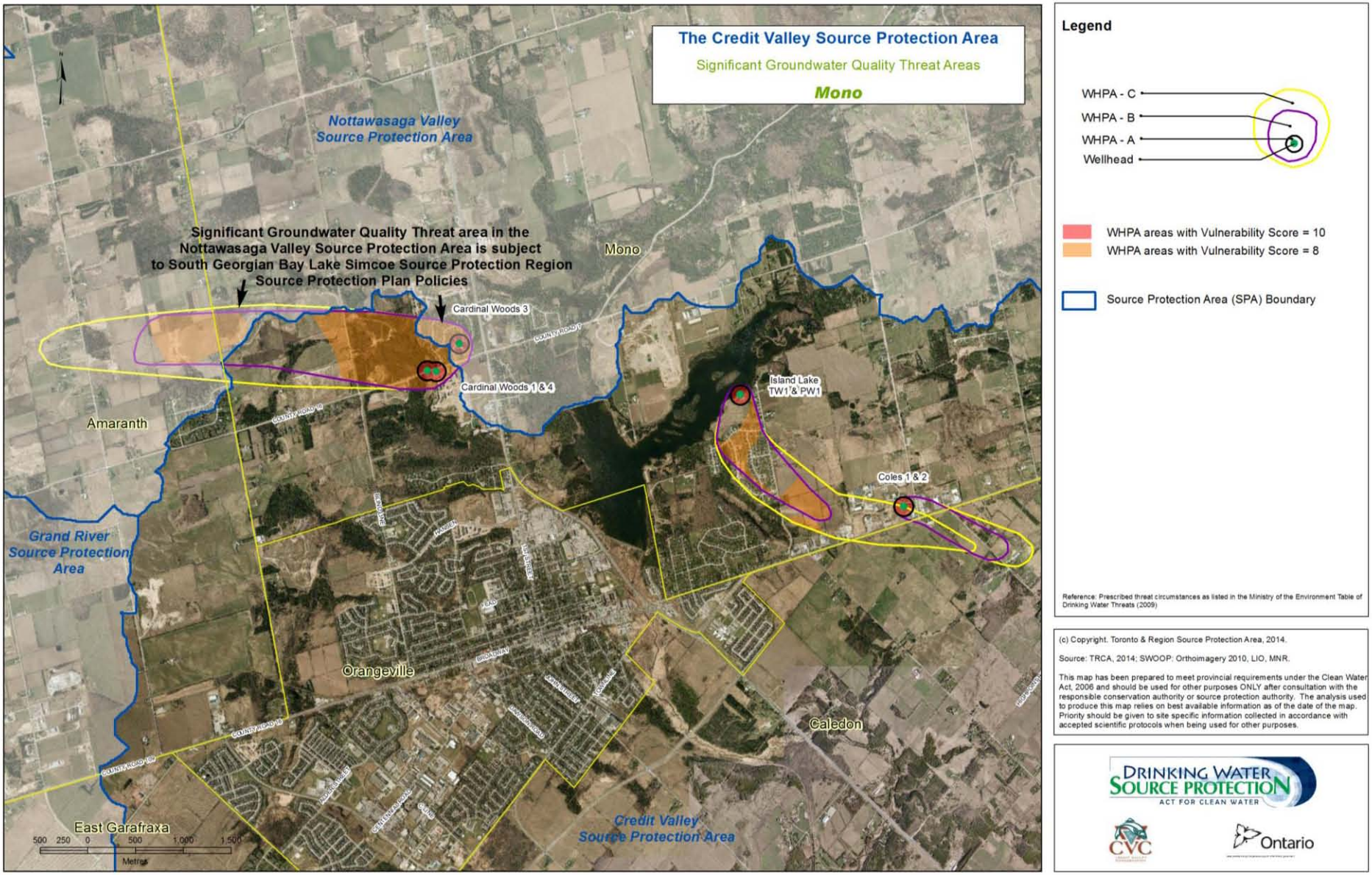
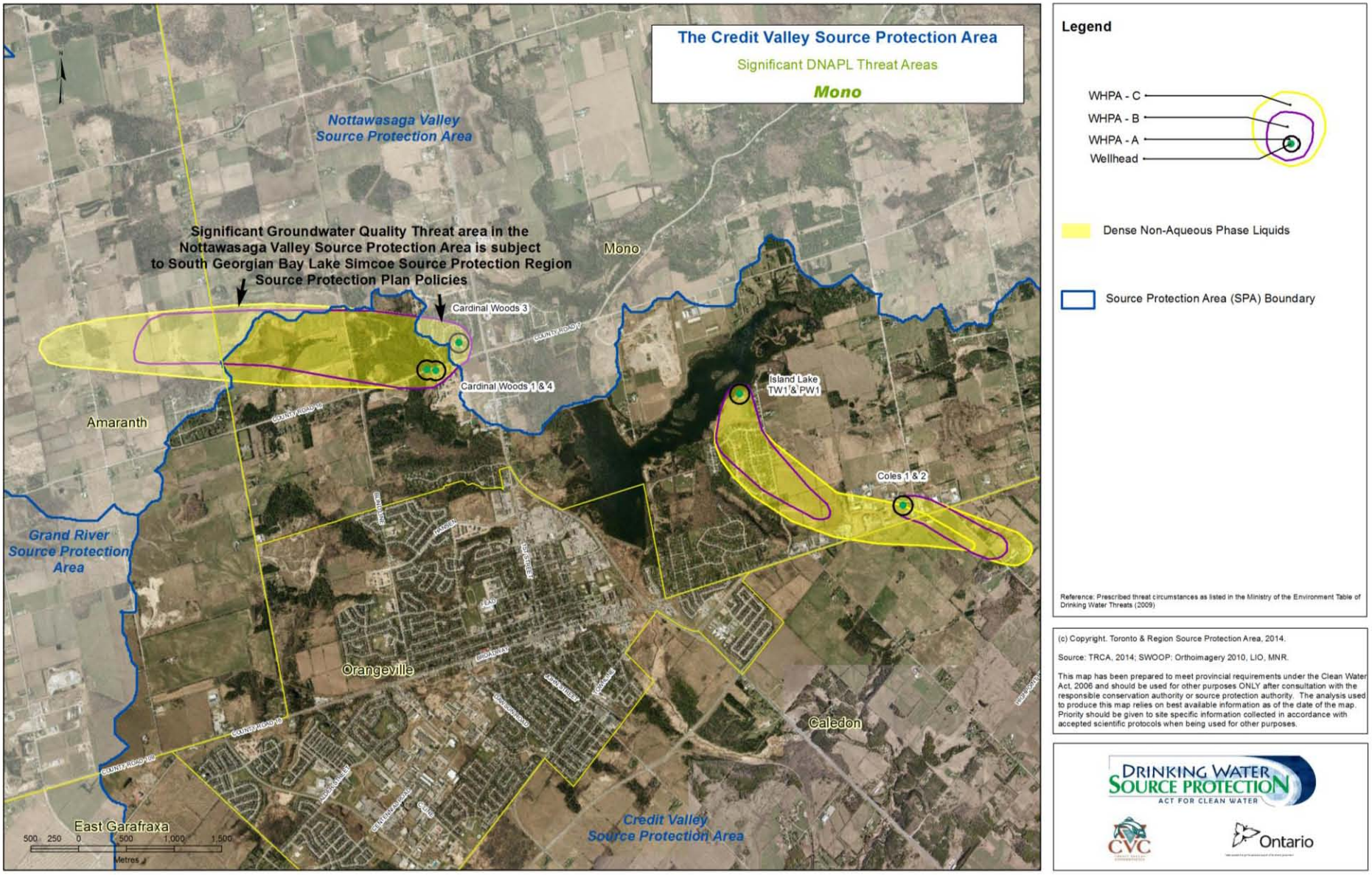
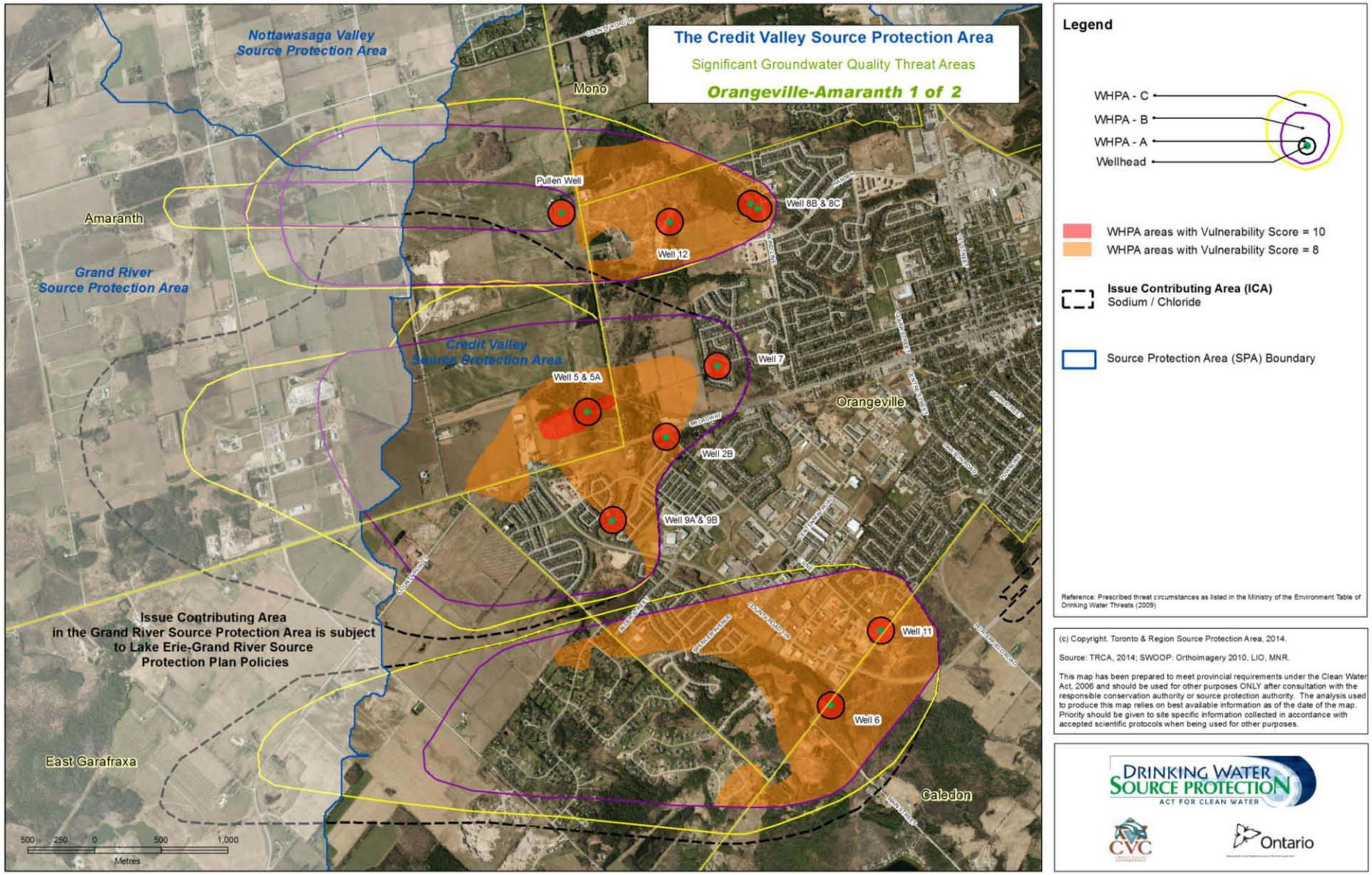


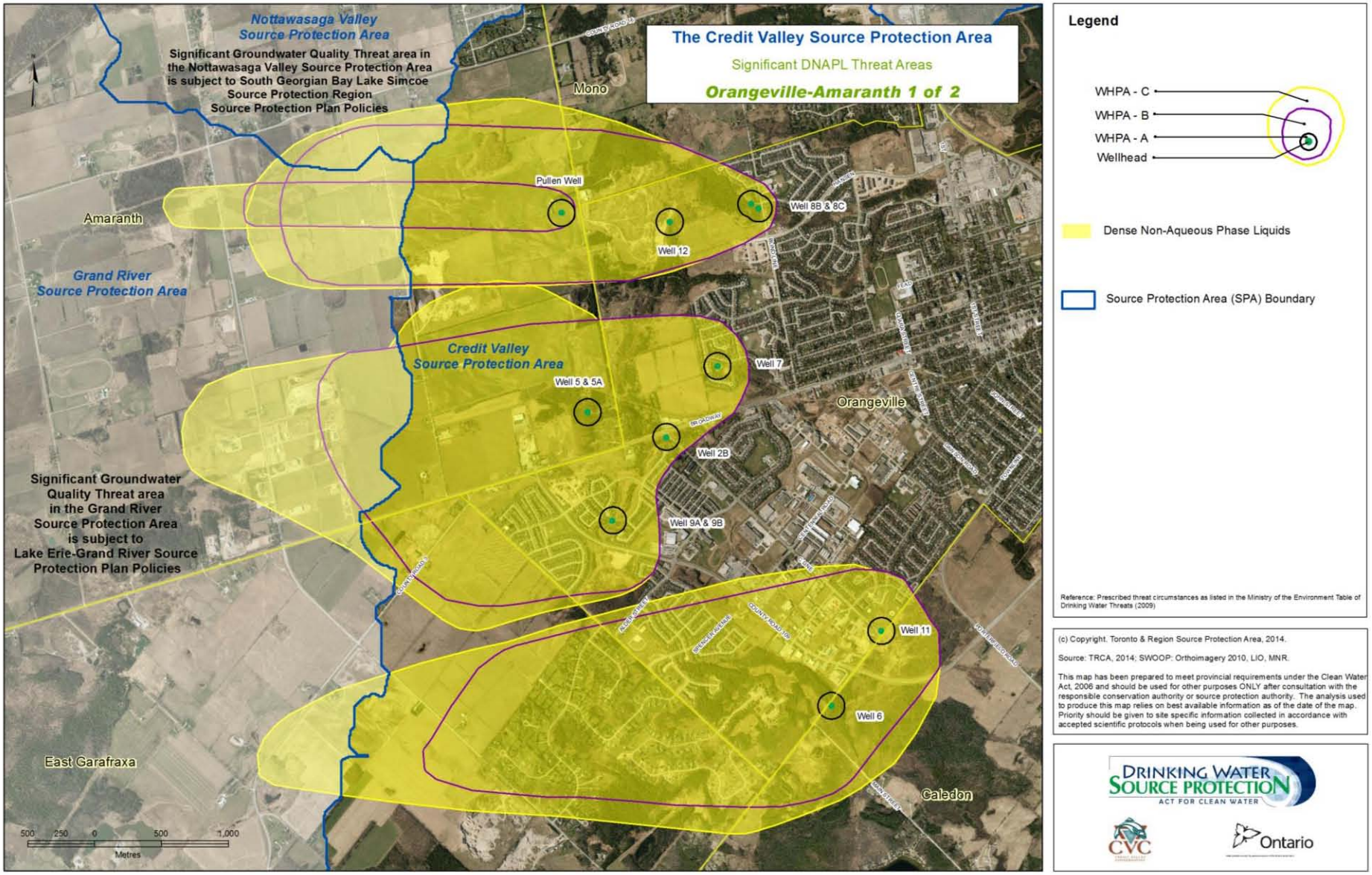
Map 1.1: Mono – Significant Groundwater Quality Threat Areas



Map 2.1: Mono – Significant DNAPL Threat Areas



Map 1.2: Orangeville-Amaranth 1 of 2 – Significant Groundwater Quality Threat Areas



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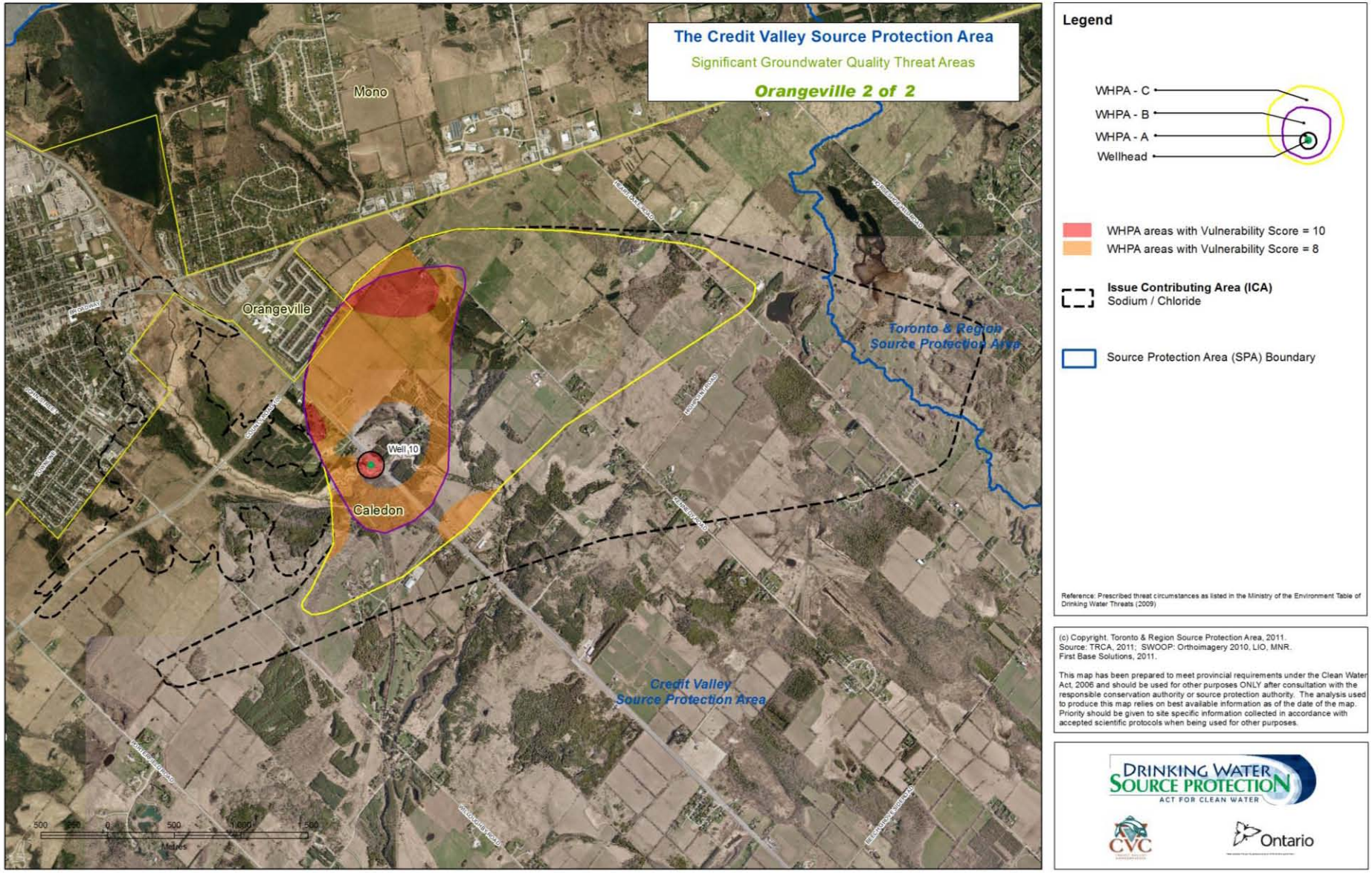

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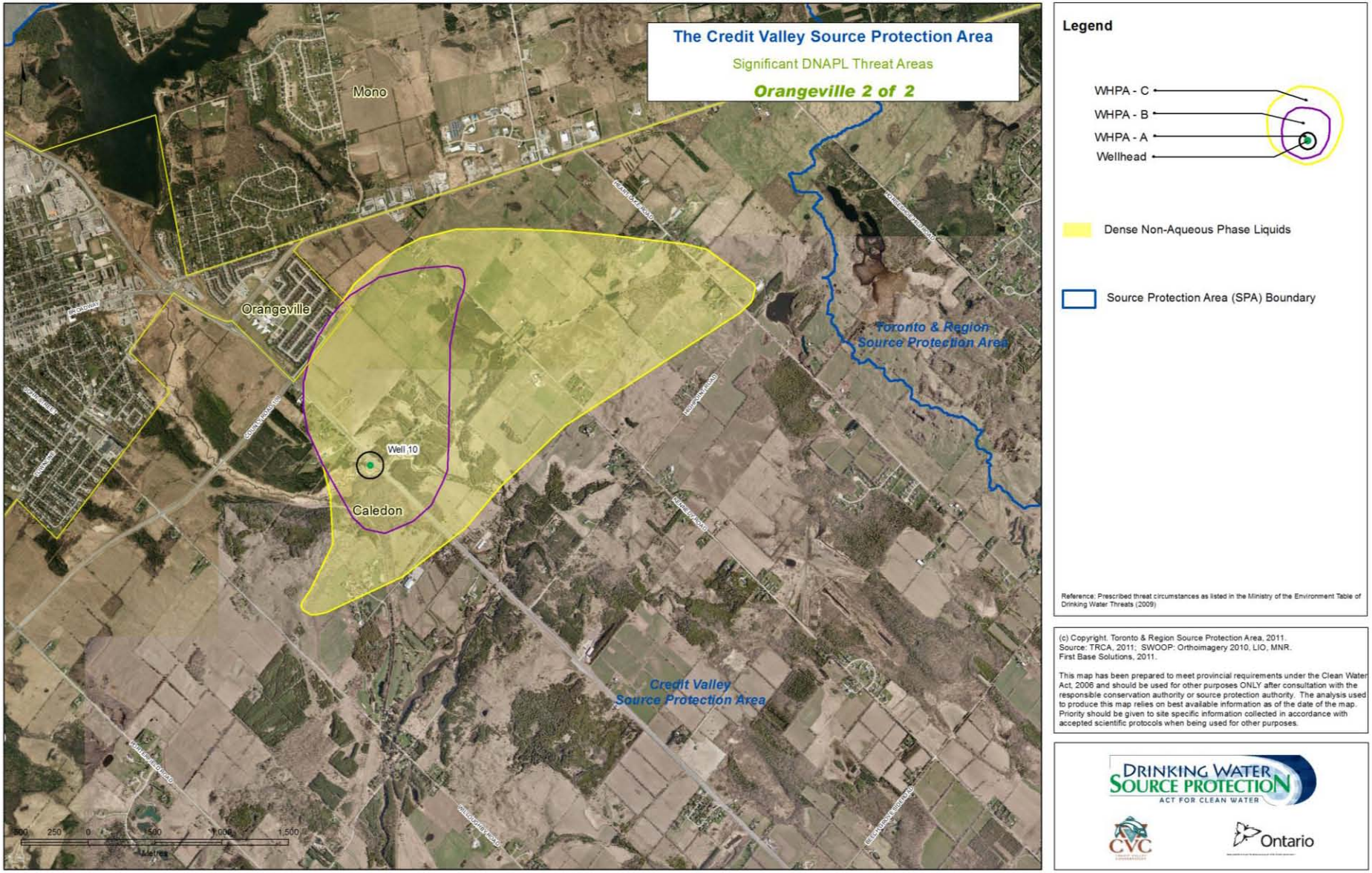

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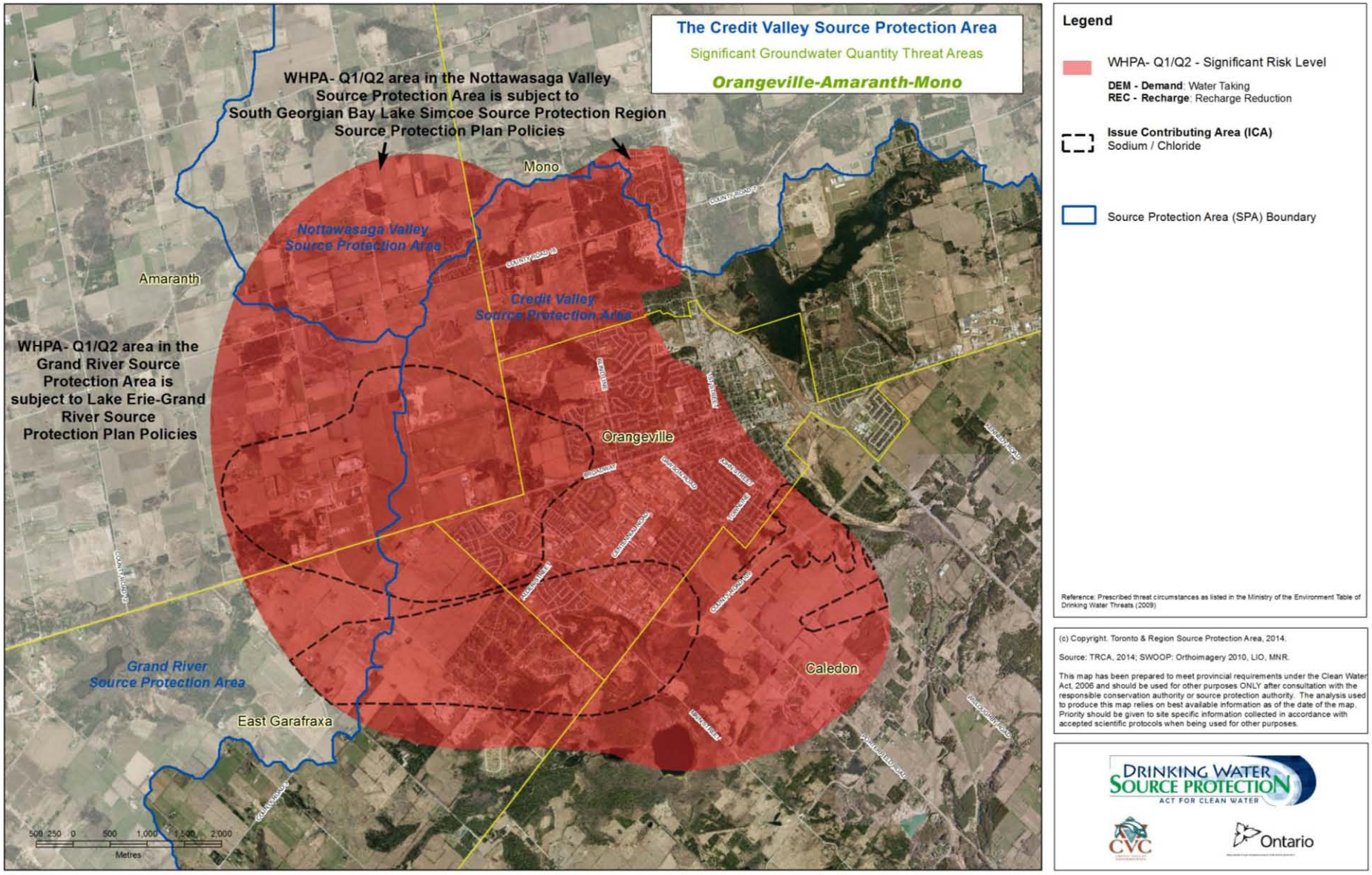

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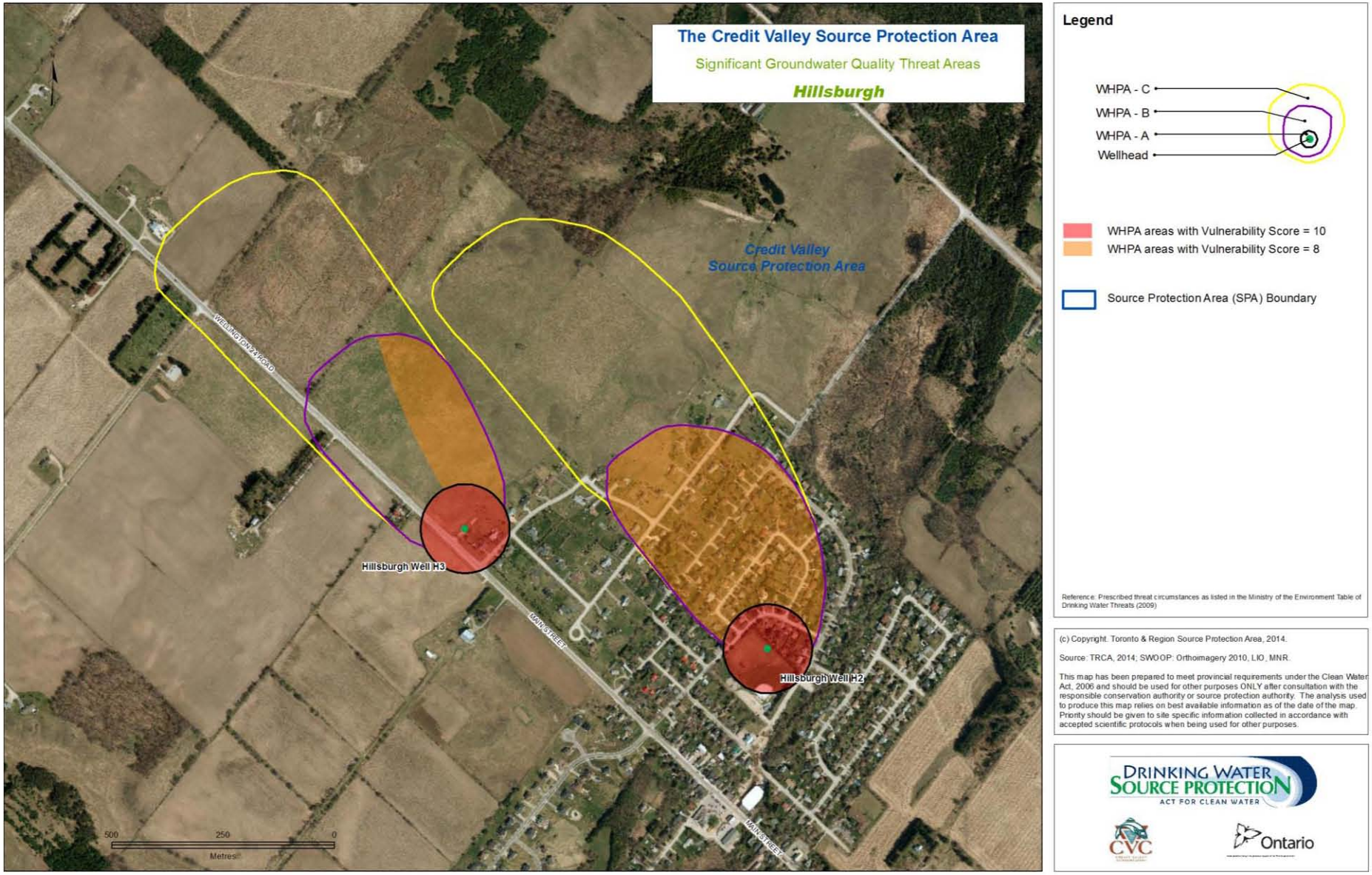
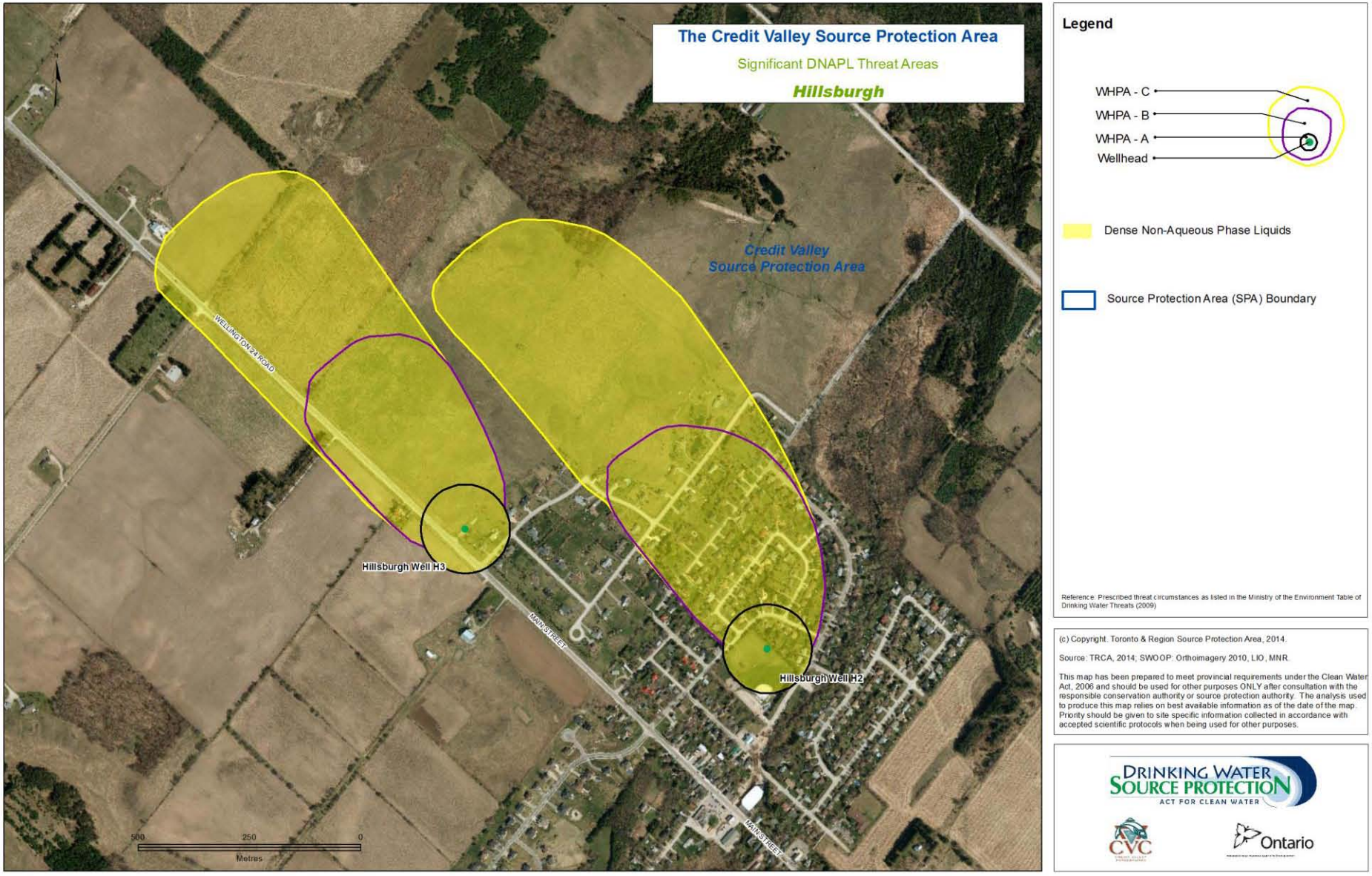


Map 1.4: Hillsburgh – Significant Groundwater Quality Threat Areas



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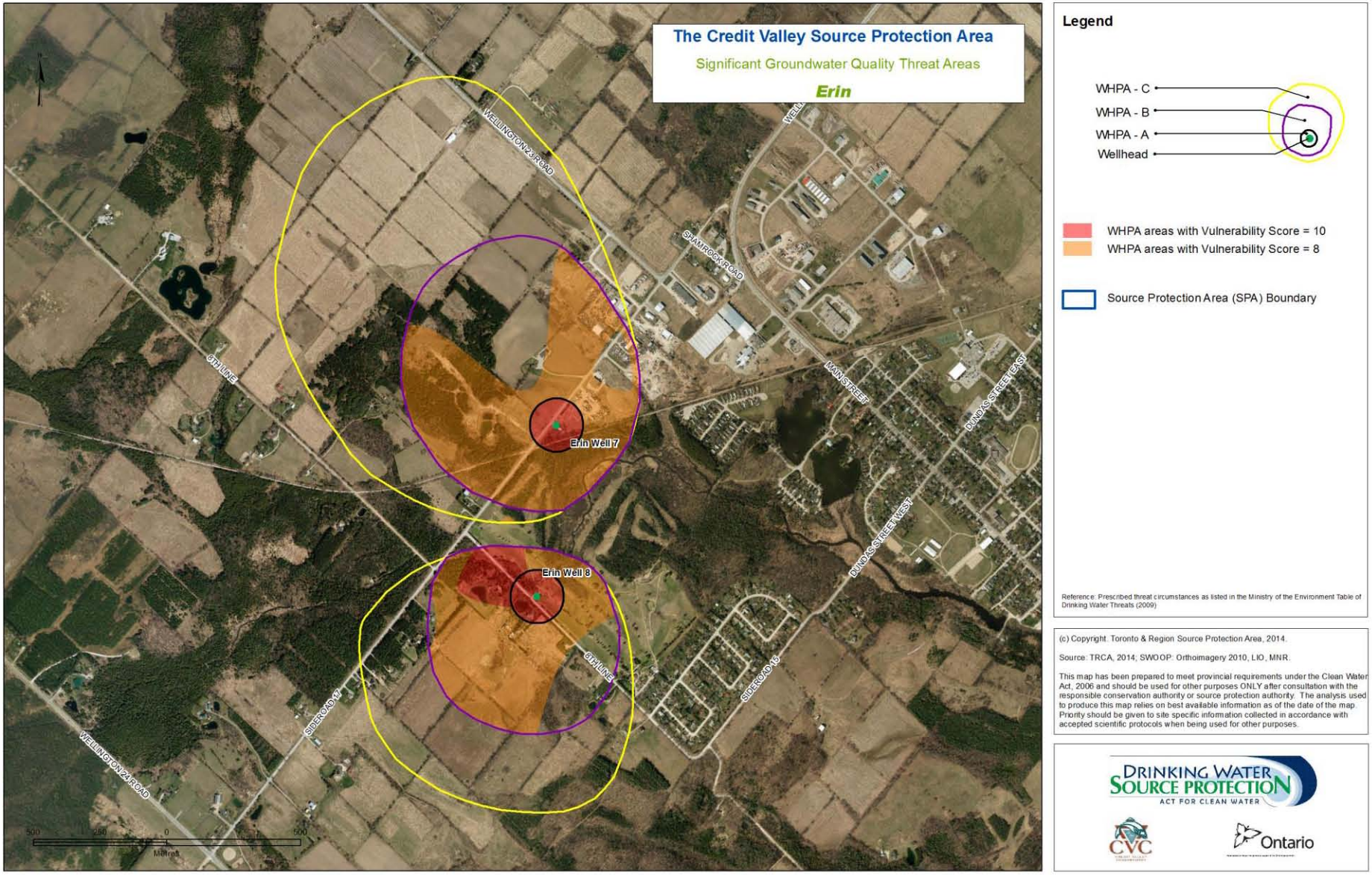
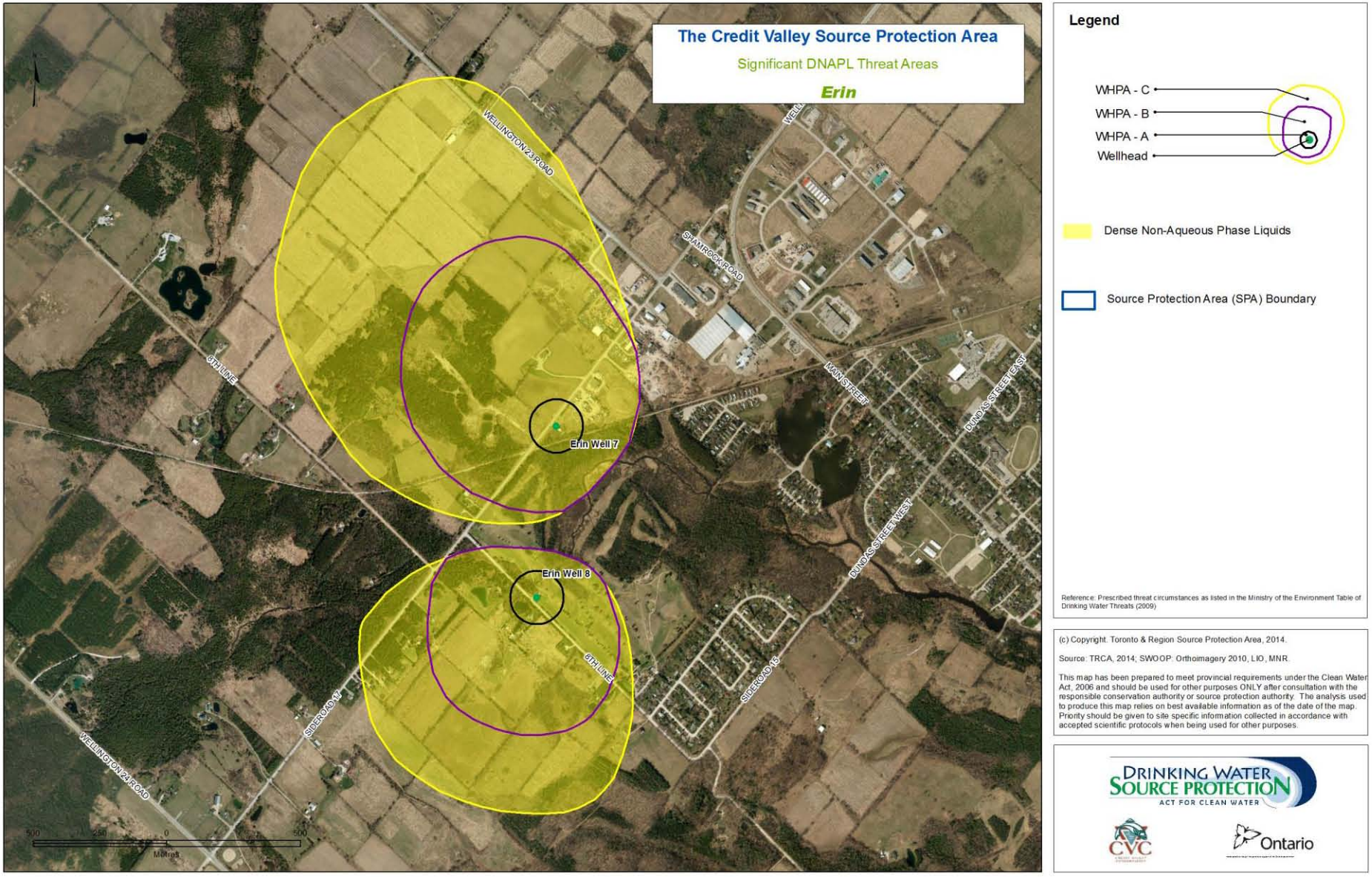
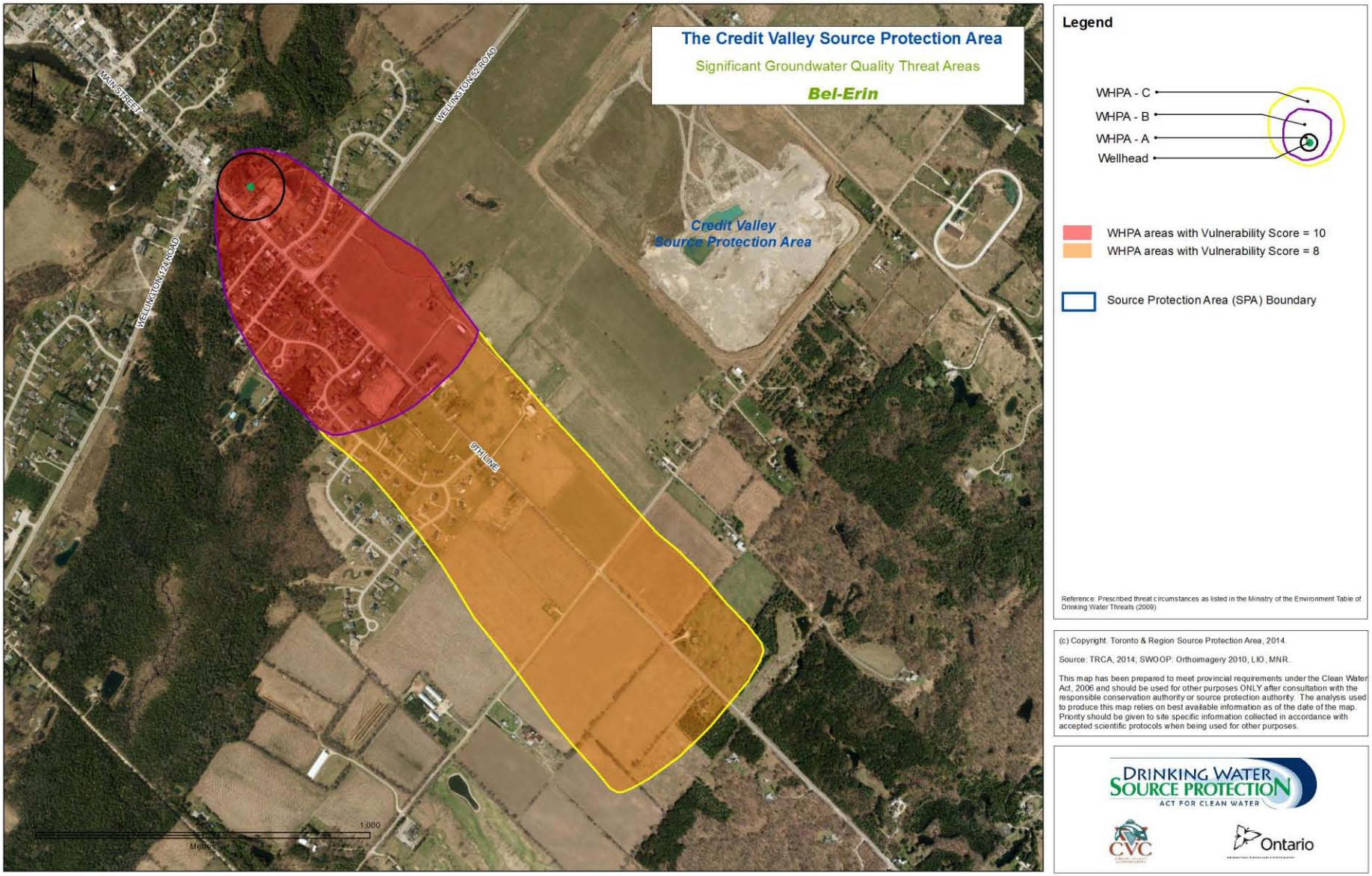


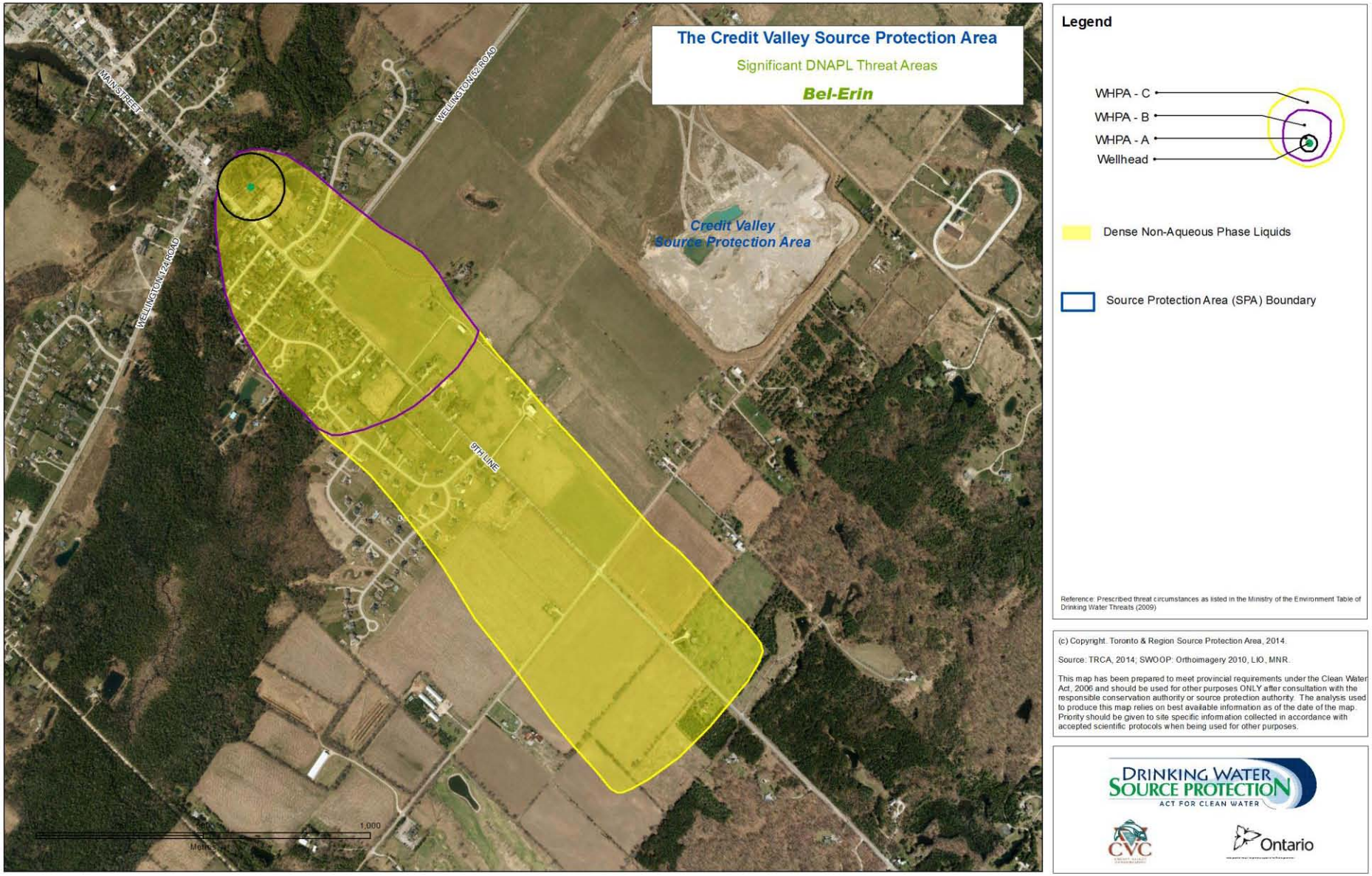
Map 1.5: Erin – Significant Groundwater Quality Threat Areas



