
HALDIMAND COUNTY

Report ECW-10-2020 Norfolk County/Six Nations Water Supply Project Update



For Consideration by Council in Committee on December 8, 2020

OBJECTIVE:

To update Council on the proposed Norfolk County/Six Nations water supply initiative and obtain approval to proceed with drafting water supply agreements with both communities and to prepare for a potential grant funding submission.

RECOMMENDATIONS:

1. THAT Report ECW-10-2020 Norfolk County/Six Nations Water Supply Project Update be received;
2. AND THAT Haldimand County Council agrees to supply water to Norfolk County and Six Nations subject to the successful negotiation of the draft water supply agreements;
3. AND THAT staff be directed to negotiate a draft Water Supply Agreement with Norfolk County relating to the supply of potable water from Haldimand County;
4. AND THAT staff be directed to negotiate a draft Water Supply Agreement with Six Nations relating to the supply of potable water from Haldimand County;
5. AND THAT staff be directed to work with Norfolk County and Six Nations in the development of grant applications for available infrastructure funding programs;
6. AND THAT staff be directed to report back to Council with the draft Water Supply Agreements.

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Approved: Craig Manley, MCIP, RPP, Chief Administrative Officer

EXECUTIVE SUMMARY:

Haldimand County has been working in partnership with Norfolk County and Six Nations with the goal of establishing a regional water supply serviced from the Nanticoke Water Treatment Plant. Based on the technical feasibility and water rate studies it has been determined that a Haldimand water supply to Norfolk County and Six Nations will result in economies of scale as well as a more diversified customer base for Haldimand County contributing to a stabilized water rate for all users. The Haldimand water supply will also provide a cost effective and timely solution for Norfolk County and Six Nations drinking water supply issues.

The project has now progressed to a point where the Water Supply Agreements with Norfolk County and Six Nations can be drafted, providing the framework for the construction of the infrastructure. The water supply agreements will include costing, phasing, governance, and water supply amounts.

BACKGROUND:

Haldimand County's Nanticoke Water Treatment Plant was constructed by the Province in 1973 with the long term vision of a centralized water plant supplying industrial and potable water to communities up to and including the Region of Waterloo and Guelph. As a result the water treatment plant's current Permit To Take Water (PTTW) and supporting infrastructure has capability that greatly exceeds the long term servicing requirements of Haldimand County.

In 2007, Haldimand County partnered with six neighbouring municipalities, the two First Nation communities and the Province to undertake a feasibility study that looked at an integrated water supply approach for the Grand Valley area. Findings from the study concluded that:

- *“an integrated water supply system is feasible for the area”, and;*
- *“access to a long term water source of safe drinking water should be viewed as important”.*

Since the completion of the 2007 study, Haldimand staff have taken steps to preserve key components of the regional water supply strategy including renewing the PTTW at its original volumes in 2012, preserving greenfield space as part of the 2015 water treatment plant upgrades and securing ownership of the west Ontario Power Generation (OPG) intake and forebay through a pending property transfer with OPG.

In 2019, driven by a need to find a timely and cost effective solution for obtaining additional water treatment capacity to meet development related water demand increases in Port Dover, Norfolk County initiated discussions with Haldimand staff regarding a potential water supply strategy to the community. As discussions have progressed, the need to service Simcoe, Delhi, Courtland and Waterford has also been identified.

In 2019, Haldimand County received a letter of support from Six Nations for a water supply from Nanticoke to Six Nations. In October 2020 Six Nations sent a second letter of support for the project to the Minister of Infrastructure.

At the September 17, 2019 Council in Committee meeting Haldimand staff were given direction through the following resolution:

THAT subject to adoption by Norfolk County Council, Resolution 12, approved by Norfolk County Council in Committee on September 3, 2019 regarding the desire to work with Haldimand County to explore the feasibility of extending water services to Norfolk County, be endorsed in principle;

AND THAT staff be directed to work with staff from Norfolk County to explore options, costing agreement principles, phasing, timing and operating parameters in this regard and report back to Council by December 2019.

