



THE REGIONAL MUNICIPALITY OF NIAGARA
PUBLIC WORKS COMMITTEE
FINAL AGENDA

PWC 5-2019

Tuesday, May 7, 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>	
4. <u>DELEGATIONS</u>	
5. <u>ITEMS FOR CONSIDERATION</u>	
5.1 <u>PW 25-2019</u> Award of Tender 2019-T-105 (RN 19-15) Reconstruction of Regional Road 98 (Montrose Road) from Regional Road 49 (McLeod Road) to Charnwood Avenue, City of Niagara Falls	3 - 10
5.2 <u>PW 26-2019</u> Thorold Zone 3 Elevated Tank Rehabilitation, 2019-T-129 (RN 19-29)	11 - 14
6. <u>CONSENT ITEMS FOR INFORMATION</u>	
6.1 <u>PW 27-2019</u> GO Implementation Office - Quarterly Update	15 - 20
6.2 <u>PWC-C 10-2019</u> Source Water Protection Overview	21 - 28

7. **OTHER BUSINESS**

7.1 **Emterra Environmental Update**

8. **CLOSED SESSION**

8.1 **Confidential Verbal Update**

A Matter of Litigation or Potential Litigation - Emterra Contract

9. **NEXT MEETING**

The next meeting will be held on Tuesday, June 11, 2019, at 9:30 a.m. in the Council Chamber, Regional Headquarters.

10. **ADJOURNMENT**

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).

Subject: Award of Tender 2019-T-105 (RN 19-15) Reconstruction of Regional Road 98 (Montrose Road) from Regional Road 49 (McLeod Road) to Charnwood Avenue, City of Niagara Falls

Report to: Public Works Committee

Report date: Tuesday, May 7, 2019

Recommendations

1. That Contract 2019-T-105 (RN 19-15) Reconstruction of Regional Road 98 (Montrose Road) From Regional Road 49 (McLeod Road) to Charnwood Avenue **BE AWARDED** to Peters Excavating Inc. at their bid price of \$6,913,417 (including 13% HST).

Key Facts

- The purpose of this report is to seek Council's approval to award Contract 2019-T-101 for the Reconstruction of Regional Road 98 (Montrose Road) From Regional Road 49 (McLeod Road) to Charnwood Avenue to Peters Excavating Inc.
- The Purchasing By-law 2016-02 requires that Council approve tender awards greater than \$5,000,000.
- The project was undertaken as a result of a Municipal Class Environmental Assessment completed in 2011.
- A public tender process was initiated and a total of three (3) bids were received with the lowest bid being \$6,118,068 (excluding taxes).
- The City of Niagara Falls is a cost sharing partner in this project and a gross budget adjustment for \$970,000 was recently processed reflecting an increase in the City of Niagara Falls cost sharing contribution from \$1,280,000 to \$2,250,000.
- The City of Niagara Falls cost sharing is related to the construction of storm sewers, sanitary sewers, watermain, sidewalk, and a multi-use path.

Financial Considerations

The original budget was established in 2009 at \$3,000,000. Throughout the project design, the overall scope was further defined to accommodate future developments in the area, and the necessary design changes were implemented resulting in an increase in the overall budget for project 20000503 to \$7,200,000. Appendix 3 – Total Estimated Project Cost provides a full budget breakdown.

The City of Niagara Falls has confirmed its financial contribution for the cost-sharing amount identified in Appendix 3 – Total Estimated Project Cost.

Analysis

- In 1998, the City of Niagara Falls completed a Transportation Master Plan (TMP) to assess and identify the transportation infrastructure requirements to address travel demands of the City of Niagara Falls.
- In assessing the short/long term transportation needs, the TMP identified the need for capacity improvements along McLeod Road.
- In response to this need, Niagara Region along with the City of Niagara Falls and the Niagara Parks Commission initiated the McLeod Road Transportation Study in 2006.
- The McLeod Road Transportation Study, completed in 2008, recommended improvements, in order to address the future 2016 and 2026 travel demands.
- Following the completion of the McLeod Road Transportation Study, Niagara Region initiated a Schedule C Municipal Class Environmental Assessment for the McLeod Road and Montrose Road corridors.
- The Municipal Class Environmental Assessment Study for McLeod Road and Montrose Road was completed, and the Environmental Study Report filed, on November 4, 2011, recommending improvements to increase traffic capacity and alleviate congestion.
- The proposed improvements for Montrose Road include a 4-lane urban cross section between McLeod Road and the north entrance to the MacBain Community Centre, and a 2-lane urban cross section between the MacBain Community Centre north entrance and Charnwood Avenue.
- Niagara Region retained Parsons Corporation, through a competitive procurement process, to undertake the detailed design for the project through a competitive process under 2016-RFP-04.
- A public tender process was initiated on March 11, 2019, to obtain tenders for the Reconstruction of Regional Road 98 (Montrose Road) From Regional Road 49 (McLeod Road) to Charnwood Avenue. Niagara Region received, and publicly opened, a total of three (3) bids on April 9, 2019.
- Niagara Region's Procurement & Strategic Acquisitions reviewed the bids received for compliance, and determined that all bids were compliant.

- One bid contained mathematical errors which were corrected and any discrepancies are noted in Appendix 2 under the corrected tender price. The correction in revised tender prices did not change the final outcome of the tender results.
- Parsons reviewed the bids received, has provided a recommendation to award Tender 2019-T-105 (RN 19-05) to Peters Excavating Inc. at their bid price \$6,118,068 (excluding HST) as noted in Appendix 2.
- Contract award requires resources from Enterprise Resource Management Services (ERMS) in order to execute the required contract documents. Transportation Engineering staff will be providing resources throughout the project in order to manage the contract with assistance from ERMS on contract/project payments.

Alternatives Reviewed

A Municipal Class Environmental Assessment Study (EA) for McLeod Road and Montrose Road was completed, and the Environmental Study Report filed, on November 4, 2011, recommending improvements to increase traffic capacity and alleviate congestion.