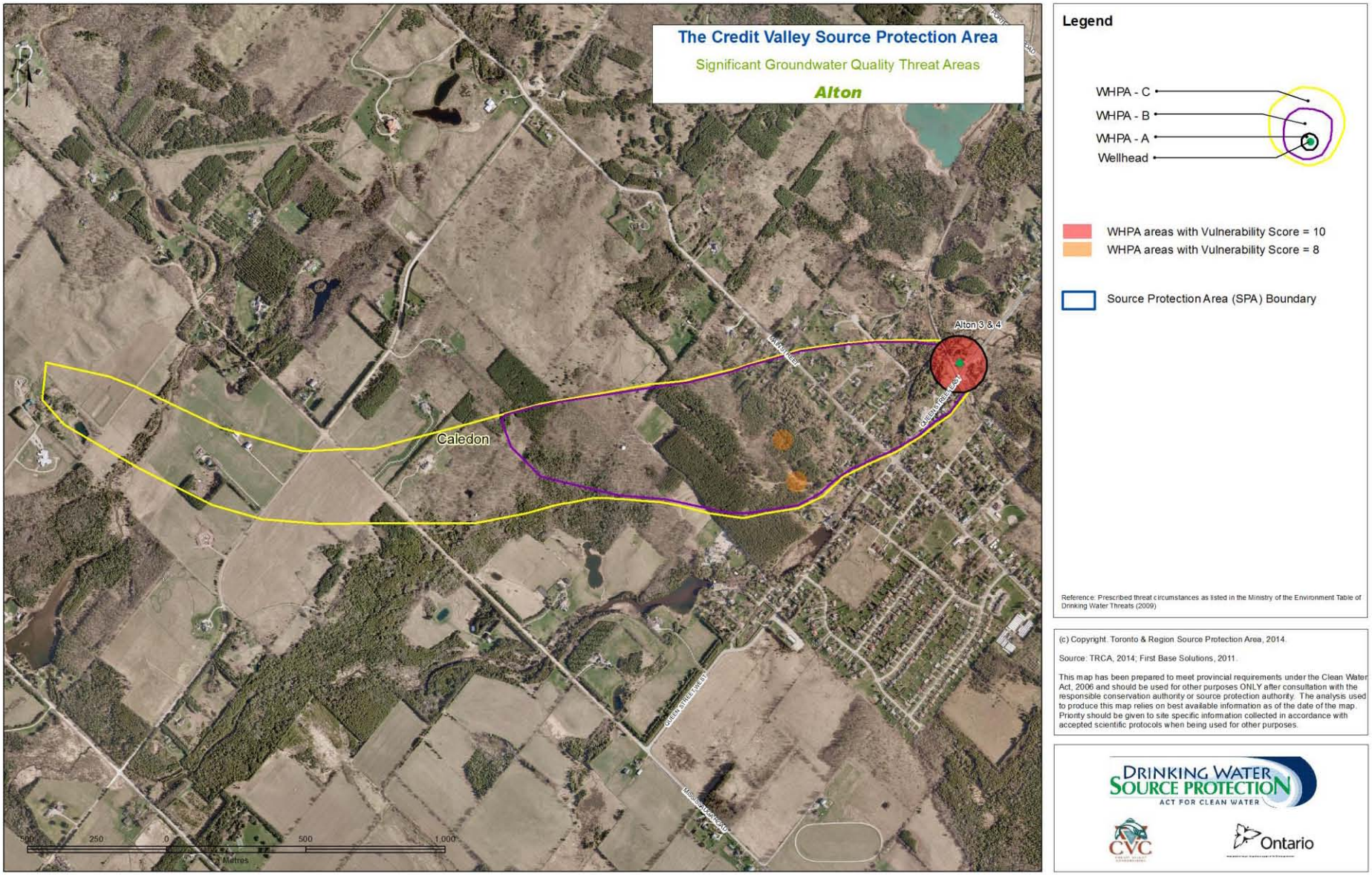
Map 2.5: Erin – Significant DNAPL Threat Areas



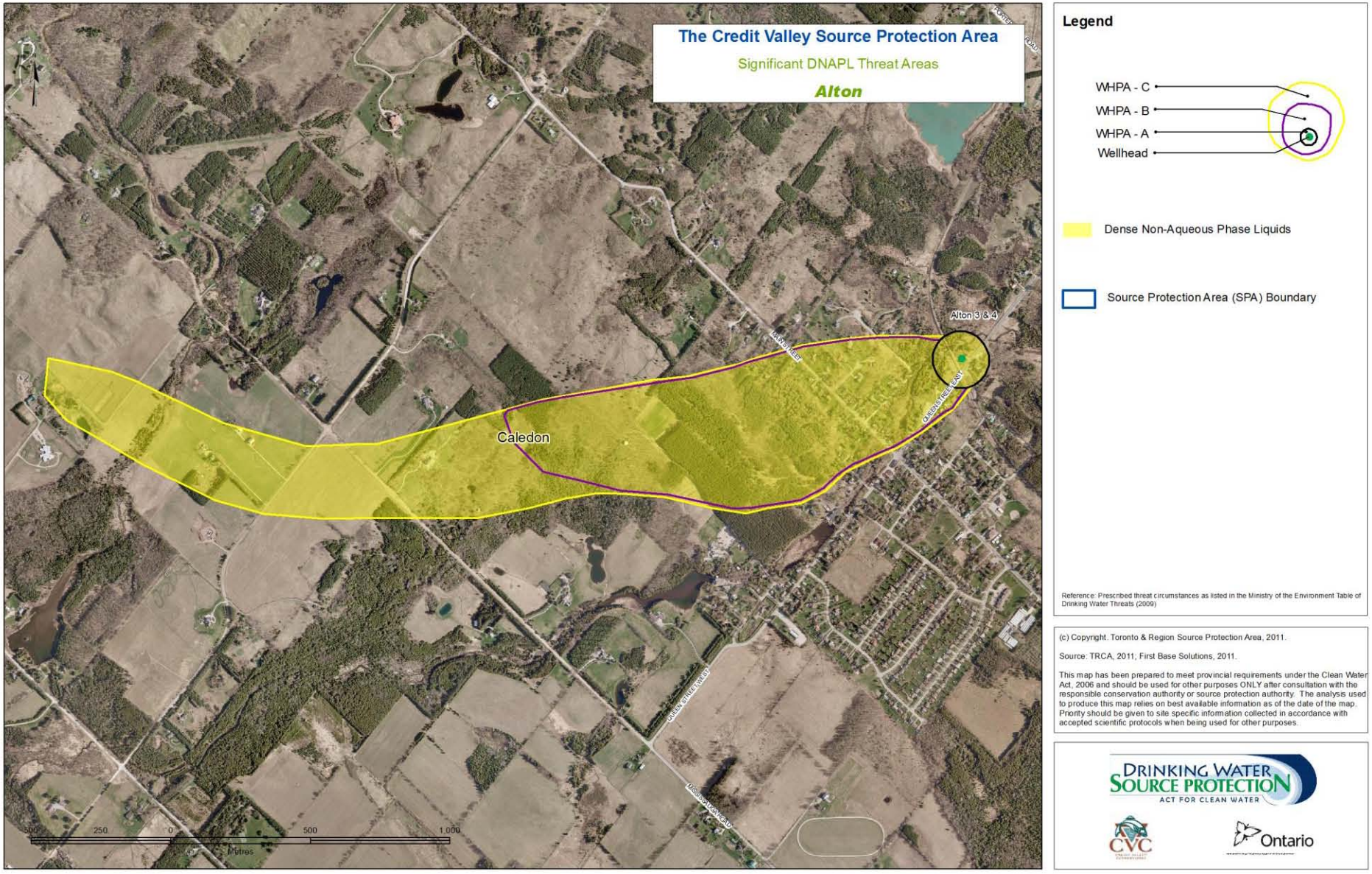
Map 1.6: Bel-Erin – Significant Groundwater Quality Threat Areas



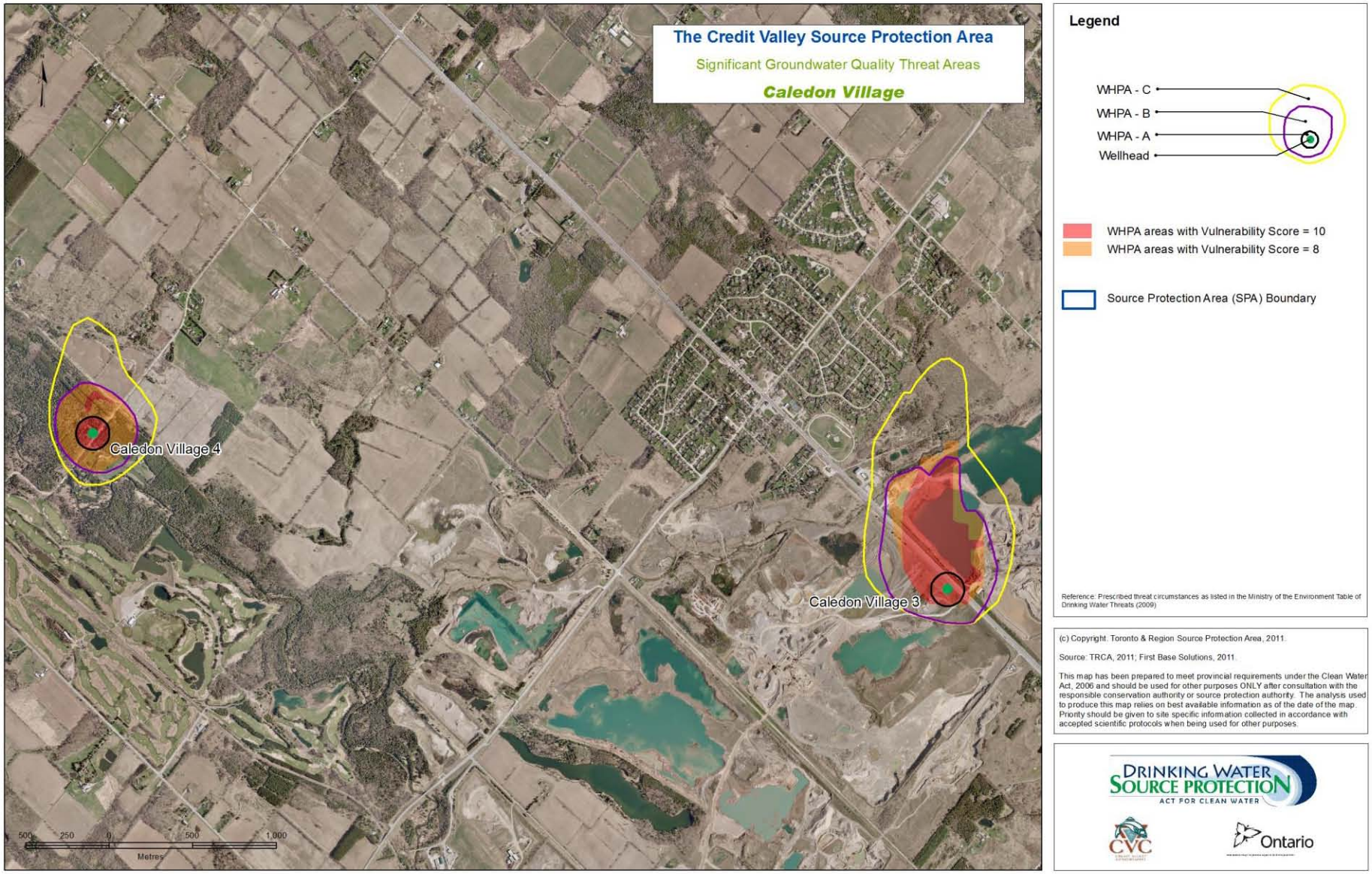
Map 2.6: Bel-Erin – Significant DNAPL Threat Areas



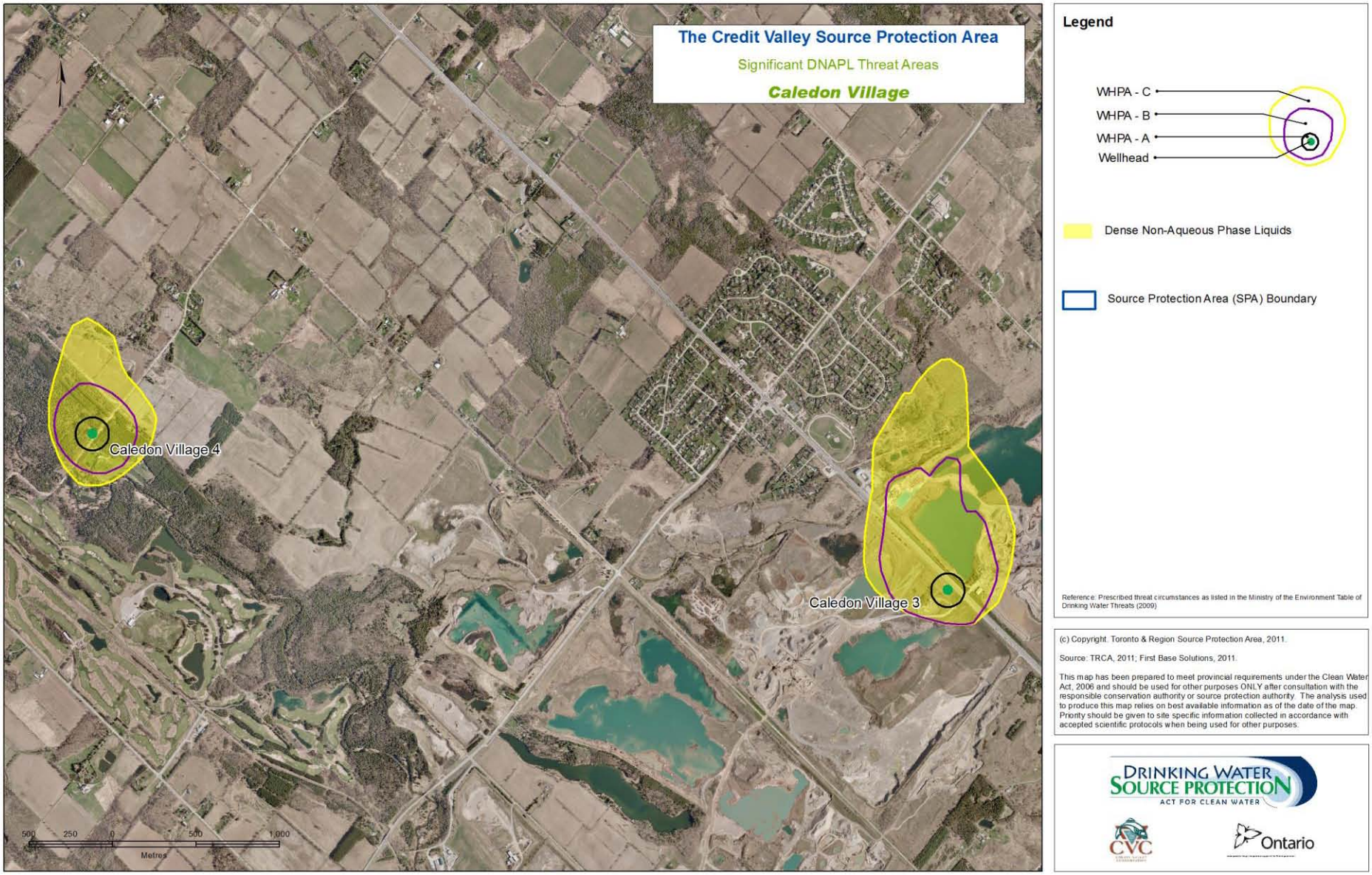
Map 1.7: Alton – Significant Groundwater Quality Threat Areas



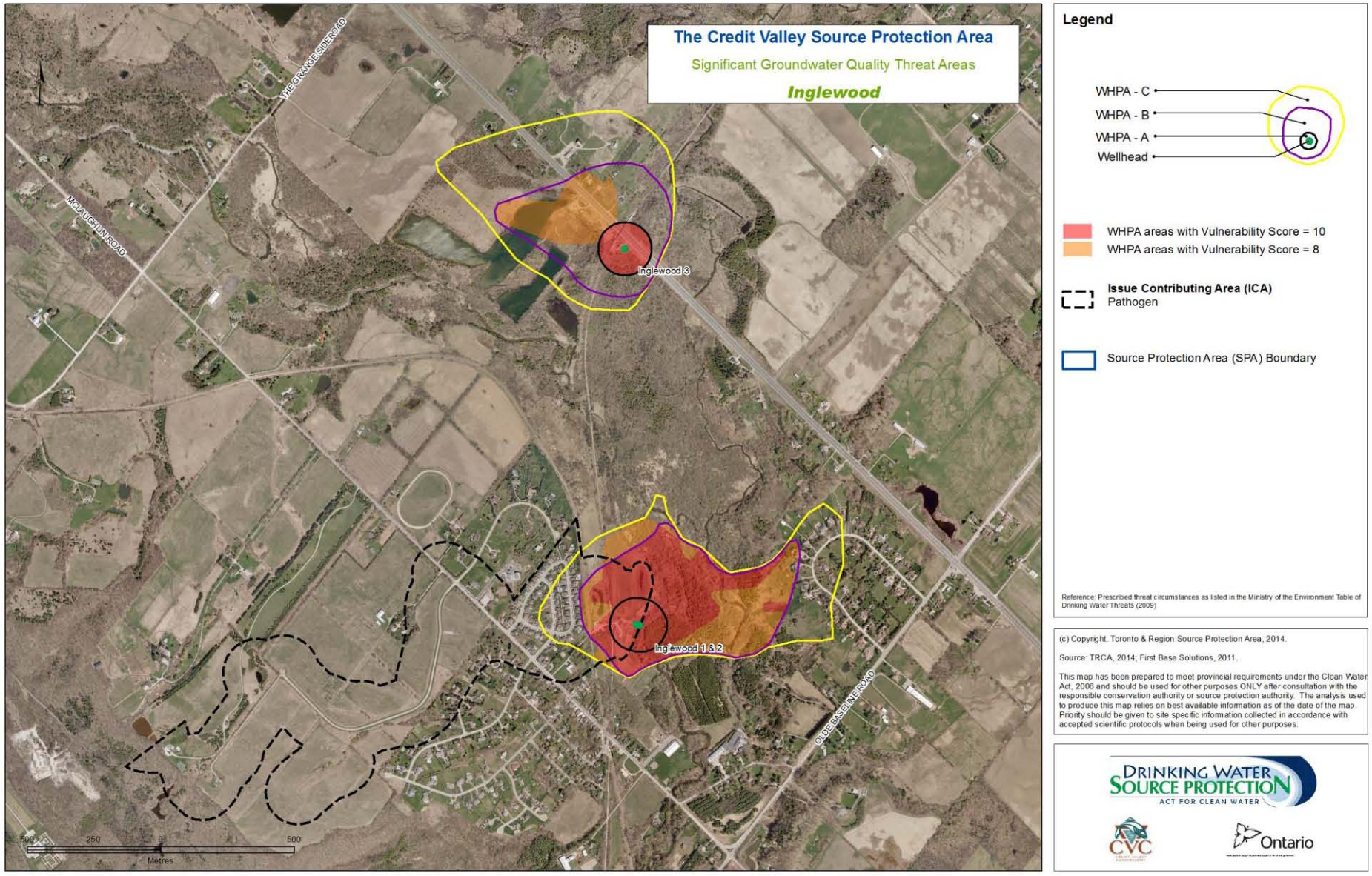
Map 2.7: Alton – Significant DNAPL Threat Areas



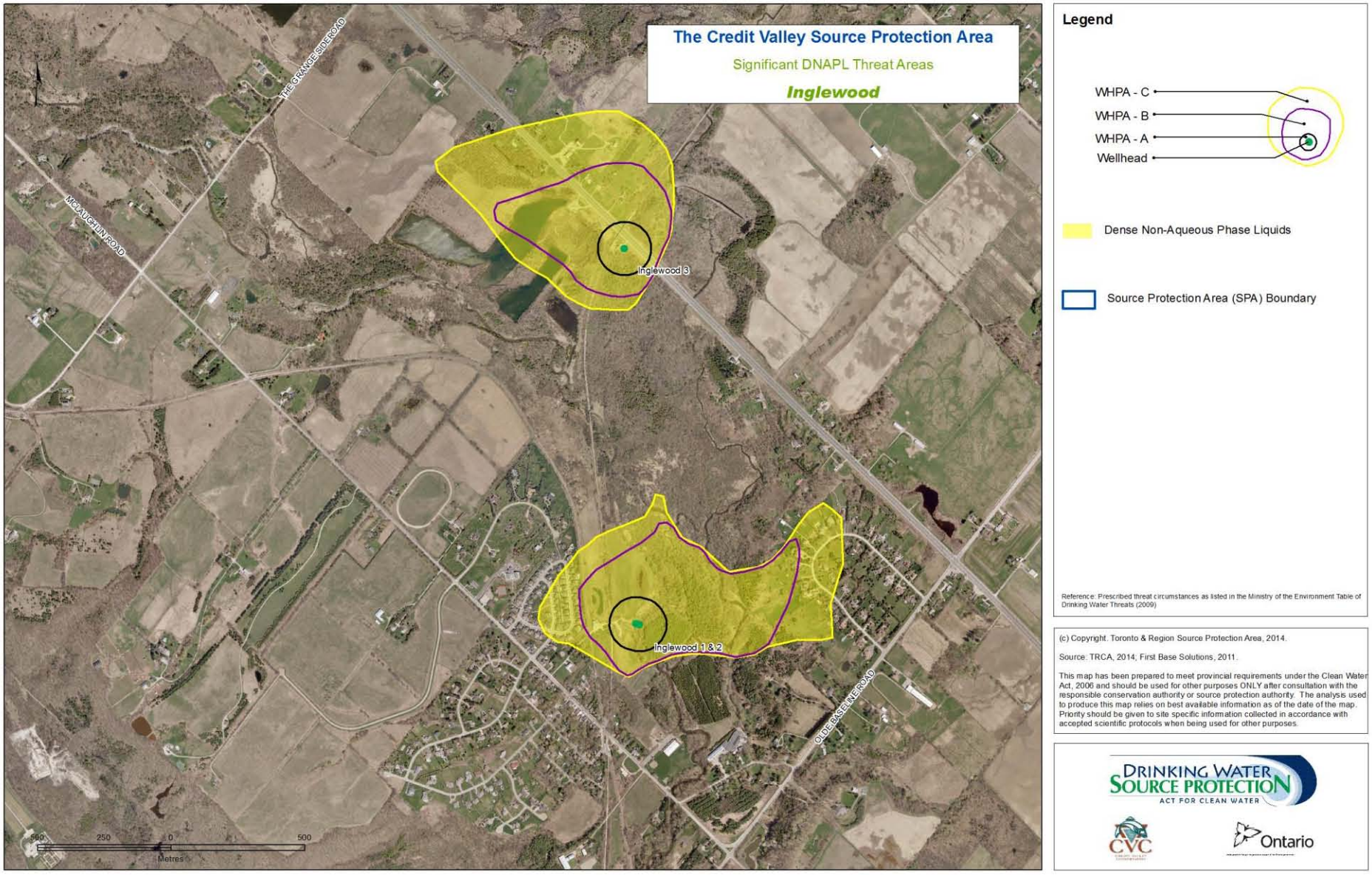
Map 1.8: Caledon Village – Significant Groundwater Quality Threat Areas



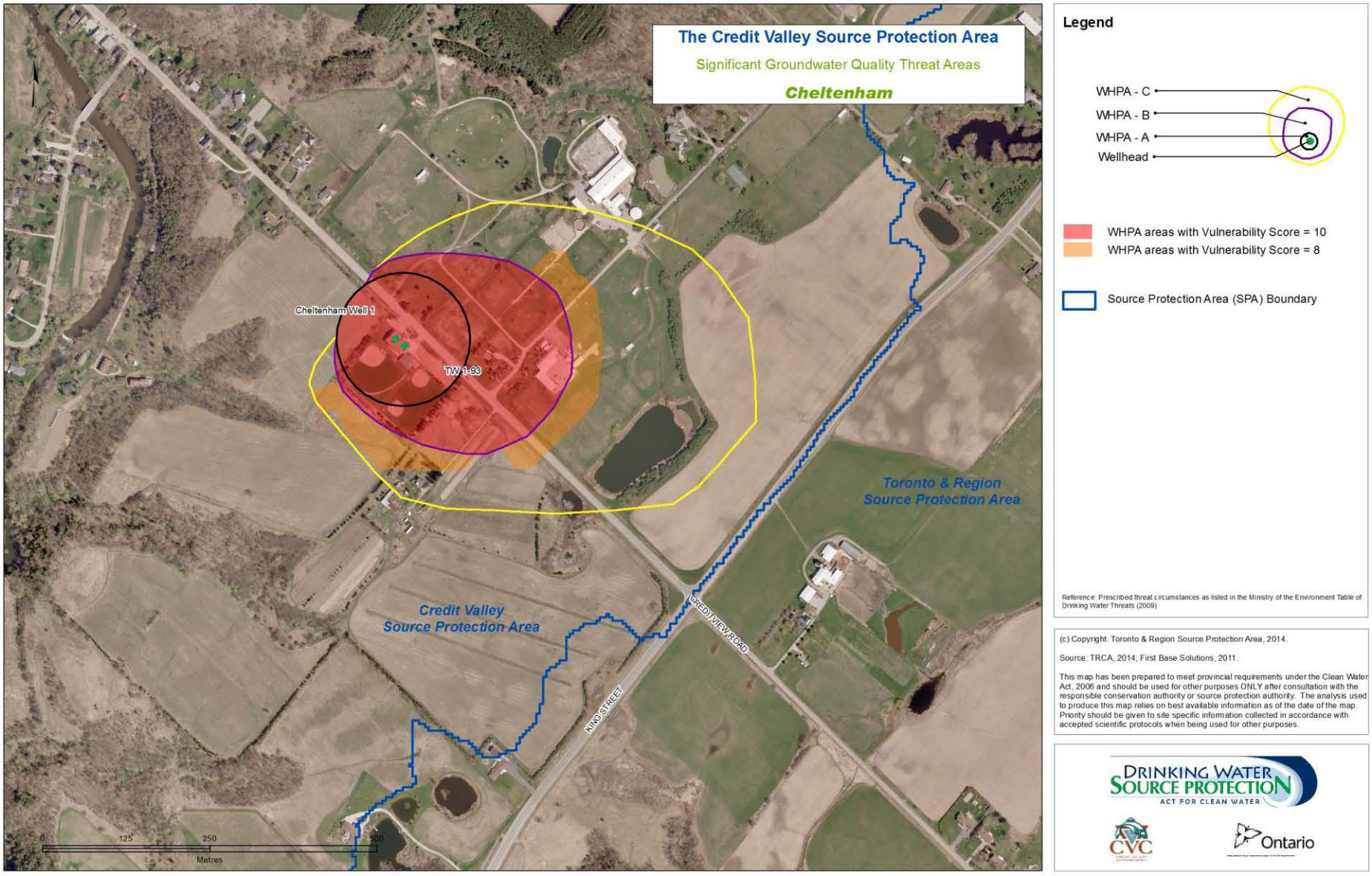
Map 2.8: Caledon Village – Significant DNAPL Threat Areas



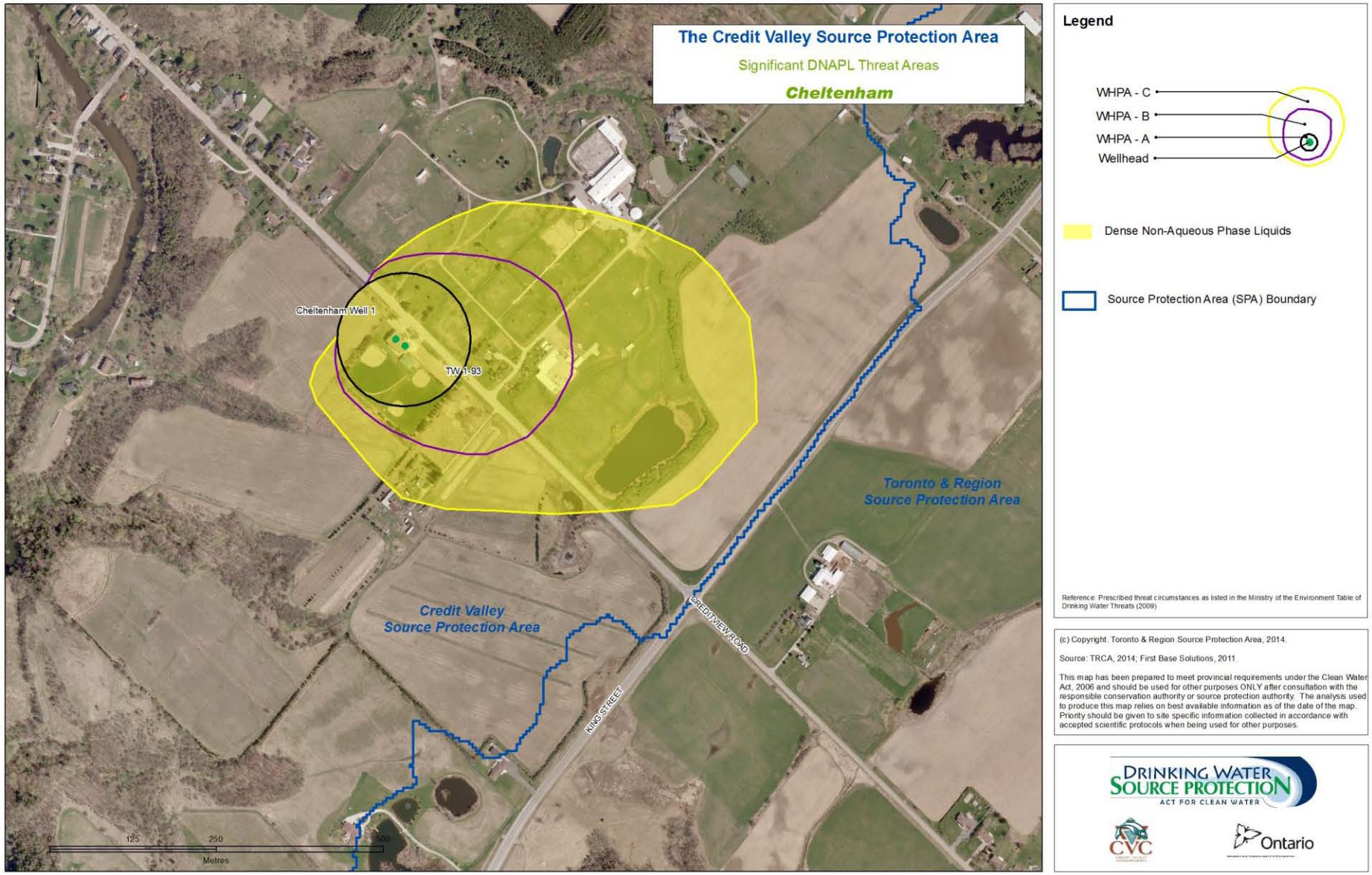
Map 1.9: Inglewood – Significant Groundwater Quality Threat Areas



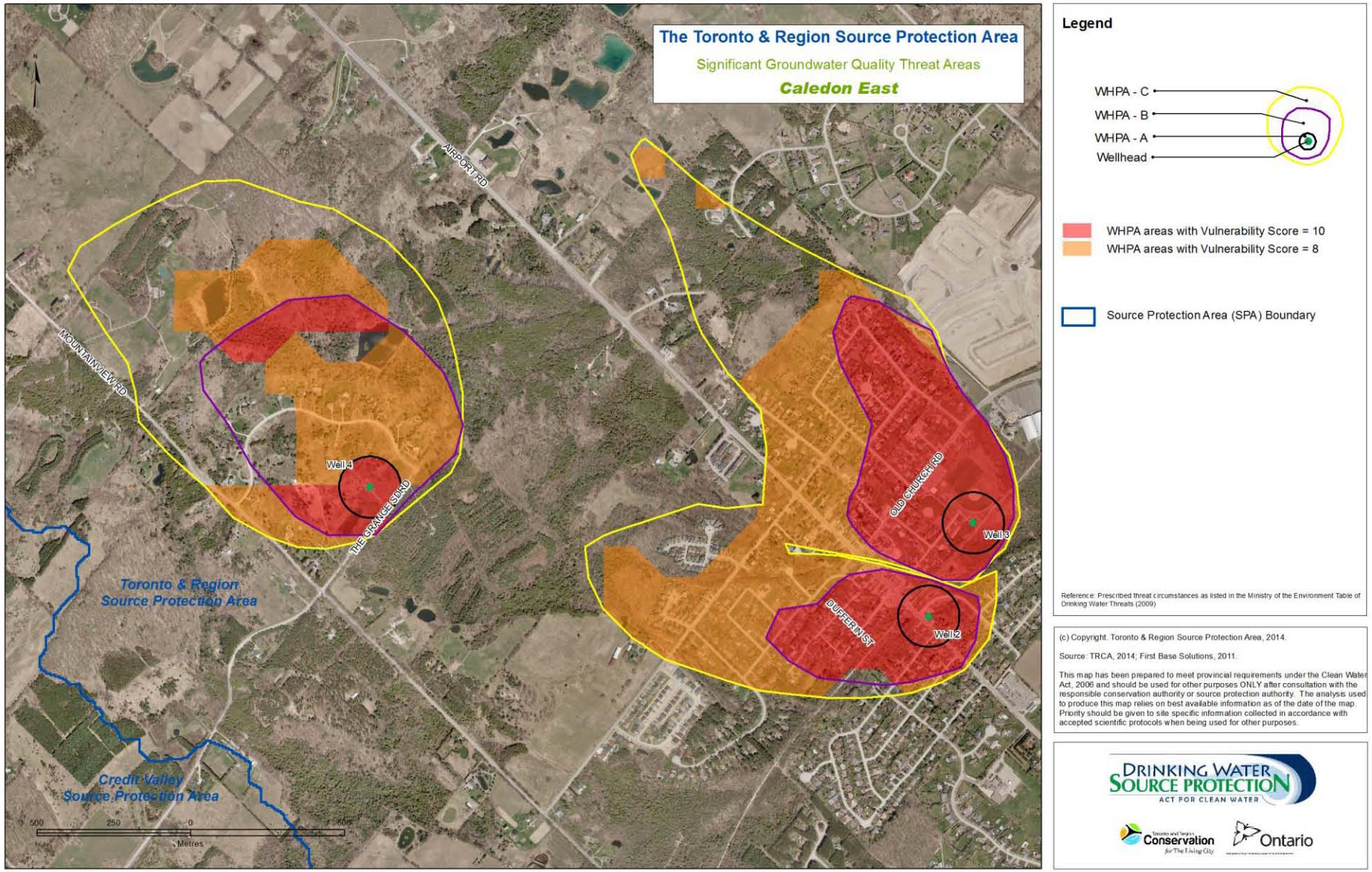
Map 2.9: Inglewood – Significant DNAPL Threat Areas



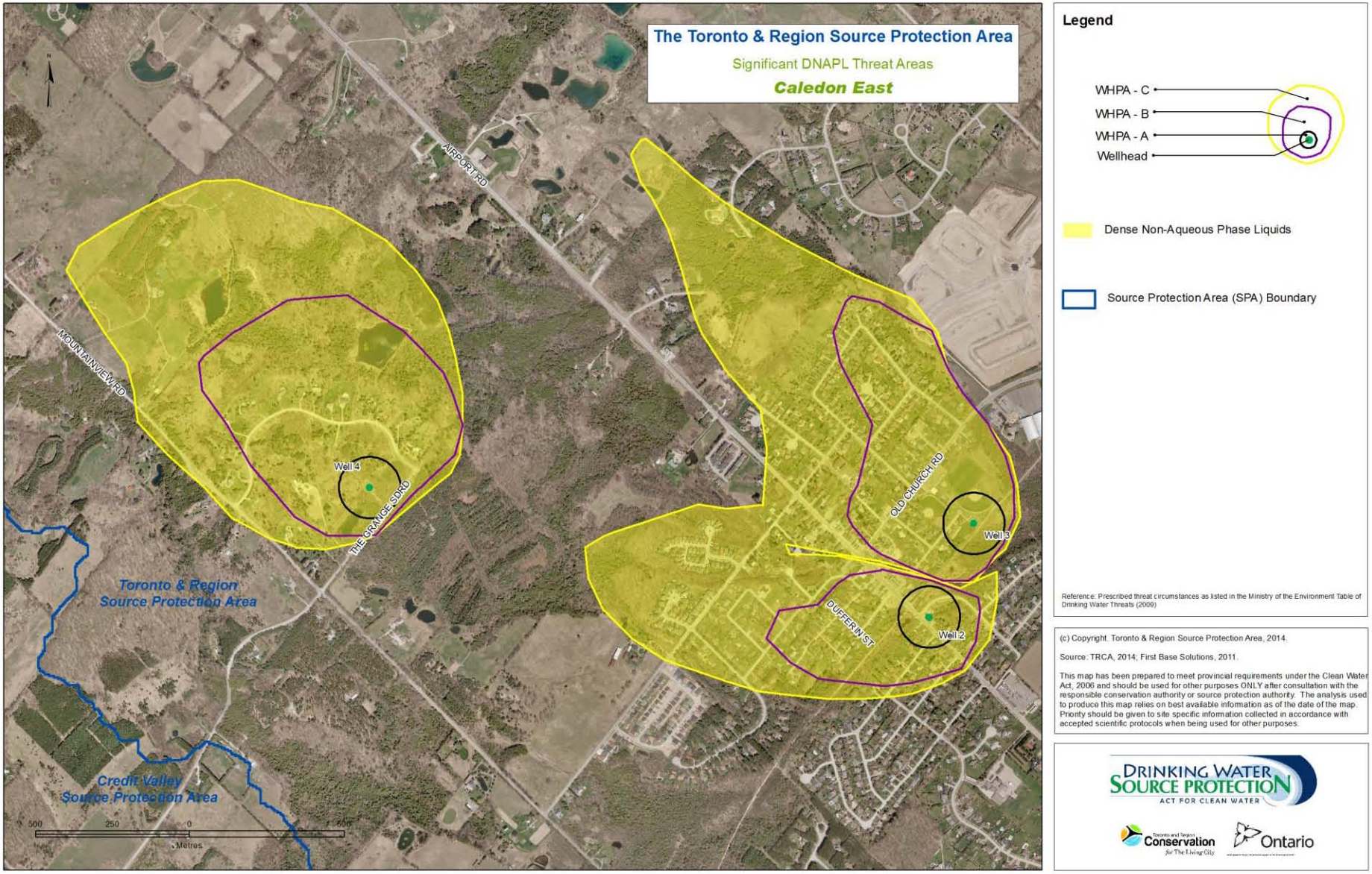
Map 1.10: Cheltenham – Significant Groundwater Quality Threat Areas



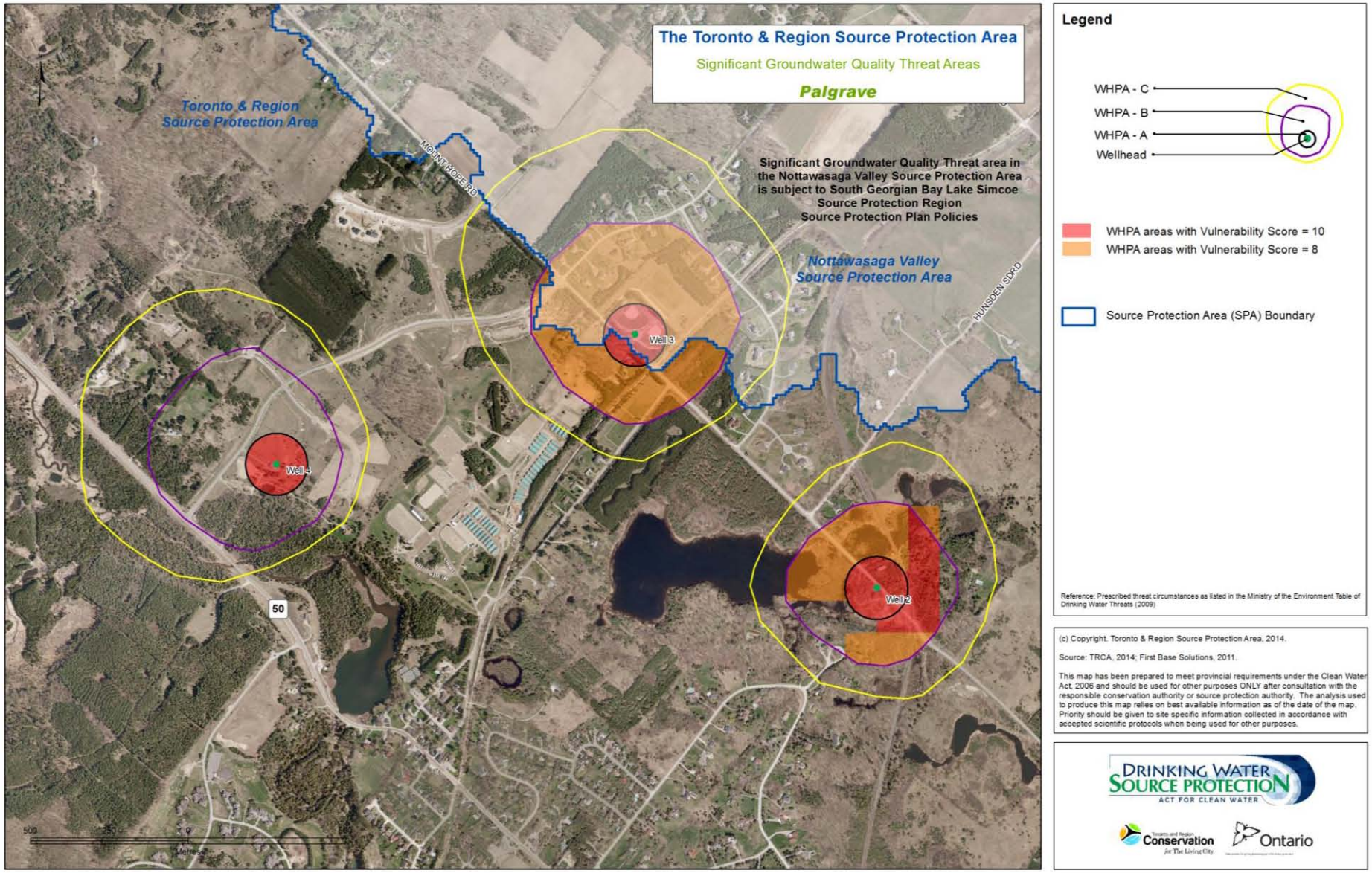
Map 2.10: Cheltenham – Significant DNAPL Threat Areas



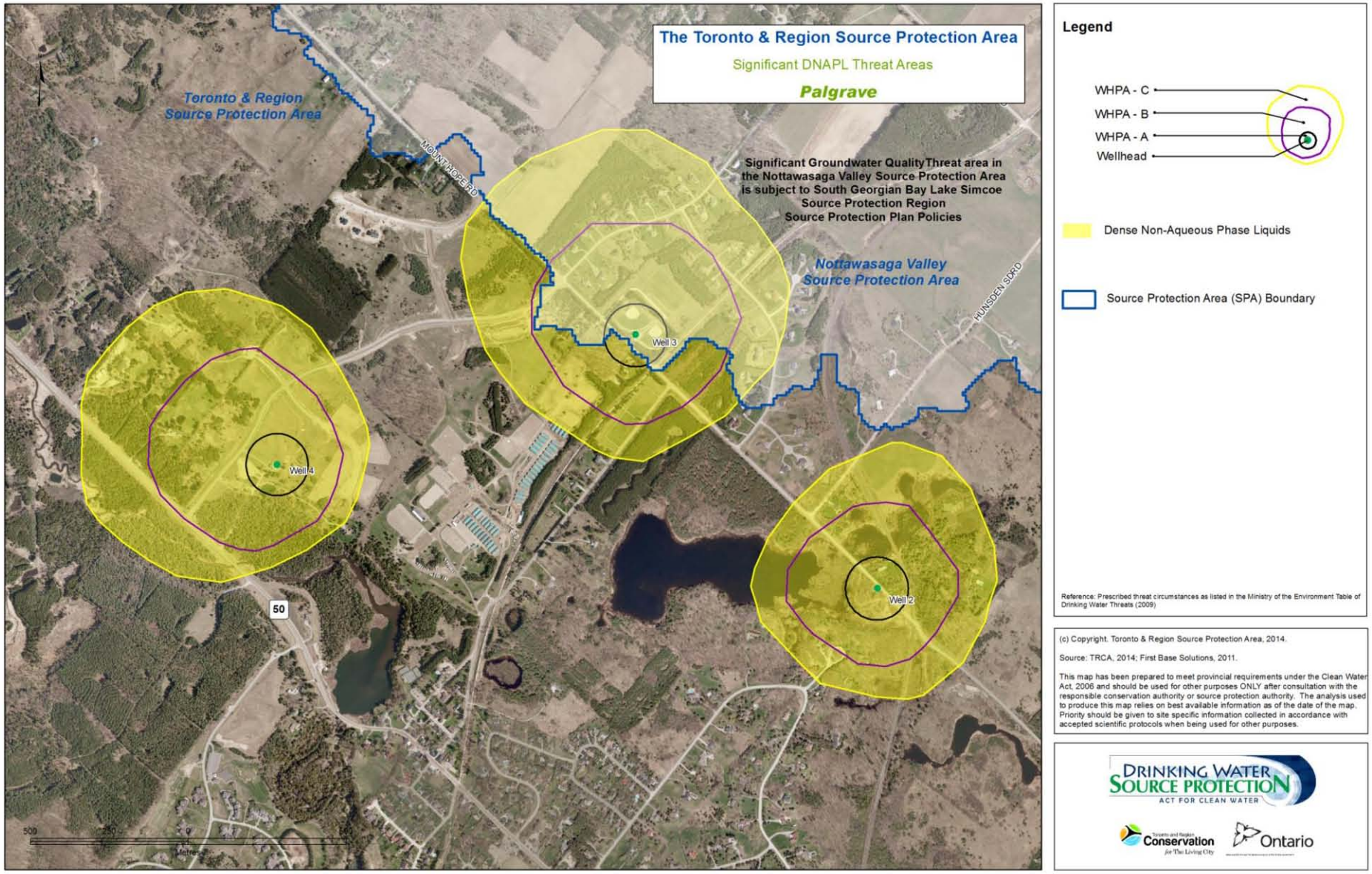
Map 1.11: Caledon East – Significant Groundwater Quality Threat Areas



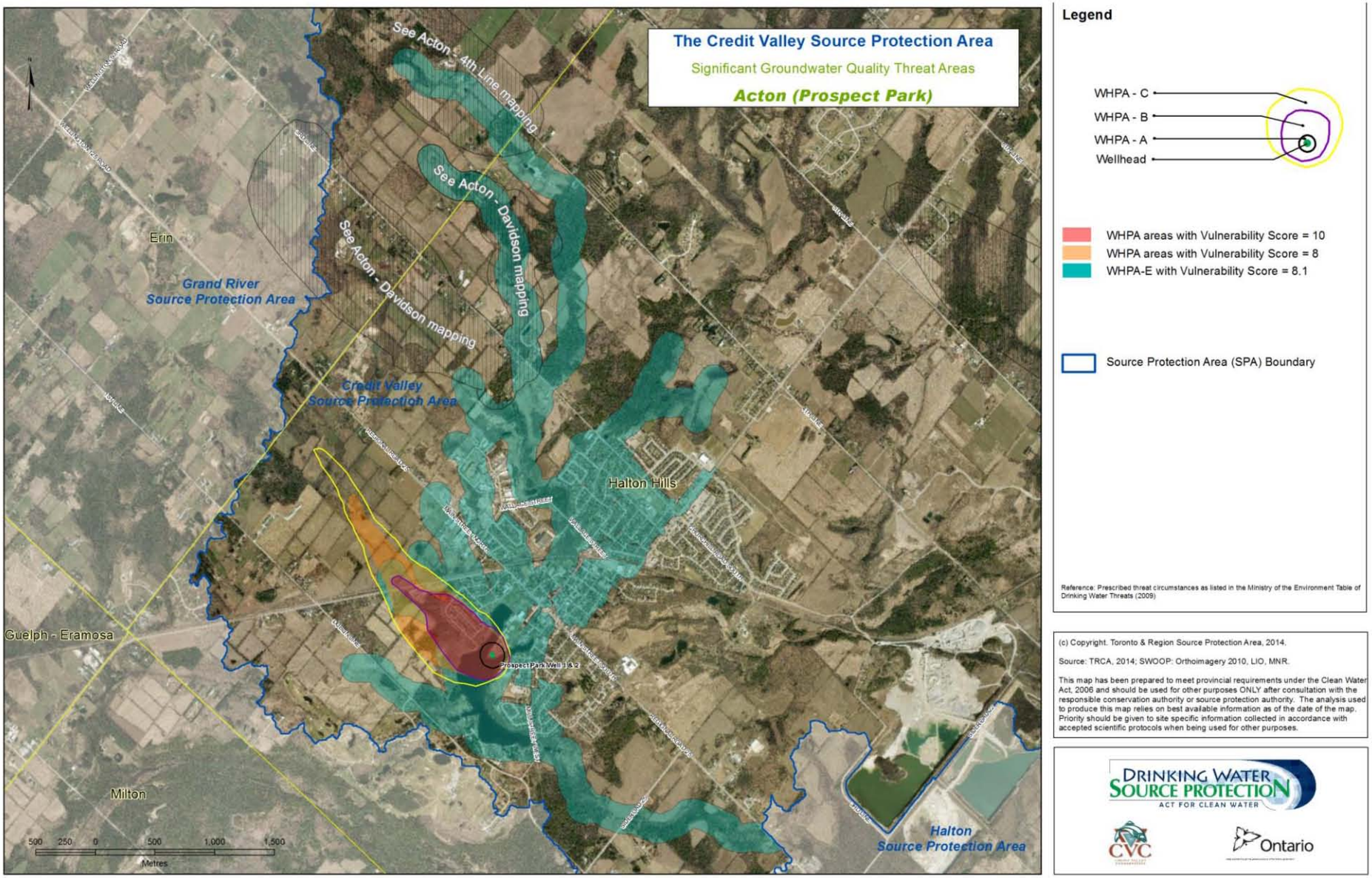
Map 2.11: Caledon East – Significant DNAPL Threat Areas



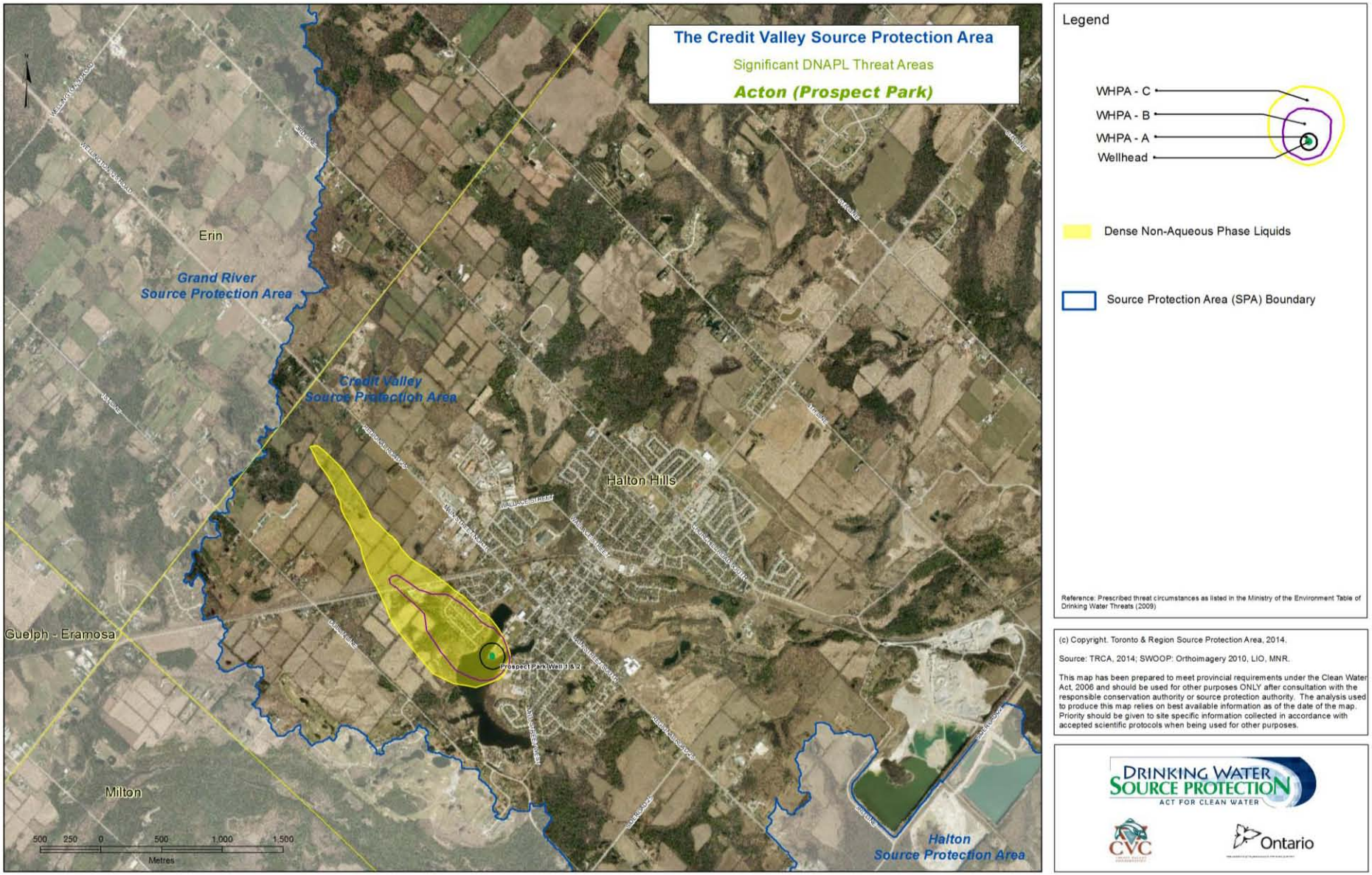
Map 1.12: Palgrave – Significant Groundwater Quality Threat Areas