In December 2019 through Memorandum ECW-M03-2019 Norfolk County Water Supply Project Update staff reported, that as a result of the Council direction, the following actions had been completed:

- A draft Project Overview Statement with Norfolk County was developed.
- An outline of a Memorandum of Understanding (MOU) with Norfolk County was developed.
- The potential for identifying the project for submission to the Investing in Canada Infrastructure Program (ICIP) Green Fund grant program was discussed.

The purpose of this report is to provide Council with an update of the work undertaken since the 2019 update, outline the benefits to Haldimand County of continuing with the regional water supply initiative and outline the next steps in the process.

ANALYSIS:

Haldimand County's Nanticoke Water Treatment Plant (WTP) has a Permit To Take Water (PTTW) and supporting infrastructure capable of meeting the long term water servicing needs of both Norfolk County and Six Nations. The Nanticoke WTP water supply can provide a cost effective and timely solution to both communities' drinking water supply issues.

An increase in the production and distribution of drinking water from the Nanticoke WTP will result in economies of scale as well as a more diversified customer base for Haldimand County, both of which are positive factors that contribute to a stabilized water rate for all users.

The goal of this initiative is to fulfill the long term drinking water supply needs for the communities of Norfolk County and Six Nations by establishing and constructing the necessary agreements, finances, approvals and infrastructure to connect to the Nanticoke drinking water system.

The following sections discuss the Norfolk County water supply, the Six Nations water supply, Federal/Provincial grant funding opportunities, benefits of the project to Haldimand County and proposed next steps.

Norfolk County Water Supply

On November 11, 2020 Norfolk County Council approved the following resolution:

THAT Staff Report PW 20-63, Introduction to the Inter Urban Water Supply, be received as information;

AND THAT Council directs staff to further investigate potential options for the establishment of a long term agreement relating to the supply of drinking water from Haldimand County as well as potential funding strategies;

AND THAT Council directs staff to discuss alternative options with the development community;

AND FURTHER THAT staff be directed to present bi-monthly information updates on this project to Council.

Based on on-going meetings with Norfolk County staff, it is clear that a Haldimand water supply is a viable option for Norfolk County to address its current water servicing challenges. In order to effectively evaluate the Haldimand water supply option, the following studies were completed:

1. Water supply servicing feasibility study to evaluate alternative servicing scenarios for the supply of Haldimand water to Port Dover, Simcoe, Delhi, Courtland and Waterford.
2. Water rate study quantifying the Norfolk wholesale water rates based on a set of cost recovery and revenue principles for a Haldimand supply to Norfolk.

Water Supply Servicing Feasibility Study

A water supply servicing feasibility study was undertaken by WT Infrastructure Solutions to review alternative servicing scenarios for the supply of water to Port Dover, Simcoe, Delhi, Courtland and Waterford. The study assessed these scenarios using available technical background and engineering knowledge to the point where feasibility and design limitations of the alternatives could be confirmed. From the assessment of alternatives, a conceptual design for a long term regional water supply option was identified that maximizes existing infrastructure.

The preferred alternative for servicing Port Dover is a 2.3 km extension of the existing Haldimand water distribution system in Nanticoke that will connect to a new 3.3 km watermain in Norfolk County, coming from the west limits of the existing Port Dover water distribution system.

The preferred alternative for servicing Simcoe, Delhi, Courtland and Waterford is a 2.1 km extension of the existing Haldimand water distribution system in Townsend that will connect to a new 32 km

transmission main along Concession 13 to Delhi, with connections extending to the north for Waterford and to the south for Simcoe.

When considering the water demand needs associated with a regional water supply for Norfolk County as well as a future water supply extension from Hagersville to Six Nations, Caledonia and Cayuga, a water treatment capacity expansion at the Nanticoke Water Treatment Plant will be necessary. The projected water demand for the proposed regional supply indicates that an additional 30,000 m³/day of treatment capacity will be needed in addition to the existing 13,600 m³/day.