Five (5) planning alternatives were reviewed as part of the EA:

1. Do nothing;
2. Improve adjacent roads;
3. Provide additional traffic lanes;
4. Non-structural improvements (e.g. signing, traffic optimization or traffic control); and
5. Accommodate other travel modes.

The preferred planning alternative for Montrose Road was “Increase traffic capacity along Montrose Road through the addition of through / turn lanes and help alleviate congestion through the accommodation of transit users, cyclists, and pedestrians and the implementation of non-structural improvements including better signage and traffic control.”

Four (4) design alternatives were reviewed as potential methods of implementing the preferred planning alternative:

1. Do nothing;
2. Four lanes with shared use cycling lanes;
3. Two / Four lanes with dedicated bike and turn lanes; and
4. Four lanes with dedicated bike and turn lanes.

The preferred design alternative, which was the basis of the detailed design, included: four lanes between Regional Road 49 and the north entrance to the MacBain Centre; two lanes between the north entrance to the MacBain Centre and Charnwood Avenue; dedicated turn lanes at intersections; and dedicated bike lanes throughout.

As part of the EA process, two Public information Centres were held. The first session occurred on February 4, 2009, and the second was held on April 20, 2010. An additional Public Information Centre occurred on October 24, 2018 to present the construction drawings, details and schedule to local residents / businesses that may be affected by the project.

Relationship to Council Strategic Priorities

This recommendation relates to the Moving People and Goods strategic priority since the planned upgrades will ensure reliable and effective transportation modes including an inter-connection of various types of transportation.

Other Pertinent Reports

- PWA 36-2010
- PW 7-2019

Prepared by:

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Senior Project Manager, Transportation
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Public Works Department

Recommended by:

Catherine Habermebl
Acting Commissioner
Public Works Department

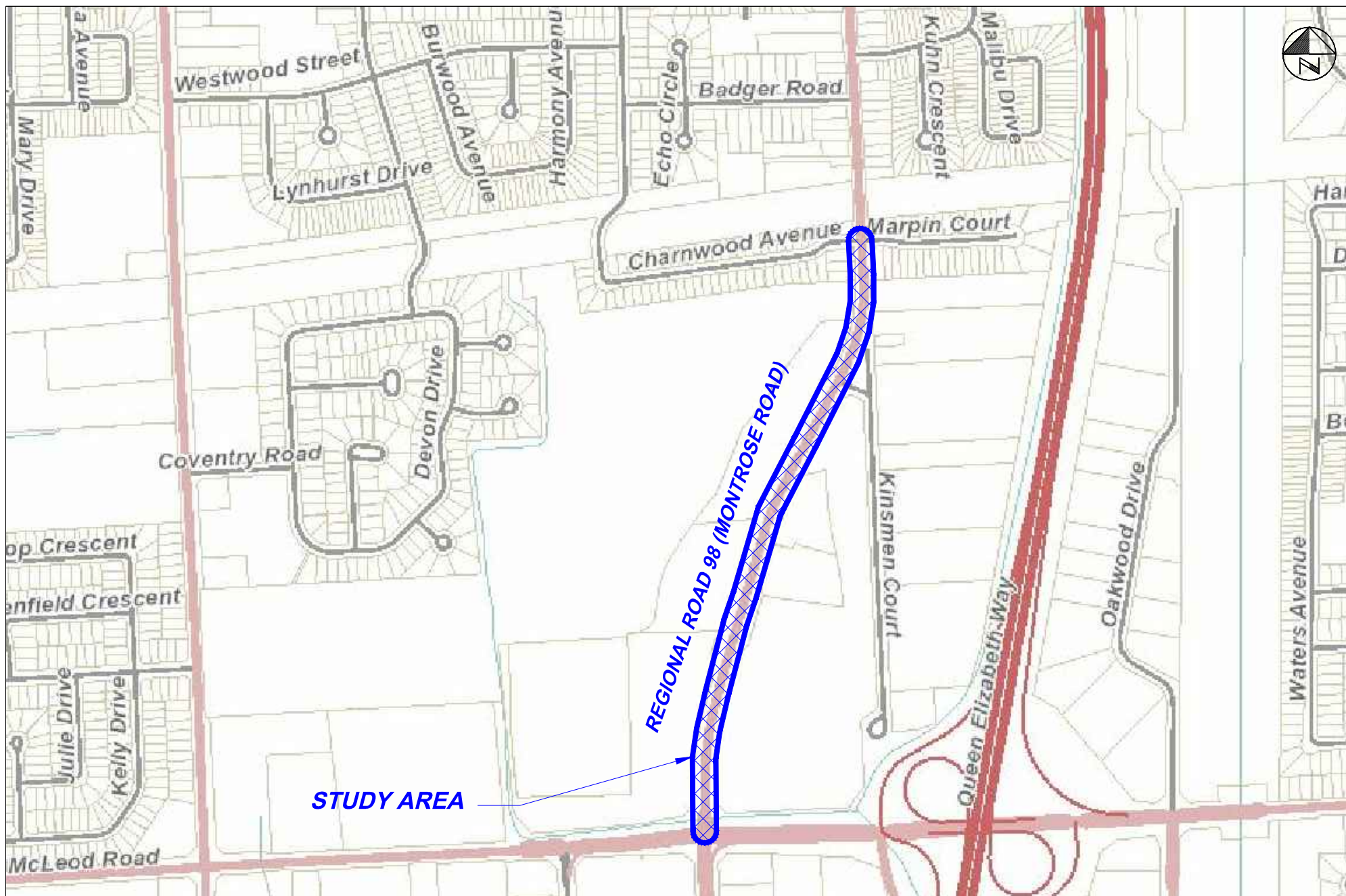
Submitted by:

Ron Tripp, P.Eng.
Acting Chief Administrative Officer

This report was prepared in consultation with Frank Tassone, Associate Director Transportation Engineering and Brian McMahon, Program Financial Specialist, and reviewed by Carolyn Ryall, Director Transportation Services.

