HALDIMAND COUNTY

Report PDD-18-2019 Jarvis Master Servicing Plan Update

For Consideration by Council in Committee on June 18, 2019

OBJECTIVE:

To inform Council of the conclusions and recommendations of the Jarvis Master Servicing Plan and to seek Council adoption of the study.

RECOMMENDATIONS:

1. THAT Report PDD-18-2019 Jarvis Master Servicing Plan Update be received;
2. AND THAT the Jarvis Master Servicing Plan - Final Report dated June 7, 2019, prepared by J.L. Richards and Associates Ltd. be adopted;
3. AND THAT staff be directed to include the recommended improvement works for new infrastructure identified within the Jarvis Master Servicing Plan - Final Report in the 2020 Ten Year Capital Budget and Forecasts;
4. AND THAT the Jarvis Master Servicing Plan be used to review development applications to identify improvements that are to be funded by developers;
5. AND THAT the recommendations of the Jarvis Master Servicing Plan - Final Report be included in future updates to the Development Charges By-law;
6. AND THAT the presentation by J.L. Richards and Associates Ltd. be received.

Prepared by: Peter Minkiewicz, MPL, Supervisor, Planning and Development

Reviewed by: Mike Evers, MCIP, RPP, BES, Director of Planning and Development

Respectfully submitted: Craig Manley, MCIP, RPP, General Manager of Community & Development Services

Approved: Donald G. Boyle, Chief Administrative Officer

EXECUTIVE SUMMARY:

The Jarvis Master Servicing Plan and Class Environmental Assessment were initiated in 2018 to, in part, address a preferred wastewater servicing option for the community of Jarvis, and to review the plan in total and conduct a comprehensive review of the servicing requirements within the community to meet expected growth. The plan will serve as the engineering and planning blueprint to inform development for the next 20 years.

BACKGROUND:

The community of Jarvis has been identified by Haldimand County as requiring a Master Servicing Plan (MSP) Update for storm drainage, wastewater conveyance, water distribution and transportation servicing, to meet the objectives of the County's Official Plan. The Plan is developed to be responsive

to population growth expectations, changing development densities and changes to transportation demands within the community. A Master Servicing Plan was developed in 2010 to address these issues. This report presents an update to those engineering considerations in light of current development conditions and demands upon the Town of Jarvis. The Master Servicing Plan Update Report documents the existing servicing conditions, identifies future servicing needs and recommends a servicing plan regarding the existing area designated for development. Of note, the plan lays out detailed needs and recommendations for those lands required for the 20 year growth forecasts of Jarvis, and which is generally focused on the northeast and southeast portions of the community. Lands that are outside of the 20 year requirement are not addressed in detail.

A separate Municipal Class Environmental Assessment was also conducted as part of the project to address the requirements for a wastewater servicing strategy for the Town of Jarvis, in which a number of options were reviewed to add new treatment capacity to be able to facilitate additional development. A preferred option was identified as a forcemain to convey wastewater to the existing Townsend Lagoons, as a longer term solution which would utilise existing surplus capacity and take advantage of built infrastructure.

The Master Servicing Plan Update was prepared by J.L. Richards and Associates Ltd. in accordance with the Master Servicing Approach of the Municipal Class Environmental Assessment (Class EA). The first two phases of the Municipal Class EA process, Problem Identification and Alternative Solutions have been followed. Stakeholder and agency consultation has been incorporated to address each study component within these two Class EA phases to produce comprehensive master plan in the form of a series of technical reports. The development of an updated Master Servicing Plan for Jarvis has the following benefits to the County:

- Establishes a long term servicing strategy that identifies key infrastructure improvements and responsibilities.
- Assists in a more appropriate assessment of Development Charges related to infrastructure upgrade requirements.
- Assists in the ability to process development applications as the overall servicing scheme is in place.
- Optimizes the process when done in concert with an Official Plan update. When development opportunities and population densities are established, servicing requirements are more readily determined.
- Enhances the ability to plan capital work and the financial plan associated with the capital program. MSP identifies infrastructure improvements and the key points where infrastructure improvements will be required to ensure key improvements are implemented as required.
- Fulfills Phases 1 and 2 of the Municipal Class EA process. Projects that are identified as Schedule A and Schedule B (below) could be advanced within the ten-year timeframe without additional study or process. After that timeframe, only an addendum to the original report would be required. Schedule C projects would still be subject to an individual EA regardless of the timeframe to advance the project. For further explanation, the below describes the differences between Schedules A, B and C:

  Schedule A projects are identified as being limited in scale, have minimal adverse environmental effects and include a number of municipal maintenance and operational activities. These projects are pre-approved and may proceed to implementation without following the full Class EA planning process. Schedule A projects generally include normal or emergency operational and maintenance activities.

  Schedule B projects have the potential for some adverse environmental effects. The proponent is required to undertake a screening process involving mandatory contact with directly affected public

and relevant review agencies, to ensure that they are aware of the project and that their concerns are addressed. If there are no outstanding concerns, then the proponent may proceed to implementation. Schedule B projects generally include improvements and minor expansions to existing facilities.

Schedule C projects have the potential for significant environmental effects and must proceed under the full planning and documentation procedures as specified. Schedule C projects generally include the construction of new facilities and major expansions to existing facilities.

- This study forms the basis for the long-term (20 year) servicing plan for Jarvis and includes water, wastewater, stormwater and transportation. The purpose in taking this approach is to avoid short-term, reactive responses that are inefficient, more costly and not in keeping with an overall, sustainable strategy. By having a long-term strategy in place, decision-making can occur that is in keeping with that strategy and enables the incremental build-out of infrastructure that is part of an overall plan.

A Public information Centre was held on May 30, 2019 and was attended by 4 individuals. There were no project specific comments received from any of the attendees, nor were any comments received as part of the notification process. The summary project report produced by J.L. Richards & Associates Ltd. is included as Attachment 1 (part of the print and digital agendas). The appendices to that report, as well as the Jarvis EA for the wastewater solution, are included as Attachments 2 to 8 of the digital agenda (website) only due to the length and technical nature of those documents.

ANALYSIS:

The Jarvis Master Servicing Plan utilized two approaches to fulfill the requirements for completion of the Master Servicing Plan. The first was public consultation, which involved meeting with stakeholders and agencies, and one Public Information Centre to receive input and maximize public awareness about the process. Comments, suggestions and concerns received throughout the consultation process have been considered and/or addressed in the recommended plan.

The second approach was analysis and design of the required infrastructure to support the twenty-year timeframe for the study. This work involved a detailed study of the existing infrastructure within Jarvis combined with future projections for growth to determine the optimum timelines and requirements for improvement works.

In an effort to identify an immediate need for additional wastewater capacity within Jarvis, a Class Environmental Assessment process was concurrently undertaken to identify a preferred solution in which a separate Public Information Centre was also advertised and notification given to stakeholders including local developers and First Nations, and held to receive public input. Comments received through that process were generally supportive of the preferred option (forcemain to Townsend) and have been considered and/or addressed within the final recommendations and plans for the provision of additional wastewater capacity.

The following sections discuss each component analyzed as part of the overall Master Servicing Plan:

Water Distribution

The Jarvis water system consists of distribution pipes ranging from 100 mm to 400 mm in diameter. The Nanticoke Water Treatment Plant provides the potable water for Jarvis which is conveyed through a 750 mm transmission main to Townsend and a 500 mm transmission main to Jarvis and Hagersville.

An elevated storage tank is located north of Townsend and is responsible for providing storage for both Townsend and Jarvis. The distribution system operates as a single pressure zone with pressures maintained by water levels in the Townsend elevated storage tank.

Proposed upgrades to service the 20-year projected water demand volumes for the community of Jarvis, improve redundancy of supply and system looping include:

- Construction of approximately 1.8 KM of new distribution watermain to service development in the north east and south west quadrants of Jarvis. This will be funded by development (developers) as it proceeds; and
- Construction of a secondary supply line from the Nanticoke Water Treatment Plant (WTP) transmission main. Construction of this supply line will provide redundancy and additional capacity.

The total cost of the proposed distribution watermain upgrades is $2,439,000 with 100% of the cost being attributed to development as the distribution watermain is considered local service. Additionally, the cost of a new secondary supply line from the Nanticoke WTP transmission main is $2,197,000. Funding will be from DC's with a portion from the Water Reserve Fund, as there will be a benefit to existing users. Funding percentages cannot be determined until the timing of the project is confirmed.

Wastewater Servicing

The existing Jarvis wastewater system consists of one pumping station, the Jarvis Wastewater Lagoons and a collection system with sewers ranging in size from 150 mm to 375 mm.

