

**TOWN OF THESSALON**  
**MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT**  
**THESSALON WATER DISTRIBUTION SYSTEM IMPROVEMENTS**

**FILE: 17-2045**



**December 2018**

# THESSALON WATER DISTRIBUTION SYSTEM IMPROVEMENTS

## CLASS ENVIRONMENTAL ASSESSMENT

### PROJECT FILE

#### 1. BACKGROUND

The Town of Thessalon operates several kilometres of small diameter watermain for potable water and fire flow. The water distribution system relies entirely on high-pressure pumps to maintain pressure throughout the system. This configuration makes the pumps a critical component for distribution of water. Currently the risk associated with a pump only system has been overcome by maintaining redundant pumps with capacity to supply volume requirement on demand even during peak flow periods along with back-up generators to ensure availability of power for the system.

*Planning for municipal projects are to follow the Municipal Class Environmental Assessment, October 2000 (as amended in 2007, 2011 & 2015) document. Exhibit A.2 Municipal Class EA Planning and Design Process outlines the phasing to undertake for projects and is included in Appendix A.*

#### 2. PROBLEM OR OPPORTUNITY STATEMENT

*Phase 1 of the Planning & Design Process is to identify the problem or opportunity.*

The opportunity for the Town of Thessalon is to make modifications to address the following performance issues that characterize the current water distribution system;

- Fire flow within the water supply system is reliant on the Water Treatment Plants (WTP) high-pressure pumps and power supply
- Municipal water distribution system pressures are variable and rely on high-pressure pumps and power supply
- The high-pressure pumps are critical to system performance but are subject to periodic failure.

#### 3. IDENTIFICATION OF INITIAL ALTERNATIVES

*The first step of Phase 2 of the Planning & Design Process is to identify alternative solutions to the problem.*

There are two components to coming up with a solution to the opportunity. Firstly, is the type of water storage facility that will be used. Secondly, is the location within the Town of Thessalon for the proposed water storage facility. To assist in discussing the options the following are definitions from *Appendix A Glossary – Design Guidelines for Drinking-Water Systems 2008 MOE*.

**Reservoir:** A tank within the distribution system that is at or below ground level for holding water. This water is used as storage for emergency domestic water supply and fire protection and is at an elevation that requires pumps to provide required system pressure.

**Standpipe:** A high tank, usually small in diameter compared to height, for holding water. This water is used to maintain pressure in a water supply system and as storage for fire protection.

**Elevated tank.** A water storage facility located on and supported by a tower constructed at an elevation to provide useful storage and pressure for a water pressure plane.

### **Alternatives – Type of Water Storage**

The alternatives considered for type of water storage are listed as follows;

**Option 1.** Status Quo – Continue to use the existing system of the WTP pumps to provide system pressure

**Option 2.** Install a Reservoir within the Distribution System

**Option 3.** Install a Standpipe within the Distribution System

**Option 4.** Install an Elevated Tank within the Distribution System

### **Alternatives – Location of Water Storage**

The Town of Thessalon has identified two potential locations for placement of a water storage facility. These locations are shown on Figure 1 with a summary following of the features for both locations.

#### **West Site - South of Dawson Street / West of Thessalon Lakeside Park**

Town Owned Property – no property acquisition necessary

Ground Elevation of 190m±

Nearest Residential (Lakeside Park trailer Sites) - 100m

Located within Looped Section of 200mm (8") Ø Watermain

This site would provide significant visibility from both approaches on Highway 17 if a water tower with “Town of Thessalon” signage was included.