Appendices

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**PW 25-2019 APPENDIX 2
Summary of Bids Received
Contract Award**

**Reconstruction of Regional Road 98 (Montrose Road) between Regional Road 49
(McLeod Road) and Charnwood Avenue, Niagara Falls**

Bidder	Tender Price (Excluding HST)	Corrected Tender Price (Excluding HST)
Peters Excavating	\$ 6,118,068	\$ -
Beam Rankin Joint Venture	\$ 7,278,785	\$ -
Alfidome	\$ 7,299,233	\$ 7,194,650

PW 25-2019 APPENDIX 3
Total Estimated Project Cost
Contract Award

Reconstruction of Regional Road 98 (Montrose Road) between Regional Road 49 (McLeod Road) and Charnwood Avenue, Niagara Falls

	Council Approved Budget	Budget Increase/ Reallocation	Revised Council Approved Budget	Expended & Committed as of 04/10/19	Forecast	Budget Remaining
	(A)	(B)	(C) = (A) + (B)	(D)	(E)	(F) = (C)-(D)- (E)
Total Estimated Project Cost (20000503)*						
(a) Construction (including Construction Contingency and 1.76% non-refundable HST)**	6,225,746		6,225,746	-	6,225,746	-
(b) Project Contingency	350,000		350,000	-	350,000	-
(c) Property Acquisition	55,700		55,700	5,699	50,001	-
(d) Consulting Engineering Services						
i. Detailed Design	-		-	-	-	-
ii. Contract Administration & Inspection	25,000		25,000	23,557	1,443	-
iii. Geotechnical Service-Quality Control	60,789		60,789	9,789	51,000	-
(e) Project Management (In-House) and Operations	310,018		310,018	2,612	307,406	-
(f) Traffic Signals and Signs	150,000		150,000		150,000	-
(g) Utility Relocation	8,630		8,630	13,718	(5,088)	-
(h) Subsurface investigation	-		-	-	-	-
(i) Miscellaneous	14,117		14,117	-	14,117	-
Total Estimated Project Cost	7,200,000	-	7,200,000	55,376	7,144,624	-

Project Funding Sources

Capital Variance Project - Levy	(1,210,000)		(1,210,000)	(1,210,000)	-	-
Federal Gas Tax Funding	(1,700,000)		(1,700,000)	(4,524)	(1,695,476)	-
Development Charges	(2,040,000)		(2,040,000)	(10,141)	(2,029,859)	-
Municipal Cost Sharing - Niagara Falls	(2,250,000)		(2,250,000)	-	(2,250,000)	-
	(7,200,000)	-	(7,200,000)	(1,224,665)	(5,975,335)	-

*All costs include 1.76% non-refundable HST.

** Total Contract Award is equal to i) \$6,118,068 before tax; ii) \$6,225,746 including 1.76% non-refundable HST; \$6,913,417 including 13% HST.

Subject: Thorold Zone 3 Elevated Tank Rehabilitation, 2019-T-129 (RN 19-29)

Report to: Public Works Committee

Report date: Tuesday, May 7, 2019

Recommendations

1. That the Gross Budget for Thorold Zone 3 Elevated Tank Rehabilitation **BE INCREASED** by \$627,110 and that the increase **BE FUNDED** from the Capital Variance – Water Project.

Key Facts

- The purpose of this report is to seek Council's approval for an increase in gross budget for Thorold Zone 3 Elevated Tank (ET) Rehabilitation project.
- Proposed works at Zone 3 ET is to undertake a full rehabilitation including interior and exterior coatings, piping, valve and instrumentation replacement, safety upgrades, electrical upgrades and site works.
- This tank has been in service for 40 years without any interior rehabilitation work. Based on annual inspection reports from 2016 and 2017, the tank was found to be at risk of failure requiring rehabilitation. Based on additional inspections, it was deemed that interim repairs were not feasible.
- \$2,365,000 has been approved in the 2018 Capital Budget for Water/Wastewater under ET Rehabilitation-Thorold South Zone 3.
- A public tender process was initiated and a total of two (2) bids were received with the lowest bid being \$2,430,434 (excluding taxes) resulting in the need to increase the construction budget

Financial Considerations

The Elevated Tank construction is a very niche market, with only four (4) qualified contractors in Ontario that could have participated in the bidding process. Only two (2) bids were received from the qualified contractors. Due to the operational risk of taking the Zone 3 ET out of service, the design consultant and bidding contractors were not able to enter the tank prior to tender. This left uncertainties regarding interior tank condition and specific rehabilitation works. Provisional items were included in the contract for these unknowns, however the risk with the uncertainties resulted in higher prices.

The total project expenditures and revenues are shown in the Total Project Budget Summary in Appendix 1. As outlined in Appendix 1, there is an overall approved budget of \$2,365,000 for this project (project number 20000626). Actual expenses and

commitments total \$229,346 as at April 10, 2019. The RFT has additional contingency and provisional items built-in to cover potential uncertainties such as additional metal works and unknown repairs. Due to the increase in contingency in the RFT, the Project Contingency was reduced by \$50,000. A \$25,000 increase to the consulting engineering services item was necessary, as the consulting fees were higher than anticipated. A budget increase is being requested in the amount of \$627,110 to be funded from the Water Capital Variance Reserve. As of April 10, 2019, the balance of the Water Capital Variance Reserve is \$1,553,537.

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

Analysis

The Thorold Zone 3 ET provides a stable supply of potable water to the Thorold South area. The ET is a “Composite Design” which is comprised of a concrete base that provides the elevation needed to meet operational pressures and a steel tank that holds the needed water volume to meet the demands of the service area. The ET holds 2.7 million litres (ML). A standard practice for the Region is to have all ETs inspected every year to ensure that the condition is known and to address condition or safety related problems.

In the fall of 2016, Zone 3 ET was inspected by Landmark, using a remote operated underwater vehicle (ROV), and found the tank to be at risk of failure. “Tank Interior - The interior lining should be removed and replaced within the next 1 to 2 years before corrosion cells cause irreparable damage to the plate junctions and thinned out areas”, Landmark. An inspection conducted in 2017 confirmed the 2016 report and provide the same recommendations. Additional inspections were carried out to determine whether interim repairs could be undertaken; however, it was deemed that a full rehabilitation of the tank was more cost-effective.