Water Rate Study

In parallel with the water servicing feasibility study, Watson and Associates have been working on a Water Rate Study which seeks to estimate the wholesale water rates that Norfolk County would pay to Haldimand for the supply of water. The analysis is based on similar principles to those utilized in the Hamilton and Haldimand water supply agreement and was conducted in two phases:

Phase 1 - based on supply of 2,800 m³/day of capacity from the Nanticoke WTP to service Port Dover. The 2,800 m³/day is the existing available capacity at the Nanticoke WTP and immediately accessible. Haldimand County is also exploring the ability to rerate the current capacity of the plant to supply an additional 4,400 m³/day with minimal infrastructure investment.

Phase 2 - based on providing water supply to all of Norfolk County's serviced communities (i.e. Port Dover, Simcoe, Delhi, Courtland and Waterford). This option will require the construction of new treatment capacity at Nanticoke as well as significant transmission mains and will be phased to meet the needs and priorities of Norfolk County.

In order to determine a wholesale water rate for the purchase of water by Norfolk County from Haldimand's Nanticoke system the operating costs and life cycle (capital) costs components related specifically to the Nanticoke system were calculated and combined to determine the effective full cost recovery rate for the anticipated flows required by Norfolk County.

The operating costs were calculated using Haldimand County's existing water operating budget adjusted to reflect the operating costs specific to the Nanticoke water system. The life cycle (capital) costing analysis assumes that Norfolk will pay for the upfront capital costs associated with the construction of the required infrastructure to distribute water to Norfolk.

In addition to the operating and lifecycle (capital) costs an administrative overhead charge of 10% and a contribution to existing infrastructure of 15% were included in the wholesale water rate calculations.

The contribution to existing infrastructure component offsets the substantial infrastructure investment the Haldimand ratepayers have made at the Nanticoke WTP which has resulted in capacity to provide for future development and economic growth. It is anticipated that once Norfolk fully funds their current and future capacity needs, they would no longer be utilizing Haldimand's existing capacity and this contribution would be removed. The contribution to existing infrastructure will provide a revenue stream that can be used to offset and/or increase the current contributions to the Water Capital Replacement Reserve thereby potentially reducing the contribution required from the Haldimand ratepayers.

The wholesale water rate calculated through the water rate study provides a checkpoint for determining the feasibility of moving forward with a Haldimand water supply to Norfolk County. Based on discussions between Haldimand County and Norfolk County staff regarding the wholesale water rates determined for Phases 1 and 2 the following can be concluded:

- Both Haldimand County and Norfolk County will benefit from the economies of scale created by the increased production of water from the Nanticoke WTP.
- Haldimand County will benefit from the sale of water to Norfolk by realizing an increase in water revenues. These revenues can be used to positively impact the Haldimand ratepayers by offsetting and/or increasing the contributions to the Water Capital Replacement Reserve. It is

important to note that the wholesale water rate is only applicable to the cost that Norfolk will pay for water and is not related to Haldimand County's volumetric water rate.

- Norfolk County will benefit from the purchase of water from Haldimand County as the Haldimand supply can provide Norfolk with a predictable stable water rate over the long term mitigating the current projected increases in the water rate.

It should be noted that the magnitude of the benefit to each community's individual ratepayers will be determined as the water supply agreements are negotiated and the phasing of the infrastructure and water volumes are determined.

Six Nations Water Supply

In order to coordinate the two projects a water supply servicing alternative review study and a rate study are being completed for the Nanticoke Highway 6 Six Nations/Caledonia/Cayuga water supply. These studies will be integrated with the Norfolk County studies to provide a fully scoped project for expanding the Nanticoke system to supply both Norfolk County and Six Nations as well as the communities of Caledonia and Cayuga.

The Six Nations water rate is expected to be favorable as their community would receive the same benefits as Haldimand County given the relatively low volumes anticipated for the water supply. This would be similar to the current agreement with the Mississaugas of the Credit First Nation (excluding any rate reductions).

Federal/Provincial Grant Funding

In March 2019 the governments of Canada and Ontario announced the Investing in Canada Infrastructure Program (ICIP) which is a federal program designed to create long-term economic growth, build inclusive, sustainable and resilient communities and support a low-carbon economy.