#### **East Site – South of Peachey Street / West of Town Public Works Garage**

Town Owned Property – no property acquisition necessary

Ground Elevation of 185.5m±

Nearest Residential – 100m

Located within Dead-end Section of 150mm (6") Ø Watermain

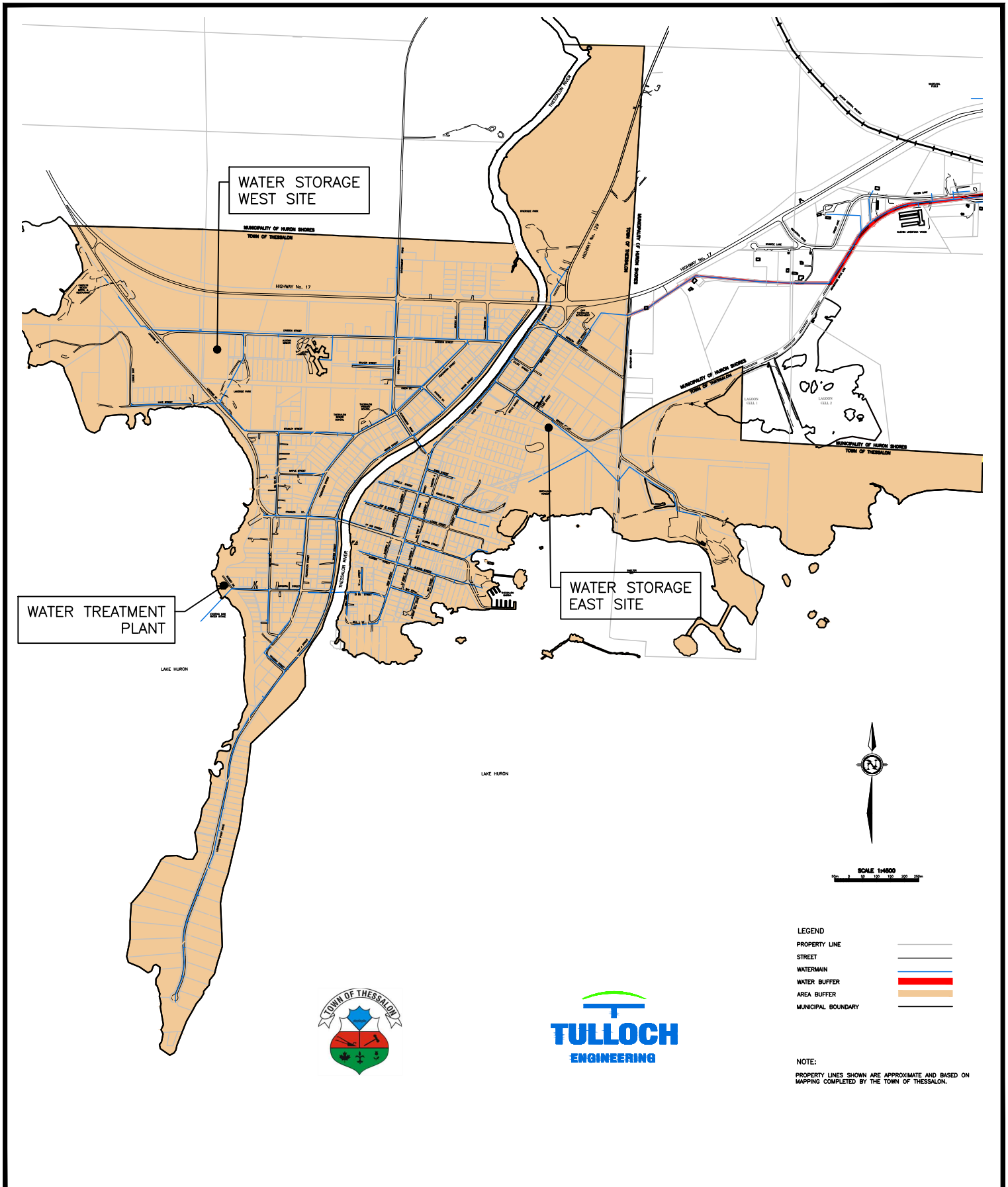


FIGURE 1 – TOWN OF THESSALON WATER SYSTEM, ALTERNATIVE LOCATIONS FOR WATER STORAGE

*A preliminary evaluation of the Class EA Schedule that the project would follow is completed at this stage.*

Schedule 'B' Type Projects are approved subject to screening for environmental effects. The proposed alternatives are anticipated to follow a Schedule 'B' Type Project. Identification of the project Schedule came from *Appendix 1 - Project Schedules of the Municipal Class EA Document*, under Water Projects: **6. Establish new or expand/replace existing water storage facilities as detailed in Appendix B – Identification of Schedule.**