It is imperative that the ET rehabilitation begin as soon as possible ensure severely corroded areas are repaired to reduce the risk of failure. Along with the interior lining, the tank also requires exterior painting, safety upgrades, process piping and instrumentation replacements, electrical upgrades and site civil works.

The ET rehabilitation design commenced in 2018 with the intent to begin construction in the spring of 2019. ET relining is seasonal work, as the temperature of the tank must remain above 15°C for lining coating. If construction is delayed and the schedule is extended into the late fall or winter, the entire ET and hoarding would require heating at a substantial cost to the project.

A budget increase in the amount of \$627,110 is required to award 2019-T-129 for \$2,473,210 (including 1.76% non-refundable HST).

Alternatives Reviewed

Delays in construction of the Thorold Zone 3 ET could increase the risk of failure, increase project costs, and potentially compromise the stable supply of potable water to Thorold South area.

Relationship to Council Strategic Priorities

This recommendation is related to Organizational Excellence since the planned rehabilitation will support a stable supply of potable water to the community of Thorold.

Other Pertinent Reports

None

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Recommended by:

Catherine Habermehl
Acting Commissioner
Public Works Department

Submitted by:

Ron Tripp, P.Eng.
Acting Chief Administrative Officer

This report was prepared by Lindsay Jones, Senior Project Manager, Water & Wastewater in consultation with Pamela Hamilton, Program Financial Specialist W-WW, and reviewed by Tony Cimino, Associate Director, Water & Wastewater Engineering.

Appendices

Appendix 1	Total Estimated Project Cost	4
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**PW 26-2019 APPENDIX 1
TOTAL ESTIMATED PROJECT COST
Budget Adjustment**

Contract 2019-T-129 (RN 19-29) Thorold Zone 3 Elevated Tank Rehabilitation

Total Estimated Project Cost 20000626 *

- (a) Construction (includes contract contingency)
- (b) Project Contingency
- (c) Consulting Engineering Services (Design, Contract Administration, & Inspection)
- (d) Project Management & Internal Costs

Total Estimated Project Cost

Total Council Approved Budget	Budget Increase / Reallocation	Revised Council Approved Budget	Expended & Committed as of April 10, 2019	Forecast	Budget Remaining
(A)	(B)	(C) = (A) + (B)	(D)	(E)	(F) = (C)-(D)- (E)
1,821,100	652,110	2,473,210		2,473,210	-
289,000	(50,000)	239,000		239,000	-
195,400	25,000	220,400	222,636	(2,236)	-
59,500		59,500	6,710	52,790	-
2,365,000	627,110	2,992,110	229,346	2,762,764	-

Project Funding Sources

Regional Reserves & Debt

(2,365,000)	(627,110)	(2,992,110)	(229,346)	(2,762,764)	-
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* All costs above include the non-refundable 1.76% portion of HST.

** Total lowest tender is equal to i) \$2,430,434 before tax; ii) \$2,473,210 including 1.76% non-refundable HST; iii) \$2,746,390 including 13% HST

Subject: GO Implementation Office – Quarterly Update

Report to: Public Works Committee

Report date: Tuesday, May 7, 2019

Recommendations

That Report PW 27-2019 **BE RECEIVED** for information.

Key Facts

- The purpose of this report is to provide an update to the extensive work undertaken as part of the ongoing collaborative relationship between Niagara's municipal partners and the Region in relation to the expansion of daily GO Rail Service to Niagara, and the integration of Niagara's transit systems.
- The GO Implementation Office is a dedicated, single-window, proactive conduit to our municipal partners, Provincial Ministries, public agencies (i.e. Metrolinx) and Niagara transit operators with the express focus to implement daily GO Rail Service and work towards an integrated Niagara transit system.
- Daily GO rail service commenced January 7, 2019, four years ahead of the previously announced schedule.
- A draft MOU to establish a municipal road at the St. Catharines GO Station will be presented to Planning and Economic Development Committee at its May 8 meeting.
- The Linking Niagara Transit Committee workplan is well underway with operational and governance components advancing for execution in 2019.

Financial Considerations

There are no financial costs directly associated with the projects outlined in this report that are not already covered in the approved 2019 Budget.

Analysis

GO Rail Expansion

The GO Implementation Office has been aggressively and proactively advancing the objective of securing daily, two-way, hourly GO rail service and associated station infrastructure. In December 2018, along with Niagara West MPP Sam Oosterhoff, Transportation Minister Jeff Yurek announced that daily commuter GO service to Niagara would be introduced effective January 7, 2019 – a full four (4) years ahead of the previous timetable. Now three (3) months into the inaugural service, ridership

continues to see a steady increase, with Metrolinx indicating they are very pleased with the uptake.

The summer seasonal weekend GO Train service will launch again this year for its eleventh season on the long weekend in May, returning June 21 through Labour Day. In 2018, the Niagara seasonal weekend GO Train service saw a 42 percent increase in ridership over 2017; a number expected to increase further in 2019 with the advent of additional tourism partnerships being secured. Furthermore, Metrolinx is set to implement a new fare harmonization policy effective April 20 with aim to align GO bus and rail fares with deeper discounts for those taking GO using PRESTO at \$17.79 one way from Niagara Falls to Union Station.

With regard to government relations, the Niagara GO Working Group, comprised of the Regional Chair and Mayors of Grimsby, Lincoln, St. Catharines and Niagara Falls (along with their respective CAOs), continue the ongoing dialogue with Metrolinx to advance the goal of securing hourly, two-way rail service to Niagara. An upcoming meeting with Metrolinx CEO Phil Verster and the Niagara GO Working Group regarding service acceleration is currently being scheduled. Additionally, planned connections with the City of Hamilton regarding alignment of strategy and impacts on the Grimsby Subdivision (the CN-owned rail corridor along which the Niagara extension operates) are being considered to ensure mutually beneficial goals are advanced in a coordinated partnership.

Negotiations with CN for increased service levels and infrastructure needs through the corridor continue to be led through the Metrolinx CEO's office with positive results for expected further announcements in 2019.