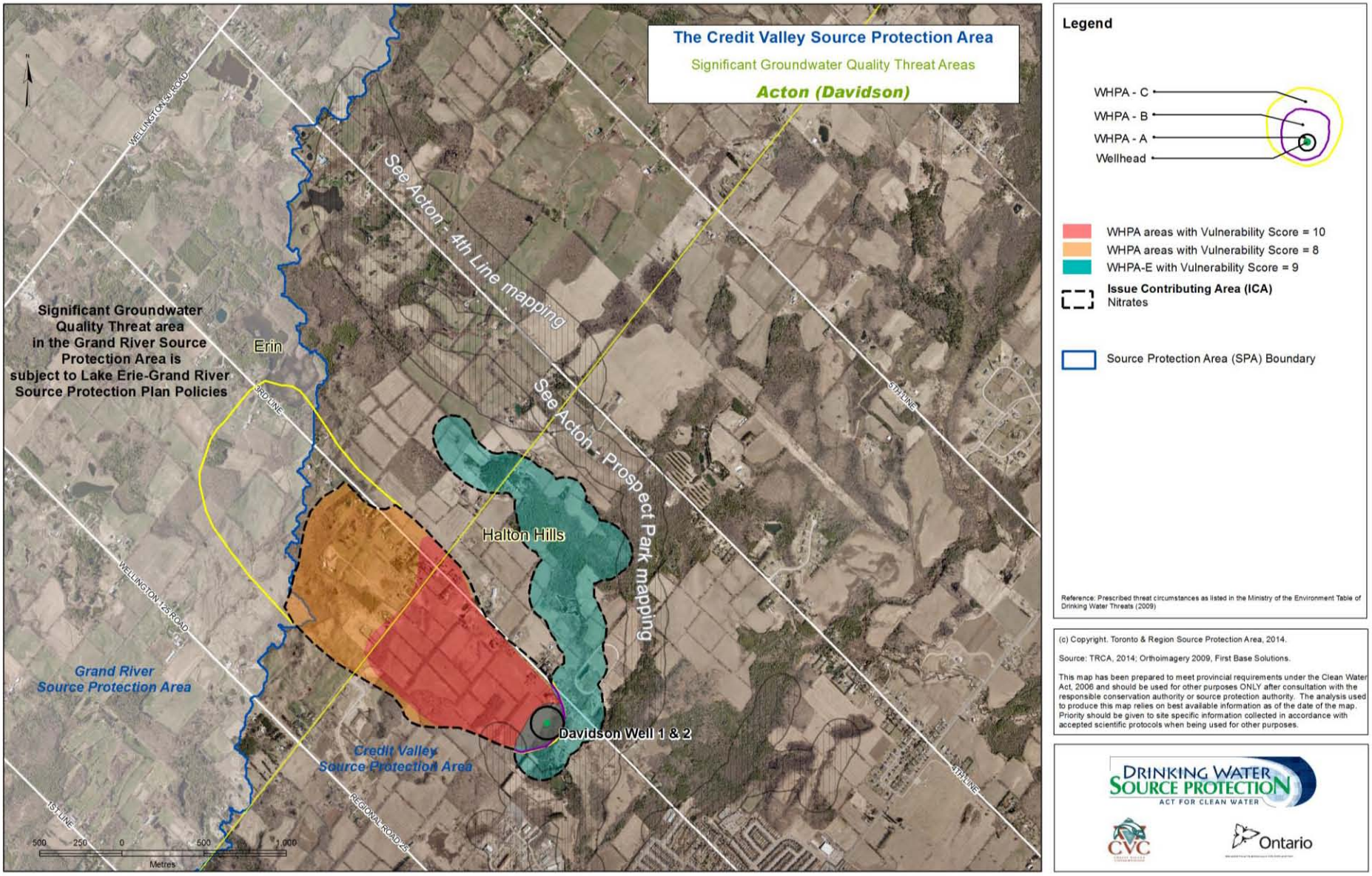
Map 2.12: Palgrave – Significant DNAPL Threat Areas



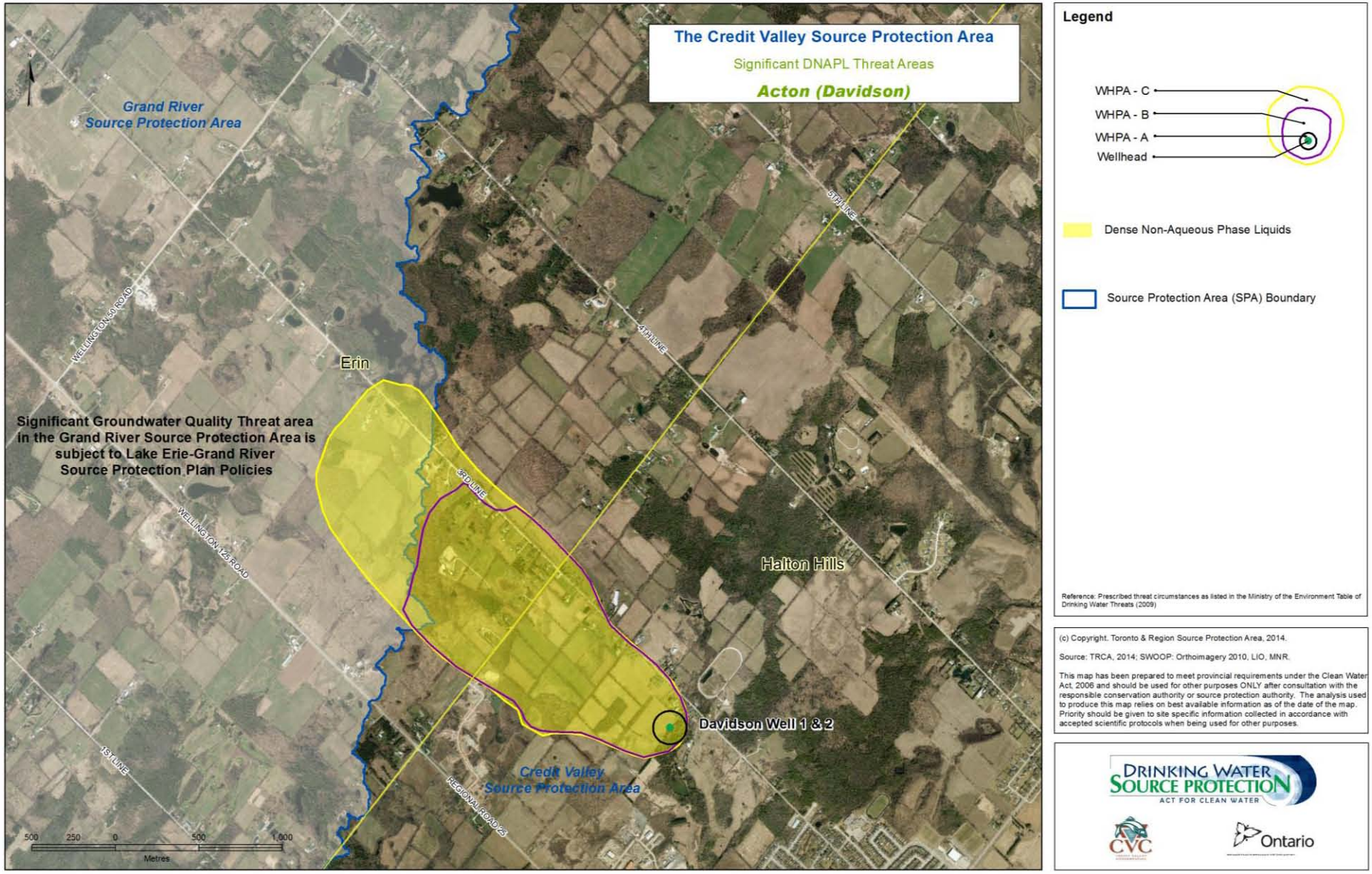
Map 1.13: Acton (Prospect Park) – Significant Groundwater Quality Threat Areas



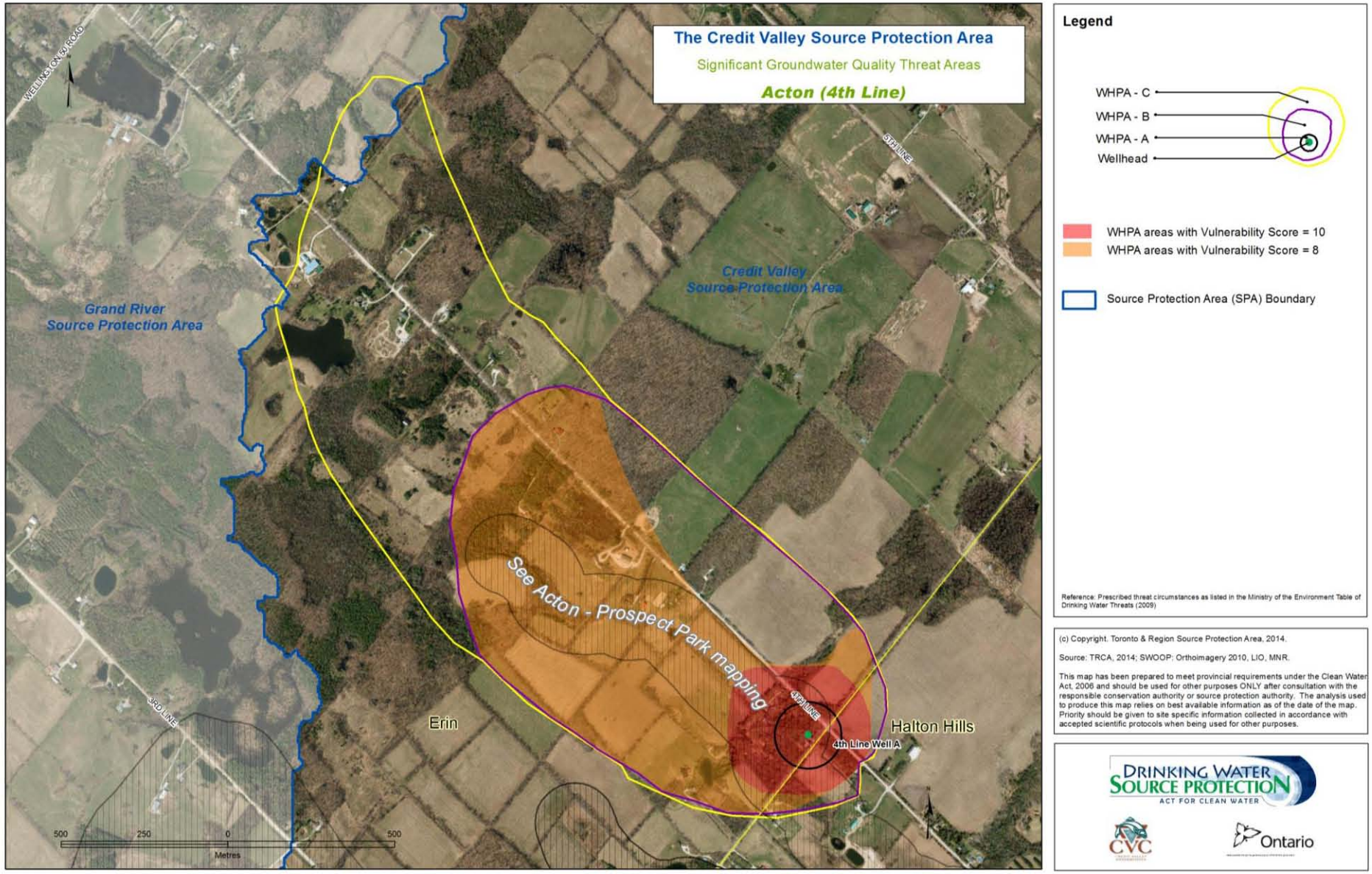
Map 2.13: Acton (Prospect Park) – Significant DNAPL Threat Areas



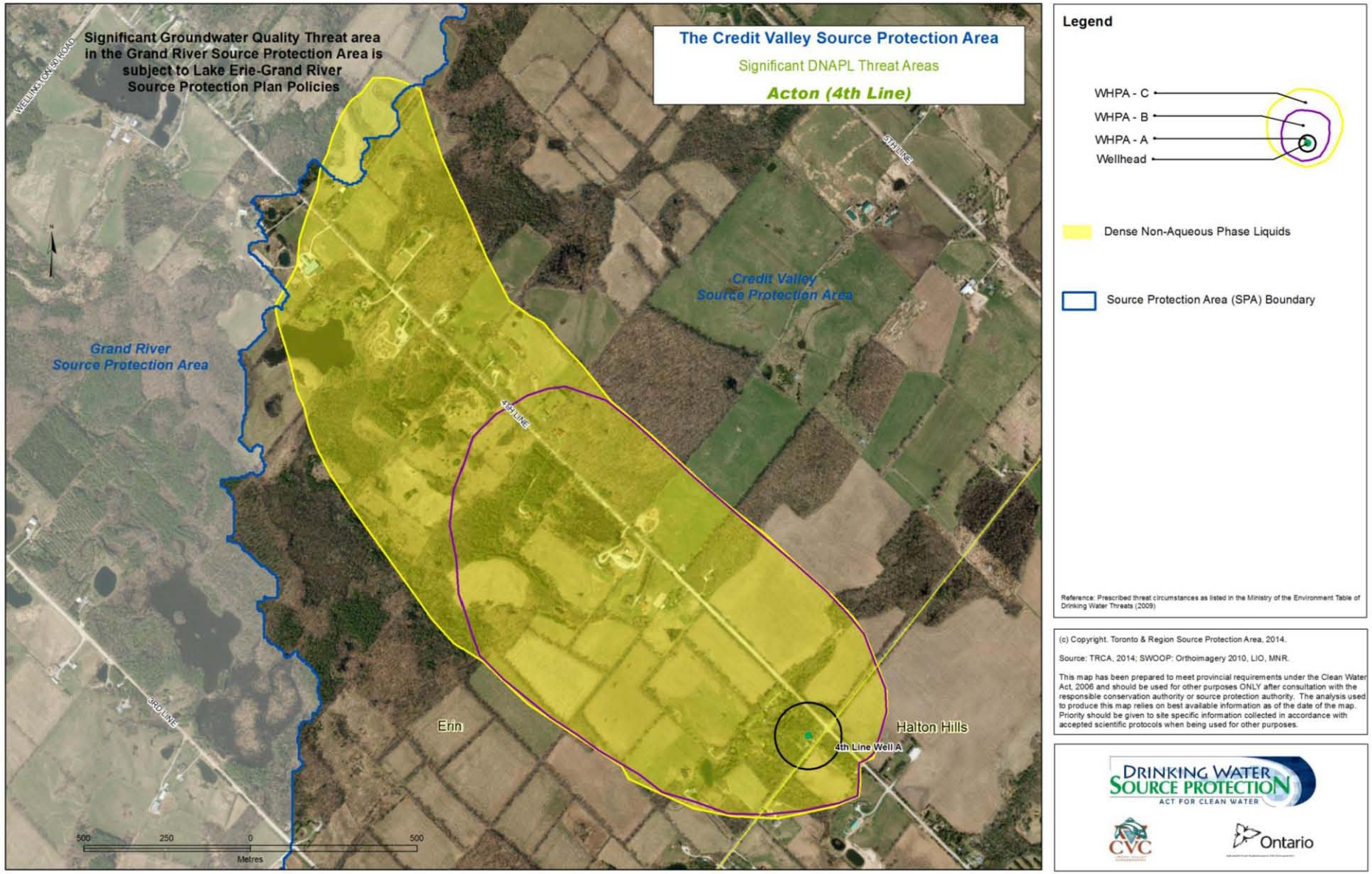
Map 1.14: Acton (Davidson) – Significant Groundwater Quality Threat Areas



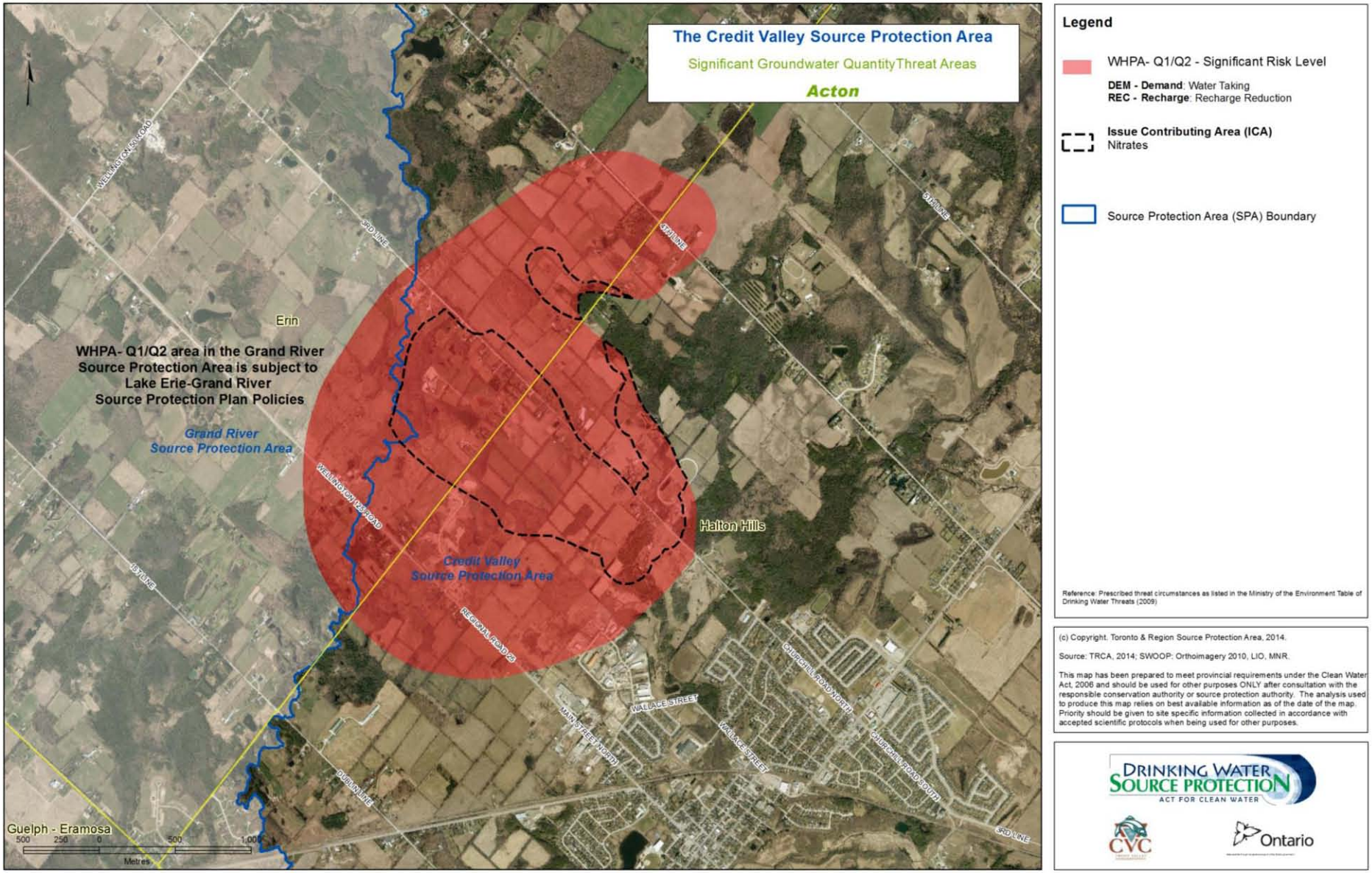
Map 2.14: Acton (Davidson) – Significant DNAPL Threat Areas



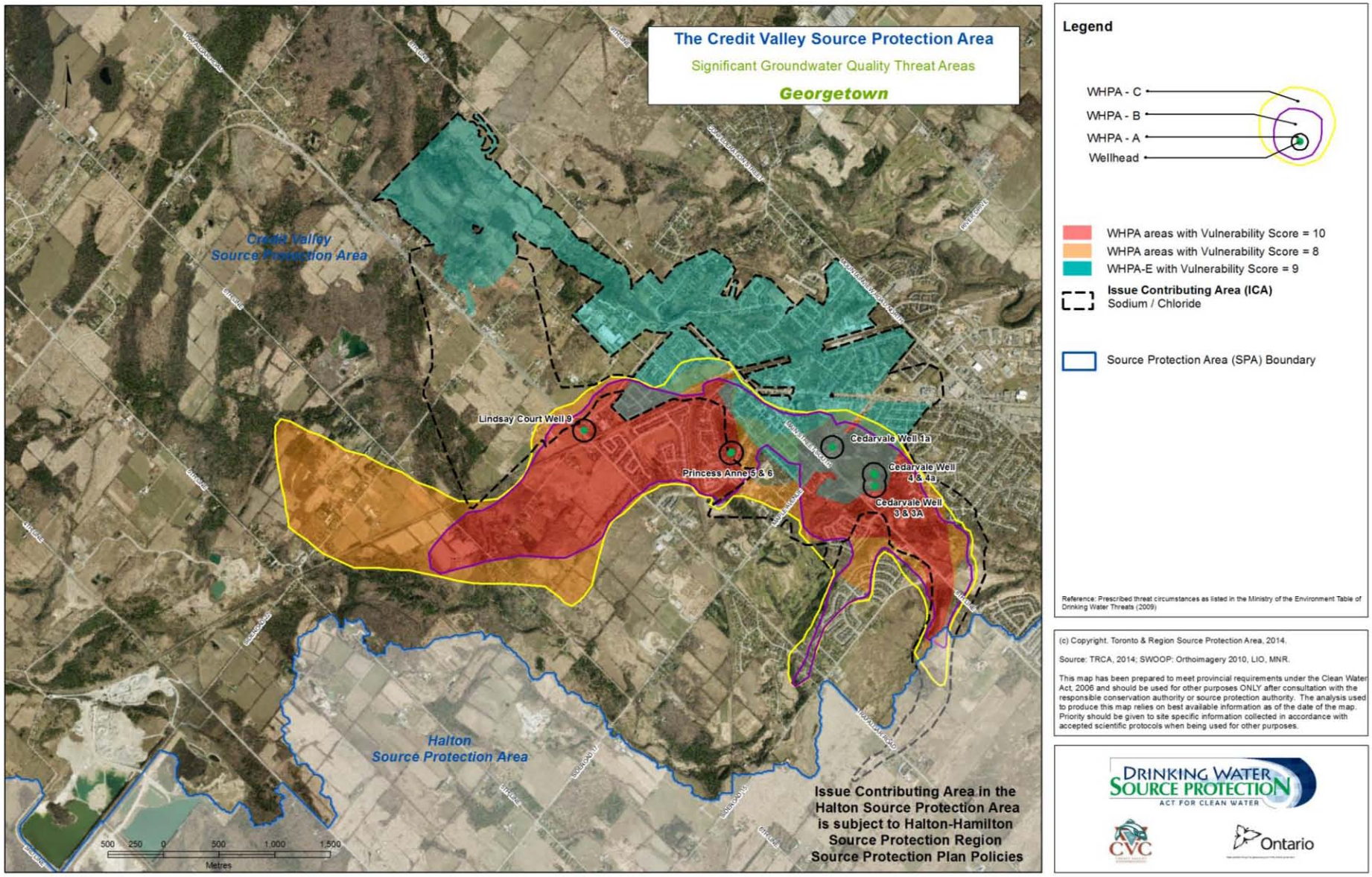
Map 1.15: Acton (4th Line) – Significant Groundwater Quality Threat Areas



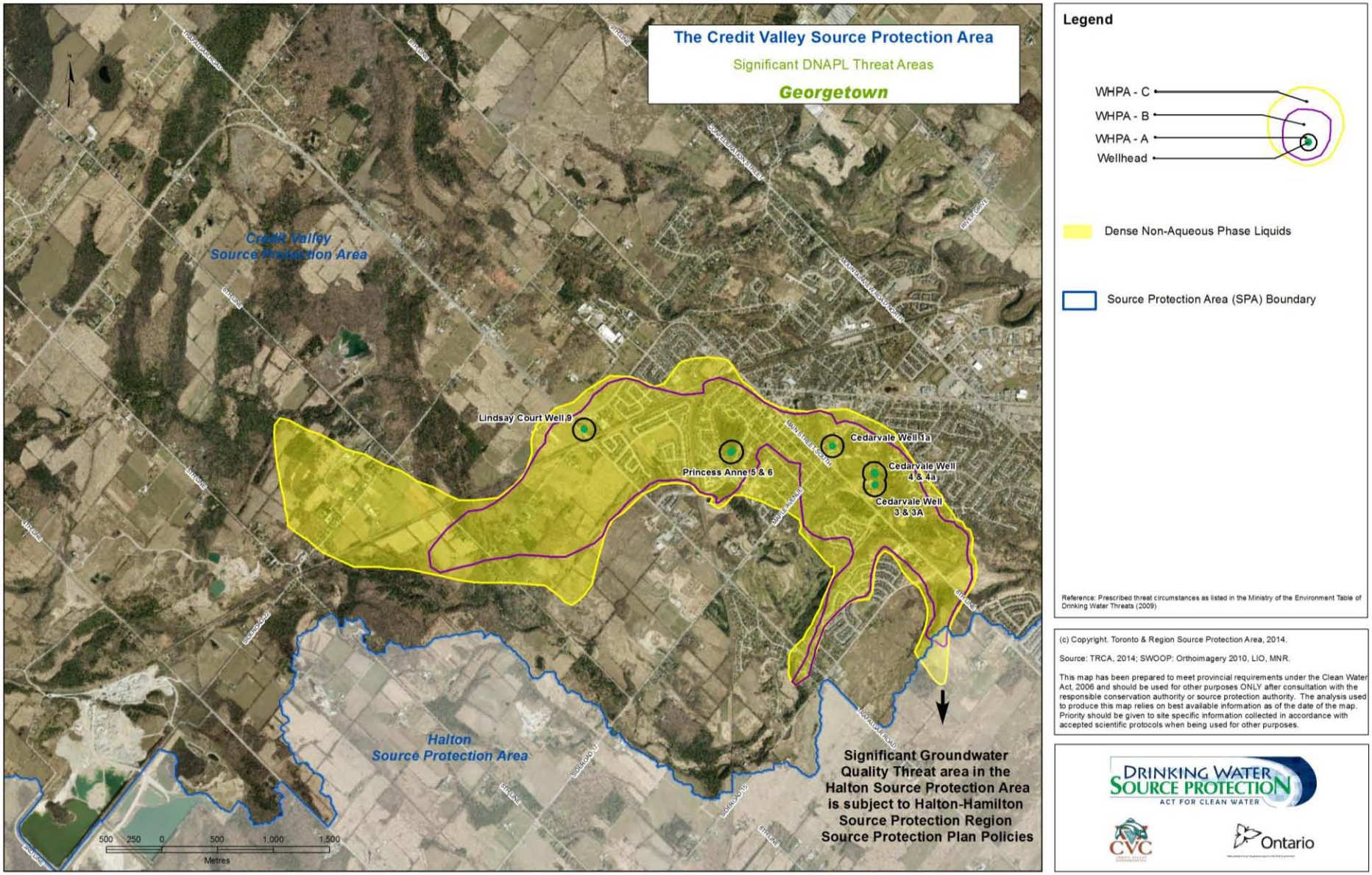
Map 2.15: Acton (4th Line) – Significant DNAPL Threat Areas



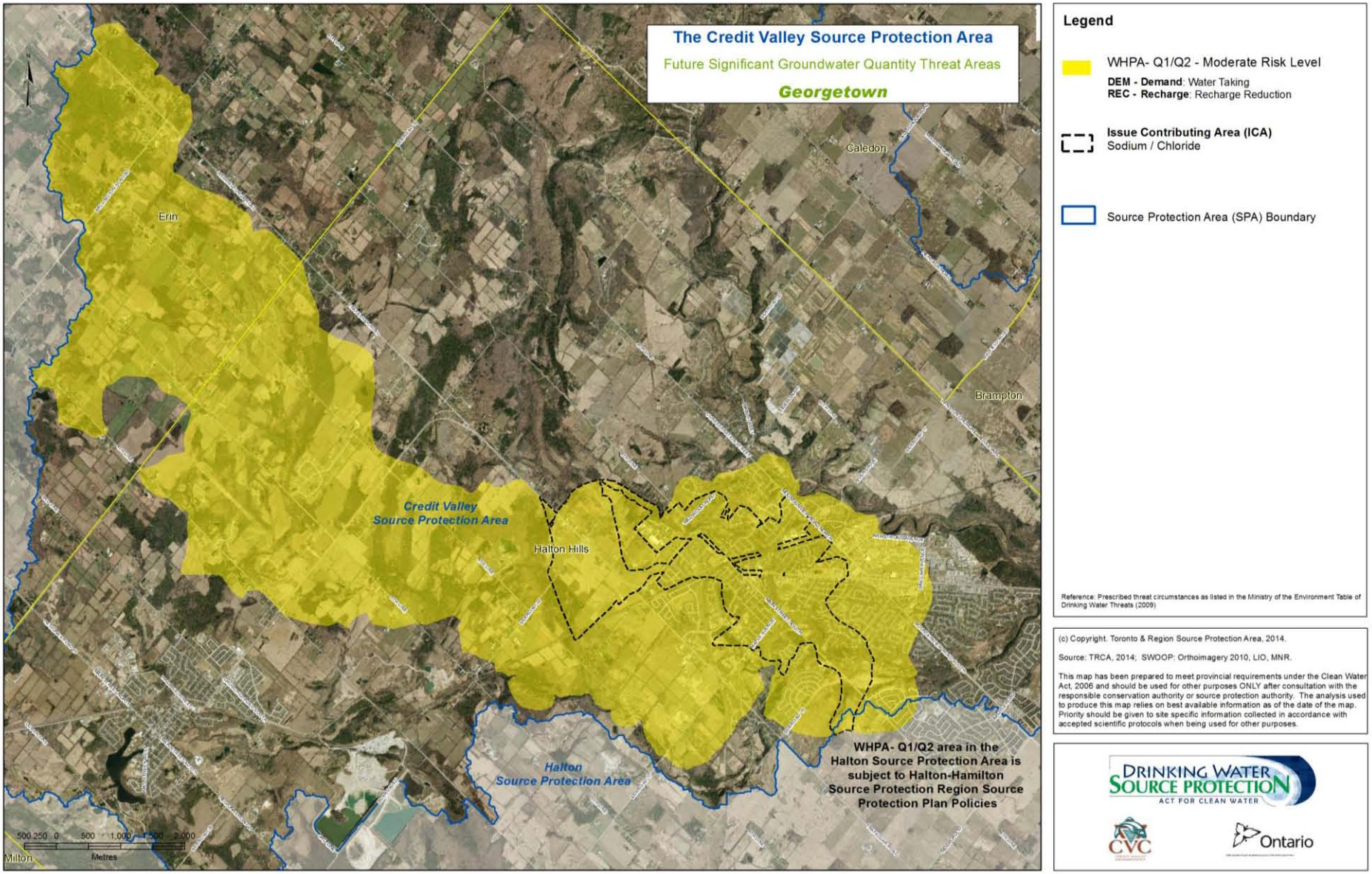
Map 3.2: Acton – Significant Groundwater Quantity Threat Areas



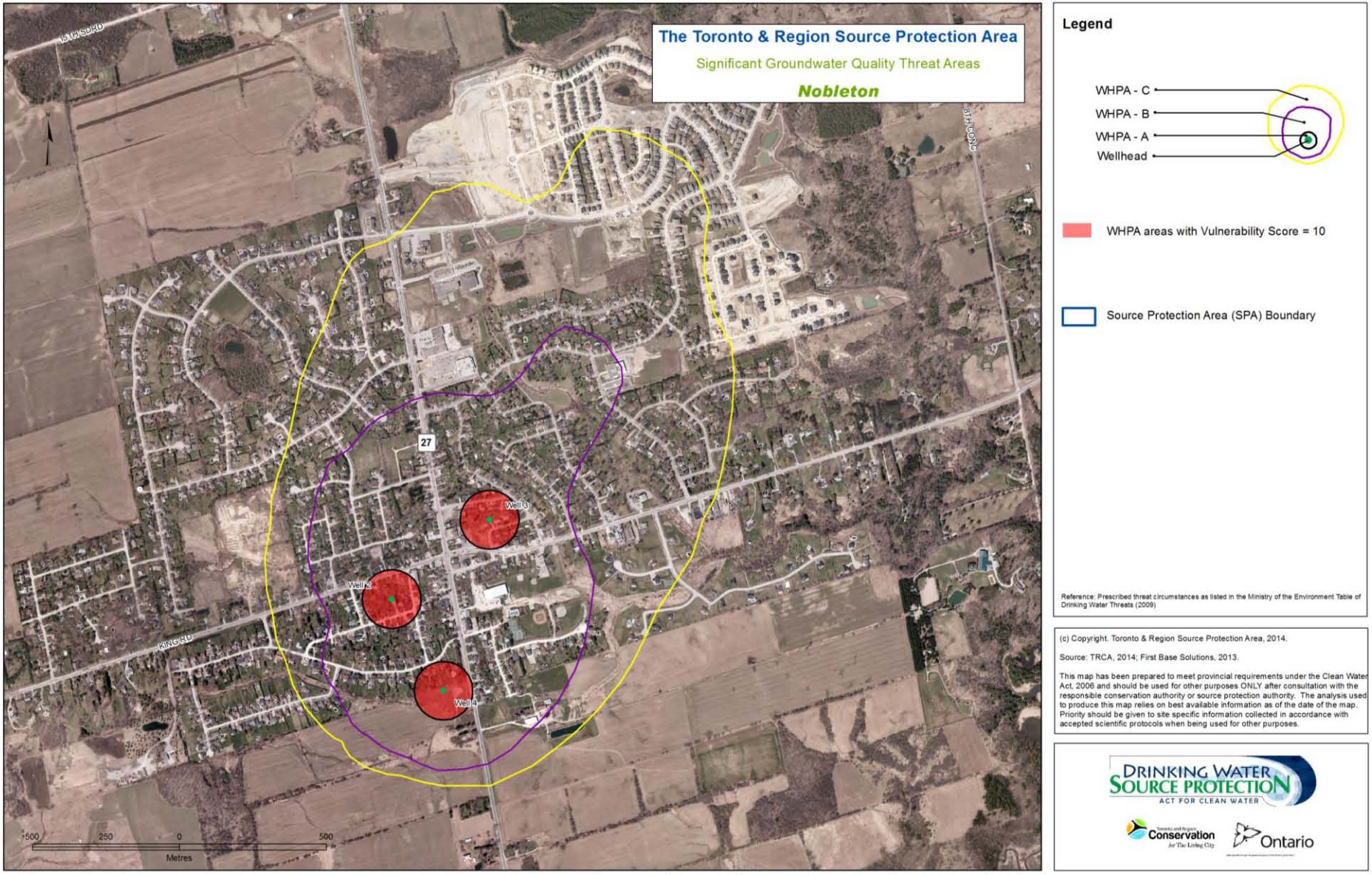
Map 1.16: Georgetown – Significant Groundwater Quality Threat Areas



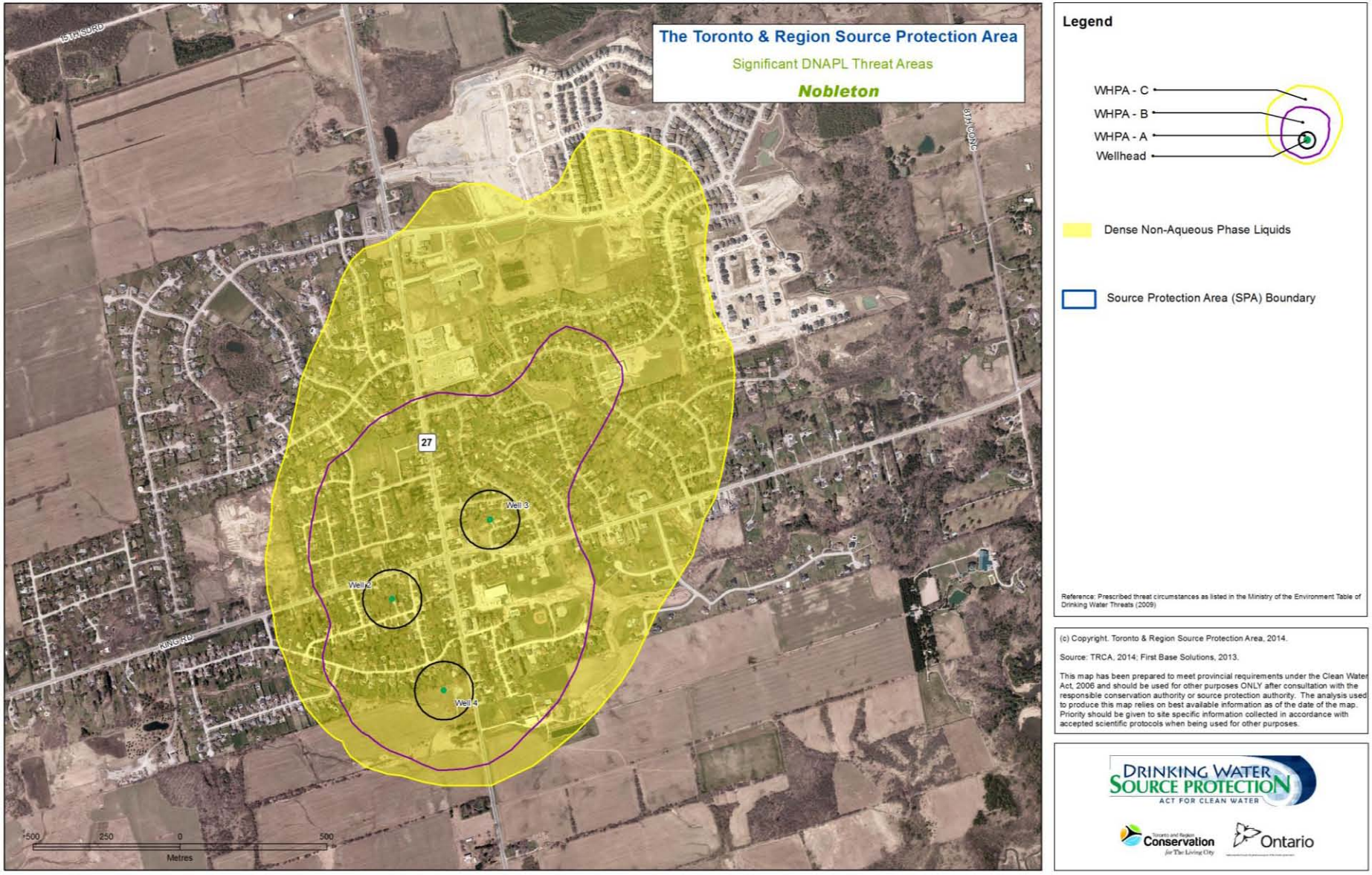
Map 2.16: Georgetown – Significant DNAPL Threat Areas



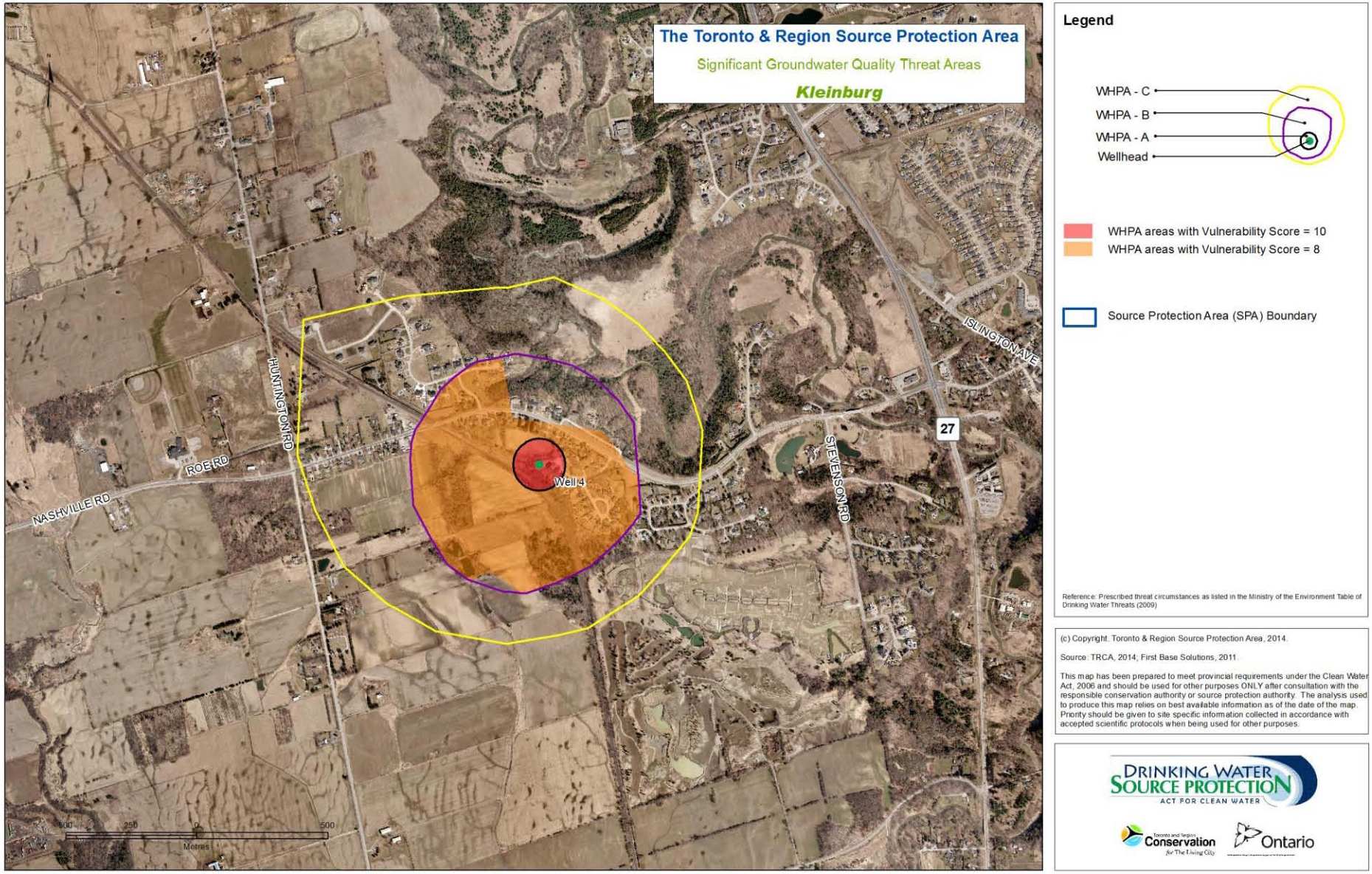
Map 3.3: Georgetown – Future Significant Groundwater Quantity Threat Areas



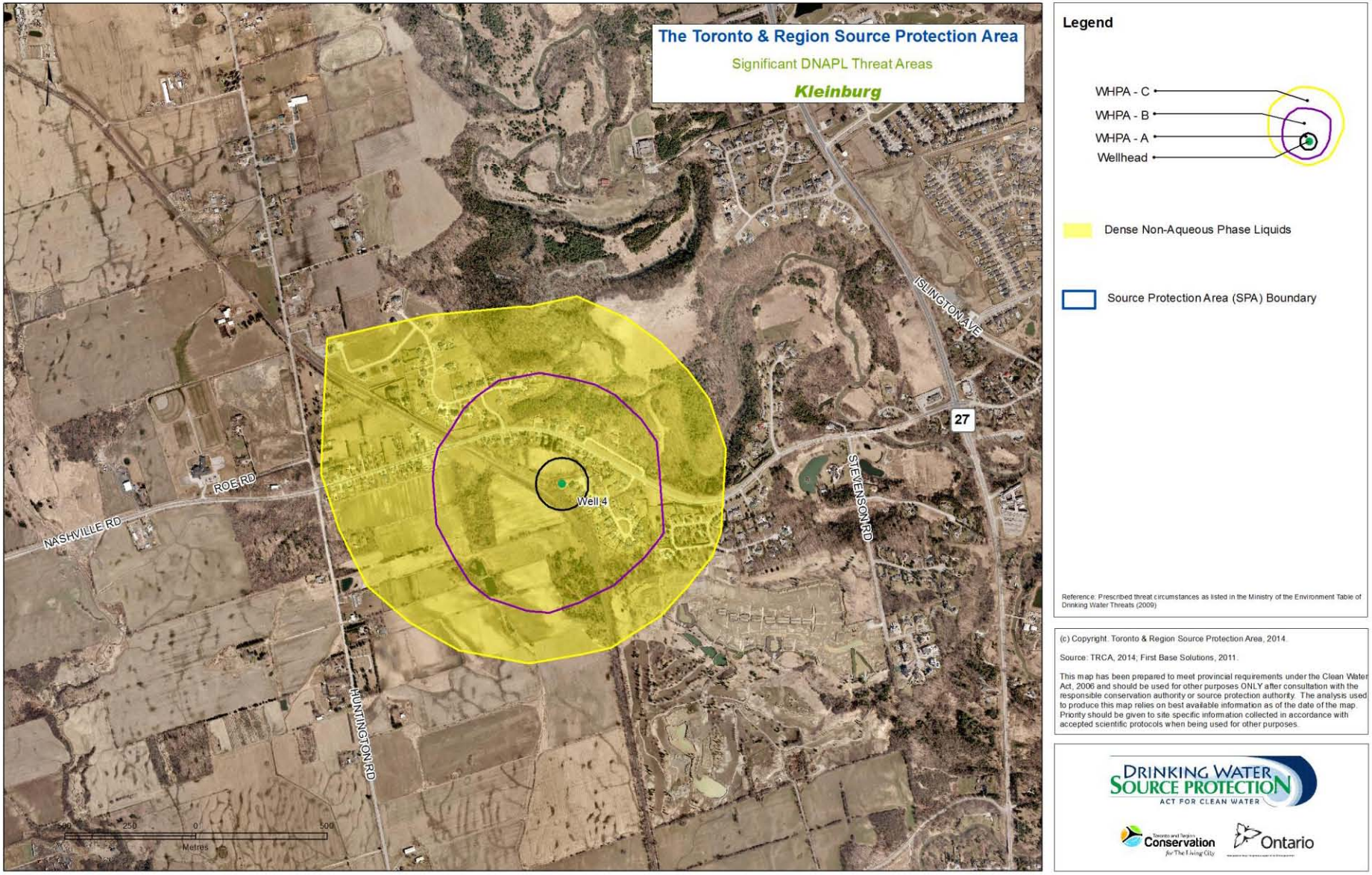
Map 1.17: Nobleton – Significant Groundwater Quality Threat Areas



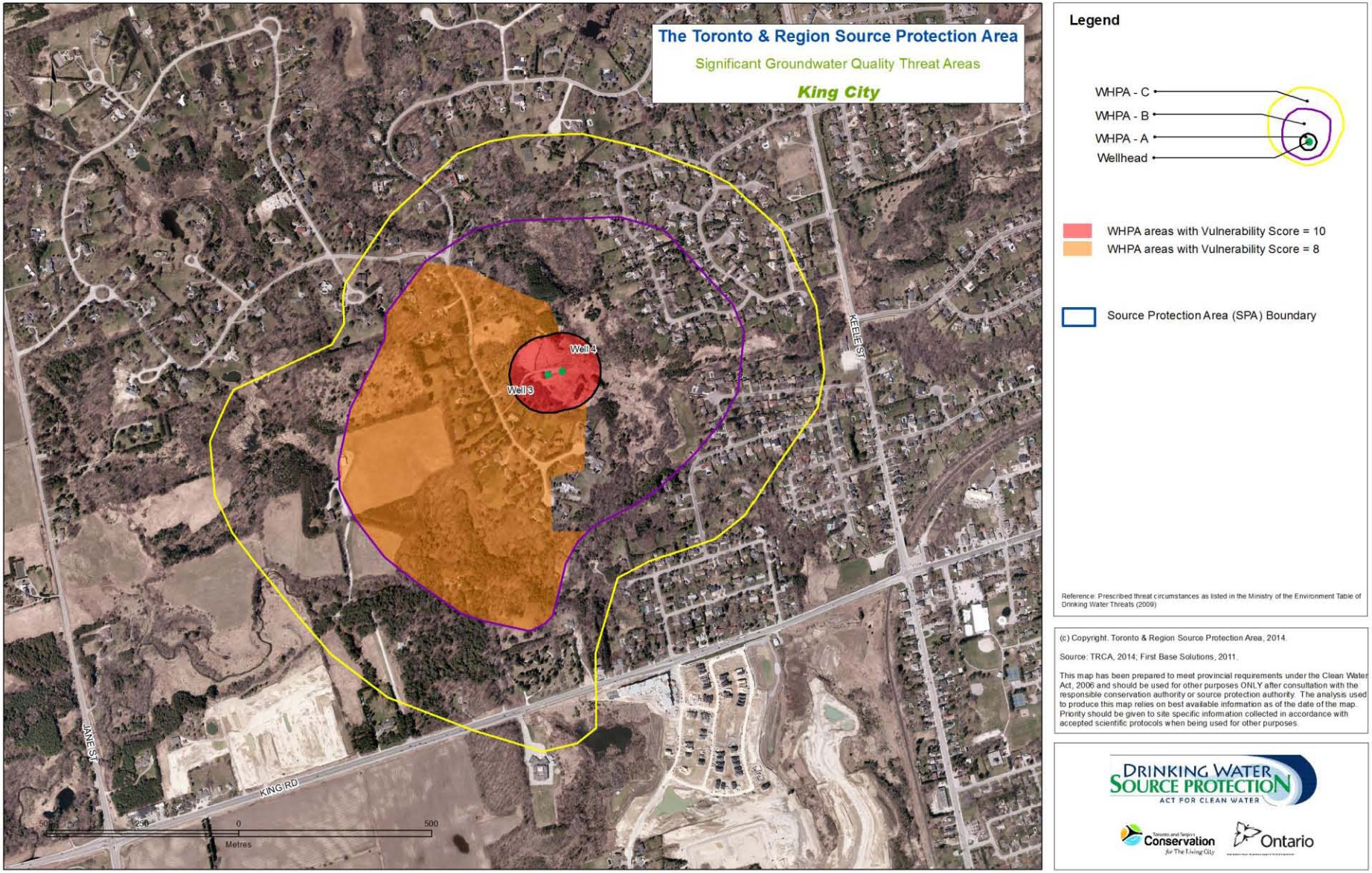
Map 2.17: Nobleton – Significant DNAPL Threat Areas