#### **4. INVENTORY ENVIRONMENT & IDENTIFY IMPACTS OF ALTERNATIVES**

*Steps 2 and 3 of Phase 2 of the Planning & Design Process is to inventory the natural, social, cultural and economic environments.*

The following items will be investigated for each environment as follows:

##### Natural Environment

- Fisheries
- Wildlife
- Vegetation

##### Social Environment

- Safety
- Water Supply Availability
- Private Property Impacts
- Construction Disruption
- Aesthetics

##### Cultural Environment

- Heritage

##### Economic Environment

- Capital Costs
- Maintenance Costs
- Private Property Purchase
- Suitable Site Location

A summary of the impacts based on the alternatives are listed in the table on the following page.

### Summary of Impacts Table

<b>Environment</b>	<b>Objective</b>	<b>Option #1 Status Quo</b>	<b>Option #2 Reservoir</b>	<b>Option #3 Standpipe</b>	<b>Option #4 Elevated Tank</b>
Natural	Fisheries	No Impact	No Impact	No Impact	No Impact
	Wildlife	No Impact	No Impact	No Impact	No Impact
	Vegetation	No Impact	Minor Impact – removal of some vegetation	Minor Impact – removal of some vegetation	Minor Impact – removal of some vegetation
Social	Safety	Continued reliance on high pressure pumps for potable water distribution and fire flows.	Reserve of potable water and fire flow available but still requires reliance on high-pressure pumps and power.	Reserve of potable water and fire flow available without reliance on high-pressure pumps and power.	Reserve of potable water and fire flow available without reliance on high-pressure pumps and power.
	Water Supply Availability	Unchanged	Increased availability for fire flows	Increased availability for fire flows and during power outages	Increased availability for fire flows and during power outages
	Private Property Impacts	Increased risk of pressure fluctuation or loss of pressure. Potential for interruption of fire flow availability.	Minor Impact - Potential visibility of reservoir to some residents and potential noise from transferring water.	Medium Impact - Potential increased visibility of standpipe to some residents and potential noise from transferring water.	Maximum Impact – Likely Visibility of elevated tank to most residents and potential noise from transferring water.
	Construction Disruption	No Impact	Potential disruption to public during construction	Potential disruption to public during construction	Potential disruption to public during construction
	Aesthetics	No Impact	Visible elements of reservoir may have a minor impact.	Visible elements of standpipe may have a medium impact. There is the potential for water tower becoming associated with Town identity by placing “Town of Thessalon” on structure	Visible elements of elevated tank may have a medium impact. There is the potential for water tower becoming associated with Town identity by placing “Town of Thessalon” on structure
Cultural	Heritage	No Impact	Likely no impact if properly sited.	Likely no impact if properly sited.	Likely no impact if properly sited.
Economic	Capital Costs	None	Planned expense – lowest cost option	Planned expense – medium cost option	Planned expense – highest cost option
	Maintenance Costs	Pump longevity is diminished by constant service. Cost associated with pump maintenance above expectations.	Increased cost for surface infrastructure. Potential to reduce expenditure on pumps.	Increased cost for surface infrastructure. Potential to reduce expenditure on pumps.	Increased cost for surface infrastructure. Potential to reduce expenditure on pumps.
	Property Purchase	No Impact	Both sites under consideration are owned by Town of Thessalon.	Both sites under consideration are owned by Town of Thessalon.	Both sites under consideration are owned by Town of Thessalon.
	Suitable Site Location	Not Applicable	Not Dependent on elevated terrain.	Options not have elevated terrain suitable within the Town for Standpipe.	Not Dependent on elevated terrain.

## **5. MITIGATION MEASURES**

*Identification of mitigating measures is part of Step 3 of Phase 2 of the Planning & Design Process. In completing the planning and design for the project there is a need to protect the environment in which the work will be completed. Mitigating measures are put in place to minimize the disturbance to the environment during construction and to prevent long-term problems due to instability, erosion and sedimentation.*

Mitigating measures will be generally similar for either alternative selected and will be addressed as part of the preliminary design of the preferred alternative after receiving public comments.