Lastly, the GO Implementation Office continues to work closely with Metrolinx to align the new daily commuter rail service at the St. Catharines VIA station to GO's Route 12 Bus which carries Niagara-bound passengers between Niagara Falls and Burlington GO station.

In-corridor Enabling Works (track, signals, structures)

A key component of the successful acceleration and enhancement of service to Niagara stations is predicated on the enabling in-corridor track and signaling works through Bayview Junction in Hamilton. Metrolinx, together with CN who owns the corridor, have been undertaking significant track improvements through this segment en route to the new Confederation Station in Stoney Creek. With these enabling works underway, track connections at West Harbour station will allow for more seamless transfers and train movements. At present, Toronto-bound Niagara trains must reverse on the CN mainline to enter the West Harbour Station. This is not operationally advantageous and new works commencing fall 2019 will allow for seamless pass through at West Harbour Station.

Niagara Region's GO Implementation Office continues to work very closely with Metrolinx to understand the extent of in-corridor rail infrastructure required to enable hourly service through to Niagara Falls.

Off-corridor Enabling Works (stations, associated road and access facilities)

Through Niagara Region's GO Implementation Office, Niagara is working diligently to determine whether or not there is a role for the Region and its partners to play within the provincial government's new transit oriented development (TOD) framework. Metrolinx is now advancing the TOD directive, and Niagara continues to actively pursue its role in the interest of fully leveraging daily GO train service to Niagara. Metrolinx is looking at both public and private sector partnerships for delivery of new station buildings. At this time it is early on in this process and staff do not have further information, but expect to be providing an update to Council before the end of Q3 2019.

The Metrolinx-led detailed design process is underway in St. Catharines and Niagara Falls, and staff are working closely with Metrolinx and our municipal partners to determine the role and scope for the Region and/or Cities at each of these sites throughout this process.

In St. Catharines, a draft Memorandum of Understanding (MOU) between Niagara Region, City of St. Catharines and Ridley College (if adopted by Regional and Municipal Councils), will enable a new municipal road to be constructed that will not only unlock the development potential around the new GO station, but also serve as the ideal primary station access.

At Niagara Falls Station, new federal and provincial funding opportunities through the Investing in Canada Infrastructure Program (ICIP) could provide a window to realize the broader Niagara Falls Station precinct vision. Staff are working closely with Metrolinx and our municipal partners to determine the role Niagara can play at these stations sites with a strategy for Council's consideration forthcoming.

Staff are also working with the Town of Lincoln to explore TOD opportunities on the site identified in GO Transit's 2011 Environmental Study Report (ESR). The GO Implementation Office continues to enable any and all opportunities for Niagara to leverage the current and future potential service at all of the locations identified in the 2011 ESR.

Niagara Region continues to work with rail partners CN and VIA Rail to explore options and opportunities to effectively and fully maximize the existing GO/VIA station lands and facilities at the St. Catharines and Niagara Falls sites, and the role the Region can play in achieving this. Further investigative works are underway with staff anticipating a report to Council in the coming committee cycles.

Metrolinx is also seeking Regional and Municipal support for installation of corridor radio communication towers along the Grimsby Subdivision. This infrastructure is required in order for Metrolinx to operate rail service through the corridor and the GO Office is working closely with municipal peers to ensure Metrolinx can facilitate this process as expeditiously as possible. Further updates related to this component will be brought forward to Committee at a future date once further details are solidified.

Inter-Municipal Transit

At the direction of the Linking Niagara Transit Committee (LNTC), the Inter-Municipal Transit Working Group (IMTWG) comprised of transit managers and transit staff from all 13 municipalities have been advancing the key elements of the 2019 workplan. This workplan is broken into two main components: operational and customer service enhancements; and governance options and business case development.

Operational and Customer Service Enhancements

- Options for an integrated call centre are being actively explored by the IMTWG in an effort to streamline operational customer service needs across transit providers for an enhanced user experience.
- 2019 U-Pass negotiations are underway with post-secondary student unions
 - A new provincial government policy regime has been announced that alters the rules surrounding mandatory and non-mandatory student fees. The changes will affect the way student unions and academic institutions deliver services by giving students the ability to opt out of certain fees.
 - The IMTWG is working closely with our post-secondary partners to examine the operational and financial impacts on transit providers as they relate to existing post-secondary agreements.
 - Committee will be apprised of the potential revenue risks and opportunities resulting from the development of prospective options throughout the negotiation process.
- 2019 Regional budget deployment for Niagara Region Transit (NRT)
 - A new service model for west Niagara is in early stages of development, intended for fall 2019 or January 2020 deployment, as it could be done in two phases. Staff are exploring the potential for other system integration opportunities to maximize coverage and budget resources.
 - The existing Port Colborne and Fort Erie Link routes are being coordinated with local staff for upload and service enhancements.
 - New fleet has been ordered as outlined in the 2019 capital budget. Transit staff, together with our local transit partners, will coordinate September 2019 service improvements according to expected bus delivery timelines. Regional transit staff are working with Niagara Falls Transit to lease buses to ensure

operational continuity to meet increasing demand and ridership during the procurement and delivery phase (which could be up to 12 months).

- MTO Provincial Gas Tax (PGT) Program / ICIP
 - As directed by the LNTC, initial discussions are underway with Port Colborne, Lincoln and Pelham to explore potential for joint reporting with mutual benefits realized through this strategy, as reported in LNTC-C 1-2019.
 - The 2019-2020 provincial budget will need to be reviewed and analyzed for any potential impacts to transit funding through the PGT. Transit staff will continue to monitor, work with provincial transit agencies, and discuss ongoing PGT requests with the MTO. Any additional impacts on Niagara's overall PGT position and/or impacts to Regional allocations will be reported to Committee when known in detail.
 - The joint federal/provincial ICIP Transit funding stream for transit is now open, closing May 28. The IMT Coordinating Committee are reviewing opportunities for joint applications which will enable further operational alignment referenced above. Projects requiring Council endorsement as part of the application process will be brought forward to committee under separate reporting.

