



THE REGIONAL MUNICIPALITY OF NIAGARA
PUBLIC WORKS COMMITTEE
FINAL AGENDA

PWC 3-2019

Tuesday, March 19, 2019

9:30 a.m.

Council Chamber

Niagara Region Headquarters, Campbell West

1815 Sir Isaac Brock Way, Thorold, ON

	Pages
1. <u>CALL TO ORDER</u>	
2. <u>DISCLOSURES OF PECUNIARY INTEREST</u>	
3. <u>PRESENTATIONS</u>	
3.1 <u>Emterra Environmental</u> Brad Muter, Chief Operations Officer, Roger Davis, Director of Safety and Fleet Operations, and Victor Lesnicki, Emterra Special Projects, Emterra Environmental	3 - 13
4. <u>DELEGATIONS</u>	
5. <u>ITEMS FOR CONSIDERATION</u>	
5.1 <u>PW 5-2019</u> Gross Budget Adjustment and Status Update for Contract 2014-T-114 (RN14-14) Niagara-on-the-Lake Wastewater Treatment Plant	14 - 20
5.2 <u>PW 19-2019</u> Drinking Water Compliance and Water Wastewater Quality Management System Endorsement <i>A presentation will precede the consideration of this item.</i>	21 - 132
5.3 <u>PW 20-2019</u> Base and Enhanced Services for Next Collection Contract	133 - 185

5.4	<u>PW 22-2019</u> Managed Competition and Fair Wage Considerations for Waste Collection Contract	186 - 232
5.5	<u>PWC-C 9-2019</u> Recommendations for consideration from the Linking Niagara Transit Committee meeting held on March 6, 2019	233 - 253
6.	<u>CONSENT ITEMS FOR INFORMATION</u>	
6.1	<u>PW 23-2019</u> Niagara Regional Transit (NRT) and Niagara Specialized Transit (NST) 2018 Ridership and Revenue Summary	254 - 261
6.2	<u>PWC-C 6-2019</u> Niagara Water Treatment Plant 2018 Summary Reports	262 - 282
7.	<u>OTHER BUSINESS</u>	
8.	<u>CLOSED SESSION</u>	
8.1	<u>Confidential Verbal Update - A Matter Respecting Litigation or Potential Litigation - Niagara-on-the-Lake Wastewater Treatment Plant</u>	
8.2	<u>Confidential Memorandum PWC-C 8-2019 - Commercial information supplied in confidence to the municipality - In-House Waste Collection Services</u>	
9.	<u>BUSINESS ARISING FROM CLOSED SESSION ITEMS</u>	
10.	<u>NEXT MEETING</u> The next meeting will be held on Tuesday, April 16, 2019, at 9:30 a.m. in the Council Chamber, Regional Headquarters.	
11.	<u>ADJOURNMENT</u>	

If you require any accommodations for a disability in order to attend or participate in meetings or events, please contact the Accessibility Advisory Coordinator at 905-980-6000 (office), 289-929-8376 (cellphone) or accessibility@niagararegion.ca (email).



EMTERRA
Environmental

Presentation to Niagara Region Public Works Committee

March 19, 2019



Thinking innovatively
Transforming waste to resources

Why Are We Here?

- Contract was extended by 3 years
 - At Niagara's request, in expectation of producer responsibility regulation to be instituted by the province, Emterra agreed to extending the contract
 - Additional time to allow Niagara to do extensive public consultations on next contract specifications and disposition of municipal assets (e.g. recycling plant)
 - Additional time to better position Niagara for the potential of sweeping changes

Why Are We Here continued?

- To address and provide insight to current concerns with collection issues
- To share the internal Emterra action plan with Public Works Committee on:
 - ✓ Fleet maintenance
 - ✓ Labour
 - ✓ Other issues:
 - Extreme weather impacts
 - Ageing fleet

Fleet Maintenance

- On-road break downs
 - High frequency of unexpected failures
 - ✓ Action: Heavy focus on preventative maintenance program to reduce failures
- Major component failures
 - High frequency of engine and transmission failures
 - ✓ Action: Certain engines/transmissions to be rebuilt by specialists to accelerate turnaround times from 3 weeks to 5 days for engines
- Hydraulic failures
 - Worn hoses and hydraulic components
 - ✓ Action: Hydraulic specialist brought in to assess entire fleet and implement hydraulic line replacement and cylinder refurbishment program over the next 30 days as a specific program to accelerate repairs



Fleet Maintenance continued...

Metal fatigue and wear and tear

- Bodies are built for a 7 to 8 year life cycle and have now exceeded that going into 9th and 10th years of service
- ✓ Action: Ongoing replacement of floors, walls, wear pads, bushings, shoes, guide rails, etc.

Accelerated maintenance program

- **Budgeted** spend: \$350K plus 1.5% of contract value (around \$350K)
- **Actual** spend in last six months alone: \$2M+

Hiring and Retention

Implemented new Drug and Alcohol D&A Program in January 2017 to ensure the safety of the community at large and workers

- Of 82 drivers interviewed from October 2018 to date, 75% failed pre-employment D&A screening
- Post-incident testing resulted in approximately 35% D&A failure rate leading to termination
- Demographic for hiring drivers is challenging despite an increase in salary and a financial incentive program introduced in November 2018

Loss of Lincoln and West Lincoln routes in January 2019

- Resulted in a loss of 7 Emterra drivers to Niagara's new contractor
- Created a decrease in morale and instability amongst the workforce



Hiring and Retention continued...

✓ Actions Taken:

- Held 11 job fairs with more planned
- Created dedicated recruiter position to specialize in hiring drivers and loaders
- Engaged single source external recruiter specializing in our industry
- Implemented financial incentive plan for drivers and loaders
- Developed and rolled out Employees of the Month recognition program
- Will implement retention bonus for last year of contract to try to stabilize workforce

Other Obstacles

Extreme Weather Impacts of early 2019

- Emterra was negatively impacted in its ability to provide services to the Region of Niagara due to the extreme weather conditions experienced in January and February 2019
- Notwithstanding extreme winter conditions resulting in shutdown of many public services, Emterra maintained collection services until they proved detrimental to the health and safety of our workforce on February 6th and 12th
- Non-completion of routes resulted in subsequent collection delays throughout the remainder of the weeks of February 6th and 12th
- Geographically, the Region of Niagara faces unique and demanding climate conditions, creating various challenges during inclement weather

Other Obstacles continued...

Ageing fleet

- Trucks are designed for 7-8 years of services; present fleet will run for 10 years
- ✓ Action: 2-year contract extension required accelerated maintenance program to keep fleet operational
- ✓ To combat ageing fleet:
 - ✓ Significant resources and funds have been and continue to be allocated to this contract, including the purchase of 2 new trucks and the redeployment of 6 trucks from internal resources
 - ✓ **Actual** maintenance and repair spend in last six months alone: \$2M+ versus budget of \$350K plus 1.5% of contract value (around \$350K)

Emterra Goals

Goals through remainder of contract:

- ✓ Truck maintenance improvements to increase fleet uptime
- ✓ Labour stabilization
- ✓ Continued dedication to high level of service delivery

Thank you for your time



Subject: Gross Budget Adjustment and Status Update for Contract 2014-T-114 (RN14-14) Niagara-on-the-Lake Wastewater Treatment Plant

Report to: Public Works Committee

Report date: Tuesday, February 19, 2019

Recommendations

1. That the gross budget for the Niagara-on-the-Lake Wastewater Treatment Plant Project **BE INCREASED** by \$763,200 and that the increase **BE FUNDED** as follows:

Capital Variance – Wastewater Project	\$419,760
Development Charges – Sewer	\$343,440;

2. That Council **AUTHORIZE** the Regional Chair and the Regional Clerk to sign the required amending agreements with: Her Majesty the Queen in Right of Canada as represented by the Minister of Infrastructure and Communities; and, Her Majesty the Queen in Right of Ontario as represented by the Minister of Economic Development, Employment and Infrastructure and the Minister of Agriculture, Food and Rural Affairs, in order to extend the term of the existing Provincial and Federal funding agreements; and,
3. That the necessary by-law **BE PRESENTED** to Council for approval on February 28, 2019.

Key Facts

- The purpose of this report is to provide an update to the Committee on the project progress and to increase the project budget for Contract 2014-T-114 (RN14-14); Project ID 10SW0807. See Appendix 1 for key map.
- Varcon's (the Region's contractor) current schedule for completing the new Wastewater Treatment Plant is May 31, 2019.
- Through the course of construction on the Contract, unforeseen issues and delays have resulted in additional level of effort required by staff and Cole (Region's consultant).
- As a result, Cole is required to spend additional time and effort to provide Contract Administration and Inspection Services. Staff recommends lengthening the term of Cole's contract to align with Varcon's revised construction schedule.
- In addition, the term of the funding agreements with both the Federal and Provincial governments requires an extension to accommodate the revised completion date, which was agreeable to both levels of government. They have since issued amending agreements for the Region to execute.

Financial Considerations

As a result of delays and extensions with the construction schedule, an additional \$903,752 has been forecasted for the Niagara-on-the-Lake Wastewater Treatment Plant. Of the amount above, \$361,600 relates to the schedule extension to May 31, 2019 (Completion), including a contingency for unforeseen expenditures that may be incurred. In addition, there will be costs to complete additional contract work identified during start up and commissioning, including internal costs, to carry the project to completion of \$542,152.

The Region has been assessing Liquidated Damages at approximately \$65,000 per month (\$3,000/working day).

The total project expenditures and revenues to date are shown in the Total Project Budget Summary in Appendix 2. As outlined in Appendix 2, there is an overall approved budget of \$50,416,373 across the two accounts (10SW1407 / 10SW0807). To date, the total estimated cost of the project is \$50,275,822 including open purchase orders, and an amount of \$903,752 is forecasted as being required to complete the project for a total projected project cost of \$51,179,574. This leaves a shortfall of \$763,200. Note the above amounts all include 1.76% non-refundable HST. Therefore, a budget increase in that amount is being requested, to be funded from the Wastewater Capital Variance Project in the amount of \$419,760, and from Development Charges Deferred Revenue – Wastewater in the amount of \$343,440. As of January 21, 2019, the balance of the Wastewater Capital Variance Project was \$1,794,708, and the balance of the Development Charges Deferred Revenue – Wastewater account was forecasted to be \$30,250,526 at December 31, 2018 subject to 2018 year-end procedures to finalize the balance outstanding.

Any unspent surplus funds will be returned to the Wastewater Capital Reserve upon project completion so that these funds can be used to fund future capital projects.

Analysis

Report PWC-C 19-2015, previously received by Committee, provided an overall project description and delineated the four distinct phases / contracts required for the execution of the project.

Water and Wastewater Engineering staff have been providing a higher than normal amount of resources throughout the project in order to manage the contract. Enterprise Resource Management (finance and legal) staff are also providing a significant amount time on contract / project payments as well as lien claims. External legal counsel are also engaged to provide support.

The Ministry of Environment Conservation and Parks (MECP) local office as well as approvals branch in Toronto was engaged during the design process to obtain the Environmental Compliance Approval (ECA). The MECP Local Office has been kept apprised of the progress to date and maintains an interest in the execution of the commissioning of the new plant.

Project Status

In general, the construction work itself is nearing completion. Commissioning of the new plant continues with ongoing equipment start-up, run tests and the site acceptance testing of the control systems. Some landscaping, siding and site work remain to be completed.

There are still a number of deficiencies that will need to be resolved in order for the project to meet final completion. Recently, change orders issued cover items and unforeseen issues identified during equipment start-up and plant commissioning. Many of these issues have resulted in an extended completion date.

Varcon recently provided an updated schedule indicating a possible completion date of May 31, 2019. Region staff and Cole will continue to work with Varcon to try and achieve this schedule. However, with this schedule there remains some concern to the Region in the form of additional cost and risk.

Co-ordination with the team working on the decommissioning of the existing plant is ongoing. This will help ensure the switchover runs smoothly and minimizes the effects of the changeover.

The Region, in partnership with Parks Canada has finalized the Environmental Assessment to determine the preferred approach to decommission the existing plant. Final comments from the MECP and the project file was put out for the final public review and comment period in late December 2018. The detailed design will begin once any concerns are addressed as appropriate.

As noted earlier, the Region collaborated with the Federal and Provincial governments for funding to complete this project. Agreements for the funding were based on the original overall project schedule. The end date for the Federal Funding agreement being March 31, 2020 and the end date for the Provincial Funding agreement being no later than December 31, 2018. Due to the revised construction schedule, meeting these dates became unachievable. Staff approached representatives of our funding partners to discuss the potential to extend these agreements. Both the levels of Government agreed such that the new end date for the Federal Agreement is March 31, 2022 and for the Provincial Agreement is no later than December 31, 2023. To administer this change both partners have sent amending agreements for the Region to execute, which require the passage of an authorizing by-law.

Alternatives Reviewed

Do Nothing – this alternative does not address the need for continued and consistent contract administration and inspection services as well as the other related costs (internal and external) required to bring the new plant into service.

Relationship to Council Strategic Priorities

This recommendation is related to the Fostering Growth strategic priority since the planned rehabilitation will ensure reliable infrastructure to support growth and economic development within the Niagara Region.

Other Pertinent Reports

PW 67-2014	Award of Tender 2014-T-113 (Contract RN 14-13) Lakeshore Road, Garrison Village and William Street Sewage Pumping Stations Upgrade & Linear Works in the Town of Niagara-on-the-Lake
PW 69-2014	General, Mechanical and Electrical Contractor Pre-Qualification for Construction of the New Niagara-on-the-Lake Wastewater Treatment Plant in the Town of Niagara-on-the-Lake
PW 93-2014	Status of the Construction of Niagara-on-the-Lake Wastewater Treatment Plant project in the Town of Niagara-on-the-Lake
PW 100-2014	Award of Tender 2014-T-114 (Contract RN 14-14) Niagara-on-the-Lake Wastewater Treatment Plant in the Town of Niagara-on-the-Lake
PWC-C 19-2015	Status update on the Construction of the new Niagara-on-the-Lake Wastewater Treatment Plant and related linear infrastructure in the Town of Niagara-on-the-Lake
PW 47-2016	2017 Wastewater Operating Budget Program Change Niagara-on-the-Lake Wastewater Treatment Plant
PW 16-2017	Contract 2014-T-114 (RN 14-14) Niagara-on-the-Lake Wastewater Treatment Plant and Contract 2014-T-113 (RN 14-13) Lakeshore Road, Garrison Village and William Street Pumping Station Upgrades and Linear Works – Project Status Report
PW 17-2017	Confidential Report A Matter of Litigation or Potential Litigation, Including Matters Before Administrative Tribunals, Affecting the

Municipality – Contract 2015-T-109 (RN 15-09) – Welland WWTP
Phase I Upgrades – Project Status Report

- PWC-C 19-2017 **Confidential Memo** A Matter involving Litigation or Potential
Litigation against the Niagara Region – Contract 2014-T-114 (RN
14-14) – Niagara-on-the-Lake Wastewater Treatment Plant
- PW 33-2017 Contract 2014-T-114 (RN 14-14) Niagara-on-the-Lake Wastewater
Treatment Plant and Contract 2014-T-113 (RN 14-13) Lakeshore
Road, Garrison Village and William Street Pumping Station
Upgrades and Linear Works
- PW 7-2018 Budget Adjustment and Status Update for Contract 2014-T-114
(RN 14-14) Niagara-on-the-Lake Wastewater Treatment Plant and
Contract 2014-T-113 (RN 14-13) Lakeshore Road, Garrison Village
and William Street Pumping Station Upgrades and Linear Works

Prepared by:

Tim Marotta, P.Eng.
Senior Project Manager – W-WW
Engineering
Public Works Department

Recommended by:

Catherine Habermehl
Acting Commissioner
Public Works Department

Submitted by:

Ron Tripp, P.Eng.
Acting Chief Administrative Officer

This report was prepared in consultation with Pamela Hamilton, Program Financial Specialist W-WW, and reviewed by Tony Cimino, Associate Director W-WW and Joseph Tonellato, P.Eng., Director W-WW.

Appendices

Appendix 1	Key Map	6
Appendix 2	Total Estimated Project Cost	7



PW 5-2019 APPENDIX 2
TOTAL ESTIMATED PROJECT COST
Budget Adjustment

**Contract 2014-T-113 (RN 14-13) Lakeshore Road, Garrison Village and William Street Pumping Station Upgrades and Linear Works &
Contract 2014-T-114 (RN 14-14) Niagara-on-the-Lake Wastewater Treatment Plant**

	Total Council Approved Budget	Revisions per PW 5-2019	Revised Project Budget	Expended & Committed as of January 16, 2019 **	Forecast	Budget Remaining
	(A)	(B)	(C) =(A)+(B)	(D)	(E)	(F) = (C)-(D)- (E)
<u>Total Estimated Project Cost (10SW0807 & 10SW1407) *</u>						
(a) Construction (includes contract contingency)	40,934,538	-	40,934,538	40,934,538	-	-
(b) Project Contingency	173,183	-	173,183		173,183	-
(c) Consulting Engineering Services (Design, Contract Administration, & Inspection)	2,263,341	227,942	2,491,284	2,393,952	97,331	-
(d) Project Management & Internal Costs	380,006	85,258	465,264	387,608	77,656	-
(e) Other Project Costs	6,665,304	450,000	7,115,304	6,559,723	555,581	-
Total Estimated Project Cost	50,416,373	763,200	51,179,573	50,275,822	903,752	-
<u>Project Funding Sources</u>						
Regional Reserves & Debt (includes Federal Gas Tax funding)	(15,944,948)	(419,760)	(16,364,708)	(15,944,948)	(419,760)	-
Development Charges	(5,705,838)	(343,440)	(6,049,278)	(5,607,731)	(343,440)	(98,107)
Provincial Grants	(14,333,333)	-	(14,333,333)	(14,430,000)		96,667
Federal Grants	(14,333,334)	-	(14,333,334)	(12,984,003)	(1,349,331)	-
Other Costing Sharing / External	(98,920)	-	(98,920)	(100,359)		1,440
	(50,416,373)	(763,200)	(51,179,573)	(49,067,041)	(2,112,531)	-

* All costs above include the non-refundable 1.76% portion of HST.

** Includes holdbacks



Drinking Water Compliance Overview and Water-Wastewater Quality Management System Endorsement

(Report PW 19-2019)

March 19, 2019

Jen Croswell, C.Tech.
Water Compliance Specialist

Rachel Whyte, B.A.Sc.
Water and Wastewater Quality Management Specialist

Niagara  Region

Overview

- Drinking water systems
- Municipal Drinking Water Licencing Program
- Water and wastewater quality management systems
- Standard of Care
- Ongoing communication
- Training opportunity for Council



Niagara  Region

Niagara Region's Drinking Water Systems

- Niagara Region owns and operates five (5) drinking water systems:
 - Grimsby
 - Port Colborne
 - Rosehill (Fort Erie)
 - Welland
 - Decew-Niagara
 - Decew and Niagara Falls plants are interconnected
 - Forms one drinking water system



Niagara Region

Municipal Drinking Water Licencing Program

- Municipal Drinking Water Licencing Program was established under the *Safe Drinking Water Act, 2002*
- All drinking water systems must have a licence to operate
- To obtain a licence, five (5) requirements must be maintained



Niagara Region

Licensing Program: Legal Instruments

Licence Requirement	Details
Permit to Take Water	Provides details of permitted water-taking from the water source
Drinking Water Works Permit	Provides details of drinking water system infrastructure and the types of system alterations that can be made
Endorsed Operational Plan	Describes the quality management system; endorsed by Owner
Operating Authority Accreditation	Achieved via third-party audits of the quality management system
Financial Plan	Provides a six-year forecast of water system financial position, cash flow, and operations
Municipal Drinking Water Licence	Provides permission to operate the drinking water system, with details of regulatory relief and/or additional sampling required

- Licensing program is applicable to water systems only; wastewater systems are governed by Environmental Compliance Approvals

What is Quality Management?

- Series of documented procedures forming an “Operational Plan”
- Operational Plan is implemented and modified as necessary to reflect changes in practice
- Annual internal audits are conducted to ensure that we continue to follow our procedures
- External audits are conducted to achieve and maintain accreditation



Water & Wastewater Quality Management

- Two quality management systems in place
- Water QMS:
 - Required under *Safe Drinking Water Act*
 - Ministry-appointed accreditation bodies
 - Three-year audit cycle
 - Accreditation maintained since 2009
 - Annual internal audit program
- Wastewater QMS:
 - No legal requirement, no accreditation
 - Best practice and due diligence exercise

water

FLOW

Niagara  Region

Quality Management: Communication

- Annual QMS Update reports to Public Works Committee:
 - Risk assessment
 - Management review
 - Changes impacting the Quality Management System
 - Operational Plan updates
 - Internal audit
 - External (accreditation) audit (*Water only*)
- Additional reporting:
 - Annual water-wastewater budget – linked to infrastructure review
 - Annual summary of audit results

Niagara  Region

Standard of Care

- Standard of Care provisions under the *Safe Drinking Water Act, 2002*, came into effect on January 1, 2013
- Requires that the **System Owner** and **those with decision-making authority** over the system must:
 - “Exercise a level of care, diligence and skill that a reasonably prudent person would be expected to exercise in a similar situation”
 - “Act honestly, competently and with integrity to ensure protection and safety of the users of the municipal drinking water system”
- Decision-makers can rely on the expertise of professionals
- Failure to comply results in an offence under the *Safe Drinking Water Act*
- Ongoing communication from the Operating Authority provides Council with tools to continually assess our water systems and help ensure that Standard of Care provisions are met

Ongoing Communication

Topic of Communication	Frequency
Water & Wastewater Financial Plan	Every 5 years
Operational Performance – Summary Report	Annual
Water QMS Update	Annual
Water QMS Audit Update	Annual
Wastewater QMS Update	Annual
Delegated Authority	Quarterly
Source Water Protection Plan Approval	As required
Request for Operational Plan Re-Endorsement	As required

Training Opportunity and Resources

- Introductory Standard of Care training session is provided:
 - *Date:* March 19, 2019
 - *Time:* 6:30 p.m. to 9:30 p.m.
 - *Location:* Council Chambers
- Additional Standard of Care resources have been appended to PW 19-2019



Questions

Thank you.

Jen Crowell, C. Tech.
 Water Compliance Specialist
 ext. 3743
jen.crowell@niagararegion.ca

Rachel Whyte, B.A.Sc.
 Water-Wastewater Quality Management Specialist
 ext. 3787
rachel.whyte@niagararegion.ca

Subject: Drinking Water Compliance and Water Wastewater Quality Management System Endorsement

Report to: Public Works Committee

Report date: Tuesday, March 19, 2019

Recommendations

1. That Report PW 19-2019, detailing information regarding Niagara Region's drinking water compliance and quality management programs, **BE RECEIVED**;
2. That information **BE RECEIVED** for Standard of Care requirements and training opportunities for members of Regional and Area Municipal councils;
3. That the Water Quality Management System Operational Plan and the Wastewater Quality Management System Operational Plan **BE APPROVED** and **ENDORSED**; and
4. That the Regional Chair and Regional Clerk **BE AUTHORIZED** to sign the Operational Plans on behalf of Council as evidence of Council's endorsement.

Key Facts

- The purpose of this report is to provide Council with details of programs that support the Water and Wastewater Services Division's continued compliance with provisions of the Safe Drinking Water Act, 2002 and the Clean Water Act, 2006. Through this report, the Water and Wastewater Services Division also seeks endorsement of the Water Quality Management System (QMS) Operational Plan and the Wastewater Quality Management System Operational Plan.
- Niagara Region owns and operates five (5) drinking water systems and has held Municipal Drinking Water Licences for each of these systems since 2009.
- Continued accreditation to the Drinking Water Quality Management Standard is required as a condition of issuance of the Municipal Drinking Water Licence.
- Under the Water Quality Management System, Council is identified as the "Owners" of the region's drinking water systems; selected staff of the Water and Wastewater Division are identified as members of the "Operating Authority".
- Standard of Care Provisions under the Safe Drinking Water Act, 2002 are applicable to Council and may result in an offense under the Act if provisions are not met.
- Standard of Care training is available to members of Regional and Area Municipality Councils on March 19, 2019 at the Niagara Region Council Chambers; in addition, the Water and Wastewater Services Division provides Council with a variety of

reports at specified intervals so that Council can continually assess Niagara's drinking water systems and ensure that Standard of Care Provisions are met.

Financial Considerations

A total of approximately \$3,825 (excluding HST) in quality management system program costs were incurred in 2018. Costs included consulting fees for an off-site external surveillance audit of the Water QMS. A similar allocation is anticipated for 2019 and is included in the approved 2019 operating budget for Water Operations.

Analysis

The purpose of this report is to provide Council with details of programs that support the Water and Wastewater Services Division's continued compliance with provisions of the *Safe Drinking Water Act, 2002* and the *Clean Water Act, 2006*. Within this report, the Water Quality Management System Operational Plan and Wastewater Quality Management System Operational Plan are also presented for Council endorsement. Endorsement of these plans is a legislative requirement.

Municipal Drinking Water Licencing Program

The Municipal Drinking Water Licencing Program (MDWLP) was developed in response to several recommendations of the Part II Report of the Walkerton Inquiry. The MDWLP requires every Operating Authority of a municipal residential drinking water system to hold a licence to operate the subject system. Without valid licences, Niagara Region is unable to operate its five (5) drinking water systems. A licence includes conditions of operation for the subject system; these may include details of additional sampling and maintenance requirements, relief from regulatory requirements, and administrative procedures related to the MDWLP.

Niagara Region will be renewing municipal drinking water licences in 2019. Under the MDWLP, there are five (5) requirements to obtain a drinking water licence:

- Financial plan;
- Drinking Water Works Permit;
- Permit to Take Water;
- Documented quality management system (QMS) operational plan; and
- Accreditation of the Operating Authority's QMS.

These requirements are discussed in more detail below.

Financial Plan

Ontario Regulation 453/07 prescribes requirements for the development of a Water and Wastewater Financial Plan (Financial Plan). Under this regulation, municipalities must prepare a Financial Plan that demonstrates financial sustainability of their drinking water systems for the duration of the term of the municipal drinking water licence.

The 2019-2028 Financial Plan was prepared based on the proposed 2019 water and wastewater operating budget and the proposed 2019-2028 water and wastewater capital budget and forecast. It was approved by Council in January 2019 under PW 4-2019. With this approval, Niagara Region can finalize and submit the applications for municipal drinking water licence renewal. The next Financial Plan submission to Council is anticipated in 2024.

Drinking Water Works Permit

Niagara Region holds drinking water works permits for each of its five (5) drinking water systems. A permit contains an overview of the major infrastructure that is installed and in use within the subject system. Permits also specify the types of infrastructure additions, modifications, replacements, or extensions that a municipality is pre-authorized to complete, versus those that require approval from the Ministry of Environment, Conservation and Parks (MECP).

Amendments

To make any additions, modifications, replacements or extensions to a drinking water system, changes must be either approved through a Schedule C amendment to the associated drinking water works permit or pre-authorized through a condition in the Drinking Water Works Permit.

In 2017, the signing authority for specific provincial and federal environmental compliance instruments, including Drinking Water Works Permit amendments and Permit to Take Water renewal applications, was delegated to the Water Compliance Specialist and the Water and Wastewater Compliance Technologist under PW 56-2017. Quarterly memoranda summarizing sign-off activity will continue to be provided to Council as part of weekly correspondence.

Source Water Protection

As mandated by the *Clean Water Act, 2006*, the drinking water sources for Niagara's drinking water systems are protected under the Niagara Peninsula Source Protection Plan (the SPP). The SPP is a locally-driven, collaborative, prevention-based plan that is based on science. In the SPP, drinking water sources are assessed, vulnerabilities are determined, and identified drinking water threats are managed via approved policies.

On July 1, 2018, Ontario Regulation 205/18 under the *Safe Drinking Water Act, 2002*, came into effect. This regulation requires municipalities to assess vulnerable areas and threats to source water before placing a new or altered drinking water system intake into service. Niagara Region is anticipating infrastructure work to four (4) of the Region's six (6) drinking water intakes within the next five (5) years. Once available, formal approval of the updated SPP will be requested by Council as required by the *Clean Water Act, 2006*.

Additional source water protection resources can be found in PWC-C 3-2018, on the Niagara Peninsula Source Water Protection website (<http://www.sourceprotection-niagara.ca>), and in Appendix I to this report (Drinking Water Source Protection Primer: For Municipal Councillors).

Water Quality Management System

The MDWLP requires those organizations who operate municipal residential drinking water systems to develop, implement, and maintain a QMS that is accredited to the requirements of Ontario's Drinking Water Quality Management Standard (the Standard). The QMS must be documented in an Operational Plan and accredited through an audit process by a third-party accreditation body that is approved by the MECP. Niagara Region has maintained accreditation to the Standard since 2009.

Niagara Region's Water QMS Operational Plan describes various operational, maintenance, testing, monitoring, administration, and oversight processes that have been implemented in support of the Water QMS. Elements of the Standard that may be of particular interest or importance to Council include risk assessment; roles, responsibilities, and authorities; infrastructure review, maintenance, rehabilitation and renewal; internal auditing; and Top Management Review.

The Water-Wastewater Quality Management Specialist provides Council with an annual Water QMS Update that summarizes the status of the Water QMS, including updates relating to the above-noted elements of interest, key QMS activities, and relevant milestones. The Water-Wastewater Quality Management Specialist also provides Council with an annual Water QMS Audit Update to summarize the results of internal and external Water QMS audits.

Wastewater Quality Management System

The Water-Wastewater Services Division has developed and implemented a quality management system for wastewater operations. While a Wastewater Quality Management System is not presently required by law, the division has implemented the Wastewater QMS as a best management practice. The division has committed to the Wastewater QMS as a tool for internal control and continual improvement. The Water-

Wastewater Quality Management Specialist provides Council with an annual Wastewater QMS Update that summarizes the status of the Wastewater QMS and provides details of key activities and milestones.

QMS Roles and Responsibilities

Several key roles and responsibilities have been defined in the Water and Wastewater QMS Operational Plans. These roles include but are not limited to the following:

System Owner

Council represents Niagara Region as the Drinking Water and Wastewater Systems Owner. Owner responsibilities include:

- Owning and endorsing the respective Operational Plans;
- Ensuring the drinking water system is operated by an accredited operating authority¹;
- Monitoring the QMS and providing resources in support of the QMS; and
- Ensuring compliance with the MDWL and its components².

Operating Authority

Niagara Region (specifically, selected staff of the Water-Wastewater Services Division) acts as the Drinking Water System Operating Authority. The responsibilities of the Operating Authority include:

- Maintaining the QMS;
- Maintaining accreditation of the QMS;
- Communicating with the Owner about the QMS and resource requirements; and
- Ensuring compliance with the MDWL and its components³.

Top Management

Top Management of the Water QMS includes the Commissioner of Public Works; the Director, Water and Wastewater Services; the Associate Director, Water Operations, Maintenance, and Staff Development; the Associate Director, Water-Wastewater Engineering; and the Associate Director, Water-Wastewater Integrated Systems.

Top Management of the Wastewater QMS includes the Commissioner of Public Works; the Director, Water and Wastewater Services; the Associate Director, Wastewater Operations, Maintenance, and Laboratory Services; the Associate Director, Water-

¹ Accreditation is not applicable for wastewater, since the Wastewater QMS is not legislatively required.

² The licensing program applies to water only.

³ Same as previous.

Wastewater Engineering; and the Associate Director, Water-Wastewater Integrated Systems.

Top Management's responsibilities include:

- Ensuring that a QMS is in place that meets the requirements of the Standard;
- Participating in annual QMS Management Reviews;
- Ensuring that the Operating Authority is aware of legislative and regulatory requirements;
- Communicating the QMS according to documented procedures; and
- Providing resources needed to maintain and improve the QMS.

QMS Representative

The Water-Wastewater Quality Management Specialist has been appointed as the QMS Representative by Top Management. The Water Compliance Specialist has been identified as the back-up Water QMS Representative⁴, as per PW 95-2014.

Responsibilities of the QMS Representative include:

- Establish and maintain procedures and documents required by the QMS;
- Report to Top Management and the Owner on the performance of the QMS and areas of required improvement;
- Ensure that current QMS documentation is being used by Operating Authority staff at all times;
- Ensure that Operating Authority staff are aware of all applicable legislative and regulatory requirements that pertain to their duties for the operation of the drinking water and/or wastewater systems; and
- Promote QMS awareness throughout the Operating Authority.

Endorsement of Water and Wastewater Quality Management System Operational Plans

Accompanying this report, Public Works Committee members have received copies of the following documents for approval and endorsement:

- Niagara Region's Water Quality Management System Operational Plan (included as Appendix II);
- Niagara Region's Wastewater Quality Management System Operational Plan (included as Appendix III).

While the previous endorsement of the Operational Plan is still valid as per PWA 109-2008, the Operating Authority is recommending that the 2019-2022 term of Council (as

⁴ A back-up Wastewater QMS Representative has not been formally identified and approved by Council.

Drinking Water and Wastewater System Owners) approve and endorse the Operational Plans as presented for Niagara Region's drinking water and wastewater systems.

In addition to Water and Wastewater QMS Update Reports that are provided to Council on an annual basis, the Water-Wastewater Quality Management Specialist will report to Council to recommend re-endorsement of an Operational Plan if substantial changes are made to its content.

Operational Performance

In addition to MDWLP requirements, summary and annual reporting are required under the *Safe Drinking Water Act, 2002*; one summary and one annual report are to be prepared per drinking water system. Summary reports must be provided to Council on an annual basis. Both summary and annual reports are posted on the external website (<https://www.niagararegion.ca/living/water/Water-Quality-Reports/default.aspx>) for public access.

The annual report provides a description of treatment processes and the quality of drinking water; including adverse water quality incidents and sample results.

The summary report contains:

- A description of regulatory non-compliances with pertinent legal instruments
- Water flow information that can be used to assess the capability of the system to meet both existing and planned uses.

The summary report has been provided to Council as PWC-C 6-2019.

Standard of Care

Standard of Care provisions under the *Safe Drinking Water Act, 2002*, came into force on January 1, 2013. These provisions require the System Owner, Top Management, and every person who, on behalf of the municipality, oversees the accredited Operating Authority or exercises decision-making authority, to “exercise the level of care, diligence and skill that a reasonably prudent person would be expected to exercise in a similar situation” and “act honestly, competently and with integrity, with a view to ensuring the protection and safety of the users of the municipal drinking-water system.” Failure to do so could result in an offense under the *Safe Drinking Water Act, 2002*. A System Owner may rely on a report of an engineer, lawyer, accountant, or other person whose professional qualifications lend credibility to the report.

Additional Standard of Care resources are available on the MECP website (<https://www.ontario.ca/page/taking-care-your-drinking-water-guide-members-municipal-councils>) and during an in-class training opportunity that will be available to members of Regional and Area Municipality Councils on March 19, 2019 from 6:30 p.m. to 9:30 p.m. at the Niagara Region Council Chambers (see Appendix IV).

Ongoing Communication with Council

In support of the *Safe Drinking Water Act, 2002*, the *Clean Water Act, 2006*, and to assist Council with meeting the due diligence requirements of the Standard of Care provisions, regular correspondence can be expected throughout the 2018-2022 Council term in regard to the MDWLP, source water protection, QMS status, and operational performance.

Minimum correspondence frequencies have been summarized below in Table 1.

Table 1: Minimum Correspondence

Topic	Frequency
Financial Plan	Every 5 years
Operational Performance – Summary Report	Annual
Water QMS Update	Annual
Water QMS Audit Update	Annual
Wastewater QMS Update	Annual
Delegated Authority	Quarterly
Source Water Protection Plan Approval	As required
Request for Operational Plan Re-Endorsement	As required

Alternatives Reviewed

No alternatives were reviewed as Niagara Region is mandated to comply with the provisions of the *Safe Drinking Water Act, 2002* and *Clean Water Act, 2006*.

Relationship to Council Strategic Priorities

Niagara Region's Water Quality Management Systems, and associated audit processes, relate directly to Council's strategic priority of "strengthening internal controls, key information sharing processes, and financial planning". The Water Quality Management System is a key internal control for the Water and Wastewater Services Division. It increases accountability by defining clear roles and responsibilities for divisional staff, and it increases transparency through documented standard operating procedures and associated record-keeping practices.

The Water Quality Management System also relates to Council's strategic priority of "enhancing the reputation of Niagara Region among residents, businesses, media and other stakeholders". The continued accreditation of the Region's Water Quality Management System provides residents with confidence that their drinking water is safe and that the associated systems are managed with competence and diligence.

Other Pertinent Reports

- PWA 109-2008, DWQMS Update (October 29, 2008).
- PW 95-2014, Identification of Back-Up QMS Representative
- PW 56-2017, Delegated Signing Authority for Environmental Approvals and Reporting
- PWC-C 3-2018, *Clean Water Act, 2006*, Overview of Responsibilities
- PW 4-2019, Water and Wastewater Financial Plan for O.Reg. 453/07
- PWC-C 6-2019, Niagara Water Treatment Plant 2018 Summary Reports

Prepared by:

Rachel Whyte, B.A.Sc.
Water & Wastewater Quality
Management Specialist
Public Works

Prepared by:

Jen Croswell, C.Tech.
Water Compliance Specialist
Public Works

Submitted by:

Catherine Habermehl
Acting Commissioner
Public Works Department

Recommended by:

Ron Tripp, P.Eng.
Acting Chief Administrative Officer

Appendices

Appendix 1	Drinking Water Source Protection Primer: For Municipal Councillors
Appendix 2	Water Quality Management System Operational Plan
Appendix 3	Wastewater Quality Management System Operational Plan
Appendix 4	Invitation: Owner Standard of Care Training

This report was reviewed by Mike Janas, C.E.T., Associate Director, Water Operations, Maintenance, and Staff Development, and Joe Tonellato, P. Eng., Director, Water-Wastewater Services.



Have you seen this Drinking Water Protection Zone sign?



These signs are appearing across Ontario to raise awareness about the vulnerability of our municipal drinking water sources. Governments at the local and provincial level are placing signs along roadways where a pollution spill could have a negative impact on our drinking water sources.

250 Thorold Road West, Third Floor
Welland, ON L3C 3W2
[905-788-3135](tel:905-788-3135)





Drinking Water Source Protection Primer: For Municipal Councillors

Your community relies on safe, sustainable drinking water. Protecting the water at its source is an important first step in the drinking water safety net.

Ontario has a comprehensive Drinking Water Source Protection Program to ensure sources of municipal drinking water are protected now and into the future. Under this program, local source protection plans developed under the Clean Water Act, 2006, are in place. These plans contain policies that protect municipal drinking water sources (water found in lakes, rivers and groundwater aquifers) from contamination and overuse.

Meet your statutory standard of care responsibilities

Source protection plans require municipalities to implement policies to protect the source water for their drinking water systems. The Safe Drinking Water Act, 2002, includes a statutory standard of care (section 19) for individuals with oversight responsibilities for municipal drinking water systems, including municipal councillors.

This standard ensures that you are practicing due diligence to protect public health when making decisions that could affect drinking water. This includes a consideration of the source water characteristics as well as the risks posed to it.

Learn more at: ontario.ca/page/taking-care-your-drinking-water-guide-members-municipal-councils.



Ensure source protection planning is in place

New regulation 205/18 has been established under the Safe Drinking Water Act, 2002, to ensure that source protection planning is in place for new and changing municipal systems, before treated drinking water is provided to the public. The regulation came into effect on July 1, 2018.



Municipal residential drinking water system owners are now responsible for ensuring that vulnerable areas are delineated and vulnerability scores are identified before they apply for a drinking water works permit. Source protection plans must also be amended and approved prior to the treated water being supplied to the public.

Notify your local conservation authority immediately, when planning changes to your drinking water systems, or planning for a new well/intake or a new system.

Provincial Policy Statement

Municipalities and other planning authorities must follow the Provincial Policy Statement. Section 2.2.1 mandates planning authorities to protect, improve or restore the quality and quantity of water. This includes protecting vulnerable areas associated with drinking water sources. This has been completed in the Niagara Region.

Be informed

- **Your constituents** may come to you with questions about the source of their drinking water supply. Find out how drinking water source protection benefits your region, and the cost of the protection. Know how many municipal wells/surface water intakes there are, where they are located, and who they serve in your municipality. Determine these with help from your municipal staff and local conservation authority.
- **Municipalities** are responsible for implementing more than half of the policies found in source protection plans. Many of these policies are legally binding. Review the source protection plan for your area to find out what policies are to be

implemented within your municipality and what actions are being taken to protect drinking water vulnerable areas.

- Understand how **source protection plan policies** can impact building requirements. Development applications and planning or building permits may be flagged at a municipality for land use planning policies. These applications or permits often need to be reviewed by the local risk management official (RMO) before they can be submitted to the municipality. Proposed activities may require a risk management plan, or in some cases are prohibited.
- When a **risk management plan** is needed, a risk management official works with the landowners/renters to develop a plan that contains measures to protect drinking water sources. A risk management plan is only required when a property is in a vulnerable area and the activity being undertaken poses a significant level risk to drinking water sources.
- **Sewage systems** identified under the Clean Water Act as causing significant level risks to drinking water sources, are subject to mandatory inspections through the Building Code Act, 1992.
- The Drinking Water Source Protection Program does not include **individual private wells**. A private well owner needs to regularly sample their water to test its quality, and properly maintain their well to protect water sources.

For more on source protection planning, visit sourceprotection-niagara.ca.



What's a vulnerable area?

Drinking water source protection is based on science. Local scientific data was used to create maps that show drinking water vulnerable areas. In these areas, we need to pay attention to activities causing contamination.

To find out if a property is located in a drinking water vulnerable area, search the Source Protection Information Atlas at ontario.ca/page/source-protection.

There are four types of vulnerable areas:

1. **Intake protection zones (IPZs)** are areas of land and water around surface water intakes that should be protected from risks to the quality and quantity of the drinking water source.
2. **Highly vulnerable aquifers (HVAs)** are areas that are particularly susceptible to contamination based on factors such as the aquifer depth underground, the soil types, soil permeability and other characteristics of the surrounding soil or rock.
3. **Wellhead protection areas (WHPAs)** are areas around municipal wells where the groundwater is travelling toward that well when the well is being pumped. These areas should be protected from risks to the quality and quantity of the drinking water source.
4. **Significant groundwater recharge areas (SGRAs)** are areas where a relatively high percentage of precipitation seeps into the ground to help maintain the water level in an aquifer that supplies a community or private residence with drinking water.

If a water quality issue is identified by source protection committees under the Clean Water Act, issue contributing areas (ICAs) can be delineated within the vulnerable areas. Examples of issues identified in Ontario include nitrate and sodium. Mandatory policies apply within issue contributing areas for municipal suppliers in order to ensure that the source water quality is protected or improved.

Know the threats to drinking water sources

The Clean Water Act identifies activities that could pose a threat to drinking water sources under certain circumstances. These threat activities may be significant, moderate or low level risks. Identified threats include:

- Application, handling and storage of agricultural source material (such as manure), non-agricultural source material (such as biosolids), commercial fertilizer, and pesticides.
- Handling and storage of fuel, dense non-aqueous phase liquids (DNAPLs*), and organic solvents.
- Land used for livestock grazing or pasturing, outdoor confinement areas, and farm-animal yards.
- Application, handling and storage of road salt, and storage of snow.
- The establishment, operation and maintenance of systems that collect, store, transmit, treat or dispose of sewage (such as septic systems and sewage treatment plants, stormwater management facilities).
- The establishment, operation and maintenance of waste disposal sites (such as landfills).
- Activities that take water from a water body without returning the water to the same water body.
- An activity that reduces the recharge of an aquifer.
- The establishment and operation of a liquid hydrocarbon pipeline (added in April 2018, through an amendment to the Clean Water Act).
- Management of aircraft de-icing chemical runoff.

*DNAPLs, or dense non-aqueous phase liquids, are a particularly hazardous group of substances that are heavier than water and are difficult to remove once they contaminate a water source.

The Regional Municipality of Niagara

**Water
Quality Management System
Operational Plan**
(QMS-WT-ALL-MAN-010)

For the:

Decew Falls/Niagara Falls Drinking-Water System
Grimsby Drinking-Water System
Port Colborne Drinking-Water System
Rosehill Drinking-Water System
Welland Drinking-Water System

Effective Date: <DRAFT>
Revision Number: 9



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Appendix 4	Drinking Water System Risk Assessment (QMS-WT-ALL-P-070)
Appendix 5	Risk Assessment Outcomes Table (CONFIDENTIAL)
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Appendix 18	<u>Management Review (QMS-WT-ALL-P-200)</u>

1. Introduction

1.1 *Drinking Water Quality Management Standard*

The Municipal Drinking Water Licensing Program is established under the *Safe Drinking Water Act, 2002* (Ontario Ministry of the Environment and Climate Change). This licensing program requires drinking water system owners to incorporate the concept of quality management into their operations, as mandated by the Drinking Water Quality Management Standard (DWQMS).

The DWQMS focuses on a proactive and preventive approach for the management of drinking water quality using the four-step “PLAN – DO – CHECK – IMPROVE” process. Under the DWQMS, all municipal residential drinking water systems are required to develop and implement a quality management system (QMS) that must be documented in an Operational Plan.

1.2 *Niagara Region*

The Regional Municipality of Niagara (“Niagara Region”) owns and operates five drinking water systems that treat and transmit safe drinking water to eleven area municipalities: the Cities of St. Catharines, Niagara Falls, Welland, Port Colborne; the Towns of Grimsby, Lincoln, Thorold, Pelham, Fort Erie, Niagara-on-the-Lake; and the Township of West Lincoln. The area municipalities own and operate distribution systems that deliver water to the consumers in Niagara.

Niagara Region is committed to producing safe drinking water and has implemented a QMS in support of its drinking water systems.

1.3 Scope

This Operational Plan documents the QMS for Niagara Region's five drinking water systems:

- Decew Falls / Niagara Falls Drinking Water System
- Grimsby Drinking Water System
- Port Colborne Drinking Water System
- Rosehill Drinking Water System
- Welland Drinking Water System

For the purpose of this Operational Plan and associated procedures:

- **All Staff** includes all staff employed by Niagara Region
- **All Operating Authority Staff** includes all staff within the Water and Wastewater Services Division *except* those who only work in wastewater systems (i.e. Wastewater Operators, Managers, and assigned Maintenance staff)
- **Staff who directly affect drinking water quality** include:
 - Associate Director, Water Operations, Maintenance & Staff Development
 - Water Operations Managers & Supervisors
 - Water Operators, Operators-in-Training, and Support Staff
 - System Maintenance Managers & Supervisors (Water)
 - System Maintenance Staff (Water)
 - Manager of Water Quality & Compliance
 - Water Quality and Compliance Staff
 - Manager of Technical Trades
 - Skilled Trades Managers
 - Contract Administrators
 - Senior Project Managers, Design and Construction
 - Project Managers, Design and Construction

2. Quality Management System Policy

Niagara Region is committed to **WATER** and our QMS Policy is shown below.

Figure 1: Water Quality Management System Policy¹



Niagara Region has implemented a
Quality Management System (QMS)
 to demonstrate our dedication to providing consumers
 with high quality drinking water.

The Region is committed to:

Working to ensure the QMS is maintained and continually improved

aiding by all relevant legislation and regulations

treating and producing water that is clean and safe

educating the public about the importance of water

respecting Niagara's most precious resource – water

Niagara  Region

www.niagararegion.ca

¹ March 31, 2015 – Revision 1

3. Commitment and Endorsement

3.1 Top Management

Each member of Top Management pledges commitment to the Water QMS and endorses the Operational Plan through the signing of a Commitment and Endorsement Memorandum. The Memorandum includes a pledge to ensure the implementation, maintenance and continual improvement of the QMS for each of Niagara Region's drinking water systems as documented in this Operational Plan.

3.2 Owner

As System Owner, Niagara Region shall ensure the implementation, maintenance and continual improvement of the QMS for each of its drinking water systems, as documented in this Operational Plan.

By signing below, Regional Council (represented by the Regional Chair and Clerk) endorse the contents of this Operational Plan.

The Regional Municipality of Niagara

Per:

Regional Chair
Jim Bradley

Date

Regional Clerk
Ann-Marie Norio

Date

3.3 Continued Endorsement

When changes in Top Management occur, the QMS Representative ensures that a Commitment and Endorsement Memorandum is signed by any new members of Top Management. Top Management receives QMS updates as per [Management Review \(QMS-WT-ALL-P-200\)](#).

The System Owner receives QMS updates as per [Communications \(QMS-WT-ALL-P-120\)](#). Continued endorsement of the Operational Plan is demonstrated through the enactment of a confirmatory by-law preceding each Council meeting. The QMS Representative ensures that Council endorsement is received for the most current Operational Plan following changes in Council due to election.

4. QMS Representative

Top Management has appointed the Water & Wastewater Quality Management Specialist as the QMS Representative for Niagara Region's drinking water systems. In the event that the Water & Wastewater Quality Management Specialist is unable to fulfil the duties of QMS Representative, the Water Compliance Specialist will assume the role and responsibilities.

The QMS Representative's responsibilities include, but are not limited to:

- Administering the QMS by ensuring that processes and procedures needed are established and maintained,
- Reporting to Top Management on the performance of the QMS and any need for improvement,
- In cooperation with all Operating Authority staff, ensuring current versions of documents required by the QMS are being used at all times,
- In cooperation with all Operating Authority staff, ensuring that personnel are aware of all applicable legislative and regulatory requirements pertaining to their duties, and
- Promoting awareness of the QMS throughout the Operating Authority.

5. Document and Records Control

Document and records control is an essential part of the QMS. [Document and Records Control \(QMS-WT-ALL-P-050\)](#) outlines how documents required by the QMS are kept current, legible, readily identifiable, retrievable, stored, protected, retained and disposed of. The procedure also documents how records required by the QMS are kept legible, readily identifiable, retrievable, stored, protected, retained and disposed of.

[Document and Records Control \(QMS-WT-ALL-P-050\)](#) is available on Vine.