## **6. EVALUATE ALTERNATIVES & IDENTIFY RECOMMENDED SOLUTION**

*Step 4 of Phase 2 of the Planning & Design Process is to evaluate the alternatives and identify a preliminary recommended solution.*

Based on the investigation to date a preliminary recommended solution has not been chosen including the water storage type and the location. Instead, based on public input and a preliminary design that will provide useful details from flow modelling a preferred site location and type of storage facility will be chosen.

## **7. CONSULT REVIEW AGENCIES AND PUBLIC**

*Step 5 of Phase 2 of the Planning & Design Process is to consult review agencies and the public on the opportunity or problem.*

A summary of the consultation is as follows:

- Public Notification was given by advertising in the local newspaper, the North Shore Sentinel on December 12, 2018 and December 19, 2018. The notice was posted on the Town of Thessalon website and at the Municipal Office for the duration of the comment period. A copy of the public notice is included in Appendix C. Affected Agencies were also contacted by letter notification.

**The following represents future steps to the process after receiving public comments and further consideration of the various options including water flow modelling, cost estimates and detailed impact assessments.**

## **8. COMMENTS RECEIVED**

Comments received will be included in the Project File.

## **9. RESPONSE TO COMMENTS RECEIVED**

This section will summarize the comments and concerns raised with a response to address the issue.

## **10. PREFERRED ALTERNATIVE**

*Step 6 of Phase 2 of the Planning & Design Process will be to select a preferred solution. This section will detail the final preferred alternative and will outline the municipality's justification for the solution. The next step is to publish a Notice of Completion to review agencies and the public. This will be done by publishing a notice in the North Shore Sentinel and on the Town of Thessalon website for a thirty-day comment period. Interested persons will be able to provide written comment on the proposal within 30 days from the date of the Notice. Comment should be directed to the Town or the Engineer at the following address:*

### **Town of Thessalon**

187 Main Street, Box 220  
Thessalon, ON; P0R 1L0  
Phone 705-842-2217, Fax 705-842-2572  
Email: townthess@bellnet.ca  
Attention: Robert P. MacLean, Clerk Treasurer

### **Tulloch Engineering**

200 Main Street; Box 579  
Thessalon, ON; P0R 1L0  
Phone 705-842-3372, Fax 705-842-2658  
Email: chris.kirby@tulloch.ca  
Attention: Chris Kirby, P. Eng.

If concerns arise regarding this project, which cannot be resolved in discussion with the municipality, a person or party may request that the Minister of the Environment make an order for the project to comply with Part II of the Environmental Assessment Act (referred to as Part II Order), which addresses individual environmental assessments. Requests must be received by the Minister at the address below within 30 calendar days of this Notice. A copy of the request must also be sent to the Engineering Consultant.

Minister  
Ministry of the Environment and Climate Change  
Floor 11, 77 Wellesley St. W.  
Toronto ON M7A 2T5  
Fax: 416-314-8452

Director, Environmental Approvals Branch  
Ministry of the Environment and Climate Change  
135 St. Clair Ave West, 1st Floor  
Toronto ON; M4V 1P5  
EAASIBgen@ontario.ca



A copy of the written request should also be sent to the Town of Thessalon.

Town of Thessalon  
187 Main Street, Box 220  
Thessalon, ON; P0R 1L0  
Phone 705-842-2217, Fax 705-842-2572  
Email: townthess@bellnet.ca  
Attention: Robert P. MacLean, Clerk Treasurer

## 11. PROJECT SCHEDULE

ACTIVITY	TIMING
First Public Notice (30-day comment period)	December 12, 2018 to January 18, 2019
Select Preferred Alternative & Preliminary Design	January 18, 2019 to February 27, 2019
Notice of Completion (30-day comment period)	February 27, 2019 to March 29, 2019
Detail Design and Approvals (Pending Project Funding)	2019 to 2020
Project Construction (Pending Project Funding)	2020 to 2022

This planning document is made available at the following locations:

### **The Town of Thessalon**

187 Main Street, Box 220  
Thessalon, ON; P0R 1L0  
Phone 705-842-2217, Fax 705-842-2572  
Email: townthess@bellnet.ca  
Attention: Robert P. MacLean, Clerk Treasurer

### **Tulloch Engineering**

200 Main Street, PO Box 579  
Thessalon, ON P0R 1L0  
Phone: 705 842-3372  
Fax: 705 842-2658  
Email: [chris.kirby@tulloch.ca](mailto:chris.kirby@tulloch.ca)  
Attention: Chris L. Kirby, P.Eng, Project Engineer

### **Thessalon Public Library**

187 Main Street  
Thessalon, ON; P0R 1L0  
Phone 705-842-2306  
Email: thessalonlib@hotmail.com

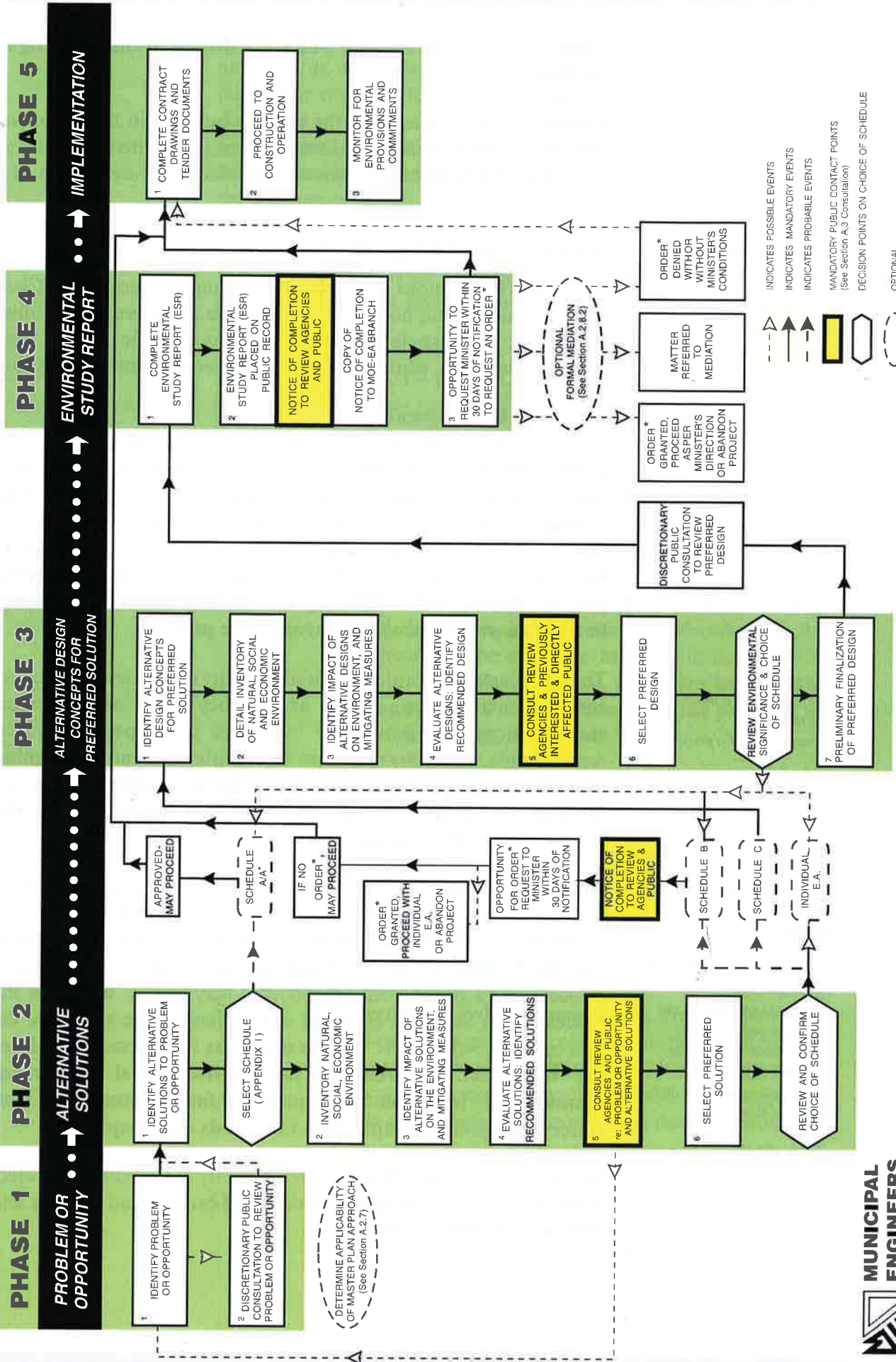
## Appendix A

### Municipal Class EA Planning and Design Process

# EXHIBIT A.2

# MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA



## Appendix B

### Identification of Schedule

**SCHEDULE B - Continued**

- revetment including soil bio-engineering techniques
  - reconstruction of a weir or dam.
18. Construction of spillway facilities at existing outfalls for erosion or sedimentation control.
  19. Construct a fishway or fish ladder in a natural watercourse, expressly for the purpose of providing a fishway.
  20. Enclose a watercourse in a storm sewer.
  21. Construct a stormwater control demonstration or pilot facility for the purpose of assessing new technology or procedures.
  22. Reconstruct existing weir or dam at the same location where the purpose, use and capacity are changed.
  23. Removal of an existing weir or dam.
  24. Establish stormwater infiltration system for groundwater recharge.
  25. A new holding tank that is designed for the total retention of all sanitary sewage disposed into it and requires periodic emptying.

**Water Projects:**

1. Establish, extend or enlarge a water distribution system and all works necessary to connect the system to an existing system or water source, where such facilities are not in either an existing road allowance or an existing utility corridor.
2. Establish facilities for disposal of process wastewater (e.g. install sewer connection, construct holding pond, dewatering and hauling operations to disposal sites).
3. Expand existing water treatment plant including intake up to existing rated capacity where land acquisition is required.
4. Increase pumping station capacity by adding or replacing equipment and appurtenances where new equipment is located in a new building or structure.