Governance Options / Business Case

- An area CAO-led committee has been established to lead development of transit governance options. The terms of reference are under development and will be shared with the LNTC at its April 24 meeting.
- As outlined in the LNTC workplan, the Specialized Transit Study is now under way. This will undertake an operational and jurisdictional review, a customer service review and survey, and provide recommendations for future alignment.
 - PICs for the Specialized Transit Study are being held:
 - Tuesday April 23, 5-7 pm, Civic Square in the Community Room, 60 East Main St., Welland
 - Wednesday April 24, 5-7 pm, St. Catharines Public Library, 54 Church St., St. Catharines
 - This information has been shared by the transit team with members of the LNTC, Transportation Steering Committee and the Accessibility Advisory Committee. A further update will be provided at the April 24 LNTC meeting.
- The IMTWG are advancing a common fare strategy as outlined in the workplan:
 - Harmonization of fares across Niagara transit systems
 - Introduction of new technology (hardware and software)
 - Engagement with PRESTO for information and demonstration
 - A further update from the IMTWG will be provided at the April 24 LNTC meeting

Other Pertinent Reports

CL-C 41-2017 (GO Implementation Office – Supplementary Information)
CSD 46-2017 (GO Transit Capital Project – Debt Substitution and Initiation of Funds)
PW 20-2017 (Establishment of GO Implementation Office)
PW 47-2017 (GO Implementation Office – Quarterly Update)
PW 13-2018 (GO Implementation Office – Quarterly Update)
LNTC-C 20-2018 (IMT Universal Support Person Pass)
LNTC-C 21-2018 (IMT Service Implementation Strategy)
LNTC-C 22-2018 (IMT Financial Impact Analysis)
LNTC-C 23-2018 (IMT Capital Plan 2019)
PDS 15-2018 (OPA 6 – Grimsby GO Transit Station Secondary Plan)
PDS 24-2018 (OPA 125 – Niagara Falls Transit Station Secondary Plan)
PDS 28-2018 (OPA 19 – St. Catharines GO Transit Station Secondary Plan)
PDS 30-2018 (OPA 4 – Beamsville GO Transit Station Secondary Plan)
PDS-C 23-2018 (Functional Station Designs – Niagara’s GO Stations)
PW 39-2018 (GO Implementation Office – Quarterly Update)
PDS-C 3-2019 (Update on the Status of GO Service to Grimsby)
PDS-C 4-2019 (Niagara Falls GO Station Functional Design)
PDS-20- 2019 (Ridley MOU)

Prepared by:

Matt Robinson
Director
GO Implementation Office

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 Kumar Ranjan, P. Eng, Transportation Lead – GO Implementation Office; Cheryl Selig, MCIP, RPP, Planning Lead, GO Implementation Office; Robert Salewysch, Transit Services Planning Coordinator; Alex Morrison, Planner, Planning and Development Services; Heather Talbot, Special Projects Consultant, Financial Management and Planning, and reviewed by Dan Ane, Manager, Program Financial Support

MEMORANDUM

PWC-C 10-2019

Subject: Source Water Protection Overview

Date: May 7, 2019

To: Public Works Committee

From: Jen Croswell, C.Tech.

After the Walkerton tragedy in May 2000, Justice Dennis O'Connor was commissioned to lead an inquiry into the contamination of the Walkerton municipal water supply and more broadly, the safety of Ontario's drinking water. The results of the Walkerton inquiry included 121 recommendations to ensure the protection of municipal drinking water in Ontario—all of which have been implemented. Source water protection planning, under the *Clean Water Act, 2006* (CWA), fulfills several of these recommendations. The purpose of this memorandum is to inform Regional Council about the source water protection program in Niagara.

Multi-Barrier Approach

Source water protection is part of the multi-barrier approach towards the protection of drinking water. Ontario's drinking water is protected and governed, with a source-to-tap focus, under two main acts: The *CWA*, and the *Safe Drinking Water Act, 2002* (SDWA).

The CWA focuses on prevention and protects sources of drinking water by:

- Requiring source water protection plans for municipal drinking water systems within Conservation Authority boundaries;
- Outlining a mandatory framework for how vulnerability and risks to drinking water are assessed and determined; and,
- Providing municipalities with the authority to regulate threat activities, as determined under the established regulations.

The SDWA ensures the provision of safe drinking water by requiring:

- Adequate treatment processes dependent on source water characteristics;
- Mandatory licencing, operator certification and training requirements;
- Regular and reliable testing and monitoring of both the treatment process and distribution system to ensure health-based drinking water standards are met;
- Prescribed corrective actions in the event of adverse test results; and
- Routine inspections by the Ministry of Environment, Conservation, and Parks (MECP).

Niagara Source Protection Planning

The Niagara Peninsula Source Protection Area (Area) overlies the same jurisdiction as the Niagara Peninsula Conservation Authority (NPCA) and encompasses Niagara region and portions of Haldimand County and the City of Hamilton. Niagara Region is the only municipality which owns and operates municipal drinking water systems (six total) within these boundaries and the identified vulnerable areas and risk mitigation policies currently only apply to Niagara Region's drinking water systems.

A science based assessment for the Area was conducted and summarized within an assessment report. The assessment included:

- Delineations of vulnerable areas including municipal water treatment plant Intake Protection Zones (IPZs), highly vulnerable aquifers, and significant groundwater recharge areas;
- Assessments of activities that would be significant or moderate drinking water threats in these vulnerable areas, particularly with respect to municipal drinking water systems;
- Identification of water quality issues associated with the raw (untreated) water supplied to the municipal water treatment plants, which could be addressed through source protection planning;
- A water budget analysis and water quantity stress assessment for the whole source protection area; and
- General background information that may be useful in developing the Source Protection Plan (SPP).

The findings identified in the assessment report are used to focus risk mitigation policies within the SPP. These policies are based on the vulnerability and the associated hazards which are presented by threats (as defined in O. Reg. 287/07). The vulnerability scores for Niagara Region's IPZs are identified in Table 1. Associated mapping can be found in Appendix I.