Proposed upgrades to service the 20-year projected wastewater production volumes for the community of Jarvis include:

- Construction of a new Class 1 pumping station to service development in the south west quadrant of Jarvis. This will be a local service funded by development (developers);
- Construction of approximately 1 kilometre of new wastewater piping to service development in the north east quadrant of Jarvis. This will be a local service funded by development (developers);
- Construction of approximately 200 metres of new wastewater piping to service development in the south west quadrant of Jarvis. This will be a local service funded by development (developers);
- Replacement of existing pumps in the Jarvis Sanitary Pumping Station (SPS) to increase pumping capability. This is considered a system improvement and will be funded by DC's; and
- Construction of a forcemain from the Jarvis SPS to the Townsend lagoons. This is considered a system improvement and will be funded by DC's.

The total cost of new wastewater piping is $2,124,000 and the cost to construct the new forcemain and pump station upgrades is $5,400,000.

Stormwater Servicing

In general, the storm drainage system for Jarvis consists of a mixture of traditional rural servicing through roadside ditches and driveway culverts, urban curb and gutter with underground sewer infrastructure along Highways 3 and 6 in the central portion of town and newer development areas.

Jarvis Municipal Drains 1 and 2 were rehabilitated in 2010 and provide an outlet for much of the stormwater system.

Proposed stormwater infrastructure upgrades to meet 20-year projected stormwater needs include:

- Construction of approximately 500 m of new storm sewers to service development in the north east and south west quadrants of Jarvis. This will be a local service funded by development (developers);
- Construction of a new storm water management pond in the north east quadrant of Jarvis. This will be a local service funded by development (developers). The total cost of the proposed upgrades is $1,193,000.

Transportation

The majority of the existing roadways in Jarvis are designated as “Local” roads. Exceptions to this classification are Talbot Street (Highway 3) and Main Street (Highway 6), which are designated as “Connecting Links (Provincial Highway)”.

Proposed improvements to the transportation network system include:

- Construction of a new collector road extending south from Talbot Street East, across from Craddock Boulevard. Intersection improvements at Main Street/Talbot Street and Talbot Street/Craddock Boulevard (both locations are under MTO jurisdiction as connecting links).

Master Servicing Plan Next Steps:

Master Servicing Plans and updates conducted under the Municipal Class Environmental process must be formally filed as documents for a 30 day review period as part of Class EA Master Plan protocol to provide final public notice. Upon acceptance of the Plan by Council, this process will be initiated. If the process unfolds without a Part II Order (‘Bump up’ which would mean additional analysis required) the studies would be deemed complete.

FINANCIAL/LEGAL IMPLICATIONS:

The total cost of infrastructure upgrades to service potential new developments and upgrade existing systems is approximately $14 million, as shown below:

Service	Cost Estimate (2018 $)
Water Servicing	$4,600,000
Wastewater Servicing	$7,500,000
Stormwater Servicing	$1,500,000
Transportation Servicing	$400,000*
Total	**$14,000,000**

**Some cost to be attributed to MTO – amount to be determined.*

All projects associated with wastewater and stormwater servicing that have DC funding requirements, have been identified in the County’s DC by-law. For the projects that are planned to occur within the next ten years, these appear in the Council Approved 2019 Rated Supported Water and Wastewater Budget.

With the exception of the water supply main project and the intersection improvements that are under MTO jurisdiction, all projects associated with water servicing and transportation servicing that have DC funding requirements, have been identified in the County’s DC by-law. For the projects that are planned to occur within the next ten years, these appear in the Council Approved 2019 Rated Supported Water and Wastewater Budget.

It should be noted that upon future approval and implementation of the proposed capital works identified in the Master Servicing Plan, there would be reciprocal operating budget impacts for the ongoing operation and minor and major maintenance of the proposed new infrastructure.

STAKEHOLDER IMPACTS:

Through the implementation of the required works identified within the Jarvis Master Servicing Plan Public Works staff will need to conduct environmental assessments, conduct additional studies, prepare tenders and administer contracts to complete the work. Assistance by other Departments may be required through out the implementation of the plan.

REPORT IMPACTS:

Agreement: No

By-law: No

Budget Amendment: Yes

Policy: No

ATTACHMENTS:

1. Jarvis Master Servicing Plan Project File Report.
2. Existing Conditions (included with website agenda only).
3. Growth Forecast (included with website agenda only).
4. Implementation Plan (included with website agenda only).
5. Notice of Commencement (included with website agenda only).
6. Public Information Centre Materials (included with website agenda only).
7. Correspondence (included with website agenda only).
8. Jarvis Class Environmental Assessment (EA) Phase 2 Report (included with website agenda only).