5. Expansions, improvements and modifications to existing patrol yards, equipment or materials storage facilities, and maintenance facilities where land acquisition is required.
6. Establish new or expand/replace existing water storage facilities.
7. New service facilities (e.g. patrol yards, storage and maintenance facilities, parking lots for service vehicles).

Appendix C

Public Notice Advertisement

**Town of Thessalon**  
**Class Environmental Assessment**  
**Thessalon Water Distribution System Improvements**  
**Public Comment Invited**

The Town of Thessalon proposes an investigation to provide improvements to the Thessalon water distribution system to reduce risk, maintain watermain pressure and availability and reliability of the water system in the event of pump failure. The project is currently being planned under **Schedule B** of the **Municipal Class Environmental Assessment**.

Project documentation for the Thessalon Water Distribution System Improvements project, including the alternatives under consideration and the Class Environmental Assessment, are available for review at the following locations. Please note that there will be extended closures of these facilities during the holidays:

**The Town of Thessalon**

187 Main Street  
Thessalon, ON P0R 1L0  
Phone 705-842-2217  
Mon-Fri: 9:00 am – 5:00 pm

**Thessalon Public Library**

187 Main Street  
Thessalon, ON P0R 1L0  
Phone 705-842-2306

**Tulloch Engineering Inc.**

200 Main Street  
Thessalon, ON P0R 1L0  
Phone 705-842-3372  
Mon-Fri: 8:00 am – 4:30 pm

For further information on this project, or to provide comment, please contact:

Chris Kirby, P. Eng.  
Tulloch Engineering Inc.  
Phone: 705-842-3372  
Email: [chris.kirby@tulloch.ca](mailto:chris.kirby@tulloch.ca)  
Mail: Box 579, Thessalon, ON P0R 1L0

Public input and comments are invited for incorporation into the planning and design of this project and will be received until January 18, 2019. Subject to comments received and the receipt of necessary approvals, the Municipality intends to proceed with the planning and preliminary design of this project in 2019.

This Notice issued December 12<sup>th</sup>, 2018.

Robert P. MacLean, Clerk Treasurer; Town of Thessalon