6. Drinking Water Systems

6.1 Description of Overall Drinking Water Systems

6.1.1 General

Niagara Region owns and operates five drinking water systems including treatment plants, transmission mains and associated reservoirs, elevated tanks, towers, standpipes, pumping and booster stations. Niagara Region supplies eleven area municipalities with safe and treated drinking water.

Table 1 lists the facilities associated with each of Niagara's drinking water systems, along with the local municipal distribution systems supplied from each system. Rechlorination stations are listed in the appropriate Drinking Water Works Permit.

Drinking water system descriptions are available on Vine (see links in Table 1).

Table 1: Niagara Region's Drinking Water Systems

Water System	Niagara Region Drinking Water System Facilities	Municipal System(s) Supplied
Decew Falls/Niagara Falls (DN) – Decew Falls/Niagara Falls Drinking Water System Description (QMS-WT-DN-P-060)	Brock High Lift Booster Pumping Station Carlton Street Reservoir & Pumping Station Decew Falls Water Treatment Plant Fifth Ave. Reservoir and Rechlorination Station Glendale Pumping Station Line 2 (Virgil) Rechlorination Station Lundy's Lane Elevated Tank Montrose Road Rechlorination Station Niagara Falls Water Treatment Plant Niagara-on-the-Lake Sampling Station Port Robinson Rechlorination Station St. Catharines (Zone 2) Standpipe St. David's Standpipe St. David's Rechlorination Station Stanley Ave. Rechlorination Station Thorold South (Zone 3) Elevated Tank Vineland Booster & Pumping Station Virgil Elevated Tank	Lincoln Niagara Falls N-O-T-L St. Catharines Thorold
Grimsby (GR) – Grimsby Drinking Water System Description (QMS-WT-GR-P-060)	Grimsby Water Treatment Plant Hixon Street Reservoir Lincoln / Grimsby Booster Pumping Station Park Rd Reservoir & Booster Pump Stn Smithville Reservoir, Elevated Tank & Pumping Station (London Rd)	Lincoln West Lincoln Grimsby Hamilton ²

² The Town of Grimsby's distribution system is connected to a small portion of the City of Hamilton's distribution system on Main Street West.

Water System	Niagara Region Drinking Water System Facilities	Municipal System(s) Supplied
Port Colborne (PC) – Port Colborne Drinking Water System Description (QMS-WT-PC-P-060)	Barrick Rd. Elevated Tank Fielden Ave. Reservoir King St. Elevated Tank ³ Port Colborne Water Treatment Plant	Port Colborne
Rosehill (RH) – Rosehill Drinking Water System Description (QMS-WT-RH-P-060)	Crescent Park Elevated Tank Erie Rd. Rechlorination Station Fort Erie South (Central Ave) Elevated Tank Ridgeway Standpipe Rosehill Water Treatment Plant Stevensville Reservoir and Pumping Station	Fort Erie
Welland (WE) – Welland Drinking Water System Description (QMS-WT-WE-P-060)	Bemis Elevated Tank Shoalts Dr. Reservoir and Pumping Station Pelham Elevated Tank Welland Water Treatment Plant	Welland Pelham Thorold

6.1.2 Treatment

The following processes are part of Niagara Region's multi-barrier approach for producing safe drinking water:

Pre-Chlorination

All of Niagara Region's drinking water systems pre-chlorinate their raw water. In the summer (i.e. temperature > 12°C), when zebra mussel infestation is a problem, the water is pre-chlorinated at the intake. When the water temperature is less than 12°C, the water is pre-chlorinated after the intake.

³ King Street Elevated Tank has been isolated from the system and is awaiting decommissioning.

Pre-Treatment (Coagulation, Flocculation and Sedimentation)

A coagulant is added to the raw water to help remove the suspended solids through the flocculation process. After flocculation, the water passes through the settling tanks where the floc is able to settle.

Filtration

Filtration removes debris and particulate remaining in the water after pre-treatment. Filter effluent turbidity is measured continuously to monitor the effectiveness of the filtration process and will alarm if the set point values are exceeded.

Primary Disinfection

Primary disinfection ensures that any potentially pathogenic organisms that are remaining in the water are rendered harmless. Niagara Region's drinking water systems achieve primary disinfection through the use of chlorination (with sodium hypochlorite). Some facilities are also equipped with UV (ultraviolet) disinfection. The effectiveness of the primary disinfection process is continuously monitored on SCADA.

Secondary Disinfection

Secondary disinfection prevents regrowth of micro-organisms within the distribution system. Secondary disinfection is accomplished by adding sufficient sodium hypochlorite to the water to maintain a residual throughout the entire distribution system.

Process Waste Management

Process waste from the pre-treatment and filtration processes is collected and treated prior to being discharged to the environment or sewer.

6.1.3 Transmission

In Niagara, treated water is conveyed through transmission systems, including storage facilities and booster stations, to the local municipal distribution systems.

Niagara Region's transmission systems are illustrated in maps on the [Niagara Navigator \(NIIMS\)](#) system. The NIIMS maps, in combination with the drinking water system descriptions (see Table 1) and the drinking water system process schematics (see Section 6.1.4), provide an overview of the five transmission systems owned and operated by Niagara Region.

6.1.4 Process Flow Charts

Process schematics for each of Niagara Region's drinking water systems are available on Vine as follows:

- [Decew Falls/Niagara Falls Drinking Water System Process Schematic \(QMS-WT-DN-V-060\)](#)
- [Grimsby Drinking Water System Process Schematic \(QMS-WT-GR-V-060\)](#)
- [Port Colborne Drinking Water System Process Schematic \(QMS-WT-PC-V-060\)](#)
- [Rosehill Drinking Water System Process Schematic \(QMS-WT-RH-V-060\)](#)
- [Welland Drinking Water System Process Schematic \(QMS-WT-WE-V-060\)](#)

6.2 Water Source

6.2.1 General Characteristics

All of the source water treated by the Niagara Region is surface water.

General characteristics of each of Niagara Region's drinking water systems are included in each system's respective drinking water system description. Drinking water system descriptions are available on Vine (see links in Table 1).

6.2.2 Common Event-driven Fluctuations, Operational Challenges & Threats

Table 2 lists common event-driven fluctuations and resulting operational challenges and threats that may impact Niagara Region's water systems.

Table 2: Common Fluctuations, Challenges & Threats

Type of Fluctuation	Resulting Operational Challenges and Threats	Action / Control Measure
Seasonal temperature fluctuations	Zebra mussels clogging the intake when raw water temperature > 12°C	Pre-chlorination at intake when raw water temperature >12°C
	Possible taste and odour events in late summer / early fall	Granular Activated Carbon (GAC) filters, or Powdered Activated Carbon (PAC)
	Frazil ice may occur when water temperature is around 0°C ⁴	Cleared by contracted diving team
Event-driven fluctuations	High winds and storm events causing increased raw water turbidity	Continual monitoring & process changes if necessary

Further details of event-driven fluctuations common to each of Niagara Region's drinking water systems are included in each system's respective drinking water system description. Drinking water system descriptions are available on Vine (see links in Table 1).

6.3 Critical Upstream & Downstream Processes

Niagara Region actively participates in source protection activities and initiatives; these source protection initiatives protect the Region's upstream water sources.

Local area municipalities own and operate distribution systems downstream of each of Niagara Region's drinking water systems (see Table 1, page 7).

⁴ Although not all facilities may experience this event, all are equipped to handle it if it should occur.

7. Risk Assessment

A risk assessment procedure has been developed and implemented that:

- Identifies potential hazardous events and associated hazards, including those required by the Ministry of the Environment, Conservation, and Parks (MECP);
- Assesses the risks associated with the occurrence of hazardous events;
- Ranks the hazardous events according to their level of risk;
- Identifies control measures;
- Identifies critical control points (CCPs);
- Identifies a method to verify currency of information;
- Ensures a risk assessment is conducted at least once every three years; and
- Considers the reliability and redundancy of equipment.

[Drinking Water System Risk Assessment \(QMS-WT-ALL-P-070\)](#) is available on Vine.

8. Risk Assessment Outcomes

The Risk Assessment Outcomes Table identifies hazardous events, associated risk scoring, control measures, CCPs and their respective CCLs, procedures for monitoring CCLs, procedures for responding to CCL deviations, and procedures for reporting and recording deviations. [Tracking Critical Control Limit \(CCL\) Deviations \(OP-WT-ALL-P-028\)](#) discusses how CCL deviations are summarized and tracked.

As an output from the Operating Authority's annual Risk Assessment exercises, CCPs for Niagara Region's drinking water systems are identified as:

- [CCP: Coagulant \(Aluminum Sulphate\) Feed \(OP-WT-ALL-P-006\)](#)
- [CCP: Secondary Disinfection \(Distribution Chlorine\) \(OP-WT-ALL-P-007\)](#)
- [CCP: Filter Effluent Turbidity \(OP-WT-ALL-P-008\)](#)

- [CCP: Primary Disinfectant \(Sodium Hypochlorite\) Feed \(OP-WT-ALL-P-009\)](#)
- [CCP: Verification of Primary Disinfection \(OP-WT-ALL-P-010\)](#)

9. Organizational Structure, Roles, Responsibilities and Authorities

Water and Wastewater Services is a division of Niagara Region's Public Works Department and serves as the Operating Authority for the Region's five drinking water systems and their associated facilities. (Refer to Section 1.3 for exclusions.)

- Our Mission Statement: Through dedicated teamwork and commitment, provide high quality, safe and reliable water and wastewater services, while practicing good stewardship of resources to benefit present and future generations.
- Our Role: To deliver clean, safe drinking water to the municipal water distribution network and to provide effective wastewater treatment for the community.

What We Do

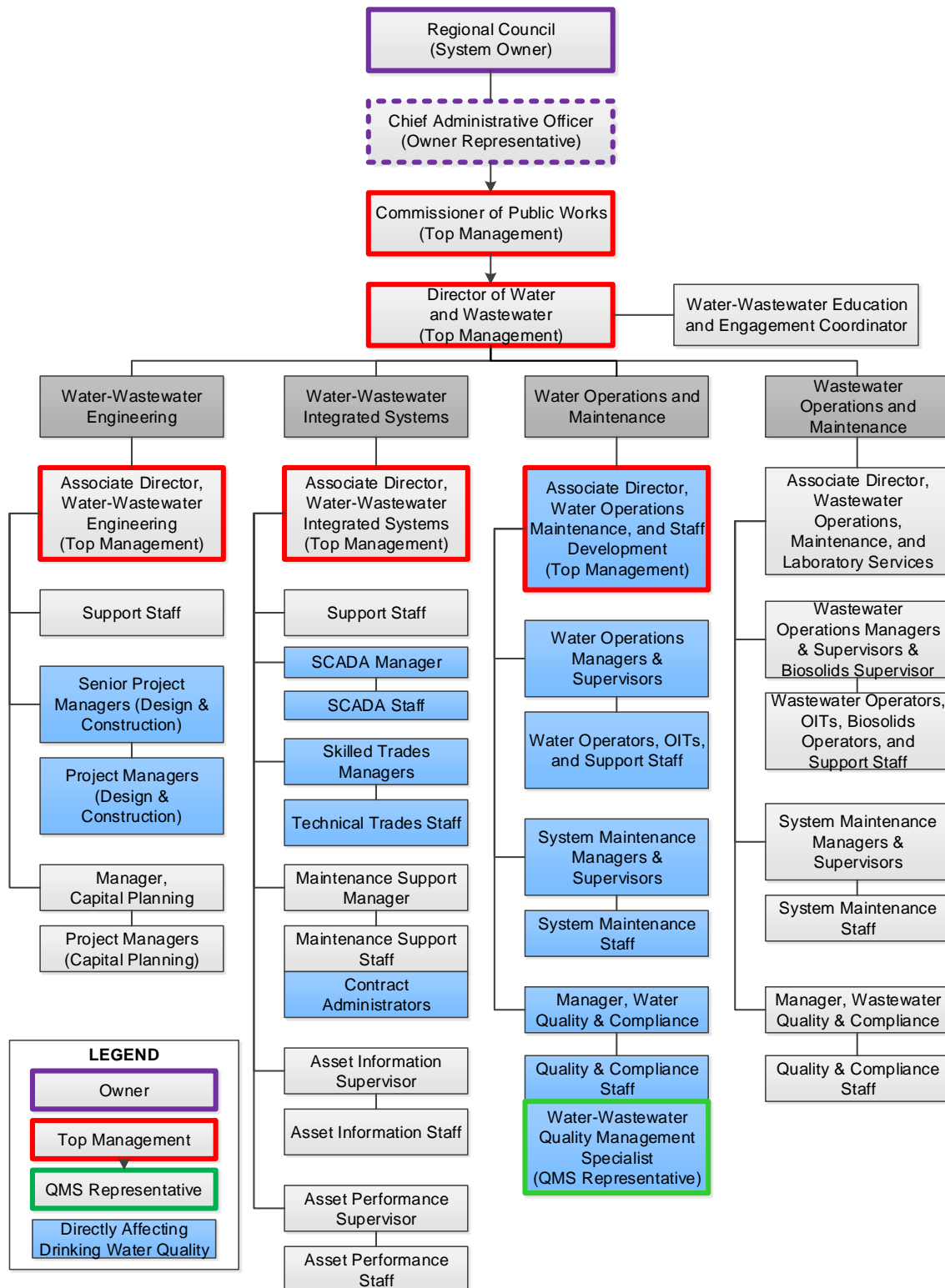
The Water and Wastewater Services Division is made up of a dedicated team of approximately 250 employees working throughout the Niagara Region on the water and wastewater systems.

The Division is divided into four working groups:

- Water Operations, Maintenance, and Staff Development;
- Wastewater Operations, Maintenance, and Laboratory Services;
- Water-Wastewater Engineering;
- Water-Wastewater Integrated Systems

The organizational structure of the Water and Wastewater Services Division, including designation/appointment of key QMS roles, is illustrated in Figure 2.

Figure 2: Water and Wastewater Services Division – Organizational Structure



Each of the four working groups has varying levels of responsibility for drinking water quality. Core responsibilities of staff in each group, as well as specific duties for those positions that directly impact drinking water quality, are identified in Table 3. Table 3 also identifies responsibilities of the System Owner, Top Management and the QMS Representative. *(NOTE: Positions that are greyed are have been deemed to not directly impact drinking water quality.)*

Table 3: Water and Wastewater Services Division – Responsibilities and Authorities

Position/Group	Responsibilities	Authorities
Regional Council (System Owner)	<ul style="list-style-type: none"> – Act as final decision making body for Niagara Region – Ensure the provision of safe drinking water to connected distribution systems of the Local Area Municipalities – Endorse Niagara Region's QMS 	<ul style="list-style-type: none"> – Perform listed responsibilities – Delegate
Chief Administrative Officer	<ul style="list-style-type: none"> – Act as representative for the Owner – Interact with Top Management 	<ul style="list-style-type: none"> – Perform listed responsibilities
Commissioner of Public Works (Top Management)	<ul style="list-style-type: none"> – Establish and implement operating policy and procedures, covering execution of department functions – Manage Public Works Department in its statutory, operational, custodial and advisory responsibilities – Act as a member of the Corporate Management Team – Participate in Management Review 	<ul style="list-style-type: none"> – Perform listed responsibilities – Discipline staff – Make Engineering decisions – Make administrative decisions related to Public Works – Delegate – Suggest continual improvements
Director of Water and Wastewater (Top Management)	<ul style="list-style-type: none"> – Provide administration and general management of Water and Wastewater Services Division – Ensure mandated delivery of water supply and wastewater treatment meets federal, provincial and municipal requirements 	<ul style="list-style-type: none"> – Perform listed responsibilities – Establish Divisional priorities; control budgets, costs, and work quality

Position/Group	Responsibilities	Authorities
Director of Water and Wastewater (Top Management) <i>(continued)</i>	<ul style="list-style-type: none"> – Provide guidance and direction to staff to ensure compliance with provincial standards and the promotion of industry best practices for the operation of the water systems – Participate in Management Review – Manage resources to ensure efficient and effective operations 	<ul style="list-style-type: none"> – Take appropriate action to ensure health and safety in emergencies – Delegate – Suggest continual improvements
Water Operations and Maintenance		
Associate Director, Water Operations, Maintenance, and Staff Development (Top Management) (Directly Affects Drinking Water)	<ul style="list-style-type: none"> – Maintain accountability for execution and direction of all aspects of drinking water system operation and maintenance – Manage Region's water treatment operations and maintenance to ensure compliance with regulatory requirements and ensure due diligence in daily activities – Demonstrate due diligence in daily activities and keep abreast of relevant legislation – Ensure adequate Health & Safety program in place for Water and Wastewater – Analyze and develop annual current and capital budgets to ensure cost-effective operations – Continually review overall function of facilities, personnel, communications and training to achieve high standard of performance – Direct activities related to public relations, evaluating investigations and preparing reports – Ensure staff/personnel issues are dealt with effectively and in a timely manner – Coordinate employee efforts and respond to emergencies and complaints – Provide emergency preparedness leadership – Participate in Management Review – May function as "Overall Responsible Operator (ORO)" as required by O. Reg. 128/04 	<ul style="list-style-type: none"> – Perform listed responsibilities – Approve purchases in accordance with approved budget and policies and procedures – Discipline and deal with major personnel matters – Suggest modifications to systems and make changes during construction – Recommend purchase of equipment or services involving major expenditures – Delegate – Suggest continual improvements

Position/Group	Responsibilities	Authorities
Water Operations Managers/ Supervisors (Directly Affects Drinking Water)	<ul style="list-style-type: none"> – Supervise operation of water treatment plants and regional transmission system – Control area budget; procure material/services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements – Participate in Public relations, evaluate investigations and preparing reports – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Respond to emergencies and complaints – Function as “Overall Responsible Operator (ORO)” as required by O. Reg. 128/04 	<ul style="list-style-type: none"> – Perform listed responsibilities – Delegate – Discipline and deal with minor personnel matters (<i>Managers only</i>) – Suggest continual improvements
System Operator and Operator-in-Training (OIT) (Directly Affects Drinking Water)	<ul style="list-style-type: none"> – Perform operational functions – Maintain written and computer based daily records – Perform routine inspections of plant – Prepare work orders for repairs to equipment – Collect and test water samples to monitor/maintain relevant parameters – Serve as “Operator-In-Charge (OIC)” (*) 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements – NOTES (*): <ul style="list-style-type: none"> ○ Operators-in-Training must perform some responsibilities at the direction of System Operator, as required by O. Reg. 128/04 ○ When an OIT is operating, the ORO shall be designated as OIC

Position/Group	Responsibilities	Authorities
Support Staff <i>(Directly Affects Drinking Water)</i>	<ul style="list-style-type: none"> – Maintain appropriate control of documents and records – Assist with communications, public relations, investigations and preparing reports as needed by Operations – Clerical functions – Assist with customer service activities, including responding to complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements
Water Systems Maintenance Managers <i>(Directly Affects Drinking Water)</i>	<ul style="list-style-type: none"> – Direct and supervise Maintenance staff within area during regular, emergency, standby and on-call hours – Demonstrate due diligence in daily activities and ensure compliance with relevant Regulations and Regional Policies – Control budget for area; monitor expenditures and procurement of materials and services – Prepare and modify maintenance schedules to provide for normal maintenance relief, staff training, vacation, lieu time, and sick time – Participate in activities related to public relations, evaluating investigations and preparing reports – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Respond to emergencies and complaints – Assist in scoping, design and construction of projects 	<ul style="list-style-type: none"> – Perform listed responsibilities – Delegate – Discipline and deal with minor personnel matters – Suggest continual improvements
Systems Maintenance Staff <i>(Directly Affects Drinking Water)</i>	<ul style="list-style-type: none"> – Respond to maintenance issues (i.e. general systems maintenance, etc.) – May serve as “Operator-In-Charge (OIC)” in the transmission system 	<ul style="list-style-type: none"> – Authority to perform listed responsibilities – Authority to Suggest continual improvements

Position/Group	Responsibilities	Authorities
Manager of Water Quality and Compliance <i>(Directly Affects Drinking Water)</i>	<ul style="list-style-type: none"> – Ensure processes are optimized and maintained – Develop and implement quality sampling program as required in a collection/transmission/distribution system – Act as Lead Auditor – Ensure training program is maintained in order to meet competencies – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed 	<ul style="list-style-type: none"> – Perform listed responsibilities – Delegate – Suggest continual improvements
W&WW Quality Management Specialist (QMS Rep) <i>(Directly Affects Drinking Water)</i>	<ul style="list-style-type: none"> – See QMS Representative Responsibilities in Operational Plan (Section 4) 	<ul style="list-style-type: none"> – Perform listed responsibilities – Delegate – Suggest continual improvements
Quality & Compliance Staff <i>(Directly Affects Drinking Water)</i>	<ul style="list-style-type: none"> – Training Program – Health & Safety Program – Technical Support – Process Optimization – Communications and Public Outreach – Compliance Support 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements
Supervisor, W&WW Development Program <i>(Directly Affects Drinking Water)</i>	<ul style="list-style-type: none"> – Perform assigned Supervisory functions – Interact with engineering, maintenance, and operations – Ensure due diligence in daily activities and compliance with regulatory requirements – Ensure that staff follow safe working practices – Participate in Public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints – Function as “Overall Responsible Operator (ORO)” as required by O. Reg. 128/04 	<ul style="list-style-type: none"> – Perform listed responsibilities – Discipline and deal with minor personnel matters – Suggest continual improvements – Delegate

Position/Group	Responsibilities	Authorities
Water-Wastewater Integrated Systems		
Associate Director, Water-Wastewater Integrated Systems	<ul style="list-style-type: none"> – Demonstrate due diligence in daily activities and keep abreast of relevant legislation and regulations – Ensure support and maintenance of CMMS, SCADA Systems and other related technologies – Analyze and develop annual current and capital budgets to ensure continuity of operations and service – Continually review overall function of working group to achieve high standard of performance – Direct activities related to public relations, evaluating investigations and preparing reports – Ensure staff/personnel issues are dealt with effectively and in a timely manner – Coordinate employee efforts and respond to emergencies and complaints – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Participate in Management Review 	<ul style="list-style-type: none"> – Perform listed responsibilities – Approve purchases in accordance with approved budget and policies and procedures – Discipline and deal with major personnel matters – Suggest modifications to systems and make changes during construction – Recommend purchase of equipment or services involving major expenditures – Delegate – Suggest continual improvements

Position/Group	Responsibilities	Authorities
SCADA Manager <i>(Directly Affects Drinking Water)</i>	<ul style="list-style-type: none"> – Manage and administer skilled trades resources to achieve Divisional goals and objectives – Control budget for area and procure material and services to provide customers both internal and external, with efficient and cost effective skilled support – Demonstrate due diligence in daily activities and ensure compliance with relevant Regulations and Regional Policies – Participate in activities related to public relations, evaluating investigations and preparing reports – Respond to emergencies and complaints – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Scoping, design and construction of projects 	<ul style="list-style-type: none"> – Perform listed responsibilities – Delegate – Suggest continual improvements
Skilled Trades Managers <i>(Directly Affects Drinking Water)</i>	<ul style="list-style-type: none"> – Manage and administer skilled trades resources to achieve Divisional goals and objectives – Control budget for area and procure material and services to provide customers both internal and external, with efficient and cost effective skilled support – Demonstrate due diligence in daily activities and ensure compliance with relevant Regulations and Regional Policies – Participate in activities related to Public relations, evaluating investigations and preparing reports – Respond to emergencies and complaints – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Scoping, design and construction of projects 	<ul style="list-style-type: none"> – Perform listed responsibilities – Supervise daily activities of Technical Trades staff – Delegate – Suggest continual improvements

Position/Group	Responsibilities	Authorities
SCADA and Technical Trades Staff <i>(Directly Affects Drinking Water)</i>	<ul style="list-style-type: none"> Respond to maintenance issues (i.e. electrical problems, SCADA issues, etc.) 	<ul style="list-style-type: none"> Perform listed responsibilities Suggest continual improvements
Water-Wastewater Maintenance Support Manager	<ul style="list-style-type: none"> Manage and administer support resources to achieve Divisional goals and objectives Control budget for area and procure material and services to provide customers both internal and external, with efficient and cost effective skilled support Demonstrate due diligence in daily activities and ensure compliance with relevant Regulations and Regional Policies Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed Maintain CMMS program 	<ul style="list-style-type: none"> Perform listed responsibilities Discipline and deal with minor personnel matters Suggest continual improvements
Maintenance Support Staff (CMMS, Clerks)	<ul style="list-style-type: none"> Maintain appropriate control of documents and records Assist with communications, public relations, investigations and preparing reports as needed by Maintenance staff Complete clerical functions Assist with customer service activities, including responding to complaints 	<ul style="list-style-type: none"> Perform listed responsibilities Suggest continual improvements
Contract Administrators <i>(Directly Affects Drinking Water)</i>	<ul style="list-style-type: none"> Review, amend and administer annual contracts for Water-Wastewater Services Prepare authorizations and approvals for contract and bid awards Monitor and supervise maintenance projects 	<ul style="list-style-type: none"> Perform listed responsibilities Suggest continual improvements

Position/Group	Responsibilities	Authorities
Asset Information Supervisor	<ul style="list-style-type: none"> – Manage and administer Water & Wastewater GIS (Geographic Information Systems) and IMS (Information Management Systems) to achieve Divisional goals and objectives – Direct and supervise Asset Information staff – Communicate project progress with Management – Control budget for area and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Participate in public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Discipline and deal with minor personnel matters – Suggest continual improvements
Asset Information Staff	<ul style="list-style-type: none"> – Coordinate the locating of sub-surface Water & Wastewater assets – Review engineering drawings and resolve discrepancies – Tracking and updating asset lifecycle data – Assist with the administration of the Water & Wastewater GIS and IMS 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements

Position/Group	Responsibilities	Authorities
Supervisor Asset Performance Management	<ul style="list-style-type: none"> – Direct and supervise Asset Performance staff – Manage and administer asset performance resources to achieve Divisional goals and objectives – Participate in infrastructure planning and review activities – Communicate project progress with Management – Control budget for area and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Participate in public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Discipline and deal with minor personnel matters – Suggest continual improvements
Asset Performance Staff	<ul style="list-style-type: none"> – Collect flow measurements, dimensional analysis and visual resources for wastewater systems – Conduct field inspections of assets – Perform emergency locates – Collect spatial coordinates for inclusion into the Water & Wastewater GIS systems – Monitor, maintain and update environmental systems and conduct evaluations for flow and weather 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements

Position/Group	Responsibilities	Authorities
Engineering		
Associate Director Engineering (Top Management)	<ul style="list-style-type: none"> – Hold accountability for scoping, design and construction of engineering projects connected with Region's water and wastewater systems – Analyze and develop annual current and capital budgets to ensure that operation plans are cost effective – Manage & administer capital project resources to achieve Divisional goals and objectives – Demonstrate due diligence in daily activities and keep abreast of relevant legislation and regulations – Communicate project progress with other working groups within and outside of Water-Wastewater Services – Direct and supervise Project Management staff – Participate in infrastructure planning and review activities – Participate in Management Review – Participate in public relations, evaluate investigations and preparing reports – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Respond to emergencies and complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest modifications to systems and make changes during construction – Delegate – Discipline and deal with major personnel matters – Suggest continual improvements

Position/Group	Responsibilities	Authorities
Senior Project Manager, Design and Construction (Directly Affects Drinking Water)	<ul style="list-style-type: none"> – Lead the scoping, design and construction of large scale projects related to Region's systems – Infrastructure planning and review – Communicate project progress with Management – Control budget for projects and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements including assisting with the preparation of applications for approvals and amendments with the Ministry of Environment – Participate in infrastructure planning and review activities – Participate in public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints – Assist PMs with issues as required 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements
Project Manager, Design and Construction (Directly Affects Drinking Water)	<ul style="list-style-type: none"> – Lead the scoping, design and construction of projects related to Region's systems – Infrastructure planning and review – Communicate project progress with Management – Control budget for area and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements including assisting with the preparation of applications for approvals and amendments with the Ministry of Environment – Participate in infrastructure planning and review activities – Participate in public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements

Position/Group	Responsibilities	Authorities
Manager, Capital Planning	<ul style="list-style-type: none"> – Manage and administer infrastructure planning and review to achieve Divisional goals and objectives – Direct and supervise Capital Planning staff – Communicate project progress with Management – Control budget for area and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Participate in public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Discipline and deal with minor personnel matters – Suggest continual improvements
Project Managers, Capital Planning	<ul style="list-style-type: none"> – Lead the scoping, design and construction of projects related to Region's systems – Infrastructure planning and review – Communicate project progress with Management – Control budget for area and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements including assisting with the preparation of applications for approvals and amendments with the Ministry of Environment – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Participate in public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements

Position/Group	Responsibilities	Authorities
Engineering Support Staff	<ul style="list-style-type: none"> – Maintain appropriate control of documents and records – Assist with communications, public relations, investigations and preparing reports as needed by Engineering – Complete clerical functions – Assist with customer service activities, including responding to complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements
Wastewater Operations		
Associate Director of Wastewater Operations, Maintenance, and Laboratory Services	<ul style="list-style-type: none"> – Accountable for execution and direction of all wastewater operations – Manage Region's wastewater treatment operations to ensure compliance with regulatory requirements and ensure due diligence in daily activities – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed Analyze and develop annual current and capital budgets to ensure that operations are cost effective – Continuously review overall function of facilities, personnel, communications and training to achieve high standard of performance – Direct activities related to Public relations, evaluating investigations and preparing reports – Ensure staff/personnel issues are dealt with effectively and in a timely manner – Coordinate employee efforts and respond to emergencies and complaints – Participate in Management Review – May function as "Overall Responsible Operator (ORO)" as required by O. Reg. 129/04 	<ul style="list-style-type: none"> – Perform listed responsibilities – Approve purchases in accordance with approved budget and policies and procedures – Discipline and deal with major personnel matters – Suggest modifications to systems and make changes during construction – Recommend purchase of equipment or services involving major expenditures – Delegate

Position/Group	Responsibilities	Authorities
Wastewater Operations Managers & Supervisors	<ul style="list-style-type: none"> – Supervise operation of wastewater treatment plants and regional collection system – Control budget for area and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Participate in Public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints – Function as “Overall Responsible Operator (ORO)” as required by O. Reg. 129/04 	<ul style="list-style-type: none"> – Perform listed responsibilities – Approve purchases in accordance with approved budget and policies and procedures – Discipline and deal with minor personnel matters – Suggest continual improvements – Issue notice of non-compliance – Delegate
Wastewater Systems Maintenance Managers	<ul style="list-style-type: none"> – Direct and supervise Maintenance staff within area during regular, emergency, standby and on-call hours – Demonstrate due diligence in daily activities and ensure compliance with relevant Regulations and Regional Policies – Control budget for area; monitor expenditures and procurement of materials and services – Prepare and modify maintenance schedules to provide for normal maintenance relief, staff training, vacation, lieu time, and sick time – Participate in activities related to public relations, evaluating investigations and preparing reports – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Respond to emergencies and complaints – Assist in scoping, design and construction of projects 	<ul style="list-style-type: none"> – Perform listed responsibilities – Delegate – Discipline and deal with minor personnel matters – Suggest continual improvements

Position/Group	Responsibilities	Authorities
System Operator and Operator-in-Training (OIT)	<ul style="list-style-type: none"> – Perform operational functions – Maintain written and computer based daily records – Perform routine inspections of plant – Prepare work orders for repairs to equipment – Collect and test wastewater samples to monitor/maintain relevant parameters – Serve as “Operator-In-Charge (OIC)” (*) 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements – *Operators-in-Training must perform some responsibilities at the direction of the System Operator, as required by O. Reg. 129/04 – *When an OIT is operating, the ORO shall be designated as OIC
Biosolids Program Manager	<ul style="list-style-type: none"> – Supervise operation of biosolids treatment facility and lagoons – Control budget for area and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Participate in Public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Approve purchases in accordance with approved budget and policies and procedures – Discipline and deal with minor personnel matters – Suggest continual improvements – Delegate
Biosolids-Residual Solids Operator	<ul style="list-style-type: none"> – Perform operational functions – Maintain written and computer based daily records – Prepare work orders for repairs to equipment – Collect and test process samples to monitor/maintain relevant parameters 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements

Position/Group	Responsibilities	Authorities
Support Staff	<ul style="list-style-type: none"> – Maintain appropriate control of documents and records – Assist with communications, Public relations, investigations and preparing reports as needed by Operations – Clerical functions – Assist with Customer Service activities including responding to complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements
Manager of Quality and Compliance, Wastewater	<ul style="list-style-type: none"> – Ensure processes are optimized and maintained – Develop and implement quality sampling program as required in a collection system – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Administer environmental enforcement program 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements – Discipline and deal with minor personnel matters – Issue notice of non-compliance – Delegate
Environmental Laboratory Supervisor	<ul style="list-style-type: none"> – Supervise Environmental Laboratory Staff – Control budget for area and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements – Discipline and deal with minor personnel matters – Delegate
Environmental Laboratory Staff	<ul style="list-style-type: none"> – Conduct analytical wastewater and biosolids testing – Follow established protocols for sampling and testing – Provide notification if there is an exceedance 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements

Position/Group	Responsibilities	Authorities
Environmental Enforcement Staff	<ul style="list-style-type: none"> – Determine sampling locations and methods, and collect water or wastewater samples for analysis – Inspect wastewater treatment, and disposal facilities and systems for compliance to federal, provincial, or local regulations (including Environmental Compliance Approvals) – Examine permits, licences, applications, and records to ensure compliance with licencing requirements – Prepare, organize, and maintain inspection records – Monitor follow-up actions in instances where violations were found, and review compliance monitoring reports. – Execute relief operational duties 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements – Recommend notice of non-compliance
Process & Compliance Staff, Wastewater	<ul style="list-style-type: none"> – Process optimization – Technical support – Compliance support – Sampling program development assistance – Benchmarking – Maintain appropriate control of documents and records 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest continual improvements

10. Competencies

Niagara Region personnel performing duties directly affecting drinking water must understand the importance of their actions. Furthermore, they must be competent in their jobs and have appropriate education, training, skills and/or experience.

The [Competencies Table \(QMS-ALL-ALL-T-100\)](#) documents competencies required for personnel performing duties directly affecting drinking water quality.

[Competencies \(QMS-WT-ALL-P-100\)](#) documents activities to develop and maintain the required competencies for personnel performing duties directly affecting drinking water quality. The Competencies Procedure also documents activities to ensure that all Operating Authority personnel are aware of the relevance of their duties.

Both the procedure and table are available on Vine.

11. Personnel Coverage

Niagara Region ensures that sufficient personnel meeting identified competencies are available for duties that directly affect drinking water quality as documented in [Personnel Coverage \(QMS-WT-ALL-P-110\)](#).

[Personnel Coverage \(QMS-WT-ALL-P-110\)](#) is available on Vine.

12. Communications

Effective communication is essential for ensuring a successful QMS. [Communications \(QMS-WT-ALL-P-120\)](#) describes how relevant aspects of the QMS are communicated between Top Management and the Owner, Operating Authority personnel, Suppliers and the Public.

[Communications \(QMS-WT-ALL-P-120\)](#) is available on Vine.

13. Essential Supplies and Services

Niagara Region's drinking water systems require a number of essential supplies and services for the production of safe drinking water. These supplies and services are categorized as:

- Chemical Supplies
- Calibration Services

- Laboratory Services
- Miscellaneous Supplies/Services

A general overview of essential supplies and services, methods to ensure their procurement, and procedures for quality assurance is provided in [Essential Supplies and Services \(QMS-WT-ALL-P-130\)](#); the procedure is available on Vine.

Essential supplies and services for both water and wastewater are identified on the [“Essential Supplies and Services” Vine page](#). The table can be filtered to show only those supplies and services used in respect of Niagara Region’s drinking water systems.

NOTE: Only drinking water system supplies and services fall within the scope of this Operational Plan.

14. Review, Rehabilitation and Renewal of Infrastructure

[Review, Rehabilitation, and Renewal of Infrastructure \(QMS-WT-ALL-P-140\)](#) describes how Niagara Region reviews the adequacy of infrastructure necessary to operate and maintain its drinking water systems. It also details how infrastructure rehabilitation and renewal projects that are funded from the capital budget are initiated, approved and communicated to the Owner.

[Review, Rehabilitation, and Renewal of Infrastructure \(QMS-WT-ALL-P-140\)](#) is available on Vine.

15. Infrastructure Maintenance

Niagara Region maintains an effective maintenance program. The maintenance program includes planned and unplanned maintenance, renewal and rehabilitation of infrastructure that is typically funded from the current budget. [Maintenance \(QMS-WT-ALL-P-150\)](#) describes the

maintenance program, long-term maintenance, rehabilitation, and renewal plans, the means to monitor maintenance effectiveness, and how maintenance programs are communicated to the Owner.

[Maintenance \(QMS-WT-ALL-P-150\)](#) is available on Vine.

16. Sampling, Testing and Monitoring

Sampling, testing and monitoring activities are essential to confirm water quality and to be compliant with legislation and regulations. [Sampling, Testing and Monitoring \(QMS-WT-ALL-P-160\)](#) describes these activities and how results are recorded and shared.

To complement the procedure, the following tables outline the sampling, testing, and monitoring activities undertaken at each WTP:

- [Sampling, Testing & Monitoring Activities – DeCew Falls WTP \(QMS-WT-DF-T-160\)](#)
- [Sampling, Testing & Monitoring Activities – Grimsby WTP \(QMS-WT-DF-T-160\)](#)
- [Sampling, Testing & Monitoring Activities – Niagara Falls WTP \(QMS-WT-DF-T-160\)](#)
- [Sampling, Testing & Monitoring Activities – Port Colborne WTP \(QMS-WT-DF-T-160\)](#)
- [Sampling, Testing & Monitoring Activities – Rosehill WTP \(QMS-WT-DF-T-160\)](#)
- [Sampling, Testing & Monitoring Activities – Welland WTP \(QMS-WT-DF-T-160\)](#)

All of the above documents are available on Vine.

17. Measurement & Recording Equipment Calibration & Maintenance

The measurement and recording equipment used in Niagara Region's drinking water systems is calibrated and maintained according to [Measurement and Recording Equipment Calibration and Maintenance \(QMS-WT-ALL-P-170\)](#).

[Measurement and Recording Equipment Calibration and Maintenance \(QMS-WT-ALL-P-170\)](#) is available on Vine.

18. Emergency Management

Emergency preparedness is achieved by following Niagara Region's Emergency Response Procedures (ERP) Manual for Water and Wastewater Systems. The ERP Manual includes response and recovery procedures for potential emergencies that could impact drinking water quality. Each procedure is laid out step by step and clearly notes responsibilities of those involved. Training and testing requirements are specified in [Emergency Response Plan – Front End \(ERP-ALL-ALL-P-001\)](#). An [Emergency Response Contact List \(ERP-ALL-ALL-T-002\)](#) is also included as part of the ERP Manual.

The ERP Manual is available on the Vine's [Water-Wastewater Services Division Page](#) under "W-WW Emergency Response Plan".

19. Internal Audits

Internal audits add value to Niagara Region's operations by providing feedback about the QMS and its effectiveness. [Internal Auditing \(QMS-WT-ALL-P-190\)](#) describes:

- How to evaluate the conformity of Niagara Region's QMS with the requirements of the Standard;
- Audit criteria, frequency, scope, methodology and record keeping requirements;

- How previous internal and external audit results are considered; and
- How corrective actions are identified and initiated (see Section 21 of this Operational Plan).

[Internal Auditing \(QMS-WT-ALL-P-190\)](#) is available on Vine.

20. Management Review

Management Reviews are performed to ensure the continuing suitability, adequacy and effectiveness of the QMS. [Management Review \(QMS-WT-ALL-P-200\)](#) documents the process followed in undertaking the review.

[Management Review \(QMS-WT-ALL-P-200\)](#) is available on Vine.

21. Continual Improvement

Niagara Region maintains and continually improves its Water QMS through annual audits, management reviews, implementation of best management practices, process optimization, and staff development, and measures the effectiveness of these continual improvement initiatives.

Through the internal audit process, corrective actions and preventive actions/opportunities for improvement are identified and reported in order to detect and eliminate non-conformances. [Corrective Action, Preventive Action, and Best Practices \(QMS-WT-ALL-P-210\)](#) outlines the Operating Authority's corrective and preventive action processes.

Deficiencies identified as part of the management review are discussed and action plans are created to improve the QMS.

Niagara Region reviews and considers best practices from a multitude of sources, including but not limited to the MECP's published list, regulatory inspections, benchmarking activities, and networking with peers. Implemented best practices are tracked as preventive actions/opportunities for improvement.

Niagara Region staff efforts are critical for continual improvement of the QMS. We are committed to providing effective staff development opportunities (i.e. courses, workshops, on the job training) in an effort to continually improve our operations.

[Corrective Action, Preventive Action, and Best Practices \(QMS-WT-ALL-P-210\)](#) is available on Vine.

Table of Revisions:

Revision	Date	Description of Revision	Updated By
0	Oct. 29, 2008	Operational Plan created	Heather Sim
1	Oct. 5, 2009	Administrative revisions include: (i) the addition of new Associate Director positions for Water and Wastewater Operations, and the removal of the Manager, Water Operations, following Organizational change; (ii) the addition of Support Staff to each area; (iii) the addition of Manager of Quality & Compliance, Process & Development Staff and Water Support Staff to the “directly impacting water quality” group; (iv) the revision of procedure numbers following revision to the Document Naming Convention Procedure; and (v) the addition of the Table of Revisions.	Jocelyn Koteles (Authorized by Commissioner of Public Works, Ken Brothers)
<i>Entered into EtQ – October 27, 2011</i>			
2	Sep. 24, 2012	Revised procedure to include: (i) updated links to relevant documents; (ii) administrative changes to positions/titles and added the Contract Administrator/Security Coordinator to the table of positions affecting the quality of drinking water (CAR#00019); (iii) identification of the Coordinator W&WW Quality Management as the QMS Representative; (iv) removed individual risk assessment outcome records and added reference to the risk assessment outcome table (QMS-WT-ALL-080-F1) and the respective CCP response procedures; (v) Removed “ <i>The Drinking-Water System Risk Outcomes Summary is available on Sherpa</i> ” from section 8.0 Risk Assessment Outcomes	Jen Croswell
3	Jan. 2, 2013	Revised procedure to include: (i) Table 3: Responsibilities and Authorities, will include “directly affects drinking water” under titles/groups which are listed in Figure 1: Water and Wastewater Services Division Organizational Chart as directly affecting the drinking water; (ii) Figure 1: Water and Wastewater Services Division Organizational Chart will be revised to include a blue box, in addition to the red box, around the Associate Director, Water Operations to indicate that the position directly affects drinking water and a member of Top Management; (iii) To provide clarity for external audiences, the Operational Plan, Table 3: Responsibilities and Authorities will be revised to include a list of maintenance staff group categories under the Title/Group column. The above revisions were made in response to external CARs J0322584-3 and J0322584-5. Additional revisions include: (i) An update to the current mission statement; (ii) updated the document ID for the Risk Assessment Outcomes Table, from QMS-WT-ALL-080-F1 to QMS-WT-ALL-081, to reflect that the Risk Assessment Outcomes Table is a living document and not a form.	Jen Croswell

Revision	Date	Description of Revision	Updated By
4	Apr. 22, 2014	Administrative revisions include: (i) the addition of the Approval, License and Amendment Procedure (QMS-ALL-ALL-021) and Ministry of Environment Inspection Document Request Procedure (QMS-WT-ALL-022) to section 2, Quality Management System Policy; (ii) the addition of Tracking Critical Control Limit (CCL) Deviations (OP-WT-ALL-807) to section 8, Risk Assessment Outcomes; (iii) the removal of Integrated Solutions Support Manager and the revisions of Process & Development Staff to Quality & Compliance Staff to section 9, Organizational Structure, Roles, Responsibilities and Authorities; (iv) revisions to Table 1: Niagara Region's Drinking-Water Systems in section 6, Drinking-Water Systems; (v) identification of a backup QMS Representative to section 4, QMs Representative; and (vi) Minor administrative edits throughout.	Jen Croswell
5	Jun. 29, 2015	Operational Plan endorsed by the System Owner and Top Management – Signature sheet to be added to document endorsement, no further revisions.	Jen Croswell
6	Jan. 7, 2016	Revisions to: <ul style="list-style-type: none"> Section 2 – updated QMS Policy poster graphic (Mar 31, 2015 Rev 1) Section 3 – revised how written records of commitment and endorsement are obtained and updated Section 9 – added the Associate Director Engineering to Top Management (OFI 2015-002-Internal); expanded Engineering and Wastewater Operations staff to reflect positions in the Wastewater Operational Plan; added Supervisory Development Program position; included additional responsibilities in regards to “scoping, design and construction of projects” maintenance manager positions (OFI-14-02) Minor administrative revisions throughout 	Jen Croswell
7	Oct. 31, 2016	<ul style="list-style-type: none"> Identified Engineering staff (Senior Project Managers and Project Managers) as staff whose work directly affects drinking water quality. Revised organizational structure and position titles to reflect reorganization of W-WW Services Division and results of the Corporate Job Evaluation Process. Updated procedure links Updated document IDs in accordance with revised document numbering conventions 	Rachel Whyte

Revision	Date	Description of Revision	Updated By
8	Aug. 24, 2018	<ul style="list-style-type: none"> Changed “Sherpa” to “Vine” to reflect implementation of new Regional intranet. Removed reference to controlled document “Essential Supplies and Services Table (QMS-WT-ALL-T-130)” and included reference to “Essential Supplies and Services” Vine page. Removed references to Regulatory Updates (ADM-WT-ALL-P-003), Drinking Water System Licence and Permit Amendments (ADM-WT-ALL-P-004), and MOECC Inspection Document Requests (ADM-WT-ALL-P-005). These procedures align with the MECP inspection process and are not considered to fall directly within the scope of the Drinking Water Quality Management System. Operational Plan. Updated list of drinking water facilities in Table 1 (page 7). Added discussion of best practice review and preventive actions as forms of continual improvement, and noted that effectiveness of continual improvement initiatives is measured. Changed staff title from Manager, Infrastructure Planning & Asset Management to Manager, Capital Planning (as per Divisional memo, 4Dec2017). Updated procedure hyperlinks as required. 	Rachel Whyte

The Regional Municipality of Niagara

Wastewater Quality Management System Operational Plan

For the:

Anger Avenue Wastewater System
Baker Road Wastewater System
Crystal Beach Wastewater System
Niagara Falls Wastewater System
Niagara-on-the-Lake Wastewater System
Port Dalhousie Wastewater System
Port Weller Wastewater System
Queenston Wastewater System
Seaway Wastewater System
Welland Wastewater System
Stevensville/Douglastown Lagoon Wastewater System
Garner Road Biosolids Handling and Dewatering Facility

Effective Date: <DRAFT>

Revision Number: 2



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Appendix 2 Wastewater System Descriptions:

- [Anger Avenue Wastewater System Description \(QMS-WW-FE-P-060\)](#)
- [Baker Road Wastewater System Description \(QMS-WW-BR-P-060\)](#)
- [Crystal Beach Wastewater System Description \(QMS-WW-CB-P-060\)](#)
- [Garner Road Biosolids Handling and Dewatering Facility System Description \(QMS-WW-GR-P-060\)](#)
- [Niagara Falls Wastewater System Description \(QMS-WW-NF-P-060\)](#)
- [Niagara-on-the-Lake Wastewater System Description \(QMS-WW-NL-P-060\)](#)
- [Port Dalhousie Wastewater System Description \(QMS-WW-PD-P-060\)](#)
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- [Queenston Wastewater System Description \(QMS-WW-QT-P-060\)](#)
- [Stevensville-Douglastown Lagoon Wastewater System Description \(QMS-WW-SD-P-060\)](#)
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Appendix 3 Wastewater System Process Schematics:

- [Anger Avenue WWTP Process Schematic \(QMS-WW-FE-V-060\)](#)
- [Baker Road WWTP Process Schematic \(QMS-WW-BR-V-060\)](#)
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- [Stevensville/Douglastown Lagoon Process Schematic \(QMS-WW-SD-V-060\)](#)
- [Seaway WWTP Process Schematic \(QMS-WW-SW-V-060\)](#)
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Appendix 4**Wastewater System Process Schematics:**

- [Anger Avenue WWTP System Schematic \(QMS-WW-FE-V-061\)](#)
- [Baker Road WWTP System Schematic \(QMS-WW-BR-V-061\)](#)
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Appendix 5**[Wastewater System Risk Assessment \(QMS-WW-ALL-P-070\)](#)****Appendix 6****Risk Assessment Outcomes Table (CONFIDENTIAL)****Appendix 7****Competencies**

- [Competencies \(QMS-WW-ALL-P-100\)](#)
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Appendix 8**[Personnel Coverage \(QMS-WW-ALL-P-110\)](#)****Appendix 9****[Communications \(QMS-WW-ALL-P-120\)](#)****Appendix 10****Essential Supplies and Services**

- [Essential Supplies and Services \(QMS-WW-ALL-P-130\)](#)
- [“Essential Supplies and Services” Vine page](#)

Appendix 11**[Review, Rehabilitation and Renewal of Infrastructure \(QMS-WW-ALL-P-140\)](#)****Appendix 12****[Maintenance \(QMS-WW-ALL-P-150\)](#)****Appendix 13****[Sampling, Testing and Monitoring \(QMS-WW-ALL-P-160\)](#)**

Appendix 14	<u>Measurement and Recording Equipment Calibration and Maintenance (QMS-WW-ALL-P-170)</u>
Appendix 15	Water-Wastewater Emergency Response Plan Manual (CONFIDENTIAL)
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Appendix 18	<u>Corrective Action (QMS-WW-ALL-P-210)</u>

DRAFT

1.0 Introduction

1.1 *Drinking Water Quality Management Standard*

The Drinking Water Quality Management Standard (DWQMS) focuses on a proactive and preventive approach for the management of drinking water quality using the four-step “PLAN–DO–CHECK–IMPROVE” process. Under the DWQMS, all municipal residential drinking water systems are required to develop and implement a quality management system (QMS) that must be documented in an operational plan. DWQMS requirements were used as a foundation for the development of Niagara Region’s Wastewater Quality Management System.

Unlike Niagara Region’s Water QMS, the Wastewater QMS is not a legislated requirement; rather, it has been developed and implemented as a best practice. The establishment of a Wastewater QMS demonstrates Niagara Region’s due diligence and proactive approach to quality management in wastewater services.

1.2 *Niagara Region*

The Regional Municipality of Niagara (“Niagara Region”) owns and operates twelve wastewater systems, including:

- **Nine** wastewater treatment plants (WWTPs), **a wastewater treatment lagoon, and a combined lagoon/WWTP system. These systems** collect and treat wastewater from eleven area municipalities: the Cities of St. Catharines, Niagara Falls, Welland, and Port Colborne; the Towns of Grimsby, Lincoln, Thorold, Pelham, Fort Erie, and Niagara-on-the-Lake; and the Township of West Lincoln. Each of these area municipalities owns and operates collection systems that collect wastewater from customers within the region.
- A biosolids handling and dewatering facility (“Garner Road”); dewatering processes at this facility are operated by Niagara Region staff, while biosolids handling is executed by a third-party contractor.

Niagara Region is committed to source water protection by effectively collecting and treating wastewater, and has implemented a QMS in support of its wastewater systems.

1.3 Scope

This Operational Plan documents the QMS for Niagara Region's twelve wastewater systems:

- Anger Avenue Wastewater System
- Baker Road Wastewater System
- Crystal Beach Wastewater System
- Niagara Falls Wastewater System
- Port Dalhousie Wastewater System
- Port Weller Wastewater System
- Queenston Wastewater System
- Seaway Wastewater System
- Welland Wastewater System
- Niagara-on-the-Lake Wastewater System (Lagoon and WWTP)
- Stevensville/Douglastown Lagoon Wastewater System
- Garner Road Biosolids Handling and Dewatering Facility Wastewater System

For the purpose of this Operational Plan and associated procedures:

- All Staff includes all staff employed by Niagara Region
- All Operating Authority Staff includes all staff within the Water and Wastewater Services Division except those who only work in water systems (i.e. Water Operators, Managers, and assigned Maintenance staff)
- Staff who directly affect wastewater treatment quality include:
 - Wastewater Operations Managers and Supervisor(s)
 - Wastewater Operators and Operators-in-Training
- Staff who affect wastewater treatment quality include:
 - Associate Director, Wastewater Operations, Maintenance, and Laboratory Services

- Wastewater Operations Clerks
- System Maintenance Managers & Supervisors (Wastewater)
- System Maintenance Staff (Wastewater)
- Manager of Wastewater Quality & Compliance
- Wastewater Quality & Compliance Staff (including Laboratory and Environmental Enforcement Staff)
- Biosolids Manager
- Biosolids – Residual Solids Operators
- Supervisor, W&WW Development Program
- Water-Wastewater Safety Advisor
- Water-Wastewater Training Advisor
- Water-Wastewater Quality Management Specialist
- Associate Director, Engineering
- Senior Project Managers & Project Managers
- Manager, Infrastructure Planning and Asset Management
- Engineering Support Staff
- Associate Director, Integrated Systems
- Manager of Technical Trades (SCADA)
- Technical Trades Staff
- Managers of Skilled Trades (Electrical and Instrumentation)
- Skilled Trades Staff
- Maintenance Support Services Manger
- Maintenance Support Staff
- Asset Information Supervisor
- Asset Information Staff
- Asset Performance Management Supervisor
- Asset Performance Management Staff

2.0 Quality Management System Policy

Niagara Region is committed to the effective treatment of wastewater within the region. Our Wastewater QMS Policy is shown below.

Figure 1: Wastewater Quality Management System Policy¹



¹ March 31, 2015 – Revision 1

3.0 Commitment and Endorsement

3.1 Top Management

Each member of Top Management pledges commitment to the Wastewater QMS and endorses the Operational Plan through the signing of a Commitment and Endorsement Memorandum. The Memorandum includes a pledge to ensure the implementation, maintenance and continual improvement of the QMS for each of Niagara Region's wastewater systems as documented in this Operational Plan.

3.2 Owner

As System Owner, Niagara Region ensures the implementation, maintenance and continual improvement of the QMS for each of its wastewater systems, as documented in this Operational Plan.

By signing below, Regional Council (represented by the Regional Chair and Clerk) endorse the contents of this Operational Plan.

The Regional Municipality of Niagara

Per:

Regional Chair
Jim Bradley

Date

Regional Clerk
Ann-Marie Norio

Date

3.4 Continued Endorsement

When changes in Top Management occur, the QMS Representative ensures that a Commitment and Endorsement Memorandum is signed by any new members of Top Management. Top Management receives QMS updates as per [Management Review \(QMS-WW-ALL-P-200\)](#).

The System Owner receives updates as per [Communications \(QMS-WW-ALL-P-120\)](#). Continued endorsement of the Operational Plan is demonstrated through the enactment of a confirmatory by-law preceding each Council meeting. The QMS Representative ensures that Council endorsement is received for the most current Operational Plan following changes in Council due to election.

4.0 QMS Representative

Top Management has appointed the Water & Wastewater Quality Management Specialist as the QMS Representative for Niagara Region's wastewater systems.

The QMS Representative's responsibilities include, but are not limited to:

- Administering the QMS by ensuring that processes and procedures needed are established and maintained;
- Reporting to Top Management on the performance of the QMS and any need for improvement;
- In cooperation with all Operating Authority staff, ensuring current versions of documents required by the QMS are being used at all times;
- In cooperation with all Operating Authority staff, ensuring that personnel are aware of all applicable legislative and regulatory requirements pertaining to their duties; and
- Promoting awareness of the QMS throughout the Operating Authority.

5.0 Document and Records Control

Document and records control is an essential part of the QMS. [Document and Records Control \(QMS-WW-ALL-P-050\)](#) outlines how documents required by the QMS are kept current, legible, readily identifiable, retrievable, stored, protected, retained and disposed of. The procedure also documents how records required by the QMS are kept legible, readily identifiable, retrievable, stored, protected, retained, and disposed of.

[Document and Records Control \(QMS-WW-ALL-P-050\)](#) is available via the Regional intranet.

6.0 Wastewater Systems

6.1 *Description of Overall Wastewater Systems*

Niagara Region owns and operates twelve wastewater systems, including wastewater treatment plants (WWTPs), collection systems, lagoons, associated pump stations, and a biosolids handling and dewatering facility. Niagara Region collects wastewater from eleven area municipalities.

Table 1 lists the facilities associated with each of Niagara's wastewater systems, as well as the local municipal collection systems that contribute to the subject system's influent.

Wastewater system descriptions are available via the Regional intranet (see links in Table 1).

Table 1: Niagara Region's Wastewater Systems

Wastewater System	Wastewater System Facilities	Municipal Collection Systems
Anger Avenue (FE) – Anger Avenue Wastewater System Description (QMS-WW-FE-P-060)	Alliston St. Sewage Pumping Station (SPS) Bardol Ave. SPS Catharine St. SPS Dominion Rd. SPS Lakeshore Rd. SPS Rose Ave. SPS Rosehill WTP Backwash PS Thompson Rd. SPS	Fort Erie
Baker Road (BR) – Baker Road Wastewater System Description (QMS-WW-BR-P-060)	Bal Harbour SPS Biggar Lagoon SPS Bridgeport SPS Campden SPS Jordan Valley SPS Lake St. SPS Lakewood Garden SPS Laurie Ave. SPS Old Orchard SPS Ontario St. SPS Roberts Rd. SPS Smithville SPS Streamside SPS Victoria Ave. SPS Woodsvie SPS	Grimsby Lincoln West Lincoln
Crystal Beach (CB) – Crystal Beach Wastewater System Description (QMS-WW-CB-P-060)	Erie Rd. SPS Nigh Rd. SPS Shirley Rd. SPS	Fort Erie (Crystal Beach and Ridgeway)

Wastewater System	Wastewater System Facilities	Municipal Collection Systems
Garner Road (GR) – Garner Road Biosolids Handling and Dewatering Facility System Description (QMS-WW-GR-P-060)	None	Digested sludge from all WWTPs Water residuals from Decew WTP and Grimsby WTP
Niagara Falls (NF) – Niagara Falls Wastewater System Description (QMS-WW-NF-P-060)	Bender Hill SPS Calaguire Estates SPS Central SPS/HRT Creek Rd. SPS Dorchester Rd. SPS Drummond Rd. SPS Garner Rd. Biosolids Storage Facility/PS Garner Rd. SW SPS Grassy Brook SPS Kalar Rd. SPS Lundy's Lane SPS Meadowvale SPS Mewburn Rd. SPS (City-owned) Muddy Run SPS Neighbourhood of St. David's SPS Oakwood Dr. SPS Rolling Acres SPS Royal Manor SPS Seneca St. SPS South Side High Lift SPS South Side Low Lift SPS Stanley/McLeod Storm Water PS Townline SPS	Niagara Falls Niagara-on-the-Lake (St. Davids)

Wastewater System	Wastewater System Facilities	Municipal Collection Systems
Niagara-on-the-Lake (NL) – Niagara-on-the-Lake Wastewater System Description (QMS-WW-NL-P-060)	Front Street SPS Garrison Village SPS Lakeshore Road SPS Line 2 (Hunter Farm) SPS Niagara Stone Road SPS Ricardo Street SPS William Street Sewage Detention Facility William Street SPS	Niagara-on-the-Lake
Port Dalhousie (PD) – Port Dalhousie Wastewater System Description (QMS-WW-PD-P-060)	Argyle SPS Beaverdams SPS Cole Farm SPS Confederation Heights SPS Eastchester SPS Glendale SPS Lakeside SPS Lighthouse Rd. SPS October Village SPS Renown SPS Riverview SPS St. George's SPS Snug Harbour SPS Wellandvale SPS	St. Catharines Thorold
Port Weller (PW) – Port Weller Wastewater System Description (QMS-WW-PW-P-060)	Airport Rd. SPS Black Horse SPS Carleton St. SPS Centre St. SPS Haulage Rd SPS Lombardy Ave. SPS Peel St. SPS Spring Garden SPS Thorold Tunnel SPS	St. Catharines Thorold

Wastewater System	Wastewater System Facilities	Municipal Collection Systems
Queenston (QT) – Queenston Wastewater System Description (QMS-WW-QT-P-060)	none	Niagara-on-the-Lake (Queenston)
Stevensville-Douglastown Lagoon (SD) – Stevensville-Douglastown Lagoon Wastewater System Description (QMS-WW-SD-P-060)	Black Creek Flow Meter Douglastown SPS Stevensville SPS	Fort Erie (Stevensville-Douglastown)
Seaway (SW) – Seaway Wastewater System Description (QMS-WW-SW-P-060)	Arena St. SPS City Hall SPS Clark St. SPS Eastside SPS Elm St. S. SPS Fares St. SPS Fretz SPS Industrial Park SPS Main St. SPS Marina 1 SPS Marina 2 SPS Marina 3 SPS Nickel St. SPS Omer Ave. SPS Oxford Rd. SPS Rosemount N. SPS Rosemount S. SPS Steele Rd. SPS Sugarloaf SPS Union St. SPS	Port Colborne

Wastewater System	Wastewater System Facilities	Municipal Collection Systems
Welland (WE) – Welland Wastewater System Description (QMS-WW-WE-P-060)	Daimler Wood SPS Dain City SPS Feeder Rd. SPS Foss Rd. SPS Fitch St. SPS (city-owned) George St. SPS Hurricane Rd. SPS Kelly St. SPS Lyons Creek CSO OAW Sanitary Sewer Ontario Rd. SPS Park Lane SPS Rice Rd Partial Flume Seaway Heights SPS South Pelham Partial Flume South St. SPS South Thorold (Towpath) SPS Timmsdale SPS	Welland Pelham Thorold South

6.2 Process Schematics and System Schematics

Process schematics for each of Niagara Region’s wastewater treatment systems are available via the Regional intranet as follows:

- Anger Avenue WWTP Process Schematic ([QMS-WW-FE-V-060](#))
- Baker Road WWTP Process Schematic ([QMS-WW-BR-V-060](#))
- Crystal Beach WWTP Process Schematic ([QMS-WW-CB-V-060](#))
- Garner Road Biosolids Facility Process Schematic ([QMS-WW-GR-V-060](#))
- Niagara Falls WWTP Process Schematic ([QMS-WW-NF-V-060](#))
- Niagara-on-the-Lake WWTP Process Schematic ([QMS-WW-NL-V-060](#))
- Port Dalhousie WWTP Process Schematic ([QMS-WW-PD-V-060](#))
- Port Weller WWTP Process Schematic ([QMS-WW-PW-V-060](#))

- Queenston WWTP Process Schematic ([QMS-WW-QT-V-060](#))
- Stevensville/Douglastown Lagoon Process Schematic ([QMS-WW-SD-V-060](#))
- Seaway WWTP Process Schematic ([QMS-WW-SW-V-060](#))
- Welland WWTP Process Schematic ([QMS-WW-WE-V-060](#))

6.3 System Schematics

Schematics for each of Niagara Region's wastewater collection systems are available via the Regional intranet as follows:

- Anger Avenue WWTP System Schematic ([QMS-WW-FE-V-061](#))
- Baker Road WWTP System Schematic ([QMS-WW-BR-V-061](#))
- Crystal Beach WWTP System Schematic ([QMS-WW-CB-V-061](#))
- Niagara Falls WWTP System Schematic ([QMS-WW-NF-V-061](#))
- Niagara-on-the-Lake WWTP System Schematic ([QMS-WW-NL-V-061](#))
- Port Dalhousie WWTP System Schematic ([QMS-WW-PD-V-061](#))
- Port Weller WWTP System Schematic ([QMS-WW-PW-V-061](#))
- Queenston WWTP System Schematic ([QMS-WW-QT-V-061](#))
- Stevensville/Douglastown Lagoon System Schematic ([QMS-WW-SD-V-061](#))
- Seaway WWTP System Schematic ([QMS-WW-SW-V-061](#))
- Welland WWTP System Schematic ([QMS-WW-WE-V-061](#))

6.4 General Characteristics of Influent

Influent to Niagara Region's wastewater systems is comprised of industrial and residential wastewater. General characteristics of each of Niagara Region's wastewater systems are documented within individual Wastewater System Descriptions (see Table 1, page 8).

6.5 Common Event-Driven Fluctuations, Operational Challenges & Threats

Event-driven fluctuations and resulting operational challenges and threats impacting Niagara Region's wastewater systems are documented within individual Wastewater System Descriptions (see Table 1, page 8).

6.6 Critical Upstream & Downstream Processes

Local area municipalities own and operate collection systems upstream of each of Niagara Region's wastewater systems (as listed in Table 1).

Niagara Region actively participates in source protection initiatives to protect source water for municipal drinking water systems.

7.0 Risk Assessment

A risk assessment procedure has been developed and implemented that:

- Identifies potential hazardous events and associated hazards,
- Assesses the risks associated with the occurrence of hazardous events,
- Ranks the hazardous events according to their level of risk,
- Identifies mitigating measures,
- Identifies a method to verify currency of information,
- Ensures a risk assessment is conducted at least once every three years, and
- Considers the reliability and redundancy of equipment.

[Wastewater System Risk Assessment \(QMS-WW-ALL-P-070\)](#) is available via the Regional intranet.

8.0 Risk Assessment Outcomes

Risk assessment outcomes include identification of hazardous events, associated risk scoring, mitigating measures, and response procedures.

9.0 Organizational Structure, Roles, Responsibilities and Authorities

Water and Wastewater Services is a division of Niagara Region's Public Works Department and serves as the Operating Authority for the Region's wastewater systems and their associated facilities (refer to Section 1.3).

- Our Mission Statement: Through dedicated teamwork and commitment, provide high-quality, safe, and reliable water and wastewater services while practicing good stewardship of resources to benefit present and future generations.
- Our Role: To deliver clean, safe drinking water to the municipal water distribution network and to provide effective wastewater treatment for the community.

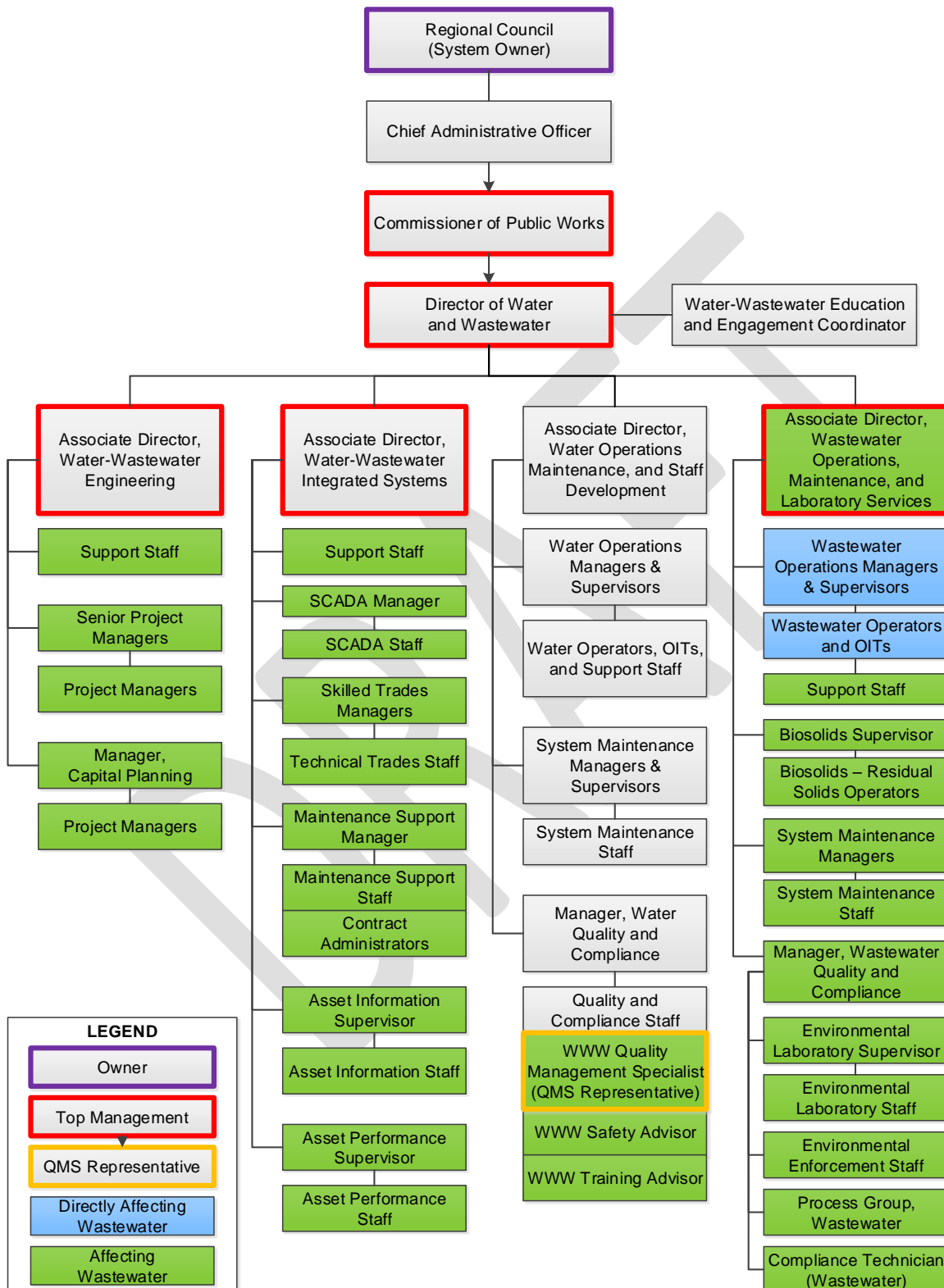
9.1 What We Do

The Water and Wastewater Services Division is made up of a dedicated team of approximately 240 employees working throughout the Niagara Region on the water and wastewater systems. The Division is divided into four working groups:

- Water Operations, Maintenance, and Staff Development;
- Wastewater Operations, Maintenance, and Laboratory Services;
- Water-Wastewater Engineering; and
- Water-Wastewater Integrated Systems.

The organizational structure of the Water and Wastewater Services Division is illustrated in Figure 2 (page 16).

Figure 2: Water and Wastewater Services Division – Organizational Structure



Each of the four working groups within the division has varying levels of responsibility for wastewater effluent quality. Core responsibilities of staff in each group, as well as specific duties for those positions that impact wastewater effluent quality, are identified in Table 2. Table 2 also identifies responsibilities of the System Owner, Top Management and the QMS Representative. (NOTE: Positions that are greyed have been deemed to not directly impact wastewater effluent quality.)

Table 2: QMS Responsibilities and Authorities

Position/Group	Responsibilities	Authorities
Regional Council (System Owner)	<ul style="list-style-type: none"> Act as final decision-making body for Niagara Region Ensure the provision of adequate resources for the operation and maintenance of Niagara Region's collection and wastewater treatment facilities Endorse Niagara Region's WWQMS 	<ul style="list-style-type: none"> Perform listed responsibilities Delegate
Chief Administrative Officer	<ul style="list-style-type: none"> Representative for the Owner, interact with Top Management 	<ul style="list-style-type: none"> Perform listed responsibilities Delegate
Commissioner of Public Works (Top Management)	<ul style="list-style-type: none"> Establish and implement operating policy and procedures, covering execution of department functions Manage Public Works Department in its statutory, operational, custodial and advisory responsibilities Act as a member of the Corporate Management Team Participate in Management Review 	<ul style="list-style-type: none"> Perform listed responsibilities Discipline staff Make engineering decisions Make administrative decisions related to Public Works Delegate
Director of Water and Wastewater (Top Management)	<ul style="list-style-type: none"> Responsible for administration and general management of Water and Wastewater Services Division Ensure wastewater treatment meets federal, provincial and municipal requirements 	<ul style="list-style-type: none"> Perform listed responsibilities Establish Divisional priorities,

Position/Group	Responsibilities	Authorities
	<ul style="list-style-type: none"> – Provide guidance and direction to staff to ensure compliance with provincial standards, and environmental compliance approvals and the promotion of industry best practices for the operation of the wastewater systems – Participate in Management Review – Manage the human and financial resources to ensure efficient and effective operations 	<ul style="list-style-type: none"> control budgets and costs, and work quality – Take appropriate action to ensure health and safety during emergency situations – Delegate
Wastewater Operations and Maintenance		
Associate Director of Wastewater (Affecting Wastewater) (Top Management)	<ul style="list-style-type: none"> – Maintain accountability for execution and direction of all aspects of wastewater system operation and maintenance – Manage Region's wastewater treatment operations to ensure compliance with regulatory requirements and due diligence in daily activities – Demonstrate due diligence in daily activities and keep abreast of relevant legislation and regulations – Ensure adequate health and safety program in place for Wastewater Services – Analyze and develop annual current and capital budgets to ensure that operations are cost effective – Continually review overall function of facilities, personnel, communications, and training to achieve high standard of performance – Direct activities related to public relations, evaluating investigations and preparing reports – Ensure staff/personnel issues are dealt with effectively and in a timely manner – Coordinate employee efforts and respond to emergencies and complaints – Provide leadership for emergency preparedness – Participate in Management Review 	<ul style="list-style-type: none"> – Perform listed responsibilities – Approve purchases in accordance with approved budget and policies and procedures – Discipline and deal with major personnel matters – Suggest modifications to systems and make changes during construction – Recommend purchase of equipment or services involving major expenditures – Delegate

Position/Group	Responsibilities	Authorities
	<ul style="list-style-type: none"> May function as “Overall Responsible Operator (ORO)” as required by Ontario Regulation 129/04 	
Wastewater Operations Manager & Supervisor <i>(Directly Affecting Wastewater)</i>	<ul style="list-style-type: none"> Supervise operation of wastewater treatment plants and regional collection system Control budget for area and procure material and services as needed to ensure efficient operation Ensure due diligence in daily activities and compliance with regulatory requirements Ensure staff follow safe work practices as outlined in health and safety procedures; provide PPE and training as needed Participate in Public relations, evaluate investigations and preparing reports Respond to emergencies and complaints Function as “Overall Responsible Operator (ORO)” as required by O. Reg. 129/04 	<ul style="list-style-type: none"> Perform listed responsibilities Approve purchases in accordance with approved budget and policies and procedures Discipline and deal with minor personnel matters <i>(Managers only)</i> Make suggestions for continual improvement Issue notice of non-compliance Delegate
System Operator and Operator-in-Training (OIT) <i>(Directly Affecting Wastewater)</i>	<ul style="list-style-type: none"> Perform operational functions Maintain written and computer based daily records Perform routine inspections of plant Prepare work orders for repairs to equipment Collect and test wastewater samples to monitor/maintain relevant parameters Serve as “Operator-In-Charge (OIC)”: <ul style="list-style-type: none"> Operators-in-Training must perform some responsibilities at the direction of the System Operator, as required by O. Reg. 129/04 When an OIT is operating, the ORO shall be designated as OIC 	<ul style="list-style-type: none"> Perform listed responsibilities Make suggestions for continual improvement

Position/Group	Responsibilities	Authorities
Biosolids Supervisor (Affecting Wastewater)	<ul style="list-style-type: none"> Supervise operation of biosolids treatment facility and lagoons Control budget for area and procure material and services as needed to ensure efficient operation Ensure due diligence in daily activities and compliance with regulatory requirements Ensure staff follow safe work practices as outlined in health and safety procedures; provide PPE and training as needed Participate in public relations, evaluate investigations and preparing reports Respond to emergencies and complaints 	<ul style="list-style-type: none"> Perform listed responsibilities Approve purchases in accordance with approved budget and policies and procedures Discipline and deal with minor personnel matters Make suggestions for continual improvement Delegate
Biosolids – Residual Solids Operator (Affecting Wastewater)	<ul style="list-style-type: none"> Perform operational functions Maintain written and computer based daily records Prepare work orders for repairs to equipment Collect and test process samples to monitor/maintain relevant parameters 	<ul style="list-style-type: none"> Perform listed responsibilities Make suggestions for continual improvement
Support Staff (Affecting Wastewater)	<ul style="list-style-type: none"> Maintain appropriate control of documents & records Assist with communications, public relations, investigations and report preparation as needed Clerical functions Assist with customer service activities including responding to complaints 	<ul style="list-style-type: none"> Perform listed responsibilities Make suggestions for continual improvement
Wastewater Systems Maintenance Managers (Affecting Wastewater)	<ul style="list-style-type: none"> Direct and supervise Maintenance staff within area during regular, emergency, standby and on-call hours 	<ul style="list-style-type: none"> Perform listed responsibilities Delegate Discipline and deal with minor

Position/Group	Responsibilities	Authorities
	<ul style="list-style-type: none"> – Demonstrate due diligence in daily activities and ensure compliance with relevant regulations and Regional policies – Control budget for area; monitor expenditures and procurement of materials and services – Prepare and modify maintenance schedules to provide for normal maintenance relief, staff training, vacation, lieu time, and sick time – Participate in activities related to public relations, evaluating investigations and preparing reports – Ensure staff follow safe work practices as outlined in health and safety procedures; provide PPE and training as needed – Respond to emergencies and complaints – Scoping, design and construction of projects 	<ul style="list-style-type: none"> personnel matters – Make suggestions for continual improvement
Systems Maintenance Staff (Affecting Wastewater)	<ul style="list-style-type: none"> – Respond to general system maintenance issues – Complete preventive maintenance tasks 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement
Manager of Quality and Compliance, Wastewater (Affecting Wastewater)	<ul style="list-style-type: none"> – Ensure processes are optimized and maintained – Develop and implement quality sampling program as required in a collection system – Ensure staff follow safe work practices as outlined in health and safety procedures; provide PPE and training as needed – Administer environmental enforcement program – Act as Lead Auditor for the ISO 17025 laboratory management system 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement – Discipline and deal with minor personnel matters – Issue notices of non-compliance – Delegate

Position/Group	Responsibilities	Authorities
Environmental Laboratory Supervisor (Affecting Wastewater)	<ul style="list-style-type: none"> – Supervise Environmental Laboratory staff – Control budget for area and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements – Ensure staff follow safe work practices as outlined in health and safety procedures; provide PPE and training as needed 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement – Discipline and deal with minor personnel matters – Delegate
Environmental Laboratory Staff (Affecting Wastewater)	<ul style="list-style-type: none"> – Conduct analytical wastewater and biosolids testing – Follow established protocols for sampling and testing – Provide notification of any exceedances 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement
Environmental Enforcement Staff (Affecting Wastewater)	<ul style="list-style-type: none"> – Determine sampling locations and methods, and collect water or wastewater samples for analysis – Inspect wastewater treatment and disposal facilities and systems for compliance to federal, provincial, and/or local regulations (including Environmental Compliance Approvals) – Examine permits, licences, applications, and records to ensure compliance with licencing requirements – Prepare, organize & maintain inspection records – Monitor follow-up actions in instances where violations were found, and review compliance monitoring reports – Act as relief Operators as required 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement – Recommend notices of non-compliance
Process Engineer, Wastewater (Affecting Wastewater)	<ul style="list-style-type: none"> – Complete process optimization activities 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement

Position/Group	Responsibilities	Authorities
Compliance Technologist, Wastewater (Affecting Wastewater)	<ul style="list-style-type: none"> – Maintain appropriate control of documents and records – Assist with developing and implementing quality sampling programs as required in collection systems – Assist with audits, investigations and preparing reports as needed by Operations – Complete federal external compliance reporting – Apply for approvals and amendments to Environmental Compliance Approvals and to the Environmental Activity and Sector Registry – Complete benchmarking activities 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement
Integrated Systems		
Associate Director, Water-Wastewater Integrated Systems (Top Management)	<ul style="list-style-type: none"> – Ensure support and maintenance of CMMS, SCADA systems and other related technologies – Analyze and develop annual current and capital budgets to ensure continuity of operations and service – Direct activities related to public relations, evaluating investigations, and preparing reports – Demonstrate due diligence in daily activities and keep abreast of relevant legislation and regulations – Ensure staff/personnel issues are dealt with effectively and in a timely manner – Coordinate employee efforts and respond to emergencies and complaints – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Participate in Management Review 	<ul style="list-style-type: none"> – Perform listed responsibilities – Approve purchases in accordance with approved budget and policies and procedures – Discipline and deal with major personnel matters – Suggest modifications to systems and make changes during construction – Recommend purchase of equipment or services involving major expenditures – Delegate

Position/Group	Responsibilities	Authorities
SCADA Manager (<i>Affecting Wastewater</i>)	<ul style="list-style-type: none"> – Manage and administer SCADA resources to achieve divisional goals and objectives – Control budget for area and procure material and services to provide internal and external customers with efficient and cost-effective skilled support – Demonstrate due diligence in daily activities and ensure compliance with relevant regulations and regional policies – Participate in activities related to public relations, evaluating investigations and preparing reports – Respond to emergencies and complaints – Ensure staff follow safe work practices as outlined in health and safety procedures; provide PPE and training as needed – Scoping, design and construction of projects 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement – Delegate
Manager, Technical Trades (<i>Affecting Wastewater</i>)	<ul style="list-style-type: none"> – Manage and administer skilled trades resources to achieve divisional goals and objectives – Control budget for area and procure material and services to provide internal and external customers with efficient and cost-effective skilled support – Demonstrate due diligence in daily activities and ensure compliance with relevant regulations and regional policies – Participate in activities related to public relations, evaluating investigations and preparing reports – Respond to emergencies and complaints – Ensure staff follow safe work practices as outlined in health and safety procedures; provide PPE and training as needed – Scoping, design and construction of projects 	<ul style="list-style-type: none"> – Perform listed responsibilities – Supervise daily activities of Technical Trades staff – Delegate – Make suggestions for continual improvement
Skilled Trades Manager (<i>Affecting Wastewater</i>)	<ul style="list-style-type: none"> – Manage and administer skilled trades resources to achieve Divisional goals and objectives – Control budget for area and procure material and services to provide internal and external customers with efficient and cost-effective skilled support 	<ul style="list-style-type: none"> – Perform listed responsibilities – Supervise daily activities of Electricians, Millwrights,

Position/Group	Responsibilities	Authorities
	<ul style="list-style-type: none"> – Demonstrate due diligence in daily activities and ensure compliance with relevant Regulations and Regional Policies – Ensure staff follow safe work practices as outlined in health and safety procedures; provide PPE and training as needed – Participate in activities related to Public relations, evaluating investigations and preparing reports – Respond to emergencies and complaints – Assist with scoping, design, and construction of projects 	<p>and/or Instrumentation Technicians</p> <ul style="list-style-type: none"> – Delegate – Discipline and deal with minor personnel matters – Make suggestions for continual improvement
Technical Trades Staff (Affecting Wastewater)	<ul style="list-style-type: none"> – Respond to maintenance issues (i.e. electrical problems, SCADA issues, etc.) 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement
Water-Wastewater Maintenance Support Services Manager (Affecting Wastewater)	<ul style="list-style-type: none"> – Manage and administer support resources to achieve divisional goals and objectives – Control budget for area and procure material and services to provide internal and external customer with efficient/cost-effective support – Demonstrate due diligence in daily activities and ensure compliance with relevant regulations and regional policies – Ensure staff follow safe work practices as outlined in health and safety procedures; provide PPE and training as needed – Maintain CMMS program 	<ul style="list-style-type: none"> – Perform listed responsibilities – Discipline and deal with minor personnel matters – Make suggestions for continual improvement
Maintenance Support Staff (CMMS, Clerks) (Affecting Wastewater)	<ul style="list-style-type: none"> – Maintain control of documents and records – Assist with communications, public relations, investigations and preparing reports as needed by Maintenance staff – Complete clerical functions – Assist with customer service activities, including responding to complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement

Position/Group	Responsibilities	Authorities
Contract Administrators (Affecting Wastewater)	<ul style="list-style-type: none"> Review, amend and administer annual contracts for Water-Wastewater Services Prepare authorizations and approvals for contract and bid awards Monitor and supervise maintenance projects 	<ul style="list-style-type: none"> Perform listed responsibilities Make suggestions for continual improvement
Asset Information Supervisor (Affecting Wastewater)	<ul style="list-style-type: none"> Manage and administer Water & Wastewater GIS (Geographic Information Systems) and IMS (Information Management Systems) to achieve Divisional goals and objectives Direct and supervise Asset Information staff Communicate project progress with Management Control budget for area and procure material and services as needed to ensure efficient operation Ensure due diligence in daily activities and compliance with regulatory requirements Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed Participate in public relations, evaluate investigations and preparing reports Respond to emergencies and complaints 	<ul style="list-style-type: none"> Perform listed responsibilities Discipline and deal with minor personnel matters Make suggestions for continual improvement
Asset Information Staff (Affecting Wastewater)	<ul style="list-style-type: none"> Coordinate the locating of sub-surface Water & Wastewater assets Review engineering drawings and resolve discrepancies Tracking and updating asset lifecycle data Assist with the administration of the Water & Wastewater GIS and IMS 	<ul style="list-style-type: none"> Perform listed responsibilities Make suggestions for continual improvement
Asset Performance Management Supervisor (Affecting Wastewater)	<ul style="list-style-type: none"> Direct and supervise Asset Performance staff Manage and administer asset performance resources to achieve Divisional goals and objectives Participate in infrastructure planning and review activities 	<ul style="list-style-type: none"> Perform listed responsibilities Discipline and deal with minor personnel matters

Position/Group	Responsibilities	Authorities
	<ul style="list-style-type: none"> – Communicate project progress with Management – Control budget for area and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Participate in public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints 	<ul style="list-style-type: none"> – Make suggestions for continual improvement
Asset Performance Staff (Affecting Wastewater)	<ul style="list-style-type: none"> – Collect flow measurements, dimensional analysis and visual resources for wastewater systems – Conduct field inspections of assets – Perform emergency locates – Collect spatial coordinates for inclusion into the Water & Wastewater GIS systems – Monitor, maintain and update environmental systems and conduct evaluations for flow and weather – Assist with design and maintenance for new and existing water and wastewater systems 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement
Engineering		
Associate Director, Engineering (Top Management)	<ul style="list-style-type: none"> – Hold accountability for scoping, design and construction of engineering projects connected with Region's water and wastewater systems – Analyze and develop annual current and capital budgets to ensure that operation plans are cost effective – Manage & administer capital project resources to achieve Divisional goals and objectives – Demonstrate due diligence in daily activities and keep abreast of relevant legislation and regulations 	<ul style="list-style-type: none"> – Perform listed responsibilities – Suggest modifications to systems and make changes during construction – Delegate – Discipline and deal with major

Position/Group	Responsibilities	Authorities
	<ul style="list-style-type: none"> – Demonstrate due diligence in daily activities and keep abreast of relevant legislation and regulations – Communicate project progress with other working groups within and outside of Water-Wastewater Services – Direct and supervise Project Management staff – Participate in infrastructure planning and review activities – Participate in Management Review – Participate in public relations, evaluate investigations and preparing reports – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Respond to emergencies and complaints 	<p>personnel matters</p> <ul style="list-style-type: none"> – Make suggestions for continual improvement
Senior Project Manager, Design and Construction (Affecting Wastewater)	<ul style="list-style-type: none"> – Lead the scoping, design and construction of large scale projects related to Region's systems – Infrastructure planning and review – Communicate project progress with Management – Control budget for projects and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements including assisting with the preparation of applications for approvals and amendments with the Ministry of Environment and Climate Change – Participate in infrastructure planning and review activities – Participate in public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints – Assist Project Managers with issues as required 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement

Position/Group	Responsibilities	Authorities
Project Manager, Design and Construction (Affecting Wastewater)	<ul style="list-style-type: none"> – Lead the scoping, design and construction of projects related to Region's systems – Infrastructure planning and review – Communicate project progress with Management – Control budget for area and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements including assisting with the preparation of applications for approvals and amendments with the Ministry of Environment – Participate in infrastructure planning and review activities – Participate in public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement
Manager, Capital Planning (Affecting Wastewater)	<ul style="list-style-type: none"> – Manage and administer infrastructure planning and review to achieve Divisional goals and objectives – Direct and supervise Capital Planning staff – Communicate project progress with Management – Control budget for area and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Participate in public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Discipline and deal with minor personnel matters – Make suggestions for continual improvement
Project Managers, Capital Planning	<ul style="list-style-type: none"> – Lead the scoping, design and construction of projects related to Region's systems – Infrastructure planning and review 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for

Position/Group	Responsibilities	Authorities
(Affecting Wastewater)	<ul style="list-style-type: none"> – Communicate project progress with Management – Control budget for area and procure material and services as needed to ensure efficient operation – Ensure due diligence in daily activities and compliance with regulatory requirements including assisting with the preparation of applications for approvals and amendments with the Ministry of Environment – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Participate in public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints 	continual improvement
Engineering Support Staff (Affecting Wastewater)	<ul style="list-style-type: none"> – Document & Record Control – Assist with communications, Public relations, investigations and preparing reports as needed by Operations – Clerical functions – Assist with Customer Service activities including responding to complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement
Water Operations and Maintenance		
Associate Director, Water Operations, Maintenance, and Staff Development (Top Management)	<ul style="list-style-type: none"> – Maintain accountability for execution and direction of all aspects of drinking water system operation and maintenance – Manage Region's water treatment operations and maintenance to ensure compliance with regulatory requirements and ensure due diligence in daily activities – Demonstrate due diligence in daily activities and keep abreast of relevant legislation and regulations – Ensure adequate health and safety program in place for Water and Wastewater 	<ul style="list-style-type: none"> – Perform listed responsibilities – Approve purchases in accordance with approved budget and policies and procedures – Discipline and deal with major personnel matters

Position/Group	Responsibilities	Authorities
	<ul style="list-style-type: none"> Analyze and develop annual current and capital budgets to ensure that operations are cost effective Continually review overall function of facilities, personnel, communications and training to achieve high standard of performance Direct activities related to public relations, evaluating investigations and preparing reports Ensure staff/personnel issues are dealt with effectively and in a timely manner Coordinate employee efforts and respond to emergencies and complaints Provide leadership for emergency preparedness Participate in Management Review May function as "Overall Responsible Operator (ORO)" as required by O. Reg. 128/04 	<ul style="list-style-type: none"> Suggest modifications to systems and make changes during construction Recommend purchase of equipment or services involving major expenditures Delegate Make suggestions for continual improvement
Water Operations Managers/ Supervisors	<ul style="list-style-type: none"> Supervise operation of water treatment plants and regional transmission system Control area budget; procure material/services as needed to ensure efficient operation Ensure due diligence in daily activities and compliance with regulatory requirements Participate in Public relations, evaluate investigations and preparing reports Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed Respond to emergencies and complaints Function as "Overall Responsible Operator (ORO)" as required by O. Reg. 128/04 	<ul style="list-style-type: none"> Perform listed responsibilities Delegate Discipline and deal with minor personnel matters (<i>Managers only</i>) Make suggestions for continual improvement
System Operator and Operator-in-Training (OIT)	<ul style="list-style-type: none"> Perform operational functions Maintain written and computer based daily records Perform routine inspections of plant Prepare work orders for repairs to equipment Collect and test water samples to monitor/maintain relevant parameters 	<ul style="list-style-type: none"> Perform listed responsibilities Make suggestions for continual improvement

Position/Group	Responsibilities	Authorities
	<ul style="list-style-type: none"> – Serve as “Operator-In-Charge (OIC)”: <ul style="list-style-type: none"> ○ Operators-in-Training must perform some responsibilities at the direction of System Operator, as required by O. Reg. 128/04 ○ When an OIT is operating, the ORO shall be designated as OIC 	
Support Staff	<ul style="list-style-type: none"> – Maintain appropriate control of documents and records – Assist with communications, public relations, investigations and preparing reports as needed by Operations – Clerical functions – Assist with customer service activities, including responding to complaints 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement
Water Systems Maintenance Managers	<ul style="list-style-type: none"> – Direct and supervise Maintenance staff within area during regular, emergency, standby and on-call hours – Demonstrate due diligence in daily activities and ensure compliance with relevant Regulations and Regional Policies – Control budget for area; monitor expenditures and procurement of materials and services – Prepare and modify maintenance schedules to provide for normal maintenance relief, staff training, vacation, lieu time, and sick time – Participate in activities related to public relations, evaluating investigations and preparing reports – Ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed – Respond to emergencies and complaints – Assist in scoping, design and construction of projects 	<ul style="list-style-type: none"> – Perform listed responsibilities – Delegate – Discipline and deal with minor personnel matters – Make suggestions for continual improvement
Systems Maintenance Staff	<ul style="list-style-type: none"> – Respond to maintenance issues (i.e. general systems maintenance, etc.) – May serve as “Operator-In-Charge (OIC)” in the transmission system 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for

Position/Group	Responsibilities	Authorities
		continual improvement
Manager, Water Quality and Compliance	<ul style="list-style-type: none"> – Ensure processes are optimized and maintained – Develop and implement quality sampling program as required in a collection/transmission/distribution system – Act as Lead Auditor – Ensure training program is maintained in order to meet competencies – Ensure staff follow safe work practices as outlined in health and safety procedures; provide PPE and training as needed 	<ul style="list-style-type: none"> – Perform listed responsibilities – Delegate – Make suggestions for continual improvement
Quality & Compliance Staff (Affects Wastewater – selected roles)	<ul style="list-style-type: none"> – Training Program – Health & Safety Program – Technical Support – Process Optimization – Communications and Public Outreach – Compliance Support 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement
W-WW Quality Management Specialist (QMS Rep) (Affecting Wastewater)	<ul style="list-style-type: none"> – See QMS Representative Responsibilities in Operational Plan (Section 4) 	<ul style="list-style-type: none"> – Perform listed responsibilities – Delegate – Make suggestions for continual improvement
W-WW Training Advisor (Affecting Wastewater)	<ul style="list-style-type: none"> – Identify essential and supplementary training needs – Develop and coordinate annual training plan – Maintain training records 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for continual improvement
W-WW Safety Advisor (Affecting Wastewater)	<ul style="list-style-type: none"> – Review operating procedures and emergency preparedness plan and upgrades – Provide safety information and programs to W-WW Division staff – Investigate health and safety incidents 	<ul style="list-style-type: none"> – Perform listed responsibilities – Make suggestions for

Position/Group	Responsibilities	Authorities
		continual improvement
Supervisor, W-WW Development Program (Affecting Wastewater)	<ul style="list-style-type: none"> – Perform assigned supervisory functions – Interact with engineering, maintenance, operations, and biosolids groups – Ensure due diligence in daily activities and compliance with regulatory requirements – Ensure staff follow safe work practices as outlined in health and safety procedures; provide PPE and training as needed – Participate in Public relations, evaluate investigations and preparing reports – Respond to emergencies and complaints – Function “Overall Responsible Operator (ORO)” as required by Ontario Regulation 129/04 	<ul style="list-style-type: none"> – Perform listed responsibilities – Discipline and deal with minor personnel matters – Make suggestions for continual improvement – Delegate

10.0 Competencies

Niagara Region personnel performing duties affecting wastewater effluent must understand the importance of their actions. Furthermore, they must be competent in their jobs and have appropriate education, training, skills and/or experience.

The [Competencies Table \(QMS-ALL-ALL-T-100\)](#) documents competencies required for personnel performing duties affecting wastewater effluent quality.

[Competencies \(QMS-WW-ALL-P-100\)](#) documents activities to develop and maintain the required competencies for personnel performing duties affecting wastewater effluent quality. It also documents activities to ensure that all Operating Authority personnel are aware of the relevance of their duties.

[Competencies \(QMS-WW-ALL-P-100\)](#) and the [Competencies Table \(QMS-ALL-ALL-T-100\)](#) are available via the Regional intranet.

11.0 Personnel Coverage

Niagara Region ensures that sufficient personnel meeting identified competencies are available for duties that affect wastewater effluent quality as documented in [Personnel Coverage \(QMS-WW-ALL-P-110\)](#).

[Personnel Coverage \(QMS-WW-ALL-P-110\)](#) is available via the Regional intranet.

12.0 Communications

Effective communication is essential for ensuring the success of a QMS. [Communications \(QMS-WW-ALL-P-120\)](#) describes how relevant aspects of the QMS are communicated between Top Management and the Owner, Operating Authority personnel, Suppliers and the Public.

[Communications \(QMS-WW-ALL-P-120\)](#) is available via the Regional intranet.

13.0 Essential Supplies and Services

Niagara Region's wastewater systems require a number of essential supplies and services for the effective treatment of wastewater. These supplies and services are categorized as:

- Chemical supplies;
- Laboratory services;
- Calibration services;
- Miscellaneous supplies and services.

Essential supplies and services are identified on the ["Essential Supplies and Services" Vine page](#). Methods to ensure procurement and quality of essential supplies and services are outlined in [Essential Supplies and Services \(QMS-WW-ALL-P-130\)](#).

[Essential Supplies and Services \(QMS-WW-ALL-P-130\)](#) and the ["Essential Supplies and Services" Vine page](#) are both available via the Regional intranet.

14.0 Review, Rehabilitation and Renewal of Infrastructure

[Review, Rehabilitation and Renewal of Infrastructure \(QMS-WW-ALL-P-140\)](#) describes how Niagara Region reviews the adequacy of infrastructure necessary to operate and maintain its wastewater systems. It also details how capitably-funded infrastructure rehabilitation and renewal projects are initiated, approved, and communicated to the Owner.

[Review, Rehabilitation and Renewal of Infrastructure \(QMS-WW-ALL-P-140\)](#) is available via the Regional intranet.

15.0 Infrastructure Maintenance

Niagara Region maintains an effective maintenance program for wastewater system infrastructure. The maintenance program includes planned and unplanned maintenance activities as well as infrastructure renewal and rehabilitation activities that are funded from the current budget. [Maintenance \(QMS-WW-ALL-P-150\)](#) describes the maintenance program, the means to monitor its effectiveness, and how it is communicated to the Owner.

[Maintenance \(QMS-WW-ALL-P-150\)](#) is available via the Regional intranet.

16.0 Sampling, Testing and Monitoring

Sampling, testing and monitoring activities are essential to confirm wastewater effluent quality and to maintain compliance with applicable legislation and regulations. [Sampling, Testing and Monitoring \(QMS-WW-ALL-P-160\)](#) describes these activities and how results are recorded and shared. To support the procedure, a table has been prepared² for each WWTP that outlines sampling, testing, and monitoring activities at the WWTP.

[Sampling, Testing and Monitoring \(QMS-WW-ALL-P-160\)](#) and the supporting tables are available via the Regional intranet.

17.0 Measurement & Recording Equipment Calibration & Maintenance

The measurement and recording equipment used in Niagara Region's wastewater systems is calibrated and maintained according to [Measurement and Recording Equipment Calibration and Maintenance \(QMS-WW-ALL-P-170\)](#).

[Measurement and Recording Equipment Calibration and Maintenance \(QMS-WW-ALL-P-170\)](#) is available via the Regional intranet.

18.0 Emergency Management

Niagara Region takes measures to maintain a state of emergency preparedness for its wastewater systems; to this end, the Region has developed an Emergency Response Plan (ERP) for Water-Wastewater Systems.

² NOTE: Tables have been created for selected WWTPs; the remaining tables are in development. Sampling plans are established and in place for all WWTPs.

The ERP includes response and recovery procedures for potential emergencies that could impact the wastewater process, effluent quality, and/or the environment. The procedures are broken down into emergency activation, emergency response/recovery, and emergency demobilization phases, and each phase outlines the responsibilities of those involved in the required activities. Training and testing requirements are specified in [Emergency Response Plan – Front End \(ERP-ALL-ALL-P-001\)](#). An [Emergency Response Contact List \(ERP-ALL-ALL-T-002\)](#) is also included as part of the ERP Manual.

The ERP Manual is available on the Vine's [Water-Wastewater Services Division Page](#) under “W-WW Emergency Response Plan”.

19.0 Internal Audits

Internal audits add value to Niagara Region’s operations by providing feedback about the Wastewater QMS and its effectiveness. [Internal Auditing \(QMS-WW-ALL-P-190\)](#) describes:

- How to evaluate the conformity of Niagara Region’s QMS with the requirements of the Standard;
- Audit criteria, frequency, scope, methodology and record keeping requirements;
- How previous internal and external audit results are considered; and
- How corrective actions are identified and initiated (see Section 21.0 of this Operational Plan).