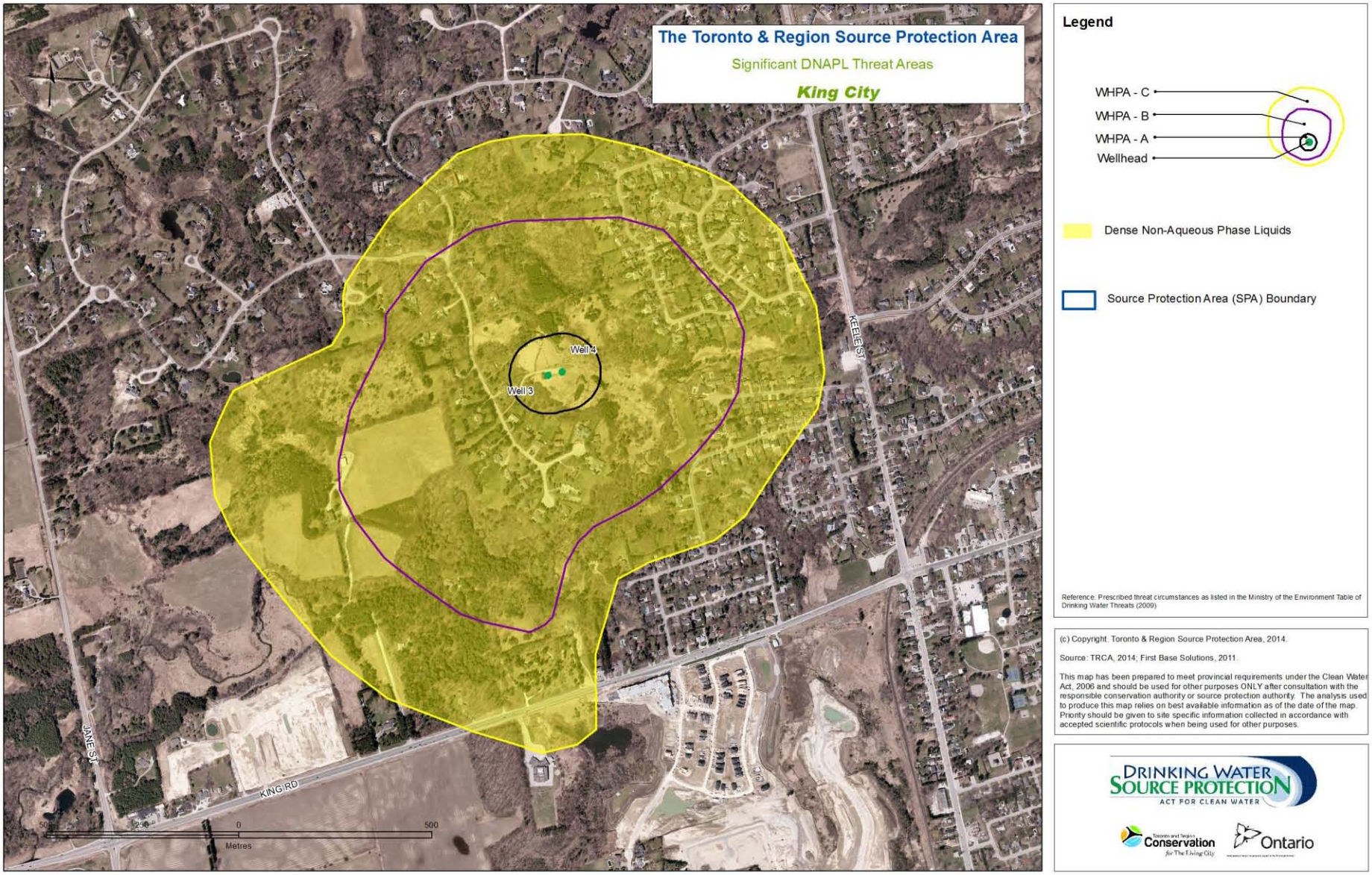
Map 1.18: Kleinburg – Significant Groundwater Quality Threat Areas



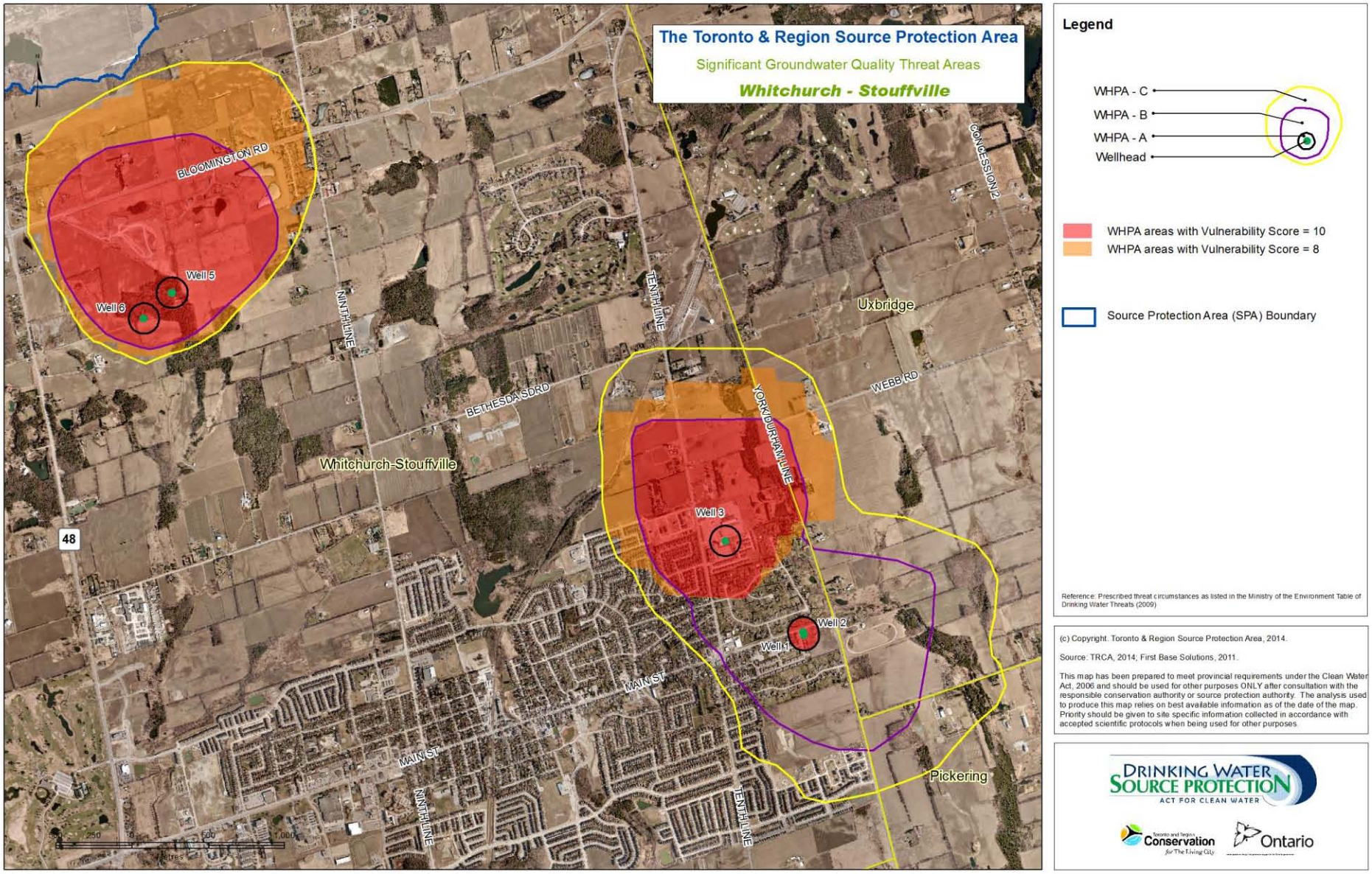
Map 2.18: Kleinburg – Significant DNAPL Threat Areas



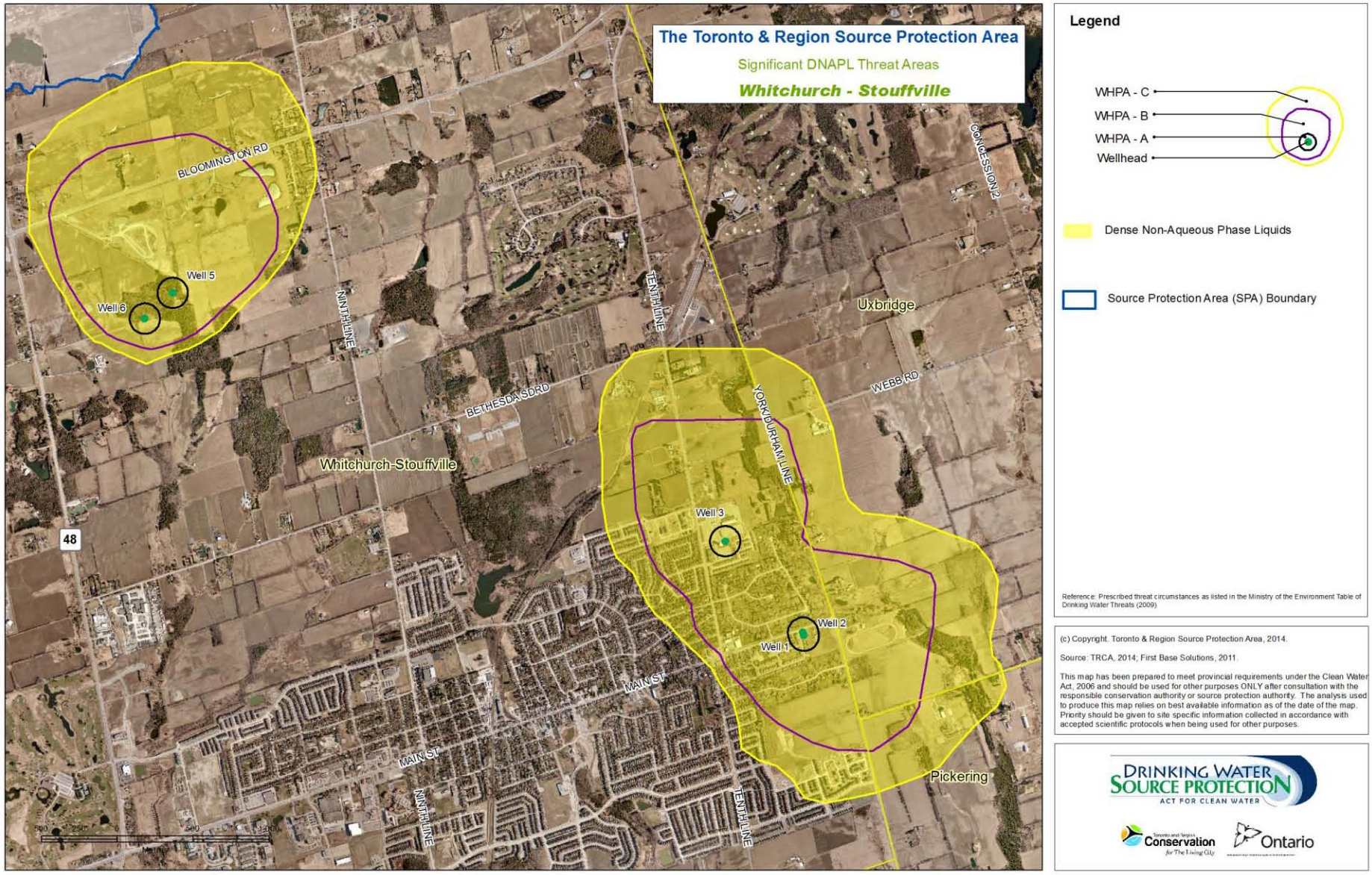
Map 1.19: King City – Significant Groundwater Quality Threat Areas



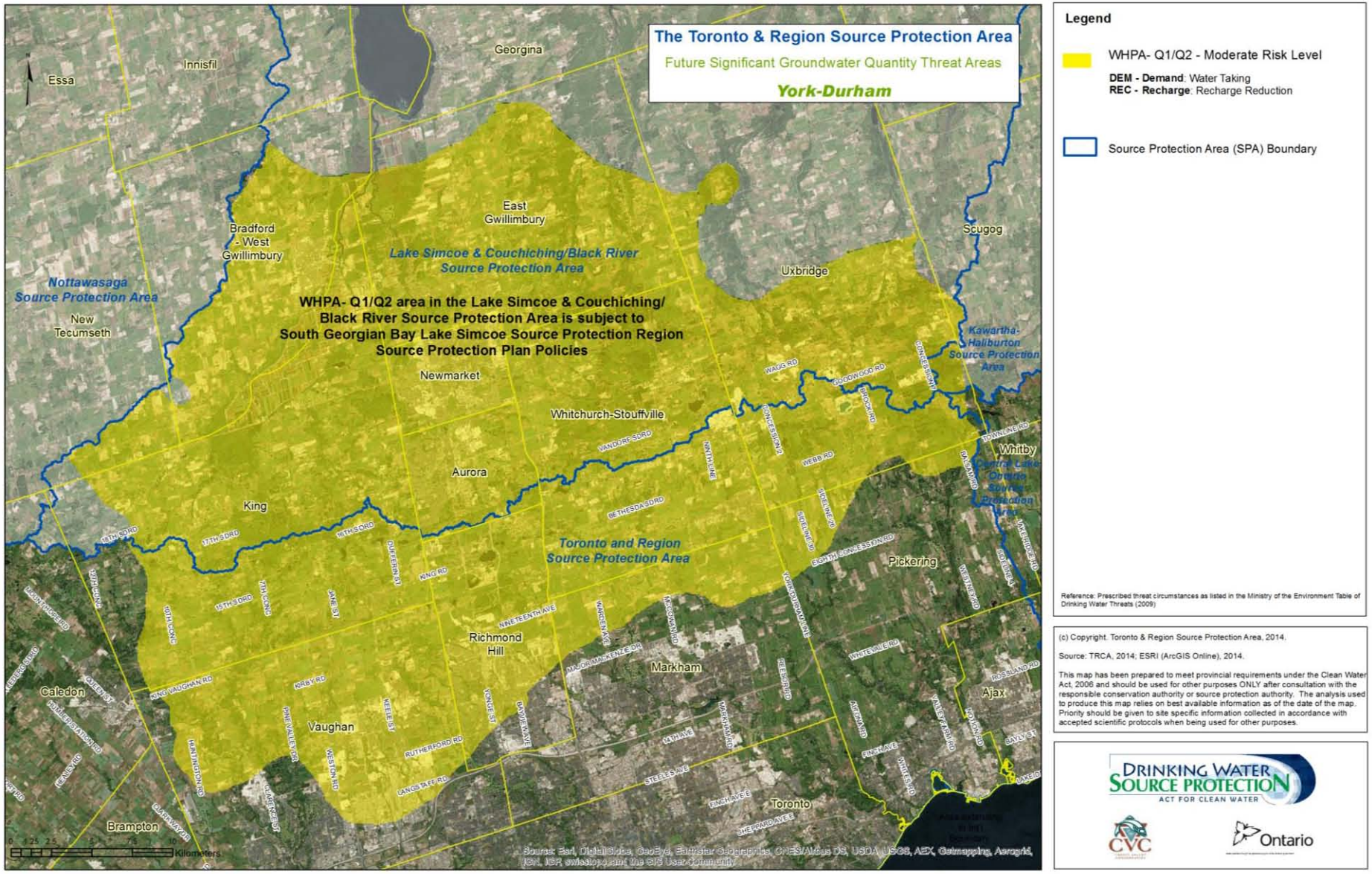
Map 2.19: King City – Significant DNAPL Threat Areas



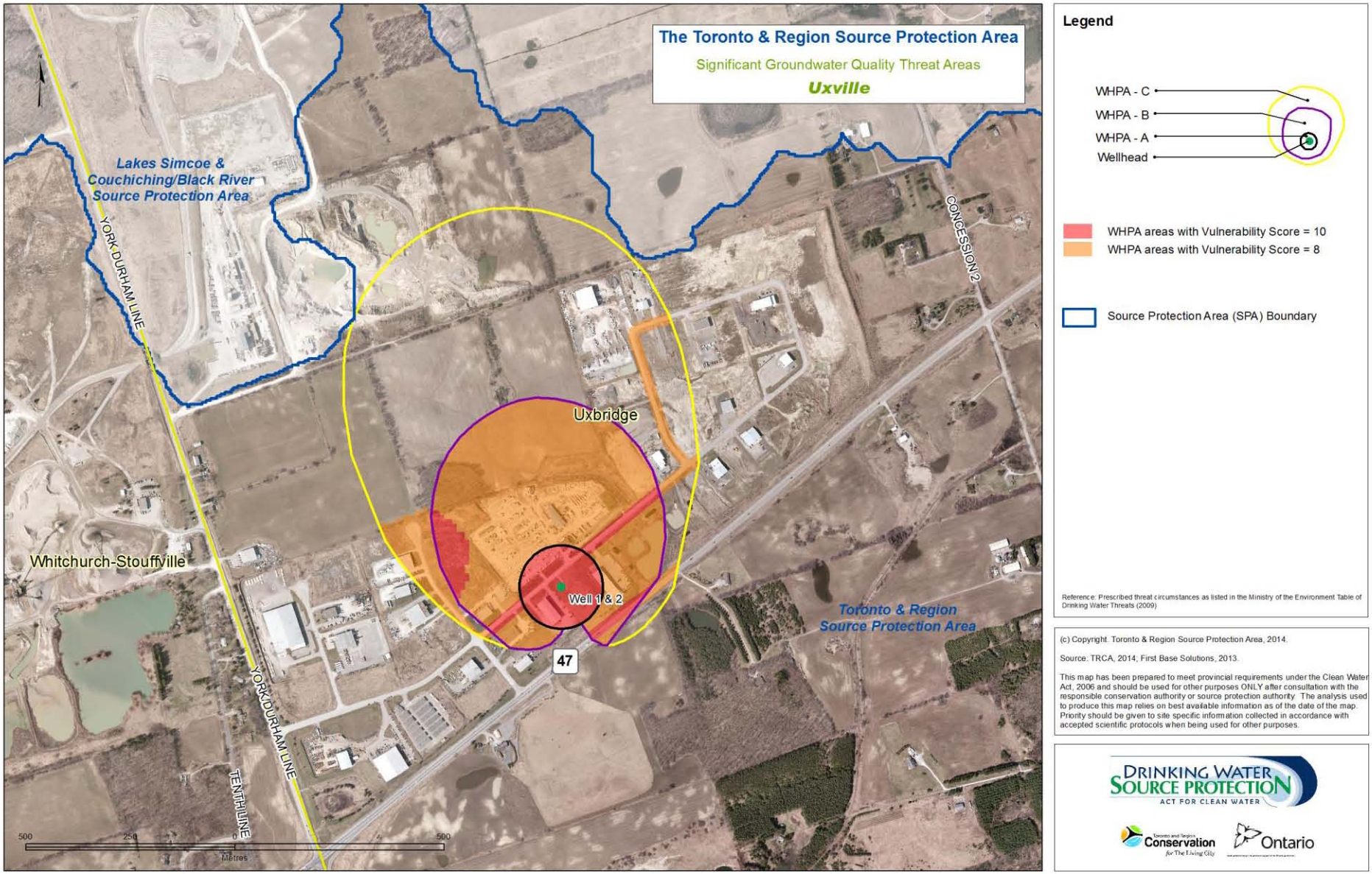
Map 1.20: Whitchurch-Stouffville – Significant Groundwater Quality Threat Areas



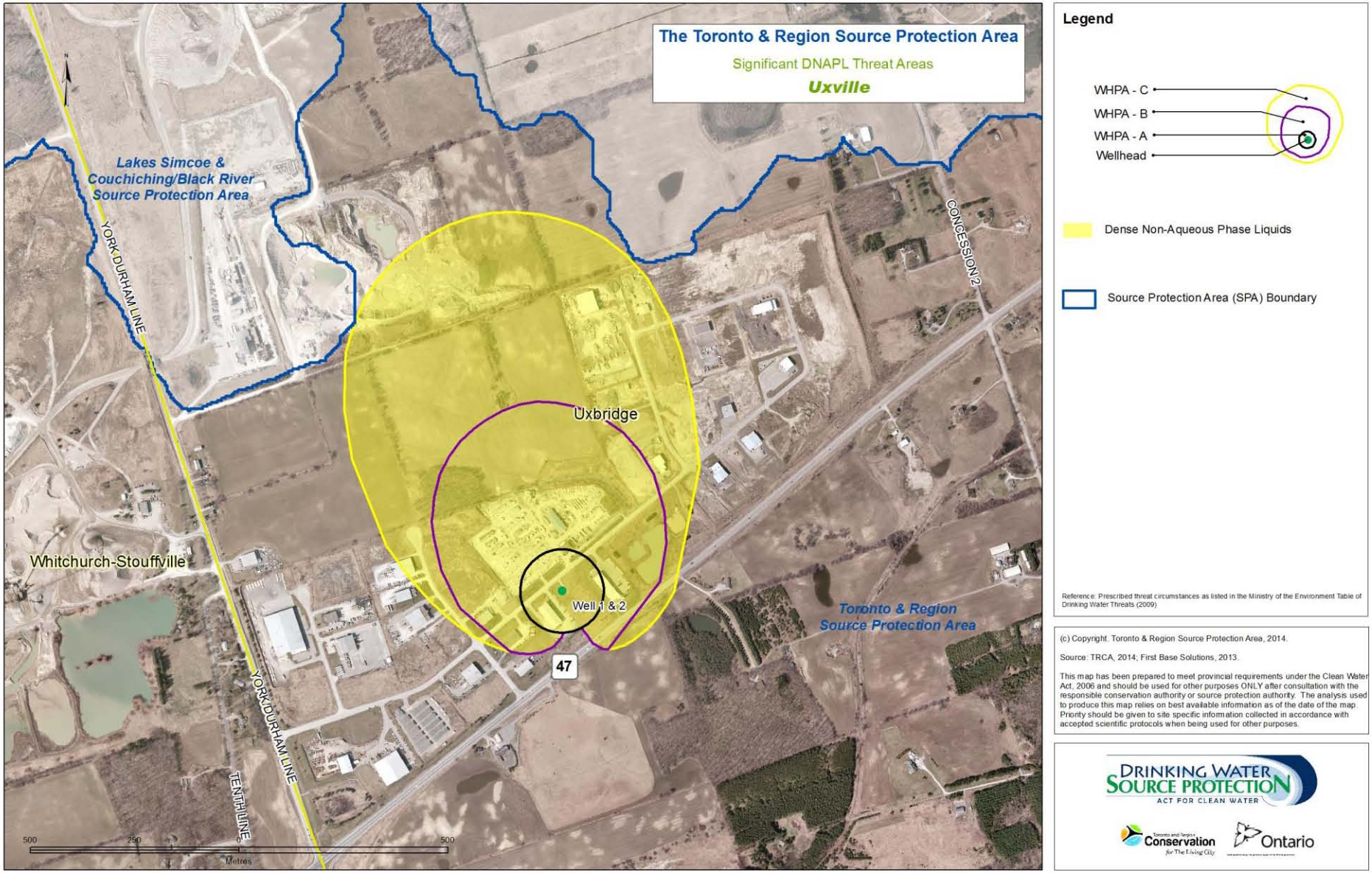
Map 2.20: Whitchurch-Stouffville – Significant DNAPL Threat Areas



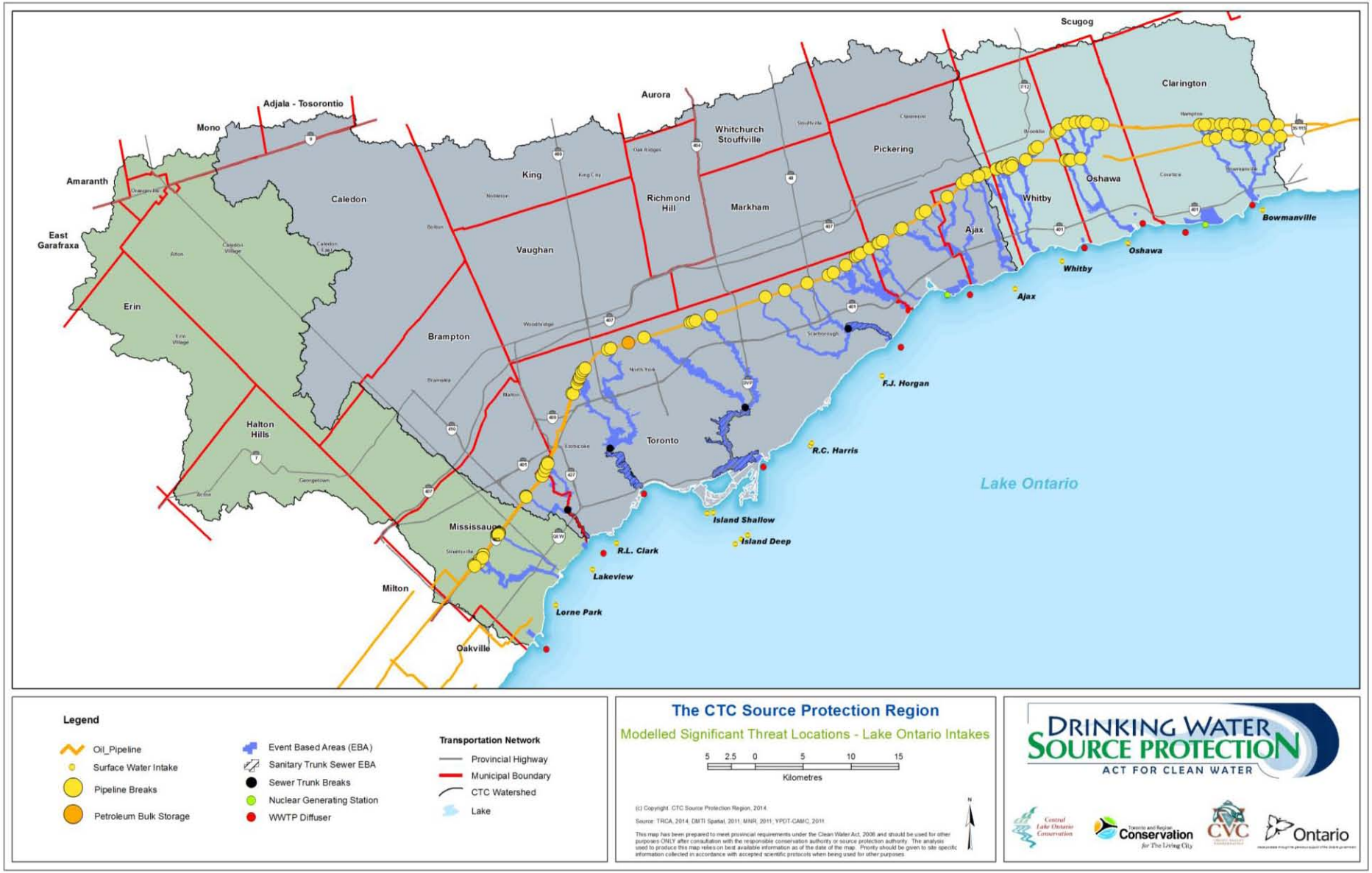
Map 3.4: York-Durham – Future Significant Groundwater Quantity Threat Areas



Map 1.21: Uxville – Significant Groundwater Quality Threat Areas



Map 2.21: Uxville – Significant DNAPL Threat Areas



Map 4.1: Lake Ontario Intakes – Modelled Significant Threat Locations

TAB 6

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

x **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2014

OR

¨ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number 1-10934

ENBRIDGE ENERGY PARTNERS, L.P.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	**39-1715850**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**

1100 Louisiana
Suite 3300
Houston, Texas 77002
(Address of Principal Executive Offices) (Zip Code)

(713) 821-2000
(Registrant's Telephone Number, Including Area Code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large Accelerated Filer	x	Accelerated Filer	¨
Non-Accelerated Filer	¨ (Do not check if a smaller reporting company)	Smaller reporting company	¨

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No x

The registrant had 254,208,428 Class A common units outstanding as of November 3, 2014.

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ENBRIDGE ENERGY PARTNERS, L.P.

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In this report, unless the context requires otherwise, references to "we," "us," "our," "EEP" or the "Partnership" are intended to mean Enbridge Energy Partners, L.P. and its consolidated subsidiaries. We refer to our general partner, Enbridge Energy Company, Inc., as our "General Partner."

This Quarterly Report on Form 10-Q includes forward-looking statements, which are statements that frequently use words such as "anticipate," "believe," "continue," "could," "estimate," "expect," "forecast," "intend," "may," "plan," "position," "projection," "should," "strategy," "target," "will" and similar words. Although we believe that such forward-looking statements are reasonable based on currently available information, such statements involve risks, uncertainties and assumptions and are not guarantees of performance. Future actions, conditions or events and future results of operations may differ materially from those expressed in these forward-looking statements. Any forward-looking statement made by us in this Quarterly Report on Form 10-Q speaks only as of the date on which it is made, and we undertake no obligation to publicly update any forward-looking statement. Many of the factors that will determine these results are beyond the Partnership's ability to control or predict. Specific factors that could cause actual results to differ from those in the forward-looking statements include: (1) changes in the demand for, the supply of, forecast data for, and price trends related to crude oil, liquid petroleum, natural gas and natural gas liquids, or NGLs, including the rate of development of the Alberta Oil Sands; (2) our ability to successfully complete and finance expansion projects; (3) the effects of competition, in particular, by other pipeline systems; (4) shut-downs or cutbacks at our facilities or refineries, petrochemical plants, utilities or other businesses for which we transport products or to which we sell products; (5) hazards and operating risks that may not be covered fully by insurance, including those related to Line 6B and any additional fines and penalties assessed in connection with the crude oil release on that line; (6) changes in or challenges to our tariff rates; and (7) changes in laws or regulations to which we are subject, including compliance with environmental and operational safety regulations that may increase costs of system integrity testing and maintenance.

For additional factors that may affect results, see "Item 1A. Risk Factors" included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2013, which is available to the public over the Internet at the U.S. Securities and Exchange Commission's, or SEC's, website (www.sec.gov) and at our website (www.enbridgepartners.com).

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PART I—FINANCIAL INFORMATION

Item 1. Financial Statements

ENBRIDGE ENERGY PARTNERS, L.P.
CONSOLIDATED STATEMENTS OF INCOME

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(unaudited; in millions, except per unit amounts)			
Operating revenue (Note 10)	$1,874.0	$1,724.0	$5,663.6	$4,950.3
Operating revenue—affiliate (Note 8)	68.3	65.4	229.4	204.8
	1,942.3	1,789.4	5,893.0	5,155.1
Operating expenses:				
Cost of natural gas (Notes 4 and 10)	1,208.5	1,234.7	3,888.4	3,469.1
Cost of natural gas—affiliate (Note 8)	29.7	22.8	98.3	95.3
Environmental costs, net of recoveries (Note 9)	50.1	0.6	93.3	184.3
Operating and administrative	119.4	153.6	323.3	348.9
Operating and administrative—affiliate (Note 8)	115.9	111.5	353.6	329.1
Power (Note 10)	59.5	43.0	164.1	105.8
Depreciation and amortization	118.8	99.6	336.0	287.6
	1,701.9	1,665.8	5,257.0	4,820.1
Operating income	240.4	123.6	636.0	335.0
Interest expense, net (Notes 6 and 10)	137.1	70.5	294.2	226.4
Allowance for equity used during construction (Note 13)	14.5	9.3	47.8	25.2
Other income	1.8	0.4	2.2	1.0
Income before income tax expense	119.6	62.8	391.8	134.8
Income tax expense (Note 11)	2.1	1.5	6.1	17.5
Net income	117.5	61.3	385.7	117.3
Less: Net income attributable to:				
Noncontrolling interest (Note 8)	70.7	20.3	149.4	54.3
Series 1 preferred unit distributions	22.5	22.7	67.5	35.8
Accretion of discount on Series 1 preferred units	3.8	3.4	11.1	5.7
Net income attributable to general and limited partner ownership interests in Enbridge Energy Partners, L.P.	$ 20.5	$ 14.9	$ 157.7	$ 21.5
Net income (loss) allocable to limited partner interests	$ (14.5)	$ (17.6)	$ 49.5	$ (73.8)
Net income (loss) per limited partner unit (basic) (Note 2)	$ (0.04)	$ (0.05)	$ 0.15	$ (0.23)
Weighted average limited partner units outstanding (basic)	328.8	317.4	327.6	313.2
Net income (loss) per limited partner unit (diluted) (Note 2)	$ (0.04)	$ (0.05)	$ 0.15	$ (0.23)
Weighted average limited partner units outstanding (diluted)	328.8	317.4	327.6	313.2

The accompanying notes are an integral part of these consolidated financial statements.

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ENBRIDGE ENERGY PARTNERS, L.P.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(unaudited; in millions)			
Net income	$117.5	$ 61.3	$385.7	$117.3
Other comprehensive income (loss), net of tax expense (benefit) of $0.0 million $(0.1) million, $0.0 million and $0.0 million, respectively (Note 10)	55.5	(14.0)	(80.6)	177.7
Comprehensive income	173.0	47.3	305.1	295.0
Less: Comprehensive income attributable to:				
Noncontrolling interest (Note 8)	70.7	20.3	149.4	54.3
Series 1 preferred unit distributions	22.5	22.7	67.5	35.8
Accretion of discount on Series 1 preferred units	3.8	3.4	11.1	5.7
Other comprehensive income attributed to noncontrolling interest	2.1	—	1.8	—
Comprehensive income attributable to general and limited partner ownership interests in Enbridge Energy Partners, L.P.	$ 73.9	$ 0.9	$ 75.3	$199.2

The accompanying notes are an integral part of these consolidated financial statements.

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ENBRIDGE ENERGY PARTNERS, L.P.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the nine month period ended September 30,	
	2014	2013
	(unaudited; in millions)	
Cash provided by operating activities:		
Net income	$ 385.7	$ 117.3
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization (Note 5)	336.0	287.6
Derivative fair value net losses (Note 10)	62.7	16.8
Inventory market price adjustments (Note 4)	4.8	3.3
Environmental costs, net of recoveries (Note 9)	81.5	221.1
Distributions from investments in joint ventures (Note 8)	6.1	—
Equity earnings from investments in joint ventures (Note 8)	(7.1)	—
Deferred income taxes (Note 11)	1.5	13.5
State income taxes	3.2	7.9
Allowance for equity used during construction (Note 13)	(47.8)	(25.2)
Amortization of debt issuance and hedging costs	8.0	7.5
Other	5.0	3.2
Changes in operating assets and liabilities, net of acquisitions:		
Receivables, trade and other	0.9	66.2
Due from General Partner and affiliates	15.3	(4.9)
Accrued receivables	27.7	452.5
Inventory (Note 4)	(131.0)	(87.4)
Current and long-term other assets (Note 10)	(28.7)	(22.3)
Due to General Partner and affiliates	(23.4)	3.1
Accounts payable and other (Notes 3 and 10)	(93.1)	28.0
Environmental liabilities (Note 9)	(116.7)	(79.8)
Accrued purchases	(28.6)	(77.0)
Interest payable	5.9	8.3
Property and other taxes payable	23.8	8.1
Settlement of interest rate derivatives (Note 10)	—	(5.3)
Net cash provided by operating activities	491.7	942.5
Cash used in investing activities:		
Additions to property, plant and equipment (Notes 5 and 14)	(2,055.8)	(1,514.5)
Changes in restricted cash (Note 8)	31.2	(2.2)
Investments in joint ventures (Note 8)	(35.4)	(181.8)
Distributions from investments in joint ventures in excess of cumulative earnings	27.0	—
Other	(0.7)	(5.6)
Net cash used in investing activities	(2,033.7)	(1,704.1)
Cash provided by financing activities:		
Net proceeds from Series 1 preferred unit issuance	—	1,200.0
Net proceeds from unit issuances (Note 7)	—	519.3
Distributions to partners (Note 7)	(544.2)	(530.6)
Repayments to General Partner (Note 8)	(12.0)	(12.0)
Net proceeds from issuance of long-term debt (Note 6)	398.1	—
Repayments of long-term debt (Note 6)	—	(200.0)
Net borrowings under credit facility (Note 6)	30.0	—
Net commercial paper borrowings (repayments) (Note 6)	799.8	(734.9)
Contributions from noncontrolling interest (Notes 7 and 8)	1,083.0	355.2
Distributions to noncontrolling interest (Notes 7 and 8)	(80.9)	(39.7)
Net cash provided by financing activities	1,673.8	557.3
Net increase (decrease) in cash and cash equivalents	131.8	(204.3)
Cash and cash equivalents at beginning of year	164.8	227.9
Cash and cash equivalents at end of period	$ 296.6	$ 23.6

The accompanying notes are an integral part of these consolidated financial statements.

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ENBRIDGE ENERGY PARTNERS, L.P.
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

	September 30, 2014	December 31, 2013
	(unaudited; in millions)	
ASSETS		
Current assets:		
Cash and cash equivalents (Note 3)	$ 296.6	$ 164.8
Restricted cash (Note 8)	38.2	69.4
Receivables, trade and other, net of allowance for doubtful accounts of $0.5 million in 2014 and 2013 (Note 9)	48.5	49.4
Due from General Partner and affiliates	26.7	40.5
Accrued receivables	182.5	210.2
Inventory (Note 4)	221.1	94.9
Other current assets (Note 10)	74.5	47.6
	888.1	676.8
Property, plant and equipment, net (Note 5)	15,038.1	13,176.8
Goodwill	246.7	246.7
Intangibles, net	255.9	263.2
Other assets, net (Note 10)	518.3	538.0
	$ 16,947.1	$ 14,901.5
LIABILITIES AND PARTNERS' CAPITAL		
Current liabilities:		
Due to General Partner and affiliates (Note 8)	$ 98.0	$ 121.4
Accounts payable and other (Notes 3, 10 and 13)	632.3	822.0
Environmental liabilities (Note 9)	164.1	233.7
Accrued purchases	437.0	465.6
Interest payable	73.9	68.0
Property and other taxes payable (Note 11)	94.2	70.7
Note payable to General Partner (Note 8)	12.0	12.0
Current maturities of long-term debt (Note 6)	200.0	200.0
	1,711.5	1,993.4
Long-term debt (Note 6)	6,007.9	4,777.4
Loans from General Partner and affiliate (Note 8)	294.0	306.0
Due to General Partner and affiliates (Note 8)	125.8	58.2
Deferred income tax liability (Note 11)	19.0	17.4
Other long-term liabilities (Notes 9 and 10)	396.0	51.7
Total liabilities	8,554.2	7,204.1
Commitments and contingencies (Note 9)		
Partners' capital: (Notes 7 and 8)		
Series 1 preferred units (48,000,000 at September 30, 2014 and December 31, 2013)	1,171.8	1,160.7
Class D units (66,100,000 at September 30, 2014)	2,516.8	—
Class A common units (254,208,428 at September 30, 2014 and December 31, 2013)	240.1	2,979.0
Class B common units (7,825,500 at September 30, 2014 and December 31, 2013)	—	65.3
i-units (67,260,894 and 63,743,099 at September 30, 2014 and December 31, 2013, respectively)	675.9	1,291.9
Incentive distribution units (1,000 at September 30, 2014)	493.1	—
General Partner	199.9	301.5
Accumulated other comprehensive income (loss) (Note 10)	(159.0)	(76.6)
Total Enbridge Energy Partners, L.P. partners' capital	5,138.6	5,721.8
Noncontrolling interest (Note 8)	3,254.3	1,975.6
Total partners' capital	8,392.9	7,697.4
	$ 16,947.1	$ 14,901.5

The accompanying notes are an integral part of these consolidated financial statements.

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ENBRIDGE ENERGY PARTNERS, L.P.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (unaudited)

1. BASIS OF PRESENTATION

We have prepared the accompanying unaudited interim consolidated financial statements in accordance with accounting principles generally accepted in the United States of America, or GAAP, for interim consolidated financial information and with the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Accordingly, the unaudited interim consolidated financial statements do not include all the information and footnotes required by GAAP for complete consolidated financial statements. In the opinion of management, they contain all adjustments, consisting only of normal recurring adjustments, which management considers necessary to present fairly our financial position as of September 30, 2014, our results of operations for the three and nine month periods ended September 30, 2014, and 2013, and our cash flows for the nine month periods ended September 30, 2014, and 2013. We derived our consolidated statement of financial position as of December 31, 2013, from the audited financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2013. Our results of operations for the nine month period ended September 30, 2014, should not be taken as indicative of the results to be expected for the full year due to seasonal fluctuations in the supply of and demand for crude oil, seasonality of portions of our natural gas business, timing and completion of our construction projects, maintenance activities, the impact of forward commodity prices and differentials on derivative financial instruments that are accounted for at fair value and the effect of environmental costs and related insurance recoveries on our Lakehead system. Our unaudited interim consolidated financial statements should be read in conjunction with our audited consolidated financial statements and notes thereto presented in our Annual Report on Form 10-K for the fiscal year ended December 31, 2013.

Comparative Amounts

During the first quarter of 2014, we changed our reporting segments. The Marketing segment was combined with the Natural Gas segment to form one new segment named “Natural Gas.” There was no change to the Liquids segment.

This change was a result of our reorganization in connection with Midcoast Energy Partner, L.P.’s, or MEP’s, initial public offering, or IPO, of its Class A common units representing limited partnership interests. This reorganization prompted management to reassess the presentation of EEP’s reportable segments considering the financial information available and evaluated regularly by our Chief Operating Decision Maker. Our new segment reporting is consistent with how management makes resource allocation decisions, evaluates performance, and furthers the achievement of our long-term objectives. Financial information for the prior periods has been restated to reflect the change in reporting segments.

Additionally, we have reclassified certain prior period affiliate amounts related to operating revenue, the cost of natural gas, and operating and administrative expenses to conform to the current period presentation. These reclassifications did not impact net income.

2. NET INCOME PER LIMITED PARTNER UNIT

We allocate our net income among our Series 1 Preferred Units, or Preferred Units, our General Partner interest and our limited partners units using the two-class method in accordance with applicable authoritative accounting guidance. Under the two-class method, we allocate our net income attributable to our general and limited partner interests to our General Partner and our limited partners according to the distribution formula for available cash as set forth in our partnership agreement. We also allocate any earnings in excess of distributions to our General Partner and limited partners utilizing the distribution formula for available cash specified in our partnership agreement. We allocate any distributions in excess of earnings for the period to our General Partner and limited partners based on their sharing of losses of 2% and 98%, respectively, as set forth in our partnership

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agreement. Until July 1, 2014, we allocated the distributions to the General Partner and limited partners as follows:

Distribution Targets	Portion of Quarterly Distribution Per Unit	Percentage Distributed to General Partner	Percentage Distributed to Limited partners
Minimum Quarterly Distribution	Up to $0.295	2 %	98 %
First Target Distribution	> $0.295 to $0.35	15 %	85 %
Second Target Distribution	> $0.35 to $0.495	25 %	75 %
Over Second Target Distribution	In excess of $0.495	50 %	50 %

Equity Restructuring Transaction

On July 1, 2014, we entered into an equity restructuring transaction, or Equity Restructuring, with the General Partner in which the General Partner irrevocably waived its right to receive cash distributions and allocations of items of income, gain, deduction and loss in excess of 2% in respect of its general partner interest in the incentive distribution rights, or Previous IDRs, in exchange for the issuance to a wholly-owned subsidiary of the General Partner of (i) 66.1 million units of a new class of limited partner interests designated as Class D units, and (ii) 1,000 units of a new class of limited partner interests designated as Incentive Distribution Units, or IDUs.

The Class D units entitle the holder thereof to receive quarterly distributions equal to the amount derived by multiplying the number of Class D units outstanding by the distribution rate per unit paid on our Class A and Class B common units, collectively referred to as common units. The Class D units are convertible on a one-for-one basis into our Class A common units any time after the fifth anniversary of issuance, or July 1, 2019, at the holder's option. We may redeem the Class D units in whole or in part after the 30-year anniversary of issuance, or July 1, 2044, at our option for either a cash amount equal to the notional value per unit, or with newly issued Class A common units with an aggregate market value at redemption equal to 105% of the aggregate notional value of the Class D units being redeemed. The Class D units have a notional value of $31.35 per unit, which was the closing price of our Class A common units on June 17, 2014, and have the same voting rights as the Class A common units. In the event of a liquidation event (or any merger or other extraordinary transaction), the Class D units entitle the holder thereof to a preference in liquidation equal to 20% of the notional value, with such preference being increased by an additional 20% on each anniversary of issuance, resulting in a liquidation preference equal to 100% of the notional value on and after July 1, 2018.

The IDUs entitle the holder thereof to receive 23% of the incremental distributions we pay in excess of $0.5435 per common unit, i-unit, and Class D unit per quarter. In the event of any decrease in the Class A common unit distribution below the current quarterly distribution level of $0.5435 per unit in any quarter during the five years commencing with the fourth quarter of 2014, the distribution we pay on the Class D units will be adjusted to the amount that we would have paid in respect of the Previous IDRs had the Equity Restructuring not occurred. In addition, we reduced the third quarter 2014 distribution payable on the Class D units so that the aggregate distributions we pay in calendar year 2014 with respect to the Previous IDRs, the Class D units and the IDUs will not exceed the distribution that we would have paid in calendar year 2014 in respect to the Previous IDRs had the Equity Restructuring not occurred.

Beginning July 1, 2014, as established by our amended and restated partnership agreement, we calculate distributions to the General Partner and limited partners based upon the distribution rates and percentages set forth in the following table:

Distribution Targets	Portion of Quarterly Distribution Per Unit	Percentage Distributed to General Partner and IDUs [1]	Percentage Distributed to Limited partners
Minimum Quarterly Distribution	Up to $0.5345	2 %	98 %
First Target Distribution	> $0.5345	25 %	75 %

(1) For distributions in excess of the Minimum Quarterly Distribution, this percentage includes both the General Partner's distributions of 2% and the distribution to the Incentive Distribution Unit holder, a wholly-owned subsidiary of our General Partner.

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We recorded the Class D units and IDUs at their fair values of $2,480.0 million and $491.7 million, respectively, with the offset recorded as a reduction to the carrying amounts of the capital accounts of the Class A and Class B common units, the i-units and the general partner on a pro rata basis. We determined the fair values of the Class D units using a market approach based upon the closing price of the Class A common units as of July 1, 2014 adjusted for differences in specific rights granted to the Class D units and other economic factors that would affect the fair value of the Class D units. We determined the fair value of the IDUs using an income approach on the basis of discounted cash flows from expected quarterly distributions.

We determined basic and diluted net income per limited partner unit as follows:

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(in millions, except per unit amounts)			
Net income	$ 117.5	$ 61.3	$ 385.7	$ 117.3
Less Net income attributable to:				
Noncontrolling interest	(70.7)	(20.3)	(149.4)	(54.3)
Series 1 preferred unit distributions	(22.5)	(22.7)	(67.5)	(35.8)
Accretion of discount on Series 1 preferred units	(3.8)	(3.4)	(11.1)	(5.7)
Net income attributable to general and limited partner interests in Enbridge Energy Partners, L.P.	20.5	14.9	157.7	21.5
Less distributions:				
Incentive distributions	(1.4)	(32.9)	(35.9)	(96.8)
Distributed earnings attributed to our General Partner	(4.5)	(3.6)	(12.6)	(10.6)
Distributed earnings attributed to Class D units	(33.1)	—	(69.8)	—
Total distributed earnings to our General Partner, Class D units, and IDUs	(39.0)	(36.5)	(118.3)	(107.4)
Total distributed earnings attributed to our common units and i-units	(182.8)	(176.5)	(542.7)	(518.6)
Total distributed earnings	(221.8)	(213.0)	(661.0)	(626.0)
Overdistributed earnings	$(201.3)	$(198.1)	$(503.3)	$(604.5)
Weighted average limited partner units outstanding	328.8	317.4	327.6	313.2
Basic and diluted earnings per unit:				
Distributed earnings per unit [1]	$ 0.56	$ 0.56	$ 1.66	$ 1.66
Overdistributed earnings per limited partner unit [2]	(0.60)	(0.61)	(1.51)	(1.89)
Net income (loss) per unit (basic and diluted) [3]	$ (0.04)	$ (0.05)	$ 0.15	$ (0.23)

(1) Represents the total distributed earnings to common units and i-units divided by the weighted average number of limited partner interests outstanding for the period.

(2) Represents the common units' and i-units' share (98%) of distributions in excess of earnings divided by the weighted average number of common units and i-units outstanding for the period and overdistributed earnings allocated to the common units and i-units based on the distribution waterfall that is outlined in our partnership agreement.

(3) For the three month period ended September 30, 2014, 43,201,310 anti-dilutive Preferred units and 66,100,000 anti-dilutive Class D units were excluded from the if-converted method of calculating diluted earnings per unit. For the nine month period ended September 30, 2014, 43,201,310 anti-dilutive Preferred units and 22,275,458 anti-dilutive Class D units were excluded from the if-converted method of calculating diluted earnings per unit.

3. CASH AND CASH EQUIVALENTS

We extinguish liabilities when a creditor has relieved us of our obligation, which occurs when our financial institution honors a check that the creditor has presented for payment. Accordingly, obligations for which we

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have made payments that have not yet been presented to the financial institution totaling approximately $16.2 million at September 30, 2014, and $24.0 million at December 31, 2013, are included in "Accounts payable and other" on our consolidated statements of financial position.

4. INVENTORY

Our inventory is comprised of the following:

	September 30, 2014	December 31, 2013
	(in millions)	
Materials and supplies	$ 2.2	$ 2.1
Crude oil inventory	12.3	18.0
Natural gas and NGL inventory	206.6	74.8
	$ 221.1	$ 94.9

The "Cost of natural gas and natural gas liquids" on our consolidated statements of income includes charges totaling $1.5 million and $0.9 million for the three month periods ended September 30, 2014 and 2013 respectively, and $4.8 million and $3.3 million for the nine month periods ended September 30, 2014 and 2013, respectively, that we recorded to reduce the cost basis of our inventory of natural gas and natural gas liquids, or NGLs, to reflect the current market value.