The ICIP Green Stream includes up to \$7 billion over 10 years in combined Federal, Provincial and other partner funding. Under the Green Stream, Ontario is prioritizing projects that address critical health and safety issues associated with water, wastewater and stormwater infrastructure.

The County applied unsuccessfully for cast iron watermain replacement projects under the first intake which was limited to communities with a population of 100,000. This first intake also included a cap on Haldimand County's maximum total eligible project cost of \$1,631,760.

The Province has indicated that there will be additional intakes for the Green Stream with increased project limits for more substantive infrastructure initiatives. The next intake was originally scheduled for release in mid-2020, however due to the current pandemic this date has been delayed.

Staff's intent is to apply for ICIP Green Stream funding as a joint submission between Haldimand County, Norfolk County and Six Nations. This project has been discussed with various provincial ministries by representatives of all three communities and several updates have been provided to the province over the past two years. Given the importance of the project it is anticipated that a lobby firm would be hired to help with the grant submission to increase the chances of a successful application.

Haldimand County Benefits from Norfolk County/Six Nations Water Supply

A Haldimand County water supply to Norfolk County and Six Nations will have the following benefits to Haldimand County:

1. Long term positive impacts on Haldimand County's water rates. It is anticipated that Haldimand County's water rates will stabilize and/or decrease over the long term due to economies of scale of a larger user base and that the diversified user base will reduce Haldimand's dependence on large industrial users.

2. The County's current Permit to Take Water (PTTW) is up for renewal in 2024 and there are conditions to the renewal that the County must be showing progress in the future usage of the excess capacity currently allocated in the PTTW. The County believes the work currently being undertaken on the regional water supply will satisfy these conditions.
3. These water supply projects may provide the County the long term ability to remove its dependence on the Hamilton water supply. A future scenario could see Haldimand County entirely self-sufficient on water from a Lake Erie supply thus avoiding potential issues related to the current inter-basin transfer between Lake Ontario and Lake Erie.
4. The water supply agreement with Norfolk County is expected to provide Haldimand County with a long term/perpetual net revenue source, from which, after the County's proportionate incremental costs are recovered, an annual contribution can be used to upgrade Haldimand's water related infrastructure. This revenue stream can also be used to offset and/or increase current annual contributions to the Water Capital Replacement Reserve fund providing additional flexibility in the ability to manage costs associated with water related capital projects and/or changes in consumption from major industry.
5. Based on typical grant submission criteria, a cooperative tripartite water supply project significantly increases the chances of a successful application for Federal/Provincial grant funding programs.

Next Steps

Over the past year a series of meetings and discussions have been held between Haldimand County and Norfolk County staff to jointly review findings from the ongoing studies, discuss current water servicing opportunities and pressures, and plan next steps. Coming out of these meetings and discussions, the following next steps were identified:

- Haldimand to update the 2006 Municipal Class Environmental Assessment for the expansion of the Nanticoke Water Treatment Plant as part of its 2021 work plan.
- Haldimand/Norfolk to draft a Water Servicing Agreement for the Norfolk County water supply.
- Haldimand/Six Nations to draft a Water Servicing Agreement for the Six Nations water supply.

FINANCIAL/LEGAL IMPLICATIONS:

A Municipal Class Schedule 'C' Environmental Assessment was completed for the expansion of the Nanticoke WTP in 2006. Since there has been more than a 10 year lapse in time since the filing of the Environmental Study Report, there is a requirement to complete a public review of the study. This project has been identified in the 2021 Rate Supported Capital at a cost of \$125,000.

Haldimand County will be responsible for some costs associated with the project and these will be brought to Council for approval through a future report. These costs are expected to consist of the following; engineering services to lead design and construction support efforts; consultant expertise in the development of grant proposal submissions; and capital costs associated with infrastructure related to the regional water supply.

It is also anticipated that as the regional water supply system builds out, the issue of governance will have to be addressed. There are several models for governance and these will need to be evaluated in the future as water volumes to neighboring communities increase and other potential partners connect to the Haldimand supply.

STAKEHOLDER IMPACTS:

Not applicable.

REPORT IMPACTS:

Agreement: No

By-law: No

Budget Amendment: No

Policy: No

ATTACHMENTS:

1. None