[Internal Auditing \(QMS-WW-ALL-P-190\)](#) is available via the Regional intranet.

20.0 Management Review

To ensure the continuing suitability, adequacy and effectiveness of the Wastewater QMS, an annual Management Review is performed according to [Management Review \(QMS-WW-ALL-P-200\)](#).

[Management Review \(QMS-WW-ALL-P-200\)](#) is available via the Regional intranet.

21.0 Continual Improvement

Niagara Region maintains and continually improves the QMS through annual internal audits, management reviews, process optimization projects, and staff development activities:

- Non-conformances and opportunities for improvement are identified and reported through the QMS *internal audit process*. Corrective actions are then initiated to resolve and eliminate the non-conformances.
- Deficiencies identified as part of the annual *management review* are discussed, and action plans are created to improve the QMS.
- Many of Niagara Region's *process optimization projects* are initiated from benchmarking results. Benchmarking involves the analysis of performance measures across Niagara's wastewater systems. These results are used to identify best practices and prioritize areas for improvement.
- Niagara Region staff play a critical role in the implementation and improvement of the QMS. We are committed to providing effective *staff development* opportunities (e.g. courses, workshops, on the job training, etc.) in an effort to continually improve our operations.

[Corrective Action \(QMS-WW-ALL-P-210\)](#) documents how corrective actions are used to continually improve the QMS. The procedure is available via the Regional intranet.

22.0 Table of Revisions:

Revision	Date	Description of Revision	Updated By
0	Jun. 30, 2015	Operational Plan created and endorsed. <i>Endorsed by Regional Council.</i>	Jen Croswell
1	Jan. 7, 2016	Revisions to: <ul style="list-style-type: none"> Section 3 (Commitment and Endorsement): Revised how written records of commitment and endorsement are obtained and updated Section 9 (Organizational Structure, Roles, Responsibilities and Authorities): <ul style="list-style-type: none"> Removed Environmental Enforcement from directly affecting wastewater and changed to affecting wastewater Added the Associate Director Engineering to Top Management (Water OFI 2015-002-Internal) Expanded Laboratory Staff to Environmental Laboratory Supervisor and Environmental Laboratory staff Included additional responsibilities in regards to “scoping, design and construction of projects” maintenance manager positions (Water OFI-14-02) Added authority for WW Operations Managers for reporting of non-compliance Minor administrative revisions throughout <i>Endorsed by the Commissioner of Public Works via authority delegated by Council.</i>	Jen Croswell
2	<DATE>	Revisions: <ul style="list-style-type: none"> Updated position titles throughout document to reflect the Divisional reorganization (2016) and the results of the non-union job evaluation process (2016). Updated document IDs throughout document to reflect changes in document numbering system. Updated hyperlinks to supporting documents as required. 	Rachel Whyte

Revision	Date	Description of Revision	Updated By
		<ul style="list-style-type: none"> Section 6 (Wastewater System Descriptions): <ul style="list-style-type: none"> Updated “Table 1: Niagara Region’s Wastewater Systems” to include all Region-owned and/or operated sewage pumping stations, including assumption of ownership of Marina 1, 2, 3 stations from the City of Port Colborne. Section 9 (Organizational Structure, Roles, Responsibilities and Authorities): <ul style="list-style-type: none"> Revised text (“What We Do”) and “Figure 2: Water and Wastewater Services Division – Organizational Structure” to reflect the Divisional reorganization. Added the Associate Director, Integrated Systems to Top Management as per the Divisional reorganization. Reorganized “Table 2: QMS Responsibilities and Authorities” to reflect the new organizational structure following the Divisional reorganization. Reworded Manager and Supervisor responsibilities for health and safety to “ensure staff follow safe work practices as outlined in Health and Safety procedures; provide PPE and training as needed” Minor administrative revisions and reformatting throughout document. <p><i>Endorsed by Regional Council.</i></p>	

STANDARD OF CARE

It's your duty.



BE INFORMED. BE VIGILANT.

Elected officials have an important role to play in ensuring Niagara communities have access to safe, high quality drinking water. You are legally obligated to do so.

To help you understand your responsibilities, Walkerton Clean Water Centre will be delivering a Standard of Care training course at Regional Headquarters.

WHO	Regional and municipal elected officials in Niagara
WHEN	Tuesday, March 19, 2019 6:30 - 9:30 p.m
WHAT	A tailored-training course designed to inform you of your oversight responsibilities under Section 19 of the Safe Drinking Water Act, and the severe penalties for those who fail to exercise vigilance towards the protection and safety of our drinking water system and its users.
WHERE	Council Chambers Niagara Region Headquarters 1815 Sir Isaac Brock Way Thorold, ON L2V 4T7
RSVP	<p>Carrie Brunet, training advisor, water and wastewater services at carrie.brunet@niagararegion.ca.</p> <p>A live-stream of the training session will be made available for those unable to attend in person.</p> <p>Certificates of completion are unable to be provided for the live-stream training method.</p>

Your response by Mar. 13 is appreciated.

Subject: Base and Enhanced Services for Next Collection Contract

Report to: Public Works Committee

Report date: Tuesday, March 19, 2019

Recommendations

1. That, based on the results of consultations with the various stakeholder groups, including the Local Area Municipalities (LAMs), the Request for Proposal (RFP) for Niagara Region's next garbage, recycling and organics collection contract **BE APPROVED** to include the following base collection options:
 - a) Obtain pricing for the following garbage collection frequency options:
 - i) Every-other-week (EOW) garbage collection for all residential properties and for those Industrial, Commercial & Institutional (IC&I) and Mixed-Use (MU) properties located outside Designated Business Areas (DBAs), as a base service (weekly recycling and organics to continue, and current garbage container (bag/can) limits would double for affected sectors, on an EOW basis), and
 - ii) Status quo – weekly base garbage collection service for all residential, IC&I and MU properties. Current garbage container limits would not change.
 - b) Establish a four (4) item limit per residential unit, per collection, for large item collection at Low-Density Residential (LDR) properties, as a base service.
 - c) Obtain pricing to discontinue and continue appliances and scrap metal curbside collection at LDR properties, as a base service.
 - d) Change the weekly garbage container (bag/can) limits for Industrial, Commercial & Institutional (IC&I) and Mixed-Use (MU) properties located inside Designated Business Areas (DBAs) from seven (7) containers to four (4) containers per property, as a base service.
 - e) Change the weekly garbage container (bag/can) limit for MU properties located outside DBAs from six (6) containers to four (4) containers per property, as a base service.
2. That mandatory use of clear garbage bags, with the option of allowing an opaque privacy bag to be placed inside the clear bag, **NOT BE IMPLEMENTED** for all sectors, as a base service, at this time;

3. That the enhanced collection services requested by the LAMs and identified in this report **BE INCLUDED** in Niagara Region's next garbage, recycling and organics collection contract RFP;
4. That a follow-up report **BE SUBMITTED** to Public Works Committee with recommendations for weekly versus EOW garbage collection and continuing versus discontinuing appliances and scrap metal curbside collection following receipt of pricing for these options in next collection contract RFP submissions; and
5. That Report PW 20-2019 and Council's resolutions **BE CIRCULATED** to the LAMs for their information.

Key Facts

- The purpose of this report is to seek Council's approval of the base collection services and identification of the enhanced services to be included in Niagara Region's next collection contract RFP.
- In addition to the stakeholder consultation and engagement process undertaken in Q3/4 2018, Niagara Region made presentations to each of the twelve (12) LAM Committees or Councils on the proposed base collection options and their enhanced collection services in Q1 2019.
- The majority of LAMs supported the proposed base collection options (see summary of the LAM positions in Appendix 1 and LAM resolutions in Appendix 2 of this report).
- Niagara Region also consulted with the Region's Accessibility Advisory Committee (AAC) representative to obtain input with respect to how these service delivery changes might impact communities of people who live with various disabilities (see Appendix 3 of this report for AAC's resolution).

Financial Considerations

It is estimated that without any changes to the existing collection service levels to be provided in Niagara Region's next contract, the annual contract cost could be greater than \$25 million in 2021. This is based on an average of the bids received for the current collection contract, plus annual escalation of 1.9%. Factors such as, but not limited to, the increase in minimum wage and driver shortages will more than likely impact pricing.

The primary financial implications of implementing the proposed recommendations include:

- Final consideration of inclusion of EOW garbage collection in the next collection contract would occur after pricing is received for this option. As a point of reference:
 - In response to Niagara Region's last collection contract RFP, excluding one submission anomaly, on average bidders priced a cost reduction of approximately \$1.2 million annually for EOW garbage collection.

- Region of Waterloo's implementation of EOW garbage collection in their 2017 contract resulted in an annual contract savings of approximately \$1.5 million.
- Elimination of Niagara Region's annual contract cost to provide appliance and scrap metal curbside collection, which currently is approximately \$130,000, should Niagara Region decide to discontinue this service.
- Incremental cost avoidance for the proposed weekly large item and garbage container limit changes, which would likely be offset by incremental increases in the organics and recycling collection costs, based on anticipated increased participation in diversion programs.
- Extended site life for open Regional landfills, and more revenue generating capacity from the reduction of divertible materials being landfilled by residents and other service users who are participating in the curbside recycling and organics collection programs.
- Cost avoidance/cost reduction in the landfill contract with Walker Environmental due to an increase in the diversion of waste from disposal. This may be offset by increased tonnages of food and organic waste collected at the curb from improved participation and capture rates, which would result in increased processing contract costs, unless the tonnages are reduced through food waste avoidance and other reduction initiatives.
- Reduction of organics being landfilled will result in three financial and environmental benefits:
 - Less methane emission, which reduces the landfill carbon footprint for climate change reduction.
 - Improved leachate quality, which lessens the potential for environmental impact.
 - Overall, there will be a long-term cost reduction with care and control of these landfill sites. Based on the Region's Landfill Liability Model, the contaminating life and monitoring would be reduced by approximately five (5) years, and thus produce an estimated annual savings for the two Regional landfill sites of \$1.3 million.

Analysis

A) BACKGROUND

At its January 17, 2019 meeting, Regional Council approved Report PW 3-2019 – Proposed Base Services for Next Collection Contract. All of the recommendations contained within this report were approved, with the following two (2) amendments, and the additional request that staff obtain input from Niagara Region's AAC:

- i) Mandatory Use of Clear Garbage Bags – Staff recommended to not include clear garbage bags in the RFP, but instead it was added as an option for consideration.
- ii) Discontinuation of Appliances and Scrap Metal Collection - Staff recommended to discontinue appliances and scrap metal collection, but instead it was decided to include, for pricing, in the next collection RFP.

A copy of Report PW 3-2019 and Council's resolutions were circulated to the LAMs on January 22, 2019, for their review and comments. A copy of Metroline's stakeholder consultation report was circulated to the LAMs on February 8, 2019, for their information.

Niagara Region made presentations to each of the twelve (12) LAM Committees or Councils on the proposed base collection options and their enhanced collection services, between December 17, 2018 and February 13, 2019. Formal LAM comments were requested by February 20, 2019.

Appendix 1 includes a summary of the LAM positions on the proposed base collection options. Appendix 2 includes the detailed LAM Council resolutions, which were received by Niagara Region, as of February 26, 2019.

Niagara Region also consulted with the Region's AAC representative to obtain input with respect to how these service delivery changes might impact communities of people who live with various disabilities. Appendix 3 includes the resolution that was passed at the AAC meeting, on January 22, 2019.

B) PROPOSED BASE COLLECTION SERVICES

The proposed base collection options were circulated to the LAMs and the AAC, for their review and comments. Based on input received and the benefits and other implications associated with each proposed service option, which are outlined below, all options are recommended for inclusion in the Niagara Region's next collection contract RFP, with the exception of mandatory clear bags for garbage.

- i) Obtain pricing for the following garbage collection frequency options:
 - a) Every-other-week (EOW) garbage collection for all residential properties and for those Industrial, Commercial & Institutional (IC&I) and Mixed-Use (MU) properties located outside Designated Business Areas (DBAs), as a base service (weekly recycling and organics to continue, and current garbage container (bag/can) limits would double for affected sectors, on an EOW basis).
 - Key Rationale:
 - Extend existing landfill site capacity
 - Contract cost avoidance
 - Increase participation and capture rates in Region's diversion programs:
 - Nearly 50% of Niagara's LDR garbage bag contains organic waste and only 48% of Niagara's LDR households use the Green Bin program.
 - IC&I and MU audits show the recycling and organics diversion programs are underutilized. Only 34% of IC&I and 61% of MU properties outside DBA participate in the recycling program. Only 11% of IC&I and 20% of MU properties outside DBA participate in the organics program.
 - Summary of LAM Positions:
 - Seven (7) LAM Councils (Fort Erie, Grimsby, Lincoln, Pelham, Port Colborne, Thorold, Welland) voted to support EOW garbage collection.

- Four (4) LAM Councils (Niagara Falls, Niagara-on-the-Lake (NotL), Wainfleet, West Lincoln) voted to not support EOW garbage collection.
- One (1) LAM Council (St. Catharines) voted only to receive the proposed option for EOW garbage collection.
- Summary of AAC Position:
 - The AAC identified a number of odour/health and safety concerns related to EOW garbage collection for those individuals living with various disabilities, some of which may be managed through the special set-out service. These are included, in more detail, in Appendix 3 of this report and staff will be following up with suggestions to AAC to help mitigate concerns.
- Other Municipality Experiences:
 - Approximately 70% of Niagara Region's thirteen (13) municipal comparators (Barrie, Durham, Halton, Markham, Ottawa, Toronto, Vaughan, Peel and Waterloo) provide EOW garbage collection service. Their residents have adapted to this change.
 - Municipalities reported waste diversion rate increases between 6% (Peel) and 16% (Durham). This diversion rate increase depended on whether the municipality introduced other diversion programs (i.e. organics) at the same time as EOW garbage.
 - Municipalities reported annual contract savings between \$200,000 (Barrie), Waterloo (\$1.5 million), and \$12 million (Peel), depending on size of the contract and any other contract changes that were implemented (i.e. EOW, carts, etc.)
 - However, Peel staff reported a one-time initial cost to implement three-stream cart collection of \$35 million (based on 325,000 single-family homes), with an estimated annual maintenance and replacement cost of \$1 to 3 million.
 - Experiences in other municipalities (i.e. Barrie, Durham, Halton, Markham, Ottawa, Peel, Toronto and Waterloo) have found that, generally speaking, switching over to EOW garbage collection did not contribute to any significant increases in illegal dumping, or increases in rodents, provided residents use their Green Bin and store their waste properly. Additional observations from Peel include:
 - A decrease in rodent complaints occurred after switching to EOW garbage collection. Participation in the organics program increased and the organic material that attracts the rodents is usually found in that cart, which is collected weekly. If residents did call in about rodents, the first question asked was if they were using their organics cart; 9 of 10 times they were not, and those calls are rarely received anymore.
 - A high number of illegal dumping calls do not occur, and it did not increase after the new EOW program.
 - Municipalities reported that some residents/businesses initially complained about the reduction in garbage collection frequency, but these complaints did not persist more than a few months.

- Telephone and Online Survey Results:
 - Based on the results of these surveys (refer to Figure 1 below), 48% (telephone) and 58% (online) of LDR households feel there would be at least “some” impact if Niagara Region switched to EOW garbage collection.
 - 45% (telephone) and 33% (online) of LDR households feel there would little to no impact to their household, if Niagara Region switched to EOW garbage collection.
 - *Conclusion: Residents are fairly evenly split on how EOW garbage collection would impact their household.*

Figure 1: Impact of Implementing Every Other Week Garbage Collection at LDR Households, by Survey Type

Low Density Residential Households	Telephone (n=1,253)	Online (n=6,639)
A big impact	27%	37%
Some impact	21%	21%
Might or might not be an impact	7%	9%
Not much of an impact	19%	17%
No impact	26%	16%
Impact Ratio (big/some vs. not much/no impact)	+3%	+25%

- Based on the results of the online survey (refer to Figure 2 below), 74% of businesses (i.e. IC&I and MU properties) outside DBAs feel there would be at least “some” impact if Niagara Region switched to EOW garbage collection.
- 17% of businesses outside DBAs feel there would little to no impact, if Niagara Region switched to EOW garbage collection.
- 72% of IC&I and 55% of MU properties outside DBAs put out four (4) garbage containers per week or less.
- 94% of IC&I and 100% of MU properties outside DBAs indicate that they are participating in the recycling program.
- Only 20% of IC&I and 43% of MU properties outside DBAs indicate that they are participating in organics program.
- *Conclusion: Businesses outside the DBAs have a perceived need to continue having weekly garbage collection, however they are not fully utilizing their diversion programs.*

Figure 2: Impact of Implementing Every Other Week Garbage Collection at IC&I and MU Properties Outside DBAs, by Survey Type

IC&I and MU Properties Outside DBAs	Total Online (n=86)	IC&I Online (n=35)	MU Online (n=51)
A big impact	52%	43%	66%
Some impact	22%	26%	17%
Might or might not be an impact	8%	10%	6%
Not much of an impact	8%	10%	6%
No impact	9%	12%	6%
Impact Ratio (big/some vs. not much/no impact)	+57%	+47%	+71%

- b) Status quo – weekly base garbage collection service for all residential, IC&I and MU properties. Current garbage container limits would not change.
- ii) Mandatory use of clear bags for garbage, with the option of allowing an opaque privacy bag to be placed inside the clear bag, for all sectors (both inside and outside DBAs).
- Key Rationale:
 - Extends existing landfill site capacity
 - Increases waste diversion
 - Summary of LAM Positions:
 - Six (6) LAM Councils (Fort Erie, Grimsby, Pelham, Thorold, Welland, Wainfleet) voted to support mandatory use of clear garbage bags.
 - Five (5) LAM Councils (Lincoln, Niagara Falls, NotL, Port Colborne, West Lincoln) voted to not support mandatory use of clear garbage bags.
 - One (1) LAM Council (St. Catharines) voted only to receive the proposed option for mandatory use of clear garbage bags.
 - Summary of AAC Position:
 - The AAC identified a number of privacy and safety concerns related to the mandatory use of clear garbage bags for those individuals living with various disabilities. These are included, in more detail, in Appendix 3 of this report.
 - As a result, the AAC passed the motion to recommend to Waste Management staff that the mandatory use of clear garbage bags not be included as part of the waste collection service delivery changes for the next collection contract.
 - Other Municipality Experiences:
 - Implementing clear bags resulted in a 6% increase in Markham's 2014 diversion rate, for a total diversion rate of 81%.
 - Markham reported that due to the clear bag program:
 - Residents are motivated to recycle due to social pressure.
 - Awareness is increased of what is placed in their garbage, due to visibility of bag contents.

- Eliminates (or minimizes) the option of residents concealing hazardous or non-acceptable materials (e.g. Recyclables, organics) in the garbage.
- Existing landfill disposal capacity is preserved.
- Markham reported that:
 - Some residents using clear bags initially complained that using clear bags was an invasion of their privacy. Markham addressed this concern by allowing residents to place up to four small opaque bags inside the clear bag for sensitive items. Markham reported this is not an issue with residents.
 - Staff did not detect any instances of illegal dumping in their public parks or boulevards.
 - Clear garbage bags do not lead to more issues with rodents, provided residents are properly diverting organic waste into the Green Bin.
- Markham confirmed that clear garbage bags do not cost any more than opaque garbage bags and are available in various sizes at stores.
- Telephone and Online Survey Results:
 - Based on the results of these surveys (refer to Figure 3 below), 48% (telephone) and 27% (online) of LDR households indicated “some” support if Niagara Region switched to mandatory use of clear garbage bags.
 - 38% (telephone) and 62% (online) of LDR households indicated little to no support, if Niagara Region switched to mandatory use of clear garbage bags.
 - *Conclusion: While there is some support for mandatory use of clear garbage bags, those residents opposed were quite vocal about their concerns (i.e. invasion of privacy, garbage police, etc.).*

Figure 3: Support for Implementing Mandatory Clear Garbage Bags at LDR Households, by Survey Type

Low Density Residential Households	Telephone (n=1,253)	Online (n=6,639)
Definitely would support	26%	13%
Probably would support	22%	14%
Might or might not support	14%	11%
Probably would not support	14%	16%
Definitely would not support	24%	46%
Support Ratio (definitely/probably vs. probably would not/definitely would not support)	+10%	-35%

- Based on the results of the online survey (refer to Figure 4 below), 40% of businesses (i.e. IC&I and MU properties) indicated “some” support if Niagara Region switched to mandatory use of clear garbage bags.
- 47% of businesses indicated little to no support, if Niagara Region switched to mandatory use of clear garbage bags.

- *While there is some support for mandatory use of clear garbage bags, those businesses opposed were quite vocal about their concerns (i.e. invasion of privacy, garbage police, etc.).*

Figure 4: Support for Implementing Mandatory Clear Garbage Bags at IC&I and MU Properties Inside and Outside DBAs, by Survey Type

IC&I and MU Properties	Total Online (n=166)	IC&I Properties		MU Properties	
		Inside DBA (n=37)	Outside DBA (n=51)	Inside DBA (n=43)	Outside DBA (n=35)
Definitely would support	21%	14%	28%	23%	17%
Probably would support	19%	22%	22%	19%	14%
Might or might not support	13%	18%	12%	9%	6%
Probably would not support	16%	16%	14%	16%	20%
Definitely would not support	31%	30%	24%	33%	43%
Support Ratio (definitely/probably support vs. would not support)	-7%	-10%	+2%	-3%	-32%

- iii) Establish a four (4) item limit per residential unit, per collection, for large item collection at LDR properties.
 - Key Rationale:
 - Contract cost avoidance for services with limited usage:
 - 93% of properties using the large item service set out four (4) items or less and 92% of the total bookings were for four (4) or less items.
 - The proposed four (4) item limit will meet the set-out needs, as most Niagara residents set-out an average of less than two (2) items per collection.
 - Summary of LAM Positions:
 - Eleven (11) LAM Councils (Fort Erie, Grimsby, Lincoln, Niagara Falls, NotL, Pelham, Port Colborne, Thorold, Wainfleet, Welland, West Lincoln) voted to support the establishment of a four (4) item limit, per collection, for large items
 - There weren't any LAM Councils that voted to not support the establishment of a four (4) item limit, per collection, for large items.
 - One (1) LAM Council (St. Catharines) voted only to receive the proposed option for the establishment of a four (4) item limit, per collection, for large items.
 - Other Municipality Experiences:
 - Average large item limit is three (3) per residential unit for those municipalities with weekly collection (i.e. Essex-Windsor, Hamilton, Simcoe), and four (4) per residential unit with bi-weekly collection (i.e. Durham, Halton, Markham, Toronto, Peel, Ottawa, Vaughan, Waterloo).

- Municipalities that implemented collection limits on the number of large items reported contract savings. These savings could not be isolated.
- No municipalities identified any resident challenges or concerns with having limits on their large item collection.
- Telephone and Online Survey Results:
 - Based on the results of these surveys (refer to Figure 5 below), 6% (telephone) and 13% (online) of LDR households feel there would be at least “some” impact if Niagara Region established a four (4) large item limit, per collection.
 - 89% (telephone) and 72% (online) of LDR households feel there would little to no impact to their household, if Niagara Region established a four (4) large item limit, per collection.
 - *Conclusion: Implementing a four (4) large item limit, per collection, will not unduly impact Niagara region’s LDR households.*

Figure 5: Impact of Establishing a Four (4) Large Item Limit, per Collection, at LDR Households, by Survey Type

Low Density Residential Households	Telephone (n=1,253)	Online (n=6,639)
A big impact	2%	5%
Some impact	4%	8%
Might or might not be an impact	5%	15%
Not much of an impact	25%	27%
No impact	64%	45%
Impact Ratio (big/some vs. not much/no impact)	-83%	-59%

- iv) Obtain Pricing to Discontinue and Continue Curbside Appliances and Scrap Metal Collection at LDR properties.
 - Key Rationale:
 - Contract cost avoidance for services with limited usage:
 - Tonnages have decreased by 94% since 2007.
 - Items can be recycled, at no cost, at the Region’s Drop-off Depots, or by scrap metal haulers/dealers.
 - Only 5% of properties are using this service.
 - Many of these items are scavenged before the Region’s collection contractor is able to collect them.
 - Summary of LAM Positions:
 - Eight (8) LAM Councils (Fort Erie, Grimsby, Lincoln, Pelham, Port Colborne, Thorold, Welland, West Lincoln) voted to support the discontinuation of curbside appliances and scrap metal collection.
 - Three (3) LAM Councils (Niagara Falls, NotL, Wainfleet) voted to not support the discontinuation of curbside appliances and scrap metal collection.
 - One (1) LAM Council (St. Catharines) voted only to receive the proposed option for discontinuing curbside appliances and scrap metal collection.

- Other Municipality Experiences:
 - Approximately 50% of Niagara Region's thirteen (13) municipal comparators (Barrie, Hamilton, London, Ottawa, Peel and Windsor) do not provide appliance collection service.
 - Municipalities reported that many appliances and scrap metal items were scavenged before their collection contractor could collect them.
 - Municipalities that eliminated this collection service realized a contract savings. In Peel, this was a net annual savings of \$100,000.
 - If residents are not provided with service, there is potential to illegally dump items:
 - Barrie reported an increase in illegal dumping when bulky/white goods collection service was discontinued; however it was not sustained beyond approximately six (6) months.
 - Peel provided its residents with advanced notice of this discontinuation of service and options for collection, so they did not see any significant increase in illegal dumping.
 - Residents may complain about the elimination of this service:
 - Those municipalities that discontinued collection (i.e. Barrie, Hamilton, Ottawa and Peel) reported minimal reaction from their residents. These municipalities provided their residents with other collection options for these items (i.e. drop-off depots, calling a scrap metal hauler, etc.).
- Telephone and Online Survey Results:
 - Based on the results of these surveys (refer to Figure 6 below), 16% (telephone) and 22% (online) of LDR households feel there would be at least "some" impact if Niagara Region discontinued appliance/scrap metal collection.
 - 75% (telephone) and 61% (online) of LDR households feel there would be little to no impact to their household, if Niagara Region discontinued appliance/scrap metal collection.
 - *Conclusion: Discontinuing appliance/scrap metal collection will not unduly impact Niagara region's LDR households.*

Figure 6: Impact of Discontinuing Appliance/Scrap Metal Collection at LDR Households, by Survey Type

LDR Households	Telephone (n=1,253)	Online (n=6,639)
A big impact	7%	8%
Some impact	9%	14%
Might or might not be an impact	9%	17%
Not much of an impact	25%	27%
No impact	50%	34%
Impact Ratio (big/some vs. not much/no impact)	-59%	-39%

- v) Change the weekly garbage container (bag/can) limits for IC&I and MU properties located inside DBAs from seven (7) containers to four (4) containers per property.
- Key Rationale:
 - Standardize base garbage collection limits across similar sectors to improve service delivery and program communication, increase participation and capture rates in diversion programs, potentially avoid contract costs for a service level which is not needed:
 - Average number of garbage containers placed out per week at IC&I and MU properties inside DBAs is two (2).
 - 67% of IC&I and 62% of MU properties inside DBAs are participating in the recycling program. Only 14% of IC&I and 20% of MU properties inside DBAs are participating in organics program.
 - Summary of LAM Positions:
 - Ten (10) LAM Councils (Fort Erie, Grimsby, Lincoln, NotL, Pelham, Port Colborne, Thorold, Wainfleet, Welland, West Lincoln) supported changing the weekly garbage container limits for IC&I and MU properties inside DBAs from seven (7) to four (4).
 - One (1) LAM Council (Niagara Falls) voted to not support changing the weekly garbage container limits for IC&I and MU properties inside DBAs from seven (7) to four (4).
 - One (1) LAM Council (St. Catharines) voted only to receive the proposed option for changing the weekly garbage container limits for IC&I and MU properties inside DBAs from seven (7) to four (4).
 - Online Survey Results:
 - Based on the results of the online survey (refer to Figure 7 below), 44% of businesses (i.e. IC&I and MU properties) inside DBAs feel there would be at least “some” impact if Niagara Region reduced the weekly garbage container limit from seven (7) to four (4).
 - 44% of businesses inside DBAs feel there would be little to no impact if Niagara Region reduced the weekly garbage container limit from seven (7) to four (4).
 - *Conclusion: While the sample size is small, it appears that businesses would be able to manage a reduction from seven (7) to four (4) garbage containers per week.*

Figure 7: Impact of Reduction to Weekly Garbage Container Limit for IC&I and MU Properties Inside DBAs from Seven (7) to Four (4) Containers, by Survey Type

IC&I and MU Properties Inside Designated Business Areas	Online (n=43)
A big impact	35%
Some impact	9%
Might or might not be an impact	12%

IC&I and MU Properties Inside Designated Business Areas	Online (n=43)
Not much of an impact	16%
No impact	28%
Impact Ratio (big/some vs. not much/no impact)	0%

- vi) Change the weekly garbage container limit for MU properties located outside DBAs from six (6) containers to four (4) containers per property.
- Key Rationale:
 - Standardize base garbage collection limits across similar sectors to improve service delivery and program communication, increase participation and capture rates in diversion programs, potentially avoid contract costs for a service level which is not needed:
 - Average number of garbage containers placed out per week at MU properties outside DBAs is less than two (2).
 - MU audits show low participation rate in Region's diversion programs. Only 61% of MU properties participate in the recycling program, and 20% of MU properties participate in the organics program.
 - Summary of LAM Positions:
 - Ten (10) LAM Councils (Fort Erie, Grimsby, Lincoln, NotL, Pelham, Port Colborne, Thorold, Wainfleet, Welland, West Lincoln) voted to support changing the weekly garbage container limits for MU properties outside DBAs from six (6) to four (4).
 - One (1) LAM Council (Niagara Falls) voted to not support changing the weekly garbage container limits for MU properties outside DBAs from six (6) to four (4).
 - One (1) LAM Council (St. Catharines) voted only to receive the proposed option for changing the weekly garbage container limits for MU properties outside DBAs from six (6) to four (4).
 - Online Survey Results:
 - Based on the results of the online survey (refer to Figure 8 below), 60% of MU properties outside DBAs feel there would be at least "some" impact if Niagara Region reduced the weekly garbage container limit from six (6) to four (4).
 - 35% of MU properties outside DBAs feel there would be little to no impact if Niagara Region reduced the weekly garbage container limit from six (6) to four (4).
 - *Conclusion: While the sample size is small, it appears that MU properties outside DBAs would be challenged to manage a reduction from six (6) to four (4) garbage containers per week.*

Figure 8: Impact of Reduction to Weekly Garbage Container Limit for MU Properties Outside DBAs from Six (6) to Four (4) Containers, by Survey Type

MU Properties Outside Designated Business Areas	Online (n=35)
A big impact	46%

MU Properties Outside Designated Business Areas	Online (n=35)
Some impact	14%
Might or might not be an impact	6%
Not much of an impact	6%
No impact	29%
Impact Ratio (big/some vs. not much/no impact)	+25%

C) ENHANCED COLLECTION SERVICES

The enhanced collection services requested by the LAMs are outlined in Appendix 4 of this report and are summarized below:

- The majority of LAMs (Fort Erie, Grimsby, Lincoln, NotL, Pelham, Port Colborne, St. Catharines, Welland, West Lincoln) support inclusion of provisional pricing for large item collection (parallel to the service approved for LDR properties) to those households in MR buildings with seven (7) or more residential units and MU properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front-end garbage collection service, subject to their approval.
- Two (2) LAMs (Pelham, St. Catharines) are requesting provisional per-stop pricing for in-ground collection of public space recycling and litter containers at IC&I, MU and/or MR properties, subject to their approval.
- All twelve (12) LAMs are requesting pricing for the continuation of their existing enhanced collection services, subject to their approval.
- Another three (3) LAMs (NotL, St. Catharines, Thorold) are requesting provisional pricing for additional enhanced collection services for their DBAs (i.e. additional waste or organics collection frequency, and changes to the garbage container limits) subject to their approval.

D) NEXT STEPS

The milestones for the collection contract RFP development are outlined below:

- i) Council approval of service levels to be included and RFP development initiated (Q1 to Q2 2019);
- ii) RFP issuance (Q4 2019);
- iii) Award of new collection contract (Q1 2020);
- iv) One year for successful bidders to order/receive their fleet of collection vehicles (Q1 2020 to Q1 2021);
- v) Start of new contract (March 8, 2021).

Further detail on the RFP timelines is included in PWC-C 8-2019.

Alternatives Reviewed

A) CART-BASED COLLECTION

Motions were received from two (2) LAM councils (Thorold and St. Catharines) requesting consideration of alternative recycling containers to reduce the amount of wind blown litter and use of a wheeled cart collection system, parallel to that implemented in the City of Toronto, in the next RFP. The full motions are documented in Appendix 2.

Niagara Region has been investigating the option of lids for recycling boxes. The results of this research are included in report WMPSC-C 11-2019 – Closed-Top Recycling Containers.

Niagara Region also previously investigated the option of switching over to cart-based collection for the next collection contract, considering the benefits of:

- i) Reduced wind-blown litter
- ii) Improved contractor collection times (i.e. automated cart collection can service up to 180 stops per hour, with one (1) person, compared to approximately 80 stops per hour, manually)
- iii) Convenience (i.e. carts can be easier for some residents to maneuver compared to carrying boxes)
- iv) Storage capacity (i.e. carts can offer additional storage capacity, which can contribute to increased participation in recycling programs)
- v) Reduced worker injuries (i.e. repetitive strain, exposure to traffic risks, physical fatigue, weather-related, etc.)

However, based on the rationale below, this system was not one of the proposed base service collection options approved by Regional Council in April 2018 for inclusion in the stakeholder consultation process.

- i) Review of Cart-based Collection for Current Contract:
Cart-based collection was investigated for implementation for the current contract (PWP 21-2008). A consultant was engaged to review various collection methods, including cart-based collection for all streams. The impact of this option from a systems perspective was evaluated. This evaluation included collection, processing and revenue implications, in addition to best practices considerations. The conclusion at that time was that this option was not considered cost effective. The estimated ten (10) year cost was approximately \$4.6 million higher than under a system without carts (i.e. Blue/Grey Box, Green Bin, kraft bags for leaves, bags/cans for garbage). This reflects the major cost of \$1 million (2007 estimate) associated with retrofitting Niagara Region's Materials Recycling Facility (MRF) from the current two-stream operation to a single-stream operation, if all recyclables are collected in one (1) cart.

Utilizing 2016 Peel Region's three-stream cart collection implementation costs, which are described in a following section below, based on roughly 170,000 single-family

homes in Niagara Region, the estimated one-time cost would be approximately \$21.7 million (includes 1.9% annual escalation).

ii) Provincial Direction:

Under the Province's Environmental Plan, waste diversion programs, such as the Blue Box Program, may be moving to the producer responsibility model. As a result, Niagara Region would no longer be responsible for providing collection and processing of Blue Box materials. This would be the responsibility of the Blue Box industry stewards. Therefore, at this time, staff do not believe implementing major program changes, such as switching to cart-based collection, is recommended.

iii) Experiences of Other Municipalities:

Based on the experiences of other municipalities that implemented a cart-based collection program, this option is not recommended for further consideration for the following reasons:

- Significant capital costs to purchase and distribute the carts:
 - Peel staff reported a one-time initial cost to implement three-stream cart collection of \$35 million (based on 325,000 single-family homes).
 - Toronto staff reported that the costs of their cart implementation are confidential. In addition, their cart program was implemented over 11 years ago, so their pricing would not be as relevant as that of Peel.
- On-going annual maintenance and replacement costs associated with the carts:
 - Peel staff reported an estimated annual maintenance and replacement cost of between \$1 to \$3 million.
- Higher contamination rates of the recycling and organics streams associated with the use of carts. As a result, there would be a decrease in Niagara Region's MRF revenues and difficulty with marketing its recyclables.
 - Niagara's 2016 residential Blue Box contamination rate was 4.8%.
 - The 2016 Provincial average contamination rate for a multi-stream (i.e. two or more streams) program was 8.9% and for a single-stream program was 14.1%.
- According to a 2018 York University study, "*Thinking Beyond the Box*":
 - Municipalities are grappling with meeting increasingly stringent standards from China, which buys around two-thirds of North America's recycling.
 - Under its National Sword Policy, China is refusing to accept recyclables with more than 0.5% contaminated materials (i.e. food residue, non-recyclables, or recyclable products ending up in the wrong stream).
 - To put it in contrast, cities like Toronto, Edmonton and Halifax have reported upwards of 20% contamination.
 - Peel Region is a prime example of the potential cost of contamination. After China turned away 13,000 tonnes of product from the Region's paper recycler, Canada Fibres, Peel Region will likely be saddled with a \$1.7 million bill for the loss.
 - "And the trend towards cart-based automation systems could be exacerbating the problem", says Calvin Lakhan, a postdoctoral Fellow in the Faculty of

- Environmental Studies at York University. Lakhan is the co-investigator of the “Waste Wiki” project at York University and corresponding author of the report.
- “From a municipal perspective, the contamination rate more than doubled if not tripled after switching to a cart-based collection system,” he says. As a result, revenue from post-recyclable materials – the same revenue expected to offset the cost of these programs – has fallen.
 - “Under the current system, municipalities using only cart-based systems aren’t getting the returns they should be,” says Mike Pilato, general manager for Clorox Canada.
 - Contamination was eight (8) per cent lower in bag-based or bag and box-based systems when contrasted with cart or box-based systems.
 - According to CIF Project 888 report “*Automated Cart Recycling: A Study of Municipal Collection and Operations in Ontario*” from 2016, additional concerns with a cart-based program are related to:
 - Storage space and capacity - While carts can offer additional storage capacity, which can contribute to increased participation in recycling programs, there may be potential issues for residents with limited space to store carts.
 - Street parking - Parked cars can be problematic for cart collection. Some municipalities have areas that cannot be serviced by fully automated cart collection vehicles. The City of Toronto employs a semi-automated cart collection program in the city core to enable the collection crew to manually move the bins around parked cars.
 - Narrow streets and lanes – Narrow streets impact the ability of automated collection vehicles to access carts.
 - Weather – Snow and ice can create difficulty for wheeling carts as well as create issues with cart placement.
 - Long driveways – May pose a challenge for some residents.

B) PROVISION OF IN-HOUSE WASTE COLLECTION

As part of the LAM consultations, motions were passed by three (3) LAM councils (Fort Erie, St. Catharines and Thorold) requesting consideration of the provision of in-house waste collection by Niagara Region (see Appendix 2 for the full resolutions).

Niagara Region completed research into providing in-house waste collection services. The results of this research are included in PW 22-2019 – Managed Competition and Fair Wage Considerations for Collection Contract and PWC-C 8-2019.

Relationship to Council Strategic Priorities

The recommendation to approve the proposed base collection and enhanced collection services to be included in Niagara Region’s next collection contract RFP supports Council’s Strategic Priority of Investment, Innovation and Entrepreneurship.

Other Pertinent Reports

- PW 22-2019 Managed Competition and Fair Wage Considerations for Collection Contract
- WMPSC-C 11-2019 Closed-Top Recycling Containers
- WMPSC-C 5-2019 Public Stakeholder Engagement Results on Proposed Collection Service Options
- PW 3-2019 Proposed Base Services for Next Collection Contract
- CWCD 357-2018 Let's Talk Waste Niagara – Stakeholder Consultation and Engagement Activities for the Proposed Waste Collection Options
- CWCD 216-2018 Fact Sheet – Consultation and Engagement Strategy for Proposed Service Level Collection Options Under Consultation
- WMPSC-C 9-2018 Stakeholder Consultation and Engagement on Proposed Collection Service Changes for Next Collection Contract
- WMPSC-C 34-2017 Schedule for the Next Regional Waste, Recycling and Organics Collection Contract
- PW 42-2014 A Matter of the Security of the Property of the Municipality – Bulky/ White Goods Collection Service for Multi-Residential and Mixed-Use Properties
- WMPSC-C 44-2013 Bulky/White Goods Collection Service for Multi-Residential and Mixed-Use Properties
- WMPSC-C 2-2013 Large Item Collection Service for Multi-Residential Buildings and Mixed-Use Properties
- PW 47-2012 Consultation Results on Proposed Clear Bag Pilot for Industrial, Commercial and Institutional Properties
- WMPSC 24-2011 Clear Bag for Garbage Pilot for Industrial, Commercial and Institutional Properties

Prepared by:

Brad Whitelaw, BA, CIM, P.Mgr, CAPM
Program Manager, Policy & Planning
Waste Management Services

Recommended by:

Catherine Habermebl
Acting Commissioner
Public Works Department

Submitted by:

Ron Tripp, P.Eng.
Acting Chief Administrative Officer

This report was prepared in consultation with Susan McPetrie, Waste Management Services Advisor and reviewed by Sara Mota, Program Financial Specialist, and Catherine Habermebl, Director, Waste Management Services.

Appendices

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Appendix 1 - Summary of Local Area Municipalities' Position on the Proposed Base Collection Options

Report Recommendations – Proposed Base Collection Options:

1. That, based on the results of consultations with the various stakeholder groups, including the Local Area Municipalities (LAMs), the Request for Proposal (RFP) for Niagara Region's next garbage, recycling and organics collection contract **BE APPROVED** to include the following base collection options:
 - a) Obtain pricing for the following garbage collection frequency options:
 - i) Every-other-week (EOW) garbage collection for all residential properties and for those Industrial, Commercial & Institutional (IC&I) and Mixed-Use (MU) properties located outside Designated Business Areas (DBAs), as a base service (weekly recycling and organics to continue, and current garbage container (bag/can) limits would double for affected sectors, on an EOW basis), and
 - ii) Status quo – weekly base garbage collection service for all residential, IC&I and MU properties. Current garbage container limits would not change.
 - b) Establish a four (4) item limit per residential unit, per collection, for large item collection at Low-Density Residential (LDR) properties, as a base service.
 - c) Obtain pricing to discontinue and continue appliances and scrap metal curbside collection at LDR properties, as a base service.
 - d) Change the weekly garbage container (bag/can) limits for Industrial, Commercial & Institutional (IC&I) and Mixed-Use (MU) properties located inside Designated Business Areas (DBAs) from seven (7) containers to four (4) containers per property, as a base service.
 - e) Change the weekly garbage container (bag/can) limit for MU properties located outside DBAs from six (6) containers to four (4) containers per property, as a base service.
2. That mandatory use of clear garbage bags, with the option of allowing an opaque privacy bag to be placed inside the clear bag, **NOT BE IMPLEMENTED** for all sectors, as a base service at this time.

Appendix 1 - Summary of Local Area Municipalities' Position on the Proposed Base Collection Options

Every-Other-Week Garbage Collection			Mandatory Use of Clear Garbage Bags		
Support	Do Not Support	No Formal Position	Support	Do Not Support	No Formal Position
Fort Erie	Niagara Falls	St. Catharines ⁽¹⁾	Fort Erie	Lincoln	St. Catharines ⁽¹⁾
Grimsby	Niagara-on-the-Lake		Grimsby	Niagara Falls	
Lincoln	Wainfleet		Pelham	Niagara-on-the-Lake	
Pelham	West Lincoln		Thorold	Port Colborne	
Port Colborne			Welland	West Lincoln	
Thorold			Wainfleet		
Welland					

Notes:

- 1) City of St. Catharines Council voted only to *receive the proposed changes to the base collection services for the next waste collection contract.*

Appendix 1 - Summary of Local Area Municipalities' Position on the Proposed Base Collection Options

Establish Four Large Item Limit per Collection			Eliminate Curbside Appliance and Scrap Metal Collection		
Support	Do Not Support	No Formal Position	Support	Do Not Support	No Formal Position
Fort Erie		St. Catharines ⁽¹⁾	Fort Erie	Niagara Falls	St. Catharines ⁽¹⁾
Grimsby			Grimsby	Niagara-on-the-Lake	
Lincoln			Lincoln	Wainfleet	
Niagara Falls			Pelham		
Niagara-on-the-Lake			Port Colborne		
Pelham			Thorold		
Port Colborne			Welland		
Thorold			West Lincoln		
Wainfleet					
Welland					
West Lincoln					

Notes:

- 1) City of St. Catharines Council voted only to *receive the proposed changes to the base collection services for the next waste collection contract.*

Appendix 1 - Summary of Local Area Municipalities' Position on the Proposed Base Collection Options

Change Weekly Garbage Container Limit for IC&I and MU <u>Inside</u> DBAs from 7 to 4			Change Weekly Garbage Container Limit for MU <u>Outside</u> DBAs from 6 to 4		
Support	Do Not Support	No Formal Position	Support	Do Not Support	No Formal Position
Fort Erie	Niagara Falls	St. Catharines ⁽¹⁾	Fort Erie	Niagara Falls	St. Catharines ⁽¹⁾
Grimsby			Grimsby		
Lincoln			Lincoln		
Niagara-on-the-Lake			Niagara-on-the-Lake		
Pelham			Pelham		
Port Colborne			Port Colborne		
Thorold			Thorold		
Wainfleet			Wainfleet		
Welland			Welland		
West Lincoln			West Lincoln		

Notes:

- 1) City of St. Catharines Council voted only to *receive the proposed changes to the base collection services for the next waste collection contract.*

Appendix 2 - Local Area Municipality Council Resolutions

1) Fort Erie:

a) Fort Erie Council Meeting of January 21, 2019: Niagara Solid Waste Management Report IS-02-2019

Resolution No. 6

Moved by: Councillor Noyes

Seconded by: Councillor Dubanow

That: Council receives the “Region of Niagara 2021 Waste Collection Contract – Proposed Options and Fort Erie Enhanced Collection Services”, and further

That: Council endorses the eight (8) recommendations included within this report.

Resolution No. 7

Moved by: Councillor Dubanow

Seconded by: Councillor Butler

That: The second recommendation be amended by adding at the end: “to be included in the Region’s RFP as options”. (Carried)

Following the approval of the amendment, Recommendation No. 7 was voted on as amended, as follows:

That: Council receives the “Region of Niagara 2021 Waste Collection Contract – Proposed Options and Fort Erie Enhanced Collection Services”, and further

That: Council endorses the eight (8) recommendations included within this report to be included in the Region’s RFP as options. (Carried)

Notice of Motion

Councillor Butler gave notice she will be bringing forward a motion returnable February 11th, requesting the Region to consider bringing waste management in-house to the Region as opposed to contracting out.

Appendix 2 - Local Area Municipality Council Resolutions

b) Town of Fort Erie Council meeting of February 11, 2019:

Please be advised the Municipal Council of the Town of Fort Erie at its meeting of February 11, 2019 passed the following resolution:

Whereas The Regional Municipality of Niagara (the "Region") is looking to reduce costs by going to a bi-weekly service; and

Whereas the Region currently contracts out Waste Management Services to the private sector; and

Whereas the Region continues to encounter problems with the delivery of services from the private sector both currently and in the past; and

Whereas it would benefit the Region for Regional staff to bring a report forward to Regional Councillors of the benefits and cost savings, if any, associated with bringing in the Waste Management Program in-house prior to establishing an RFP to be released for contractual services;

Now therefore be it resolved,

That: The Town of Fort Erie hereby requests The Regional Municipality of Niagara to prepare a report for Regional Council that speaks to the benefits and cost savings, if any, associated with bringing the Waste Management Contracts in-house; and further

That: This resolution be sent to all Local Municipalities within The Regional Municipality of Niagara, and the CAO, Clerk, Chair and Councillors of The Regional Municipality of Niagara.

Appendix 2 - Local Area Municipality Council Resolutions

2) Grimsby:

a) Grimsby Public Works Committee Meeting of December 12, 2018:

Public Works Committee Minutes, December 12, 2018 C-18-229

DPW18-42 - Region of Niagara 2020 Waste Collection Contract - Proposed Changes and Grimsby Enhanced Collection Services

PW18-57

Moved by Councillor R. Vaine;

Seconded by Councillor R. Freake;

Resolved that Report DPW18-42 dated December 4, 2018 regarding 'Region of Niagara 2020 Waste Collection Contract - Proposed Changes and Grimsby Enhanced Collection Services' be received and that the eight (8) recommendations included within this report hereby be endorsed and forwarded to Town Council for approval.

CARRIED

b) Grimsby Council Meeting of December 17, 2018:

Moved by Councillor Dunstall;

Seconded by Councillor Bothwell;

Resolved that the Public Works Committee meeting minutes of December 12, 2018 be received and that the recommendations contained therein be approved.

CARRIED

Appendix 2 - Local Area Municipality Council Resolutions

3) Lincoln:

a) Community Services & Infrastructure Committee Meeting of February 13, 2019:

Motion No. CSI-2019-07

Moved by Councillor L. Timmers

Receive and file PW 05-19, Region of Niagara 2020 Waste Collection Service Contract – Proposed Changes and Town of Lincoln Enhanced Collection Services.

Niagara Region proposed recommendations 1 through 8 be endorsed:

1. Pricing for the following garbage collection frequency options:
 - a) That every-other-week garbage collection be implemented for all residential properties and for those Industrial, Commercial and Institutional properties and Mixed Use properties located outside Designated Business Areas as a base service. Current garbage container limits would double for all properties, on an every-other-week basis. The recycling and organic bin collection for all properties shall remain weekly collection. Those Industrial, Commercial and Institutional properties and Mixed Use properties located inside the Designated Business Areas would continue to receive weekly garbage, recycling and organics collection as a base service.
 - b) Status quo – weekly base garbage collection service.
2. That switching to mandatory use of clear garbage bags with optional opaque privacy bag, for all sectors be considered an option and more information be shared on opportunities and challenges of such a change.
3. That the establishment of a four (4) item limit per residential unit, per collection, for large item collection at Low Density Residential properties be approved as a base service as per the recommendation of the Waste Management Division of Niagara Region.
4. That the appliance and scrap metal pick-up be discontinued at Low Density Residential properties as per the recommendation of the Waste Management Division of Niagara Region.
5. That the number of garbage bags/containers for Industrial Commercial and Institutional properties and Mixed Use properties inside Designated Business

Appendix 2 - Local Area Municipality Council Resolutions

Areas be reduced from seven (7) to four (4) per week, as a base service as per the recommendation of the Waste Management Division of Niagara Region.

6. That the number of garbage bags/containers for Mixed Use properties outside Designate Business Areas be reduced from six (6) to four (4) per week, or eight (8) containers per week under every-other-week garbage collection, as a base service as per the recommendation of the Waste Management Division of Niagara Region.
7. That the Town's enhanced service and extra payment for front-end garbage collection at Town owned facilities continue.
8. That pricing for the provision of a new enhanced service for large item collection (parallel to the service approved for Low Density Residential properties) to those households in Multi Residential buildings with seven (7) or more residential units and Mixed Use properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front- end garbage collection service, be included in the upcoming Regional tender.
9. That Council direct the Clerk to inform the Region of the Town's position on the proposed waste collection service changes.

CARRIED

At this time a verbal motion was made to reconsider item 7.1. Chair Rintjema announced that by majority vote the item would be reconsidered.

Members concluded deliberations with the following amended motion

Motion No. CSI-2019-08

Moved by Councillor P. MacPherson

Receive and file PW 05-19, Region of Niagara 2020 Waste Collection Service Contract – Proposed Changes and Town of Lincoln Enhanced Collection Services.

Niagara Region proposed recommendations 1 through 8 be endorsed:

1. Pricing for the following garbage collection frequency options:

Appendix 2 - Local Area Municipality Council Resolutions

- a) That every-other-week garbage collection be implemented for all residential properties and for those Industrial, Commercial and Institutional properties and Mixed Use properties located outside Designated Business Areas as a base service. Current garbage container limits would double for all properties, on an every-other-week basis. The recycling and organic bin collection for all properties shall remain weekly collection. Those Industrial, Commercial and Institutional properties and Mixed Use properties located inside the Designated Business Areas would continue to receive weekly garbage, recycling and organics collection as a base service.
 - b) Status quo – weekly base garbage collection service.
- ~~2. That switching to mandatory use of clear garbage bags with optional opaque privacy bag, for all sectors be considered an option and more information be shared on opportunities and challenges of such a change. (AS AMENDED)~~**
3. That the establishment of a four (4) item limit per residential unit, per collection, for large item collection at Low Density Residential properties be approved as a base service as per the recommendation of the Waste Management Division of Niagara Region.
 4. That the appliance and scrap metal pick-up be discontinued at Low Density Residential properties as per the recommendation of the Waste Management Division of Niagara Region.
 5. That the number of garbage bags/containers for Industrial Commercial and Institutional properties and Mixed Use properties inside Designated Business Areas be reduced from seven (7) to four (4) per week, as a base service as per the recommendation of the Waste Management Division of Niagara Region.
 6. That the number of garbage bags/containers for Mixed Use properties outside Designate Business Areas be reduced from six (6) to four (4) per week, or eight (8) containers per week under every-other-week garbage collection, as a base service as per the recommendation of the Waste Management Division of Niagara Region.
 7. That the Town's enhanced service and extra payment for front-end garbage collection at Town owned facilities continue.

Appendix 2 - Local Area Municipality Council Resolutions

8. That pricing for the provision of a new enhanced service for large item collection (parallel to the service approved for Low Density Residential properties) to those households in Multi Residential buildings with seven (7) or more residential units and Mixed Use properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front- end garbage collection service, be included in the upcoming Regional tender.
9. That Council direct the Clerk to inform the Region of the Town's position on the proposed waste collection service changes.

CARRIED (AS AMENDED)

b) **Lincoln Council Meeting of February 19, 2019:**

Please be advised that at the Community Services and Infrastructure Committee held on February 13, 2019 and ratified at Council on February 19, 2019, Council for the Corporation of the Town of Lincoln passed the following motion:

Receive and file PW 05-19, Region of Niagara 2020 Waste Collection Service Contract - Proposed Changes and Town of Lincoln Enhanced Collection Services.

Niagara Region proposed recommendations 1 through 8 be endorsed:

1. Pricing for the following garbage collection frequency options:
 - a) That every-other-week garbage collection be implemented for all residential properties and for those Industrial, Commercial and Institutional properties and Mixed Use properties located outside Designated Business Areas as a base service. Current garbage container limits would double for all properties, on an every-other-week basis. The recycling and organic bin collection for all properties shall remain weekly collection. Those Industrial, Commercial and Institutional properties and Mixed Use properties located inside the Designated Business Areas would continue to receive weekly garbage, recycling and organics collection as a base service.
 - b) Status quo – weekly base garbage collection service.
2. That the establishment of a four (4) item limit per residential unit, per collection, for large item collection at Low Density Residential properties be approved as a base service as per the recommendation of the Waste Management Division of Niagara Region.

Appendix 2 - Local Area Municipality Council Resolutions

3. That the appliance and scrap metal pick-up be discontinued at Low Density Residential properties as per the recommendation of the Waste Management Division of Niagara Region.
4. That the number of garbage bags/containers for Industrial Commercial and Institutional properties and Mixed Use properties inside Designated Business Areas be reduced from seven (7) to four (4) per week, as a base service as per the recommendation of the Waste Management Division of Niagara Region.
5. That the number of garbage bags/containers for Mixed Use properties outside Designate Business Areas be reduced from six (6) to four (4) per week, or eight (8) containers per week under every-other-week garbage collection, as a base service as per the recommendation of the Waste Management Division of Niagara Region.
6. That the Town's enhanced service and extra payment for front-end garbage collection at Town owned facilities continue.
7. That pricing for the provision of a new enhanced service for large item collection (parallel to the service approved for Low Density Residential properties) to those households in Multi Residential buildings with seven (7) or more residential units and Mixed Use properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front- end garbage collection service, be included in the upcoming Regional tender.
8. That Council direct the Clerk to inform the Region of the Town's position on the proposed waste collection service changes.

CARRIED

Appendix 2 - Local Area Municipality Council Resolutions

4) Niagara Falls:

a) Niagara Falls City Council Meeting of February 12, 2019:

At the February 12, 2019 meeting of Niagara Falls City Council, the following motions were passed:

That Niagara Falls City Council is not in favour of every other week waste collection. City Council requests the Region to maintain waste collection service at the current level, with weekly collection of waste, recycling and organic bin matter, and same number of bags/containers collected, for residential properties (low density residential 1-6 units) and Industrial/Commercial/Industrial -Mixed Uses outside and inside designated business areas".

That City Council requests that the Region collect pricing on maintaining the existing Multi-Residential (greater than 6 units) enhanced garbage collection".

That City Council request the Region to collect pricing on enhanced services for Public Space recycling, City litter receptacles in Designated Business Areas, and for 7 day a week collection from mid-May to mid-October in Designated Business Areas.

That City Council is in favour of 4 large items per residential unit, per collection, and of maintaining the appliance and scrap metal collection, but not in favour of the mandatory use of clear plastic bags."

Appendix 2 - Local Area Municipality Council Resolutions

5) Niagara-on-the-Lake (NotL):

a) NotL Committee of the Whole Meeting of Monday, February 4, 2019:

Council lifted the following report for discussion and voted on the recommendations contained in the report separately.

OPS-19-003 Region of Niagara 2020 Waste Collection Contract – Proposed Changes and Niagara-on-the-Lake Enhanced Collection Service

Moved by Councillor John Wiens that the recommendations contained in Operation Services Report OPS-19-003 be amended as follows:

- 1.1 That Council receive this report;
- 1.2 ~~That the recommendations approved by the Niagara Region included within this report be endorsed, except for the elimination of scrap metal pick up;~~
- 1.3 That the Niagara Region propose an alternative service delivery for scrap metal pick up;
- 1.4 That Council support the recommendations regarding the enhanced system put forth by the Niagara-on-the-Lake Chamber of Commerce regarding the businesses in the Heritage District:
 - a) change the pick up time from 9:00 a.m. to 10:00 a.m.
 - b) do not discontinue the disposal of appliances and scrap metal curbside;
 - c) there should be consideration of pooling limits for all businesses;
 - d) retain the current enhancement services provided

APPROVED, AS AMENDED.

Recommendation 1.2 lifted and amended by adding the following: mandatory use of clear garbage bags and bi-weekly collection.

- 1.2 That the recommendations approved by the Niagara Region included within this report be endorsed, except for the elimination of scrap metal pick up; mandatory use of clear garbage bags and bi-weekly collection.

APPROVED.

Appendix 2 - Local Area Municipality Council Resolutions

b) NotL Council Meeting of Monday, February 11, 2019:

Please be advised the Council of The Corporation of the Town of Niagara-on-the Lake, at its regular meeting held on February 11, 2019 approved Report OPS-19-003, as amended, attached to this letter, which recommended the following:

- 1.1 that Council receive report OPS-19-003; and
- 1.2 that the recommendations approved by the Niagara Region included within this report be endorsed, except for the elimination of scrap metal pick up; *mandatory use of clear garbage bags and bi-weekly collection; and*
- 1.3 that the Niagara Region propose an alternative service delivery for scrap metal pick up; and
- 1.4 that Council support the recommendations regarding the enhanced system put forth by the Niagara-on-the-Lake Chamber of Commerce regarding the businesses in the Heritage District:
 - a) change the pick-up time from 9:00 a.m. to 10:00 a.m.
 - b) do not discontinue the disposal of appliances and scrap metal curbside;
 - c) there should be consideration of pooling limits for all businesses;
 - d) retain the current enhancement services provided

Appendix 2 - Local Area Municipality Council Resolutions

6) Pelham:

a) Town of Pelham Council Meeting of Tuesday, February 19, 2019:

At their regular meeting of February 19, 2019, Council of the Town of Pelham enacted the following:

THAT THE COUNCIL OF THE TOWN OF PELHAM approve the report regarding the Region of Niagara 2021 Waste Collection Contract – Proposed Changes and the Town of Pelham's Enhanced Collection Services; and further,

BE IT RESOLVED THAT Council approve of recommendations 1 through 9 as follows:

1. That every-other-week garbage collection be implemented for all residential properties and for those Industrial, Commercial and Institutional properties and Mixed Use properties located outside Designated Business Areas as a base service. Current garbage container limits would double for all properties, on an every-other-week basis. The recycling and organic bin collection for all properties shall remain weekly collection. Those Industrial, Commercial and Institutional properties and Mixed Use properties located inside the Designated Business Areas would continue to receive weekly garbage, recycling and organics collection as a base service. The Town of Pelham Designated Business Area boundary will be reviewed and potentially expanded to include Fenwick and Ridgeville.
2. That switching to clear garbage bags be approved.
3. That the establishment of a four (4) item limit per residential unit, per collection, for large item collection at Low Density Residential properties be approved, as a base service.
4. That the appliance and scrap metal pick-up be discontinued at Low Density Residential properties.
5. That the number of garbage bags/containers for Industrial Commercial and Institutional properties and Mixed Use properties inside Designate Business Areas be reduced from seven (7) to four (4) per week, as a base service.
6. That the number of garbage bags/containers for Mixed Use properties outside Designated Business Areas be reduced from six (6) to four (4) per week, or eight (8) containers per week under every-other-week garbage collection, as a base service.

Appendix 2 - Local Area Municipality Council Resolutions

7. That the Town of Pelham's enhanced service and extra payment for public spaces recycling in designated business areas, front-end garbage collection at multi-residential and Institutional, Commercial & Industrial properties, servicing of street litter bins in designated business areas, and enhanced waste disposal services continue.
8. That pricing of a new enhanced service for large bulky goods/item collection (parallel to the service approved for Low Density Residential properties) to those households in Multi Residential buildings with seven (7) or more residential units and Mixed Use properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front-end garbage collection service, be included in the upcoming Regional tender.
9. That the Region's RFP consider a per stop price for in-ground public space recycling and litter bins and/or for in-ground IC&I, MR and/or MU properties (all streams), as an enhanced service under provisional items.

and further,

THAT Council direct the Clerk to inform the Region of the Town of Pelham's position on the proposed waste collection service changes.

Appendix 2 - Local Area Municipality Council Resolutions

7) Port Colborne:

a) Port Colborne Council Meeting of February 25, 2019:

At its meeting held on February 25, 2019, City of Port Colborne Council approved the following proposed Regional collection changes to the 2021 collection contract:

1. That every-other-week (EOW) garbage collection be implemented, for all residential properties, including those IC&I and MU properties located outside DBAs as a base service. (Current garbage container limits would double for all properties, on an EOW basis). That Recycling and Organic Bin collection for all properties shall remain weekly collection. Those IC&I and MU properties located inside the DBAs would continue to receive weekly garbage, recycling and organics collection as a base service.
2. That the establishment of a four (4) item limit per residential unit, per collection, for large item collection at LDR properties be approved (base service).
3. That appliance and scrap metal pick-up be discontinued at LDR properties.
4. That the number of garbage bags/containers for IC&I and MU properties inside DBAs be reduced from seven (7) to four (4) per week (base service).
5. That the number of garbage bags/containers for MU properties outside DBAs be reduced from six (6) to four (4) per week, or eight (8) containers per week under EOW garbage collection (base service).
6. That the City's enhanced service levels that currently exist continue for the term of the new Regional Contract.

Appendix 2 - Local Area Municipality Council Resolutions

8) St. Catharines:

a) St. Catharines Council Meeting of February 11, 2019:

At its meeting held on February 11, 2019, St. Catharines City Council approved the following motion:

That Report TES-030-2019 from Transportation and Environmental Services dated January 29, 2019 regarding – Region of Niagara 2021 Waste Collection Contract – Proposed Changes and St Catharines Enhanced Collections Services, be received; and

That Council direct staff to notify the Region of Niagara that the City of St. Catharines receive the proposed changes to the base collection services for the next waste collection contract, as outlined in this report and summarized in Appendix 1; and

That Council request that the Region of Niagara, as part of the Request for Proposal for the new waste collection contract, include pricing for the following enhanced collection services for St. Catharines:

1. For existing enhanced collection services, including:
 - a. Additional Curbside recycling in the Downtown Designated Business Area (DBA) one additional day per week
 - b. Public spaces recycling in the Downtown DBA
 - c. Front-end cardboard collection in the Downtown DBA
 - d. Additional waste collection in the Downtown DBA (three additional days per week)
 - e. Front-end garbage collection for Multi-Residential (MR – seven or more residential units) properties
 - f. Street litter and park bin pick-up
2. For new enhanced collection services, including:
 - a. Additional garbage container limit for Industrial, Commercial & Institutional (IC&I) and Mixed-Use (MU) properties inside DBA areas (increasing limit by three (3) containers per pick-up, to match existing limit of seven (7) containers per pick-up)
 - b. Additional organic collection in the Downtown DBA (two additional organic collections per week)
 - c. Large item collection (parallel to the service approved for Low Density Residential properties) for those households on MR properties (Seven (7) or more residential units) and MU properties with one (1) or more residential units,

Appendix 2 - Local Area Municipality Council Resolutions

that receive the Region's base curbside or enhanced front-end garbage collection service

- d. A per stop price for in-ground public space recycling and litter bins and a per stop price for in-ground IC&I, MR and/or MU properties (all streams); and

That Council direct City staff to request that the Niagara Region consider bringing some or all of its waste management services in house as part of the Niagara Region's upcoming RFP process; and

Further, that for the same existing and new enhanced collection services for the Port Dalhousie Business Improvement Area (BIA) as requested above for the Downtown DBA.

b) St. Catharines Council Meeting of February 25, 2019:

At its meeting held on February 25, 2019, St. Catharines City Council approved the following motion:

Whereas Council received information from the Region of Niagara regarding their RFP for a waste management contract on February 11th, 2019;

Whereas Council added some items to the list of enhanced services but did not include costing for the Toronto model of wheeled bins;

Now therefore be it resolved that Council request the Region of Niagara to include pricing for 'a mobile alternative' (eg: totes on wheels) to replace the current plastic bag system as part of the Region's Waste Management RFP; and

That staff be directed to advise the Region of Council's decision.

Appendix 2 - Local Area Municipality Council Resolutions

9) Thorold:

a) **Thorold Council Meeting of January 15, 2019:**

At its meeting held on January 15, 2019, Councillor Handley requested the Niagara Region, as part of its waste management consultation, consider bringing the service in-house either whole or in part.

MOVED BY: Councillor Handley

SECONDED BY: Councillor DeRose

Whereas the Niagara Region current private waste management contracts are up for renewal in 2021; and

Whereas public municipal services don't need to earn profits for shareholders, shifting municipal work to the private sector makes more sense only where a company can be shown to provide equal or better service at a significantly lower cost to the City while maintaining the same or better working conditions and health and safety standards; and

Whereas several municipalities across Canada have brought some or all of their waste management services back in house to reduce cost, better waste diversion rate and improve levels of service.

Now therefore be it resolved that the City of Thorold requests that the Niagara Region bring some or all of its waste management services inhouse as part of its upcoming request for proposal process.

CARRIED

b) **Thorold Council Meeting of February 5, 2019:**

At its meeting held on February 5, 2019, Thorold City Council approved the following motion:

PWCS2019-04

Niagara Region Waste Collection Contract – Proposed Base and Enhanced Levels of Service

MOVED BY: Councillor Longo

Appendix 2 - Local Area Municipality Council Resolutions

1. **That** the City of Thorold support the recommendations outlined in the Niagara Region's Report PW 3-2019.
2. **That** Regional Council be guided by the City of Thorold Resolution dated January 15, 2019 respecting the provision of in-house waste collection services.
3. **That** Regional staff be encouraged to research and source better alternatives for recycling containers that will reduce the amount of debris and litter collected along City roads and public spaces.

CARRIED

Appendix 2 - Local Area Municipality Council Resolutions

10) Wainfleet:

a) **Wainfleet Council Meeting of February 12 2019:**

At its regular meeting of February 12, 2019 the Township of Wainfleet received a presentation from Brad Whitelaw regarding the renewal of the Region of Niagara's Proposed Waste Collection Contract. Staff also submitted a report regarding this matter (BESR-004/2019).

After discussion, Council expressed several concerns pertinent to the specific realities of a rural municipality with lakefront cottages and luxury homes. Council expressed concerns for the potential impact on rental homes/seasonal residents that with a single missed collection may not have garbage collected for up to 4 weeks, depending on the rental schedule. Council is also concerned that extended pick-up models would exacerbate the vermin infestation in the Niagara Region.

Council passed the following motion at their regular meeting held February 12, 2019:

"THAT Staff report BESR-004/2019 Re: Niagara Region Proposed Waste Collection Contract be received for information;

THAT Council strongly object to the proposed every-other-week garbage collection, particularly along the Lakeshore;

THAT Council express concern regarding:

- i. the proposed discontinuation of appliance and scrap metal curbside collection
- ii. the potential implications of illegal dumping arising from the proposed changes to the Region's waste collection contract;

THAT local area municipalities be afforded a final opportunity to provide comment regarding base level garbage, recycling and organics collection program services once the Request for Proposal pricing levels are known and prior to any services contract being awarded by the Region.

AND THAT Staff be directed to provide comment to the Niagara Region by February 20, 2019."

Appendix 2 - Local Area Municipality Council Resolutions

11) Welland:

a) **Welland Council Meeting of February 5, 2019:**

At its meeting held on February 5, 2019, Welland City Council approved the following motion:

THAT THE COUNCIL OF THE CITY OF WELLAND approves Report ENG-2019-02 regarding Region of Niagara 2020 Waste Collection Contract - Proposed Changes and Welland Enhanced Collection Services; and further

THAT Welland City Council approve of recommendations as follows:

1. **That** every-other-week (EOW) garbage collection be implemented for all residential properties and for those IC&I and MU properties located outside DBAs as a base service. Current garbage container limits would double for all properties, on an EOW basis. The recycling and organic bin collection for all properties shall remain weekly collection. Those IC&I and MU properties located inside the DBAs would continue to receive weekly garbage, recycling and organics collection as a base service.
2. **That** the establishment of a four (4) item limit per residential unit, per collection, for large item collection at LDR properties be approved as a base service.
3. **That** the appliance and scrap metal pick-up be discontinued at LDR properties.
4. **That** the number of garbage bags/containers for IC&I and MU properties inside DBAs be reduced from seven (7) to four (4) per week, as a base service.
5. **That** the number of garbage bags/containers for MU properties outside DBAs be reduced from six (6) to four (4) per week, or eight (8) containers per week under EOW garbage collection, as a base service.
6. **That** the City's enhanced service and extra payment for front-end garbage collection at multi-residential properties (currently a total of 12 containers) continue.
7. **That** the provision of a new enhanced service for large item collection (parallel to the service approved for LDR properties) to those households in MR buildings with seven (7) or more residential units and MU properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front-end garbage collection service, be approved; and further

THAT Welland City Council directs the Clerk to inform the Region of the City's position on the proposed waste collection service changes.

Appendix 2 - Local Area Municipality Council Resolutions

12) West Lincoln:

a) West Lincoln Public Works/Recreation/Arena Committee Meeting of February 19, 2019:

At its meeting held on February 19, 2019, West Lincoln Public Works/Recreation/Arena Committee approved the following motions:

That, Niagara Region be advised that the Township of West Lincoln is opposed to the mandatory use of clear bags for both residential and business waste as there is a concern relating to privacy and every-other-week (EOW) garbage collection for the residential sector and those IC&I and MU properties located outside DBAs, as a base service"; and,

That, Niagara Region be advised that the Township of West Lincoln wishes to continue with its current enhanced services for the DBA collection area (i.e. additional garbage container limits, increased garbage or recycling collection frequency, street litter, front-end garbage, etc.); and,

That, Niagara Region be advised that the Township of West Lincoln is interested in principle with respect to the provision of an enhanced large item collection service to Multi-Residential buildings and Multi-Unit properties with 1 or more residential units that receive the Region's curbside base or enhanced garbage collection services pending Niagara Region provides the Township with a cost for providing this additional enhanced service and that no decision be made on providing this service until consideration has been given by Township Council.

That, the Clerk be authorized to advise Niagara Region of the above prior to ratification of Council as comments are to be provided by no later than February 20, 2019.

Appendix 3 – Accessibility Advisory Committee Motion from January 22, 2019

The Accessibility Advisory Committee, at its meeting held on Tuesday January 22, 2019, passed the following motion:

7.1 AAC-C 02-2019

Amendment to Recommendations from the Public Works Committee meeting held on January 8, 2019

Moved by C. Theal

Seconded by G. Eden

That AAC-C 02-2019, being a memorandum from A.-M. Norio, Regional Clerk, respecting recommendations from the Public Works Committee, **BE RECEIVED**;

That the following comments **BE PROVIDED** to Waste Management staff for consideration as part of the waste collection service delivery changes for the next collection contract:

- Clear bags would infringe on the privacy of those individuals who are dependent on incontinence products as well as those who are required to use various medical supplies on an ongoing basis (i.e. parts of needles that are not placed in a sharps container)
- For individuals who are frail and infirm, being forced to put out medical waste in a clear bag could impede their safety and would infringe on their privacy
- If a privacy bag is offered, is this double bagging and defeating the overall purpose of using clear bags? Will the allowance of one privacy bag be sufficient?
- It is already difficult for individuals with physical disabilities, elderly individuals and individuals with cognitive disabilities or mental health issues to take one bag of garbage to the curb let alone two bags. Putting garbage out the night before is not an option because of animals/rodents - this could potentially extend their garbage pick up from two weeks to four - health issue
- If garbage is not picked up because of improper sorting, the individual's garbage pick up is extended to four weeks - health issue - extremely difficult for individuals with accessibility issues to bring garbage back in when it is not picked up and to have to go through it to remove improper materials

- Individuals with cognitive/mental health issues will have difficulty remembering what week is garbage pick up week - compounding the amount of trash being stored - health issue - looking for trouble if weekly cycle is breached
- Odour/Health and safety issues with incontinence products now being picked up every two weeks
- Health and safety issue with storing garbage for two weeks as opposed to one - this will not help with the rodent issue that is already a problem in many areas
- Inability of individuals with accessibility issues to take their garbage out due to inclement weather now forces them to keep their garbage for another two weeks; and

That this Committee **RECOMMEND** to Waste Management staff that the mandatory use of clear garbage bags not be included as part of the waste collection service delivery changes for the next collection contract.

Carried

Appendix 4 – Summary of Local Area Municipalities' Requested Enhanced Collection Services for Niagara Region's Collection Contract RFP

i) Fort Erie:

Town of Fort Erie Council, at its January 21, 2019 meeting, approved the following enhanced collection services to be included in Niagara Region's collection contract RFP:

- That the Town continue with street litter and recycling collection in the BIA's as per the current regime (Monday in Crystal Beach, Monday and Thursday in Bridgeburg and Ridgeway; the BIA's pay for garbage, the Town pays for recycling collection)
- That the provision of a new enhanced service for large item collection (parallel to the service approved for LDR properties) to those households in MR buildings with seven (7) or more residential units and MU properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front-end garbage collection service

ii) Grimsby:

Town of Grimsby Council, at its December 17, 2018 meeting, approved the following enhanced collection services to be included in Niagara Region's collection contract RFP:

- The Town's enhanced service and extra payment for collection inside the Grimsby Downtown Improvement Area (DIA) remain at two (2) collection days per week but changed to Tuesdays and Fridays and that the number of garbage bags/containers be reduced from 12 per pick-up day to 6 per pick-up day (12 per week), resulting in the Town's Enhanced service payment being reduced from 17 bags/containers per week to 8
- That the provision of a new enhanced service for large item collection (parallel to the service approved for LDR properties) to those households in MR buildings with seven (7) or more residential units and MU properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front-end garbage collection service

In addition, the following enhanced collection services will continue to be provided in the Town of Grimsby:

- Public spaces litter/recycling containers in Grimsby DIA (three (3) days-per-week), and on Winward Drive (one (1) day-per-week)
- Additional recycling collection in Grimsby DIA (one (1) day-per-week)

Appendix 4 – Summary of Local Area Municipalities' Requested Enhanced Collection Services for Niagara Region's Collection Contract RFP

iii) Lincoln:

Town of Lincoln Council, at its February 19, 2019 meeting, approved the following enhanced collection services to be included in Niagara Region's collection contract RFP:

- That the Town's enhanced service and extra payment for front-end garbage collection at Town-owned facilities continue
- That pricing for the provision of a new enhanced service for large item collection (parallel to the service approved for Low Density Residential properties) to those households in Multi Residential buildings with seven (7) or more residential units and Mixed Use properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front-end garbage collection service, be included in the upcoming Regional tender

iv) Niagara Falls:

City of Niagara Falls Council, at its February 12, 2019 meeting, approved the following enhanced collection services to be included in Niagara Region's collection contract RFP:

- That City Council requests that the Region collect pricing on maintaining the existing Multi-Residential (greater than 6 units) enhanced garbage collection
- That City Council request the Region to collect pricing on enhanced services for Public Space recycling, City litter receptacles in Designated Business Areas, and for 7 day a week collection from mid-May to mid-October in Designated Business Areas

Appendix 4 – Summary of Local Area Municipalities’ Requested Enhanced Collection Services for Niagara Region’s Collection Contract RFP

v) **Niagara-on-the-Lake:**

Town of Niagara-on-the-Lake Council, at its February 11, 2019 meeting, approved the following enhanced collection services to be included in Niagara Region’s collection contract RFP:

- That Council support the recommendations regarding the enhanced system put forth by the Niagara-on-the-Lake Chamber of Commerce regarding the businesses in the Heritage District:
 - a) change the pick up time from 9:00 a.m. to 10:00 a.m.
 - b) do not discontinue the disposal of appliances and scrap metal curbside;
 - c) there should be consideration of pooling limits for all businesses;
 - d) retain the current enhancement services provided
- That the provision of a new enhanced service for large item collection (parallel to the service approved for LDR properties) to those households in MR buildings with seven (7) or more residential units and MU properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front-end garbage collection service

Town of Niagara-on-the-Lake and Chamber of Commerce staff requested the following enhanced collection services for the DBA be included in Niagara Region’s collection contract RFP:

- Maintain the current 3 collection days in the Designated Business Area as Monday (enhanced); Thursday (base); and Saturday (enhanced)
- Change the start time for these 3 collection days from 9:00 a.m. to 10:00 a.m., for garbage, recycling, cardboard, and organics collection
- Maintain the unlimited cardboard collection days to be on Monday and Saturday
- Maintain once-per-week recycling and organics collection day to be on Thursday (base)
- Request provisional pricing for the following 3 garbage collection options, subject to the Town’s final approval of which option will be chosen:

Proposed Option	Weekly Collection Frequency	Bag Limit per Property per Day	Description of Service Change
1	Base day + 2 enhanced days = 3 days per week	20 bags	Status Quo
2	Base day + 2 enhanced days = 3 days per week	15 bags	5 fewer bags per property, per collection
3	Base day + 2 enhanced days = 3 days per week	10 bags	10 fewer bags per property, per collection

Appendix 4 – Summary of Local Area Municipalities' Requested Enhanced Collection Services for Niagara Region's Collection Contract RFP

vi) Pelham:

Town of Pelham Council, at its February 19, 2019 meeting, approved the following enhanced collection services to be included in Niagara Region's collection contract RFP:

- That the Town of Pelham's enhanced service and extra payment for public spaces recycling in designated business areas, front-end garbage collection at multi-residential and Institutional, Commercial & Industrial properties, servicing of street litter bins in designated business areas, and enhanced waste disposal services continue.
- That pricing of a new enhanced service for large bulky goods/item collection (parallel to the service approved for Low Density Residential properties) to those households in Multi Residential buildings with seven (7) or more residential units and Mixed Use properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front-end garbage collection service, be included in the upcoming Regional tender.
- That the Region's RFP consider a per stop price for in-ground public space recycling and litter bins and/or for in-ground IC&I, MR and/or MU properties (all streams), as an enhanced service under provisional items

vii) Port Colborne:

City of Port Colborne Council, at its February 25, 2019 meeting, approved the following enhanced collection services to be included in Niagara Region's collection contract RFP:

- Organics Cart Collection - Designated Business Area (one (1) day-per-week)
- Public Spaces Recycling - City Facilities (i.e. Parks, Arenas, Beaches) (two (2) days-per-week)
- Street Litter Bins - City Facilities (i.e. Parks, Arenas, Beaches) (two (2) days-per-week)

City of Port Colborne staff also requested Niagara Region obtain provisional pricing for the following enhanced collection service:

- Large item collection (parallel to the service approved for Low Density Residential properties) to those households in Multi Residential buildings with seven (7) or more residential units and Mixed Use properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front-end garbage collection service

Appendix 4 – Summary of Local Area Municipalities' Requested Enhanced Collection Services for Niagara Region's Collection Contract RFP

viii) St. Catharines:

City of St. Catharines Council, at its February 11, 2019 meeting, approved the following enhanced collection services to be included in Niagara Region's collection contract RFP:

- For existing enhanced collection services, including:
 - a. Additional Curbside recycling in the Downtown Designated Business Area (DBA) (one (1) additional day per week)
 - b. Public spaces recycling in the Downtown DBA
 - c. Front-end cardboard collection in the Downtown DBA
 - d. Additional waste collection in the Downtown DBA (three (3) additional days per week)
 - e. Front-end garbage collection for Multi-Residential (MR – seven (7) or more residential units) properties
 - f. Street litter and park bin pick-up
- For new enhanced collection services, including:
 - a. Additional garbage container limit for Industrial, Commercial & Institutional (IC&I) and Mixed-Use (MU) properties inside DBA areas (increasing limit by three (3) containers per pick-up, to match existing limit of seven (7) containers per pick-up)
 - b. Additional organic collection in the Downtown DBA (two (2) additional organic collections per week)
 - c. Large item collection (parallel to the service approved for Low Density Residential properties) for those households on MR properties (seven (7) or more residential units) and MU properties with one (1) or more residential units, that receive the Region's base curbside or enhanced front-end garbage collection service
 - d. A per stop price for in-ground public space recycling and litter bins and a per stop price for in-ground IC&I, MR and/or MU properties (all streams); and
- **Further**, that for the same existing and new enhanced collection services for the Port Dalhousie Business Improvement Area (BIA) as requested above for the Downtown DBA.

Appendix 4 – Summary of Local Area Municipalities’ Requested Enhanced Collection Services for Niagara Region’s Collection Contract RFP

ix) Thorold:

City of Thorold staff requested Niagara Region obtain pricing for the following enhanced collection service options for the DBA to be included in Niagara Region’s collection contract RFP:

- Additional downtown waste collection in DBA, based on the following options:

Proposed Option	Collection Frequency	Bag Limit per Property per Day	Description of Service Change
1	Base day + 2 additional days = 3 days per week	7 bags	Status Quo
2	Base day + 1 additional day = 2 days per week	7 bags	One less collection day per week
3	Base + 2 additional days = 3 days per week	4 bags	3 less bags per collection

- Additional Blue Box collection in DBA (two (2) days-per-week)
- Public spaces recycling collection in DBA (one (1) day-per-week)
- Street litter bins in Designated Business Area (three (3) days-per-week)

x) Wainfleet:

Township of Wainfleet Council did not approve any enhanced collection services be included in Niagara Region’s collection contract RFP.

Appendix 4 – Summary of Local Area Municipalities' Requested Enhanced Collection Services for Niagara Region's Collection Contract RFP

xi) Welland:

City of Welland Council, at its February 5, 2019 meeting, approved the following enhanced collection services to be included in Niagara Region's collection contract RFP:

- **That** the City's enhanced service and extra payment for front-end garbage collection at multi-residential properties (currently a total of 12 containers) continue.
- **That** the provision of a new enhanced service for large item collection (parallel to the service approved for LDR properties) to those households in MR buildings with seven (7) or more residential units and MU properties with one (1) or more residential unit, that receive the Region's base curbside or enhanced front-end garbage collection service, be approved.

xii) West Lincoln:

Township of West Lincoln Public Works/Recreation/Arena Committee, at its February 19, 2019 meeting, approved the following enhanced collection services to be included in Niagara Region's collection contract RFP:

- **That**, Niagara Region be advised that the Township of West Lincoln wishes to continue with its current enhanced services for the DBA collection area (i.e. additional garbage container limits, increased garbage or recycling collection frequency, street litter, front-end garbage, etc.); and,
- **That**, Niagara Region be advised that the Township of West Lincoln is interested in principle with respect to the provision of an enhanced large item collection service to Multi-Residential buildings and Multi-Unit properties with 1 or more residential units that receive the Region's curbside base or enhanced garbage collection services pending Niagara Region provides the Township with a cost for providing this additional enhanced service and that no decision be made on providing this service until consideration has been given by Township Council.

Subject: Managed Competition and Fair Wage Considerations for Waste Collection Contract

Report to: Public Works Committee

Report date: Tuesday, March 19, 2019

Recommendations

1. That Regional Council **NOT APPROVE** Waste Management staff proceeding with the request for a managed competition bid process (i.e. in-house bid) for Niagara Region's next garbage, recycling and organics collection contract (Collection Contract) primarily due to timing constraints;
2. That Regional Council **ENDORSE** inclusion of a living wage clause in the Collection Contract Request for Proposal (RFP); and
3. That Report PW 22-2019 and Council's resolutions **BE CIRCULATED** to the Local Area Municipalities (LAMs), for their information.

Key Facts

- The purpose of this report is to seek Council's approval to proceed with inclusion of a living wage clause in the Collection Contract, to partially mitigate the risks associated with private collection contracts in lieu of Niagara Region submitting an in-house bid to provide collection services in response to the Collection Contract RFP.
- Structuring the Collection Contract RFP to ensure that at least two (2) proponents are successful, by dividing the region into three (3) collection areas and limiting a successful proponent to receipt of two (2) collection areas, will further alleviate pressure on a single contractor and ensure contingency in the event of future contract performance issues.
- As a result of presentations to each of the 12 LAM Committees or Councils on proposed base collection options and enhanced collection services for the next Collection Contract RFP, as referenced in PW 20-2019, and to ensure good performance by successful proponents for the next Collection Contract RFP, three municipalities have submitted Council Resolutions directing Niagara Region to consider including in-house waste collection services for the next Collection Contract: (i) City of Thorold at Council meeting of January 15, 2019; (ii) City of St. Catharines at Council meeting of February 11, 2019; and (iii) Town of Fort Erie at Council meeting of February 11, 2019.
- For the first seven (7) years of the current Collection Contract, for a very competitive price, residents did not experience a significant number of performance issues.

- Waste Management staff lack the experience to prepare an in-house bid without external consultant assistance, and procurement processes when acquiring resources such as collection vehicles will introduce a delay in the Collection Contract RFP process that cannot be accommodated due to the start date for the next Collection Contract.
- Report PWC-C 8-2019 provides further information on estimated costing for in-house collection and timing for the next RFP
- Niagara Region's Waste Management staff consulted with staff from the Legal Services Administration and the Procurement and Strategic Acquisitions divisions of Enterprise Resource Management Services (ERMS) department and from the Social Assistance and Employment Opportunities (SAEO) division of Community Services.

Financial Considerations

Costs of Managed Competition

There are costs associated with implementing a managed competition process that would allow Niagara Region to submit an in-house bid. There is a cost to hire a Fairness Monitor for the duration of the RFP process (starting as soon as staff begin drafting the RFP and continuing through to award of the Collection Contract). For reference, Niagara Region hired a Fairness Monitor for a previous project at a cost of approximately \$20,000. Additional details about the importance of a Fairness Monitor are included in the Analysis section. There is also the cost for Niagara Region to hire an independent consultant to prepare the cost accounting and technical submission for the in-house bid in response to the Collection Contract RFP, which staff estimate would exceed \$60,000, for the technical submission alone. One staff person from Niagara Region would oversee the consultant and participate in the bid process, further incurring cost for salary.

Costs are associated with a successful in-house bid. High level costs associated with implementation of an in-house collection team are outlined in confidential memo PWC-C 8-2019. At minimum, capital and operating costs would include: yard/maintenance building; waste collection vehicles and associated maintenance, fuel, tires and insurance; Collection Supervisor vehicles and associated maintenance, fuel, tires and insurance; labour costs for Collection Supervisor, drivers and loaders, mechanics for regular and on-road service, and administration support staff; and general equipment such as uniforms, personal protective equipment (PPE) and spill kits.

There may be some minor cost offsets with a successful in-house bid through government exemptions from the requirements of securing a bond and letter of credit. There may also be some savings, for example, for the cost of vehicles where government organizations can secure a better rate. Private companies may view this as an unfair advantage.

Awarding a contract to an in-house team could potentially be more cost effective, and even if a municipality does not save as much as anticipated, this may still be the preferred option, which is the case for Ottawa. According to an article in the [Ottawa Citizen](#) from June 19, 2018, Ottawa has experienced deficits in regards to budget from their in-house teams. The East Ottawa zone has had annual operating deficits in three (3) of the five (5) years, with a cumulative deficit of about \$1.1 million. Additionally, the Downtown Zone, which was sole sourced, has had operating deficits in all but one (1) year between 2013 and 2017, with a cumulative total in that time of roughly \$1.6 million. Reasons for the deficits include cost overruns on increased expenses for labour, fleet and fuel; expiring warranties on an aging fleet; and a labour arbitration that forced the City to use full-time collection workers for overtime work, rather than calling on sub-contractors and casual labourers. Despite operating deficits, Ottawa is content with the results of the in-house teams because the costs are still lower than the next closest private bid (the actual cost difference is not included in the article). The Downtown Zone was sole-sourced, so there is no way to compare costs as it was never put to tender.

Costs of a Living Wage Clause

There are costs for including a living wage clause in the Collection Contract. Living wage for Niagara Region is calculated by the Niagara Poverty Reduction Network using the National Living Wage Framework (included as Appendix 1). As of November 2018 the living wage for Niagara was \$17.99. Considering only the drivers and loaders, for whom there is a wage difference, Niagara Region staff estimate salary costs could result in an annual increase of at least \$320,000 (loaders only) to \$750,000 (loaders and increasing pay rate for drivers proportionately) over current costs. This cost would continue to rise over time as the living wage rate is recalculated annually in November. Costs would likely be further escalated when other staff (e.g. customer service representatives) are included in the calculation. Upon award of the Collection Contract, the living wage will need to be recalculated by the Ontario Living Wage Network as the hourly wage could be less than the defined living wage per hour at the start of the Contract (2021) depending on the presence of and distribution of employee and employer paid health benefits of the contractor.

Niagara Region staff would need to ensure that the Collection Contract reflects the requirement of the successful proponents to pay a living wage for their employees working on this Collection Contract, and to ensure the appropriate gap between drivers and loaders is maintained throughout the length of the contract. One option is to structure the RFP such that proponents are awarded points based on wage structure to ensure fair compensation to all employees. Alternatively, Niagara Region could become a Fair Wage Employer, but this would have wide reaching implications on the Corporation, as it applies to full-time, part-time, and all externally (third party) contracted staff that provide service on a regular basis, and not just contracted collection staff. This analysis is outside the scope of this report. Additional details about living wage and Fair Wage Employers are included in the Analysis section.

Analysis

Niagara Region Waste Management Services staff were asked to investigate the managed competition process as a result of Council resolutions from the Town of Fort Erie, the City of St. Catharines, and the City of Thorold following presentations about the results of the stakeholder consultation sessions for the proposed services for the next collection contract (PW 20-2019). The resolutions suggest in-house service might alleviate issues related to service delivery from the private sector, and as such, these Councils have requested that Niagara Region identify the benefits and cost savings (if any) of bringing collection in-house. Managed competition promotes an environment of competition, in which an in-house bid is submitted alongside submissions from the private sector.

Traditionally, municipal public services, such as waste management, have been provided by an in-house team. For several decades now, these services have been removed from public control to the private sector, in search of reduced costs and increased efficiencies. Research completed by the [Canadian Centre for Policy Alternatives](#) has shown that waste collection by both the public and private sectors can be hit and miss, so municipalities are increasingly adopting a type of service delivery that does not depend solely on either an in-house team or the private sector. Waste Management staff researched three (3) comparator municipalities who utilize a mixed waste collection system, comprised of both an in-house team and a private contractor: the City of Hamilton, the City of Ottawa, and the City of Toronto. For Waste Management purposes, comparator municipalities are defined as those within Ontario and with a population of 300,000 or more. Staff are unaware of any other comparator municipalities utilizing this type of system for waste collection services.

Waste Management staff also consulted with staff from Legal Services Administration, Procurement and Strategic Acquisitions, and SAEO.

The benefits and challenges of managed competition are described in detail in the Financial section above and in the Analysis below, and key items are summarized in Table One.

Table One: Benefits and Challenges of In-House Collection

Benefits	Challenges
Competitive pricing is obtained on private sector work as a result of the bidding process	A significant capital investment would be required for vehicle-related costs, plus any additional infrastructure costs. Capital financing has not been determined and would require further review of the Region's capital financing strategy.

Benefits	Challenges
Less need for contract management, including consequences for failure to provide prescribed services	Higher wage and benefit costs (offset with inclusion of living wage clause)
Control and flexibility to make changes in service levels	Personnel/labour management required (e.g. potential for collective bargaining agreement restrictions)
A municipality's lower cost of borrowing, and the fact that municipalities do not pay taxes and insurance in the same manner as private sector companies do, may result in lower collection costs	Lack of in-house expertise at Niagara Region requires that an external consultant assist with the bid response, introducing timing and cost implications

Timing Implications of Managed Competition

Timing of release for the Collection Contract RFP is a concern for Waste Management staff, who are working to minimize performance issues that residents are currently experiencing with the contractor. It is imperative that the Collection Contract RFP be issued in time to allow the successful proponents to adequately prepare for collection start date, which requires at minimum: detailed analysis of routes; acquisition of vehicles; hiring of staff; set up of administration; locating and potentially acquiring, building or modifying facilities; and a number of other tasks.

Waste Management staff lack the in-house experience to prepare a bid without external support and require that a consultant assist with development of any bid. Hiring a consultant takes time that would delay the submission of an in-house bid and it would be difficult to submit a response within the required time-frame for the Collection Contract RFP. The current contract is set to end in March of 2021 and as such, the RFP process must continue along the current schedule, which does not allow for a delay to be introduced through managed competition. Waste Management staff suggest exploring the option of managed competition for subsequent Collection Contract RFP's, when there is adequate time to prepare. The importance of timing for issuance of the next Collection Contract RFP is further outlined in PWC-C 8-2019.

There is a risk that a successful in-house bid team would not be ready for the March 2021 start date, depending on the award date. For example, in discussion with staff at the City of Toronto, who are in the process of procuring new collection vehicles, it was noted that the general timeline to acquire new vehicles of 12 months has been extended to 18 months. Although the Niagara Region might source the vehicles from a different supplier, the potential for the extended time an in-house team might require should be noted. Of course, private companies bidding on the Collection Contract RFP might also have the same limitations, but, they may also have resources unavailable to Niagara Region. For example, they may have vehicles that can be deployed from other

contracts, or they may purchase vehicles at a larger volume resulting in different agreements with vehicle providers.

Waste Management staff were advised that one alternative to competing with an in-house bid is to have staff complete a business case evaluation to determine the costs for an in-house bid and structure the RFP such that Niagara Region has the right to remove an area from consideration (i.e. Niagara Region can award to an internal team regardless of bids, in the event that staff are not satisfied after the evaluation of submissions). This process could identify whether cost savings are potentially available and mitigate against tender results that exceed expectations of staff. Waste Management staff do not recommend this direction as the RFP has already been designed with three (3) defined collection areas, to be awarded to a minimum of two (2) proponents. Secondly, benchmarking reports for costs that are prepared annually with data available for comparator municipalities provide Niagara Region staff a method of determining fair market value for services although that information doesn't provide direct protection against tender bids that are priced in a manner inconsistent with the expectations of staff. Preparation of a business case, while not subject to all the timing constraints of a competitive internal bid, remain subject to timing, resource and cost pressures. On balance, Waste Management staff believe the benefits of preparing the business case don't outweigh the direct costs, staff time and risk of delay due to time an in-house team may require to prepare for collection.

Risk Implications of Managed Competition

An integral aspect of the managed competition process is that there is an 'ethical wall' separating the RFP project team from the in-house bid team, in which the RFP development and bid are not discussed with members outside of the respective teams. The separation ensures that there are no unfair advantages and/or disadvantages given to the in-house team. The 'ethical' wall is developed and maintained by a Fairness Monitor. Based on discussion with the City of Ottawa, the Fairness Monitor is to be retained during the initiation phase, prior to the start of drafting the RFP. While not a prescriptive legal obligation that the Fairness Monitor appointment precede any work on the RFP, failure to do so could result in an allegation of unfairness in the process. Waste Management Services began drafting the RFP in early December of 2018 and, due to the size of the division, many staff have already been involved in the process. In addition to the cost, past Regional experience with hiring a Fairness Monitor has shown a lead time requirement of at least three to four months (unless single sourced), which would impact the timing for release of the Collection Contract RFP, the importance of which is highlighted above.

In addition to hiring a Fairness Monitor, Niagara Region would need to immediately designate a staff person, who has not yet participated in any part of the RFP preparation process, and who would work with an independent consultant, at a cost to Niagara Region, to prepare the in-house bid in response to the RFP. As noted above,

the independent consultant would need to be retained and that could involve a lead time potentially greater than needed for hiring a Fairness Monitor.

The restricted time available for a retained consultant and designated staff person to prepare an alternate bid, combined with the lack of an existing policy framework and internal staff's lack of direct experience in undertaking such a project creates a material risk that the resulting internal bid, if successful, fails to adequately estimate costs and timelines needed for implementation.

Policy Implications of Managed Competition

Under the Resource Recovery and Circular Economy Act, 2016 (RRCEA), the Province is shifting to a producer responsibility framework for products and packaging, making producers and brand holders accountable for recovering resources and reducing waste associated with products. The Waste Diversion Transition Act, 2016, allows for the products and packaging managed under existing waste diversion programs to be transitioned to the new producer responsibility framework. More recently, the Province has released a "Made in Ontario Environment Plan" that further indicates the Province's support for movement to producer responsibility framework. Due to the uncertain role of municipalities under the new legislation, it is recommended that Niagara Region minimize investment of capital in the collection of recyclables at this time. An in-house bid by Niagara Region should only reflect collection of garbage and organics.

To allow an in-house bid, per the Niagara Region's Purchasing By-Law, Regional Council must first approve a format for the development and submission of the in-house bid. Regional Council has not provided formal direction for the development of a managed competition policy, but discussion did occur at previous Public Works committee meetings regarding an in-house bid. The City of Ottawa has developed an internal policy for managed competition and ideally, Niagara Region should follow suit, prior to submission of any in-house bid for the Collection Contract, to avoid the potential for the perception of an unfair advantage to an in-house team.

Performance Mitigation Measures

Good and consistent service for residents can be acquired through means other than in-house service. When designing the RFP, for purposes of collection service, the region would be divided into three (3) areas. Any successful proponent will be awarded a maximum of two (2) of these areas, ensuring that at least two (2) independent contractors will service Niagara residents. This eliminates the burden on one company to complete collection for the entire region.

Current Contract provisions are being reviewed and will be revised in the new RFP to ensure Niagara Region can retain alternative service providers in a more timely manner if the successful proponents are not meeting their contract obligations. For example,

currently Niagara Region must provide six (6) business hour notice to Emterra before the Region can retain another service provider to perform work not completed by Emterra.

Bids from private contractors may result in cost reductions, however, this may be at the expense of employee wages. By including a clause for living wage that requires the successful proponents to pay their employees working on this Contract the Ontario Living Wage, it is anticipated that the collection contractors may see less employee turnover and lower levels of absenteeism, both of which could contribute to improved service for residents. Additionally, this will mitigate the need for an in-house team, in which the municipality would pay a fair wage. A living wage is defined as “the hourly wage a worker needs to earn to cover their basic expenses and participate in their community” (Ontario Living Wage Network). Living Wage Employers are “responsible employers who care about their employees and the community. They recognize that paying a living wage constitutes a critical investment in the long-term prosperity of the economy by fostering a dedicated, skilled and healthy workforce” (Ontario Living Wage Network). As previously noted, Niagara Region could structure the RFP to require that successful proponents pay their employees working on this Collection Contract the living wage, rather than obtaining the formal designation of a Living Wage Employer. As documented in the Financial section of this report, it is important to identify that living wage does have a financial impact on collection, with respect to increased wages over the current costs. The City of Toronto has a Fair Wage Office and Policy (included as Appendix 2) and the City of Hamilton also has a policy (included as Appendix 3) applied to construction contracts valued at over \$500,000.