5. PROPERTY, PLANT AND EQUIPMENT

Our property, plant and equipment is comprised of the following:

	September 30, 2014	December 31, 2013
	(in millions)	
Land	$ 43.1	$ 43.6
Rights-of-way	829.4	666.2
Pipelines	9,617.3	8,035.8
Pumping equipment, buildings and tanks	2,831.0	2,233.0
Compressors, meters and other operating equipment	2,124.1	1,989.8
Vehicles, office furniture and equipment	417.4	322.0
Processing and treating plants	514.2	514.4
Construction in progress	1,329.0	2,077.7
Total property, plant and equipment	17,705.5	15,882.5
Accumulated depreciation	(2,667.4)	(2,705.7)
Property, plant and equipment, net	$ 15,038.1	$ 13,176.8

During the nine month period ended September 30, 2014, we recorded asset retirement obligations, or AROs, of $100.6 million. Of that amount, $60.0 million is related to the pre-replacement Line 6B and $40.6 million is related to the pre-replacement Line 3. These AROs are recorded in "Accounts payable and other" and "Other long-term liabilities," respectively, with an offset to "Property, plant and equipment, net" in our consolidated statements of financial position. Both of these pipelines are part of our Lakehead system, and the AROs are related to the decommissioning of the original pipelines as we are completing Line 6B replacement work in 2014 and the Line 3 replacement with an estimated in-service date of late 2017. The associated ARO is a component of the pipelines category of "Property, plant and equipment, net." We record AROs at fair value in the period in which they can be reasonably determined. Fair value is determined based on expected future cash flows and estimated retirement periods, as well as discount and inflation rates.

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During the three month period ended September 30, 2014, we retired components of our pre-replacement Line 6B assets, including the related asset retirement costs, in the amount of $282.5 million. Consistent with the group method of depreciation, we charged the retirement of these components to accumulated depreciation.

6. DEBT

The following table presents the carrying amounts, net of related amortized discounts, of our consolidated debt obligations.

	September 30, 2014	December 31, 2013
	(in millions)	
EEP debt obligations:		
Commercial Paper	$ 1,100.0	$ 300.0
5.350% Senior Notes due 2014	200.0	200.0
5.875% Senior Notes due 2016	299.9	299.9
7.000% Senior Notes due 2018	99.9	99.9
6.500% Senior Notes due 2018	399.3	399.1
9.875% Senior Notes due 2019	500.0	500.0
5.200% Senior Notes due 2020	499.9	499.9
4.200% Senior Notes due 2021	599.2	599.1
7.125% Senior Notes due 2028	99.8	99.8
5.950% Senior Notes due 2033	199.8	199.8
6.300% Senior Notes due 2034	99.8	99.8
7.500% Senior Notes due 2038	399.1	399.0
5.500% Senior Notes due 2040	546.4	546.4
8.050% Junior subordinated notes due 2067	399.8	399.7
MEP debt obligations:		
MEP Credit Agreement	365.0	335.0
3.560% MEP Series A Senior Notes due 2019	75.0	—
4.040% MEP Series B Senior Notes due 2021	175.0	—
4.420% MEP Series C Senior Notes due 2024	150.0	—
Total	$ 6,207.9	$ 4,977.4

Interest Cost

Our interest cost for the three and nine month periods ended September 30, 2014, and 2013, is comprised of the following:

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(in millions)			
Interest expense	$ 137.1	$ 70.5	$ 294.2	$ 226.4
Interest capitalized	11.6	13.4	35.7	39.8
Interest cost incurred	$ 148.7	$ 83.9	$ 329.9	$ 266.2
Weighted average interest rate	*6.0%*	*6.3%*	*6.2%*	*6.1%*

Credit Facilities and Commercial Paper

We have a committed multi-year senior unsecured revolving credit facility, which we refer to as the Credit Facility, and a 364-day credit agreement, which we refer to as the 364-Day Credit Facility. We refer to our Credit Facility and our 364-Day Credit Facility as the Credit Facilities. The Credit Facility permits aggregate borrowings of up to, at any one time outstanding, $1.975 billion.

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On October 6, 2014, we amended our Credit Facility to extend the maturity date to September 26, 2019; however, $175.0 million of commitments will expire on the original maturity date of September 26, 2018.

On July 3, 2014, we amended our 364-Day Credit Facility to extend the revolving credit termination date to July 3, 2015, and to decrease aggregate commitments under the facility to $650.0 million. The 364-Day Credit Facility provides aggregate lending commitments of up to $650.0 million: (1) on a revolving basis for a 364-day period, extendible annually at the lenders' discretion, and (2) for a 364-day term on a non-revolving basis following the expiration of all revolving periods. Together, the Credit Facilities provide an aggregate amount of approximately $2.625 billion of bank credit, as of September 30, 2014, which we use to fund our general activities and working capital needs.

We have a commercial paper program that provides for the issuance of up to an aggregate principal amount of $1.5 billion of commercial paper and is supported by our Credit Facilities. We access the commercial paper market primarily to provide temporary financing for our operating activities, capital expenditures and acquisitions when the available interest rates we can obtain are lower than the rates available under our Credit Facilities. At September 30, 2014, we had approximately $1.1 billion in principal amount of commercial paper outstanding at a weighted average interest rate of 0.33%, excluding the effect of our interest rate hedging activities. Under our commercial paper program, we had net borrowings of approximately $799.8 million during the nine month period ended September 30, 2014, which includes gross borrowings of $7.4 billion and gross repayments of $6.6 billion. At December 31, 2013, we had $300.0 million in principal amount of commercial paper outstanding at a weighted average interest rate of 0.37%, excluding the effect of our interest rate hedging activities. Our policy is to limit the amount of commercial paper we can issue by the amounts available under our Credit Facility up to an aggregate principal amount of $1.5 billion.

We have the ability and intent to refinance all of our commercial paper obligations on a long-term basis through borrowings under our Credit Facilities. Accordingly, such amounts have been classified as "Long-term debt" in our accompanying consolidated statements of financial position.

On February 3, 2014, we entered into an uncommitted letter of credit arrangement, pursuant to which the lender may, on a discretionary basis and with no commitment, agree to issue standby letters of credit upon our request. On September 9, 2014, we amended this uncommitted letter of credit arrangement to increase the aggregate amount not to exceed $220.0 million. While the letter of credit arrangement is uncommitted and issuance of letters of credit is at the lender's sole discretion, we view this arrangement as a liquidity enhancement as it allows us to potentially reduce our reliance on utilizing our committed Credit Facilities for issuance of letters of credit to support our hedging activities.

The amounts we may borrow under the terms of our Credit Facilities are reduced by the face amount of our letters of credit outstanding. Our policy is to maintain availability at any time under our Credit Facilities amounts that are at least equal to the amount of commercial paper that we have outstanding at any time. Taking that policy into account, at September 30, 2014, we have approximately $1.3 billion available under the terms of our Credit Facilities, determined as follows:

	(in millions)
Total credit available under Credit Facilities	$ 2,625.0
Less: Amounts outstanding under Credit Facilities	—
Principal amount of commercial paper outstanding	1,100.0
Letters of credit outstanding	183.6
Total amount available at September 30, 2014	$ 1,341.4

As of September 30, 2014, we were in compliance with the terms of all of our financial covenants under the Credit Facilities.

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MEP Credit Agreement

On November 13, 2013, MEP, Midcoast Operating L.P., or Midcoast Operating, and their material domestic subsidiaries, entered into a senior revolving credit facility, or the MEP Credit Agreement which permits aggregate borrowings of up to, at any one time outstanding, $850.0 million. The original term of the MEP Credit Agreement is three years with an initial maturity date of November 13, 2016, subject to four one-year requests for extensions. On September 30, 2014, MEP amended the MEP Credit Agreement to extend the maturity date from November 13, 2016, to September 30, 2017; however, $140.0 million of commitments will expire on the original maturity date of November 13, 2016. In connection with the amendment to the MEP Credit Agreement, we entered into an amended and restated subordination agreement by and among MEP, Midcoast Operating, the other parties from time to time party thereto and us in favor of Bank of America N.A., as administrative agent, and for the benefit of the administrative agent and the lenders party to the MEP Credit Agreement, to accommodate the subordination agreement entered into in connection with the MEP private debt issuance on September 30, 2014, described under "MEP Private Debt Issuance."

At September 30, 2014, MEP had $365.0 million in outstanding borrowings under the MEP Credit Agreement at a weighted average interest rate of 1.9%. Under the MEP Credit Agreement, we had net borrowings of approximately $30.0 million during the nine month period ended September 30, 2014, which includes gross borrowings of $5,570.0 billion and gross repayments of $5,540.0 billion. As of September 30, 2014, MEP was in compliance with the terms of its financial covenants.

MEP Private Debt Issuance

On September 30, 2014, MEP completed a private debt issuance of $400.0 million. The debt consists of three tranches of senior notes: $75.0 million of 3.56% Series A Senior Notes due in 2019; $175.0 million of 4.04% Series B Senior Notes due in 2021; and $150.0 million of 4.42% Series C Senior Notes due in 2024, collectively the Notes. All of the Notes pay interest semi-annually on March 31 and September 30, commencing on March 31, 2015. MEP received approximately $398.1 million in net proceeds, which were used to repay outstanding indebtedness and for other general partnership purposes. Using a portion of the net proceeds, MEP settled two interest rate swaps for a net payment of $0.9 million on September 30, 2014, which will be amortized to interest expense over the original 5 year hedge term.

The Notes were issued pursuant to a Note Purchase Agreement, or the Purchase Agreement, between MEP and the purchasers named therein. The Notes and all other obligations under the Purchase Agreement are unconditionally guaranteed by each of MEP's domestic material subsidiaries pursuant to a guaranty agreement. Until such time as MEP obtains an investment grade rating from either Moody's or S&P and upon certain trigger events, MEP and the guarantors will grant liens in their assets (subject to certain excluded assets) to secure the obligations under the Notes. There are currently no liens associated with the Notes.

Additionally, the Purchase Agreement contains various covenants and restrictive provisions which limit the ability of MEP and its subsidiaries to incur certain liens or permit such liens to exist, merge or consolidate with another company, dispose of assets, make distributions on or redeem or repurchase their equity interests, incur or guarantee additional debt, repay subordinated debt or certain debt owed to affiliates prior to maturity, alter MEP's lines of business, and enter into certain types of transactions with affiliates or subsidiaries that MEP is permitted to designate as unrestricted subsidiaries.

The Purchase Agreement also requires compliance with two financial covenants. MEP must not permit the ratio of consolidated funded debt to pro forma earnings before interest, taxes, depreciation and amortization (the total leverage ratio), EBITDA, as of the end of any applicable four-quarter period, to exceed 5.00 to 1.00, or 5.50 to 1.00 during acquisition periods. MEP also must maintain, on a consolidated basis, as of the end of each applicable four-quarter period, a ratio of pro forma EBITDA to consolidated interest expense for such four quarter period then ended of at least 2.50 to 1.00.

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In connection with MEP's entry into the Purchase Agreement, MEP, along with the guarantors and us, entered into a subordination agreement in which we agreed to subordinate our right to payment on obligations owed by Midcoast Operating under each of the Financial Support Agreement and the Working Capital Agreements, both entered into by and between Midcoast Operating and us on November 13, 2013, and liens, if secured, to the rights of the holders under the Purchase Agreement, subject to the terms and conditions of the subordination agreement in favor and for the benefit of the holders of the Notes.

Fair Value of Debt Obligations

The carrying amounts of our outstanding commercial paper, borrowings under our Credit Facilities, and MEP Credit Agreement approximate their fair values at September 30, 2014, and December 31, 2013, respectively, due to the short-term nature and frequent repricing of the amounts outstanding under these obligations. The fair value of our outstanding commercial paper and borrowings under our Credit Facilities and MEP Credit Agreement are included with our long-term debt obligations above since we have the ability and the intent to refinance the amounts outstanding on a long-term basis.

The approximate fair values of our fixed-rate debt obligations was $5.5 billion and $4.9 billion at September 30, 2014, and December 31, 2013, respectively. We determined the approximate fair values using a standard methodology that incorporates pricing points that are obtained from independent, third-party investment dealers who actively make markets in our debt securities. We use these pricing points to calculate the present value of the principal obligation to be repaid at maturity and all future interest payment obligations for any debt outstanding. The fair value of our long-term debt obligations is categorized as Level 2 within the fair value hierarchy.

7. PARTNERS' CAPITAL

Distribution to Partners

The following table sets forth our distributions, as approved by the board of directors of Enbridge Energy Management, or Enbridge Management, during the nine month period ended September 30, 2014.

Distribution Declaration Date	Record Date	Distribution Payment Date	Distribution per Unit	Cash available for distribution	Amount of Distribution of i-units to i-unit Holders [1]	Retained from General Partner [2]	Distribution of Cash
				(in millions, except per unit amounts)			
July 31, 2014	August 7, 2014	August 14, 2014	$ 0.5550	$ 224.7	$ 36.7	$ 0.8	$ 187.3
April 30, 2014	May 8, 2014	May 15, 2014	$ 0.5435	$ 214.5	$ 35.3	$ 0.7	$ 178.5
January 30, 2014	February 7, 2014	February 14, 2014	$ 0.5435	$ 213.7	$ 34.6	$ 0.7	$ 178.4

(1) We issued 3,517,795 i-units to Enbridge Management, the sole owner of our i-units, during 2014 in lieu of cash distributions.
(2) We retained an amount equal to 2% of the i-unit distribution from our General Partner to maintain its 2% general partner interest in us.

Changes in Partners' Capital

The following table presents significant changes in partners' capital accounts attributable to our General Partner and limited partners as well as the noncontrolling interests in our consolidated subsidiaries, Enbridge Energy, Limited Partnership, or OLP, and MEP, for the nine month periods ended September 30, 2014 and 2013. The noncontrolling interest in the OLP arises from the joint funding arrangements with our General Partner and its affiliate to finance: (1) construction of the U.S. portion of the Alberta Clipper crude oil pipeline and related facilities, which we refer to as the Alberta Clipper Pipeline; (2) expansion of our Lakehead system to transport crude oil to destinations in the Midwest United States, which we refer to as the Eastern Access Projects; and (3) further expansion of our Lakehead system to transport crude oil between Neche, North Dakota and Superior,

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Wisconsin, which we refer to as the Mainline Expansion Projects. Noncontrolling interest in MEP arises from its public unitholders' ownership interests in MEP.

	For the nine month period ended September 30,	
	2014	2013
	(in millions)	
Series 1 Preferred interests		
Beginning balance	$1,160.7	$ —
Proceeds from issuance of preferred units	—	1,200.0
Net income	67.5	35.8
Accretion of discount on preferred units	11.1	5.7
Distribution payable	(67.5)	(35.8)
Beneficial conversion feature of preferred units	—	(47.7)
Ending balance	$1,171.8	$1,158.0
General and limited partner interests		
Beginning balance	$4,637.7	$4,774.9
Proceeds from issuance of partnership interests, net of costs	—	519.3
Net income	157.7	21.5
Distributions	(544.2)	(530.6)
Beneficial conversion feature of preferred units	—	47.7
Transfer of interests in subsidiary to Midcoast Energy Partners, L.P.	(125.4)	—
Ending balance	$4,125.8	$4,832.8
Accumulated other comprehensive loss		
Beginning balance	$ (76.6)	$ (320.5)
Changes in fair value of derivative financial instruments reclassified to earnings	22.2	21.3
Changes in fair value of derivative financial instruments recognized in other comprehensive income (loss)	(104.6)	156.4
Ending balance	$ (159.0)	$ (142.8)
Noncontrolling interest		
Beginning balance	$1,975.6	$ 793.5
Capital contributions	1,083.0	355.2
Transfer of interests in subsidiary to Midcoast Energy Partners, L.P.	125.4	—
Other comprehensive loss allocated to noncontrolling interest	1.8	—
Net income	149.4	54.3
Distributions to noncontrolling interest	(80.9)	(39.7)
Ending balance	$3,254.3	$1,163.3
Total partners' capital at end of period	$8,392.9	$7,011.3

Midcoast Energy Partners, L.P.

On November 13, 2013, MEP, one of our subsidiaries, completed its IPO of 18,500,000 Class A common units representing limited partner interests and subsequently issued an additional 2,775,000 Class A common units pursuant to the underwriter's exercise of their over allotment option. MEP received proceeds (net of underwriting discounts, structuring fees and offering expenses) of approximately $354.9 million. MEP used the net proceeds to distribute approximately $304.5 million to us, to pay approximately $3.4 million in revolving credit facility origination and commitment fees and used approximately $47.0 million to redeem 2,775,000 Class A common units from us. At September 30, 2014, we owned 5.9% of outstanding MEP Class A common units, 100% of the outstanding MEP Subordinated Units, 100% of MEP's general partner and 48.4% of the limited partner interests in Midcoast Operating.

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On July 1, 2014, we sold a 12.6% limited partner interest in Midcoast Operating to MEP, for $350.0 million in cash, which reduced our total ownership interest in Midcoast Operating from 61% to 48.4%. This transaction represents our first sale to MEP of additional interests in Midcoast Operating since MEP's IPO on November 13, 2013. We intend to sell additional interests in our natural gas assets, held through Midcoast Operating, to MEP and use the proceeds from any such sale as a source of funding for us. However, we do not know when, or if, any additional interests will be offered for sale.

The change in our total ownership interest in Midcoast Operating was recorded as an equity transaction, and no loss on the sale was recognized in our consolidated statements of income or comprehensive income. The increase in MEP's ownership interest in Midcoast Operating resulted in a reclassification of $125.4 million from the partners' capital accounts on a pro-rata basis to "Noncontrolling interest" in our consolidated statements of financial position.

8. RELATED PARTY TRANSACTIONS

Administrative and Workforce Related Services

We do not directly employ any of the individuals responsible for managing or operating our business, nor do we have any directors. Enbridge and its affiliates provide management and we obtain managerial, administrative, operational and workforce related services from our General Partner, Enbridge Management and affiliates of Enbridge pursuant to service agreements among our General Partner, Enbridge Management, affiliates of Enbridge, and us. Pursuant to these service agreements, we have agreed to reimburse our General Partner, Enbridge Management and affiliates of Enbridge for the cost of managerial, administrative, operational and director services they provide to us. Where directly attributable, the cost of all compensation, benefits expenses and employer expenses for these employees are charged directly by Enbridge to the appropriate affiliate. Enbridge does not record any profit or margin for the administrative and operational services charged to us.

The following table presents the affiliate amounts incurred by us for services received pursuant to the services agreements. The amounts we incurred are reflected in our consolidated statements of income by category.

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(in millions)			
Operating and administrative—affiliate	$ 115.9	$ 111.5	$ 353.6	$ 329.1

Distribution from MEP

The following table presents distributions paid by MEP to its public Class A common unitholders and us during the nine month period ended September 30, 2014, representing the noncontrolling interest in MEP.

Distribution Declaration Date	Distribution Payment Date	Amount Paid to EEP	Amount Paid to the noncontrolling interest	Total MEP Distribution
		(in millions)		
July 31, 2014	August 14, 2014	$ 8.1	$ 6.9	$ 15.0
April 29, 2014	May 15, 2014	7.8	6.6	14.4
January 29, 2014	February 14, 2014	4.2	3.5	7.7
		$ 20.1	$ 17.0	$ 37.1

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Working Capital Credit Facility

On November 13, 2013, we entered into a $250.0 million Working Capital Loan Agreement, or the Working Capital Credit Facility, by and between Midcoast Operating, as borrower, and the Partnership, as lender. On October 30, 2014, we received a notice from Midcoast Operating that it is exercising its right under the Working Capital Agreement to terminate the Working Capital Agreement upon 30-days' notice, and such termination is expected to occur in the fourth quarter. As of September 30, 2014, there were no outstanding borrowings under the Working Capital Agreement.

Joint Funding Arrangement for Alberta Clipper Pipeline

In 2009, we entered into a joint funding arrangement with several of our affiliates and affiliates of Enbridge Inc., or Enbridge, to finance the construction of the United States segment of the Alberta Clipper Pipeline, which we refer to as the Series AC. As part of that arrangement, we have a credit agreement between our General Partner and us, which we refer to as the A1 Term Note. A summary of the cash activity for the A1 Term Note for the nine month periods ended September 30, 2014 and 2013 are as follows:

	A1 Term Note September 30,	
	2014	2013
	(in millions)	
Beginning Balance	$318.0	$330.0
Borrowings	—	—
Repayments	(12.0)	(12.0)
Ending Balance	$306.0	$318.0

We incurred interest expense under the A1 Term Note of $6.1 million and $18.3 million for the three and nine month periods ended September 30, 2014, respectively. We have presented the amounts in "Interest expense, net" on our consolidated statements of income.

We allocated earnings derived from operating the Alberta Clipper Pipeline in the amount of $16.3 million and $38.0 million for the three and nine month periods ended September 30, 2014, respectively, to our General Partner for its 66.67% share of the earnings of the Alberta Clipper Pipeline. We also allocated $13.4 million and $39.6 million of such earnings to our General Partner for the three and nine month periods ended September 30, 2013, respectively. We have presented the amounts we allocated to our General Partner for its share of the earnings of the Alberta Clipper Pipeline in "Net income attributable to noncontrolling interest" on our consolidated statements of income.

Distribution to Series AC Interests

The following table presents distributions paid by the OLP to our General Partner and its affiliate during the nine month period ended September 30, 2014, representing the noncontrolling interest in the Series AC, and to us, as the holders of the Series AC general and limited partner interests. The distributions were declared by the board of directors of Enbridge Management, acting on behalf of Enbridge Pipelines (Lakehead) L.L.C., the managing general partner of the OLP and the Series AC interests.

Distribution Declaration Date	Distribution Payment Date	Amount Paid to Partnership	Amount paid to the noncontrolling interest	Total Series AC Distribution
		(in millions)		
July 31, 2014	August 14, 2014	$ 7.4	$ 14.8	$ 22.2
April 30, 2014	May 15, 2014	6.6	13.1	19.7
January 30, 2014	February 14, 2014	6.4	12.8	19.2
		$ 20.4	$ 40.7	$ 61.1

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Joint Funding Arrangement for Eastern Access Projects

The OLP has a series of partnership interests, which we refer to as the EA interests. The EA interests were created to finance projects to increase access to refineries in the U.S. Upper Midwest and in Ontario, Canada for light crude oil produced in western Canada and the United States, which we refer to as the Eastern Access Projects. Our General Partner owns 75% of the EA interests, and projects are jointly funded by our General Partner at 75% and us at 25%.

Our General Partner made equity contributions totaling $550.5 million and $272.5 million to the OLP during the nine month periods ended September 30, 2014 and 2013, respectively, to fund its equity portion of the construction costs associated with the Eastern Access Projects.

We allocated earnings from the Eastern Access Projects in the amount of $41.7 million and $90.5 million to our General Partner for its ownership of the EA interest for the three and nine month periods ended September 30, 2014, respectively. We allocated earnings derived from the Eastern Access Projects in the amount of $6.6 million and $14.4 million to our General Partner for the three and nine month periods ended September 30, 2013, respectively. We have presented the amount allocated to our General Partner in "Net income attributable to noncontrolling interest" on our consolidated statements of income.

Distribution to Series EA Interests

The following table presents distributions paid by the OLP to our General Partner and its affiliate during the nine month period ended September 30, 2014, representing the noncontrolling interest in the Series EA, and to us, as the holders of the Series EA general and limited partner interests. The distributions were declared by the board of directors of Enbridge Management, acting on behalf of Enbridge Pipelines (Lakehead), L.L.C., the managing general partner of the OLP and the Series EA interests.

Distribution Declaration Date	Distribution Payment Date	Amount Paid to EEP	Amount Paid to the noncontrolling interest	Total Series EA Distribution
		(in millions)		
July 31, 2014	August 14, 2014	$ 5.6	$ 16.7	$ 22.3
April 29, 2014	May 15, 2014	2.5	6.5	9.0
		$ 8.1	$ 23.2	$ 31.3

Joint Funding Arrangement for U.S. Mainline Expansion Projects

The OLP also has a series of partnership interests, which we refer to as the ME interests. The ME interests were created to finance projects to increase access to the markets of North Dakota and western Canada for light oil production on our Lakehead System between Neche, North Dakota and Superior, Wisconsin, which we refer to as our Mainline Expansion Projects. Our General Partner owns 75% of the ME interests, and the projects are jointly funded by our General Partner at 75% and us at 25%, under the Mainline Expansion Joint Funding Agreement, which parallels the Eastern Access Joint Funding Agreement.

Our General Partner has made equity contributions totaling $384.0 million and $82.7 million to the OLP for the nine month periods ended September 30, 2014, and 2013, respectively, to fund its equity portion of the construction costs associated with the Mainline Expansion Projects.

We allocated earnings from the Mainline Expansion Projects in the amount of $9.8 million and $20.0 million to our General Partner for its ownership of the ME interest for the three and nine month periods ended September 30, 2014, respectively. We allocated earnings derived from the Mainline Expansion Projects in the amount of $0.3 million to our General Partner for the three and nine month periods ended September 30, 2013, respectively. We have presented the amount we allocated to our General Partner in "Net income attributable to noncontrolling interest" on our consolidated statements of income.

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Sale of Accounts Receivable

For the three and nine month periods ended September 30, 2014, we sold and derecognized $1,260.1 million and $3,792.8 million, respectively, of receivables to a wholly owned subsidiary of Enbridge. For the three and nine month periods ended September 30, 2014, the cash proceeds were $1,259.8 million and $3,791.8 million, respectively, which was remitted to us through our centralized treasury system. As of September 30, 2014, $411.1 million of the receivables were outstanding and had not been collected on behalf of the Enbridge subsidiary.

Consideration for the receivables sold is equivalent to the carrying value of the receivables less a discount for credit risk. The difference between the carrying value of the receivables sold and the cash proceeds received is recognized in "Operating and administrative-affiliate" expense in our consolidated statements of income. For the three and nine month periods ended September 30, 2014, the cost stemming from the discount on the receivables sold was not material.

As of September 30, 2014 and December 31, 2013, we had $38.2 million and $69.4 million, respectively, included in "Restricted cash" on our consolidated statements of financial position, consisting of cash collections related to the receivables sold that have yet to be remitted to the Enbridge subsidiary as of September 30, 2014.

Affiliate Revenues and Purchases

We record operating revenues in our Liquids segment for storage, transportation and terminaling services we provide to affiliates. The sales to affiliates are presented in "Operating revenue—affiliate" on our consolidated statements of income. Purchases of natural gas, natural gas liquids, or NGLs, and crude oil from Enbridge and its affiliates are presented in "Cost of natural gas—affiliate" on our consolidated statements of income.

The following table presents our results for the three and nine month periods ended September 30, 2014, and September 30, 2013, for operating revenues from sales to Enbridge and its affiliates and costs of natural gas, NGLs and crude oil purchases from Enbridge and its affiliates.

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(in millions)			
Operating revenue—affiliate	$ 68.3	$ 65.4	$ 229.4	$ 204.8
Cost of natural gas—affiliate	$ 29.7	$ 22.8	$ 98.3	$ 95.3

Related Party Transactions with Joint Ventures

We have a 35% aggregate indirect interest in the Texas Express NGL system, which is comprised of two joint ventures with third parties that together include a 580-mile NGL intrastate transportation pipeline and a related NGL gathering system that was placed into service in the fourth quarter of 2013. Our equity investment in the Texas Express NGL system at September 30, 2014 and December 31, 2013, was $380.2 million and $371.3 million, respectively, which is included on our consolidated statements of financial position in "Other assets, net." For the three and nine month periods ending September 30, 2014, we recognized $6.1 million and $7.1 million of equity earnings, respectively, in "Other income (expense)" on our consolidated statements of income related to our investment in the system.

For the three and nine month periods ended September 30, 2014, we incurred $5.4 million and $16.8 million, respectively, of pipeline transportation and demand fees from Texas Express NGL system for our Natural Gas business. We did not incur any fees from the Texas Express NGL system for the three and nine month periods ended September 30, 2013. These expenses are included in "Cost of natural gas – affiliate" on our consolidated statements of income.

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Our Natural Gas business has made commitments to transport up to 120,000 barrels per day, or Bpd, of NGLs on the Texas Express NGL system from 2014 to 2023.

9. COMMITMENTS AND CONTINGENCIES

Environmental Liabilities

We are subject to federal and state laws and regulations relating to the protection of the environment. Environmental risk is inherent to liquid hydrocarbon and natural gas pipeline operations, and we are, at times, subject to environmental cleanup and enforcement actions. We manage this environmental risk through appropriate environmental policies and practices to minimize any impact our operations may have on the environment. To the extent that we are unable to recover environmental liabilities through insurance or other potentially responsible parties, we will be responsible for payment of liabilities arising from environmental incidents associated with the operating activities of our Liquids and Natural Gas businesses. Our General Partner has agreed to indemnify us from and against any costs relating to environmental liabilities associated with the Lakehead system assets prior to the transfer of these assets to us in 1991. This excludes any liabilities resulting from a change in laws after such transfer. We continue to voluntarily investigate past leak sites on our systems for the purpose of assessing whether any remediation is required in light of current regulations.

As of September 30, 2014 and December 31, 2013, we had $64.0 million and $25.8 million, respectively, included in “Other long-term liabilities,” that we have accrued for costs we have recognized primarily to address remediation of contaminated sites, asbestos containing materials, management of hazardous waste material disposal, outstanding air quality measures for certain of our liquids and natural gas assets and penalties we have been or expect to be assessed.

Griffith Terminal Crude Oil Release

On February 25, 2014, a release of approximately 975 barrels of crude oil occurred within the Griffith Terminal in Griffith, Indiana. A repair plan has been reviewed with Pipeline and Hazardous Materials Safety Administration, or PHMSA and repair work has commenced. The released oil was fully contained within our facility and substantially all of the free product was recovered. The released oil did not affect the local community, wildlife or water supply. In connection with this crude oil release, the cost estimate is approximately $7.0 million, excluding possible fines and penalties. As of September 30, 2014, we made payments of $6.0 million, and we have a remaining estimated liability of $1.0 million.

Lakehead Line 6B Crude Oil Release

We continue to perform necessary remediation, restoration and monitoring of the areas affected by the Line 6B crude oil release. All the initiatives we are undertaking in the monitoring and restoration phase are intended to restore the crude oil release area to the satisfaction of the appropriate regulatory authorities.

On March 14, 2013, we received an order from the Environmental Protection Agency, or EPA, which we refer to as the Order, that defined the scope which requires additional containment and active recovery of submerged oil relating to the Line 6B crude oil release. We submitted our initial proposed work plan required by the EPA on April 4, 2013, and we resubmitted the workplan on April 23, 2013, and again on May 1, 2013, based on EPA comments. The EPA approved the Submerged Oil Recovery and Assessment workplan, or SORA, with modifications on May 8, 2013. We incorporated the modification and submitted an approved SORA on May 13, 2013. At this time we have completed substantially all of the SORA.

We are also working with the Michigan Department of Environmental Quality, or MDEQ, to transition submerged oil reassessment, sheen management and sediment trap monitoring and maintenance activities from the EPA to the MDEQ, through a Kalamazoo River Residual Oil Monitoring and Maintenance Work Plan or, the Plan.

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As of September 30, 2014, our total cost estimate for the Line 6B crude oil release is $1.21 billion, which is an increase of $85.9 million as compared to December 31, 2013. On May 28, 2014 the MDEQ, Water Resource Division, approved our Schedule of Work for the remainder of 2014. Of the total cost increase of $50.9 million during the three month period ended September 30, 2014, $33.0 million is primarily related to the MDEQ approved Schedule of Work, and completion of the dredge activities near Ceresco and Morrow Lake, and $17.9 million is related to an increase of estimated civil penalties under the Clean Water Act of the United States, as described below under *Lines 6A & 6B Fines and Penalties*.

For purposes of estimating our expected losses associated with the Line 6B crude oil release, we have included those costs that we considered probable and that could be reasonably estimated at September 30, 2014. Our estimates exclude: (1) amounts we have capitalized, (2) any claims associated with the release that may later become evident, (3) amounts recoverable under insurance, and (4) fines and penalties from other governmental agencies except as described in the Line 6A & 6B Fines and Penalties section below. Our assumptions include, where applicable, estimates of the expected number of days the associated services will be required and rates that we have obtained from contracts negotiated for the respective service and equipment providers. As we receive invoices for the actual personnel, equipment and services, our estimates will continue to be further refined. Our estimates also consider currently available facts, existing technology and presently enacted laws and regulations. These amounts also consider our and other companies' prior experience remediating contaminated sites and data released by government organizations. Despite the efforts we have made to ensure the reasonableness of our estimates, changes to the recorded amounts associated with this release are possible as more reliable information becomes available. We continue to have the potential of incurring additional costs in connection with this crude oil release due to variations in any or all of the categories described above, including modified or revised requirements from regulatory agencies, in addition to fines and penalties as well as expenditures associated with litigation and settlement of claims.

The material components underlying our total estimated loss for the cleanup, remediation and restoration associated with the Line 6B crude oil release include the following:

	(in millions)
Response Personnel & Equipment	$ 551.6
Environmental Consultants	227.0
Professional, regulatory and other	429.4
Total	$ 1,208.0

For the nine month periods ended September 30, 2014 and 2013, we made payments of $117.4 million and $62.3 million, respectively, for costs associated with the Line 6B crude oil release. As of September 30, 2014 and December 31, 2013, we had a remaining estimated liability of $219.4 million and $258.9 million, respectively.

Lines 6A & 6B Fines and Penalties

On September 9, 2010, a crude oil release occurred on Line 6A in Romeoville, Illinois. Due to the absence of sufficient information, we cannot provide a reasonable estimate of the liability for potential fines and penalties that could be assessed in connection with the Line 6A release. At September 30, 2014, our total estimated costs for the Line 6A crude oil release do not include an estimate for fines and penalties, which may be imposed by the EPA and PHMSA, in addition to other federal, state and local governmental agencies.

At September 30, 2014, our estimated costs related to the Line 6B crude oil release included $47.5 million in fines and penalties. Of this amount, $3.7 million related to civil penalties assessed by PHMSA that we paid during the third quarter of 2012. The total also included an amount of $40.0 million related to civil penalties under the Clean Water Act of the United States. While no final fine or penalty has been assessed or agreed to date, we believe that, based on the best information available at this time, the $40.0 million represents an estimate of the minimum amount which may be assessed, excluding costs of injunctive relief that may be agreed

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to with the relevant governmental agencies. Given the complexity of settlement negotiations, which we expect will continue, and the limited information available to assess the matter, we are unable to reasonably estimate the final penalty which might be incurred or to reasonably estimate a range of outcomes at this time. Injunctive relief is likely to include measures directed toward enhancing spill prevention, leak detection, and emergency response to environmental events, and the cost of compliance with such measures could be significant. Discussions with governmental agencies regarding fines, penalties, and injunctive relief are ongoing.

Insurance Recoveries

We are included in the comprehensive insurance program that is maintained by Enbridge for its subsidiaries and affiliates that renew throughout the year. On May 1 of each year, our insurance program is up for renewal and includes commercial liability insurance coverage that is consistent with coverage considered customary for our industry and includes coverage for environmental incidents such as those we have incurred for the crude oil releases from Lines 6A and 6B, excluding costs for fines and penalties.

A majority of the costs incurred for the crude oil release for Line 6B are covered by the insurance policy that expired on April 30, 2011, which had an aggregate limit of $650.0 million for pollution liability. Including our remediation spending through September 30, 2014, we have exceeded the limits of coverage under this insurance policy. As of September 30, 2014, we have recorded total insurance recoveries of $547.0 million for the Line 6B crude oil release, out of the $650.0 million aggregate limit. We will record receivables for additional amounts we claim for recovery pursuant to our insurance policies during the period that we deem realization of the claim for recovery to be probable.

In March 2013, we and Enbridge filed a lawsuit against the insurers of our remaining $145.0 million coverage, as one particular insurer is disputing our recovery eligibility for costs related to our claim on the Line 6B crude oil release and the other remaining insurers assert that their payment is predicated on the outcome of our recovery with that insurer. We received a partial recovery payment of $42.0 million from the other remaining insurers.

Of the remaining $103.0 million coverage limit, $85.0 million is the subject matter of the lawsuit Enbridge filed in March 2013 against one particular insurer who is disputing our recovery eligibility for costs related to our claim on the Line 6B oil release. The recovery of the remaining $18.0 million is awaiting resolution of this lawsuit. While we believe those costs are eligible for recovery, there can be no assurance that we will prevail in our lawsuit.

We are pursuing recovery of the costs associated with the Line 6A crude oil release from third parties; however, there can be no assurance that any such recovery will be obtained. Additionally, fines and penalties would not be covered under our existing insurance policy.

Enbridge renewed its comprehensive property and liability insurance programs under which we are insured through April 30, 2015, having a liability aggregate limit of $700.0 million, including sudden and accidental pollution liability. The deductible applicable to oil pollution events was increased to $30.0 million per event, from the previous $10.0 million. In the unlikely event that multiple insurable incidents which in aggregate exceed coverage limits occur within the same insurance period, the total insurance coverage will be allocated among the Enbridge entities on an equitable basis based on an insurance allocation agreement we have entered into with Enbridge, MEP, and other Enbridge subsidiaries.

Legal and Regulatory Proceedings

We are a participant in various legal and regulatory proceedings arising in the ordinary course of business. Some of these proceedings are covered, in whole or in part, by insurance. We are also directly, or indirectly, subject to challenges by special interest groups to regulatory approvals and permits for certain of our expansion projects.

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A number of governmental agencies and regulators have initiated investigations into the Line 6B crude oil release. Approximately 10 actions or claims are pending against us and our affiliates in state and federal courts in connection with the Line 6B crude oil release, including direct actions and actions seeking class status. Based on the current status of these cases, we do not expect the outcome of these actions to be material.

Governmental agencies and regulators have also initiated investigations into the Line 6A crude oil release. One claim was filed against us and our affiliates by the State of Illinois in an Illinois state court in connection with this crude oil release, and the parties are currently operating under an agreed interim order. The costs associated with this order are included in the estimated environmental costs accrued for the Line 6A crude oil release. We are also pursuing recovery of the costs associated with the Line 6A crude oil release from third parties; however, there can be no assurance that any such recovery will be obtained.

We have accrued a provision for future legal costs and probable losses associated with the Line 6A and Line 6B crude oil releases as described above in this footnote.

10. DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING ACTIVITIES

Our net income and cash flows are subject to volatility stemming from changes in interest rates on our variable rate debt obligations and fluctuations in commodity prices of natural gas, NGLs, condensate, crude oil, power and fractionation margins. Fractionation margins represent the relative difference between the price we receive from NGL and condensate sales and the corresponding cost of natural gas we purchase for processing. Our interest rate risk exposure results from changes in interest rates on our variable rate debt and exists at the corporate level where our variable rate debt obligations are issued. Our exposure to commodity price risk exists within each of our segments. We use derivative financial instruments (i.e., futures, forwards, swaps, options and other financial instruments with similar characteristics) to manage the risks associated with market fluctuations in interest rates and commodity prices, as well as to reduce volatility of our cash flows. Based on our risk management policies, all of our derivative financial instruments are employed in connection with an underlying asset, liability and/or forecasted transaction and are not entered into with the objective of speculating on interest rates or commodity prices. We have hedged a portion of our exposure to variability in future cash flows associated with the risks discussed above through 2019 in accordance with our risk management policies.

Accounting Treatment

Effective January 1, 2014, we elected to prospectively change the presentation of derivative assets and liabilities from a net basis to a gross basis in the Consolidated Statements of Financial Position. We adopted this change to provide more detailed information about the future economic benefits and obligations associated with our derivative activities in our Consolidated Statements of Financial Position. This change had no impact to the Consolidated Statements of Income, Net income (loss) per limited partner unit, or Partners' capital.

Non-Qualified Hedges

Many of our derivative financial instruments qualify for hedge accounting treatment as set forth in the authoritative accounting guidance. However, we have transaction types associated with our commodity derivative financial instruments where the hedge structure does not meet the requirements to apply hedge accounting. As a result, these derivative financial instruments do not qualify for hedge accounting and are referred to as non-qualifying. These non-qualifying derivative financial instruments are marked-to-market each period with the change in fair value, representing unrealized gains and losses, included in "Cost of natural gas," "Operating revenue", "Power" or "Interest expense" in our consolidated statements of income. These mark-to-market adjustments produce a degree of earnings volatility that can often be significant from period to period, but have no cash flow impact relative to changes in market prices. The cash flow impact occurs when the underlying physical transaction takes place in the future and the associated financial instrument contract settlement is made.

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The following transaction types do not qualify for hedge accounting and contribute to the volatility of our income and cash flows:

Commodity Price Exposures:

- **Transportation**—In our Natural Gas segment, when we transport natural gas from one location to another, the pricing index used for natural gas sales is usually different from the pricing index used for natural gas purchases, which exposes us to market price risk relative to changes in those two indices. By entering into a basis swap, where we exchange one pricing index for another, we can effectively lock in the margin, representing the difference between the sales price and the purchase price, on the combined natural gas purchase and natural gas sale, removing any market price risk on the physical transactions. Although this represents a sound economic hedging strategy, the derivative financial instruments (i.e., the basis swaps) we use to manage the commodity price risk associated with these transportation contracts do not qualify for hedge accounting, since only the future margin has been fixed and not the future cash flow. As a result, the changes in fair value of these derivative financial instruments are recorded in earnings.
- **Storage**—In our Natural Gas segment, we use derivative financial instruments (i.e., natural gas, crude oil and NGL swaps) to hedge the relative difference between the injection price paid to purchase and store natural gas, crude oil and NGLs and the withdrawal price at which these commodities are sold from storage. The intent of these derivative financial instruments is to lock in the margin, representing the difference between the price paid for the natural gas, crude oil and NGLs injected and the price received upon withdrawal of these commodities from storage in a future period. We do not pursue cash flow hedge accounting treatment for these storage transactions since the underlying forecasted injection or withdrawal of these commodities, may not occur in the period as originally forecast. This can occur because we have the flexibility to make changes in the underlying injection or withdrawal schedule, based on changes in market conditions. In addition, since the physical commodities are recorded at the lower of cost or market, timing differences can result when the derivative financial instrument is settled in a period that is different from the period the physical commodity is sold from storage. As a result, derivative financial instruments associated with our storage activities can create volatility in our earnings.
- **Condensate, Natural Gas and NGL Options**—In our Natural Gas segment, we use options to hedge the forecasted commodity exposure of our condensate, NGLs and natural gas. Although options can qualify for hedge accounting treatment, pursuant to the authoritative accounting guidance, we have elected non-qualifying treatment. As such, our option premiums are expensed as incurred. These derivatives are being marked-to-market, with the changes in fair value recorded to earnings each period. As a result, our operating income is subject to volatility due to movements in the prices of condensate, NGLs and natural gas until the underlying long-term transactions are settled.
- **Optional Natural Gas Processing Volumes**—In our Natural Gas segment, we use derivative financial instruments to hedge the volumes of NGLs produced from our natural gas processing facilities. Some of our natural gas contracts allow us the choice of processing natural gas when it is economical and to cease doing so when processing becomes uneconomic. We have entered into derivative financial instruments to fix the sales price of a portion of the NGLs that we produce at our discretion and to fix the associated purchase price of natural gas required for processing. We typically designate derivative financial instruments associated with NGLs we produce per contractual processing requirements as cash flow hedges when the processing of natural gas is probable of occurrence. However, we are precluded from designating the derivative financial instruments as qualifying hedges of the respective commodity price risk when the discretionary processing volumes are subject to change. As a result, our operating income is subject to increased volatility due to fluctuations in NGL prices until the underlying transactions are settled or offset.
- **NGL and Crude Oil Forward Contracts**—In our Natural Gas segment, we use forward contracts to fix the price of NGLs and crude oil we purchase and to fix the price of NGLs and crude oil that we sell

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to meet the demands of our customers that sell and purchase NGLs and crude oil. A subgroup of physical NGL and physical crude oil contracts qualify for the normal purchases and normal sales, or NPNS scope exception. All other forward contracts are being marked-to-market each period with the change in fair value recorded in earnings. As a result, our operating income is subject to additional volatility associated with fluctuations in NGL and crude oil prices until the forward contracts are settled.

- **Natural Gas Forward Contracts**—In our Natural Gas segment, we use forward contracts to sell natural gas to our customers. A subgroup of physical natural gas contracts qualify for the NPNS scope exception. All other forward contracts are being marked-to-market each period with the change in fair value recorded in earnings. As a result, our operating income is subject to additional volatility associated with the changes in fair value of these contracts.
- **Crude Oil Contracts**—In our Liquids segment, we use forward contracts to hedge a portion of the crude oil length inherent in the operation of our pipelines, which we subsequently sell at market rates. These hedges create a fixed sales price for the crude oil that we will receive in the future. We elected not to designate these derivative financial instruments as cash flow hedges, and as a result, will experience some additional volatility associated with fluctuations in crude oil prices until the underlying transactions are settled or offset.
- **Power Purchase Agreements**—In our Liquids segment, we use forward physical power agreements to fix the price of a portion of the power consumed by our pumping stations in the transportation of crude oil in our owned pipelines. We designate these derivative agreements as non-qualifying hedges because they fail to meet the criteria for cash flow hedging or the NPNS exception. As various states in which our pipelines operate have legislated either partially or fully deregulated power markets, we have the opportunity to create economic hedges on power exposure. As a result, our operating income is subject to additional volatility associated with changes in the fair value of these agreements due to fluctuations in forward power prices.

Except for physical power, in all instances related to the commodity exposures described above, the underlying physical purchase, storage and sale of the commodity is accounted for on a historical cost or net realizable value basis rather than on the mark-to-market basis we employ for the derivative financial instruments used to mitigate the commodity price risk associated with our storage and transportation assets. This difference in accounting (i.e., the derivative financial instruments are recorded at fair market value while the physical transactions are recorded at the lower of historical or net realizable value) can and has resulted in volatility in our reported net income, even though the economic margin is essentially unchanged from the date the transactions were consummated. Relating to the power purchase agreements, commodity power purchases are immediately consumed as part of pipeline operations and are subsequently recorded as actual power expenses each period.

Derivative Positions

Our derivative financial instruments are included at their fair values in the consolidated statements of financial position as follows:

	September 30, 2014	December 31, 2013
	(in millions)	
Other current assets	$ 37.8	$ 21.2
Other assets, net	36.2	74.4
Accounts payable and other [1]	(25.6)	(172.0)
Other long-term liabilities	(267.9)	(12.3)
Due from general partner and affiliates	0.4	—
	$ (219.1)	$ (88.7)

(1) Includes $16.7 million of cash collateral at December 31, 2013.

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The changes in the assets and liabilities associated with our derivatives are primarily attributable to the effects of new derivative transactions we have entered at prevailing market prices, settlement of maturing derivatives and the change in forward market prices of our remaining hedges. Our portfolio of derivative financial instruments is largely comprised of natural gas, NGL and crude oil sales and purchase contracts.

The table below summarizes our derivative balances by counterparty credit quality (negative amounts represent our net obligations to pay the counterparty).

	September 30, 2014	December 31, 2013
	(in millions)	
Counterparty Credit Quality [1]		
AAA	$ 0.3	$ 0.3
AA	(91.0)	(49.7)
A [2]	(134.0)	(40.1)
Lower than A	5.6	0.8
	$ (219.1)	$ (88.7)

(1) As determined by nationally-recognized statistical ratings organizations.
(2) Includes $16.7 million of cash collateral at December 31, 2013.

As the net value of our derivative financial instruments has decreased in response to changes in forward commodity prices, our outstanding financial exposure to third parties has also decreased. When credit thresholds are met pursuant to the terms of our International Swaps and Derivatives Association, Inc., or ISDA®, financial contracts, we have the right to require collateral from our counterparties. We include any cash collateral received in the balances listed above. When we are in a position of posting collateral to cover our counterparties' exposure to our non-performance, the collateral is provided through letters of credit, which are not reflected above.

At September 30, 2014, we had no cash collateral on our asset exposures, and at December 31, 2013, we held $16.7 million of cash collateral on our asset exposures, and we have provided letters of credit totaling $183.0 million and $76.1 million relating to our liability exposures pursuant to the margin thresholds in effect, respectively, under our ISDA® agreements.

In the event that our credit ratings were to decline to the lowest level of investment grade, as determined by Standard & Poor's and Moody's, we would be required to provide additional amounts under our existing letters of credit to meet the requirements of our ISDA® agreements. For example, if our credit ratings had been at the lowest level of investment grade at September 30, 2014, we would have been required to provide additional letters of credit in the amount of $48.8 million.

At September 30, 2014 and December 31, 2013, we had credit concentrations in the following industry sectors, as presented below:

	September 30, 2014	December 31, 2013
	(in millions)	
United States financial institutions and investment banking entities	$ (176.3)	$ (85.0)
Non-United States financial institutions [1]	(49.3)	0.8
Other	6.5	(4.5)
	$ (219.1)	$ (88.7)

(1) Includes $16.7 million of cash collateral at December 31, 2013.

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Gross derivative balances are presented below before the effects of collateral received or posted and without the effects of master netting arrangements. Both our assets and liabilities are adjusted for non-performance risk, which is statistically derived. This credit valuation adjustment model considers existing derivative asset and liability balances in conjunction with contractual netting and collateral arrangements, current market data such as credit default swap rates and bond spreads and probability of default assumptions to quantify an adjustment to fair value. For credit modeling purposes, collateral received is included in the calculation of our assets, while any collateral posted is excluded from the calculation of the credit adjustment. Our credit exposure for these over-the-counter, or OTC, derivatives is directly with our counterparty and continues until the maturity or termination of the contracts.

Effect of Derivative Instruments on the Consolidated Statements of Financial Position

		Asset Derivatives Fair Value at		Liability Derivatives Fair Value at	
	Financial Position Location	September 30, 2014	December 31, 2013	September 30, 2014	December 31, 2013
		(in millions)			
Derivatives designated as hedging instruments [1]					
Interest rate contracts	Other current assets	$ —	$ 8.1	$ —	$ —
Interest rate contracts	Other assets	16.9	57.1	—	—
Interest rate contracts	Accounts payable and other [2]	—	11.9	(7.8)	(145.5)
Interest rate contracts	Other long-term liabilities	—	—	(255.0)	(11.3)
Commodity contracts	Other current assets	3.3	2.0	—	(0.6)
Commodity contracts	Other assets	1.3	3.5	—	(0.5)
Commodity contracts	Accounts payable and other	—	1.9	(2.2)	(12.7)
Commodity contracts	Other long-term liabilities	—	0.6	(0.3)	(1.4)
		21.5	85.1	(265.3)	(172.0)
Derivatives not designated as hedging instruments					
Commodity contracts	Other current assets	34.5	11.8	—	(0.1)
Commodity contracts	Other assets	18.0	17.6	—	(3.3)
Commodity contracts	Accounts payable and other	—	5.4	(15.6)	(16.3)
Commodity contracts	Other long-term liabilities	—	—	(12.6)	(0.2)
Commodity contracts	Due from general partner and affiliates	0.4	—	—	—
		52.9	34.8	(28.2)	(19.9)
Total derivative instruments		$ 74.4	$ 119.9	$ (293.5)	$ (191.9)

(1) Includes items currently designated as hedging instruments. Excludes the portion of de-designated hedges which may have a component remaining in AOCI.
(2) Liability derivatives exclude $16.7 million of cash collateral at December 31, 2013.

Accumulated Other Comprehensive Income

We record the change in fair value of our derivative financial instruments that qualify for and are designated as a cash flow hedge, which is a hedge of a forecasted transaction or future cash flows, in "Accumulated other comprehensive income", also referred to as AOCI, a component of "Partners' capital," until the underlying hedged transaction occurs. Upon settlement of the designated cash flow hedges, gains (losses) are reclassified to earnings. Also included in AOCI, as of September 30, 2014, are unrecognized losses of approximately $29.6 million associated with derivative financial instruments that qualified for and were classified as cash flow hedges of forecasted transactions that were subsequently de-designated, settled, or terminated. These losses are reclassified to earnings over the periods during which the originally hedged forecasted transactions affect earnings. During the nine month period ended September 30, 2014, unrealized commodity hedge losses of

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$0.2 million were de-designated as a result of the hedges no longer meeting hedge accounting criteria. We estimate that approximately $11.7 million, representing unrealized net losses from our cash flow hedging activities based on pricing and positions at September 30, 2014, will be reclassified from AOCI to earnings during the next 12 months.