Table 1: Niagara's Vulnerability Scores

Intake	IPZ-1 (distance to intake)	IPZ-2 (two hour time of travel)
Niagara Falls	8.0	6.4
Port Colborne	9.0	8.1
Welland	7.0	N/A (contained within IPZ-1)
Decew Falls Main Intake and 406	8.0	4.9
Decew Falls Lake Gibson	8.0	5.6
Rosehill	7.0	5.6
Grimsby	5.0	4.0

The IPZ-1 for the Decew Falls and Niagara Falls intakes and the IPZ-1 and IPZ-2 for Port Colborne's intake are considered highly vulnerable and significant drinking water threats have been identified for these intakes in accordance with the CWA. An IPZ-3, which is based on local modelling, was determined specifically to identify diesel fuel spills as a significant threat in the Welland Canal which impacts the Decew Falls, Port Colborne, and Welland drinking water systems. These and the remaining intakes also have moderate and low risk threats associated with them. Intake vulnerabilities and threats are managed through the multi-barrier approach, identified above, which includes adequate water treatment, testing, and verification in addition to a preventive approach of risk mitigation through the SPP. A table of identified significant drinking water threats can be found in Appendix II.

Policy options to manage the identified threats range from softer approaches (such as encouraging best management practices by way of a public education program) to more regulatory style approaches (such as requiring risk management plans), and in specific cases, particular activities may be prohibited within the IPZ. Some significant drinking water threat policies, such as the requirement of a risk management plan or prohibition, are enforceable under Part IV of the CWA and carry penalties if not complied with.

The rationale for policy choices are summarized in the explanatory document. The SPP was approved by the MECP in December 2013 and came into effect on October 1, 2014. As of March, 2018, the implementation of the SPP was deemed as "progressing well/on target" since the "majority of threats have been assessed and the remaining policies are on track for implementation".

Roles and Responsibilities

The CWA defines several contributor groups which are unique to source water protection. These include:

- Source Protection Authority – Follows the same structure as the current NPCA board;
- Source Protection Committee – Includes municipal, sector, and public interest representatives; and
- Risk Management Official and Risk Management Inspector – Appointed by Regional Council, or delegated authority, and is typically employed by the municipality.

In April 2016, Jen Croswell, Water Compliance Specialist, was appointed as Risk Management Official and Risk Management Inspector by the Commissioner of Public Works. Deanna Barrow, Manager of Quality and Compliance, was appointed as back-up. This appointment was communicated to Public Works Committee through PWC-C 16-2016.

In addition to the contributors identified above, many other stakeholders contribute to the planning and implementation of source protection in Niagara. A high-level overview of responsibilities under the CWA has been outlined in *Table 2*:

Table 2: Clean Water Act, 2006, Roles and Responsibilities Overview

Entity	Role	Responsibility
Ministry of Environment, Conservation, and Parks	Governing Body	Provide guidance, oversight, approval and funding to Source Protection Authority
Niagara Peninsula Conservation Authority	Source Protection Authority	Completes Section 36 amendments for the SPP
Niagara Peninsula Conservation Authority	Source Protection Authority	Facilitates annual implementation reporting, Source Protection Committee meetings, and plan updates
Independent/Sector Representatives	Source Protection Committee	Reviews and approves annual reporting and plan updates
Council (Regional and Area Municipal)	Governing Body	Approves revisions to the SPP via Council resolution
Niagara Region	Technical Expert	Completes Technical work for CWA Section 34/36 amendments to the plan
Niagara Region	Risk Management Official and Risk Management Inspector	Enforces Part IV of SPP policies
Niagara Region	Risk Management Official	Completes annual reporting on Part IV enforcement activities
Niagara Region	Policy Implementer	Various departments (Water and Wastewater, Transportation and Planning and Development) implement source protection policies
Niagara Region	Stakeholder	Participates in consultation opportunities
Area Municipality/Other Agencies/Public	Policy Implementer	Implements source protection policies
Area Municipality/Other Agencies/Public	Stakeholder	Participates in consultation opportunities

SPP Updates

Within the next five (5) years, Niagara Region is anticipating changes to the IPZs of the Decew Falls, Niagara Falls, Welland, and Rosehill drinking water systems. In most cases, it is anticipated that these changes will reduce the vulnerability and resulting threats to the impacted IPZs. See Table 1Table 3 for a high-level description of this work. Updates to the SPP are expected and can be initiated by several mechanisms within the CWA. These mechanisms are identified in Figure 1.

Table 3: Anticipated Infrastructure Changes Impacting Existing Intake Structures

Water Treatment Plant	Description	Motivation
Decew Falls	Encasement of existing raw water channel	Reduction in land-use impacts and increase in supply security
Niagara Falls	Relocation from Welland River to Niagara River	Ability to maintain water taking during Ontario Power Generation maintenance work on hydro canal
Welland	Minor relocation	Major water treatment plant upgrade requiring minor relocation of intake for water taking
Rosehill	Increase distance from shore and depth of intake	Life-cycle replacement and reduction in land-use impacts

Figure 1: SPP Amendment Mechanisms under CWA

Section 34 Amendment	- Proposed by Source Protection Authority - Captures changes that fall outside of other updates
Section 35 Order	Order at the discretion of the Minister of the Environment
Section 36 Mandatory Review	- Mandatory review of existing work - Continuous improvement
Section 51 Administrative Revision	- Discretion of the Source Protection Authority - Minor administrative revisions

The SPP is currently undergoing a Section 36 mandatory review which, where timing permits, will include the anticipated infrastructure work to Niagara Region's drinking water intakes and other area of interest as identified in the Section 36 work plan proposal.

It should be noted that the IPZ delineation is current to the date of plan approval by the MECP (December 2013). Mapping updates will be completed as the source water technical work is undertaken and integrated into the assessment report. Technical work will be carried out in stages as this work is completed on a per project basis. O. Reg. 205/18 under the SDWA ensures that the SPP has been updated prior to new intake infrastructure being put into service.

In the event the timing of these changes does not coincide with the mandated Section 36 update, a Section 34 amendment can be initiated. In both cases, Niagara Region will be an active participant in the planning process and Regional Council, along with impacted area municipal Councils, will be required to approve the SPP prior to final MECP approval.