Finally, it should be noted that for the first seven (7) years of the current Collection Contract, for a very competitive price, residents did not experience a significant number of performance issues. Rather than in-house service, there are other mechanisms, described above, that will help mitigate performance issues.

Alternatives Reviewed

Alternatives to an in-house bid, and the associated benefits and challenges of each option, are discussed in detail above. As itemized in the Recommendations, it is suggested that two of these alternatives be applied: (i) Inclusion of a living wage clause in the Collection Contract RFP; and (ii) Structuring the Collection Contract RFP to ensure that two (2) proponents are successful, by dividing the region into three (3) collection areas and limiting a successful proponent to receipt of two (2) collection areas.

Relationship to Council Strategic Priorities

The recommendation to include a living wage clause in the Collection Contract supports Council's Strategic Priority of Doing Business Differently, promoting the values that foster economic prosperity in Niagara.

Other Pertinent Reports

- PW 20-2019 Base and Enhanced Services for Next Collection Contract
- PWC-C 8-2019

Prepared by:

Jennifer Mazurek
Acting Manager, Waste Policy &
Planning
Waste Management Services

Recommended by:

Catherine Habermehl
Acting Commissioner
Public Works Department

Submitted by:

Ron Tripp, P.Eng.
Acting Chief Administrative Officer

This report was prepared in consultation with Alison Powell, Acting Business Analyst, Waste Management Services, Sterling Wood, Legal Counsel, Bart Menage, Director Procurement and Strategic Acquisitions and Sherri Tait, Acting Associate Director Waste Collection and Diversion and reviewed by Sara Mota, Program Financial Specialist, and Lydia Torbicki, Acting Director, Waste Management Services.

Appendices

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CALCULATING THE LIVING WAGE IN NIAGARA REGION 2018

The Niagara Poverty Reduction Network



ACKNOWLEDGEMENTS

A living wage reflects what earners in a family need to be paid based on the actual costs of living and being included in a specific community.

The living wage is calculated as an evidence-based hourly rate at which a household (two adults working full-time, two children) can meet its basic cost of living needs, once government transfers have been added to the family's income and deductions have been subtracted. Included in this calculation are food, shelter, clothing, transportation, child care, non-OHIP medical insurance, continuing adult education, and items that allow for fuller participation in society, such as communication, family leisure outings, and local recreation.

In Canada, a living wage is a **VOLUNTARY COMMITMENT** that can be made by public, private, and not-for-profit sector employers to compensate directly-employed and contract-employed full-time and part-time workers.

Calculating a living wage provides an opportunity for a community to:

- discuss work, wages, and compensation in different ways;
- act as a guide for employers who want to ensure their workforce can adequately meet their family's basic household cost of living and community inclusion needs.

THE HOURLY LIVING WAGE
FOR NIAGARA REGION WAS
ESTABLISHED AS **\$17.99**
FOR 2018.

This report was made possible through the valuable input and collaboration of the Niagara Poverty Reduction Network Wages and Work Task group. The methodology presented in this report was adapted from the Canadian Living Wage Framework: A National Methodology for Calculating the Living Wage in Your Community and the Canadian Centre for Policy Alternatives Ontario Family Expense Workbook to develop the living wage calculation. The Family Expense Workbook was updated by the Ontario Living Wage Network and the living wage calculation generated using the CCPA-Ontario Living Wage Calculator. The tool used to calculate community expenses, taxes and government transfers is updated on an annual basis. The 2018 calculator update was completed by Iglia Ivanova from the Canadian Centre for Policy Alternatives in British Columbia.

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This brief provides context on the living wage calculation for Niagara region in 2018, a description of the methodology used to calculate a living wage, and a look at who could implement a living wage.

WHAT IS A LIVING WAGE?

In Canada, a living wage is currently a voluntary commitment that can be made by public, private and not-for-profit sector employers to compensate directly-employed and contract-employed full-time and part-time workers. It is a guide for employers who wish to pay fairer wages for work and labour. Fairer wages are wages that allow a family to be able to meet their basic household cost of living needs, as well as to be included in the mainstream community; in other words, an inclusive wage.

A living wage is not the same as the minimum wage, which is the legal minimum all employers must pay. The living wage sets a higher test - it reflects what earners in a family need to be paid on an hourly basis based on the actual costs of living and being included in a specific community. The living wage is calculated as an evidence-based hourly rate at which a household consisting of two working parents with two children can meet its basic needs, once government transfers have been added to the family's income and taxes and payroll deductions have been subtracted.

Included in this calculation are food, shelter, clothing, transportation, child care, private health insurance for prescription drugs, vision, and dental coverage, continuing education for adults to upgrade skills, and items that allow for fuller participation in society, such as communication, family leisure outings and local recreation. The calculation is neither national nor provincial – it is done for a municipality or region to reflect real and unique local living costs and the hourly wage required to meet those needs.

A living wage is by no means a luxury wage. Many items that could be considered as an important component of mainstream quality of life are not included in the reference calculation, including savings for a child's education, retirement, home ownership, or even debt repayment. It provides a conservative estimate of what that family needs to earn in order to meet basic day-to-day cost of living needs and to participate in the social life of their community¹.

Calculating a living wage provides an opportunity for a community to:

- discuss work, wages, and compensation in different ways;
- act as a guide for employers who want to ensure their workforce can adequately meet their family's basic household cost of living and community inclusion needs.

OF NOTE:

A living wage is just one of many tools in a tool-box to assist workers and employers in helping to meet a family's basic cost of living needs and opportunities for community participation – it is not a stand-alone policy or decision. It works more effectively when implemented in conjunction with increased availability of reasonably-priced housing, more accessible and affordable child care and public transit options, employee group benefit plans, skills training, economic development initiatives, and other broad public policies and programs.

HOW IS A LIVING WAGE CALCULATED?

A living wage calculation examines the expenditures necessary to meet basic needs and to participate both economically and socially in a community. The resulting hourly wage represents the income necessary to meet both family expenditures and pay taxes and payroll deductions. It is determined using the Ontario Living Wage Network's Living Wage calculator for Ontario, which is adapted from the National Living Wage Framework², takes into account a conservative estimate of family expenses, as well as the tax, transfer, and payroll deduction rules for the province. This framework incorporates a consistent definition and methodology that is being deployed across the country to ensure uniformity and credibility of approach. Taxes, transfers, and even hours of work vary widely from province to province. Cost of living, such as rent, and access to public services, such as child care and transit also vary. For this reason, there are variations in the living wage calculation from community to community and province to province.

In 2018, the Ontario Living Wage Network reviewed and updated the methodology for calculating the cost of living in Ontario. The key methodology change is an adjustment of work hours per week for each adult. In the past, Ontario communities have calculated the cost of living based on a 37.5-hour work week. In reviewing the methodology, the decision was made to move to a 35-hour work week. According to Statistics Canada, the average usual hours for workers 15 years and older in Canada is 35 hours per week³.

The living wage calculation starts with a list (and accompanying estimated cost) of necessary expenses for a standard reference family of four (two adults both aged 35 and both working full-time jobs (35 hours/week each), a three-year old child and a seven-year old child) to:

- meet basic needs (i.e. housing, nutritious food, transportation);
- participate in the economic and social fabric of their community (i.e. recreational opportunities);
- purchase items that can help them escape marginal subsistence (i.e. household items)

The list of family expenses contains no extravagances. It does not allow families to save for their children's post-secondary education. It does not acknowledge that many working families carry debt obligations, such as student loans. It does not allow for home ownership and its many additional expenses. But it does recognize that assets, resources, and services such as rent, transportation, child care, food, clothing, internet, telephone, and laundry are essential items that every family requires to meet basic needs in an advanced economy and developed country such as Canada in the 21st century.

In calculating the living wage for Niagara region, expenses were determined from credible and reliable sources such as Niagara Region Public Health, Canada Mortgage and Housing Corporation

OF NOTE:

Although lowest consistent cost alternatives were presented when possible, bargains, sales, coupons, and other price-lowering measures cannot be consistently relied upon by any family and thus form no part of this calculation.

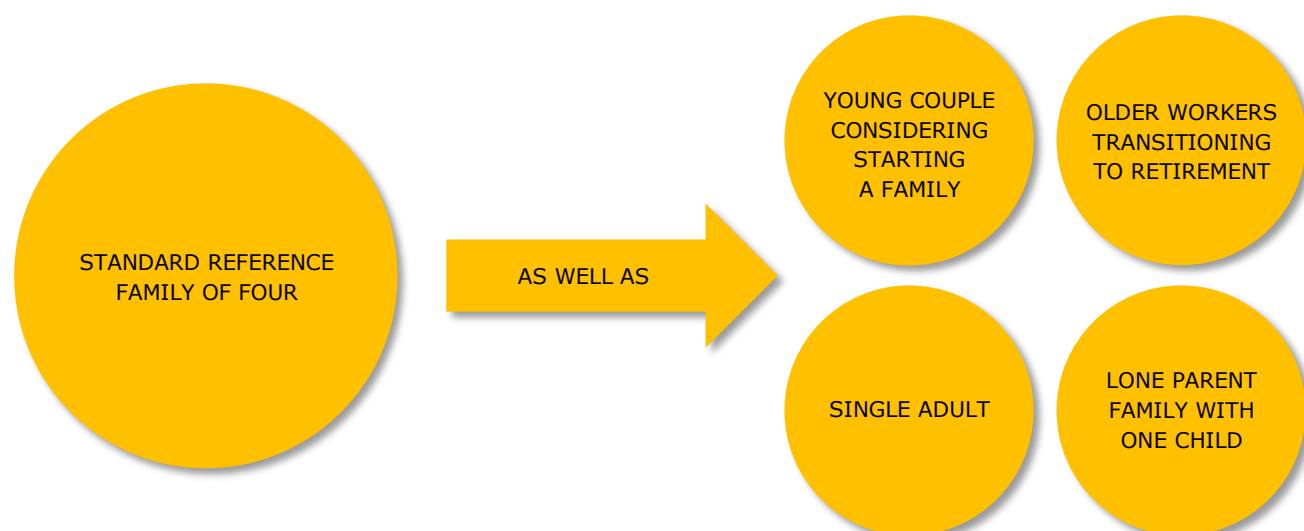
(CMHC), and Statistics Canada's Market Basket Measure (MBM). Some expenses are eligible for subsidies, such as child care available through Niagara Region Community Services.

Once total family expense has been added up, the calculation moves to the income side of the equation, to incorporate applicable employment income and government transfers. The living wage incorporates relevant government assistance, such as child benefits.

The final step in calculating a community or region's living wage is to calculate the employment income this family needs to meet both household expenses and to pay taxes and payroll deductions. This is done by dividing total employment income by the annual number of hours worked (3,640 hours, based on two adults each working a 35-hour work week for 52 weeks).

The living wage calculation covers the basic needs and social inclusion of a majority of its family units living in its communities. Although a standard reference family of four is used for calculation purposes, a living wage supports the diversity of families in our community through the life cycle, so that young adults are in a position to consider starting a family and older workers have some extra income as they age and require different supports. A living wage is also sufficient to meet the needs of a single adult or a lone parent with one child.

FIGURE 1: WHO A LIVING WAGE CAN SUPPORT



The methodology for calculating Niagara region's living wage includes the following scenario:

- A healthy family of four – two parents, both aged 35, and two children, one aged three and one aged seven
- One child in full-time daycare
- One child in before and after-school care and in camps during summer and school breaks
- Full-time hours of employment per week (35) for each of the two parents
- Each parent taking one college course per year to improve skills and employment capacity
- Cost of living including rental housing, transportation, food, clothing, child care, laundry, telephone, medical and life insurance, and other reasonable social inclusion expenses
- Inclusion of any applicable tax credits, returns, government benefits, and subsidies

SUMMARY OF ANNUAL HOUSEHOLD EXPENSES

TABLE 1: NIAGARA REGION'S 2018 LIVING WAGE: SUMMARY OF ANNUAL HOUSEHOLD EXPENSES

ITEM	ANNUAL AMOUNT (rounded to the nearest dollar figure)
Food	\$8,786
Clothing/Footwear	\$3,201
SHELTER	
<i>Rent, 3 bedroom apartment</i>	\$13,692
<i>Utilities</i>	\$1,316
<i>Tenant Insurance</i>	\$191
Transportation/Vehicle	\$13,196
CHILD CARE (before subsidy)	
<i>Daycare/Camps</i>	\$14,125
ECONOMIC AND COMMUNITY PARTICIPATION/INCLUSION	
<i>Cell Phone</i>	\$678
<i>Internet and Cable</i>	\$650
<i>Other – Includes Family Outings, Personal Care, Laundry, Recreation, Household Items/Furnishings, School Supplies/Fees, Reading Materials, Bank Fees, Birthday Presents</i>	\$9,038
OTHER	
<i>Non-OHIP Medical Insurance</i>	\$2,719
<i>Critical Illness and Life Insurance</i>	\$510
<i>Adult Education</i>	\$632
<i>Contingency</i>	\$2,749
TOTAL FAMILY HOUSEHOLD EXPENSES	\$71,483

SUMMARY OF ANNUAL FAMILY INCOME

TABLE 2: NIAGARA REGION'S 2018 LIVING WAGE – SUMMARY OF ANNUAL FAMILY INCOME

HOUSEHOLD INCOME, TAXES, & PAYROLL DEDUCTIONS*	ANNUAL AMOUNT
Total Household Employment Income Required	\$65,474 (or \$32,737 per job)
2018 Hourly Living Wage	\$17.99
GOVERNMENT TRANSFERS & SUBSIDIES	
Canada Child Benefit (CCB)	\$8,262
Child Care Subsidy	\$6,735
Ontario Trillium Benefit	\$43
Total Transfers/Subsidies	\$15,040
Total Household Income Before Deduction (Household Employment Income + Transfer/Subsidies)	\$80,514
Government Taxes & Payroll Deductions	
Federal and Provincial Tax after Credits	\$5,050
CPP and EI Contributions	\$3,981
Total Taxes/Deductions	\$9,031
Total Household Income After Deductions (Household Employment Income + Transfer/Subsidies – Tax/Payroll Deductions)	\$71,483
(Total Family Household Expenses - Table 1)	(\$71,483)

*Appendix A provides a detailed description of the government benefits, taxes, transfers, and other payroll deductions associated with the 2018 Niagara region living wage calculation.

OF NOTE:

Table 1 itemizes each household expense and estimated cost. The detailed breakdown of the “Annual Household Expenses” calculation, methodology, and rationale can be found in the “**Calculating the Cost of Living in Niagara Region, 2018**” report, located on the Niagara Poverty Reduction Network website: www.wipeoutpoverty.ca

WHO COULD IMPLEMENT A LIVING WAGE IN NIAGARA?

There are a range of possibilities:

- **Municipal/Regional government:** The Region of Niagara, as well as its 12 municipal governments, could adopt a living wage strategy in all employment and procurement policies to ensure that all staff and contract workers are paid Niagara region's living wage. The City of Cambridge, Ontario³ is one example of a municipal government that recently passed a motion to become a living wage employer, while the City of Toronto is considering living wage recommendations in its Municipal Poverty Reduction Strategy⁴.
- **Broader public service sector:** The broader public service, including hospitals and post-secondary institutions, could adopt an organization-wide living wage policy that would ensure all staff and contract workers are paid Niagara region's living wage. The Hamilton-Wentworth District School Board is one example of a public sector employer that has adopted a living wage policy as a way to send a strong message on the importance of inclusive wages to reduce poverty⁵.
- **Social profit/social service sector and granting agencies:** Many employers in Niagara region, including many non-profit organizations, offer employment opportunities that are funded by some combination of government institutions and community foundations. These granting organizations have considerable influence over the pay offered through their grants as they seek to support programs that provide the highest level of service for the lowest cost possible. Moving forward, grantors could consider the quality of the jobs supported by the funding and move to ensure that employment opportunities consider including Niagara region's living wage. Positive Living, located in St. Catharines, is an example of a non-profit certified living wage employer.
- **Private sector:** There is a growing and strong argument that private sector employers have much to gain by embracing the living wage movement and a good jobs strategy. Although public debate over a higher minimum wage is often subject to objections that the demands are too great, there is much evidence to suggest that the choice to pay low-paid workers higher wages is good for business of all sizes, good for the community, and good for the employees. Waterloo, Ontario has several private sector living wage champions, including GCP Industrial Products and Grosche International and Pen Financial Credit Union.

OF NOTE:

If an employer in Niagara region provides comparable or better non-OHIP medical coverage and/or disability/life insurance coverage as part of an overall compensation package, the hourly living wage would be lowered by at least one dollar/hour. This can be taken into account in the Ontario Living Wage Network Employer Certification Program³. Learn more about the certification program at www.ontariolivingwage.ca

As the amount of family living expenses is reduced, child care subsidy rates, taxes, and other deductions fluctuate, thus impacting the hourly wage rate.

To date, seven employers based in Niagara region have become recognized as certified Living Wage employers.

Regardless of the sector, the fundamental principles and implications of a living wage remain the same:

- Income is the most important determinant of one's health. Higher wages mean healthier workers and healthier workers are more productive and absent less often;
- Higher wages lead to reduced staff turnover, which means lower training and recruitment costs for employers;
- Recognizing employees' contribution to the employer's bottom line by compensating them with competitive, inclusionary wages to meet the needs covered in a living wage calculation enhances reputation among consumers and the community⁶.
- A living wage is one of many tools in a toolbox to assist in helping to meet a family's basic cost of living needs and opportunities for community participation – it is not a stand-alone policy or decision. It works more effectively when implemented in conjunction with increased availability of reasonably-priced housing, more accessible and affordable child care and public transit options, employee benefit plans, skills training, economic development initiatives, and other broad public policies and programs.

APPENDIX A

The following section provides a detailed description of the government benefits, taxes, transfers, and other payroll deductions associated with the 2018 Niagara region living wage calculation and income level:

CANADA CHILD BENEFIT

The Canada Child Benefit (CCB) is a tax-free monthly payment made to eligible families to help them with the cost of raising children under 18 years of age¹⁰. The CCB might include the child disability benefit and any related provincial and territorial programs.

CHILD CARE SUBSIDY

In Ontario, the provincial government provides lump sum funding to municipalities across the province to provide child care subsidies for families in financial need. The subsidy works on a sliding scale, offering greater support for families with the lowest incomes.

ONTARIO TRILLIUM BENEFIT

The Ontario Trillium Benefit (OTB) combines the following three credits to help pay for energy costs as well as sales and property tax: Northern Ontario Energy Credit, Ontario Energy and Property Tax Credit, and Ontario Sales Tax Credit.¹¹

FEDERAL AND PROVINCIAL INCOME TAX

Each living wage calculation takes into account the amount of money an income earner pays in federal and provincial taxes, after all government credits and deductions.

CANADA PENSION PLAN AND EMPLOYMENT INSURANCE CONTRIBUTIONS

With few exceptions, every person who is employed and earns over \$3,500 per year in Canada must contribute to the Canada Pension Plan (CPP)¹². Workers must also contribute to the Employment Insurance (EI) fund. Both contributions are subject to a yearly maximum. Generally, both contributions are deducted from one's paycheck.

SOURCES

1. Richards, T., Cohen, M., Klein, S., and Littman, D (2008) - *Working for a Living 2008: Making paid work meet basic family needs in Vancouver and Victoria* Vancouver: CCPS-BC – policyalternatives.ca
2. National Living Wage Framework (2015) - livingwagecanada.ca
3. Ontario Living Wage Network (2018), Employer Certification Program - ontariolivingwage.ca
4. Waterloo Record (2016), Cambridge Becomes First in Ontario to Endorse Living Wage Policy - therecord.com
5. City of Toronto (2015), Interim Poverty Reduction Strategy - toronto.ca
6. Hamilton Spectator (2013), School board sends message on poverty - thespec.com
7. Living Wage Canada (2015), Two new living wage giants in Hamilton - livingwagecanada.ca
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10. Canada Revenue Agency (2016), Canada Child Benefit - cra-arc.gc.ca
11. Ontario Government (2018) Ontario Trillium Benefit – www.ontario.ca/page/ontario-trillium-benefit
12. Government of Canada (2016), Canada Pension Plan - canada.ca



Fair Wage Policy

Note: This policy is extracted from Schedule A of the City of Toronto Municipal Code, Chapter 67.

A1. Definitions

As used in this Fair Wage Policy, the following terms have the meaning indicated:

APPRENTICE – An individual who has entered into a registered training agreement under which the individual is to receive workplace-based training in a trade, other occupations or skill set as part of an apprenticeship program approved by the Ontario Ministry of Training, Colleges and Universities.

APPRENTICESHIP PROGRAM – A program recognized by Ontario Ministry of Training, Colleges and Universities which provides for the qualification, recruitment, selection, employment, and training on the job. Apprenticeship and training leads to Ontario Certification of Qualification and Apprenticeship for Journeyperson status, which is recognized by employer and employee representatives of industry.

CONTRACT – A legal, business agreement between the City of Toronto and the contractor to perform work or services or to provide materials and supplies.

CONTRACTORS – Any person or business entity with whom the City enters into a contract with to perform the work or provide services.

FAIR WAGE SCHEDULE – Stipulated rates of pay for different classifications of work produced and obtainable from the Fair Wage and Labour Trades Office.

FIELD WORK – All work in performance of the contract that is not shop work.

FRINGE BENEFITS – Includes such benefits as company pension plans, extended health care benefits, dental and prescription plans, etc. It does not include legislated payroll deductions such as C.P.P., E.H.T., W.S.I.B. or E.I.C.

NON-COMPLIANCE – The occurrence of any of the following conditions:

- Contractor fails to co-operate with the Manager, Fair Wage Office in fulfilling his/her responsibilities under the Fair Wage Policy and the Labour Trades Contractual Obligations in the Construction Industry.
- Sub-contractor fails to co-operate with the Manager, Fair Wage Office in fulfilling his/her responsibilities under the Fair Wage Policy and the Labour Trades Contractual Obligations in the Construction Industry.
- Contractor or sub-contractor has been found in violation of the Fair Wage Policy (non-compliance applies to both contractor and sub-contractor).

- Contractor has been found in violation of the Labour Trades Contractual Obligations in the Construction Industry.
- Sub-contractor has been found in violation of the Labour Trades Contractual Obligations in the Construction Industry.

PROCUREMENT CALL DOCUMENT – Includes a Tender, Request for Quotations and a Request for Proposals as issued by the Purchasing and Materials Management Division, and as defined in Chapter 195 of the Toronto Municipal Code.

SHOP WORK – Any work in performance of the contract that is done in or at any factory, foundry, shop or place of manufacture not located at or upon the site of the work, and not operated solely for the purpose of the work.

SUB-CONTRACTOR – Any person or business entity not contracting with or employed directly by the City but who supplies services or materials to the improvement under an agreement with the contractor or under the contract with another sub-contractor.

WAGES or RATE OF WAGES – Includes the hourly rate, vacation and holiday pay and any applicable amount for fringe benefits shown in the current Fair Wage Schedule, to be paid to the worker as part of the worker's wages or for the worker's benefit provided for in any collective agreement applicable to that worker.

WORKERS – Includes mechanics, workers, labourers, owners and drivers of a truck or other vehicle employed in the execution of the contract by the contractor or by any sub-contractor under them and clerical staff.

A2. City of Toronto Council references

1. City of Toronto Council, by the adoption of Corporate Services Committee Report 13, Clause 1, as amended, at its meeting of October 1 and 2, 1998, directed that the Fair Wage Policy of the former Municipality of Metropolitan Toronto be adopted for all City departments, agencies, boards and commissions and replace all existing fair wage policies of the former local municipalities.
2. City of Toronto Council, by the adoption of Administration Committee Report 7, Clause 1, as amended, at its meeting of June 18, 19 and 20, 2002, directed that certain changes be made to the Fair Wage Policy and Procedures.
3. City of Toronto Council, by the adoption of Administration Committee Report 5, Clause 2, at its meeting of June 24, 25 and 26, 2003, directed that certain further changes be made to the Fair Wage Policy and Procedures, and to the Fair Wage Rate Schedule.
4. City of Toronto Council, by the adoption of Government Management Committee Item 8.9, at its meeting of October 22 and 23, 2007, directed that certain changes be made to the Fair Wage Policy.

A3. Purpose and history of Fair Wage Policy

1. The Fair Wage Policy has as a central principle the prohibition of the City doing business with contractors, sub-contractors and suppliers who discriminate against their workers.

2. Originally implemented in 1893 to ensure that contractors for the City paid their workers the union rates or, for non-union workers, the prevailing wages and benefits in their field, the Fair Wage Policy has expanded over the years to other non-construction classifications such as clerical workers.
3. The policy also requires compliance with acceptable number of working hours and conditions of work in order to protect the rights of workers.

A4. Intent of Fair Wage Policy

The intent of the Fair Wage Policy can be summarized as follows:

1. To produce stable labour relations with minimal disruption
2. To compromise between the wage differentials of organized and unorganized labour
3. To create a level playing field in competitions for City work
4. To protect the public
5. To enhance the reputation of the City for ethical and fair business dealings

A5. Application

1. The provisions of the Fair Wage Policy apply equally to contractors and all sub-contractors engaged in work for the City of Toronto. It is understood that contractors cannot sub-contract work to any sub-contractor at a rate lower than called for in the Fair Wage Policy.
2. The fair wage rates do not apply to small businesses, typically those with owner-operators, or partnerships, or principals of companies as long as they undertake the work themselves.
3. It should be noted that under the above City of Toronto Council reference authorities, the conditions of the Fair Wage Policy cannot be waived, unless authorized by Council to do so.

A6. Establishment of rates

1. Establishing fair wage rates and schedules are intended to minimize potential conflicts between organized and unorganized labour in the tendering and awarding of City contracts.
2. Certain designated construction-related rates are based on the lowest rate established by collective bargaining, while the wage rates for other classifications are based on market and industrial surveys in accordance with the prevailing wages for non-union workers in the geographic area.
3. The City encourages contractors to hire and train apprentices under approved apprenticeship programs. Apprentices/trainees will be assessed based on Provincial Qualification Apprenticeship Certification Criteria.
4. Fair wage rates, including rates for apprentices, are established through discussion between the Fair Wage Office and with employee and employer groups and associations (having both union and non-union members). This discussion will also include appropriate apprenticeship programs for construction-related trades.
5. The proper wage rates to be paid to apprentices/trainees are those specified by a particular industry program in which they are enrolled, expressed as a percentage of the journeyman rate on the wage determination. In the event employees reported as apprentices and trainees have

not been properly registered, or are utilized at the jobsite in excess of the ratio of journeymen permitted under the approved program, they must be paid the applicable schedule of wage rate. The Manager, Fair Wage Office may assess established employee work history as to determine the appropriate apprentice/trainee level.

6. These rates are reviewed by the above-noted groups and are recommended to Council, by the Manager, Fair Wage Office for approval every three years.

A7. Contractor and sub-contractor responsibilities

1. Contractors will be responsible for any violations or non-compliance issues arising from the engagement of any sub-contractor on City work.
2. The contractor or sub-contractor shall pay or cause to be paid weekly or biweekly to every worker employed in the execution of the contract wages at the following rates, namely:
 - For workers employed in shop work:
 - The union rate of wages in the particular district or locality in which the work is undertaken for any class or work in respect of which there is such union rate; and
 - For any class of work for which there is no such union rate, the rate of wages shall be the rate of wages, as determined by the Manager, Fair Wage Office prevailing in the particular district or locality in which the work is undertaken.
 - For workers employed in field work:
 - Where the contractor or sub-contractor is in contractual relationship with a union recognized by the Ontario Labour Relations Board as the bargaining agent for the relevant workers, the applicable rate of wages set out in the collective agreement; and
 - Where there is no such contractual relationship, a rate not less than that set out for such work in the Schedule of Wage Rates files by the Manager, Fair Wage Office, with the City Clerk of the corporation after being first approved by Toronto Council; and
 - For any class of work for which there is no rate, the rate of wages shall be the rate of wages, as determined by the Manager, Fair Wage Office, prevailing in the particular district or locality in which the work is undertaken.
3. The contractor and sub-contractor shall:
 - At all times keep a list of the names and classifications of all workers employed in the work, the hourly rate and hours worked per day and a record of the amounts paid to each.
 - From time to time, if demanded by the Manager, Fair Wage Office, furnish a certified copy of all paysheets, lists, records and books relating to the work and keep the originals thereof open at all times for examination by the Manager.
 - At all times furnish and disclose to the said manager any other information respecting wages of workers that may be desired by the manger in connection with the work.
 - Attach to all accounts rendered for payment of money upon the contract, a declaration affirming that the requirements of the Fair Wage Policy have been fully complied with.
 - Display legible copies of this Fair Wage Policy in a prominent position in his or her workshop(s), accessible to all employees.

4. The contractor or sub-contractor shall not compel or permit any worker engaged for the work to work more than the number of hours per day and the number of hours per week set out in the Fair Wage Schedule for the particular type of work involved except in case of emergency, and then only with the written permission of the commissioner or head of the department/division having charge of the work or the person then acting as such.

A8. Responsibilities of Manager, Fair Wage Office

1. To fulfil the duties of the Manager, as set out in Chapter 67 of the Toronto Municipal Code, 67-A3.
2. In every procurement call to which the Fair Wage Policy applies, the Manager, Fair Wage Office, will determine the applicable Fair Wage Schedules for the work requested in the procurement call, or whether unionized workers need to be utilized for the work requested in the procurement call as per Chapter 67 Schedule B Labour Trades Contractual Obligations in the construction industry.
3. Once the applicable Fair Wage Schedule is determined for a specific procurement call, the Manager, Fair Wage Office will provide a copy of the Fair Wage Schedule to Purchasing and Materials Management Division to insert into the procurement document, before the procurement documentation is issued.
4. In case of a jurisdictional dispute or dispute as to rate of wages to be paid under the contract or as to the amount to be paid to any worker or apprentice, the decision of the Manager, Fair Wage Office, shall be final and binding upon all parties.
5. After the procurement call closes, the Manager, Fair Wage Office, at the request of Purchasing and Materials Management Division, will send a fair wage declaration form to the three lowest bidders, to determine if the bidder will comply with the fair wage policy and fair wage schedule.

A9. Penalty provisions

1. If the contractor or sub-contractor fails to pay any worker wages at the rate called for in Chapter 67-A7, the City may:
 - Charge an administrative fee not in excess of 15 per cent of the balance necessary to make up the amount that should have been paid from the contractor's progress draw or holdback; and
 - Pay the worker(s) directly for any back-wages owing directly from the contractor's progress draw or holdback.
2. If a tenderer or bidder is found not to comply with the Fair Wage Policy, the Manager may recommend the next lowest bidder for contract aware to Purchasing and Materials Management Division in the following circumstances:
 - On the declaration form discussed in Chapter 67-A8E, a contractor or sub-contractor does not meet the Fair Wage Schedules.
 - An investigation is underway and the firm does not co-operate in providing timely information within 5 business days after being requested by the Manager, Fair Wage Office in fulfilling his or her responsibilities under the Fair Wage Policy and the Labour

Trades Contractual Obligations in the Construction Industry and, operationally, the provision of goods and/or services cannot be delayed.

- o A contractor or sub-contractor is in violation of the Fair Wage Policy and has not paid restitution to its workers.
- o A contractor or sub-contractor is unable to comply with the City of Toronto Labour Trades Contractual Obligations in the Construction Industry.

A10. Disqualification provisions

1. When a contractor or any sub-contractor is found to be in non-compliance with the provisions of the Fair Wage Policy in two separate instances over a period of three years inclusive, the Manager, Fair Wage Office must report and may recommend to the Government Management Committee that the said contractor or sub-contractor be disqualified from conducting business with the City for a period of two years, inclusive.
2. The disqualification period will start from the day of the decision of Council.
3. After the disqualifying period is over, the said contractor or sub-contractor will be placed on probation for the next year. If another non-compliance violation occurs, the Manager, Fair Wage Office must report and may recommend to the Government Management Committee that the said contractor or sub-contractor be disqualified from conducting business with the City for an indefinite period of time.
4. All non-compliance activities (including firm names) and disqualification statistics will be reported to Council annually. **Disqualified firms** (<https://www.toronto.ca/business-economy/doing-business-with-the-city/search-bid-on-city-contracts/suspended-disqualified-firms/>) will be published on the City's website.



City of Hamilton

Fair Wage Policy and Fair Wage Schedule

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1. POLICY STATEMENT

Every Contractor and Sub-Contractor shall compensate their Employees in accordance with the Fair Wage Policy and Fair Wage Schedule on all Construction Contracts with the City. The compensation requirements as set out in the Fair Wage Policy and Fair Wage Schedule are minimum requirements.

2. INTERPRETATION

In this Fair Wage Policy and Fair Wage Schedule:

- a) a word defined in or importing the singular number has the same meaning when used in the plural number, and vice versa;
- b) the provisions shall be read with changes of gender or number as the context may require;
- c) a reference to any Act, by-law, rule, procedure or regulation shall be deemed to include a reference to any substitution or amendment thereof;
- d) any reference to an officer of the City shall be construed to mean the person holding that office, the designate or delegate of that person.

3. DEFINITIONS

Capitalized words and phrases used in this Fair Wage Policy and Fair Wage Schedule shall have the following meanings, unless expressly stated otherwise.

“Benefits” includes employer contributions to such items as a pension plan, Registered Retirement Savings Plan (RRSP), medical plan bonus, retention pay or the like and vacation;

“City Council” means the Council of the City of Hamilton;

“City” means the City of Hamilton, its officers, officials, employees and agents;

“Construction Contract” means any construction work awarded to a Contractor of a minimum of \$500,000.00 excluding residential sectors;

“Contractor” means any person having a Construction Contract with the City but does not include any person that only supplies materials for the Construction Contract;

“Employees” mean those persons employed by the Contractor or Sub-Contractor who perform work identified in the Fair Wage Schedule, for a Construction Contract with the City;

“Fair Wage Policy” means the Fair Wage Policy approved by Council, as amended from time to time;

“Fair Wage Schedule” means the Fair Wage Schedule approved by Council, as amended from time to time. The Fair Wage Schedule stipulates the Total Hourly Compensation for Employees;

“Hours of Work” means the regular hours of work per day and week and shall include a provision for the payment of overtime beyond such regular hours, as per the Employment Standards Act, 2000, S.O. 2000, c.41, specifically Part VIII Overtime Pay;

“Initiator” means any person who submits a complaint to the City alleging non-compliance with the Fair Wage Policy and Fair Wage Schedule by any Contractor or Sub-Contractor performing construction work on a City Construction Contract.

“Manager of Procurement” shall mean the Manager of Procurement or designate.

“Sub-Contractor” means any person performing work on a City Construction Contract for a Contractor, or an agreement with another Sub-Contractor, but does not include any person that only supplies materials for the Construction Contract;

“Total Hourly Compensation” means the aggregate amount of Wages and Benefits as stated in the Fair Wage Schedule;

“Wages” means the Employees basic hourly rate, which is paid as earned at the time of undertaking the work.

4. CITY RESPONSIBILITIES

- 4.1. The Director of Financial Services shall periodically review the Fair Wage Policy and recommend to the appropriate standing committee of Council any required amendments to the Fair Wage Policy.
- 4.2. The Director of Employee & Labour Relations will prepare and review the Fair Wage Schedule from time to time and recommend to the appropriate Standing Committee of Council those amendments to the Fair Wage Schedule.
- 4.3. The Manager of Procurement shall reference the Fair Wage Policy and Fair Wage Schedule in all City Construction Contracts. The City’s Procurement website will post the Fair Wage Policy and Fair Wage Schedule and Fair Wage Complaint Form at hamilton.ca/procurement.
- 4.4. The Manager of Procurement will co-ordinate the preparation of an annual report for the appropriate Standing Committee of Council regarding complaints investigated and resulting audits performed pursuant to the Fair Wage Policy and Fair Wage Schedule.
- 4.5. The City shall address a written objection to the administration of the Fair Wage Policy and Fair Wage Schedule.
- 4.6. The City is not in any way liable, obligated or responsible to any Employee, Sub Contractor, Contractor or any other person for the payment of any monies not paid by a

Contractor or Sub-Contractor in accordance with the Fair Wage Policy and Fair Wage Schedule, and the City assumes no responsibility to such Employee, Sub-Contractor, Contractor or any other person for the administration and enforcement of the Fair Wage Policy and Fair Wage Schedule.

5. AD HOC FAIR WAGE COMMITTEE

- 5.1 The City shall participate in an ad hoc Fair Wage Committee to discuss issues, and provide a forum for consultation regarding issues related to the Fair Wage Policy and Fair Wage Schedule.
- 5.2 The Committee shall meet on an as required basis.
- 5.3 The Committee, as determined by the City, shall be comprised, as a minimum, of the following members:
 - a) Director of Financial Services or designate,
 - b) Director of Employee & Labour Relations or designate,
 - c) A representative from:
 - Hamilton & District Heavy Construction Association,
 - Hamilton-Brantford Ontario, Building and Construction Trades Council,
 - Labourers' International Union of North America,
 - Christian Labour Association of Canada, and
 - Merit OpenShop Contractors Association of Ontario.

6. CONTRACTOR AND SUB-CONTRACTOR RESPONSIBILITIES

- 6.1 A Contractor shall ultimately be responsible for any violations or non-compliance of Sub-Contractors on its City Construction Contracts.
- 6.2 A Contractor is fully responsible for ensuring that all Sub-Contractors comply with the Fair Wage Policy and Fair Wage Schedule.
- 6.3 The Contractor or Sub-Contractor shall not be responsible for any increase to the Fair Wage Schedule which occurs after the closing of the Request for Tenders or Request for Proposals for the City Construction Contract awarded to the Contractor.
- 6.4 At the commencement of the work, the Contractor shall post a copy of the Fair Wage Policy and Fair Wage Schedule in a prominent location at the City Construction Contract site to enable Employees of the Contractor and Sub Contractor to review. Alternate methods may be considered, and if approved by the Manager of

Procurement, shall be in writing prior to the commencement of the Construction Contract.

- 6.5 After substantial performance (as defined in the Construction Lien Act, R.S.O. 1990, c. C.30) of the Construction Contract and prior to release of the holdback, for all Construction Contracts with the City, the Contractor shall provide to the City, in a form acceptable to the City, a statutory declaration confirming that the Contractor and its Sub-Contractors complied with the Fair Wage Policy and Fair Wage Schedule. The City reserves the right to not release part or all of the holdback on a Construction Contract until such Contractor's sworn statement of compliance is received and deemed to be satisfactory by the City.

7. COMPLIANCE

- 7.1 A Contractor or Sub-Contractors shall be in compliance with the Fair Wage Policy and Fair Wage Schedule when the Employee receives a minimum compensation package that includes Wages and Benefits, which aggregate amount is not less than the Total Hourly Compensation as set out in the Fair Wage Schedule.
- 7.2 Employees shall be paid on a "pay by pay basis" every pay period in accordance with Fair Wage Schedule. Alternate methods of payment may be considered, and if approved by the Manager of Procurement, shall be in writing prior to the commencement of the Construction Contract. For example any lump sum pay-out made to the Employee to reconcile money owed at the completion of the Construction Contract is not permitted.
- 7.3 Any lump sum payment approved is to be made no later than the date of substantial performance of the related Construction Contract.

8. RECORDS

- 8.1 The Contractor and Sub-Contractor shall keep records of the names, addresses, Wages, Benefits, vacation paid or provided, and hours worked for all of its Employees to demonstrate compliance with the Fair Wage Policy and Fair Wage Schedule.
- 8.2 Unless otherwise approved by the City, the Contractor and Sub-Contractor shall make these records available for inspection upon request by the City within ten business days.
- 8.3 In any agreement with a Sub-Contractor, the Contractor shall require the Sub Contractor to:
- a) provide written acknowledgment prior to the commencement of construction work that the Fair Wage Policy and Fair Wage Schedule applies;

- b) keep records of the names, addresses, Wages, Benefits, vacation paid or provided, and hours worked for all of its Employees to demonstrate compliance with the Fair Wage Policy and Fair Wage Schedule; and
 - c) Unless otherwise approved by the City, make these records available for inspection upon request by the City within ten business days.
- 8.4 If a Contractor or Sub-Contractor enters into a contract for service with a self employed independent contractor to perform work identified in the Fair Wage Schedule, the Contractor or Sub-Contractor shall keep the following records to demonstrate that the self-employed independent contractor is not an Employee of the Contractor or Sub Contractor:
- a) duties and responsibilities of both parties;
 - b) self-employed independent contractor invoices;
 - c) self-employed independent contractor HST registration number;
 - d) self-employed independent contractor Workplace Safety and Insurance Board and insurance certificates; and
 - e) self-employed independent contractor trade certificates or licences which relate to the Construction Contract.

Should there be concerns regarding the self-employed independent contractor's degree of dependency from the Contractor or Sub-Contractor, further records shall be made available to demonstrate that an employer employee relationship does not exist between the Contractor or Sub-Contractor and a self-employed independent contractor. The guideline issued by Canada Revenue Agency RC4110 "Employee or Self-Employed" may be used to assist in making a final determination.

9. INSPECTION AND AUDITS

The City retains the right to inspect and audit the records of the Contractor or Sub Contractor (as referred to in Section 8. Records) at any time during the period of the Construction Contract and at any time thereafter as deemed by the City.

10. CONSEQUENCES OF NON-COMPLIANCE

- 10.1 Upon determining that a Contractor or Sub-Contractor is non compliant with the Fair Wage Policy and Fair Wage Schedule, the Manager of Procurement:
- a) shall advise the Contractor, in writing, that it has been determined that the Contractor or Sub-Contractor is non-compliant and that the Contractor or Sub-Contractor is required to rectify the non-compliance(s) and provide written proof of the same, in a form satisfactory to the City, within ten business days;
- and

- b) may withhold making payment, progress payment or release of holdback to the Contractor in an amount which is equal to the shortfall in Wages or Benefits, or may take any other remedies that are otherwise available at law or in equity.
and
 - c) shall impose upon the Contractor a minimum cost of \$5,000.00 (excluding taxes) for the City inspection, audit or other action as deemed necessary by the City, and may deduct such costs from any payment or payments (as appropriate) owed by the City to the Contractor, or may take any other remedies that are otherwise available at law or in equity. In addition, the Contractor shall be responsible for all the City's costs beyond the minimum cost of \$5,000.00(excluding taxes), which will be payable immediately upon request.
- 10.2 Where a Contractor or Sub-Contractor has been determined to be non-compliant with the Fair Wage Policy and Fair Wage Schedule for the first time in a five year period, the Manager of Procurement may require the Contractor to pay for and submit a licensed Public Accountant assurance report, acceptable to the City, which verifies compliance with the Fair Wage Policy and Fair Wage Schedule on the next three City Construction Contracts to which the Contractor is awarded. Such assurance report shall provide sufficient information and detail to demonstrate compliance with the Fair Wage Policy and Fair Wage Schedule and shall be submitted after substantial performance (as defined in the Construction Lien Act, R.S.O. 1990, c. C.30) of the Construction Contract and prior to the release of the holdback. The City reserves the right to not release part or all of the holdback on a Construction Contract until such assurance report is received and deemed to be satisfactory by the City.
- The City reserves the right to treat a first non-compliance as a second or subsequent non-compliance.
- 10.3 Where a Contractor or Sub-Contractor has been determined to be non-compliant with the Fair Wage Policy and Fair Wage Schedule for a second or subsequent time within a five year period from the date of the first determination of non compliance by the Manager of Procurement, the City, as approved by City Council, may refuse:
- a) to accept any bid, quotation or proposal from such Contractor or Sub Contractor, or;
 - b) the use of a Sub-Contractor where the Sub-Contractor was determined to be non-compliant with the Fair Wage Policy and Fair Wage Schedule
- on any City contract for a period of two years from the date of City Council approval, save and except any Construction Contract the Contractor may currently have with the City.
- 10.4 If the Contractor or Sub-Contractor fails to keep accurate records, the Contractor or Sub-Contractor will pay a licensed Public Accountant to provide an assurance report, acceptable to the City, which clearly demonstrates compliance with the Fair Wage Policy and Fair Wage Schedule.

11. COMPLAINTS

- 11.1 Any person may submit a complaint to the City, alleging non-compliance with the Fair Wage Policy and Fair Wage Schedule, by any Contractor or Sub Contractor performing construction work on a City Construction Contract. All complaints must be submitted in writing and contain sufficient information in order to investigate the complaint. The Fair Wage Complaint Form may be completed for this purpose
- 11.2 The complaint must be forwarded to the City's Manager of Procurement via email (procurement@hamilton.ca), regular mail or in person to the Procurement Section, Corporate Services Department, 120 King Street West, Suite 900, Hamilton, Ontario L8P 4V2.
- 11.3 The complaint may be initiated at any time during the Construction Contract but shall be received by the City no later than 21 calendar days following substantial performance of the related Construction Contract.
- 11.4 Upon receipt of a complaint, the Manager of Procurement will conduct an initial review of the complaint submitted and advise the Initiator of the complaint of the investigation fee and what the likely cost of the investigation will be. The minimum cost of an investigation will be \$5,000.00 (excluding taxes). The City, at its discretion, may waive the cost of an investigation if an Employee is the Initiator of the complaint.
- 11.5 The Initiator shall confirm to the City in a timely manner whether or not they would like to proceed with the complaint.
- 11.6 The City shall take such action as it deems is necessary to determine whether the Contractor or Sub-Contractor involved or named in the complaint is compliant with the Fair Wage Policy and Fair Wage Schedule. Such action deemed necessary by the City shall commence within 30 calendar days of receipt of a completed Fair Wage Complaint Form submitted to the Manager of Procurement.
- 11.7 Once such action to determine compliance or non-compliance is completed to the City's satisfaction, the Manager of Procurement shall inform the Initiator and any Contractor or Sub-Contractor involved or named in the complaint of the City's determination of the Contractor's or Sub-Contractor's compliance or non-compliance with the Fair Wage Policy and Fair Wage Schedule.
- 11.8 Whenever a complaint is initiated by a person other than an individual Employee of the Contractor or Sub-Contractor involved or named in the complaint, and said Contractor or Sub-Contractor is found to be compliant with the Fair Wage Policy and Fair Wage Schedule with respect to the complaint, the costs associated with the inspections, audits or other action deemed necessary regarding the investigation of the complaint will be borne solely by the Initiator. Until the Initiator has paid the associated costs to the City, the City will not accept any additional complaints from the Initiator.
- 11.9 For the purposes of the City not accepting any additional complaints from the Initiator under section 11.8 of this Fair Wage Policy, a reference to Initiator shall also include an officer, director, a majority or controlling shareholder, or a member of the Initiator, if a

corporation; a partner of the Initiator, if a partnership; any corporation to which the Initiator is an affiliate of or successor to, or an officer, a director or a majority or controlling shareholder of such corporation; and any person with whom the Initiator is not at arm's length within the meaning of the Income Tax Act (Canada).

- 11.10 The City shall make every effort to safeguard the confidentiality of each Initiator's identity. However, this information is subject to the provisions of the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. M.56. For greater certainty and direction regarding how such issues of confidentiality will be handled and may affect an Initiator's rights, the Initiator should reference the City's policies related to Freedom of Information on the City's website under the Office of the City Clerk at hamilton.ca.

12. APPEALS PROCESS

- 12.1 Contractors, Sub-Contractors or Initiators may feel aggrieved and may seek to dispute the outcome of a Fair Wage complaint process. If anyone wishes to appeal the outcome of a Fair Wage complaint, they shall write to the Manager of Procurement within five business days of being notified of the Fair Wage complaint outcome and provide a detailed statement outlining the grounds of the appeal and request a meeting with the Manager of Procurement.
- 12.2 If no resolution satisfactory to both parties has been achieved, the Contractor, Sub Contractor or Initiator will have three business days from the date of the meeting with the Manager of Procurement to make a formal written request with the Manager of Procurement to meet with the General Manager of the Client Department issuing the Construction Contract and the General Manager of Finance and Corporate Services regarding their complaint. The General Managers will make the final decision regarding the outcome of the Fair Wage complaint process.

13. FAIR WAGE SCHEDULE UPDATE

- 13.1 The Fair Wage Schedule shall be automatically updated every three years.
- 13.2 Unless otherwise approved by Council, the Total Hourly Compensation rates set out in the Fair Wage Schedule shall be:
- a) based upon the collective hourly wage rates set out in the respective collective agreements from the three year's preceding the date of the last Fair Wage Schedule update. For example, the hourly rates set in 2016 shall be updated in 2019 (three years after 2016). The updated rates in 2019 shall be based upon the 2016 hourly rates (three years preceding 2019);
 - b) calculated by increasing the respective collective agreement's hourly wage rates by no more than 24%; and
 - c) frozen for the three year term.

Fair Wage Schedule

Road Work:

Work performed	Total Hourly Compensation
Shovels, backhoes, draglines, gradalls, clams (on site), Grader "A", fine grade bulldozer, Pitman type cranes, self-erecting tower cranes	\$42.84
Clams (yard operation), mechanics, welders	\$41.85
Hydra-lift truck mounted hydraulic cranes	\$41.60
Curb machine, self-propelled power drills, hydraulic, etc. bulldozer operators, all front end loader operators, scrapers (self-propelled), dozer 815 type, off highway vehicles and concrete paver, pulverizer and asphalt planer	\$41.43
Mixer man on asphalt plant	\$41.35
Engineers on boilers (with papers), asphalt spreader (self-propelled), asphalt roller	\$41.28
Farm and industrial type tractor operators with excavating attachments, grader operator B', snippers, hydro axe and tree farmer, feller buncher, hydro shear, trenching machines, caisson boring machines under 25 H.P., lubrication unit operator, skid steer loaders, Kabota skid steer loaders, Kabota bobcat type excavators and those less than 65 H.P. and similar types, skidder type equipment with hydraulic and cable attachments	\$41.11
Boiler fireman (without papers), burnerman on asphalt plant	\$40.61
Roller Operator (asphalt) 'B', mobile sweeper	\$40.23
Farm and industrial type tractor, (towed and self-propelled compaction units), grade rollerman, including self-propelled rubber tired rollers, hydro-vac truck	\$39.92

Road Work, Open Cut Work for Sewer and Watermain Construction:

Work performed	Total Hourly Compensation
Engineers operating Cranes with a manufacturer's rating of 70 tons capacity and over, self-erecting tower cranes.	\$38.42
Engineers operating crawler cranes, mobile cranes, piledrivers, caisson boring machines and working foreman.	\$37.30
Engineers operating crawler backhoes, gradalls, Pitman type cranes, graders, mechanics and welders, articulating Hydraulic Crane (Knuckleboom). Asphalt plant operator. Self-propelled hydraulic drills.	\$36.06
Engineers operating bulldozers, frontend loaders, industrial tractors with backhoe and all other attachments, crawler tractors, crawler tractor and scraper, self-propelled scrapers, sideboom, Concrete Paver, Asphalt Planer, asphalt spreaders, curb machines, asphalt roller. Dozer 815 type and boom trucks. Dump truck drivers. Float, Flatbed Drivers, Off highway vehicles.	\$35.69
Engineers operating bobcat, skid steer, all frontend loader with all attachments, Kubota type backhoe with all attachments, trenchers, hydro-vac truck.	\$33.88
Engineers operating self-propelled roller, packer - rubber tired, sheepsfoot on grade or backfill, farm tractor, pump 6" and over.	\$31.37

Open Cut Work for Sewer and Watermain Construction:

Work performed	Total Hourly Compensation
Engineer operating cranes, self-erecting tower cranes, caisson boring machines 25 H.P. and over, sidebooms cranes, clams, backhoes, derricks, pile-drivers, gradalls, mobile and similar equipment, Pitman type cranes. Grader operator 'A' and fine grade bulldozer operator.	\$43.62
Heavy duty field mechanics and equipment repair welders.	\$42.32
Hydra-Lift truck mounted hydraulic cranes.	\$42.27
Operators of bulldozers, tractors, scrapers, emcos, grader "B", all front-end loaders and similar equipment, farm and industrial tractors with excavating attachments, trenching machines, caisson boring machines under 25 h.p., snippers, hydro axe and tree farmer, feller buncher, hydro shear, lubrication unit operator, skid steer loaders, Kabota skid steer loaders, Kabota Bobcat type excavators and those less than 65 h.p. and similar types, skidder type equipment with hydraulic and cable attachments, curb machines and self-propelled power drills, hydraulic, etc., off highway vehicles.	\$42.20
Service men on shovels, compressors, pumps, self-propelled rollers, boom truck drivers, operators of 5 or more heaters.	\$40.82
Oilers, greasers, mechanics helpers hydro-vac truck - 3rd year.	\$40.32
Oilers, greasers, mechanics helpers hydro-vac truck - 2nd year.	\$39.08
Oilers, greasers, mechanics helpers hydro-vac truck - 1st year.	\$37.84

Labourers - Sewer Watermain, Roads Building Paving, Parking Lots, Bridge Rehab:

Work performed	Total Hourly Compensation
Labourer	\$35.97
Skilled Labourer	\$36.51
Crawler Type Drillman, Powderman	\$39.23
Catch Basin Constructors	\$37.25
Asphalt Raker, Pipelayers, Trenchless Tech. Carpenters, Cement Finishers	\$37.89
Man Hole Valve Chamber Constructors	\$37.68
Rodman Reinforcing Installers, Curb-setters, Bricksetters, Stonepaving	\$36.94
Working Foreman	\$39.42
Watchman Six Shifts Per Week, (10) hours per shift (Weekly)	\$19.67
Traffic Control Person	\$33.03

Labourers - Bridge Building, Underpasses, Overpasses, Pedestrian retaining walls connected with dams etc.:

Work performed	Total Hourly Compensation
Labourer	\$36.77
Skilled Labourer	\$37.31
Powderman, Crawler Type Driller	\$39.61
Carpenters	\$38.70
Rodman	\$38.06
Concrete Finisher	\$38.45
Piling Driving (All types Operation)	\$37.44
Working Foreman	\$40.23
Watchman Six Shifts Per Week, (10) hours per shift (Weekly)	\$19.67
Traffic Control Person	\$32.41

Labourers - Mining and Tunneling Operation:

Work performed	Total Hourly Compensation
Labourer	\$37.21
Underground Labourer, Pipelayer, Reinforced Concrete Worker, Skilled	\$37.93
Concrete Leader	\$38.24
Pumpman (3" Disc. and Under), Deck Man, Pit Bottom Man, Signal Man	\$37.56
Pile Driving all types and all Operations related thereto	\$38.37
Mucker and Miner Helper, Grout Machine Man, Diamond Drill, Welder	\$38.55
Shield Driver and Mole Driver, Lead Miner	\$38.86
Powderman	\$38.92
Fence Erector	\$38.80
Working Foreman	\$39.23
Watchman and Dryman	\$36.57

Building and Construction Work:

Work performed	Total Hourly Compensation
Engineers operating: cranes with a manufacturer's rating of over 164 to 219 tons capacity.	\$45.99
Engineers operating: cranes with a manufacturer's rating of 100 to 164 tons capacity, 1 st class Stationary Engineers, and skyway, climbing, hammerhead and kangaroo and GCI type cranes.	\$45.43
Engineers operating: all conventional and "hydraulic" type cranes, save and except those set' out in Article 1.1 above, 15 ton capacity and over boom truck, clams, shovels, gradalls, backhoes, draglines, piledrivers, all power derricks, gantry cranes, caisson boring machines (over 25 HP), and similar drill rigs, mine hoists, and all similar equipment working on land or water, overhead cranes, chimney hoists, multiple drum hoists, single drum hoists (over 12 stories), single drum hoists of manual friction and brake type, and all similar equipment, dredges - suction and dipper, hydraulic jacking equipment on vertical slip forms, hydraulic jacking poles, creter cranes, and hydraulic skoopers. heavy duty mechanics, qualified welders and 2nd Class Stationary Engineers and self-propelled hydraulic drills. Self-erecting cranes 15 ton capacity and over. Carry Deck cranes 15 ton capacity and over.	\$44.50
Pitman type cranes of 10 ton to less than 15 ton. Self-erecting cranes 10 ton to less than 15 ton capacity. Carry Deck cranes 10 ton to less than 15 ton capacity.	\$43.91
Operators of: air tuggers used for installation of vessels, tanks, machinery, and for steel erection; side booms on land or water; man and material hoist and single drum hoists 12 stories and under not of a manual friction and brake type; elevators, monorails, bullmoose type equipment of 5 ton capacity or over, air compressor feeding low pressure into air locks, tunnel mole. 3rd Class Stationary Engineer. Self-erecting cranes less than 10 ton capacity. Carry Deck cranes less than 10 ton capacity.	\$43.33
Operators of: bulldozers (including 815 type), tractors, scrapers, graders, emcos, overhead and front-end loaders, side loaders, industrial tractors with excavating attachments, trenching machines, and all similar equipment, mobile concrete pumps, Pitman type cranes under 10 ton capacity, mobile pressure grease units, mucking machines, hydraulically operated utility pole hole digger, and Dinky locomotive type engines. 4th Class Stationary Engineers. Kubota Type Backhoe and Skid Steer Loader.	\$43.11
Operators of: batching and crushing plants, 6" discharge pumps and over, wellpoint systems and all similar systems, concrete mixers of 1 cubic yard and over, gas, diesel, or steam driven generators over 50 HP (portable), fork lifts over 8' lifting height, air tuggers except those in Group 1.3, caisson boring machines (25 HP and under), drill rigs, post hole diggers, portable air compressors 150 CFM and over, and concrete pumps. Signalman.	\$40.23

Building and Construction Work: (continued)	Building and Construction Work: (continued)
Operators of: boom trucks, "A" Frames, driver mounted compaction units, bullmoose type equipment under 5 ton capacity, fork lifts 8' and under in lifting height and conveyors. Firemen. Permanent automatically controlled elevators on Commercial and Institutional buildings.	\$38.99
Operators of: Pumps under 6" discharge where three (3) or more pumps are employed on the same job site, hydraulic jacking equipment for underground operations, portable air compressors under 150 CFM where attendant is required, and driver mounted power sweepers. Attendants for forced air, gas, or oil burning temporary heating units of 500,000 BTU's or over per hour, or, five (5) or more on the same job site, oilers, oiler-drivers, and mechanics helpers.	\$37.51
2nd Year	\$35.32
1st Year	\$32.67
Engineers operating: draglines, cranes including but not limited to Self-erecting Cranes and Carry Deck Cranes. Heavy Duty Mechanics. Spider-type cranes.	\$42.90
Engineers operating: shovels, backhoes, hoptoes, gradalls and similar equipment, whip hammer, power mounted drill.	\$42.11
Welders	\$42.51
Operators of: bulldozers (including 815 type), tractors, scrapers, emcos, graders, overhead loaders, front-end loaders, industrial tractors with excavating attachments, compressor operators. Kubota Type Backhoe and Skid Steer Loader.	\$41.27
Mechanic's helpers and Servicemen	\$39.02
Oiler-Grademen and Oiler-Drivers	\$38.45
Compactors	\$38.56

Tunnel Work:

Work performed	Total Hourly Compensation
Engineer operating all hoists hoisting materials out of shafts, tuggers, and derricks with lifting capacity over 2000 lbs, self-erecting tower cranes, compressor house set up man, self-propelled power drills, hydraulic etc.	\$43.59
Heavy duty field mechanics.	\$42.59
Engineer operating shaft hoist, tuggers and derricks, 2000 lbs or less, compressor operators 500 CFM or over, hydro-vac truck.	\$42.47

Marble, Tile, Terrazzo, Cement Masons, Resilient Floor Layers and Their Helpers:

Work performed	Total Hourly Compensation
Marble Mason	\$45.45
Terrazzo Tile Mechanic	\$45.25
Base Machine Operator	\$43.92
Terrazzo Helper	\$43.61
Marble Tile Helper	\$43.51

Bricklayers, Masons, and Plasterers:

Work performed	Total Hourly Compensation
Bricklayers, Masons, and Plasterers	\$44.54
Apprentice 1	\$22.27
Apprentice 2	\$29.20
Apprentice 3	\$35.64
Apprentice 4	\$40.09

Glaziers:

Work performed	Total Hourly Compensation
Journeyman Glazier Metal Mechanic with Certificate of Qualifications	\$39.78
Apprentice 1 (1-1000hrs)	\$19.89
Apprentice 2 (1001-2000hrs)	\$21.87
Apprentice 3 (2001-3000hrs)	\$23.87
Apprentice 4 (3001-4000hrs)	\$25.85
Apprentice 5 (4001-5000hrs)	\$27.85
Apprentice 6 (5001-6000hrs)	\$29.83
Apprentice 7 (6001-7000hrs)	\$31.82
Apprentice 8 (7001-8000hrs)	\$33.81

Elevator Constructors:

Work performed	Total Hourly Compensation
Elevator Mechanic	\$58.61
Probationary Helper I	\$32.24
Probationary Helper II	\$35.17
Helper I	\$41.03
Helper II	\$43.96
Improver Helper	\$46.90
Adjuster	\$65.94
Mechanic in charge (4-9) people	\$65.94
Mechanic in charge (10-19) people	\$67.41
Mechanic in charge (20+) people	\$68.58

Heat and Frost Insulators (Asbestos):

Work performed	Total Hourly Compensation
Journeyman	\$46.46
Fourth Year Apprentice	\$38.13
Third Year Apprentice	\$32.55
Second Year Apprentice	\$26.88
First Year Apprentice	\$21.32
Provisional	\$25.97
Conditional	\$29.91
Asbestos Remover Level One	\$25.33
Asbestos Remover Level Two	\$28.33
Asbestos Remover Level Three	\$26.19

Millwrights:

Work performed	Total Hourly Compensation
Journeyman	\$46.67
Foreperson	\$53.49
Sub-foreperson	\$50.08
Apprentice (0-1999hrs)	\$28.00
Apprentice (2000-3999hrs)	\$32.67
Apprentice (4000-5999hrs)	\$37.34
Apprentice (6000-8000hrs)	\$42.01

Plumbers, Steamfitters and Pipefitters:

Work performed	Total Hourly Compensation
Journeyman	\$45.69
Apprentice 1	\$18.28
Apprentice 2	\$22.85
Apprentice 3	\$27.42
Apprentice 4	\$31.99
Apprentice 5	\$36.56
Foreman	\$50.27

Welders:

Work performed	Total Hourly Compensation
Journeyman	\$45.69
Apprentice 1	\$22.85
Apprentice 2	\$27.42
Apprentice 3	\$31.99

Electrical:

Work performed	Total Hourly Compensation
Journeyman Electrician	\$47.44
Foreman	\$53.33
Apprentice 1	\$15.43
Apprentice 2	\$20.83
Apprentice 3	\$26.10
Apprentice 4	\$31.50
Apprentice 5	\$36.77

Painters – Industrial:

Work performed	Total Hourly Compensation
Journeyman Painter	\$39.73
5401 - 6000 hours worked	\$29.80
4501 - 5400 hours worked	\$27.81
3601 - 4500 hours worked	\$23.83
1801 - 3600 hours worked	\$21.85
1001 - 1800 hours worked	\$19.86
451 - 1000 hours worked	\$17.36
1 - 450 hours worked	\$16.12
Apprentice Helper (Unless Minimum Wage is Greater than \$11.00)	\$13.95

Painters – Commercial:

Work performed	Total Hourly Compensation
Journeyman Painter	\$34.56
5401 - 6000 hours worked	\$25.92
4501 - 5400 hours worked	\$24.19
3601 - 4500 hours worked	\$20.73
1801 - 3600 hours worked	\$19.01
1001 - 1800 hours worked	\$17.36
451 - 1000 hours worked	\$17.36
1 - 450 hours worked	\$16.12
Apprentice Helper (Unless Minimum Wage is Greater than \$11.00)	\$13.95

Roofers:

Work performed	Total Hourly Compensation
Foreman	\$44.42
Journeyman	\$43.96
Material Handler	\$41.74
Third Year Apprentice	\$34.22
Second Year Apprentice	\$30.49
First Year Apprentice	\$25.59
Pre-apprentice	\$20.76

Sheet Metal:

Work performed	Total Hourly Compensation
Foreman (3 - 15 men)	\$47.41
Foreman (16 - 25 men)	\$48.65
Foreman (Over 25 men)	\$49.58
Journeyman	\$43.56
First Year Apprentice	\$16.37
Second Year Apprentice	\$22.00
Third Year Apprentice	\$27.45
Fourth Year Apprentice	\$32.44
Fifth Year Apprentice	\$37.88
Sheeter / Decker	\$43.56
Sheeter / Decker Assistant	\$40.16
Material Handler	\$35.10
Probationary Employee	\$20.60

Drywall Finishers:

Work performed	Total Hourly Compensation
Journeyperson (Drywall Finishers)	\$43.33
3601 - 5400 hours worked	\$32.50
2401 - 3600 hours worked	\$28.16
1201 - 2400 hours worked	\$23.83
1 - 1200 hours worked	\$15.13

Iron Workers: Bridge, Structural, Ornamental and Reinforcing Iron Workers

Work performed	Total Hourly Compensation
GF Foreman	\$54.89
Foreman	\$51.24
Base Wage (Journeyman)	\$45.74
Apprentice (0-1000hrs)	\$27.44
Apprentice (1001-2000hrs)	\$32.02
Apprentice (2001-3000hrs)	\$34.31
Apprentice (3001-4000hrs)	\$36.59
Apprentice (4001-5000hrs)	\$38.89
Apprentice (5001-6000hrs)	\$41.17

Rodmen: Bridge, Structural, Ornamental and Reinforcing Iron Workers

Work performed	Total Hourly Compensation
Foreman	\$50.13
Sub-Foreman	\$47.65
Base Wage (Journeyman)	\$43.93
Apprentice (0-500hrs)	\$26.36
Apprentice (501-1000hrs)	\$30.75
Apprentice (1001-2000hrs)	\$35.14
Apprentice (2001-3000hrs)	\$39.54
Apprentice (3001-4000hrs)	\$41.74

MEMORANDUM

PWC-C 9-2019

Subject: Recommendations for Consideration from the Linking Niagara Transit Committee meeting held on March 6, 2019

Date: March 19, 2019

To: Public Works Committee

From: Ann-Marie Norio, Regional Clerk

At its meeting held on March 6, 2019, the Linking Niagara Transit Committee put forward the following motions for consideration by the Public Works Committee:

Minute Item 6.1

LNTC-C 1-2019

Rationale for Municipal and Regional Provincial Gas Tax Sharing Through Joint Canadian Urban Transit Association (CUTA) Reporting

That Report LNTC-C 1-2019, dated February 6, 2019, respecting Rationale for Municipal and Regional Provincial Gas Tax Sharing Through Joint Canadian Urban Transit Association (CUTA) Reporting, **BE RECEIVED** and the following recommendations **BE APPROVED**:

1. That Regional Council **AGREE IN PRINCIPLE** that Niagara Region report transit statistics in consolidation with local area municipalities operating smaller transit systems to maximize provincial gas tax (PGT) funding from MTO; and
2. That staff **BE AUTHORIZED** to develop agreement terms in consultation with local area municipalities outlining the framework for consolidated reporting and the PGT as well as cost distribution between participating municipalities and Niagara Region.

Respectfully submitted and signed by

Ann-Marie Norio
Regional Clerk

**THE REGIONAL MUNICIPALITY OF NIAGARA
LINKING NIAGARA TRANSIT COMMITTEE
MINUTES**

**LNTC 01-2019
Wednesday, March 6, 2019
Council Chamber
Niagara Region Headquarters, Campbell West
1815 Sir Isaac Brock Way, Thorold, ON**

Committee: Campion (Mayor – Welland), Fertich (Regional Councillor), G. Miller (Councillor – St. Catharines), L. Van Vilet (Councillor – Welland) (Committee Chair), S. Chemnitz, Chief Administrative Officer (St. Catharines), G. Long, Chief Administrative Officer (Welland), M. Robinson, Director, GO Implementation Office, K. Todd, Chief Administrative Officer (Niagara Falls)

Other Councillors: Sendzik (Mayor – St. Catharines)

Absent/Regrets: Diodati (Mayor – City of Niagara Falls), Ip (Regional Councillor), W. Redekop (Mayor – Fort Erie), Dabrowski (Councillor – Niagara Falls), M. Siscoe (Councillor – St. Catharines) (Committee Vice-Chair)

Staff: S. Brear, Program Financial Analyst, J. Gilston, Legislative Coordinator, K. Ranjan, Transportation Lead, GO Implementation Office, R. Salewytch, Transit Service Planning Coordinator, H. Talbot, Financial & Special Projects Consultant, L. Tracey, Project Coordinator, GO Implementation, M. Trennum, Deputy Regional Clerk

1. CALL TO ORDER

Matthew Trennum, Deputy Regional Clerk, called the meeting to order at 2:12 p.m.

2. DISCLOSURES OF PECUNIARY INTEREST

There were no disclosures of pecuniary interest.

3. **SELECTION OF COMMITTEE CHAIR AND VICE CHAIR**

3.1 **Call for Nominations for Committee Chair**

Matthew Trennum, Deputy Regional Clerk, called for nominations for the position of Chair of the Linking Niagara Transit Committee for a two-year term (2019-2020).

Moved by G. Miller
Seconded by L. Van Vliet

That M. Siscoe **BE NOMINATED** as Chair of the Linking Niagara Transit Committee for a two-year term (2019-2020).

3.2 **Motion to Close Nominations for Committee Chair**

Matthew Trennum, Deputy Regional Clerk, called a second and a third time for nominations for the position of Linking Niagara Transit Committee Chair.

There being no further nominations it was:

Moved by Councillor Campion
Seconded by G. Miller

That nominations for the position of Chair of the Linking Niagara Transit Committee for the 2019-2020 term, **BE CLOSED**.

Carried

3.3 **Voting for Position of Committee Chair**

There being only one nominee for the position of Committee Chair, the Deputy Clerk announced that M. Siscoe would be the Linking Niagara Transit Committee Chair for a two-year term (2019-2020).

3.4 **Call for Nominations for Committee Vice-Chair**

Matthew Trennum, Deputy Regional Clerk, called for nominations for the position of Vice-Chair of the Linking Niagara Transit Committee for a (2019-2020).

Moved by Councillor Campion
Seconded by Councillor Fertich

That L. Van Vliet **BE NOMINATED** as Vice-Chair of the Linking Niagara Transit Committee for a two-year term (2019-2020).

3.5 Motion to Close Nominations for Committee Vice-Chair

Matthew Trennum, Deputy Regional Clerk, called a second and third time for nominations for the position of Linking Niagara Transit Committee Vice-Chair.

There being no further nominations it was:

Moved by Councillor Campion
Seconded by G. Miller

That nominations for the position of Vice-Chair of the Linking Niagara Transit Committee for the 2019-2020 term, **BE CLOSED**.

Carried

3.6 Voting for Position of Committee Vice Chair

There being only one nomination for the position of Committee Vice-Chair, the Deputy Clerk announced that L. Van Vliet would be the Linking Niagara Transit Committee Vice-Chair for a two-year term (2019-2020).

At this point in the meeting, L. Van Vliet assumed the chair.

4. **PRESENTATIONS**

4.1 Niagara Transit

Matt Robinson, Director, GO Implementation Office, provided information respecting Moving Niagara Transit Forward. Topics of the presentation included:

- Introduction and Definitions
- Overview: Where We've Been
- Inter-Municipal Transit Reporting Structure
- Milestones: What We've Achieved
- Moving Transit Forward: Where We're Going
- Workplan: What's Next
- An Accelerated Path to Connectivity
- Niagara Regional Transit 2019 Budget Strategy and Revenue Outlook
- Provincial Gas Tax Outlook and Opportunity
- Transit Jurisdictional Comparison

5. **DELEGATIONS**

There were no delegations.

6. **ITEMS FOR CONSIDERATION**

6.1 **LNTC-C 1-2019**

Rationale for Municipal and Regional Provincial Gas Tax Sharing Through Joint Canadian Urban Transit Association (CUTA) Reporting

Moved by Councillor Fertich
Seconded by Councillor Campion

That Report LNTC-C 1-2019, dated February 6, 2019, respecting Rationale for Municipal and Regional Provincial Gas Tax Sharing Through Joint Canadian Urban Transit Association (CUTA) Reporting, **BE RECEIVED** and the following recommendations **BE APPROVED**:

1. That Regional Council **AGREE IN PRINCIPLE** that Niagara Region report transit statistics in consolidation with local area municipalities operating smaller transit systems to maximize provincial gas tax (PGT) funding from the Ministry of Transportation Ontario; and
2. That staff **BE AUTHORIZED** to develop agreement terms in consultation with local area municipalities outlining the framework for consolidated reporting and the PGT as well as cost distribution between participating municipalities and Niagara Region.

Carried

6.2 **LNTC-C 3-2019**

2019 Meeting Schedule

Moved by G. Miller
Seconded by Councillor Campion

That Report LNTC-C 3-2019, dated February 6, 2019, respecting 2019 Meeting Schedule, **BE RECEIVED** and the following recommendation **BE APPROVED**:

1. That the Linking Niagara Transit Committee Meetings **BE HELD** on Mondays at 2:00 p.m. on the following dates in 2019:

April 24, May 29, June 26, July 24, August 28, September 25, October 23 and November 20.

Carried

7. CONSENT ITEMS FOR INFORMATION

Moved by Councillor Campion
Seconded by G. Miller

That the following items **BE RECEIVED** for information:

LNTC-C 4-2019

Linking Niagara Transit Committee - Terms of Reference

LNTC-C 2-2019

A memorandum from M. Robinson, Director, GO Implementation Office, dated February 6, 2019, respecting Inter-Municipal Transit Workplan Update.

Carried

8. OTHER BUSINESS

8.1 Potential New Coach-Style Bus Showcase

Matt Robinson, Director, GO Implementation Office and Rob Salewysch, Transit Service Planning Coordinator announced that on Wednesday, March 13, 2019, Niagara Region Transit will showcase a new accessible coach-style bus for the public. The bus will be parked on Academy Street at the St. Catharines Bus Terminal (62-66 Carlisle Street, St. Catharines) from 2 - 4:30 p.m. to collect feedback from the community with respect to its potential use.

9. NEXT MEETING

The next meeting will be held on Wednesday, April 24, 2019 at 2:00 p.m. in the Council Chamber, Regional headquarters.

10. ADJOURNMENT

There being no further business, the meeting adjourned at 3:31 p.m.

Leo Van Vliet
Committee Chair

Matthew Trennum
Deputy Regional Clerk

Ann-Marie Norio
Regional Clerk

Subject: Rationale for Municipal and Regional provincial gas tax sharing through joint Canadian Urban Transit Association (CUTA) reporting

Report to: Linking Niagara Transit Committee

Report date: Wednesday, February 6, 2019

Recommendations

1. That Regional Council **AGREE IN PRINCIPLE** that Niagara Region report transit statistics in consolidation with local area municipalities operating smaller transit systems to maximize provincial gas tax (PGT) funding from MTO.
2. That staff **BE AUTHORIZED** to develop agreement terms in consultation with local area municipalities outlining the framework for consolidated reporting and the PGT as well as cost distribution between participating municipalities and Niagara Region.

Key Facts

- The purpose of this report is to seek authorization to develop a Memorandum of Understanding (MoU) with local area municipalities operating smaller transit systems for consolidated reporting of Canadian Urban Transit Association (CUTA) statistics by Niagara Region in light of the financial benefits outlined in this report.
- Total loss in PGT between 2019 and 2022 without proposed joint CUTA reporting is estimated at \$1.0M.
- Independent CUTA reporting from small local transit operators will not generate sufficient operating costs and municipal contributions to ensure they receive the maximum amount of eligible PGT at their current and projected funding levels.
- Benefits of Joint CUTA reporting:
 - Local transit operators could apply PGT funding towards net operating expenses without limiting future PGT allocations.
 - Local transit operators could increase transit spending without incremental tax burdens on residents.
 - Niagara Region would receive or share the population portion of the annual PGT allocation based the relative proportion of demand/ridership.
- “Fiscal Responsibility and Affordability with no negative impacts on local transit revenues” was a guiding principle from the *Niagara Transit Service Delivery and Governance Study* (Dillon Report, 2017) and the subsequent MoU signed in 2017. Staff continues to quantify the impacts to PGT as well as the operating and capital costs resulting from the route consolidations outlined in LNTC-C 21-2018.
- A discussion about provincial funding and the importance of investment in Niagara's future transit, including the GO expansion, was advanced at the recent AMO

conference in a meeting with the new Minister of Transportation. Discussions are ongoing with MTO at both the political and staff levels.

Financial Considerations

The proposed Niagara Region Transit (NRT) operational plan, including both service enhancements for existing routes and new service connections to Niagara West, Pelham, Crystal Beach and Wainfleet, once fully implemented will require an additional \$11.5M in net operating costs plus \$13.9M for new capital (LNTC-C-22-2018 and LNTC-C-23-2018). Local populations rely on both local and inter-municipal transit connections, however under the current MTO allocation methodology, population statistics can only be applied to and received by one transit operator. Options for sharing PGT between local and inter-municipal transit links were evaluated based on the ability to maintain a constant annual transit investment while enhancing and/or expanding service levels with no tax levy impact.

PGT is intended to fund expenditures that support ridership growth and are incremental to transit spending, and is not intended to replace or reduce the municipal contributions to transit. Smaller local transit providers generally operate a reduced level of service as compared to major transit operators. Based on the local population census data, the transit providers within Niagara with annual operating costs less than \$250,000 may not be eligible for the full PGT allowable through the MTO methodology. In addition, if a municipality reduces their spending on transit through reduced transit investment or inclusion of PGT funds to offset the municipal contribution, they would receive a reduced PGT allocation in the subsequent program year if they did not maintain the minimum municipal contribution percentage. Joint CUTA reporting provides an opportunity to ensure the region as a whole receives all eligible PGT funding.

Under the PGT funding program, municipalities qualify for PGT if they contribute financially to public transit services, with the total share determined by a formula of 70 percent based on ridership and 30 percent based on population. The 2018-2019 provincial envelope, based on this formula, generated approximately \$0.27 cents per transit ride and \$9.15 per capita. Despite the majority of the provincial funding envelope being allocated through ridership, the annual allocations for small transit operators depend heavily on population due to comparatively low ridership on these systems. This is especially true for the smaller transit operators in Niagara.

The total 2018 PGT allocation to the region was \$6.4M with an estimated \$4.0M (62%) being generated by the 447,876 census population. By 2022, the Provincial Government intends to increase the PGT funding from the current 2.0 cents per litre to 4.0 cents per litre, thus making Niagara's municipalities eligible for an estimated \$8.0M annually based on their population alone. The three largest municipalities, St. Catharines, Niagara Falls and Welland generate 47% of their \$5.0M in PGT from

population, where as the remaining municipalities realize 94% of their \$1.45M in PGT from population and based on the MTO methodology may not receive all eligible funds. The PGT allocated to NRT is derived from only those municipal populations which do not have local transit. In 2017, Pelham received their first year of PGT which reduced the PGT funding for NRT since the population statistics can only be applied to and received by one transit operator. Despite increasing investment and expansion of NRT services, the introduction of local transit services such as Grimsby and Lincoln will result in additional NRT PGT reductions (estimated at \$475,000 annually).

Under the proposed NRT operational plan outlined in LNTC-C-21-2018, 100% of Fort Erie and Port Colborne Link route services are to being transferred to Niagara Region. The decrease in net operating costs realized by Port Colborne will drive the municipal transit spending below the necessary spending threshold to receive all eligible PGT funding. This risk is further compounded when the allocated PGT funding is used to offset the remaining operating costs as illustrated in the example below. Through joint CUTA reporting, these risks would be mitigated and ensure that all eligible funding is received.

Example: Reductions in eligible PGT funding

	Scenario 1	Scenario 2
A Operating Costs	\$ 200,000	\$ 200,000
B Revenue	\$ 20,000	\$ 20,000
C Donations	\$ 10,000	\$ 10,000
D PGT used in Operating		\$ 100,000
E Net Operating Cost	\$ 170,000	\$ 70,000
F Municipal Contribution (E+B+C-D)	\$ 200,000	\$ 100,000
Maximum PGT allowable (0.75*F)	\$ 150,000	\$ 75,000

The loss in PGT over the next four years is provided in Table 1 below and is estimated at approximately \$1.0 million for existing transit operators. The loss in PGT funding is expected to increase as local transit services begin in Lincoln, Grimsby, West Lincoln and Wainfleet. As local transit services expand and municipal contributions increase beyond \$250,000 annually, the estimated loss would decrease.

Table 1: Estimated combined loss in PGT through independent CUTA reporting

	2019	2020	2021	2022	2019 -2022
Fort Erie	\$ -	\$ -	\$ -	\$ -	\$ -
Port Colborne	\$ 40,628	\$ 50,189	\$ 182,761	\$ 259,563	\$ 533,142
Niagara on the lake	\$ -	\$ -	\$ -	\$ 31,845	\$ 31,845
Welland					
Niagara Falls					
St. Catharines					
Pelham	\$ 26,287	\$ 100,343	\$ 88,704	\$ 191,050	\$ 406,385
Estimate Lost PGT (Existing Transit Operations)	\$ 66,915	\$ 150,533	\$ 271,465	\$ 482,458	\$ 971,371

Together with other municipal partners, Niagara advanced a discussion about provincial funding and the importance of investment in Niagara's future transit and GO expansion at the recent AMO conference in a meeting with the new Minister of Transportation. Discussions are ongoing with MTO at both the political and staff levels. In the meantime, the development of a PGT sharing methodology could be established on a case by case basis and would be evaluated based on equity and fairness across the Niagara Region.

Analysis

Regional staff analysed each municipality independently and the opportunities were identified based on their ability to maintain the current level of transit investment and simultaneously allow for transit service expansions and enhancements.

Port Colborne and Fort Erie established Link routes to Welland and Niagara Falls respectively, but with limited service hours. In 2011, the service levels on the Link routes were enhanced through a pilot project funded by Niagara Region. The local routes have always been funded by the local municipality. In 2017, following the successful and unanimous triple majority process, the current Link routes were made a permanent component of inter-municipal transit (IMT). These routes are well established with historic baselines for service hours, operating costs and ridership however a distribution model for new local and IMT connections will be more difficult to determine since a start-up cost framework has not been established, nor is there a baseline for comparable service hours, operating costs and ridership. The options for sharing PGT, while rooted on the same premise that the populations within local boundaries benefit from both local and IMT connections, may require differing methodologies for allocating PGT. Therefore unique proposals for PGT sharing were provided for each of the following groups:

- Existing local and IMT routes
- New local and IMT routes

A. Existing Local and IMT Routes

Existing local and IMT Link routes have established operating costs and ridership and therefore provide the baseline for future PGT sharing opportunities. Options were evaluated based on the ability to maintain a consistent transit investment over the next four years and were not based on realizing operational cost savings (Table 2). In addition, opportunities were identified where service expansion at both the local and regional level could be realized without financial impacts to the tax levy.

Table 2: Options based on maintaining 2018 municipal contributions over next 4 years

Opportunity / Target		Benefit	Risk
Option A	vary PGT applied to operating; holding tax levy constant at 2018 rate	- PGT funding available for NRT capital replacement /investment	-no funding for local transit re-investment
Option B	hold PGT applied to operating at the 2018 level	- cost savings realized from the Region Link upload to the Region provide funds for local transit re-investment - remaining PGT used for Link capital investment	- could result in large fluctuations in PGT funding year over year - funds may be in excess of service requirements - no PGT available for Link capital investment
Option C	apply all available PGT funds to operating	- could provide largest Local transit re-investment opportunity	- could result in large fluctuations in PGT funding year over year - funds may be in excess of service requirements - no PGT available for Link capital investment
Option D	Joint CUTA reporting - apply formula of ridership proportions to allocate PGT between Local & Link	- Captures all available PGT funds - ensures PGT distribution between local and regional transit proportionate to the demographic/population usage - provides tax levy no greater than 2018 base - allows for local and regional service expansion	- re-estimation of PGT sharing conducted annually

Based on the criteria of maintaining a constant local transit tax levy over the next 4 years, Option D above, provides the greatest opportunity for local transit service expansion plus PGT funding for NRT capital investment. Therefore, it is the recommendation of this report that joint CUTA reporting through Option D be the appropriate methodology for sharing the population portion of the PGT.

Existing Smaller Transit Operators

Fort Erie

Current operating costs and municipal contributions for Fort Erie Transit are sufficient to ensure full receipt of PGT at current and projected funding levels. It is estimated that 95% of the annual PGT is received through the population portion of the formula, while the remaining 5% is through ridership.

Fort Erie residents receive both local and Link transit services, therefore the preferred option for sharing PGT between Fort Erie and Niagara Region would be through

allocations based on the proportion of local and Link ridership, Option D. Applying the current estimated ridership proportion of 80% local and 20% link results in an annual estimate of \$238,000 in PGT remaining within Fort Erie and \$60,000 going to Niagara Region. Assuming the relative transit ridership remains constant, the 2022 estimates (including the proposed increase of the Provincial PGT envelope) projects \$418,000 to Fort Erie (annually) and \$105,000 for the Niagara Region (annually). Through joint CUTA reporting, annual PGT distribution would reflect actual ridership proportions each year to account for individual growth differences.

Table 3: Fort Erie Options for PGT Sharing through Joint Reporting

Fort Erie	Opportunity / Target	Municipal \$ Contribution	2019 - 2022 Total Impact	
			PGT Received	PGT Lost
Option A	holding tax levy constant at 2018 rate	\$4.11 M Total (all Base service)	- \$0.6 M used for FE Operating (no excess PGT for local Transit Re-Investment) - \$0.93 M used for FE Link Capital	No Lost PGT
Option B	hold PGT applied to operating at the 2018 level	\$4.11 M Total (\$3.57 M Base \$0.54 M Reinvestment)	- \$1.14 M used for FE Operating (incl. \$0.54 M PGT for local Transit Re-Investment) - \$0.40 M used for FE Link Capital	No Lost PGT
Option C	apply all available PGT funds to operating	\$4.11 M Total (\$3.18 M Base \$0.93 M Reinvestment)	- \$1.54 M used for FE Operating (incl. \$0.93 M PGT for local Transit Re-Investment) - \$0.0 M used for FE Link Capital	No Lost PGT
Option D	Joint CUTA reporting	\$4.11 M Total (\$3.48 M Base \$0.63 M Reinvestment)	- \$1.23 M used for FE Operating (incl. \$0.63 M PGT for local Transit Re-Investment) - \$0.31 M used for FE Link Capital	No Lost PGT

Note: the proportion of PGT allocated to NRT, assuming the increased provincial envelope would cover the capital investment required to service the Fort Erie Link route. Also assumes that the PGT doubles by 2022, as planned.

Based on Option D above, Fort Erie would generate an additional \$0.63M over the next 4 years to re-invest in local transit while holding the existing tax levy constant at 2018 levels. Niagara Region would receive sufficient funding to purchase one bus every 12 years at current PGT funding levels and two buses every 12 years if funding levels double. No other option provides this benefit.

Port Colborne

Current operating costs and municipal contributions for Port Colborne Transit are not sufficient to ensure full receipt of PGT at current and projected funding levels. It is estimated that 97% of the annual PGT is received through the population portion of the formula, while the remaining 3% is through ridership.

Table 4: Port Colborne Options for PGT Sharing through Joint Reporting

Port Colborne		2019 - 2022 Total Impact		
	Opportunity / Target	Municipal \$ Contribution	PGT Received	PGT Lost
Option A	holding tax levy constant at 2018 rate	Total \$0.41 M	- \$0.06 M used for PC Operating (no excess PGT for local Transit Re-Investment) - \$0.38 M used for PC Link Capital	\$0.38 M
Option B	hold PGT applied to operating at the 2018 level	Total \$0.41 M (\$0.19 M Base \$0.22 Reinvestment)	- \$0.27 M used for PC Operating (incl. \$0.22 M PGT for local Transit Re-Investment) - \$0.0 M used for PC Link Capital	\$0.53 M
Option C	apply all available PGT funds to operating	Total \$0.41 M (\$0.19 M Base \$0.22 Reinvestment)	- \$0.27 M used for PC Operating (incl. \$0.22 M PGT for local Transit Re-Investment) - \$0.0 M used for PC Link Capital	\$0.53 M
Option D	Joint CUTA reporting	Total \$0.41 M (\$0.18 M Base \$0.23 M Reinvestment)	- \$0.28 M used for PC Operating (incl. \$0.23 M PGT for local Transit Re-Investment) - \$0.53 M used for PC Link Capital	No Loss

Note: the proportion of PGT allocated to NRT, assuming the increased provincial envelope would cover the capital investment required to service the Port Colborne Link route. Also assumes that the PGT doubles by 2022, as planned.

Port Colborne's current operating practice, Option C, applies all available PGT funds towards reducing the tax levy requirements for transit operating costs. If this practice continues after NRT uploads 100% of Link service costs (which are currently 60% of Port Colborne's annual transit budget), the majority of allowable PGT will become ineligible. Port Colborne residents receive both local and Link transit services, therefore the preferred option for sharing PGT between Port Colborne and Niagara Region would be through allocations based on the proportion of local and Link ridership, Option D.

Through joint reporting and PGT sharing under Option D, Port Colborne would realize a consistent and lower year over year budget and ensure all eligible PGT funds are received. Applying the current estimated ridership proportion of 35% local and 65% Link would result in an annual estimated \$54,000 in PGT remaining within Port Colborne and an estimated \$100,000 going to Niagara Region. Assuming the relative transit ridership remains constant, the 2022 estimates including increases in the Provincial PGT

envelope, projects \$99,000 for Port Colborne and \$183,000 for the Niagara Region. Through joint CUTA reporting, annual PGT distribution would reflect actual ridership proportions each year to account for individual growth differences.

Based on Option D above, Port Colborne would generate an additional \$0.23M over the next 4 years to re-invest in local transit while holding the existing tax levy constant at 2018 levels. Option D also prevents the loss of PGT relating to the 75% threshold. Niagara Region would receive sufficient funding to purchase two buses every 12 years at current PGT funding levels and three buses every 12 years if funding levels double.

Niagara-on-the-Lake

Current operating costs and municipal contributions for Niagara-on-the-Lake Transit are sufficient to ensure full receipt of PGT at current and projected funding levels. It is estimated that 97% of the annual PGT is received through the population portion of the formula, while the remaining 3% is through ridership.

Niagara-on-the-Lake Transit does not currently operate a Link route, but instead connects with other IMT routes within its municipal boundary which gives its residents access to both local and IMT routes. NRT route 40/45 generated approximately 73,000 boardings in 2017, the relative percentage of resident trips using NRT was 73% with the remaining 17% utilizing local transit services. Table 5 below estimates \$101,229 of the total 2018 PGT allocation would be eligible to Niagara Region for services delivered to Niagara-on-the-Lake. Alternatively, MTO could contribute an incremental \$101,229 in PGT to Niagara Region based on the current 2.0 cents per litre currently apportioned for PGT funding.

Table 5: Niagara-on-the-Lake Option D - Population Servicing Methodology for PGT Sharing

	2017 adj. Boardings		Option D. Transit Ridership /Population	2018 PGT Allocation	Estimated Population Portion of PGT	2018 PGT population share to NR
	Local Ridership	NRT Ridership				
NOTL	27,303	73,200	72.8%	\$143,487	\$ 138,987	\$ 101,229

The current operating structure does not appear to realize any benefits to reporting jointly with Niagara Region. Future opportunities may develop as the consolidation framework unfolds.

Existing Large Transit Operators

The 2018 NRT proposed operational plan including the IMT route consolidations have estimated the financial impacts associated with the transfer of ridership and subsequent PGT funding from the municipalities to Niagara Region. The estimated PGT share within this report are to be included in the larger financial discussion regarding the total

financial impacts resulting from the proposed route consolidations outlined in the Dillon Report.

Welland

Current operating costs and municipal contributions for Welland Transit are sufficient to ensure full receipt of PGT at current and projected funding levels. It is estimated that 67% of the annual PGT Welland receives is generated through the population portion of the formula, while the remaining 33% is through ridership.

Table 6: Welland Option D - Population Servicing Methodology for PGT Sharing

	2017 adj. Boardings		Option D. Transit Ridership /Population	2018 PGT Allocation	Estimated Population Portion of PGT	2018 PGT population share to NR
	Local Ridership	NRT Ridership				
Welland	1,025,622	90,410	8.1%	\$691,259	\$ 465,035	\$ 37,672

Welland residents have direct access to both local and IMT routes. NRT routes 60/65 and 70/75 generated approximately 90,000 boardings in 2017, the relative percentage of resident trips using NRT was 8.0% with the remaining 92.0% utilizing local transit services. Table 6 above estimates \$37,672 of the total 2018 PGT allocation would be eligible to Niagara Region for services delivered to Welland. Alternatively, MTO could contribute an incremental \$37,672 in PGT to Niagara Region based on the current 2.0 cents per litre currently apportioned for PGT funding.

Niagara Falls

Current operating costs and municipal contributions for Niagara Falls Transit are sufficient to ensure full receipt of PGT at current and projected funding levels. It is estimated that 54% of the annual PGT Niagara Falls receives is generated through the population portion of the formula, while the remaining 46% is through ridership.

Table 7: Niagara Falls Option D - Population Servicing Methodology for PGT Sharing

	2017 adj. Boardings		Option D. Transit Ridership /Population	2018 PGT Allocation	Estimated Population Portion of PGT	2018 PGT population share to NR
	Local Ridership	NRT Ridership				
Niagara Falls	2,310,328	163,797	6.6%	\$1,401,055	\$ 762,310	\$ 50,468

Niagara Falls residents have direct access to both local and IMT routes. NRT routes 40/45, 50/55 and 60/65 generated approximately 164,000 boardings in 2017, the relative percentage of resident trips using NRT was 6.6% with the remaining 93.4% utilizing local transit services. Table 7 above estimates \$50,468 of the total 2018 PGT allocation would be eligible to Niagara Region for services delivered to Niagara Falls. Alternatively, MTO could contribute an incremental \$50,468 in PGT to Niagara Region based on the current 2.0 cents per litre currently apportioned for PGT funding.

St. Catharines

Current operating costs and municipal contributions for St. Catharines Transit are sufficient to ensure full receipt of PGT at current and projected funding levels. It is estimated that 48% of the annual PGT St. Catharines receives is generated through the population portion of the formula, while the remaining 52% is through ridership.

Table 8: St. Catharines Option D - Population Servicing Methodology for PGT Sharing

	2017 adj. Boardings		Option D. Transit Ridership /Population	2018 PGT Allocation	Estimated Population Portion of PGT	2018 PGT population share to NR
	Local Ridership	NRT Ridership				
St. Catharines	5,842,960	155,140	2.6%	\$2,882,397	\$ 1,371,573	\$ 35,475

St. Catharines residents have direct access to both local and IMT routes. NRT routes 40/45, 50/55 and 70/75 generated approximately 155,000 boardings in 2017, the relative percentage of resident trips using NRT was 2.6% with the remaining 97.4% utilizing local transit services. Table 8 above estimates \$35,475 of the total 2018 PGT allocation would be eligible to Niagara Region for services delivered to St. Catharines. Alternatively, MTO could contribute an incremental \$35,475 in PGT to Niagara Region based on the current 2.0 cents per litre currently apportioned for PGT funding.

B. New Local and IMT Routes

For municipalities which do not have local service or that have recently initiated local service or supporting IMT connections, baseline statistics are not available. Thus the start-up cost sharing framework including baseline service hours, operating costs, and ridership are not fully known. Using other local start-up operations as a reference, it is assumed that new local transit operations will not incur large capital expenditures since services will be contracted out to third party providers who transfer the cost of capital through fixed operating rates. The reduced capital pressures will likely result in the PGT funding being used to reduce municipal operating contributions and the subsequent tax levy impact. Therefore opportunities to share PGT between local and IMT providers may be based on a minimum municipal spending threshold plus assurance of a minimum PGT funding to cover NRT capital requirements. Determinations on the appropriate sharing methodology would be established through relative assessments based on the established guiding principle of equity and fairness across Niagara region.

Pelham

It is estimated that 99% of annual PGT will be received through the population portion of the formula, while the remaining 1% is through ridership. Pelham residents currently receive local transit service which includes one IMT stop, accounting for approximately 20% of the total route time. The current demand for the IMT portion of the route is not sufficient to warrant a conventional fixed route feeder service, however alternative service delivery options could meet the demand in a more cost effective solution.

Table 9: Pelham Required Municipal Transit Spend to Receive 100% of Eligible PGT

	Pelham	
	2019	2022
Eligible Population PGT	\$ 160,189	\$ 281,425
Required Municipal Own Transit Spending* (75% threshold)	\$ 213,586	\$ 375,233
*Municipal own spending includes passenger revenues, donations if applicable, and municipal contributions to operating and capital expenses		

The 2017 CUTA reported statistics estimate that the Pelham transit municipal contribution is insufficient to ensure Pelham receives 100% of eligible PGT funding in 2018. The net operating costs plus revenues and donations do provide sufficient transit investment to receive full funding however, the inclusion of the PGT funding to offset operating expenses reduces the municipal contribution and therefore reduces the subsequent years PGT allocation. The required municipal transit contribution (spending in excess of the PGT funding used for operating expenses) to receive 100% of the eligible PGT is presented in Table 9 above.

Prior to 2017, the Pelham population base was included in the NRT PGT allocation and accounted for an estimated \$150,000 annually. Comparing the 2017 Pelham budget with their estimated 2018 transit budget (Table 9), illustrates the dilemma that small transit operators face when applying all PGT funding towards operating costs. Holding transit investment constant at 2018 service levels, this approach projects large year over year fluctuations in the annual budgeted tax levy ranging from \$90,000 to \$150,000. This results in a total four year transit tax levy of \$0.51M, and eliminates the potential for surplus funding to be used for transit expansion as well as an estimated loss of \$0.44M in PGT funding from the province. The recent provincial announcement of the 2018/2019 PGT allocation supports this analysis with Pelham realizing a reduction of \$100,000 over last year's PGT allocation. This represents an overall financial loss to Niagara.

Table 10: Pelham Options for PGT Sharing through Joint Reporting

Pelham	Opportunity / Target	Municipal \$ Contribution	2019 - 2022 Total Impact	
			PGT Received	PGT Lost
Current Outlook: Option A, B & C all the Same		Total \$0.51 M (all Base Service)	- \$0.40 M used for Pelham Operating (no excess PGT for local Transit Re-Investment) - \$0.0 M used for Pelham Link Capital	\$0.44 M
Option D	Joint CUTA reporting	Total \$0.4 M (\$0.03 M Base \$0.37 M Reinvestment)	- \$0.64 M used for Pelham Operating (incl. \$0.37 M PGT for local Transit Re-Investment) - \$0.17 M used for Pelham Link Capital	No Loss

Note: assumes that the PGT doubles by 2022, as planned.

There exists an opportunity to receive 100% of all eligible PGT funding and stabilize Pelham's annual budgeting requirements through Option D outlined in Table 10 above. Through the development of a transit strategy and the formation of a partnership between Pelham and the Region, both would be financially better off than working independently. The partnership would include joint CUTA reporting, a minimum local annual transit contribution, a 20% cost share from Niagara Region towards the IMT portion of the service and a portion of the Pelham PGT funding. For example, assuming a minimum levy-supported transit investment by Pelham equal to \$100,000 (the average of the last two years tax levy based on 2017 and 2018), this partnership would result in a four year total transit tax levy of \$400,000, allow for \$372,000 in local transit expansion, and direct \$167,000 of PGT towards the Region for capital replacement.

Lincoln

It is estimated that 99% of annual PGT will be received through the population portion of the formula, with the remaining 1% through ridership. Lincoln residents currently only receive a piloted local transit service; however the 2019 Lincoln operational plan includes a permanent local transit service plus an IMT Link extending from Lincoln to St. Catharines with an annual net operating budget of \$585,000 plus up to \$1.5M in capital.

The required municipal transit contribution by the Town to receive 100% of the eligible PGT is presented in Table 11 below. The proposed 2019 operational budget for Lincoln Transit is \$263,550 with an estimated \$2,000 in potential fare revenue. The total transit municipal contribution of \$265,550 results in an estimated PGT of approximately \$199,000, which is \$23,000 below the full eligible PGT funding (\$222,000). Since Lincoln Transit uses a contracted third party to operate its transit, the municipality does not have capital expenditures. If the estimated \$199,000 PGT funds were used to offset the 2019 operational expenses, the subsequent year PGT funding would decrease from \$199,000 to \$50,000, an additional \$149,000 loss in eligible funding.

Table 11: Lincoln Required Municipal Transit Spend to Receive 100% of Eligible PGT

	Lincoln	
	2019	2022
Eligible Population PGT	\$ 222,702	\$ 391,248
Required Municipal Own Transit Spending* (75% threshold)	\$ 296,936	\$ 521,664
*Municipal own spending includes passenger revenues, donations if applicable, and municipal contributions to operating and capital expenses		

The current PGT funding for the Lincoln population is being allocated to NRT for all IMT services. This is because Lincoln does not currently charge a fare which is an eligibility requirement for PGT. If the local transit service's net operating budget is less than the required municipal transit spending or the PGT funding is used to reduce the local municipal transit spending below the required threshold, the lost funding would result in a net decrease to the region as a whole. Currently the population base for Lincoln is included in the PGT allocation to Niagara Region and therefore, when removed, will result in an estimated \$220,000 reduction in funding to the Region.

Through joint reporting and the sharing of the PGT funding, 100% of the eligible PGT funding for the Lincoln population base would be allocated to the Region. The PGT allocation would be shared between Lincoln and the Region based on an agreed upon ridership/ population percentage similar to other smaller systems. The local transit budget would be consistent and known year over year plus the former losses in eligible PGT would become available and provide funding for IMT capital requirements associated with the proposed West Niagara expansion of IMT Link service.

Without historic baseline data for local and Link services driving ridership proportions, determination on the agreement for relative PGT shares would need to ensure equity and fairness among all transit providers as well as consistency and transparency to tax payers. The formula for allocation could be modified over time to reflect actual ridership data on both systems

Grimsby

It is estimated that 99% of annual PGT will be received through the population portion of the formula, with the remaining 1% through ridership. Grimsby residents currently do not receive any transit services however the NRT 2019 operational plan includes an IMT Link extending from Grimsby to St. Catharines with an annual net operating budget of \$585,000 plus up to \$3.5M in capital.

Table 12: Grimsby Required Municipal Transit Spend to Receive 100% of Eligible PGT

	Grimsby	
	2019	2022
Eligible Population PGT	\$ 255,723	\$ 449,260
Required Municipal Own Transit Spending* (75% threshold)	\$ 340,964	\$ 599,013
*Municipal own spending includes passenger revenues, donations if applicable, and municipal contributions to operating and capital expenses		

Currently the population base for Grimsby accounts for an estimated \$250,000 annually in the PGT allocation to Niagara Region and supports all IMT services. If the budgeted municipal transit spend is less than the required municipal transit spend for 100% PGT funding there will be a net loss of PGT funding to the region as a whole. The required annual municipal contribution to receive all eligible PGT funding (based on the Grimsby population) would be \$341,000 which is greater than current spending in Pelham, Lincoln, and Port Colborne. This suggests that the initial transit investment in Grimsby would be insufficient to receive 100% of PGT funding.

Through joint reporting and the sharing of the PGT funding, 100% of the eligible PGT funding for the Grimsby population base would be allocated to the Region. The PGT allocation would be shared between Grimsby and the Region based on an agreed upon ridership/ population percentage similar to other smaller systems. The local transit budget would be consistent and known year over year plus any former losses in eligible PGT would become available and provide funding for IMT capital requirements associated with the proposed West Niagara expansion of IMT Link service.

Without historic baseline data for local and link services driving ridership proportions, determination on the agreement for relative PGT shares would need to ensure equity and fairness among all transit providers as well as consistency and transparency to tax payers. The formula for allocation could be modified over time to reflect actual ridership data on both systems.

Remaining Municipalities

Currently West Lincoln and Wainfleet do not operate local transit services. Based on the existing population base, independent locally operated transit services would not be fiscally prudent. Future operational plans combining local and IMT services using alternative deployment strategies (i.e. on-demand transit) may provide a more cost effective solution.

Alternatives Reviewed

An alternative to the proposed strategy would be to not report CUTA statistics jointly and continue to apply PGT towards offsetting local transit operating costs and realize year-over-year fluctuation in PGT allocations from the province. The estimated loss in PGT funding of \$1.0 M over the next four years would result in negative impacts to the taxpayer and prevent local and IMT agencies from expanding services without further negative impacts on the taxpayer.

Relationship to Council Strategic Priorities

This proposal aligns with Council strategic priority of achieving results under Doing Business Differently. This proposal also aligns with Council strategic priority of Moving People and Goods and directly advances the following key Council Strategic Priorities:

- Provincial commitment to GO Rail expansion in Niagara
- Support local municipalities in developing long-term solution for transit.

Other Pertinent Reports

- LNTC-C 21-2018 IMT Service Implementation Strategy
- LNTC-C 22-2018 IMT Financial Impact Analysis
- LNTC-C 23-2018 IMT Capital Plan 2019
- PW 19-2018 Niagara Region Transit 2018 Service Agreement

Prepared by:

Heather Talbot
Financial & Special Projects Consultant
Financial Planning and Management,
Corporate Services

Recommended by:

Todd Harrison
Commissioner
Enterprise Resource Management
Services

Submitted by:

Ron Tripp, P.Eng.
Acting Chief Administrative Officer

This report was prepared by Heather Talbot, Financial and Special Project Consultant, Financial Management and Planning, in consultation with the Transit Operators and the Inter-Municipal Transit Working Group; Matt Robinson, Director, GO Implementation Office, Kumar Ranjan, Transportation Lead GO Implementation Office, Robert Salewysch, Transit Planning Coordinator; and reviewed by Helen Chamberlain, Director, Financial Management & Planning/Deputy Treasurer.

Subject: Niagara Regional Transit (NRT) and Niagara Specialized Transit (NST)
2018 Ridership and Revenue Summary

Report to: Public Works Committee

Report date: Tuesday, March 19, 2019

Recommendations

That Report PW 23-2019 **BE RECEIVED** for information.

Key Facts

- The purpose of this report is to summarize the 2018 ridership and revenue for NRT and NST.
- The 2018 NRT ridership grew from 492,540 in 2017 to 692,021 in 2018 (41% growth) with the net expense finishing over budget by approximately 2%.
- NRT ridership growth is largely due to the route consolidations pertaining to 60/65 and significantly larger than projected enrollment at Niagara College, which required implementation of additional services from September through December.
- The 2018 NST ridership was approximately 10% higher than in 2017 with the net expense finishing approximately 30% over budget due to increased demand for the service.

Financial Considerations

Niagara Region Transit (NRT)

The 2018 NRT operating budget included \$4,579,285 in operator payments plus \$100,000 in maintenance costs and \$1,449,217 in fare revenue for a net expense of \$3,230,068. The 2018 NRT actual operator payments totaled \$4,969,963 plus \$231,666 in maintenance costs with \$1,912,765 in fare revenue for a net expense of \$3,288,864. This resulted in a variance of approximately \$58,796 (2%) over budget.

The higher than budgeted actual operator payments and revenues are a combined result of route consolidation and increased demand/ridership which required deployment of additional vehicles. The largest variance is a result of much larger than anticipated major repair costs for the aging NRT fleet. Additional commentary is provided in the analysis section of this report.

In 2018, the Region's share of revenue for NRT grew to \$1,912,765. This is an increase of 44% over 2017 and is driven predominantly by the U-pass (post-secondary) portion of revenue.

Table 1 below summarizes the variance between the operating budget and the actual operating costs.

Table 1 – NRT Operating Budget vs. Operating Costs

Details	2018 Budget	2018 Actual	2017 Actual	Var \$ 2018A vs 2018B	Var % 2018A vs 2018B	Explanation
Operator Payments	\$ 4,579,285	\$ 4,969,963	\$ 3,974,319	\$(390,678)	(9%)	Route Consolidation & Enrollment Pressures
Maintenance Costs	\$ 100,000	\$ 231,666	\$ 19,996	\$(131,666)	(132%)	Major repairs to aging fleet
Revenue	\$(1,449,217)	\$(1,912,765)	\$(1,330,805)	\$ 463,548	32%	Increased U-Pass Contribution due to route consolidation & supplemental services
Net Expense	\$ 3,230,068	\$ 3,288,864	\$ 2,663,510	\$ (58,796)	(2%)	

Niagara Specialized Transit (NST)

The NST budget included \$2,008,384 in operator payments and \$101,336 in fare revenue for a net expense of \$1,907,048. The 2018 actuals included \$2,627,753 in operator payments and \$151,123 in fare revenue for a net expense of \$2,476,630. This resulted in an unfavourable variance of \$569,582 (30%) over budget. This variance was primarily driven by the continued increase in demand for the service. However, this also includes \$138,010 to write-off the pre-payment made at the beginning of the contract. This was done to close the initial Agreement in conjunction with the negotiations toward a new Amending Agreement.

Table 2 below summarizes the operating budget and the actual operating costs for NST.

Table 2 – NST Operating Budget vs. Operating Costs

Details	2018 Budget	2018 Actual	2017 Actual	Var \$ 2018A vs 2018B	Var % 2018A vs 2018B	Explanation
# of Trips	25,700**	30,057	27,258	(4,357)	(17%)	Increased Demand
Operator Pymts.*	\$ 2,008,384	\$ 2,627,753	\$ 2,239,757	\$ (619,369)	(31%)	Increased Demand
Fare Revenue	\$ (101,336)	\$ (151,123)	\$ (131,305)	\$ 49,787	49%	Variation in fare product sales; trip distribution across zones
Net Expense	\$1,907,048	\$ 2,476,630	\$ 2,108,452	\$ (569,582)	(30%)	

*Includes payments to Service Provider for late trip cancellations, payment handling charges and 1.76% non-refundable HST

**As reported in PW 40-2018, the demand-based annual trip projection of 30,270 was reduced to 25,700 to meet budget guidance.

In September 2018, staff brought forward a report (PW 40-2018) highlighting the current state of the service and reporting the results of cost mitigation efforts originally outlined in PW 51-2017. In addition, PW 40-2018 outlined a plan to reduce the number of trips available each day to a number well below the annual daily average to remain within base budget. In response to concerns from the public, Council directed staff to maintain the average daily service level and to fund the program through cost savings throughout the corporation. While the net expense did exceed the 2018 base budget, it did comply with the revised funding limit set by Council. This, in turn, has given staff the ability to continue to negotiate with the current service provider to provide enhanced consistency with respect to budget and service delivery for 2019.

Staff are confident that the upcoming changes to the NST Service Agreement will ensure that the 2019 net expense will be contained within the forecasted operating budget. This is due to a restructuring of key performance indicators to be shared in additional detail in a report to this Committee once the Amending Agreement has been finalized.

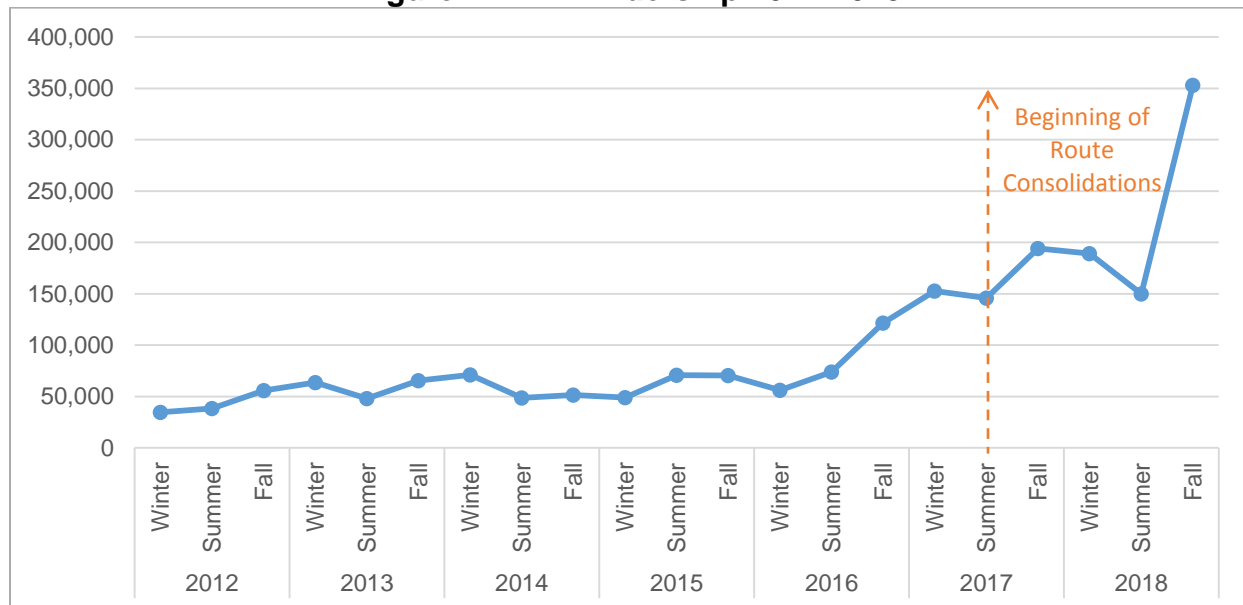
Analysis

Niagara Region Transit (NRT)

The NRT service has continued to see annual growth in its ridership. From 2017 to 2018, the ridership grew approximately 41%.

Figure 1 below illustrates the ridership trend since 2012.

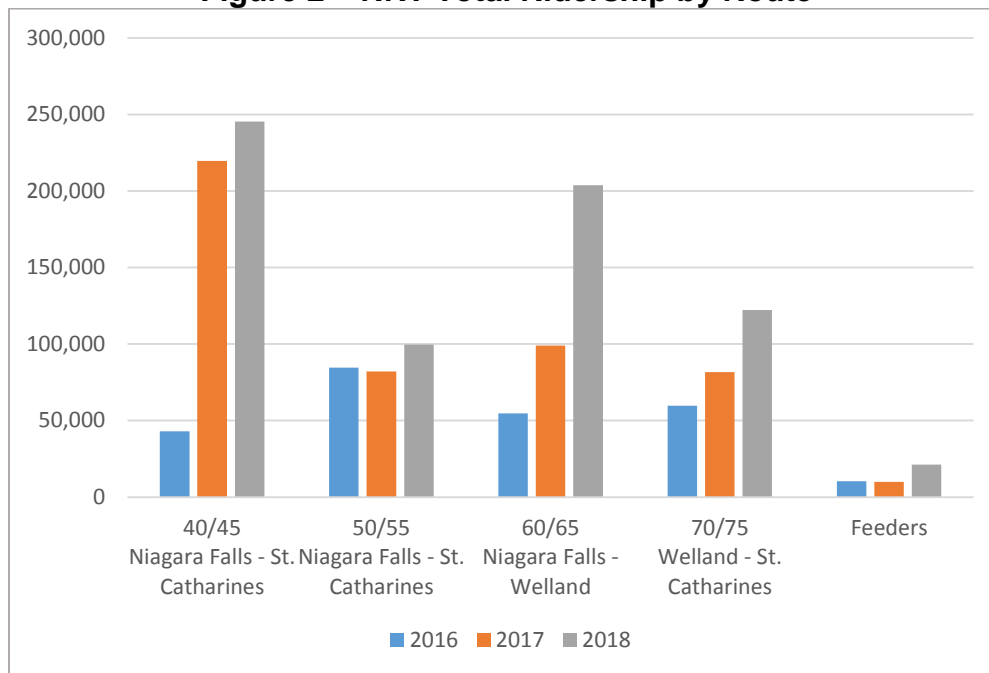
Figure 1 – NRT Ridership 2012-2018



A substantial factor in the ridership growth was the significant enrollment increase at Niagara College for the fall semester. This was exacerbated by a larger than typical proportion of transit-dependent students in this enrollment cohort with the majority of these students residing in Niagara Falls. This unexpected demand overwhelmed the existing NRT system. The pressure eased after additional funds were secured from Niagara College to provide supplemental services. However, this pressed every available bus into service and required additional support from the local transit providers in terms of fleet and staff.

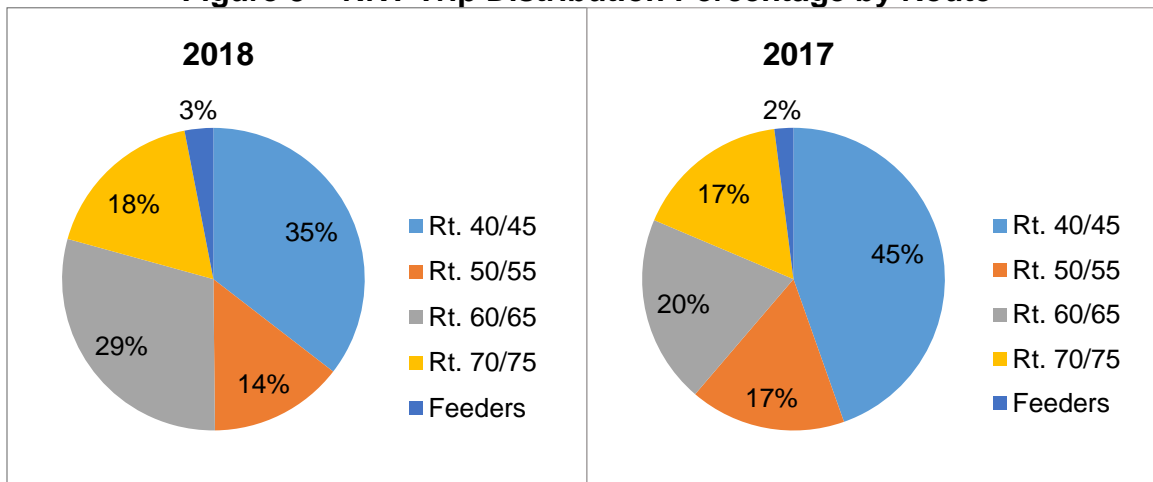
Each route experienced an increase in overall ridership from 2017 to 2018 as is illustrated by Figure 2 below.

Figure 2 – NRT Total Ridership by Route



It should also be noted that much of this growth is due to the consolidation of Routes 60 and 65 with the previously chartered Niagara College Route 21 in September 2018. This resulted in the transfer of ridership from Route 21 to the Routes 60 and 65 as evidenced by the shifts in ridership distribution in favour of routes 60 and 65 as illustrated below in Figure 3.

Figure 3 – NRT Trip Distribution Percentage by Route



Niagara Specialized Transit (NST)

The NST service experienced an increase of approximately 10% in its annual ridership from 2017 to 2018. However, it is extremely important to note that the service had already delivered nearly 21,000 trips by the end of August 2018. This number reflects almost 82% of the budgeted trips after only two thirds of the year. Without the additional financial support from Council identified earlier in this report, the service would have reached its annual allotment for trips by the end of October. This is indicative of the public's growing need for accessible transportation, especially in areas underserved, or unserved, by regular public transit.

Table 3 summarizes the growth of the service by the municipality of origin.

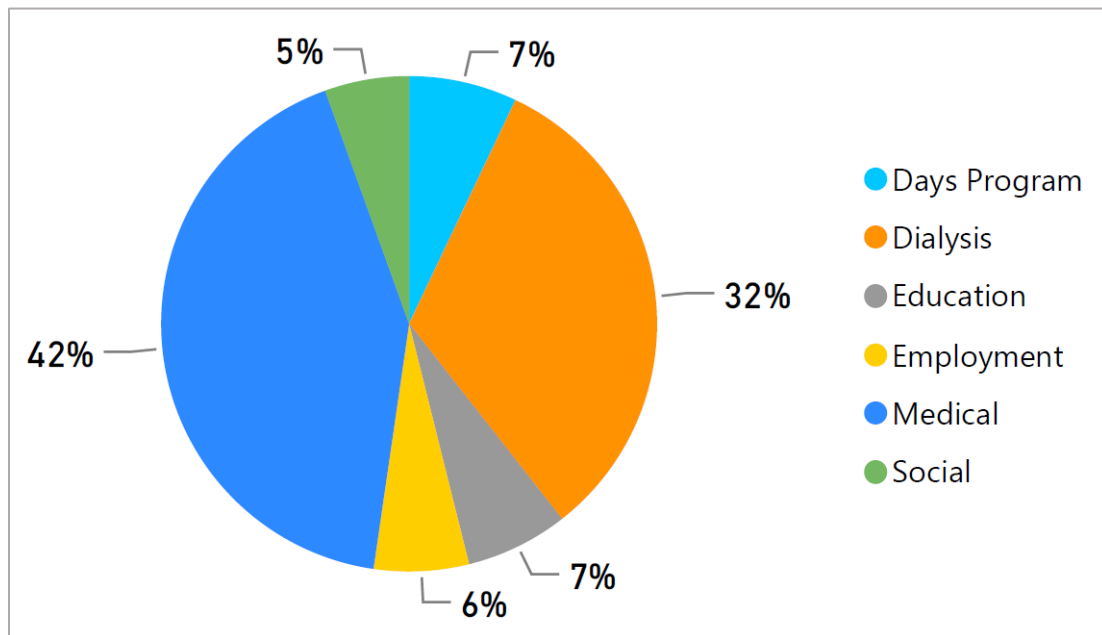
Table 3 - Trip Summary by Municipality of Origin

Municipality (Trip Origin)	Trips (2016)	Trips (2017)	Trips (2018)	Growth
Niagara Falls	3,807	6,383	6,977	9%
St. Catharines	4,465	6,273	6,783	8%
Thorold	365	663	1,158	75%
Welland	3,083	5,258	5,700	8%
Port Colborne	673	1,450	1,695	17%
Wainfleet	20	104	214	106%
Fort Erie	1,958	3,611	3,124	-13%
Niagara-on-the-Lake	1,088	1,301	1,683	29%
Grimsby	290	443	661	49%
Lincoln	622	638	715	12%
West Lincoln	104	115	213	85%
Pelham	482	514	497	-3%
Hamilton	216	505	637	26%
Total	17,173	27,258	30,057	10%

It is especially important to note that while ridership has continued to grow, the majority of trips (74%) are medically related (medical plus dialysis). When rides for community day programs are factored in, this number increases to 81% and highlights the substantial need that this service meets by enabling residents to access health related services. In January 2017, AODA also mandated that specialized transit providers are not able to limit or restrict a trip by its purpose/type. Therefore, NST began facilitating

social trips as well, however, these only account for 5% of the total ridership. Figure 4 below provides the distribution of the trips delivered in 2017 by their type/purpose.

Figure 4 – NST Trip Distribution by Type



Staff approved 619 new applications in 2018 which represents a 30% increase in eligible riders. While this number is consistent with the annual applications from previous years, it does indicate a growing client base. This potential ridership growth cannot be realized without additional financial support in out years based on Council's direction to maintain the 2018 service levels.

Alternatives Reviewed

Given the aforementioned growth potential for NST, a specialized transit study has commenced and will provide recommendations for service levels, operating models, peer comparisons, customer experience improvements as well as potential governance options.

Relationship to Council Strategic Priorities

This report is being brought forward to provide an annual update to the Public Works Committee on the status of the Niagara Region Transit and the Niagara Specialized Transit services. Supporting transit was a priority of the previous Council under the Moving People and Goods segment and will continue through the consolidation process.

Other Pertinent Reports

PW 40-2018 – NST Negotiations and Program Changes

PW 51-2017 – NST Program Change Options

CAO 8-2017 – Niagara Region's Transit Service Delivery and Governance Strategy

Prepared by:

Robert Salewytch
Transit Service Planning Coordinator
Public Works

Recommended by:

Catherine Habermehl
Acting, Commissioner
Public Works

Submitted by:

Ron Tripp, P.Eng.
Acting, Chief Administrative Officer

This report was prepared in consultation with Brian McMahon, Program Financial Specialist, Heather Talbot, Financial and Special Projects Consultant, and reviewed by Matt Robinson, Director, GO Implementation Office.

MEMORANDUM**PWC-C 6-2019****Subject: Niagara Water Treatment Plant 2018 Summary Reports****Date: March 19, 2019****To: Public Works Committee****From: Jen Croswell, C.Tech., Water Compliance Specialist**

A Drinking Water Summary Report (Summary Report), required under the Safe Drinking Water Act, 2002, has been prepared for each of Niagara Region's six (6) drinking water treatment plants for January 1, 2018 through December 31, 2018, inclusive. The Summary Reports have been provided as Appendix I and include:

- A description of any failure to meet the requirements of any governing Act, Regulation, Order or Approval that the Drinking Water System operates under, along with the actions the Operating Authority undertook to mitigate any such non-compliance;
- A summary of water flow rates including maximum daily flow rates and instantaneous peak flow rates in comparison with the capacity of the water works identified in the drinking water license and permit. This information is included for the purpose of allowing the owner (Niagara Region) of the system to assess the capability of the system to meet existing and planned uses of the system.

The intent of the Summary Report is to provide full disclosure and acts as an instrument to ensure Council, senior management, regulatory agencies and the public are made aware of any non-compliance issues.

In addition to the Summary Reports, staff have produced Annual Water Quality Reports (Annual Reports) for each of Niagara Region's six (6) drinking water treatment plants, as required by the Safe Drinking Water Act, 2002. The Annual Reports have been made available to the public via the Niagara Region website

(<https://www.niagararegion.ca/living/water/Water-Quality-Reports/default.aspx>).

The publication of these reports will be advertised in the Region's Public Works Green Scene newsletter in spring 2019.

Inspections were completed for all of Niagara's six (6) water treatment plants. Five (5) water treatment plants (Decew Falls, Grimsby, Niagara Falls, Port Colborne, and Rosehill) obtained a 100% compliance score on the Ministry of Environment, Conservation and Parks (MECP) Inspection Rating Report. One (1) water treatment plant, Welland, was found to be in non-compliance with Ministry Regulations and/or System Licences and obtained an inspection rating of 99.17%. The non-compliance

was administrative in nature and did not result in environmental or public health risk. Details of the non-compliance are as follows:

- Watermain installation which crosses a waterbody using an open-cut construction method requires an application for a Schedule C amendment and approval from the Ministry of Environment, Conservation and Parks prior to construction. The initial assessment for a watermain construction project concluded that the impacted ditch was not a waterway. Upon further review it was determined that the ditch was deemed a waterway, therefore, an inappropriate approval method for construction was used. Niagara Region was found to be in non-compliance with item (b) of Subsection 31 (1) of the Safe Drinking Water Act, 2002. Internal operating procedures were updated and staff training was conducted to ensure appropriate approvals are obtained for future construction projects.

May this memorandum serve as acknowledgment of receipt of the Summary Reports by the system owner, Council.

Appendices

Appendix I – 2018 Summary Reports – Decew Falls, Grimsby, Niagara Falls, Port Colborne, Rosehill and Welland Water Treatment Plants

Respectfully submitted and signed by

Jen Croswell, C.Tech.
Water Compliance Specialist

DECEW FALLS WATER TREATMENT PLANT

ANNUAL SUMMARY REPORT

(Prepared under Ontario Regulation 170/03)

January 1 to December 31, 2018

Ministry of the Environment, Conservation and Parks

**Municipal Drinking Water License # 007-102
Drinking Water Works Permit # 007-202**

1. Failure to meet with the requirements of the Act, the regulation, the system's approval:

The Decew Falls Water Treatment Plant was operated in such a way that at no time did it fail to meet or exceed the requirements of the Act, the Regulations, the system's approval or any order that may have been issued for this reporting period.

2. A summary of flows for the reporting period January 1, 2018 – December 31, 2018:

2018	TOTAL FLOW		AVERAGE DAY		MAX. DAY	MIN. DAY	MAX. FLOW RATE	MIN. FLOW RATE	WASTE SLUDGE
Date	Raw (ML)	Treated (ML)	Raw (ML)	Treated (ML)	Treated (ML)	Treated (ML)	Treated (ML/d)	Treated (ML/d)	(ML)
Jan	1747.219	1554.102	56.362	50.132	52.878	47.948	79.436	23.199	0.780
Feb	1564.273	1374.048	55.867	49.073	52.782	46.148	102.588	17.566	0.824
Mar	1729.191	1529.487	55.780	49.338	51.362	47.224	74.101	22.622	0.824
Apr	1677.964	1489.972	55.932	49.666	53.904	47.001	72.347	20.722	0.824
May	1900.540	1728.820	61.308	55.924	78.354	28.757	94.029	10.472	9.062
Jun	2190.617	2039.161	73.021	67.972	94.908	54.981	101.540	23.311	6.417
Jul	2383.023	2314.860	76.872	74.673	93.786	63.726	112.529	35.124	0.727
Aug	2210.630	2055.174	71.311	66.296	74.668	57.917	130.316	36.187	0.564
Sep	1971.414	1814.582	65.714	60.486	68.567	55.336	90.257	34.811	0.520
Oct	1752.368	1616.921	56.528	52.159	54.237	49.514	77.662	25.595	9.279
Nov	1613.699	1478.511	53.790	49.284	51.976	47.055	78.401	22.996	3.165
Dec	1630.932	1490.453	52.611	48.079	50.940	42.939	101.623	16.124	1.084
TOTAL	22371.870	20486.091							34.071
MIN						28.757		10.472	0.520
MAX					94.908		130.316		9.279
AVG			61.258	56.090					2.839

* The flow rates are moments in time, and can be affected by various circumstances, such as pump changes or valve position and therefore not unusual to have higher or lower than normal flows.

3. A comparison of actual flows to that of the flow rates set out in the system's approval:

Flow rates as set in:

- Municipal Drinking Water License # 007-102
- Drinking Water Works Permit # 007-202

Maximum daily flow: 227.300 ML

Maximum flow rate: 227.300 ML/day

2018	AVERAGE DAY	% OF RATED CAPACITY	MAX. DAY	% OF RATED CAPACITY	MAX. FLOW RATE	% OF RATED CAPACITY
Date	Treated (ML)		Treated (ML)		Treated (ML/d)	
Jan	50.132	22.1%	52.878	23.3%	79.436	34.9%
Feb	49.073	21.6%	52.782	23.2%	102.588	45.1%
Mar	49.338	21.7%	51.362	22.6%	74.101	32.6%
Apr	49.666	21.9%	53.904	23.7%	72.347	31.8%
May	55.924	24.6%	78.354	34.5%	94.029	41.4%
Jun	67.972	29.9%	94.908	41.8%	101.540	44.7%
Jul	74.673	32.9%	93.786	41.3%	112.529	49.5%
Aug	66.296	29.2%	74.668	32.8%	130.316	57.3%
Sep	60.486	26.6%	68.567	30.2%	90.257	39.7%
Oct	52.159	22.9%	54.237	23.9%	77.662	34.2%
Nov	49.284	21.7%	51.976	22.9%	78.401	34.5%
Dec	48.079	21.2%	50.940	22.4%	101.623	44.7%

GRIMSBY WATER TREATMENT PLANT

ANNUAL SUMMARY REPORT

(Prepared under Ontario Regulation 170/03)

January 1 to December 31, 2018

Ministry of the Environment, Conservation and Parks

Municipal Drinking Water License # 007-105
Drinking Water Works Permit # 007-205

1. Failure to meet with the requirements of the Act, the regulation, the system's approval:

The Grimsby Water Treatment Plant was operated in such a way that at no time did it fail to meet or exceed the requirements of the Act, the regulation, the system's approval or any order that may have been issued for this reporting period.

2. A summary of flows for the reporting period January 1, 2018 – December 31, 2018:

2018	TOTAL FLOW		AVERAGE DAY		MAX. DAY	MIN. DAY	MAX. FLOW RATE	MIN. FLOW RATE	WASTE SLUDGE
Date	Raw (ML)	Treated (ML)	Raw (ML)	Treated (ML)	Treated (ML)	Treated (ML)	Treated (ML/D)	Treated (ML/D)	(ML)
Jan	414.622	416.369	13.375	13.093	15.042	12.022	12.926	13.507	1.106
Feb	354.535	356.979	12.662	12.749	13.878	11.649	17.154	8.002	1.392
Mar	403.471	404.538	13.015	13.050	14.086	12.100	11.695	14.345	0.809
Apr	404.677	396.065	13.489	13.202	14.498	11.857	17.456	8.676	2.307
May	483.141	481.737	15.585	15.540	20.968	13.064	23.167	9.206	0.789
Jun	562.669	558.598	18.756	18.620	23.809	13.312	29.904	8.735	0.707
Jul	636.146	625.639	20.521	20.182	25.717	13.037	33.139	3.704	1.052
Aug	530.532	526.613	17.114	16.988	20.126	13.782	16.651	16.242	1.128
Sep	475.568	468.128	15.852	15.604	18.369	13.308	14.142	15.047	0.974
Oct	423.797	419.155	13.671	13.521	15.265	11.541	12.637	14.356	1.093
Nov	386.797	384.374	12.893	12.812	13.821	11.677	11.686	13.321	2.608
Dec	405.950	404.121	13.095	13.036	14.507	11.071	12.377	12.257	0.481
TOTAL	5481.905	5442.316							14.446
MIN						11.071		3.704	0.481
MAX					25.717		33.139		2.608
AVG			15.002	14.866					1.204

* The flow rates are moments in time, and can be affected by various circumstances, such as pump changes or valve position and therefore not unusual to have higher or lower than normal flows.

3. A comparison of actual flows to that of the flow rates set out in the system's approval:

Flow rates as set in:

- Municipal Drinking Water License # 007-105
- Drinking Water Works Permit # 007-205

Maximum daily flow: 44.000 ML

Maximum flow rate: 44.000 ML/day

2018	AVERAGE DAY	% OF RATED CAPACITY	MAX. DAY	% OF RATED CAPACITY	MAX. FLOW RATE	% OF RATED CAPACITY
Date	Treated (ML)		Treated (ML)		Treated (ML/d)	
Jan	13.093	29.8%	15.042	34.2%	12.926	29.4%
Feb	12.749	29.0%	13.878	31.5%	17.154	39.0%
Mar	13.050	29.7%	14.086	32.0%	11.695	26.6%
Apr	13.202	30.0%	14.498	33.0%	17.456	39.7%
May	15.540	35.3%	20.968	47.7%	23.167	52.7%
Jun	18.620	42.3%	23.809	54.1%	29.904	68.0%
Jul	20.182	45.9%	25.717	58.4%	33.139	75.3%
Aug	16.988	38.6%	20.126	45.7%	16.651	37.8%
Sep	15.604	35.5%	18.369	41.7%	14.142	32.1%
Oct	13.521	30.7%	15.265	34.7%	12.637	28.7%
Nov	12.812	29.1%	13.821	31.4%	11.686	26.6%
Dec	13.036	29.6%	14.507	33.0%	12.377	28.1%

NIAGARA FALLS WATER TREATMENT PLANT

ANNUAL SUMMARY REPORT

(prepared under Ontario Regulation 170/03)

January 1 to December 31, 2018

Ministry of the Environment, Conservation and Parks

**Drinking Water Works Permit # 007-202
Municipal Drinking Water License # 007-102**

1. Failure to meet with the requirements of the Act, the regulation, the system's approval:

The Niagara Falls Water Treatment Plant was operated in such a way that at no time did it fail to meet or exceed the requirements of the Act, the Regulations, the system's approval or any order that may have been issued for this reporting period.

2. A summary of flows for the reporting period January 1, 2018 – December 31, 2018

2018	TOTAL FLOW		AVERAGE DAY		MAX. DAY	MIN. DAY	MAX. FLOW RATE	MIN. FLOW RATE	WASTE SLUDGE
Date	Raw (ML)	Treated (ML)	Raw (ML)	Treated (ML)	Treated (ML)	Treated (ML)	Treated (ML/d)	Treated (ML/d)	(ML)
Jan	1374.275	1257.808	44.331	40.574	50.967	36.870	57.200	17.000	0.876
Feb	1206.517	1090.977	43.090	38.963	42.430	34.928	63.509	17.580	0.113
Mar	1360.299	1202.922	43.881	40.097	48.097	34.670	75.790	16.080	2.169
Apr	1265.187	1156.643	42.173	38.555	46.171	29.370	60.751	14.530	2.189
May	1489.074	1385.821	48.035	44.704	57.808	36.843	76.225	21.030	0.229
Jun	1744.255	1638.605	58.142	54.620	74.508	42.024	119.450	25.470	0.421
Jul	2077.807	1971.490	67.026	63.596	74.286	49.241	108.978	17.990	1.662
Aug	1729.568	1670.229	55.793	53.878	66.362	46.104	84.297	25.490	0.432
Sep	1432.248	1375.239	47.742	45.841	54.533	36.727	77.110	25.120	0.288
Oct	1318.990	1255.997	42.548	40.516	45.471	34.508	61.161	24.870	1.753
Nov	1195.792	1125.617	39.860	37.521	42.513	33.112	65.780	18.290	4.743
Dec	1254.508	1192.650	40.468	38.473	44.726	29.246	68.601	17.930	0.688
TOTAL	17,448.520	16,323.998							15.563
MIN						29.246		14.530	0.113
MAX					74.508		119.450		4.743
AVG		1,360.33	47.76	44.78					1.297

*The flow rates are moments in time, and can be affected by various circumstances, such as pump changes or valve position and therefore not unusual to have higher or lower than normal flow.

3. A comparison of actual flows to the flow rates set out in the system's approval:

Flow rates as set in:

- Drinking Water Works Permit # 007-202
- Municipal Drinking Water License # 007-102

Maximum daily flow: 145.500 ML

Maximum flow rate: 145.500 ML/day

2018	AVERAGE DAY	% OF RATED CAPACITY	MAX. DAY	% OF RATED CAPACITY	MAX. FLOW RATE	% OF RATED CAPACITY
Date	Treated (ML)		Treated (ML)		Treated (ML/d)	
Jan	40.574	28%	50.967	35%	57.200	39%
Feb	38.963	27%	42.430	29%	63.509	44%
Mar	40.097	28%	48.097	33%	75.790	52%
Apr	38.555	27%	46.171	32%	60.751	42%
May	44.704	31%	57.808	40%	76.225	52%
Jun	54.620	38%	74.508	51%	119.450	82%
Jul	63.596	44%	74.286	51%	108.978	75%
Aug	53.878	37%	66.362	46%	84.297	58%
Sep	45.841	32%	54.533	37%	77.110	53%
Oct	40.516	28%	45.471	31%	61.161	42%
Nov	37.521	26%	42.513	29%	65.780	45%
Dec	38.473	26%	44.726	31%	68.601	47%

PORT COLBORNE WATER TREATMENT PLANT

ANNUAL SUMMARY REPORT

(Prepared under Ontario Regulation 170/03)

January 1 to December 31, 2018

Ministry of the Environment, Conservation and Parks

Drinking Water Works Permit # 007-201
Municipal Drinking Water License # 007-101

1. Failure to meet with the requirements of the Act, the regulation, the system's approval:

The Port Colborne Water Treatment Plant was operated in such a way that at no time did it fail to meet or exceed the requirements of the Act, the regulation, the system's approval or any order that may have been issued for this reporting period.

2. A summary of flows for the reporting period January 1, 2018 – December 31, 2018:

2018	TOTAL FLOW		AVERAGE DAY		MAX. DAY	MIN. DAY	MAX. FLOW RATE	MIN. FLOW RATE	WASTE SLUDGE
Date	Raw (ML)	Treated (ML)	Raw (ML)	Treated (ML)	Treated (ML)	Treated (ML)	Treated (ML/d)	Treated (ML/d)	(ML)
Jan	332.370	313.200	10.722	10.103	14.160	8.660	18.759	3.815	2.297
Feb	301.360	284.260	10.763	10.152	12.510	7.860	20.892	3.692	2.187
Mar	320.380	303.640	10.335	9.795	11.500	8.150	18.872	3.395	2.747
Apr	311.730	290.285	10.391	9.676	10.930	8.150	17.979	3.015	2.473
May	321.830	304.945	10.382	9.837	11.650	7.560	18.492	2.526	2.113
Jun	306.590	285.670	10.220	9.522	11.160	7.520	21.364	3.169	1.861
Jul	316.950	298.470	10.224	9.628	11.510	7.830	18.441	5.128	1.766
Aug	276.600	260.500	8.923	8.403	10.640	5.880	17.272	3.128	1.629
Sep	237.750	222.560	7.925	7.419	9.090	4.210	21.333	3.282	1.590
Oct	232.580	221.480	7.503	7.145	9.520	5.820	17.600	3.262	1.663
Nov	227.729	216.300	7.591	7.210	8.273	5.670	16.400	3.210	1.521
Dec	241.340	231.870	7.785	7.480	10.310	6.020	16.554	2.887	1.612
TOTAL	3427.209	3233.180							23.459
MIN						4.210		2.526	1.521
MAX					14.160		21.364		23.459
AVG			9.397	8.864					1.955

*The flow rates are moments in time, and can be affected by various circumstances, such as pump changes or valve position and therefore not unusual to have higher or lower than normal flow.

3. A comparison of actual flows to that of the flow rates set out in the system's approval:

Flow rates as set in:

- Drinking Water Works Permit # 007-201
- Municipal Drinking Water License # 007-101

Maximum daily flow 36.000 ML
Maximum flow rate 36.000 ML/day

2018	AVERAGE DAY	% OF RATED CAPACITY	MAX. DAY	% OF RATED CAPACITY	MAX. FLOW RATE	% OF RATED CAPACITY
Date	Treated (ML)		Treated (ML)		Treated (ML/d)	
Jan	10.103	28.1%	14.160	39.3%	18.759	52.1%
Feb	10.152	28.2%	12.510	34.8%	20.892	58.0%
Mar	9.795	27.2%	11.500	31.9%	18.872	52.4%
Apr	9.676	26.9%	10.930	30.4%	17.979	49.9%
May	9.837	27.3%	11.650	32.4%	18.492	51.4%
Jun	9.522	26.5%	11.160	31.0%	21.364	59.3%
Jul	9.628	26.7%	11.510	32.0%	18.441	51.2%
Aug	8.403	23.3%	10.640	29.6%	17.272	48.0%
Sep	7.419	20.6%	9.090	25.3%	21.333	59.3%
Oct	7.145	19.8%	9.520	26.4%	17.600	48.9%
Nov	7.210	20.0%	8.273	23.0%	16.400	45.6%
Dec	7.480	20.8%	10.310	28.6%	16.554	46.0%

ROSEHILL WATER TREATMENT PLANT

ANNUAL SUMMARY REPORT

(prepared under Ontario Regulation 170/03)

January 1 to December 31, 2018

Ministry of the Environment, Conservation and Parks

Drinking Water Works Permit # 007-203
Municipal Drinking Water License # 007-103

1. Failure to meet with the requirements of the Act, the regulation, the system's approval:

The Rosehill Water Treatment Plant was operated in such a way that at no time did it fail to meet or exceed the requirements of the Act, the regulation, the system's approval or any order that may have been issued for this reporting period.

2. A summary of flows for the reporting period January 1, 2018 – December 31, 2018:

2018	TOTAL FLOW		AVERAGE DAY		MAX. DAY	MIN. DAY	MAX. FLOW RATE	MIN. FLOW RATE	WASTE SLUDGE
Date	Raw (ML)	Treated (ML)	Raw (ML)	Treated (ML)	Treated (ML)	Treated (ML)	Treated (ML/d)	Treated (ML/d)	(ML)
Jan	395.899	368.676	12.771	11.893	13.479	10.874	19.932	4.100	10.098
Feb	345.991	322.718	12.357	11.526	12.058	10.416	20.359	4.250	8.060
Mar	378.718	353.500	12.217	11.403	11.887	10.817	15.812	3.830	9.676
Apr	374.992	349.987	12.500	11.666	12.529	10.803	18.701	4.080	6.263
May	436.606	408.701	14.084	13.184	16.190	11.413	26.171	4.140	6.751
Jun	476.494	447.357	15.883	14.912	18.756	12.890	26.667	4.250	13.131
Jul	551.854	519.173	17.802	16.748	19.878	13.137	29.521	4.640	10.021
Aug	477.970	443.090	15.418	14.293	17.699	12.547	25.214	5.810	6.936
Sep	423.099	390.400	14.103	13.013	15.016	11.671	22.855	4.830	9.892
Oct	405.164	376.458	13.070	12.144	16.511	11.186	25.692	5.600	11.773
Nov	381.242	358.273	12.702	11.942	13.440	11.167	28.051	5.420	9.527
Dec	392.357	360.077	15.213	11.615	12.556	10.790	19.658	3.740	15.213
TOTAL	5,040.386	4,698.410							117.341
MIN						10.416		3.740	6.263
MAX					19.878		29.521		15.213
AVG			14.010	12.862					9.778

*The flow rates are moments in time, and can be affected by various circumstances, such as pump changes or valve position and therefore not unusual to have higher or lower than normal flows.

3. A comparison of actual flows to that of the flow rates set out in the system's approval:

Flow rates as set in:

- Drinking Water Works Permit # 007-203
- Municipal Drinking Water License # 007-103

Maximum daily flow: 50.000 ML

Maximum flow rate: 50.000 ML/day

2018	AVERAGE DAY	% OF RATED CAPACITY	MAX. DAY	% OF RATED CAPACITY	MAX. FLOW RATE	% OF RATED CAPACITY
Date	Treated (ML)		Treated (ML)		Treated (ML/d)	
Jan	11.893	24%	13.479	27%	19.932	40%
Feb	11.526	23%	12.058	24%	20.359	41%
Mar	11.403	23%	11.887	24%	15.812	32%
Apr	11.666	23%	12.529	25%	18.701	37%
May	13.184	26%	16.190	32%	26.171	52%
Jun	14.912	30%	18.756	38%	26.667	53%
Jul	16.748	33%	19.878	40%	29.521	59%
Aug	14.293	29%	17.699	35%	25.214	50%
Sep	13.013	26%	15.016	30%	22.855	46%
Oct	12.144	24%	16.511	33%	25.692	51%
Nov	11.942	24%	13.440	27%	28.051	56%
Dec	11.615	23%	12.556	25%	19.658	39%

WELLAND WATER TREATMENT PLANT

ANNUAL SUMMARY REPORT

(Prepared under Ontario Regulation 170/03)

January 1 to December 31, 2018

Ministry of the Environment, Conservation and Parks

Drinking Water Works Permit # 007-204
Municipal Drinking Water License # 007-104

1. Failure to meet with the requirements of the Act, the regulation, the system's approval:

The Welland Water Treatment Plant was found to be in non-compliance with regulations and/or system Licenses, as follows:

- Watermain installation which crosses a waterbody using an open-cut construction method requires an application for a Schedule C amendment and approval from the Ministry of Environment, Conservation and Parks prior to construction. The initial assessment for a watermain construction project concluded that the impacted ditch was not a waterway. Upon further review it was determined that the ditch was deemed a waterway, therefore, an inappropriate approval method for construction was used. Niagara Region was found to be in non-compliance with item (b) of Subsection 31 (1) of the Safe Drinking Water Act, 2002. Internal operating procedures were updated and staff training was conducted to ensure appropriate approvals are obtained for future construction projects.

2. A summary of flows for the reporting period January 1, 2018 – December 31, 2018:

2018	TOTAL FLOW		AVERAGE DAY		MAX. DAY	MIN. DAY	MAX. FLOW RATE	MIN. FLOW RATE	WASTE SLUDGE
Date	Raw (ML)	Treated (ML)	Raw (ML)	Treated (ML)	Treated (ML)	Treated (ML)	Treated (ML/d)	Treated (ML/d)	(ML)
Jan	680.560	672.057	21.954	21.679	27.748	13.615	39.888	22.351	21.345
Feb	602.360	592.912	21.513	21.175	27.500	13.820	40.231	21.922	18.804
Mar	658.630	633.278	21.246	20.428	27.525	11.700	39.138	24.423	36.653
Apr	629.840	615.674	20.995	20.522	23.059	17.271	40.856	23.979	27.165
May	710.340	699.436	22.914	22.562	30.190	19.706	48.668	18.194	24.268
Jun	769.740	750.298	25.658	25.010	30.629	20.419	40.494	25.038	37.607
Jul	908.740	891.671	29.314	28.764	35.789	22.909	51.112	10.296	37.011
Aug	791.350	777.488	25.527	25.080	35.394	20.290	40.594	24.675	31.908
Sep	701.540	687.628	23.385	22.921	28.598	20.415	39.931	16.104	29.936
Oct	661.080	654.130	21.325	21.101	24.296	18.869	39.350	19.710	27.409
Nov	624.320	615.690	20.811	20.523	22.614	18.634	42.487	14.799	24.586
Dec	659.360	641.388	21.270	20.690	22.788	18.364	41.237	11.331	31.229
TOTAL	8397.860	8231.650							347.921
MIN						11.700		10.296	18.804
MAX					35.789		51.112		347.921
AVG			22.993	22.538					28.993

*The flow rates are moments in time, and can be affected by various circumstances, such as pump changes or valve position and therefore not unusual to have higher or lower than normal flow.

3. A comparison of actual flows to that of the flow rates set out in the system's approval:

Flow rates as set in:

- Drinking Water Works Permit # 007-204
- Municipal Drinking Water License # 007-104

Maximum daily flow

65.000 ML

Maximum flow rate

65.000 ML/day

2017	AVERAGE DAY	% OF RATED CAPACITY	MAX. DAY	% OF RATED CAPACITY	MAX. FLOW RATE	% OF RATED CAPACITY
Date	Treated (ML)		Treated (ML)		Treated (ML/d)	
Jan	21.679	33.4%	27.748	42.7%	39.888	61.4%
Feb	21.175	32.6%	27.500	42.3%	40.231	61.9%
Mar	20.428	31.4%	27.525	42.3%	39.138	60.2%
Apr	20.522	31.6%	23.059	35.5%	40.856	62.9%
May	22.562	34.7%	30.190	46.4%	48.668	74.9%
Jun	25.010	38.5%	30.629	47.1%	40.494	62.3%
Jul	28.764	44.3%	35.789	55.1%	51.112	78.6%
Aug	25.080	38.6%	35.394	54.5%	40.594	62.5%
Sep	22.921	35.3%	28.598	44.0%	39.931	61.4%
Oct	21.101	32.5%	24.296	37.4%	39.350	60.5%
Nov	20.523	31.6%	22.614	34.8%	42.487	65.4%
Dec	20.690	31.8%	22.788	35.1%	41.237	63.4%