During the first quarter of 2014 it was determined that a portion of forecasted short term debt transactions were not expected to occur, due to changing funding requirements. Since we will require less short-term debt than previously forecasted, we terminated several of our existing interest rate hedges used to lock-in interest rates on our short-term debt issuances as these hedges no longer meet the cash flow hedging requirements. These terminations resulted in realized losses of $0.8 million for the nine month period ended September 30, 2014.

Our earnings and cash flows are exposed to the variability in longer term interest rates ahead of the anticipated fixed rate debt issuances. Forward starting interest rate swaps are used as cash flow hedges against the effect of future interest rate movements on earnings and cash flow. In order to mitigate the negative effect that increasing interest rates can have on our cash flows, we have purchased 10 year interest rate swaps with a total notional value of $ 2.35 billion as of September 30, 2014.

In September 2014, we amended the maturity date on certain interest rate hedges of future debt issuances that were originally set to mature in 2014 and 2016 to better reflect the expected timing of future debt issuances. The ineffective portion of the hedges fair value in relation to the hedged future debt issuances is recognized in income at the amendment date and each quarter end. For the three and nine months ended September 30, 2014, interest expense increased due to recognition of unrealized losses for hedge ineffectiveness of approximately $62.2 million associated with interest rate hedges that were originally set to mature in 2014 and 2016.

Effect of Derivative Instruments on the Consolidated Statements of Income and Accumulated Other Comprehensive Income

Derivatives in Cash Flow Hedging Relationships	Amount of Gain (Loss) Recognized in AOCI on Derivative (Effective Portion)	Location of Gain (Loss) Reclassified from AOCI to Earnings (Effective Portion)	Amount of Gain (Loss) Reclassified from AOCI to Earnings (Effective Portion)	Location of Gain (Loss) Recognized in Earnings on Derivative (Ineffective Portion and Amount Excluded from Effectiveness Testing) [1]	Amount of Gain (Loss) Recognized in Earnings on Derivative (Ineffective Portion and Amount Excluded from Effectiveness Testing) [1]
			(in millions)		
For the three month period ended September 30, 2014					
Interest rate contracts	$ 44.1	Interest expense	$ (4.0)	Interest expense	$ (62.2)
Commodity contracts	11.2	Cost of natural gas	(2.1)	Cost of natural gas	0.9
Total	$ 55.3		$ (6.1)		$ (61.3)
For the three month period ended September 30, 2013					
Interest rate contracts	$ 1.7	Interest expense	$ (4.2)	Interest expense	$ (1.1)
Commodity contracts	(17.2)	Cost of natural gas	(0.6)	Cost of natural gas	(0.5)
Total	$ (15.5)		$ (4.8)		$ (1.6)
For the nine month period ended September 30, 2014					
Interest rate contracts	$ (93.0)	Interest expense	$ (12.1)	Interest expense	$ (73.2)
Commodity contracts	7.9	Cost of natural gas	(12.4)	Cost of natural gas	1.5
Total	$ (85.1)		$ (24.5)		$ (71.7)
For the nine month period ended September 30, 2013					
Interest rate contracts	$ 179.3	Interest expense	$ (24.3)	Interest expense	$ (0.5)
Commodity contracts	(8.8)	Cost of natural gas	3.0	Cost of natural gas	1.8
Total	$ 170.5		$ (21.3)		$ 1.3

(1) Includes only the ineffective portion of derivatives that are designated as hedging instruments and does not include net gains or losses associated with derivatives that do not qualify for hedge accounting treatment.

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Components of Accumulated Other Comprehensive Income/(Loss)

	Cash Flow Hedges
	(in millions)
Balance at December 31, 2013	$ (76.6)
Other Comprehensive Income before reclassifications [1]	(104.6)
Amounts reclassified from AOCI [2] [3]	22.2
Tax benefit (expense)	—
Net other comprehensive income	$ (82.4)
Balance at September 30, 2014	$ (159.0)

(1) Excludes NCI loss of $0.5 million reclassified from AOCI at September 30, 2014.
(2) Excludes NCI gain of $2.3 million reclassified from AOCI at September 30, 2014.
(3) For additional details on the amounts reclassified from AOCI, reference the *Reclassifications from Accumulated Other Comprehensive Income* table below.

Reclassifications from Accumulated Other Comprehensive Income

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(in millions)			
Losses (gains) on cash flow hedges:				
Interest Rate Contracts [1]	$ 4.0	$ 4.2	$ 12.1	$ 24.3
Commodity Contracts [2] [3]	1.6	0.6	10.1	(3.0)
Total Reclassifications from AOCI	$ 5.6	$ 4.8	$ 22.2	$ 21.3

(1) Loss reported within “Interest expense” in the consolidated statements of income.
(2) Loss (gain) reported within “Cost of natural gas” in the consolidated statements of income.
(3) Excludes NCI gain of $0.5 million and $2.3 million reclassified from AOCI for the three and nine month periods ending September 30, 2014.

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Effect of Derivative Instruments on Consolidated Statements of Income

Derivatives Not Designated as Hedging Instruments	Location of Gain or (Loss) Recognized in Earnings [1]	For the three month period ended September 30,		For the nine month period ended September 30,	
		2014	2013 [2]	2014	2013 [2]
		Amount of Gain or (Loss) Recognized in Earnings [3]		Amount of Gain or (Loss) Recognized in Earnings [3]	
		(in millions)			
Interest rate contracts	Interest expense [4]	$ —	$ 0.1	$ —	$ —
Commodity contracts	Operating revenue [5]	14.6	(16.7)	10.1	(14.0)
Commodity contracts	Operating revenue—Affiliate	—	—	0.5	—
Commodity contracts	Power	—	0.1	0.5	0.3
Commodity contracts	Cost of natural gas [6]	9.5	(21.8)	(9.9)	(2.6)
Total		$ 24.1	$ (38.3)	$ 1.2	$ (16.3)

(1) Does not include settlements associated with derivative instruments that settle through physical delivery.
(2) The effects of derivative instruments on consolidated statements of income for the three and nine month periods ended September 30, 2013 have been revised to include settlement gains (losses) on derivatives not designated as hedge instruments of $(0.8) million and $1.8 million, respectively. The revisions to the disclosure had no impact on previously reported net income or earnings per unit.
(3) Includes only net gains or losses associated with those derivatives that do not qualify for hedge accounting treatment and does not include the ineffective portion of derivatives that are designated as hedging instruments.
(4) Includes settlement gains of $0.1 million and $0.3 million for the three and nine month periods ended September 30, 2013, respectively.
(5) Includes settlement gains (losses) of $0.6 million and $(0.7) million for the three month periods ended September 30, 2014 and September 30, 2013, respectively, and $0.9 million and $1.0 million for the nine month periods ended September 30, 2014 and September 30, 2013, respectively.
(6) Includes settlement gains (losses) of $0.2 million and $(0.2) million for the three month periods ended September 30, 2014 and September 30, 2013, respectively, and $(8.6) million and $0.5 million for the nine month periods ended September 30, 2014 and September 30, 2013, respectively.

We record the fair market value of our derivative financial and physical instruments in the consolidated statements of financial position as current and long-term assets or liabilities on a gross basis. However, the terms of the ISDA, which governs our financial contracts and our other master netting agreements, allow the parties to elect in respect of all transactions under the agreement, in the event of a default and upon notice to the defaulting party, for the non-defaulting party to set-off all settlement payments, collateral held and any other obligations (whether or not then due), which the non-defaulting party owes to the defaulting party. The effect of the rights of set-off are outlined below.

Offsetting of Financial Assets and Derivative Assets

	As of September 30, 2014				
	Gross Amount of Recognized Assets	Gross Amount Offset in the Statement of Financial Position	Net Amount of Assets Presented in the Statement of Financial Position	Gross Amount Not Offset in the Statement of Financial Position	Net Amount
			(in millions)		
Description:					
Derivatives	$ 74.4	$ —	$ 74.4	$ (33.6)	$ 40.8
Total	$ 74.4	$ —	$ 74.4	$ (33.6)	$ 40.8

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	As of December 31, 2013				
	Gross Amount of Recognized Assets	Gross Amount Offset in the Statement of Financial Position	Net Amount of Assets Presented in the Statement of Financial Position	Gross Amount Not Offset in the Statement of Financial Position	Net Amount
			(in millions)		
Description:					
Derivatives	$ 119.9	$ (24.3)	$ 95.6	$ (18.6)	$ 77.0
Total	$ 119.9	$ (24.3)	$ 95.6	$ (18.6)	$ 77.0

Offsetting of Financial Liabilities and Derivative Liabilities

	As of September 30, 2014				
	Gross Amount of Recognized Liabilities	Gross Amount Offset in the Statement of Financial Position	Net Amount of Liabilities Presented in the Statement of Financial Position	Gross Amount Not Offset in the Statement of Financial Position	Net Amount
			(in millions)		
Description:					
Derivatives	$ (293.5)	$ —	$ (293.5)	$ 33.6	$(259.9)
Total	$ (293.5)	$ —	$ (293.5)	$ 33.6	$(259.9)

	As of December 31, 2013				
	Gross Amount of Recognized Liabilities	Gross Amount Offset in the Statement of Financial Position	Net Amount of Liabilities Presented in the Statement of Financial Position	Gross Amount Not Offset in the Statement of Financial Position	Net Amount
			(in millions)		
Description:					
Derivatives [1]	$ (208.6)	$ 24.3	$ (184.3)	$ 18.6	$(165.7)
Total	$ (208.6)	$ 24.3	$ (184.3)	$ 18.6	$(165.7)

(1) Includes $16.7 million of cash collateral at December 31, 2013.

Inputs to Fair Value Derivative Instruments

The following table sets forth by level within the fair value hierarchy our financial assets and liabilities that were accounted for at fair value on a recurring basis as of September 30, 2014 and December 31, 2013. We classify financial assets and liabilities in their entirety based on the lowest level of input that is significant to the fair value measurement. Our assessment of the significance of a particular input to the fair value measurement requires judgment and may affect our valuation of the financial assets and liabilities and their placement within the fair value hierarchy.

	September 30, 2014				December 31, 2013			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
				(in millions)				
Interest rate contracts [1]	$ —	$(245.9)	$ —	$(245.9)	$ —	$(96.4)	$ —	$(96.4)
Commodity contracts:								
Financial	—	12.1	1.8	13.9	—	6.4	(6.9)	(0.5)
Physical	—	—	7.6	7.6	—	—	(0.2)	(0.2)
Commodity options	—	—	5.3	5.3	—	—	8.4	8.4
Total	$ —	$(233.8)	$ 14.7	$(219.1)	$ —	$(90.0)	$ 1.3	$(88.7)

(1) During the period, there were no significant transfers in or out of any of any of the Levels or between Levels.

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Qualitative Information about Level 2 Fair Value Measurements

We categorize, as Level 2, the fair value of assets and liabilities that we measure with either directly or indirectly observable inputs as of the measurement date, where pricing inputs are other than quoted prices in active markets for the identical instrument. This category includes both OTC transactions valued using exchange traded pricing information in addition to assets and liabilities that we value using either models or other valuation methodologies derived from observable market data. These models are primarily industry-standard models that consider various inputs including: (1) quoted prices for assets and liabilities; (2) time value; and (3) current market and contractual prices for the underlying instruments, as well as other relevant economic measures. Substantially all of these inputs are observable in the marketplace throughout the full term of the assets and liabilities, can be derived from observable data, or are supported by observable levels at which transactions are executed in the marketplace.

Qualitative Information about Level 3 Fair Value Measurements

Data from pricing services and published indices are used to value our Level 3 derivative instruments, which are fair-valued on a recurring basis. We may also use these inputs with internally developed methodologies that result in our best estimate of fair value. The inputs listed in the table below would have a direct impact on the fair values of the listed instruments. The significant unobservable inputs used in the fair value measurement of the commodity derivatives (Natural Gas, NGLs, Crude and Power) are forward commodity prices. The significant unobservable inputs used in determining the fair value measurement of options are price and volatility. Increases/(decreases) in the forward commodity price in isolation would result in significantly higher/(lower) fair values for long positions, with offsetting impacts to short positions. Increases/(decreases) in volatility would increase/(decrease) the value for the holder of the option. Generally, a change in the estimate of forward commodity prices is unrelated to a change in the estimate of volatility of prices. An increase to the credit valuation adjustment would change the fair value of the positions.

Quantitative Information About Level 3 Fair Value Measurements

Contract Type	Fair Value at September 30, 2014 [2] (in millions)	Valuation Technique	Unobservable Input	Range [1] Lowest	Range [1] Highest	Range [1] Weighted Average	Units
Commodity Contracts - Financial							
Natural Gas	$ (0.6)	Market Approach	Forward Gas Price	3.49	4.74	4.01	MMBtu
NGLs	$ 2.4	Market Approach	Forward NGL Price	0.24	1.98	1.18	Gal
Commodity Contracts - Physical							
Natural Gas	$ 1.8	Market Approach	Forward Gas Price	2.03	4.83	4.04	MMBtu
Crude Oil	$ (1.5)	Market Approach	Forward Crude Price	83.03	94.98	90.86	Bbl
NGLs	$ 7.4	Market Approach	Forward NGL Price	0.23	2.05	1.08	Gal
Power	$ (0.1)	Market Approach	Forward Power Price	36.21	39.49	37.84	MWh
Commodity Options							
Natural Gas, Crude and NGLs	$ 5.3	Option Model	Option Volatility	14%	40%	28%	
Total Fair Value	$ 14.7						

(1) Prices are in dollars per Millions of British Thermal Units, or MMBtu, for Natural Gas; dollars per Gallon, or Gal, for NGLs; dollars per barrel, or Bbl, for Crude Oil; and dollars per Megawatt hour, or MWh, for Power.

(2) Fair values include credit valuation adjustments of approximately $0.1 million of losses.

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Quantitative Information About Level 3 Fair Value Measurements

Contract Type	Fair Value at December 31, 2013 [2]	Valuation Technique	Unobservable Input	Range [1] Lowest	Range [1] Highest	Range [1] Weighted Average	Units
	(in millions)						
Commodity Contracts - Financial							
Natural Gas	$ —	Market Approach	Forward Gas Price	3.64	4.41	4.14	MMBtu
NGLs	$ (6.9)	Market Approach	Forward NGL Price	1.00	2.13	1.38	Gal
Commodity Contracts - Physical							
Natural Gas	$ 1.1	Market Approach	Forward Gas Price	3.36	4.82	4.15	MMBtu
Crude Oil	$ (0.5)	Market Approach	Forward Crude Oil Price	86.37	103.04	97.24	Bbl
NGLs	$ (0.1)	Market Approach	Forward NGL Price	0.02	2.19	0.95	Gal
Power	$ (0.7)	Market Approach	Forward Power Price	32.40	38.98	35.07	MWh
Commodity Options							
Natural Gas, Crude and NGLs	$ 8.4	Option Model	Option Volatility	18%	44%	28%	
Total Fair Value	$ 1.3						

(1) Prices are in dollars per Millions of British Thermal Units, or MMBtu, for Natural Gas; dollars per Gallon, or Gal, for NGLs; dollars per barrel, or Bbl, for Crude Oil; and dollars per Megawatt hour, or MWh, for Power.
(2) Fair values include credit valuation adjustments of approximately $0.1 million of gains.

Level 3 Fair Value Reconciliation

The table below provides a reconciliation of changes in the fair value of our Level 3 financial assets and liabilities measured on a recurring basis from January 1, 2014 to September 30, 2014. No transfers of assets between any of the Levels occurred during the period.

	Commodity Financial Contracts	Commodity Physical Contracts	Commodity Options	Total
	(in millions)			
Beginning balance as of January 1, 2014	$ (6.9)	$ (0.2)	$ 8.4	$ 1.3
Transfer in (out) of Level 3 [1]	—	—	—	—
Gains or losses:				
Included in earnings	(3.9)	11.1	(1.1)	6.1
Included in other comprehensive income	(0.2)	—	—	(0.2)
Purchases, issuances, sales and settlements:				
Purchases	—	—	0.4	0.4
Sales	—	—	(1.6)	(1.6)
Settlements [2]	12.8	(3.3)	(0.8)	8.7
Ending balance as September 30, 2014	$ 1.8	$ 7.6	$ 5.3	$14.7
Amount of changes in net assets attributable to the change in derivative gains or losses related to assets still held at the reporting date	$ 2.4	$ 7.2	$ (1.8)	$ 7.8
Amounts reported in operating revenue	$ —	$ 11.2	$ —	$ 11.2

(1) Our policy is to recognize transfers as of the last day of the reporting period.
(2) Settlements represent the realized portion of forward contracts.

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Fair Value Measurements of Commodity Derivatives

The following table provides summarized information about the fair values of expected cash flows of our outstanding commodity based swaps and physical contracts at September 30, 2014 and December 31, 2013.

		At September 30, 2014					At December 31, 2013	
			Wtd. Average Price [2]		Fair Value [3]		Fair Value [3]	
	Commodity	Notional [1]	Receive	Pay	Asset	Liability	Asset	Liability
						(in millions)		
Portion of contracts maturing in 2014								
Swaps								
Receive variable/pay fixed	Natural Gas	668,692	$ 4.00	$ 3.91	$ 0.1	$ —	$ —	$ —
	NGL	623,000	$ 56.02	$ 56.64	$ 0.3	$ (0.7)	$ 0.6	$ (0.4)
	Crude Oil	95,000	$ 89.87	$ 92.56	$ —	$ (0.3)	$ —	$ —
Receive fixed/pay variable	Natural Gas	2,380,100	$ 4.26	$ 4.09	$ 0.5	$ (0.1)	$ 0.1	$ (1.0)
	NGL	2,021,140	$ 51.91	$ 50.97	$ 3.7	$ (1.8)	$ 4.8	$ (12.7)
	Crude Oil	457,764	$ 95.26	$ 90.14	$ 2.7	$ (0.4)	$ 3.4	$ (5.4)
Receive variable/pay variable	Natural Gas	19,562,500	$ 4.03	$ 4.02	$ 0.6	$ (0.5)	$ 0.6	$ (0.1)
Physical Contracts								
Receive variable/pay fixed	Natural Gas	313,224	$ 3.89	$ 1.23	$ 0.8	$ —	$ —	$ —
	NGL	550,000	$ 42.40	$ 43.88	$ —	$ (0.8)	$ 0.9	$ (0.9)
	Crude Oil	45,000	$ 90.85	$ 93.90	$ —	$ (0.1)	$ —	$ —
Receive fixed/pay variable	Natural Gas	185,506	$ 4.03	$ 3.97	$ —	$ —	$ —	$ —
	NGL	3,504,872	$ 39.20	$ 37.85	$ 5.1	$ (0.4)	$ 0.4	$ (2.6)
	Crude Oil	75,000	$ 93.08	$ 90.62	$ 0.2	$ —	$ —	$ (0.4)
Pay fixed	Power [4]	14,716	$ 37.84	$ 46.59	$ —	$ (0.1)	$ —	$ (0.7)
Receive variable/pay variable	Natural Gas	72,613,470	$ 4.02	$ 4.02	$ 0.9	$ (1.1)	$ 0.9	$ (0.4)
	NGL	10,947,422	$ 42.80	$ 42.61	$ 2.7	$ (0.6)	$ 5.8	$ (3.7)
	Crude Oil	758,914	$ 88.26	$ 90.52	$ 0.8	$ (2.5)	$ 1.1	$ (1.2)
Portion of contracts maturing in 2015								
Swaps								
Receive variable/pay fixed	Natural Gas	316,837	$ 3.91	$ 3.93	$ —	$ —	$ —	$ —
	NGL	145,850	$ 72.56	$ 78.20	$ —	$ (0.8)	$ —	$ —
	Crude Oil	456,000	$ 87.81	$ 92.94	$ —	$ (2.3)	$ —	$ —
Receive fixed/pay variable	Natural Gas	809,761	$ 4.56	$ 4.21	$ 0.3	$ —	$ —	$ —
	NGL	1,024,750	$ 54.42	$ 52.36	$ 3.1	$ (1.0)	$ 1.5	$ (1.1)
	Crude Oil	1,303,165	$ 96.75	$ 87.78	$11.7	$ —	$ 8.3	$ —
Receive variable/pay variable	Natural Gas	42,725,000	$ 3.92	$ 3.94	$ 0.8	$ (1.7)	$ 0.1	$ —
Physical Contracts								
Receive variable/pay fixed	NGL	95,000	$ 46.73	$ 48.37	$ —	$ (0.2)	$ —	$ —
Receive fixed/pay variable	NGL	586,394	$ 49.38	$ 47.79	$ 1.0	$ —	$ —	$ —
Receive variable/pay variable	Natural Gas	108,991,322	$ 4.05	$ 4.05	$ 1.4	$ (0.7)	$ 0.5	$ (0.1)
	NGL	3,094,719	$ 61.40	$ 61.19	$ 1.2	$ (0.5)	$ —	$ —
	Crude Oil	151,000	$ 90.30	$ 88.89	$ 0.2	$ —	$ —	$ —
Portion of contracts maturing in 2016								
Swaps								
Receive variable/pay fixed	Natural Gas	181,435	$ 3.78	$ 3.85	$ —	$ —	$ —	$ —
	Crude Oil	68,250	$ 86.36	$ 90.00	$ —	$ (0.2)	$ —	$ —
Receive fixed/pay variable	Crude Oil	68,250	$ 90.89	$ 86.36	$ 0.3	$ —	$ 0.7	$ —
Receive variable/pay variable	Natural Gas	12,027,000	$ 3.96	$ 3.98	$ 0.1	$ (0.3)	$ —	$ —
Physical Contracts								
Receive variable/pay variable	Natural Gas	34,560,879	$ 4.06	$ 4.05	$ 0.7	$ (0.4)	$ 0.1	$ —
Portion of contracts maturing in 2017								
Physical Contracts								
Receive variable/pay variable	Natural Gas	14,299,743	$ 4.27	$ 4.26	$ 0.2	$ (0.1)	$ —	$ —

(1) Volumes of natural gas are measured in MMBtu, whereas volumes of NGL and crude oil are measured in Bbl. Our power purchase agreements are measured in MWh.
(2) Weighted average prices received and paid are in $/MMBtu for natural gas, $/Bbl for NGL and crude oil and $/MWh for power.
(3) The fair value is determined based on quoted market prices at September 30, 2014 and December 31, 2013, respectively, discounted using the swap rate for the respective periods to consider the time value of money. Fair values are presented in millions of dollars and exclude credit valuation adjustments of approximately $0.2 million of losses and $0.1 million of gains at September 30, 2014 and December 31, 2013, respectively.
(4) For physical power, the receive price shown represents the index price used for valuation purposes.

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The following table provides summarized information about the fair values of expected cash flows of our outstanding commodity options at September 30, 2014 and December 31, 2013.

		At September 30, 2014					At December 31, 2013	
					Fair Value [3]		Fair Value [3]	
	Commodity	Notional [1]	Strike Price [2]	Market Price [2]	Asset	Liability	Asset	Liability
						(in millions)		
Portion of option contracts maturing in 2014								
Puts (purchased)	Natural Gas	1,104,000	$ 3.90	$ 4.10	$ 0.1	$ —	$ 0.7	$ —
	NGL	193,200	$54.79	$52.43	$ 0.9	$ —	$ 2.9	$ —
Calls (written)	NGL	115,000	$60.92	$54.59	$—	$ (0.1)	$ —	$ (1.0)
Puts (written)	Natural Gas	1,104,000	$ 3.90	$ 4.10	$—	$ (0.1)	$ —	$ (0.5)
	NGL	32,200	$66.36	$51.70	$—	$ (0.5)	$ —	$ —
Calls (purchased)	NGL	46,000	$50.40	$43.84	$—	$ —	$ —	$ —
Portion of option contracts maturing in 2015								
Puts (purchased)	Natural Gas	4,015,000	$ 3.90	$ 4.00	$ 1.4	$ —	$ 1.7	$ —
	NGL	1,350,500	$48.75	$50.62	$ 5.5	$ —	$ 6.0	$ —
	Crude Oil	547,500	$85.42	$87.76	$ 2.3	$ —	$ 1.8	$ —
Calls (written)	Natural Gas	1,277,500	$ 5.05	$ 4.00	$—	$ (0.1)	$ —	$ (0.3)
	NGL	529,250	$55.18	$50.29	$—	$ (1.7)	$ —	$ (1.0)
	Crude Oil	547,500	$91.75	$87.76	$—	$ (2.1)	$ —	$ (1.9)
Puts (written)	Natural Gas	4,015,000	$ 3.90	$ 4.00	$—	$ (1.4)	$ —	$ —
Calls (purchased)	Natural Gas	1,277,500	$ 5.05	$ 4.00	$ 0.1	$ —	$ —	$ —
Portion of option contracts maturing in 2016								
Puts (purchased)	Natural Gas	1,647,000	$ 3.75	$ 4.08	$ 0.5	$ —	$ —	$ —
	NGL	1,281,000	$41.82	$44.06	$ 6.5	$ —	$ —	$ —
	Crude Oil	439,200	$80.00	$85.93	$ 2.0	$ —	$ —	$ —
Calls (written)	Natural Gas	1,647,000	$ 4.98	$ 4.08	$—	$ (0.3)	$ —	$ —
	NGL	1,281,000	$48.59	$44.06	$—	$ (5.6)	$ —	$ —
	Crude Oil	439,200	$92.25	$85.93	$—	$ (2.2)	$ —	$ —

(1) Volumes of natural gas are measured in MMBtu, whereas volumes of NGL and crude oil are measured in Bbl.
(2) Strike and market prices are in $/MMBtu for natural gas and in $/Bbl for NGL and crude oil.
(3) The fair value is determined based on quoted market prices at September 30, 2014 and December 31, 2013, respectively, discounted using the swap rate for the respective periods to consider the time value of money. Fair values are presented in millions of dollars.

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Fair Value Measurements of Interest Rate Derivatives

We enter into interest rate swaps, caps and derivative financial instruments with similar characteristics to manage the cash flow associated with future interest rate movements on our indebtedness. The following table provides information about our current interest rate derivatives for the specified periods.

Date of Maturity & Contract Type	Accounting Treatment	Notional	Average Fixed Rate [1]	Fair Value [2] at September 30, 2014	Fair Value [2] at December 31, 2013
		(dollars in millions)			
Contracts maturing in 2015					
Interest Rate Swaps—Pay Fixed	Cash Flow Hedge	$ 510	1.53%	$ (1.9)	$ (6.8)
Contracts maturing in 2016					
Interest Rate Swaps—Pay Fixed	Cash Flow Hedge	$ 90	0.55%	$ —	—
Contracts maturing in 2017					
Interest Rate Swaps—Pay Fixed	Cash Flow Hedge	$ 450	2.21%	$ (12.2)	$ (13.8)
Contracts maturing in 2018					
Interest Rate Swaps—Pay Fixed	Cash Flow Hedge	$ 810	2.24%	$ 1.4	$ 3.3
Contracts maturing in 2019					
Interest Rate Swaps—Pay Fixed	Cash Flow Hedge	$ 620	2.96%	$ (1.0)	$ —
Contracts settling prior to maturity					
2014—Pre-issuance Hedges [3]	Cash Flow Hedge	$ —	0.00%	$ —	$ (132.7)
2015—Pre-issuance Hedges	Cash Flow Hedge	$1,000	5.48%	$ (208.5)	—
2016—Pre-issuance Hedges	Cash Flow Hedge	$ 500	4.21%	$ (38.0)	$ 60.8
2017—Pre-issuance Hedges	Cash Flow Hedge	$ 500	3.69%	$ (10.8)	—
2018—Pre-issuance Hedges	Cash Flow Hedge	$ 350	3.08%	$ 12.4	—

(1) Interest rate derivative contracts are based on the one-month or three-month London Interbank Offered Rate, or LIBOR.

(2) The fair value is determined from quoted market prices at September 30, 2014 and December 31, 2013, respectively, discounted using the swap rate for the respective periods to consider the time value of money. Fair values are presented in millions of dollars and exclude credit valuation adjustments of approximately $12.7 million of gains at September 30, 2014 and $7.1 million of losses at December 31, 2013.

(3) Includes $16.7 million of cash collateral at December 31, 2013.

11. INCOME TAXES

We are not a taxable entity for United States federal income tax purposes, or for the majority of states that impose an income tax. Taxes on our net income generally are borne by our unitholders through the allocation of taxable income. Our income tax expense results from the enactment of state income tax laws by the State of Texas that apply to entities organized as partnerships. Our income tax expense is based upon many but not all items included in net income.

We computed our income tax expense by applying a Texas state income tax rate to modified gross margin. The Texas state income tax rate was 0.4% for the nine month periods ended September 30, 2014 and 2013. Our income tax expense is $2.1 million and $1.5 million, for the three month periods ended September 2014 and 2013, respectively, and $6.1 million and $17.5 million for the nine month periods ended September 30, 2014 and 2013, respectively.

At September 30, 2014 and December 31, 2013, we have included a current income tax payable of $1.1 million and $0.9 million, respectively, in “Property and other taxes payable” on our consolidated statements of financial position. In addition, at September 30, 2014 and December 31, 2013, we have included a deferred income tax payable of $19.0 million and $17.4 million, respectively, in “Deferred income tax liability,” on our consolidated statements of financial position to reflect the tax associated with the difference between the net basis in assets and liabilities for financial and state tax reporting.

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12. SEGMENT INFORMATION

Our business is divided into operating segments, defined as components of the enterprise, about which financial information is available and evaluated regularly by our Chief Operating Decision Maker, collectively comprised of our senior management, in deciding how resources are allocated and performance is assessed.

Each of our reportable segments is a business unit that offers different services and products that is managed separately, because each business segment requires different operating strategies. We have segregated our business activities into two distinct operating segments:

- Liquids; and
- Natural Gas.

During the first quarter of 2014, we changed our reporting segments. The Marketing segment was combined with the Natural Gas segment to form one new segment called "Natural Gas". There was no change to the Liquids segment.

This change was a result of the reorganization of EEP resulting from MEP's IPO, which prompted Management to reassess the presentation of EEP's reportable segments considering the financial information available and evaluated regularly by EEP's Chief Operating Decision Maker. The new segment is consistent with how management makes resource allocation decisions, evaluates performance, and furthers the achievement of the Partnership's long-term objectives. Financial information for the prior periods has been restated to reflect the change in reporting segments.

The following tables present certain financial information relating to our business segments and corporate activities:

	For the three month period ended September 30, 2014			
	Liquids	Natural Gas	Corporate [1]	Total
	(in millions)			
Operating revenue	$ 542.9	$ 1,399.4	$ —	$1,942.3
Cost of natural gas	—	1,238.2	—	1,238.2
Environmental costs, net of recoveries	50.1	—	—	50.1
Operating and administrative	126.5	105.0	3.8	235.3
Power	59.5	—	—	59.5
Depreciation and amortization	79.3	39.5	—	118.8
	315.4	1,382.7	3.8	1,701.9
Operating income (loss)	227.5	16.7	(3.8)	240.4
Interest expense, net	—	—	137.1	137.1
Allowance for equity used during construction	—	—	14.5	14.5
Other income (expense) [2]	—	6.1	(4.3)	1.8
Income (loss) before income tax expense	227.5	22.8	(130.7)	119.6
Income tax expense	—	—	2.1	2.1
Net income (loss)	227.5	22.8	(132.8)	117.5
Less: Net income attributable to:				
Noncontrolling interest	—	—	70.7	70.7
Series 1 preferred unit distributions	—	—	22.5	22.5
Accretion of discount on Series 1 preferred units	—	—	3.8	3.8
Net income (loss) attributable to general and limited partner ownership interests in Enbridge Energy Partners, L.P.	$ 227.5	$ 22.8	$ (229.8)	$ 20.5

(1) Corporate consists of interest expense, interest income, allowance for equity used during construction, noncontrolling interest and other costs such as income taxes, which are not allocated to the business segments.

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(2) Other income (expense) for our Natural Gas segment includes our equity investment in the Texas Express NGL system which we began recognizing operating costs during the fourth quarter of 2013.

	For the three month period ended September 30, 2013			
	Liquids	Natural Gas	Corporate (1)	Total
	(in millions)			
Operating revenue	$ 401.5	$ 1,387.9	$ —	$1,789.4
Cost of natural gas	—	1,257.5	—	1,257.5
Environmental costs, net of recoveries	0.6	—	—	0.6
Operating and administrative	149.7	113.6	1.8	265.1
Power	43.0	—	—	43.0
Depreciation and amortization	63.8	35.8	—	99.6
	257.1	1,406.9	1.8	1,665.8
Operating income (loss)	144.4	(19.0)	(1.8)	123.6
Interest expense, net	—	—	70.5	70.5
Allowance for equity used during construction	—	—	9.3	9.3
Other income	—	—	0.4	0.4
Income (loss) before income tax expense	144.4	(19.0)	(62.6)	62.8
Income tax expense	—	—	1.5	1.5
Net income (loss)	144.4	(19.0)	(64.1)	61.3
Less: Net income attributable to the noncontrolling interest	—	—	20.3	20.3
Series 1 preferred unit distributions	—	—	22.7	22.7
Accretion of discount on Series 1 preferred units	—	—	3.4	3.4
Net income (loss) attributable to general and limited partner ownership interests in Enbridge Energy Partners, L.P.	$ 144.4	$ (19.0)	$ (110.5)	$ 14.9

(1) Corporate consists of interest expense, interest income, allowance for equity used during construction, noncontrolling interest and other costs such as income taxes, which are not allocated to the business segments.

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	As of and for the nine month period ended September 30, 2014			
	Liquids	Natural Gas	Corporate (1)	Total
		(in millions)		
Operating revenue	$ 1,449.9	$ 4,443.1	$ —	$ 5,893.0
Cost of natural gas	—	3,986.7	—	3,986.7
Environmental costs, net of recoveries	93.3	—	—	93.3
Operating and administrative	352.5	317.5	6.9	676.9
Power	164.1	—	—	164.1
Depreciation and amortization	222.7	113.3	—	336.0
	832.6	4,417.5	6.9	5,257.0
Operating income (loss)	617.3	25.6	(6.9)	636.0
Interest expense, net	—	—	294.2	294.2
Allowance for equity used during construction	—	—	47.8	47.8
Other income (expense)	—	7.1 (2)	(4.9)	2.2
Income (loss) before income tax expense	617.3	32.7	(258.2)	391.8
Income tax expense	—	—	6.1	6.1
Net income (loss)	617.3	32.7	(264.3)	385.7
Less: Net income attributable to:				
Noncontrolling interest	—	—	149.4	149.4
Series 1 preferred unit distributions	—	—	67.5	67.5
Accretion of discount on Series 1 preferred units	—	—	11.1	11.1
Net income (loss) attributable to general and limited partner ownership interests in Enbridge Energy Partners, L.P.	$ 617.3	$ 32.7	$ (492.3)	$ 157.7
Total assets	$ 11,252.8	$ 5,461.9 (3)	$ 232.4	$ 16,947.1
Capital expenditures (excluding acquisitions)	$ 1,861.3	$ 158.4	$ 3.2	$ 2,022.9

(1) Corporate consists of interest expense, interest income, allowance for equity used during construction, noncontrolling interest and other costs such as income taxes, which are not allocated to the business segments.

(2) Other income (expense) for our Natural Gas segment includes our equity investment in the Texas Express NGL system which began recognizing operating costs during the fourth quarter of 2013.

(3) Total assets for our Natural Gas segment includes our long term equity investment in the Texas Express NGL system.

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	As of and for the nine month period ended September 30, 2013			
	Liquids	Natural Gas	Corporate [1]	Total
		(in millions)		
Operating revenue	$ 1,100.7	$ 4,054.4	$ —	$ 5,155.1
Cost of natural gas	—	3,564.4	—	3,564.4
Environmental costs, net of recoveries	184.3	—	—	184.3
Operating and administrative	334.8	337.8	5.4	678.0
Power	105.8	—	—	105.8
Depreciation and amortization	181.0	106.6	—	287.6
	805.9	4,008.8	5.4	4,820.1
Operating income (loss)	294.8	45.6	(5.4)	335.0
Interest expense, net	—	—	226.4	226.4
Allowance for equity used during construction	—	—	25.2	25.2
Other income	—	—	1.0	1.0
Income (loss) before income tax expense	294.8	45.6	(205.6)	134.8
Income tax expense	—	—	17.5	17.5
Net income (loss)	294.8	45.6	(223.1)	117.3
Less: Net income attributable to the noncontrolling interest	—	—	54.3	54.3
Series 1 preferred unit distributions	—	—	35.8	35.8
Accretion of discount on Series 1 preferred units	—	—	5.7	5.7
Net income (loss) attributable to general and limited partner ownership interests in Enbridge Energy Partners, L.P.	$ 294.8	$ 45.6	$ (318.9)	$ 21.5
Total assets	$ 8,497.9	$ 5,224.6 [2]	$ 161.5	$13,884.0
Capital expenditures (excluding acquisitions)	$ 1,527.2	$ 191.9	$ 13.9	$ 1,733.0

(1) Corporate consists of interest expense, interest income, allowance for equity used during construction, noncontrolling interest and other costs such as income taxes, which are not allocated to the business segments.

(2) Total assets for our Natural Gas segment includes our long term equity investment in the Texas Express NGL system.

13. REGULATORY MATTERS

Regulatory Accounting

We apply the authoritative regulatory accounting provisions to a number of our pipeline projects that meet the criteria outlined for regulated operations. The rates for Southern Access, Alberta Clipper, the Mainline Expansion Project, Eastern Access, the Line 6B 75-mile Replacement Project, Line 6B Integrity Project, and the Line 14 Project, which are currently the primary applicable projects, are based on a cost-of-service recovery model that follows the FERC's authoritative guidance and is subject to annual filing requirements with the FERC. Under our cost-of-service tolling methodology, we calculate tolls annually based on forecast volumes and costs. A difference between forecast and actual results causes an over or under recovery of rates in any given year. These over or under recoveries of rates are returned to shippers or recovered by us through future rate adjustments in the following year. Under the authoritative accounting provisions applicable to our regulated operations, over or under recoveries are recognized in the financial statements in the current period. This accounting model matches earnings to the period with which they relate and conforms to how we recover our costs associated with these expansions through the annual cost-of-service filings with the FERC and through toll rate adjustments with our customers.

Due to over or under recovery revenue adjustments made in accordance with the FERC's authoritative guidance and our cost-of-service tariff methodology, we recognize assets and liabilities for regulatory purposes.

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The assets and liabilities that we recognize for regulatory purposes are recorded on a net basis in "Other current assets" or "Accounts payable and other," respectively, on our consolidated statements of financial position. As of September 30, 2014 and December 31, 2013, we had a net regulatory liability balance of $5.6 million and a net regulatory asset balance of $7.7 million, respectively.

The net regulatory asset or liability balance is comprised of the cumulative over and under recovery revenue adjustments made during the prior calendar year, less any amortizations, and the cumulative over and under recovery revenue adjustments made during current calendar year to date. We track regulatory assets and liabilities by vintage, and our regulatory assets and liabilities are amortized on a straight-line basis over a one-year recovery period. Accordingly, amortization for a net regulatory asset or liability arising from over and under recovery adjustments related to any given calendar year does not begin until January of the following year. Our over and under recovery revenue adjustments and net regulatory asset amortization for the three and nine months ended September 30, 2014 and 2013 are as follows:

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(in millions)		(in millions)	
Current Year (Over)/Under Recovery Revenue Adjustments	$ (4.5)	$ 3.2	$ (5.6)	$ 7.7
Amortization of Prior Year Regulatory (Asset)/Liability	—	3.8	(7.7) [1]	11.5

(1) The amortization of the prior year regulatory asset for the nine month period ended September 30, 2014, includes a $7.6 million adjustment of the regulatory asset for the difference between estimates as of December 31, 2013, and actual data received during the nine month period ended September 30, 2014.

Other Contractual Obligations

Southern Access Pipeline

We have entered into certain contractual obligations with our customers on the Southern Access Pipeline in which a portion of the revenue earned on volumes above certain predetermined shipment levels, or qualifying volumes, are returned to the shippers through future rate adjustments. We record the liabilities associated with this contractual obligation in "Accounts payable and other," on our consolidated statements of financial position. The amortization for this contractual obligation reflects the related transportation rate adjustment in the subsequent year. At September 30, 2014, we had no qualifying volume liabilities related to the Southern Access Pipeline on our statements of financial position. At December 31, 2013, we had $6.1 million in qualifying volume liabilities related to the Southern Access Pipeline on our statements of financial position. For the nine month periods ended September 30, 2014 and 2013, we increased our revenues by $6.1 million and $4.2 million, respectively, on our consolidated statements of income with a corresponding amount reducing the contractual obligation on our consolidated statements of financial position to account for amortization of the liability.

Alberta Clipper Pipeline

A portion of the rates we charge our customers includes an estimate for annual property taxes. If the estimated property tax we collect from our customers is significantly higher than the actual property tax imposed, we are contractually obligated to refund 50% of the property tax over recovery. At September 30, 2014 and December 31, 2013, we had $6.3 million and $6.9 million, respectively, in property tax over recovery liabilities related to our Alberta Clipper Pipeline on our statements of financial position.

For 2013, we also incurred liabilities related to this contractual obligation on the Alberta Clipper Pipeline. As a result, in 2013, we reduced revenues for the amounts due back to our shippers and recorded a liability for the contractual obligation. We amortize the liability on a straight line basis in the following year. For the nine month periods ended September 30, 2014 and 2013, we increased our revenues by $5.2 million and $4.5 million, respectively, on our consolidated statements of income with a corresponding amount reducing the contractual obligation on our consolidated statements of financial position.

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Allowance for Equity Used During Construction

We are permitted to capitalize and recover costs for rate-making purposes that include an allowance for equity costs during construction, referred to as AEDC. In connection with construction of the Eastern Access Projects, Line 6B 75-mile Replacement and Mainline Expansion Projects, we recorded $14.5 and $47.8 million of "Allowance for equity used during construction" in our consolidated statement of income for the three and nine month period ended September 30, 2014, respectively, and a corresponding amount of $47.8 million of AEDC in "Property, plant and equipment" on our consolidated statement of financial position at September 30, 2014. We recorded $9.3 million and $25.2 million of "Allowance for equity used during construction" in our consolidated statements of income for the three and nine month period ended September 30, 2013, respectively, and a corresponding amount of $25.2 million of AEDC in "Property, plant and equipment" on our consolidated statement of financial position at September 30, 2013.

14. SUPPLEMENTAL CASH FLOWS INFORMATION

In the "Cash used in investing activities" section of the consolidated statements of cash flows, we exclude changes that did not affect cash. The following is a reconciliation of cash used for additions to property, plant and equipment to total capital expenditures (excluding "Investment in joint venture"):

	For the nine month period ended September 30,	
	2014	2013
	(in millions)	
Additions to property, plant and equipment	$ 2,055.8	$ 1,514.5
Increase (decrease) in construction payables	(32.9)	218.5
Total capital expenditures (excluding "Investment in joint venture")	$ 2,022.9	$ 1,733.0

15. RECENT ACCOUNTING PRONOUNCEMENTS NOT YET ADOPTED

In April 2014, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update No. 2014-08 that changes the criteria and requires expanded disclosures for reporting discontinued operations. This accounting update is effective for annual and interim periods beginning after December 15, 2014 and is to be applied prospectively. We do not expect that the adoption of this pronouncement will have a material impact on our consolidated financial statements.

In May 2014, the FASB issued Accounting Standards Update No. 2014-09 that outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. This accounting update is effective for annual and interim periods beginning on or after December 15, 2016 and may be applied on either a full or modified retrospective basis. We are currently evaluating which transition approach we will apply and the impact that this pronouncement will have on our consolidated financial statements.

In August 2014, the FASB issued Accounting Standards Update No. 2014-15 which provides guidance on determining when and how to disclose going-concern uncertainties in the financial statements. The new standard requires management to perform interim and annual assessments of an entity's ability to continue as a going concern within one year of the date the financial statements are issued. An entity must provide certain disclosures if conditions or events raise substantial doubt about the entity's ability to continue as a going concern. This accounting update is effective for annual and interim periods beginning on or after December 15, 2016, with early adoption permitted. We do not expect that the adoption of this pronouncement will have a material impact on our consolidated financial statements.

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16. SUBSEQUENT EVENTS

Credit Facility Agreement Amendments

On October 6, 2014, we amended the Credit Facility to extend the maturity date from September 26, 2018 to September 26, 2019; however, $175.0 million of commitments will expire on the original maturity date of September 26, 2018.

Distribution to Partners

On October 31, 2014, the board of directors of Enbridge Management declared a distribution payable to our partners on November 14, 2014. The distribution will be paid to unitholders of record as of November 7, 2014 of our available cash of $221.8 million at September 30, 2014, or $0.5550 per limited partner unit. Of this distribution, $183.7 million will be paid in cash, $37.3 million will be distributed in i-units to our i-unitholder, Enbridge Management, and due to the i-unit distribution, $0.8 million will be retained from our General Partner from amounts otherwise distributable to it in respect of its general partner interest and limited partner interest to maintain its 2% general partner interest.

Distribution to Series AC Interests

On October 31, 2014, the board of directors of Enbridge Management, acting on behalf of Enbridge Pipelines (Lakehead) L.L.C., the managing general partner of the OLP and a holder of the Series AC interests, declared a distribution payable to the holders of the Series AC general and limited partner interests. The OLP will pay $20.3 million to the noncontrolling interest in the Series AC, while $10.1 million will be paid to us.

Distribution to Series EA Interests

On October 31, 2014, the board of directors of Enbridge Management, acting on behalf of Enbridge Pipelines (Lakehead) L.L.C., the managing general partner of the OLP and a holder of the Series EA interests, declared a distribution payable to the holders of the Series EA general and limited partner interests. The OLP will pay $43.7 million to the noncontrolling interest in the Series EA, while $14.6 million will be paid to us.

Distribution to Series ME Interests

On October 31, 2014, the board of directors of Enbridge Management, acting on behalf of Enbridge Pipelines (Lakehead) L.L.C., the managing general partner of the OLP and a holder of the Series ME interests, declared a distribution payable to the holders of the Series ME general and limited partner interests. The OLP will pay $1.9 million to the noncontrolling interest in the Series ME, while $0.6 million will be paid to us.

Distribution from MEP

On October 30, 2014, the board of directors of Midcoast Holdings, L.L.C., acting in its capacity as the general partner of MEP, declared a cash distribution payable to their partners on November 14, 2014. The distribution will be paid to unitholders of record as of November 7, 2014, of MEP's available cash of $15.6 million at September 30, 2014, or $0.3375 per limited partner unit. MEP will pay $7.2 million to their public Class A common unitholders, while $8.4 million in the aggregate will be paid to us with respect to our Class A common units, our subordinated units, and to Midcoast Holdings, L.L.C. with respect to its general partner interest.

Midcoast Operating Distribution

On October 30, 2014, the general partner of Midcoast Operating, acting in its capacity as the general partner of Midcoast Operating, declared a cash distribution by Midcoast Operating payable to its partners of record as of November 7, 2014. Midcoast Operating will pay $12.6 million to us and $13.5 million to MEP.

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Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations is based on and should be read in conjunction with our consolidated financial statements and the accompanying notes included in Item 1. *Financial Statements* of this report.

RESULTS OF OPERATIONS—OVERVIEW

We provide services to our customers and returns for our unitholders primarily through the following activities:

- Interstate pipeline transportation and storage of crude oil and liquid petroleum;
- Gathering, treating, processing and transportation of natural gas and natural gas liquids, or NGLs, through pipelines and related facilities; and
- Supply, transportation and sales services, including purchasing and selling natural gas and NGLs.

We conduct our business through two business segments: Liquids and Natural Gas. During the first quarter of 2014, we changed our reporting segments. The Marketing segment was combined with the Natural Gas segment to form one new segment named "Natural Gas". There was no change to the Liquids segment.

This change was a result of the reorganization of EEP in connection with MEP's IPO which prompted management to reassess the presentation of EEP's reportable segments considering the financial information available and evaluated regularly by EEP's Chief Operating Decision Maker. The new segment is consistent with how management makes resource allocation decisions, evaluates performance, and furthers the achievement of the Partnership's long-term objectives. Financial information for the prior periods has been restated to reflect the change in reporting segments.

The following table reflects our operating income by business segment and corporate charges for each of the three and nine month periods ended September 30, 2014 and 2013.

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(in millions)			
Operating income (loss)				
Liquids	$ 227.5	$ 144.4	$ 617.3	$ 294.8
Natural Gas	16.7	(19.0)	25.6	45.6
Corporate, operating and administrative	(3.8)	(1.8)	(6.9)	(5.4)
Total operating income	240.4	123.6	636.0	335.0
Interest expense	137.1	70.5	294.2	226.4
Allowance for equity used during construction	14.5	9.3	47.8	25.2
Other income	1.8	0.4	2.2	1.0
Income before income tax expense	119.6	62.8	391.8	134.8
Income tax expense	2.1	1.5	6.1	17.5
Net income	117.5	61.3	385.7	117.3
Less: Net income attributable to:				
Noncontrolling interest	70.7	20.3	149.4	54.3
Series 1 preferred unit distributions	22.5	22.7	67.5	35.8
Accretion of discount on Series 1 preferred units	3.8	3.4	11.1	5.7
Net income attributable to general and limited partner ownership interests in Enbridge Energy Partners, L.P.	$ 20.5	$ 14.9	$ 157.7	$ 21.5

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Contractual arrangements in our Liquids and Natural Gas segments expose us to market risks associated with changes in commodity prices where we receive crude oil, natural gas or NGLs in return for the services we provide or where we purchase natural gas or NGLs. Our unhedged commodity position is fully exposed to fluctuations in commodity prices. These fluctuations can be significant if commodity prices experience significant volatility. We employ derivative financial instruments to hedge a portion of our commodity position and to reduce our exposure to fluctuations in crude oil, natural gas and NGL prices. Some of these derivative financial instruments do not qualify for hedge accounting under the provisions of authoritative accounting guidance, which can create volatility in our earnings that can be significant. However, these fluctuations in earnings do not affect our cash flow. Cash flow is only affected when we settle the derivative instrument.

Summary Analysis of Operating Results

Liquids

The following factors primarily affected the $83.1 million and the $322.5 million increases in operating income for the three and nine month periods ended September 30, 2014, respectively, when compared to the same period of 2013:

- Increased revenue of $78.6 million and $203.5 million for the three and nine month periods ended September 30, 2014, respectively, related to rate increases as a result of tariff filings that became effective July 1 and August 1, 2014. Operating revenue on our Lakehead system was offset by $17.7 million and $46.3 million for the three and nine month periods ended September 30, 2014, respectively, related to regulatory true-ups on Lakehead toll revenues;
- Decreased environmental expense of $91.0 million for the nine month period ended September 30, 2014 as compared with the same period in 2013, primarily due to lower environmental accruals, net of recoveries, related to the Line 6B crude oil release recognized in the second quarter of 2013;
- Increased volumes on our Lakehead and North Dakota systems increased revenue by $57.4 million and $145.4 million for the three and nine month periods ended September 30, 2014, respectively, when compared to the same periods in 2013;
- Increased revenue from our ship or pay agreements of $5.3 million and $17.8 million on our North Dakota Bakken system for the three and nine month period ended September 30, 2014, respectively;
- Increased rail revenue of $2.5 million and $15.4 million for the three and nine month periods ended September 30, 2014, respectively, on our Berthold Rail system which was placed in service in March of 2013;
- Increased non-cash, mark-to-market net gains of $12.0 million related to derivative financial instruments for the three month period ended September 30, 2014. The increase is the result of $4.0 million in realized gains related to our settled derivative financial instruments, coupled with $8.0 million of non-cash, mark-to-market net gains due to decreases in average forward prices of crude oil during the three month period ended September 30, 2014 compared to increases in the average forward prices of crude oil during the same period in 2013; and
- Decreased operating and administrative expenses of $23.2 million for the three month period ended September 30, 2014, primarily due to a decrease of $45.3 million of pipeline integrity costs. This decrease was offset by increases of $8.2 million in operational costs, $6.7 million of workforce related costs, and $5.7 million of property taxes. The decreased pipeline integrity costs is primarily due to costs incurred in the third quarter of 2013 for the Line 14 hydrostatic test that was not repeated in the third quarter of 2014. The increase in the other aforementioned operating and administrative costs are attributable to additional assets placed into service.

The increase in operating income was partially offset by the following factors:

- Increased operating and administrative expenses of $17.7 million for the nine month period ended September 30, 2014, when compared to the same period in 2013. This is due to increases of $16.5

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million in operational costs, $29.0 million of workforce related costs, and $13.5 million of property taxes. These costs increases were offset by $40.6 million of lower pipeline integrity costs. The decrease in pipeline integrity costs is primarily due to the aforementioned Line 14 hydrostatic test conducted in the third quarter of 2013 that was not repeated in 2014. The increase in the other operating and administrative costs is primarily the result of additional assets placed into service;

- Increased environmental expense of $49.5 million for the three month period ended September 30, 2014 as compared with the same period in 2013, primarily due to activities performed as part of the Michigan Department of Environmental Quality, or MDEQ, approved Schedule of Work, completion of the dredge activities near Ceresco and Morrow Lake, and estimated civil penalties;
- Increased power costs of $16.5 million and $58.3 million for the three and nine month periods ended September 30, 2014, respectively, as compared to the same periods in 2013. This is due to an increase in volumes on our system; and
- Increased depreciation expense of $15.5 million and $41.7 million for the three and nine month periods ended September 30, 2014, respectively, when compared to the same periods in 2013, directly attributable to additional assets placed into service.

Natural Gas

The operating income of our Natural Gas business increased $35.7 million and decreased $20.0 million for the three and nine month periods ended September 30, 2014, respectively, when compared to the same periods in 2013, primarily due to the following:

- Decreased operating income of approximately $15.0 million and $42.9 million for the three and nine month periods ended September 30, 2014, respectively, when compared to the same periods in 2013, due to reduced average daily volumes on our major systems primarily attributable to the loss of a major customer on our Anadarko system and reduced and delayed drilling activity by certain producers. The decrease in volumes in the East Texas region was primarily attributable to reduced dry gas drilling, and delayed drilling activity and well completions;
- Operating and administrative costs decreased $8.6 million and $20.3 million for the three and nine month periods ended September 30, 2014, respectively, when compared to the same periods in 2013, due partly to lower volumes received from our Natural Gas segment and partly due to a strategic reduction of long hauls due to new geographically advantaged sales points;
- Segment gross margin decreased as a result of lower storage margins of $7.4 million and $12.3 million for the three and nine month periods ended September 30, 2014, respectively, when compared to the same periods in 2013, and by an increase in cost of sales of $4.1 million for the three month period ended September 30, 2014, due to higher transportation and fractionation fees, freight costs, and product purchase costs, when compared to the same period in 2013;
- Decreased operating revenue less the cost of natural gas derived from keep-whole processing earnings for the three and nine month periods ended September 30, 2014, of $7.1 million and $19.0 million, respectively, when compared to the same periods in 2013, due to a lower volumes in keep-whole barrels in the Oklahoma and North Texas regions;
- Decreased operating income of approximately $3.0 million for the nine month period ended September 30, 2014, when compared to the same period in 2013, primarily due to the impact of sustained freezing temperatures which significantly disrupted producer well head production levels and our pipeline operations; and
- Decreased operating income of $1.5 million and $3.7 million for the three and nine month periods ended September 30, 2014, respectively, due to reduced pricing spreads between our Conway and Mont Belvieu market hubs when compared with the same periods in 2013.

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The above factors were partially offset for the three and nine month periods ended September 30, 2014, as compared with the same periods in 2013 primarily due to:

- Increased operating income of $50.2 million and $23.2 million for the three and nine month periods ended September 30, 2014, respectively, when compared to the same periods in 2013, due to non-cash, mark-to-market net losses from derivative instruments that do not qualify for hedge accounting treatment;
- Segment gross margin increased $2.4 million and $8.9 million for the three and nine month periods ended September 30, 2014, as compared with the same periods in 2013 due to increased margins from pricing differentials. Higher operating income for the nine month period ended September 30, 2014, was predominately due to strong natural gas marketing optimization results attributable to seasonal demand for natural gas deliveries from Mid-Continent to the Midwest market. We benefited from the natural gas pricing difference between market centers in the Mid-Continent supply areas and market area in the Midwest, which arose from higher than normal demand from winter weather in the Midwest;
- Increased operating revenues of $2.5 million and $6.9 million for the three and nine month periods ended September 30, 2014, related to contractual minimum volume commitment contracts in which our customer has not moved the required volumes; and
- Increased depreciation and amortization expense of $3.7 million and $6.7 million for the three and nine month periods ended September 30, 2014, respectively, as compared with the same periods in 2013, due to additional assets that were put in service.

Derivative Transactions and Hedging Activities

We use derivative financial instruments (i.e., futures, forwards, swaps, options and other financial instruments with similar characteristics) to manage the risks associated with market fluctuations in commodity prices and interest rates and to reduce variability in our cash flows. Based on our risk management policies, all of our derivative financial instruments are employed in connection with an underlying asset, liability and/or forecasted transaction and are not entered into with the objective of speculating on commodity prices or interest rates. We record all derivative instruments in our consolidated financial statements at fair market value pursuant to the requirements of applicable authoritative accounting guidance. We record changes in the fair value of our derivative financial instruments that do not qualify for hedge accounting in our consolidated statements of income as follows:

- Liquids segment commodity-based derivatives—“Operating revenue” and “Power”
- Natural Gas segment commodity-based derivatives—“Operating revenue” and “Cost of natural gas”
- Corporate interest rate derivatives—“Interest expense”

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The changes in fair value of our derivatives are also presented as a reconciling item on our consolidated statements of cash flows. The following table presents the net changes in fair value associated with our derivative financial instruments:

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(in millions)			
Liquids segment				
Non-qualified hedges	$ 6.5	$ (5.5)	$ (1.0)	$ (4.3)
Natural Gas segment				
Hedge ineffectiveness	0.9	(0.5)	1.5	1.8
Non-qualified hedges	16.8	(32.0)	10.0	(13.5)
Commodity derivative fair value net gains (losses)	24.2	(38.0)	10.5	(16.0)
Corporate				
Hedge ineffectiveness	(62.2)	(1.1)	(73.2)	(0.5)
Non-qualified interest rate hedges	—	—	—	(0.3)
Derivative fair value net gains (losses)	$ (38.0)	$ (39.1)	$ (62.7)	$ (16.8)

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RESULTS OF OPERATIONS—BY SEGMENT

Liquids

The following tables set forth the operating results and statistics of our Liquids segment assets for the periods presented:

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(in millions)			
Operating Results:				
Operating revenue	$ 542.9	$ 401.5	$ 1,449.9	$ 1,100.7
Environmental costs, net of recoveries	50.1	0.6	93.3	184.3
Operating and administrative	126.5	149.7	352.5	334.8
Power	59.5	43.0	164.1	105.8
Depreciation and amortization	79.3	63.8	222.7	181.0
Operating expenses	315.4	257.1	832.6	805.9
Operating income	$ 227.5	$ 144.4	$ 617.3	$ 294.8
Operating Statistics				
Lakehead system:				
United States [1]	1,711	1,430	1,635	1,393
Province of Ontario [1]	461	395	453	388
Total Lakehead system deliveries [1]	2,172	1,825	2,088	1,781
Barrel miles (billions)	152	124	430	357
Average haul (miles)	758	739	755	735
Mid-Continent system deliveries [1]	191	216	193	202
North Dakota system:				
Trunkline [1]	345	202	300	158
Gathering [1]	2	4	3	3
Total North Dakota system deliveries [1]	347	206	303	161
Total Liquids Segment Delivery Volumes [1]	2,710	2,247	2,584	2,144

(1) Average barrels per day in thousands.

Three month period ended September 30, 2014 compared with the three month period ended September 30, 2013

The operating revenue of our Liquids segment increased $141.4 million for the three month period ended September 30, 2014 when compared with the same period in 2013, primarily due to (1) increased tariff rates that became effective with the Federal Energy Regulatory Commission, or FERC, on August 1, 2014 for our Lakehead system, and on July 1, 2014 for our North Dakota and Ozark systems, (2) an increase in volumes on our systems, and (3) non-cash mark-to-market gains.

The increase in tariff rates accounted for $78.6 million of the increase in operating revenue for the three month period ended September 30, 2014 when compared to September 30, 2013.

The increase in tariff rates was offset by a $17.7 million decrease in revenues as a result of regulatory true-ups related to Lakehead toll revenues. The Lakehead tariff that became effective on August 1, 2014 eliminated

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the System Expansion Project II, or SEP II, surcharge that accounted for a large part of this decrease. The decrease was due to an over-collection of revenues on 2013 rates containing provisions that were not applicable under the newly negotiated agreement. Generally, these rates would have been updated on April 1 as part of the annual tariff filing. However, the renegotiation and delay in the annual filing for the Lakehead system resulted in an over-collection on SEP II. This newly negotiated agreement eliminated the SEP II surcharge, but adds new Facility Surcharge Mechanism, or FSM, rate components to recover the remaining Line 14 rate base, Legacy Integrity costs, and 50% of Future Agreed-Upon Integrity costs. The FSM revenue requirement for 2014 will be recovered over a five month period from August to December versus the usual nine month period from April to December as done in the typical Lakehead FSM filing schedule. This shortened recovery caused the rates to increase by approximately 4.6% over what they would have been if the rates were effective on April 1.

The North Dakota and Ozark systems tariffs that became effective on July 1, 2014 consisted of an annual indexing adjustment to the base rates in compliance with rate ceilings allowed by FERC.

Operating revenue of our Liquids segment increased for the three month period ended September 30, 2014 when compared with the same period in 2013 by $57.4 million due to higher average daily delivery volumes on our Lakehead and North Dakota systems. Average daily volumes delivered increased 463,000 barrels per day during the three month period ended September 30, 2014 compared to the three month period ended September 30, 2013. Of that amount, our Lakehead system realized higher daily volumes of approximately 347,000 barrels per day, which contributed to increased revenue of $43.9 million for the Lakehead system. This increase in volumes was in large part due to additional assets being placed into service, including the Line 6B replacement and various subcomponents of the Eastern Access and Mainline Expansion projects. The North Dakota system also experienced an increase of 141,000 barrels per day due to favorable market pricing differentials between the East coast and Gulf coast markets.

Additionally, our operating revenue increased for the three month period ended September 30, 2014, when compared to the same period in 2013, due to an increase of $2.5 million from our Berthold Rail and North Dakota Storage Systems. The Berthold Rail increase primarily results from higher average daily delivered rail volumes when compared to the same period last year. The revenue increase from the prior year reflects the placement of North Dakota Storage tanks into service during the fourth quarter of 2013. Moreover, operating revenue for the three month period ended September 30, 2014 increased by $5.3 million due to related ship-or-pay contracts on our Bakken system. This is primarily due to increased committed volumes for certain shippers. These long-term ship-or-pay contracts contain make-up rights. Make-up rights are granted when minimum volume commitments are not utilized during the period but under certain circumstances can be used to offset overages in future periods, subject to expiration periods. We recognize revenue associated with make-up rights at the earlier of when the make-up volume is shipped, the make-up right expires, or when it is determined that the likelihood that the shipper will utilize the make-up right is remote.

Lastly, our operating revenue increased during the three month period ended September 30, 2014, when compared to the same period in 2013, due to increases of $12.0 million of non-cash, mark-to-market net gains related to derivative financial instruments. The increase is the result of $4.0 million in realized gains related to our settled derivative financial instruments, coupled with $8.0 million of non-cash, mark-to-market net gains due to decreases in average forward prices of crude oil during the three month period ended September 30, 2014 compared to increases in the average forward prices of crude oil during the same period in 2013. We use forward contracts to hedge a portion of the crude oil we expect to receive from our customers as a pipeline loss allowance as part of the transportation of their crude oil. We subsequently sell this crude oil at market rates. We use derivative financial instruments which fix the sales price we will receive in the future for the sale of this crude oil. We elected not to designate these derivative financial instruments as cash flow hedges.

Environmental costs, net of recoveries, increased $49.5 million for the three month period ended September 30, 2014 when compared with the same period in 2013 due to $50.9 million in cost accruals related to the remediation of the Line 6B crude oil release. These costs accruals were mostly driven by activities performed

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as part of the Michigan Department of Environmental Quality, or MDEQ, approved Schedule of Work, completion of the dredge activities near Ceresco and Morrow Lake, and estimated civil penalties under the Clean Water Act of the United States. During the three month period ended September 30, 2013 there were no environmental costs or insurance recoveries related to the Line 6B crude oil release.

The operating and administrative expenses of our Liquids segment decreased $23.2 million for the three month period ended September 30, 2014 when compared with the same period in 2013, primarily due to a decrease of $45.3 million in pipeline integrity costs related to the Line 14 hydrostatic test. This decrease was offset by increased costs of: $8.2 million of operational costs, primarily consisting of contract labor, repairs and maintenance, and professional and regulatory services; $6.7 million related to workforce expenses; and $5.7 million of property taxes. The decrease in pipeline integrity costs is primarily due to costs incurred for the aforementioned hydrostatic test we performed on Line 14 during the third quarter of 2013 that was not repeated during the third quarter of 2014. The increase in the other aforementioned operating and administrative costs are primarily the result of additional assets placed into service during the period as discussed above.

Power costs increased $16.5 million for the three month period ended September 30, 2014 when compared to the same period in 2013 primarily as a result of increased volumes.

The increase in depreciation expense of $15.5 million for the three month period ended September 30, 2014 is directly attributable to the additional assets we have placed in service since the three month period ended September 30, 2013, primarily on projects discussed above.

Nine month period ended September 30, 2014 compared with nine month period ended September 30, 2013

Our Liquids segment contributed $617.3 million of operating income during the nine month period ended September 30, 2014, representing a $322.5 million increase over the $294.8 million operating income for the same period in 2013. The components comprising the operating income of our Liquids business, such as operating revenue, operating and administrative expenses, power costs, and depreciation expenses changed during the nine month period ended September 30, 2014, as compared with the same period in 2013, primarily for the reasons noted above in our three month analysis in addition to the items noted below.

Operating revenue increased by $349.2 million for the nine month period ended September 30, 2014, when compared with the same period in 2013, primarily due to increases in tariff rates, delivery volumes and rail revenue as discussed in our analysis above. In addition, operating revenue for the nine month period ended September 30, 2014 improved due to increased revenues associated with ship or pay contracts on our Bakken system of $17.8 million. This is due to a full nine months of earnings from the Bakken system which went into service in March of 2013, as well as increased committed volumes for certain shippers.

Environmental costs, net of recoveries decreased $91.0 million for the nine month period ended September 30, 2014, when compared with the same period in 2013, which is primarily attributable to the change in cost accruals and insurance recoveries for Line 6B as discussed above. During the nine month period ended September 30, 2014 there were $85.9 million in cost accruals compared to $215.0 million accruals for the comparable period ended September 30, 2013. There were no insurance recoveries for the nine month period ended September 30, 2014 compared to $42.0 million in insurance recoveries for the comparable period ended September 30, 2013.

The operating and administrative expenses of our Liquids segment increased $17.7 million for the nine month period ended September 30, 2014 when compared with the same period in 2013. The increase is primarily due to: $16.5 million of operational costs, primarily consisting of contract labor, insurance, rent and leases, and professional and regulatory services; $29.0 million of workforce related costs; and $13.5 million of property taxes. The increase is offset by a decrease of $40.6 million of pipeline integrity costs primarily due to the

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previously mentioned hydrostatic test we performed during the third quarter of 2013 that was not repeated during the third quarter of 2014. The increase in the other aforementioned operating and administrative costs are primarily the result of additional assets placed into service during the period, including the Line 6B 75-mile Replacement and various subcomponents of the Eastern Access and Mainline Expansion projects.

Future Prospects Update for Liquids

The table and discussion below summarize our commercially secured projects for the Liquids segment, which have been recently placed into service or will be placed into service in future periods:

Projects	Total Estimated Capital Costs (in millions)	In-Service Date	Funding
Eastern Access Projects:			
Line 5, Line 62 Expansion, Line 6B Replacement	$ 2,400	2013—2014 (4)	Joint (1)
Eastern Access Upsize—Line 6B Expansion	310	Early 2016	Joint (1)
U.S. Mainline Expansions:			
Line 61 (ME phase 1)	160	Q3 2014	Joint (2)
Line 67 (ME phase 1)	220	Q3 2014 (3)	Joint (2)
Chicago Area Connectivity (Line 62 twin)	495	Q3 2015	Joint (2)
Line 61 (ME phase 2)	1,160	2015—2016	Joint (2)
Line 67 (ME phase 3)	240	Q3 2015	Joint (2)
Line 6B 75-mile Replacement Program	390	Q2 2013—Q1 2014	EEP
Sandpiper Project	2,600	2017	Joint (5)
Line 3 Replacement Program	2,600	Late 2017	EEP (6)

(1) Jointly funded 25% by us and 75% by our General Partner under Eastern Access Joint Funding agreement. Estimated capital costs are presented at 100% before our General Partner's contributions.
(2) Jointly funded 25% by us and 75% by our General Partner under Mainline Expansion Joint Funding agreement. Estimated capital costs are presented at 100% before our General Partner's contributions.
(3) A number of temporary system optimization actions have been undertaken to substantially mitigate any impact on throughput associated with the delays in regulatory approvals for the cross border expansion.
(4) As of September 30, 2014, all projects in this phase have been put into service.
(5) Since November 25, 2013, the Sandpiper Project is funded 62.5% by us and 37.5% by Williston Basin Pipeline LLC, an affiliate of Marathon Petroleum Corp., under the North Dakota Pipeline Company Amended and Restated Limited Liability Company Agreement.
(6) A special committee of independent directors of the Board of EEP has been established to consider a joint funding agreement with Enbridge Inc.

Line 3 Replacement Program

On March 3, 2014, we and Enbridge announced that shipper support was received to replace portions of the existing 1,031-mile Line 3 pipeline on the Canadian Mainline/Lakehead system between Hardisty, Alberta, Canada and Superior, Wisconsin. Our portion of the Line 3 Replacement Program, referred to as the US L3R Program, includes replacing 358 miles from the U.S./Canadian border at Neche, North Dakota to Superior, Wisconsin. Subject to regulatory and other approvals, the US L3R Program is targeted to be completed in late 2017 at an estimated cost of $2.6 billion. While the L3R Program will not provide an increase in the overall capacity of the mainline system, it supports the safety and operational reliability of the system, enhances flexibility and will allow us to optimize throughput. The L3R Program is expected to achieve an equivalent 34-inch diameter pipeline capacity of approximately 760,000 bpd, which will enhance the flexibility and reliability of the Enbridge mainline system's over Western Canada export capacity.

The initial term of the agreement is 15 years. For purposes of the toll surcharge, the agreement specifies a 30 year recovery of the capital based on a cost of service methodology. A special committee of independent

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directors of the board of EEP has been established to consider a proposal from our General Partner, on behalf of Enbridge, that would establish joint funding arrangements for the US L3R Program by creating an additional jointly owned series of partnership interests in OLP similar to the series established for Alberta Clipper, Eastern Access and Mainline Expansion.

Line 6B 75-mile Replacement Program

In 2011, we announced plans to replace 75-miles of non-contiguous sections of Line 6B of our Lakehead system. Our Line 6B pipeline runs from Griffith, Indiana through Michigan to the international border at the St. Clair River. The new segments have been completed in components, with approximately 65 miles of segments placed in service in 2013. The two remaining 5-mile segments in Indiana were placed in service in March 2014. The total capital for this replacement program was approximately $390 million. These costs are currently being recovered through our FSM.

Light Oil Market Access Program

On December 6, 2012, we and Enbridge announced our plans to invest in a Light Oil Market Access Program to expand access to markets for growing volumes of light oil production. This program responds to significant recent developments with respect to supply of light oil from U.S. north central formations and western Canada, as well as refinery demand for light oil in the U.S. Midwest and eastern Canada. The Light Oil Market Access Program includes several projects that will provide increased pipeline capacity on our North Dakota regional system, further expand capacity on our U.S. mainline system, upsize the Eastern Access Project, enhance Enbridge's Canadian mainline terminal capacity and provide additional access to U.S. Midwestern refineries.

Sandpiper Project

Included in the Light Oil Market Access Program is the Sandpiper Project which will expand and extend the North Dakota feeder system by 225,000 Bpd to a total of 580,000 Bpd. The proposed expansion will involve construction of an approximate 600-mile pipeline from Beaver Lodge Station near Tioga, North Dakota to the Superior, Wisconsin mainline system terminal. The new line will twin the existing 210,000 Bpd North Dakota system mainline, which now terminates at Clearbrook Terminal in Minnesota, adding 250,000 Bpd of capacity on the twin line between Tioga and Berthold, North Dakota and 225,000 Bpd of capacity on the twin line between Berthold and Clearbrook both with a new 24-inch diameter pipeline, in addition to adding 375,000 Bpd between Clearbrook and Superior with a 30-inch diameter pipeline. The Sandpiper project is expected to cost approximately $2.6 billion.

Marathon Petroleum Corporation, or MPC, has been secured as an anchor shipper for the Sandpiper project. As part of the arrangement, we, through our subsidiary, North Dakota Pipeline Company LLC, or NDPC, formerly known as Enbridge Pipelines (North Dakota) LLC, and Williston Basin Pipeline LLC, or Williston, an affiliate of MPC, entered into an agreement to, among other things, admit Williston as a member of NDPC. Williston will fund 37.5% of the Sandpiper Project construction and have the option to participate in other growth projects within NDPC, unless specifically excluded by the agreement; this investment is not to exceed $1.2 billion in aggregate. In return for funding part of Sandpiper's construction, Williston will obtain an approximate 27% equity interest in NDPC at the in-service date of Sandpiper. Previously, we stated that the estimated target in-service date for our Sandpiper pipeline project would be in early 2016. We now estimate that the in-service date for the Sandpiper pipeline project will occur during 2017, subject to obtaining regulatory and other approvals. The delay is a result of a longer than expected permitting process in the State of Minnesota.

We filed a petition with the FERC to approve recovering Sandpiper's costs through a surcharge to the NDPC rates between Beaver Lodge and Clearbrook and a cost of service structure for rates between Clearbrook and Superior. In March 2013, the FERC denied the petition on procedural grounds. We refiled the petition on

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February 12, 2014 and received approval in the form of a declaratory order from the FERC on May 16, 2014. Furthermore, in late 2013, we held an open season to solicit commitments from shippers for capacity created by the Sandpiper Project. The open season closed in late January 2014 with the receipt of a further capacity commitment which can be accommodated within the planned incremental capacity as identified above.

Eastern Access Projects

Since October 2011, we and Enbridge have announced multiple expansion projects that will provide increased access to refineries in the U.S. Upper Midwest and the Canadian provinces of Ontario and Quebec for light crude oil produced in western Canada and the United States. In 2013, we completed and placed into service the 50,000 Bpd capacity expansion of our Line 5 light crude line between Superior, Wisconsin and the international border at the St. Clair River. Furthermore in 2013, we completed and placed into service the expansion of the Spearhead North pipeline, or Line 62 expansion, between Flanagan, Illinois and the Terminal at Griffith, Indiana. The Line 62 expansion increased capacity from 130,000 Bpd to 235,000 Bpd by adding horsepower.

In 2012, we announced plans to replace additional sections of the our Line 6B in Indiana and Michigan, referred to as the Line 6B Replacement project, including the addition of new pumps and terminal upgrades at Hartsdale, Griffith and Stockbridge, as well as tanks at Flanagan, Stockbridge and Hartsdale, to increase capacity from 240,000 Bpd to 500,000 Bpd. The replacement of the Line 6B sections are in addition to the line 6B 75-Mile Replacement Program discussed above. Portions of the existing 30-inch diameter pipeline have been replaced with 36-inch diameter pipe. The target in-service date for the Line 6B Replacement project was split into two phases, with the segment between Griffith and Stockbridge completed in May 2014 and the segment from Ortonville, Michigan to the international border at the St. Clair River completed in September 2014. These completed projects cost us approximately $2.4 billion and are being undertaken on a cost-of-service basis with shared capital cost risk, such that the toll surcharge will absorb 50% of any cost overruns over $1.85 billion during the Competitive Toll Settlement, or CTS, term, which runs until July 2021.

As part of the Light Oil Market Access Program announced in 2012, we announced a further expansion project of Line 6B to increase capacity from 500,000 Bpd to 570,000 Bpd and will include pump station modifications at Griffith, Niles and Mendon, additional modifications at the Griffith and Stockbridge terminals and breakout tankage at Stockbridge. The expected cost of this expansion is approximately $310 million, which is a decrease of $55 million from the original estimated cost as a result of a more detailed engineering estimate and a proposed tank construction being removed from the scope of the project. This further expansion of Line 6B is expected to begin service in early 2016.

These projects, collectively referred to as the Eastern Access Projects, will cost approximately $2.7 billion. The Eastern Access Projects are now being funded at 75% by our General Partner and 25% by us under the Eastern Access Joint Funding Agreement, after we exercised the option to reduce our portion of the funding by 15 percentage points on June 28, 2013. Additionally, within one year of the in-service date, scheduled for early 2016, we will have the option to increase our economic interest by up to 15 percentage points at cost.

U.S. Mainline Expansions

In 2012 and 2013, we announced further expansion projects for our mainline pipeline system including (1) expanding our existing 36-inch diameter Alberta Clipper pipeline, or Line 67; (2) expanding of the existing 42-inch diameter Southern Access pipeline, or Line 61; and (3) expanding by constructing Line 78, a 76-mile, 36-inch diameter twin of the Spearhead North pipeline, or Line 62.

The initial phase of the Line 67 pipeline expansion includes increasing capacity between Neche, North Dakota into the Superior, Wisconsin Terminal from 450,000 Bpd to 570,000 Bpd at an estimated cost of approximately $220 million, while the second phase will add an additional 230,000 Bpd of capacity at an

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estimated cost of approximately $240 million. These projects require only the addition of pumping horsepower at existing sites with no pipeline construction. Subject to regulatory and other approvals, including an amendment to the current Presidential border crossing permit to allow for operation of the Line 67 pipeline at its currently planned operating capacity of 800,000 Bpd through the border crossing segment, the expansions will be undertaken on a full cost-of-service basis. It is anticipated that obtaining regulatory approval for the expansion to 800,000 Bpd will take longer than originally planned although approval is expected mid-2015. A number of temporary system optimization actions have been undertaken to substantially mitigate any impact on throughput associated with the delays in regulatory approvals for the cross border expansion.

The current scope of the Southern Access expansion between Superior, Wisconsin and Flanagan, Illinois also consists of two phases. The initial phase of the Southern Access pipeline expansion was completed in August 2014 and increased capacity between the Superior Terminal and the Flanagan Terminal near Pontiac, Illinois from 400,000 Bpd to 560,000 Bpd at an estimated cost of approximately $160 million. The second phase of the Southern Access pipeline expansion will expand the pipeline to its full 1,200,000 Bpd potential with additional tankage requirements. The Line 61 expansion from 560,000 Bpd to 1,200,000 Bpd is now estimated to cost approximately $1.2 billion, which is a decrease of $90 million from the original estimated cost as a result of a more detailed engineering estimate. Both phases of the expansion require only the addition of pumping horsepower and crude oil tanks at new and existing sites with no pipeline construction. For the second phase of the Line 61 expansion, which remains subject to regulatory and other approvals, the pump station expansion is expected to be available for service in the third quarter of 2015, with the additional tankage is expected to be completed in early 2016.

Furthermore, as part of the Light Oil Market Access Program announced in 2012, the capacity on our Lakehead System between Flanagan, Illinois, and Griffith, Indiana will be expanded by constructing Line 78, a 79-mile, 36-inch diameter twin of the Spearhead North pipeline, or Line 62, with an initial capacity of 570,000 Bpd, at an estimated cost of $495 million. Subject to regulatory and other approvals, the expansion is expected to begin service in the third quarter of 2015.

These projects collectively referred to as the U.S. Mainline Expansions projects, will cost approximately $2.3 billion and will be undertaken on a cost-of-service basis. Furthermore, these projects are jointly funded by our General Partner and us, under the Mainline Expansion Joint Funding Agreement, which parallels the Eastern Access Joint Funding Agreement. On June 28, 2013, we exercised our option to decrease our economic interest and funding of the U.S. Mainline Expansions projects from 40% to 25%. Within one year of the in-service date, scheduled for 2016, we will have the option to increase its economic interest held at that time by up to 15 percentage points at cost.

Canadian Eastern Access and Mainline Expansion Projects

The Eastern Access Projects and U.S. Mainline Expansions projects complement Enbridge's strategic initiative of expanding access to new markets in North America for growing production from western Canada and the Bakken Formation.

Since October 2011, Enbridge also announced several complementary Eastern Access and Mainline Expansion Projects. These projects include: (1) partial reversal of Enbridge's Line 9A in western Ontario to permit crude oil movements eastbound from Sarnia as far as Westover, Ontario which was completed and placed into service in August 2013; (2) construction of a 35-mile pipeline adjacent to Enbridge's Toledo Pipeline, originating at our Line 6B in Michigan to serve refineries in Michigan and Ohio which was completed and placed into service in May 2013; (3) reversal of Enbridge's Line 9B from Westover, Ontario to Montreal, Quebec to serve refineries in Quebec; (4) an expansion of Enbridge's Line 9B to provide additional delivery capacity within

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Ontario and Quebec; (5) expansions to add horsepower on existing lines on the Enbridge Mainline system from western Canada to the U.S. border which was completed in August 2014; and (6) modifications to existing terminal facilities on the Enbridge Mainline system, comprised of upgrading existing booster pumps, additional booster pumps and new tank line connections in order to accommodate additional light oil volumes and enhance operational flexibility. The outstanding projects have various targeted in-service dates through 2015. In October 2014, the Canadian National Energy Board, or NEB, requested additional information regarding one of the 30 conditions imposed on the Line 9B projects in March 2014. On October 23, 2014, Enbridge responded to the NEB describing Enbridge's rigorous approach to risk management and isolation valve placement. Enbridge is currently awaiting response from the NEB to determine whether additional information is needed to satisfy the condition prior to applying for a Leave to Open allowing the operation of the project. As a result, Enbridge is unable to estimate the length of delay to the in-service date (previously expected in the fourth quarter of 2014). These projects will enable growing light crude production from the Bakken shale and from Alberta to meet refinery needs in Michigan, Ohio, Ontario and Quebec. These projects will also provide much needed transportation outlets for light crude, mitigating the current discounting of supplies in the basins, while also providing more favorable supply costs to refiners currently dependent on crudes priced off of the Atlantic basin.

Enbridge United States Gulf Coast Projects and Southern Access Extension

One of our key strengths is our relationship with Enbridge. In 2011, Enbridge announced two major U.S. Gulf Coast market access pipeline projects, which, when completed, will pull more volume through our pipeline and may lead to further expansions of our Lakehead pipeline system. In addition, in 2012 Enbridge announced the Southern Access Extension, which will support the increasing supply of light oil from Canada and the Bakken into Patoka, Illinois.

Flanagan South Pipeline

Enbridge's Flanagan South Pipeline project will transport more volumes into Cushing, Oklahoma and twin its existing Spearhead pipeline, which starts at the hub in Flanagan, Illinois and delivers volumes into the Cushing hub. The 590-mile, 36-inch diameter pipeline has a design capacity of approximately 600,000 Bpd and was mechanically complete in September 2014 and line fill arrangements have begun and will continue throughout November 2014. However, in the initial years, it is not expected to operate to its full design capacity. In August 2013, the Sierra Club and National Wildlife Federation, the Plaintiff, filed a Complaint for Declaratory and Injunctive Relief, referred to as the Complaint, with the United States District Court for the District of Columbia, or the Court. The Complaint was filed against multiple federal agencies, or the Defendants, and included a request that the Court issue a preliminary injunction suspending previously granted federal permits and ordering Enbridge to discontinue construction of the project on the basis that the Defendants failed to comply with environmental review standards of the National Environmental Protection Act. In September 2013, Enbridge obtained intervener status and joined the Defendants in filing a response in opposition to the motion for preliminary injunction. The Plaintiff's request for preliminary injunction was denied by the Court in November 2013. A court hearing was held on February 21, 2014 concerning the merits of the Complaint against the Defendants. The Court ruled on August 18, 2014 dismissing all claims in favor of Enbridge and the federal agencies. The Plaintiffs filed an appeal to the U.S. Court of Appeals, D.C. Circuit.

Seaway Crude Pipeline

In 2011, Enbridge completed the acquisition of a 50% interest in the Seaway Crude Pipeline System, or Seaway. Seaway is a 670-mile pipeline that includes a 500-mile, 30-inch pipeline long-haul system that was reversed in 2012 to enable transportation of oil from Cushing, Oklahoma to Freeport, Texas, as well as a Texas City Terminal and Distribution System that serves refineries in the Houston and Texas City areas. Seaway also includes 6.8 million barrels of crude oil tankage on the Texas Gulf Coast and provided an initial capacity of 150,000 Bpd. Further pump station additions and modifications completed in January 2013 have increased the capacity to approximately 400,000 Bpd, depending upon the mix of light and heavy grades of crude oil.

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In March 2012, based on additional capacity commitments from shippers, plans were announced to proceed with an expansion of the Seaway Pipeline through construction of a second line to more than double its capacity to 850,000 Bpd. In July 2014, this second line, or Seaway Pipeline Twin, was mechanically complete with line fill expected to follow the completion of line fill for the Flanagan South Pipeline (discussed above). This 30-inch diameter pipeline follows the same route as the existing Seaway Pipeline. Also included in the scope of this second line, was a 65-mile, 36-inch diameter pipeline lateral from the Seaway Jones Creek facility to Enterprise Product Partners L.P.'s, or Enterprise Product's, ECHO crude oil terminal, or ECHO Terminal, in Houston, Texas that was completed in January 2014. Furthermore, the 100-mile pipeline from Enterprise Product's ECHO Terminal to the Port Arthur/Beaumont, Texas refining center to provide shippers access to the region's heavy oil refining capabilities was completed in August 2014. The new 100-mile pipeline offers incremental capacity of 750,000 Bpd.

Southern Access Extension

In December 2012, Enbridge announced that it would undertake the Southern Access Extension project, which will consist of the construction of a 165-mile, 24-inch diameter crude oil pipeline from Flanagan to Patoka, Illinois, as well as additional tankage and two new pump stations. The initial capacity of the new line is expected to be approximately 300,000 Bpd. On July 1, 2014, Enbridge entered into an agreement with Lincoln Pipeline LLC, or Lincoln, an affiliate of MPC, to, among other things, admit Lincoln as a partner and participate in the Southern Access Extension. Lincoln has purchased a 35% equity interest in the project and will make additional cash contributions in accordance with the Southern Access Extension's spend profile in proportion to its 35% interest. Subject to regulatory and other approvals, the project is expected to be placed into service in late 2015.

Natural Gas

The following tables set forth the operating results of our Natural Gas segment and approximate average daily volumes of natural gas throughput and NGLs produced on our major systems for the periods presented.

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(in millions)			
Operating revenues	$ 1,399.4	$ 1,387.9	$ 4,443.1	$ 4,054.4
Cost of natural gas	1,238.2	1,257.5	3,986.7	3,564.4
Operating and administrative	105.0	113.6	317.5	337.8
Depreciation and amortization	39.5	35.8	113.3	106.6
Operating expenses	1,382.7	1,406.9	4,417.5	4,008.8
Operating income (loss)	16.7	(19.0)	25.6	45.6
Other income	6.1	—	7.1	—
Net income (loss)	$ 22.8	$ (19.0)	$ 32.7	$ 45.6
Operating Statistics (MMBtu/d)				
East Texas	1,063,000	1,120,000	1,021,000	1,201,000
Anadarko	806,000	957,000	816,000	963,000
North Texas	304,000	314,000	292,000	326,000
Total	2,173,000	2,391,000	2,129,000	2,490,000
NGL Production (Bpd)	84,121	88,907	82,578	89,620

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Three month period ended September 30, 2014, compared with three month period ended September 30, 2013

The operating income of our Natural Gas business for the three month period ended September 30, 2014, increased $35.7 million, as compared with the same period in 2013. The most significant area affected was the Natural Gas segment gross margin, representing revenue less cost of natural gas, which increased $30.8 million for the three month period ended September 30, 2014, as compared with the same period in 2013.

Segment gross margin experienced an increase in non-cash, mark-to-market net gains of $50.2 million for the three month period ended September 30, 2014, compared to the same period in 2013, primarily related to increased gains in the three months ended September 30, 2014, on our NGL and condensate hedges and overall physical commodity gains from the non-qualifying physical NGL contracts. We are exposed to fluctuations in commodity prices in the near term on approximately 40% of the physical natural gas, NGLs and condensate we expect to receive as compensation for our services. As a result of this unhedged commodity price exposure, our segment gross margin generally increases when the prices of these commodities are rising and generally decreases when the prices are declining.

The following table depicts the effect that non-cash, mark-to-market net gains and losses had on the operating results of our Natural Gas segment for the three and nine month periods ended September 30, 2014, and 2013:

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(in millions)			
Hedge ineffectiveness	$ 0.9	$ (0.5)	$ 1.5	$ 1.8
Non-qualified hedges	16.8	(32.0)	10.0	(13.5)
Derivative fair value gains (losses)	$ 17.7	$ (32.5)	$ 11.5	$ (11.7)

Segment gross margin was negatively affected by the reduced production volumes by approximately $15.0 million for the three month period ended September 30, 2014, compared to the same period in 2013. The average daily volumes of our major systems for the three month period ended September 30, 2014, decreased by approximately 218,000 MMBtu/d, or 9%, when compared to the same period in 2013. The average NGL production for the three month period ended September 30, 2014, decreased 4,786 Bpd, or 5%, when compared to the same period in 2013. The decrease in natural gas and NGL volumes in the Anadarko region was primarily attributable to the loss of a major customer on our Anadarko system and reduced and delayed drilling activity by certain producers. The decrease in natural gas volumes in the East Texas region was primarily attributable to reduced dry gas drilling, and delayed drilling activity and well completions.

The natural gas and NGL production volumes have been improving quarter over quarter during the year and the outlook on our systems is expected to improve as we progress through the fourth quarter. We expect producer activity to increase in each of our asset regions with the exception of the Anadarko region. Additionally, drilling activity by natural gas producers in all regions is expected to target rich gas and oil prospects. This is notable in East Texas where existing processing capacity is full. Completion of the Beckville Cryogenic Processing Plant, which is expected to commence service in early 2015, is expected to alleviate this capacity constraint.

Segment gross margin increased by $2.5 million for the three months ended September 30, 2014, from contractual minimum volume commitments that will not be met before the contracts expire.

Segment gross margin increased $2.4 million for the three month period ended September 30, 2014, as compared with the same period in 2013 due to increased margins from pricing differentials.

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Our segment gross margin decreased $7.4 million for the three month period ended September 30, 2014, compared with the same period in 2013 due in part to lower storage volumes as a result of lower volumes received from our Gathering, Processing and Transportation segment.

The barrels that we produce under traditional keep-whole gas processing arrangements we refer to collectively as keep-whole earnings. Operating revenue less the cost of natural gas derived from keep-whole earnings for the three month period ended September 30, 2014, decreased $7.1 million from the same period in 2013, primarily due to lower ethane prices in the Anadarko region coupled with lower volumes of propane, butane, and natural gasoline.

Our segment gross margin decreased $4.1 million for the three month period ended September 30, 2014, compared with the same period in 2013 due to higher transportation and fractionation fees, freight costs, and product purchase costs, when compared to the same period in 2013.

Segment gross margin decreased $1.5 million for the three month period ended September 30, 2014, due to reduced pricing spreads between our Conway and Mont Belvieu market hubs when compared with the same period in 2013. On our Anadarko system, we purchase certain NGL components at Conway hub prices and then have the option to resell those same NGL components at Mont Belvieu hub prices.

Operating and administrative costs decreased $8.6 million for the three month period ended September 30, 2014, compared to the same period in 2013, due partly to lower volumes received from our Natural Gas segment and partly due to a strategic reduction of long hauls due to new geographically advantaged sales points.

Depreciation and amortization expense for our Natural Gas segment increased $3.7 million for the three month period ended September 30, 2014, compared with the same period of 2013, due to additional assets that were placed into service.

We recognized a $6.1 million equity income in “Other income (expense)” on our consolidated statement of income related to our investment in the Texas Express NGL system, which commenced startup operations during the fourth quarter of 2013.

Nine month period ended September 30, 2014, compared with nine month period ended September 30, 2013

The operating income of our Natural Gas business for the nine month period ended September 30, 2014, decreased $20.0 million, as compared with the same period in 2013. The most significant area affected was segment gross margin which decreased $33.6 million for the nine month period ended September 30, 2014, as compared with the same period in 2013.

Segment gross margin was affected by reduced production volumes which negatively affected segment gross margin by approximately $42.9 million for the nine month period ended September 30, 2014, compared to the same period in 2013. The average daily volumes of our major systems for the nine month period ended September 30, 2014, decreased by approximately 361,000 MMBtu/d, or 14% when compared to the same period in 2013. The average NGL production for the nine month period ended September 30, 2014, decreased by 7,042 Bpd, or 8%, when compared to the same period in 2013. The decrease in natural gas and NGL volumes in the Anadarko region was primarily attributable to the loss of a major customer on our Anadarko system and delayed drilling activity by certain producers. The decrease in natural gas volumes in the East Texas region was primarily attributable to reduced dry gas drilling, and delayed drilling activity and well completions.

Segment gross margin derived from keep-whole earnings for the nine month period ended September 30, 2014, decreased $19.0 million from the same period in 2013, due to a decrease in processing margins primarily driven by lower volumes in keep-whole barrels in the Oklahoma and North Texas regions.

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Our segment gross margin decreased $12.3 million for the nine month period ended September 30, 2014, compared with the same period in 2013 due in part to lower storage volumes as a result of lower volumes received from our Gathering, Processing and Transportation segment.

Segment gross margin decreased $3.7 million for the nine month period ended September 30, 2014, due to reduced pricing spreads between our Conway and Mont Belvieu market hubs when compared with the same period in 2013.

Segment gross margin decreased approximately $3.0 million for nine month period ended September 30, 2014, primarily due to the impact of sustained freezing temperatures in the first quarter 2014, which significantly disrupted producer well head production levels and our pipeline operations.

The decrease in segment gross margin was partially offset by increases in non-cash, mark-to-market net gains of $23.2 million for the nine month period ended September 30, 2014, compared to the same period in 2013 due to gains on our NGL, equity gas, and crude oil hedges, and overall physical commodity gains from the non-qualifying physical natural gas, NGL, and crude oil contracts.

Segment gross margin increased $8.9 million for the nine month period ended September 30, 2014, as compared with the same period in 2013 due to increased margins from pricing differentials. We benefited from the difference between market centers in the Mid-Continent supply areas and market area in the Midwest, which arose from higher than normal demand from winter weather in the Midwest.

The decrease in segment gross margin was partially offset by an increase of $6.9 million for the nine months ended September 30, 2014, due to contractual cumulative minimum volume commitments that will not be met before the contracts expire.

Operating and administrative costs of our Natural Gas segment decreased $20.3 million for the nine month period ended September 30, 2014, compared to the same period in 2013, due partly to lower volumes received from our Natural Gas segment and partly due to a strategic reduction of long hauls due to new geographically advantaged sales points.

Depreciation and amortization expense for our Natural Gas segment increased $6.7 million, for the nine month period ended September 30, 2014, compared with the same period of 2013, due to additional assets that were put in service.

We recognized $7.1 million in equity earnings in “Other income (expense)” on our consolidated statements of income related to our investment in the Texas Express NGL system, which commenced startup operations during the fourth quarter of 2013.

Future Prospects for Natural Gas

We intend to expand our natural gas gathering and processing services by (1) capturing opportunities within our footprint, (2) expanding outside of our footprint through strategic acquisitions, (3) providing an array of services for both natural gas and natural gas liquids in combination with core asset optimization, and (4) capitalizing on new market opportunities by diversifying geographically and by commodity composition. We will pursue internal growth projects designed to provide exposure to incremental supplies of natural gas at the wellhead, increase opportunities to serve additional customers, including new wholesale customers, and allow expansion of our treating and processing businesses. Additionally, we will pursue acquisitions to expand our natural gas services in situations where we have natural advantages to create additional value. We have completed several expansion projects and are currently constructing one major expansion project that is designed to increase natural gas processing, NGL production, residue gas and NGL transportation capacity. The paragraph below summarizes our commercially secured project for the Natural Gas segment, which we expect to place into service in future periods.

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Beckville Cryogenic Processing Plant

In April 2013, we announced plans to construct a cryogenic natural gas processing plant near Beckville in Panola County, Texas, which we refer to as the Beckville processing plant. This plant is expected to serve existing and prospective customers pursuing production in the Cotton Valley formation. We expect our Beckville processing plant to be capable of processing approximately 150 million cubic feet per day, or MMcf/d, of natural gas and producing approximately 8,500 Bpd of NGLs to accommodate the additional liquids-rich natural gas being developed within this geographical area in which our East Texas system operates. We estimate the cost of constructing the plant to be approximately $145.0 million and expect it to commence service in the first quarter of 2015.

The project is funded by us and MEP based on our proportionate ownership percentages in Midcoast Operating, which was 61% and 39%, respectively, before July 1, 2014, and 48.4% and 51.6%, respectively, after July 1, 2014.

Corporate

Our corporate activities consist of interest expense, interest income, allowance for equity during construction, noncontrolling interest and other costs such as income taxes, which are not allocated to the business segments.

	For the three month period ended September 30,		For the nine month period ended September 30,	
	2014	2013	2014	2013
	(in millions)			
Operating Results:				
Operating and administrative expenses	$ 3.8	$ 1.8	$ 6.9	$ 5.4
Operating loss	(3.8)	(1.8)	(6.9)	(5.4)
Interest expense, net	137.1	70.5	294.2	226.4
Allowance for equity used during construction	14.5	9.3	47.8	25.2
Other income (expense)	(4.3)	0.4	(4.9)	1.0
Income tax expense	2.1	1.5	6.1	17.5
Net loss	(132.8)	(64.1)	(264.3)	(223.1)
Noncontrolling interest	70.7	20.3	149.4	54.3
Series 1 preferred unit distributions	22.5	22.7	67.5	35.8
Accretion of discount on Series 1 preferred units	3.8	3.4	11.1	5.7
Net loss attributable to general and limited partners	$ (229.8)	$ (110.5)	$ (492.3)	$ (318.9)

Three month period ended September 30, 2014, compared with three month period ended September 30, 2013

The $68.7 million increase in our net loss for the three month period ended September 30, 2014, as compared to the same period in 2013 was primarily attributable to interest expense.

Our earnings and cash flows are exposed to the variability in longer term interest rates ahead of the anticipated fixed rate debt issuances. Forward starting interest rate swaps are used as cash flow hedges against the effect of future interest rate movements on earnings and cash flow. In order to mitigate the negative effect that increasing interest rates can have on our cash flows, we have purchased 10 year interest rate swaps with a total notional value of $2.35 billion as of September 30, 2014. In September 2014, we amended the maturity date on certain interest rate hedges of future debt issuances that were originally set to mature in 2014 and 2016 to better reflect the expected timing of future debt issuances. The ineffective portion of the hedges fair value in

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relation to the hedged future debt issuances is recognized in income at the amendment date and each quarter end. For the three months ended September 30, 2014, interest expense increased due to recognition of unrealized losses for hedge ineffectiveness of approximately $62.2 million associated with interest rate hedges that were originally set to mature in 2014 and 2016.

Nine month period ended September 30, 2014, compared with nine month period ended September 30, 2013

The results for corporate activities for the nine month period ended September 30, 2014, compared to the same period in 2013, changed for the same reasons as noted in the three month analysis above in addition to the factors discussed below.

Income tax expense decreased $11.4 million for the nine month period ended September 30, 2014, compared to the same period in 2013, primarily due to a tax law that was passed in 2013 in the State of Texas, which resulted in a one-time increase to deferred income tax expense.

AEDC increased $22.6 million for the nine month period ended September 30, 2014, compared with the corresponding period in 2013, primarily related to construction on our Eastern Access projects.

Other Matters

Alberta Clipper Pipeline Joint Funding Arrangement

In July 2009, we entered into a joint funding arrangement to finance construction of the U.S. segment of the Alberta Clipper Pipeline with several of our affiliates and affiliates of Enbridge, including our General Partner. In connection with the joint funding arrangement, we allocated earnings derived from operating the Alberta Clipper Pipeline in the amount of $16.3 million and $13.4 million to our General Partner for its 66.67% share of the earnings of the Alberta Clipper Pipeline for the three month periods ended September 30, 2014 and 2013, respectively. We allocated earnings derived from operating the Alberta Clipper Pipeline in the amount of $38.0 million and $39.6 million to our General Partner for the nine month periods ended September 30, 2014, and September 30, 2013, respectively. We have presented the amounts we allocated to our General Partner for its share of the earnings of the Alberta Clipper Pipeline in “Net income attributable to noncontrolling interest” on our consolidated statements of income.

Alberta Clipper Drop Down Proposal

On September 17, 2014, we received a proposal from our General Partner pursuant to which our General Partner would drop down its 66.7% interest in the U.S. segment of the Alberta Clipper Pipeline to us for aggregate consideration of approximately $900 million. The proposed consideration would be cash of approximately $300 million, plus approximately $600 million of newly created Class E limited partner equity units to be issued to our General Partner by us. The Class E units would be entitled to the same distributions as the Class A common units and would be convertible into Class A common units on a one-for-one basis at our General Partners’ option. The Board of Directors of Enbridge Energy Management, the delegate of our General Partner, has appointed a special committee comprised of independent directors to review the proposal. Our acceptance of the proposal is subject to the review and favorable recommendation by the special committee and final approval by the Board of Directors. If approved, this transaction is targeted to close by the end of 2014.

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Joint Funding Arrangement for Eastern Access Projects

In May 2012, the OLP amended and restated its partnership agreement to establish an additional series of partnership interests, which we refer to as the EA interests. The EA interests were created to finance projects to increase access to refineries in the U.S. Upper Midwest and in Ontario, Canada for light crude oil produced in western Canada and the United States, which we refer to as the Eastern Access Projects.

In connection with the partnership agreement, we allocated earnings from the Eastern Access Projects in the amount of $41.7 million and $6.6 million to our General Partner for its ownership of the EA interest, representing its 75% economic interest, for the three month periods ended September 30, 2014, and September 30, 2013, respectively. We allocated earnings derived from the Eastern Access Projects in the amount of $90.5 million and $14.4 million to our General Partner for the nine month periods ended September 30, 2014, and September 30, 2013, respectively. We have presented this amount we allocated to our General Partner in "Net income attributable to noncontrolling interest" on our consolidated statements of income.

Joint Funding Arrangement for the U.S. Mainline Expansion

In December 2012, the OLP further amended and restated its limited partnership agreement to establish another series of partnership interests, which we refer to as the ME interests. The ME interests were created to finance projects to increase access to the markets of North Dakota and western Canada for light oil production on our Lakehead System between Neche, North Dakota and Superior, Wisconsin, which we refer to as our Mainline Expansion Projects.

We allocated earnings from the Mainline Expansion Projects in the amount of $9.8 million and $0.3 million to our General Partner for its ownership of the ME interest, representing its 75% economic interest, for the three month periods ended September 30, 2014, and September 30, 2013, respectively. We allocated earnings from the Mainline Expansion Projects in the amount of $20.0 million and $0.3 million to our General Partner for its ownership of the ME interest for the nine month periods ended September 30, 2014, and September 30, 2013, respectively. We have presented the amount we allocated to our General Partner in "Net income attributable to noncontrolling interest" in our consolidated statements of income.

LIQUIDITY AND CAPITAL RESOURCES

Available Liquidity

Our primary source of short-term liquidity is provided by our $1.5 billion commercial paper program, which is supported by our $1.975 billion multi-year senior unsecured revolving credit facility, which we refer to as the Credit Facility, and our $650.0 million credit agreement, which we refer to as the 364-Day Credit Facility. We refer to the 364-Day Credit Facility and the Credit Facility as our Credit Facilities. We access our $1.5 billion commercial paper program primarily to provide temporary financing for our operating activities, capital expenditures and acquisitions when the interest rates available to us for commercial paper are more favorable than the rates available under our Credit Facilities.

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As set forth in the following table, we had approximately $2.1 billion of liquidity available to us at September 30, 2014, to meet our ongoing operational, investment and financing needs, as well as the funding requirements associated with the environmental remediation costs resulting from the crude oil release on Line 6B.

	EEP	MEP
	(in millions)	
Cash and cash equivalents	$ 230.4	$ 66.2
Total credit available under EEP's Credit Facilities	2,625.0	—
Total credit available under MEP's Credit Agreement	—	850.0
Less: Amounts outstanding under MEP's Credit Agreement	—	365.0
Principal amount of commercial paper issuances	1,100.0	—
Letters of credit outstanding	183.6	—
Total	$1,571.8	$551.2

General

Our primary operating cash requirements consist of normal operating expenses, maintenance capital expenditures, distributions to our partners and payments associated with our risk management activities. We expect to fund our current and future short-term cash requirements for these items from our operating cash flows supplemented as necessary by issuances of commercial paper and borrowings on our Credit Facilities. Margin requirements associated with our derivative transactions are generally supported by letters of credit issued under our Credit Facilities.

Our current business strategy emphasizes developing and expanding our existing Liquids and Natural Gas businesses through organic growth and targeted acquisitions. We expect to initially fund our long-term cash requirements for expansion projects and acquisitions, as well as retire our maturing and callable debt, first from operating cash flows and then from issuances of commercial paper and borrowings on our Credit Facilities. We expect to obtain permanent financing as needed through the issuance of additional equity and debt securities, which we will use to repay amounts initially drawn to fund these activities, although there can be no assurance that such financings will be available on favorable terms, if at all. In addition, we intend to sell additional interests in Midcoast Operating entity to MEP to raise capital over the course of the next several years. Although this is our intent, there is no assurance that any transactions will occur as they are subject to, among other things, obtaining agreement from MEP and its board of directors around the commercial terms of such a sale. When we have attractive growth opportunities in excess of our own capital raising capabilities, the General Partner has provided supplementary funding, or participated directly in projects, to enable us to undertake such opportunities. If in the future we have attractive growth opportunities that exceed capital raising capabilities, we could seek similar arrangements from the General Partner, but there can be no assurance that this funding can be obtained.

As of September 30, 2014, we had a working capital deficit of approximately $0.8 billion and approximately $2.1 billion of liquidity to meet our ongoing operational, investing and financing needs as shown above, as well as the funding requirements associated with the environmental remediation costs resulting from the crude oil releases on Lines 6A and 6B.

Capital Resources

Equity and Debt Securities

Execution of our growth strategy and completion of our planned construction projects contemplate our accessing the public and private equity and credit markets to obtain the capital necessary to fund these activities. We have issued a balanced combination of debt and equity securities to fund our expansion projects and acquisitions. Our internal growth projects and targeted acquisitions will require additional permanent capital and require us to bear the cost of constructing and acquiring assets before we begin to realize a return on them. If

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market conditions change and capital markets become constrained, our ability and willingness to complete future debt and equity offerings may be limited. The timing of any future debt and equity offerings will depend on various factors, including prevailing market conditions, interest rates, our financial condition and our credit rating at the time.

Midcoast Energy Partners, L.P.

On November 13, 2013, in connection with the closing of MEP's IPO, certain transactions, among others, occurred pursuant to which we effectively conveyed to MEP a 39% limited partner interest in Midcoast Operating.

On July 1, 2014, we sold a 12.6% limited partner interest in Midcoast Operating to MEP, for $350.0 million in cash, which brought our total ownership interest in Midcoast Operating from 61% to 48.4%. This transaction represents our first disposition of additional interests in Midcoast Operating since MEP's IPO on November 13, 2013. We intend to sell additional interests in our natural gas assets, held through Midcoast Operating, to MEP and use the proceeds from any such sale as a source of funding for us. However, we do not know when, or if, any additional interests will be offered for sale. At September 30, 2014, we owned 5.9% of the outstanding MEP Class A units, 100% of the outstanding MEP Subordinated Units, 100% of MEP's general partner and 48.4% of the limited partner interests in Midcoast Operating.

Under the Midcoast Operating Agreement, EEP and MEP each have the option to contribute its proportionate share of additional capital to Midcoast Operating if any additional capital contributions are necessary to fund capital expenditures or other growth projects. To the extent that MEP or EEP elect not to make any such capital contributions, the contributing party will be permitted to make additional capital contributions in exchange for additional interests in Midcoast Operating. EEP can elect not to participate in certain growth projects. We expect to participate proportionately in these natural gas capital projects, although there is no guarantee that we will do so.

Joint Funding Arrangements

In order to obtain the required capital to expand our various pipeline systems, we have determined that the required funding would challenge our ability to efficiently raise capital. Accordingly, we have explored numerous options and determined that several joint funding arrangements would provide the best source of available capital to fund the expansion projects. See *Other Matters* above.

Cash Requirements

Capital Spending

We expect to make additional expenditures during the remainder of the year for the acquisition and construction of natural gas processing and crude oil transportation infrastructure. In 2014, we expect to spend approximately $1.6 billion on expansion capital and other projects associated with our liquids and natural gas systems with the expectation of realizing additional cash flows as projects are completed and placed into service. We expect to receive funding of approximately $1.2 billion from our General Partner based on our joint funding arrangement for the Eastern Access Projects and Mainline Expansion Projects and $145.0 million from MPC based on joint funding arrangement on the Sandpiper Project. We recognized capital expenditures of $2.0 billion for the nine month period ending September 30, 2014, including $91.0 million on maintenance capital activities and $1.1 billion of expenditures that were financed by contributions from our General Partner and MPC via joint funding arrangements. In addition, we incurred $24.6 million in net contributions to fund our joint ventures. At September 30, 2014, we had approximately $1.3 billion in outstanding purchase commitments, before contributions from our joint funding arrangements with our General Partner, attributable to capital projects for the construction of assets that will be recorded as property, plant and equipment in the future.

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Acquisitions

We continue to assess ways to generate value for our unitholders, including reviewing opportunities that may lead to acquisitions or other strategic transactions, some of which may be material. We evaluate opportunities against operational, strategic and financial benchmarks before pursuing them. We expect to obtain the funds needed to make acquisitions through a combination of cash flows from operating activities, borrowings under our Credit Facilities and the issuance of additional debt and equity securities. All acquisitions are considered in the context of the practical financing constraints presented by the capital markets.

Forecasted Expenditures

We categorize our capital expenditures as either maintenance capital or expansion capital expenditures. Maintenance capital expenditures are those expenditures that are necessary to maintain the service capability of our existing assets and include the replacement of system components and equipment which are worn, obsolete or completing its useful life. We also include in maintenance capital expenditures a portion of our expenditures for connecting natural gas wells, or well-connects, to our natural gas gathering systems. Expansion capital expenditures include our capital expansion projects and other projects that improve the service capability of our existing assets, extend asset useful lives, increase capacities from existing levels, reduce costs or enhance revenues and enable us to respond to governmental regulations and developing industry standards.

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We estimate our capital expenditures based upon our strategic operating and growth plans, which are also dependent upon our ability to produce or otherwise obtain the financing necessary to accomplish our growth objectives. The following table sets forth our estimates of capital expenditures we expect to make for system enhancement and maintenance capital for the year ending December 31, 2014. Although we anticipate making these expenditures in 2014, these estimates may change due to factors beyond our control, including weather-related issues, construction timing, regulatory permitting, changes in supplier prices or poor economic conditions, which may adversely affect our ability to access the capital markets. Additionally, our estimates may also change as a result of decisions made at a later date to revise the scope of a project or undertake a particular capital program or an acquisition of assets. For the full year ending December 31, 2014, we anticipate the capital expenditures to approximate the following:

	Total Forecasted Expenditures (in millions)
Liquids Projects	
Eastern Access Projects	$ 775
U.S. Mainline Expansions	760
Sandpiper	390
Line 6B 75-mile Replacement Program	10
Line 3 Replacement	170
Liquids Integrity Program	325
Expansion Capital	255
Maintenance Capital Expenditures	70
	2,755
Less joint funding from:	
General Partner [1]	1,150
Third parties	145
Liquids Total	**$ 1,460**
Natural Gas Projects	
Beckville Cryogenic Processing Plant	$ 105
Expansion Capital	110
Maintenance Capital Expenditures	55
	270
Less joint funding from:	
MEP [2]	125
Natural Gas Total	**145**
TOTAL	**$ 1,605**

(1) No joint funding of the Line 3 Replacement is included in this line item as the joint funding agreement with Enbridge Inc. has not been completed.
(2) Joint funding is based upon six months of MEP at a 39% ownership of Midcoast Operating and six months of MEP at a 51.6% ownership of Midcoast Operating.

We maintain a comprehensive integrity management program for our pipeline systems, which relies on the latest technologies that include internal pipeline inspection tools. These internal pipeline inspection tools identify internal and external corrosion, dents, cracking, stress corrosion cracking and combinations of these conditions. We regularly assess the integrity of our pipelines utilizing the latest generations of metal loss, caliper and crack detection internal pipeline inspection tools. We also conduct hydrostatic testing to determine the integrity of our pipeline systems. Accordingly, we incur substantial expenditures each year for our integrity management programs.

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Under our capitalization policy, expenditures that replace major components of property or extend the useful lives of existing assets are capital in nature, while expenditures to inspect and test our pipelines are usually considered operating expenses. The capital spending components of our programs have increased over time as our pipeline systems age.

We expect to incur continuing annual capital and operating expenditures for pipeline integrity measures to ensure both regulatory compliance and to maintain the overall integrity of our pipeline systems. Expenditure levels have continued to increase as pipelines age and require higher levels of inspection, maintenance and capital replacement. We also anticipate that maintenance capital will continue to increase due to the growth of our pipeline systems and the aging of portions of these systems. Maintenance capital expenditures are expected to be funded by operating cash flows.

We anticipate funding expansion capital expenditures temporarily through borrowing under the terms of our Credit Facility, with permanent debt and equity funding being obtained when appropriate.

Environmental

Lakehead Line 6B Crude Oil Release

During the nine month period ended September 30, 2014, our cash flows were impacted by the approximate $117.4 million we paid for the environmental remediation, restoration and cleanup activities resulting from the crude oil releases that occurred in 2010 on Line 6B of our Lakehead system. Of the $1.21 billion in total cost accrued, we expect to pay a significant portion of the total remaining estimated cost of $219.4 million related to the Order received from the EPA during 2014.

In March 2013, we and Enbridge filed a lawsuit against the insurers of our remaining $145.0 million coverage, as one particular insurer is disputing our recovery eligibility for costs related to our claim on the Line 6B crude oil release and the other remaining insurers assert that their payment is predicated on the outcome of our recovery with that insurer. We received a partial recovery payment of $42.0 million from the other remaining insurers during the third quarter 2013 and have since amended our lawsuit, such that it now includes only one carrier. While we believe that our claims for the remaining $103.0 million are covered under the policy, there can be no assurance that we will prevail in this lawsuit.

Derivative Activities

We use derivative financial instruments (i.e., futures, forwards, swaps, options and other financial instruments with similar characteristics) to manage the risks associated with market fluctuations in commodity prices and interest rates and to reduce variability in our cash flows. Based on our risk management policies, all of our derivative financial instruments are employed in connection with an underlying asset, liability and/or forecasted transaction and are not entered into with the objective of speculating on commodity prices or interest rates.

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The following table provides summarized information about the timing and expected settlement amounts of our outstanding commodity derivative financial instruments based upon the market values at September 30, 2014 for each of the indicated calendar years:

	Notional	2014	2015	2016	2017	2018	Total [4]
			(in millions)				
Swaps							
Natural gas [1]	78,671,325	$ 0.6	$ (0.6)	$(0.2)	$—	$—	$ (0.2)
NGL [2]	3,814,740	1.5	1.3	—	—	—	2.8
Crude Oil [2]	2,448,429	2.0	9.4	0.1	—	—	11.5
Options							
Natural gas—puts written [1]	5,119,000	(0.1)	(1.4)	—	—	—	(1.5)
Natural gas—puts purchased [1]	6,766,000	0.1	1.4	0.5	—	—	2.0
Natural gas—calls written [1]	2,924,500	—	(0.1)	(0.3)	—	—	(0.4)
Natural gas—calls purchased [1]	1,277,500	—	0.1	—			0.1
NGL—puts purchased [2]	2,824,700	0.9	5.5	6.5	—	—	12.9
NGL—calls purchased [2]	46,000	—	—	—	—	—	—
NGL—puts written [2]	32,200	(0.5)	—	—	—	—	(0.5)
NGL—calls written [2]	1,925,250	(0.1)	(1.7)	(5.6)	—	—	(7.4)
Crude Oil—puts purchased [2]	986,700	—	2.3	2.0	—	—	4.3
Crude Oil—calls written [2]	986,700	—	(2.1)	(2.2)	—	—	(4.3)
Forward contracts							
Natural gas [1]	230,964,144	0.6	0.7	0.3	0.1	—	1.7
NGL [2]	18,778,407	6.0	1.5	—	—	—	7.5
Crude Oil [2]	1,029,914	(1.6)	0.2	—	—	—	(1.4)
Power [3]	14,716	(0.1)	—	—	—	—	(0.1)
Totals		$ 9.3	$16.5	$ 1.1	$ 0.1	$—	$ 27.0

(1) Notional amounts for natural gas are recorded in MMBtu.
(2) Notional amounts for NGLs and crude oil are recorded in Barrels, or Bbl.
(3) Notional amounts for power are recorded in Megawatt hours, or MWh.
(4) Fair values exclude credit adjustments of approximately $0.2 million of losses at September 30, 2014.

The following table provides summarized information about the timing and estimated settlement amounts of our outstanding interest rate derivatives calculated based on implied forward rates in the yield curve at September 30, 2014 for each of the indicated calendar years:

	Notional Amount	2014	2015	2016	2017	2018	Thereafter	Total [1]
				(in millions)				
Interest Rate Derivatives								
Interest Rate Swaps:								
Floating to Fixed	$2,480	$(1.5)	$ (8.2)	$ (4.2)	$ 0.8	$ (0.7)	$ 0.2	$ (13.6)
Pre-issuance hedges [2]	$2,350	—	(208.6)	(38.0)	(10.8)	12.4	—	(245.0)
		$(1.5)	$(216.8)	$(42.2)	$(10.0)	$11.7	$ 0.2	$(258.6)

(1) Fair values are presented in millions of dollars and exclude credit valuation adjustments of approximately $12.7 of gains at September 30, 2014.
(2) There was no cash collateral at September 30, 2014.

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Cash Flow Analysis

The following table summarizes the changes in cash flows by operating, investing and financing for each of the periods indicated:

	For the nine month period ended September 30,		Variance 2014 vs. 2013 Increase (Decrease)
	2014	2013	
		(in millions)	
Total cash provided by (used in):			
Operating activities	$ 491.7	$ 942.5	$ (450.8)
Investing activities	(2,033.7)	(1,704.1)	(329.6)
Financing activities	1,673.8	557.3	1,116.5
Net increase (decrease) in cash and cash equivalents	131.8	(204.3)	336.1
Cash and cash equivalents at beginning of year	164.8	227.9	(63.1)
Cash and cash equivalents at end of period	$ 296.6	$ 23.6	$ 273.0

Operating Activities

Net cash provided by our operating activities decreased $450.8 million for the nine month period ended September 30, 2014 compared to the same period in 2013, primarily due to a decrease in our working capital accounts of $642.7 million. This decrease, due to our working capital accounts, was offset by a $268.4 million increase in net income offset by non-cash items of $82.6 million for the nine month period ended September 30, 2014 as compared to the same period in 2013.

Changes in our working capital accounts are shown in the following table and discussed below:

	For the nine month period ended September 30,		Variance 2014 vs. 2013
	2014	2013	
		(in millions)	
Changes in operating assets and liabilities, net of acquisitions:			
Receivables, trade and other	$ 0.9	$ 66.2	$ (65.3)
Due from General Partner and affiliates	15.3	(4.9)	20.2
Accrued receivables	27.7	452.5	(424.8)
Inventory	(131.0)	(87.4)	(43.6)
Current and long-term other assets	(28.7)	(22.3)	(6.4)
Due to General Partner and affiliates	(23.4)	3.1	(26.5)
Accounts payable and other	(93.1)	28.0	(121.1)
Environmental liabilities	(116.7)	(79.8)	(36.9)
Accrued purchases	(28.6)	(77.0)	48.4
Interest payable	5.9	8.3	(2.4)
Property and other taxes payable	23.8	8.1	15.7
Net change in working capital accounts	$ (347.9)	$ 294.8	$(642.7)

The changes in our operating assets and liabilities, net of acquisitions as presented in our consolidated statements of cash flow for the nine month period ended September 30, 2014, compared to the same period in 2013, is primarily the result of items listed below coupled with general timing differences for cash receipts and payment associated with our third-party accounts. The main items affecting our cash flows from operating assets and liabilities include the following:

- The change in trade receivables from December 31, 2012 to September 30, 2013 was primarily due to the sale of $79.8 million of trade receivables to a subsidiary of Enbridge pursuant to a purchase agreement, or the Receivables Agreement, that we entered into on June 28, 2013. This sale was

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partially offset by increased billings due to our Bakken projects entering service in March 2013 coupled with general timing differences in billing and receipt of payments;

- The change in accrued receivables from December 31, 2012 to September 30, 2013 was primarily the result of lower production of natural gas and NGLs from our facilities during the nine month period ended September 30, 2013. We sold $322.4 million of our accrued receivables outstanding as of December 31, 2012 to an Enbridge subsidiary under the Receivables Agreement. In addition, we had decreased volumes on our systems due to decreased natural gas drilling activity. For the nine month period ended September 30, 2014, our sales decreased even more than the nine month period ended September 30, 2013 due to continued reduced volumes; and
- The decline in accounts payable and other from December 31, 2013 to September 30, 2014 was primarily the result of book overdraft that was present at December 31, 2013 that was not present at September 30, 2014 coupled with decreased operating accruals related to our liquid pipelines. The primary driver of the increase in accounts payable and other from December 31, 2012 to September 30, 2013 was an increase in operating accruals associated with our Lakehead system partially offset by increased regulatory liability activities including amortization and over/under collections.

The above decrease was partially offset by an increase in net income of $268.4 million offset by a $82.6 million decrease in our non-cash items for the nine month period ended September 30, 2014 compared to the nine month period ended September 30, 2013. The decrease in non-cash items primarily consisted of the following:

- Decreased environmental costs of $139.6 million mainly attributed to $215.0 million in additional estimated costs recognized during 2013 related to the Line 6B crude oil release as a result of the Order accessed by the EPA in March 2013, while only $85.9 million in additional estimated costs were recognized in nine month period ended September 30, 2014;
- Increased derivative net losses of $45.9 million, compared to 2013, primarily as a result of fluctuations in commodity prices;
- Increased depreciation and amortization of $48.4 million due to projects placed in service in 2014;
- Increased allowance for equity used during construction, or AEDC, of $22.6 million attributable to the Eastern Access Projects and Mainline Expansion Projects partially offset by decreased AEDC due to the Line 6B (75-mile) Replacement project going into service early in 2014; and
- Decreased deferred income taxes for the nine month period ended September 30, 2014 of $12.0 million, primarily due to the new Texas Margin Tax law passed in the second quarter of 2013.

Investing Activities

Net cash used in our investing activities during the nine month period ended September 30, 2014 increased by $329.6 million, compared to the same period of 2013, primarily due to increased additions to property, plant and equipment, net of construction payables of $541.3 million in 2014 related to various enhancement projects, offset by the following:

- Decreased cash contributions of $146.4 million combined with decreased allowance for interest during construction associated with our joint venture project, Texas Express NGL system, as the project went into service at the end of 2013, coupled with $27.0 million in distributions in excess of cumulative earnings in 2014 from our joint venture investment in the Texas Express NGL system; and
- Decreased restricted cash balance of $33.4 million consisting of cash collections related to the receivables sold that have yet to be remitted to the Enbridge subsidiary in accordance with the Receivables Agreement.

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Financing Activities

Net cash provided by our financing activities increased $1,116.5 million for the nine month period ended September 30, 2014, compared to the same period in 2013, primarily due to the following:

- Increased net borrowings on our commercial paper of $1,534.7 million for the nine months ended September 30, 2014;
- Increased capital contributions from noncontrolling interest of $727.8 million in 2014 for ownership interests in the Mainline Expansion Projects, Eastern Access Projects and Sandpiper Project;
- Increased net proceeds from issuance of MEP senior notes totaling $398.1 million in 2014 compared to no activity in 2013;
- Decreased repayments on long-term debt of $200.0 million for 2014, due to us repaying in full our 4.750% Senior Notes due in 2013 compared to no payments on our Senior Notes in 2014; and
- Increased net borrowings on the MEP Credit Agreement of $30.0 million in 2014, compared to no activity in 2013.

Offsetting the increases above were the following:

- Decreased net proceeds in 2014 of $1,200.0 million due to no preferred unit issuances in 2014 while we had a preferred unit issuance in 2013;
- Decreased net proceeds from unit issuances, including our General Partner's contributions of $519.3 million from 2013 while we had no issuances in 2014; and
- Increased distributions to our limited partners of $13.6 million and distributions to noncontrolling interest of $41.2 million.

SUBSEQUENT EVENTS

Credit Facility Agreement Amendments

On October 6, 2014, we amended the Credit Facility to extend the maturity date from September 26, 2018 to September 26, 2019; however, $175.0 million of commitments will expire on the original maturity date of September 26, 2018.

Distribution to Partners

On October 31, 2014, the board of directors of Enbridge Management declared a distribution payable to our partners on November 14, 2014. The distribution will be paid to unitholders of record as of November 7, 2014 of our available cash of $221.8 million at September 30, 2014, or $0.5550 per limited partner unit. Of this distribution, $183.7 million will be paid in cash, $37.3 million will be distributed in i-units to our i-unitholder, Enbridge Management, and due to the i-unit distribution, $0.8 million will be retained from our General Partner from amounts otherwise distributable to it in respect of its general partner interest and limited partner interest to maintain its 2% general partner interest.

Distribution to Series AC Interests

On October 31, 2014, the board of directors of Enbridge Management, acting on behalf of Enbridge Pipelines (Lakehead) L.L.C., the managing general partner of the OLP and a holder of the Series AC interests, declared a distribution payable to the holders of the Series AC general and limited partner interests. The OLP will pay $20.3 million to the noncontrolling interest in the Series AC, while $10.1 million will be paid to us.

Distribution to Series EA Interests

On October 31, 2014, the board of directors of Enbridge Management, acting on behalf of Enbridge Pipelines (Lakehead) L.L.C., the managing general partner of the OLP and a holder of the Series EA interests,

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declared a distribution payable to the holders of the Series EA general and limited partner interests. The OLP will pay $43.7 million to the noncontrolling interest in the Series EA, while $14.6 million will be paid to us.

Distribution to Series ME Interests

On October 31, 2014, the board of directors of Enbridge Management, acting on behalf of Enbridge Pipelines (Lakehead) L.L.C., the managing general partner of the OLP and a holder of the Series ME interests, declared a distribution payable to the holders of the Series ME general and limited partner interests. The OLP will pay $1.9 million to the noncontrolling interest in the Series ME, while $0.6 million will be paid to us.

Distribution from MEP

On October 30, 2014, the board of directors of Midcoast Holdings, L.L.C., acting in its capacity as the general partner of MEP, declared a cash distribution payable to their partners on November 14, 2014. The distribution will be paid to unitholders of record as of November 7, 2014, of MEP's available cash of $15.6 million at September 30, 2014, or $0.3375 per limited partner unit. MEP will pay $7.2 million to their public Class A common unitholders, while $8.4 million in the aggregate will be paid to us with respect to our Class A common units, our subordinated units, and to Midcoast Holdings, L.L.C. with respect to its general partner interest.

Midcoast Operating Distribution

On October 30, 2014, the general partner of Midcoast Operating, acting in its capacity as the general partner of Midcoast Operating, declared a cash distribution by Midcoast Operating payable to its partners of record as of November 7, 2014. Midcoast Operating will pay $12.6 million to us and $13.5 million to MEP.

REGULATORY MATTERS

FERC Transportation Tariffs

Lakehead System

On June 27, 2014, Lakehead filed for an increase effective August 1, 2014 to its system rates. This rate filing was in part an index filing in accordance with 18 CFR 342.3 and in part a compliance filing with certain settlement agreements, which are not subject to FERC indexing. This filing included the increase in rates in compliance with the indexed rate ceilings allowed by the FERC which incorporates the multiplier of 1.038858, which was issued by the FERC on May 14, 2014, in Docket No. RM93-11-000. This filing also reflected an annual rate adjustment for the Facilities Surcharge Mechanism, or FSM, components of the Lakehead system. The FSM allows Lakehead to recover costs associated with particular shipper-approved projects through an incremental surcharge layered on top of the base rates. The FSM surcharge rates reflect our projected costs for these shipper-approved projects for 2014 and true-ups for the difference between estimated and actual costs for the prior year. Historically, the Lakehead system annual tariff rate adjustment for the FSM component of rates with an effective date of April 1 and the index rate filing with an effective date of July 1; however, the filings were delayed due to the then ongoing negotiations with the CAPP concerning certain components of the tariff rate structure. This negotiation eliminated the System Expansion Project II, or SEPII, surcharge and added recovery of the associated SEP II rate base to the FSM component of Lakehead rates. The rate base consisted of the costs for Line 14 and certain legacy integrity costs which were incurred to maintain the integrity and safety of the pipeline. The rates also include recovery of costs related to additional FSM projects, the Eastern Access Phase 2 Mainline Expansion, and the 2014 Mainline Expansions.

This tariff filing increased the transportation rate for heavy crude oil movements from the Canadian border to the Chicago, Illinois area by approximately $0.32 per barrel, to approximately $2.49 per barrel. The surcharge is applicable to each barrel of crude oil that is placed on our system beginning on the effective date of the tariff, which we recognize as revenue when the barrels are delivered, typically a period of approximately 30 days from the date shipped.

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Effective April 1, 2013, we filed our Lakehead system annual tariff rate adjustment with the FERC to reflect our projected costs and throughput for 2013 and true-ups for the difference between estimated and actual costs and throughput data for the prior year. This tariff rate adjustment filing also included the recovery of costs related to the Flanagan Tank Replacement Project and the Eastern Access Phase 1 Mainline Expansion Project. The Lakehead system utilized the SEPII and the FSM, which are components of our Lakehead system's overall rate structure and allows for the recovery of costs for enhancements or modifications to our Lakehead system.

This tariff filing increased the transportation rate for heavy crude oil movements from the Canadian border to the Chicago, Illinois area by approximately $0.28 per barrel, to approximately $2.13 per barrel. The surcharge is applicable to each barrel of crude oil that is placed on our system beginning on the effective date of the tariff, which we recognize as revenue when the barrels are delivered, typically a period of approximately 30 days from the date shipped.

*North Dakota and Ozark System*s

North Dakota FERC tariffs Nos. 72.29 and 3.0.0, with effective dates of January 24, 2014, were filed to implement the name change of the North Dakota System from Enbridge Pipelines (North Dakota) LLC to North Dakota Pipeline Company, LLC.

Effective April 1, 2014, we filed updates to the calculation of the surcharges on the two previously approved expansions, Phase 5 Looping and Phase 6 Mainline, on our North Dakota system. These surcharges are cost-of-service based surcharges that are trued up each year to actual costs and volumes and are not subject to the FERC indexing methodology. The filing increased transportation rates for all crude oil movements on our North Dakota system with a destination of Clearbrook, Minnesota by an average of approximately $0.05 per barrel, to an average of approximately $2.21 per barrel.

Effective May 8, 2014, FERC tariff No. 3.4.0 cancelled transportation rates on the North Dakota System from Flat Lake, Montana, as the pipeline is no longer providing service from that receipt point.

On May 30, 2014, we filed FERC tariffs with effective dates of July 1, 2014 for our North Dakota and Ozark systems. We increased the rates in compliance with the indexed rate ceilings allowed by the FERC which incorporates the multiplier of 1.038858, which was issued by the FERC on May 14, 2014, in Docket No. RM93-11-000.

Effective April 1, 2013 for the North Dakota system we filed updates to the calculation of the surcharges on the two previously approved expansions, Phase 5 Looping and Phase 6 Mainline, on our North Dakota system. As previously mentioned, these surcharges are cost-of-service based surcharges that are trued up each year to actual costs and volumes and are not subject to the FERC indexing methodology. This filing increased the average transportation rate for crude oil movements on our North Dakota System by $0.55 per barrel, to an average of approximately $2.06 per barrel.

Effective July 1, 2013, we filed FERC tariffs for our North Dakota and Ozark systems. We increased the rates in compliance with the indexed rate ceilings allowed by FERC which incorporates the multiplier of 1.045923, which was issued by FERC on May 15, 2013, in Docket No. RM93-11-000.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

The following should be read in conjunction with the information presented in our Annual Report on Form 10-K for the year ended December 31, 2013, in addition to information presented in Items 1 and 2 of this Quarterly Report on Form 10-Q. There have been no material changes to that information other than as presented below.

Our net income and cash flows are subject to volatility stemming from changes in interest rates on our variable rate debt obligations and fluctuations in commodity prices of natural gas, NGLs, condensate, crude oil

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and fractionation margins. Fractionation margins represent the relative difference between the price we receive from NGL and condensate sales and the corresponding cost of natural gas we purchase for processing. Our interest rate risk exposure results from changes in interest rates on our variable rate debt and exists at the corporate level where our variable rate debt obligations are issued. Our exposure to commodity price risk exists within each of our segments. We use derivative financial instruments (i.e., futures, forwards, swaps, options and other financial instruments with similar characteristics) to manage the risks associated with market fluctuations in interest rates and commodity prices, as well as to reduce volatility of our cash flows. Based on our risk management policies, all of our derivative financial instruments are employed in connection with an underlying asset, liability and/or forecasted transaction and are not entered into with the objective of speculating on interest rates or commodity prices.

Interest Rate Derivatives

The table below provides information about our derivative financial instruments that we use to hedge the interest payments on our variable rate debt obligations that are sensitive to changes in interest rates and to lock in the interest rate on anticipated issuances of debt in the future. For interest rate swaps, the table presents notional amounts, the rates charged on the underlying notional amounts and weighted average interest rates paid by expected maturity dates. Notional amounts are used to calculate the contractual payments to be exchanged under the contract. Weighted average variable rates are based on implied forward rates in the yield curve at September 30, 2014.

Date of Maturity & Contract Type	Accounting Treatment	Notional	Average Fixed Rate [1]	Fair Value [2] at September 30, 2014	Fair Value [2] at December 31, 2013
				(dollars in millions)	
Contracts maturing in 2015					
Interest Rate Swaps—Pay Fixed	Cash Flow Hedge	$ 510	1.53%	$ (1.9)	$ (6.8)
Contracts maturing in 2016					
Interest Rate Swaps—Pay Fixed	Cash Flow Hedge	$ 90	0.55%	$ —	—
Contracts maturing in 2017					
Interest Rate Swaps—Pay Fixed	Cash Flow Hedge	$ 450	2.21%	$ (12.2)	$ (13.8)
Contracts maturing in 2018					
Interest Rate Swaps—Pay Fixed	Cash Flow Hedge	$ 810	2.24%	$ 1.4	$ 3.3
Contracts maturing in 2019					
Interest Rate Swaps—Pay Fixed	Cash Flow Hedge	$ 620	2.96%	$ (1.0)	$ —
Contracts settling prior to maturity					
2014—Pre-issuance Hedges [3]	Cash Flow Hedge	$ —	0.00%	$ —	$ (132.7)
2015—Pre-issuance Hedges	Cash Flow Hedge	$1,000	5.48%	$ (208.5)	—
2016—Pre-issuance Hedges	Cash Flow Hedge	$ 500	4.21%	$ (38.0)	$ 60.8
2017—Pre-issuance Hedges	Cash Flow Hedge	$ 500	3.69%	$ (10.8)	—
2018—Pre-issuance Hedges	Cash Flow Hedge	$ 350	3.08%	$ 12.4	—

(1) Interest rate derivative contracts are based on the one-month or three-month London Interbank Offered Rate, or LIBOR.

(2) The fair value is determined from quoted market prices at September 30, 2014 and December 31, 2013, respectively, discounted using the swap rate for the respective periods to consider the time value of money. Fair values are presented in millions of dollars and exclude credit valuation adjustments of approximately $12.7 million of gains at September 30, 2014 and $7.1 million of losses at December 31, 2013.

(3) Includes $16.7 million of cash collateral at December 31, 2013.

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Fair Value Measurements of Commodity Derivatives

The following table provides summarized information about the fair values of expected cash flows of our outstanding commodity based swaps and physical contracts at September 30, 2014 and December 31, 2013.

		At September 30, 2014					At December 31, 2013	
			Wtd. Average Price [2]		Fair Value [3]		Fair Value [3]	
	Commodity	Notional [1]	Receive	Pay	Asset	Liability	Asset	Liability
					(in millions)			
Portion of contracts maturing in 2014								
Swaps								
Receive variable/pay fixed	Natural Gas	668,692	$ 4.00	$ 3.91	$ 0.1	$ —	$ —	$ —
	NGL	623,000	$ 56.02	$56.64	$ 0.3	$ (0.7)	$ 0.6	$ (0.4)
	Crude Oil	95,000	$ 89.87	$92.56	$ —	$ (0.3)	$ —	$ —
Receive fixed/pay variable	Natural Gas	2,380,100	$ 4.26	$ 4.09	$ 0.5	$ (0.1)	$ 0.1	$ (1.0)
	NGL	2,021,140	$ 51.91	$50.97	$ 3.7	$ (1.8)	$ 4.8	$ (12.7)
	Crude Oil	457,764	$ 95.26	$90.14	$ 2.7	$ (0.4)	$ 3.4	$ (5.4)
Receive variable/pay variable	Natural Gas	19,562,500	$ 4.03	$ 4.02	$ 0.6	$ (0.5)	$ 0.6	$ (0.1)
Physical Contracts								
Receive variable/pay fixed	Natural Gas	313,224	$ 3.89	$ 1.23	$ 0.8	$ —	$ —	$ —
	NGL	550,000	$ 42.40	$43.88	$ —	$ (0.8)	$ 0.9	$ (0.9)
	Crude Oil	45,000	$ 90.85	$93.90	$ —	$ (0.1)	$ —	$ —
Receive fixed/pay variable	Natural Gas	185,506	$ 4.03	$ 3.97	$ —	$ —	$ —	$ —
	NGL	3,504,872	$ 39.20	$37.85	$ 5.1	$ (0.4)	$ 0.4	$ (2.6)
	Crude Oil	75,000	$ 93.08	$90.62	$ 0.2	$ —	$ —	$ (0.4)
Pay fixed	Power [4]	14,716	$ 37.84	$46.59	$ —	$ (0.1)	$ —	$ (0.7)
Receive variable/pay variable	Natural Gas	72,613,470	$ 4.02	$ 4.02	$ 0.9	$ (1.1)	$ 0.9	$ (0.4)
	NGL	10,947,422	$ 42.80	$42.61	$ 2.7	$ (0.6)	$ 5.8	$ (3.7)
	Crude Oil	758,914	$ 88.26	$90.52	$ 0.8	$ (2.5)	$ 1.1	$ (1.2)
Portion of contracts maturing in 2015								
Swaps								
Receive variable/pay fixed	Natural Gas	316,837	$ 3.91	$ 3.93	$ —	$ —	$ —	$ —
	NGL	145,850	$ 72.56	$78.20	$ —	$ (0.8)	$ —	$ —
	Crude Oil	456,000	$ 87.81	$92.94	$ —	$ (2.3)	$ —	$ —
Receive fixed/pay variable	Natural Gas	809,761	$ 4.56	$ 4.21	$ 0.3	$ —	$ —	$ —
	NGL	1,024,750	$ 54.42	$52.36	$ 3.1	$ (1.0)	$ 1.5	$ (1.1)
	Crude Oil	1,303,165	$ 96.75	$87.78	$11.7	$ —	$ 8.3	$ —
Receive variable/pay variable	Natural Gas	42,725,000	$ 3.92	$ 3.94	$ 0.8	$ (1.7)	$ 0.1	$ —
Physical Contracts								
Receive variable/pay fixed	NGL	95,000	$ 46.73	$48.37	$ —	$ (0.2)	$ —	$ —
Receive fixed/pay variable	NGL	586,394	$ 49.38	$47.79	$ 1.0	$ —	$ —	$ —
Receive variable/pay variable	Natural Gas	108,991,322	$ 4.05	$ 4.05	$ 1.4	$ (0.7)	$ 0.5	$ (0.1)
	NGL	3,094,719	$ 61.40	$61.19	$ 1.2	$ (0.5)	$ —	$ —
	Crude Oil	151,000	$ 90.30	$88.89	$ 0.2	$ —	$ —	$ —
Portion of contracts maturing in 2016								
Swaps								
Receive variable/pay fixed	Natural Gas	181,435	$ 3.78	$ 3.85	$ —	$ —	$ —	$ —
	Crude Oil	68,250	$ 86.36	$90.00	$ —	$ (0.2)	$ —	$ —
Receive fixed/pay variable	Crude Oil	68,250	$ 90.89	$86.36	$ 0.3	$ —	$ 0.7	$ —
Receive variable/pay variable	Natural Gas	12,027,000	$ 3.96	$ 3.98	$ 0.1	$ (0.3)	$ —	$ —
Physical Contracts								
Receive variable/pay variable	Natural Gas	34,560,879	$ 4.06	$ 4.05	$ 0.7	$ (0.4)	$ 0.1	$ —
Portion of contracts maturing in 2017								
Physical Contracts								
Receive variable/pay variable	Natural Gas	14,299,743	$ 4.27	$ 4.26	$ 0.2	$ (0.1)	$ —	$ —

(1) Volumes of natural gas are measured in MMBtu, whereas volumes of NGL and crude oil are measured in Bbl. Our power purchase agreements are measured in MWh.

(2) Weighted average prices received and paid are in $/MMBtu for natural gas, $/Bbl for NGL and crude oil and $/MWh for power.

(3) The fair value is determined based on quoted market prices at September 30, 2014 and December 31, 2013, respectively, discounted using the swap rate for the respective periods to consider the time value of money. Fair values are presented in millions of dollars and exclude credit valuation adjustments of approximately $0.2 million of losses and $0.1 million of gains at September 30, 2014 and December 31, 2013, respectively.

(4) For physical power, the receive price shown represents the index price used for valuation purposes.

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The following table provides summarized information about the fair values of expected cash flows of our outstanding commodity options at September 30, 2014 and December 31, 2013.

		At September 30, 2014					At December 31, 2013	
					Fair Value [3]		Fair Value [3]	
Commodity		Notional [1]	Strike Price [2]	Market Price [2]	Asset	Liability	Asset	Liability
					(in millions)			
Portion of option contracts maturing in 2014								
Puts (purchased)	Natural Gas	1,104,000	$ 3.90	$ 4.10	$ 0.1	$ —	$ 0.7	$ —
	NGL	193,200	$54.79	$52.43	$ 0.9	$ —	$ 2.9	$ —
Calls (written)	NGL	115,000	$60.92	$54.59	$—	$ (0.1)	$ —	$ (1.0)
Puts (written)	Natural Gas	1,104,000	$ 3.90	$ 4.10	$—	$ (0.1)	$ —	$ (0.5)
	NGL	32,200	$66.36	$51.70	$—	$ (0.5)	$ —	$ —
Calls (purchased)	NGL	46,000	$50.40	$43.84	$—	$ —	$ —	$ —
Portion of option contracts maturing in 2015								
Puts (purchased)	Natural Gas	4,015,000	$ 3.90	$ 4.00	$ 1.4	$ —	$ 1.7	$ —
	NGL	1,350,500	$48.75	$50.62	$ 5.5	$ —	$ 6.0	$ —
	Crude Oil	547,500	$85.42	$87.76	$ 2.3	$ —	$ 1.8	$ —
Calls (written)	Natural Gas	1,277,500	$ 5.05	$ 4.00	$—	$ (0.1)	$ —	$ (0.3)
	NGL	529,250	$55.18	$50.29	$—	$ (1.7)	$ —	$ (1.0)
	Crude Oil	547,500	$91.75	$87.76	$—	$ (2.1)	$ —	$ (1.9)
Puts (written)	Natural Gas	4,015,000	$ 3.90	$ 4.00	$—	$ (1.4)	$ —	$ —
Calls (purchased)	Natural Gas	1,277,500	$ 5.05	$ 4.00	$ 0.1	$ —	$ —	$ —
Portion of option contracts maturing in 2016								
Puts (purchased)	Natural Gas	1,647,000	$ 3.75	$ 4.08	$ 0.5	$ —	$ —	$ —
	NGL	1,281,000	$41.82	$44.06	$ 6.5	$ —	$ —	$ —
	Crude Oil	439,200	$80.00	$85.93	$ 2.0	$ —	$ —	$ —
Calls (written)	Natural Gas	1,647,000	$ 4.98	$ 4.08	$—	$ (0.3)	$ —	$ —
	NGL	1,281,000	$48.59	$44.06	$—	$ (5.6)	$ —	$ —
	Crude Oil	439,200	$92.25	$85.93	$—	$ (2.2)	$ —	$ —

(1) Volumes of natural gas are measured in MMBtu, whereas volumes of NGL and crude oil are measured in Bbl.
(2) Strike and market prices are in $/MMBtu for natural gas and in $/Bbl for NGL and crude oil.
(3) The fair value is determined based on quoted market prices at September 30, 2014 and December 31, 2013, respectively, discounted using the swap rate for the respective periods to consider the time value of money. Fair values are presented in millions of dollars.

Our credit exposure for over-the-counter derivatives is directly with our counterparty and continues until the maturity or termination of the contract. When appropriate, valuations are adjusted for various factors such as credit and liquidity considerations.

	September 30, 2014	December 31, 2013
	(in millions)	
Counterparty Credit Quality [1]		
AAA	$ 0.3	$ 0.3
AA	(91.0)	(49.7)
A [2]	(134.0)	(40.1)
Lower than A	5.6	0.8
	$ (219.1)	$ (88.7)

(1) As determined by nationally-recognized statistical ratings organizations.
(2) Includes $16.7 million of cash collateral at December 31, 2013.

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Item 4. Controls and Procedures

We and Enbridge maintain systems of disclosure controls and procedures designed to provide reasonable assurance that we are able to record, process, summarize and report the information required to be disclosed in the reports that we file or submit under the Securities Exchange Act of 1934, as amended, or the Exchange Act, within the time periods specified in the rules and forms of the Securities and Exchange Commission, and that such information is accumulated and communicated to our management, including our principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure. Our management, with the participation of our principal executive and principal financial officers, has evaluated the effectiveness of our disclosure controls and procedures as of September 30, 2014. Based upon that evaluation, our principal executive and principal financial officers concluded that our disclosure controls and procedures are effective at the reasonable assurance level. In conducting this assessment, our management relied on similar evaluations conducted by employees of Enbridge affiliates who provide certain treasury, accounting and other services on our behalf.

There have been no changes in internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting during the three month period ended September 30, 2014.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings

Refer to Part I, Item 1. *Financial Statements*, "Note 9. *Commitments and Contingencies*," which is incorporated herein by reference.

Item 1A. Risk Factors

None.

Item 6. Exhibits

Reference is made to the "Index of Exhibits" following the signature page, which we hereby incorporate into this Item.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

ENBRIDGE ENERGY PARTNERS, L.P.
(Registrant)

By: Enbridge Energy Management, L.L.C.
as delegate of Enbridge Energy Company, Inc.
as General Partner

Date: November 3, 2014

By: /s/ Mark A. Maki
Mark A. Maki
President and
Principal Executive Officer

Date: November 3, 2014

By: /s/ Stephen J. Neyland
Stephen J. Neyland
Vice President—Finance
(Principal Financial Officer)

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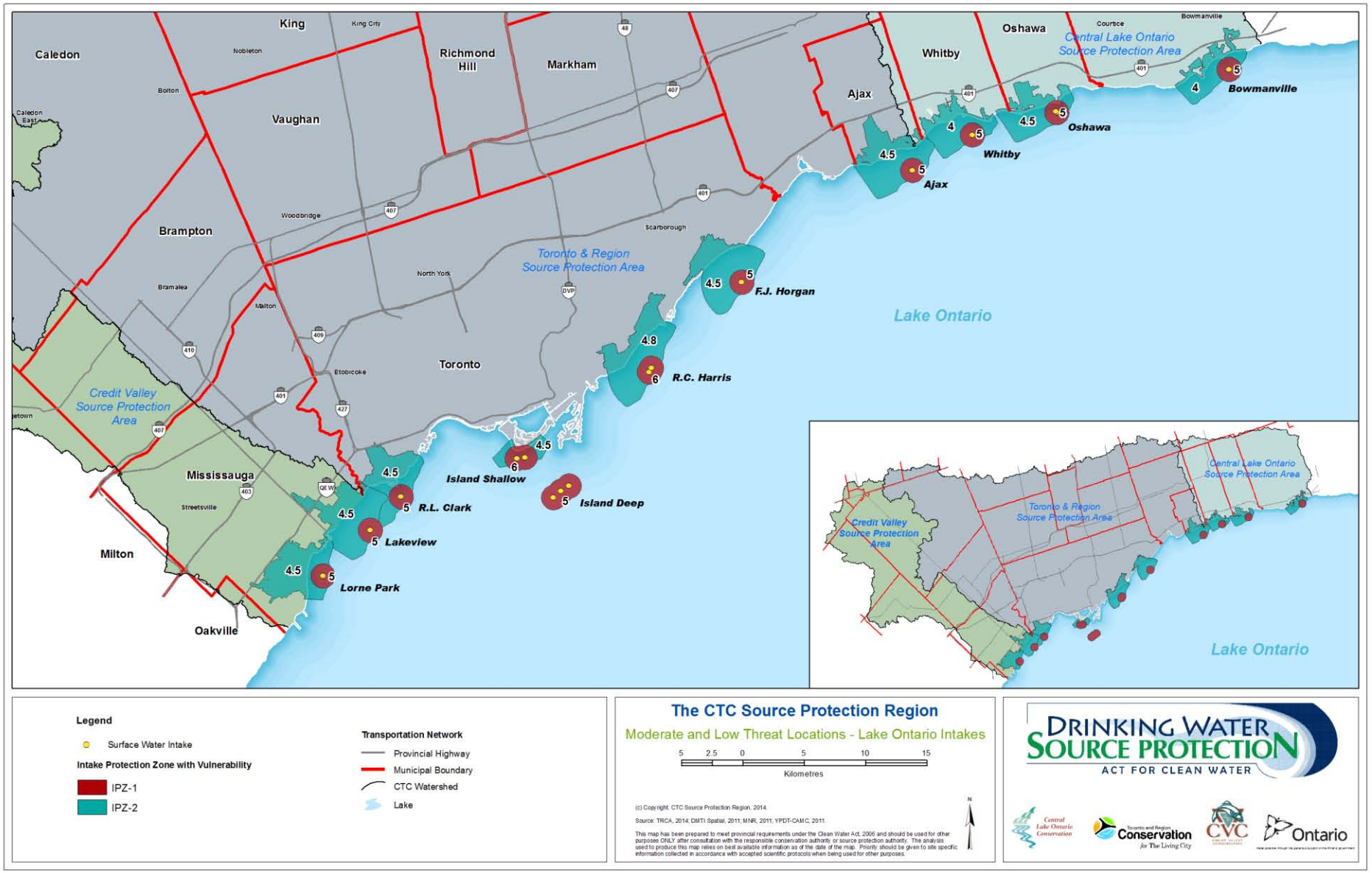
Index of Exhibits

Each exhibit identified below is filed as a part of this Quarterly Report on Form 10-Q. Exhibits included in this filing are designated by an asterisk; all exhibits not so designated are incorporated by reference to a prior filing as indicated.

Exhibit Number	Description
10.1	Subordination Agreement, dated as of September 30, 2014, by and among Midcoast Energy Partners, L.P., other obligors from time to time party thereto, Enbridge Energy Partners, L.P., and certain of its subsidiaries and affiliates from time to time party thereto in favor of the holders from time to time of the Notes (incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K, filed on October 6, 2014).
10.2	Amended and Restated Subordination Agreement Subordination Agreement, dated as of September 30, 2014, by and among Midcoast Energy Partners, L.P., Midcoast Operating, L.P., the other credit parties from time to time party thereto and Enbridge Energy Partners, L.P. in favor of Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.2 to our Current Report on Form 8-K, filed on October 6, 2014).
10.3	Extension Agreement and Fifth Amendment to Credit Agreement, dated as of October 6, 2014, by and among Enbridge Energy Partners, L.P., the lender parties thereto and Bank of America, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K, filed on October 10, 2014).
31.1*	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Principal Executive Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Principal Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	XBRL Instance Document.
101.SCH*	XBRL Taxonomy Extension Schema Document.
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document.



Map 4.2: Lake Ontario Intakes – Moderate and Low Threat Locations