Annual Reporting

As identified above, NPCA is responsible for annual source protection program reporting as mandated under the CWA. Niagara Region and other policy implementers work collaboratively with NPCA by providing information required to complete the annual progress report. The 2018 annual progress report will be published in the coming months.

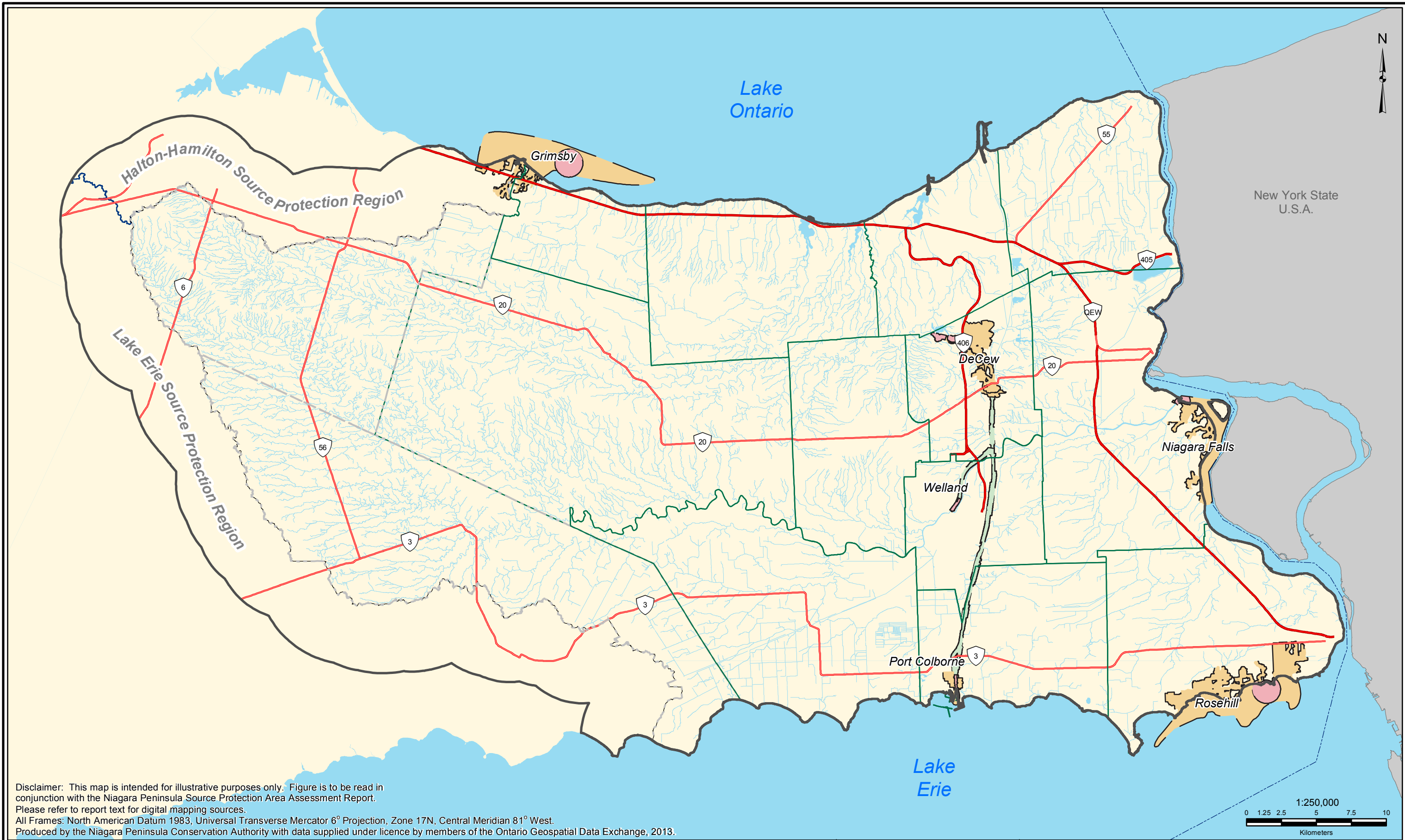
Additional Information

Additional source water protection resources, including the SPP, assessment report, explanatory document, work plan proposal, and annual progress reports can be found on the Niagara Peninsula Source Water Protection website (<http://www.sourceprotection-niagara.ca>).

Respectfully submitted and signed by

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- Appendix I Map of Niagara Region's Intake Protection Zones
- Appendix II Identified Significant Drinking Water Threats for Niagara Region's Intake Protection Zones



PWC-C 10-2019 Appendix II – Identified Significant Drinking Water Threats for Niagara Region’s Intake Protection Zones

Threat Category	Decew Falls IPZ-1	Niagara Falls IPZ-1	Port Colborne IPZ-1	Port Colborne IPZ-2
1 - Waste disposal sites	x	x	x	x
2 - Sanitary, storm, and industrial discharges	x	x	x	x
3, 4, and 21 – Agricultural source material (application and storage)	x	x	x	x
6, 7 – Non-agricultural source material (application and storage)	x	x	x	x
10 – Pesticide application				x
11 – Pesticide storage and handling				x
13, 14 – Road salt and snow storage				x
18 – Aircraft de-icing runoff				x

A full list of possible prescribed drinking water threats, as identified in Ontario Regulation 287/07, is included below:

1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act.
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.
3. The application of agricultural source material to land.
4. The storage of agricultural source material.
5. The management of agricultural source material.
6. The application of non-agricultural source material to land.
7. The handling and storage of non-agricultural source material.
8. The application of commercial fertilizer to land.
9. The handling and storage of commercial fertilizer.
10. The application of pesticide to land.
11. The handling and storage of pesticide.
12. The application of road salt.
13. The handling and storage of road salt.
14. The storage of snow.
15. The handling and storage of fuel.
16. The handling and storage of a dense non-aqueous phase liquid.
17. The handling and storage of an organic solvent.
18. The management of runoff that contains chemicals used in the de-icing of aircraft.
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
20. An activity that reduces the recharge of an aquifer.
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard.