



# WELCOME

## Environmental Assessment for the Thornbury Water Treatment Plant Capacity Increase

### PUBLIC INFORMATION CENTRE

Please complete the Sign-in Sheet and review the display materials. The Project Team is available to answer your questions and address any concerns.

Your input is valued!

Please fill out a comment sheet.



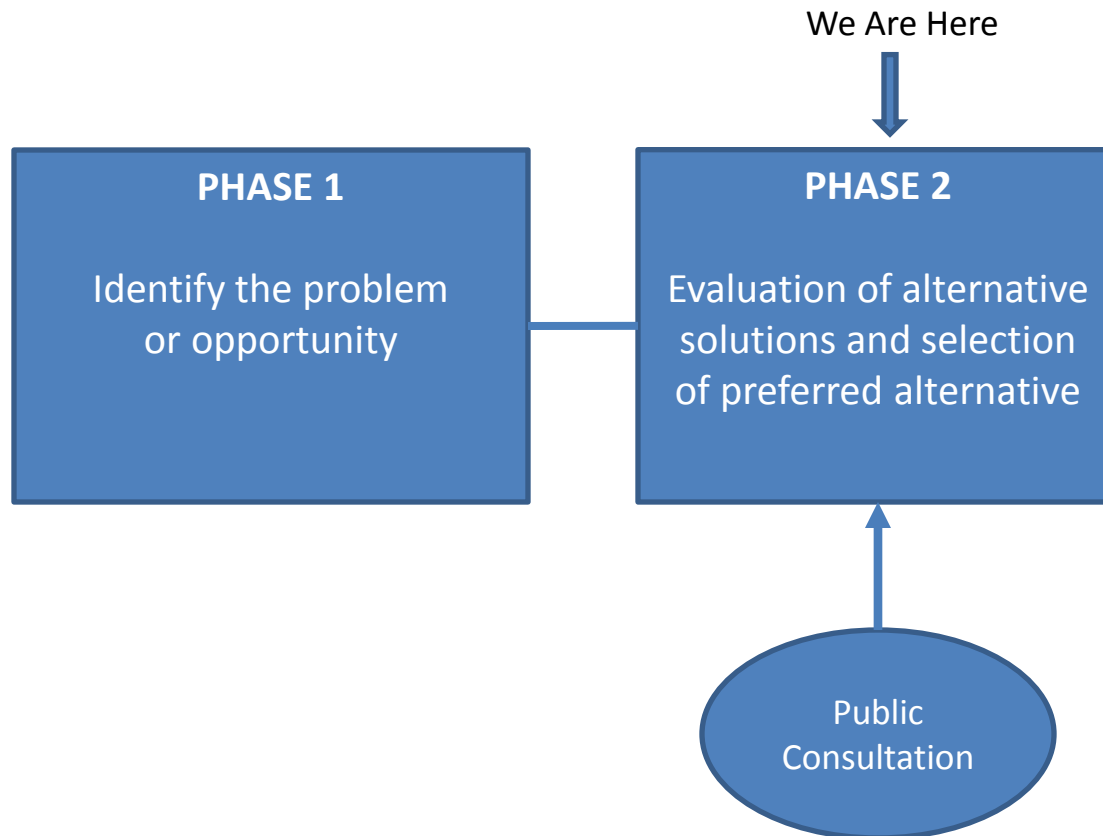


# Introduction to the Class Environmental Assessment

- A Class Environmental Assessment (EA) is a study that examines alternatives and impacts for proposed projects and confirms the best alternative solution.
- Public consultation is a requirement of the Municipal Class EA process. Public input is valuable for
  - Confirming the best alternative solution.
  - Obtaining the residents' perspective on the issue.
  - Raise your concerns early in the process so they can be addressed.
- The Class EA process for this study consists of 2 phases. The project is currently in Phase 2.



# Overview of the Class Environmental Assessment Process





# Phase 1: The Existing System

## Thornbury Water Treatment Plant

- Existing facility has a rated capacity of 13,536 m<sup>3</sup>/day.
- The 2012 maximum daily water demand was 9,069 m<sup>3</sup>/day.
- Raw (untreated) water is supplied to the plant from Georgian Bay by an intake pipe and low lift pumps.
- Treatment of water consists of a Pall Ultrafiltration Membrane System and disinfected using ultraviolet irradiation and chlorine.



# Phase 1: The Existing System

## Supply from Town of Collingwood

- The Town of The Blue Mountains currently has a take or pay agreement with the Town of Collingwood for the supply of treated water.
- The Town of The Blue Mountains began to take water (based on the agreement) in January 2005.
- Currently in 2014, the agreement allows for up to 4,000 m<sup>3</sup>/day of treated water to be supplied from the Town of Collingwood.
- However, the current agreement is undergoing review between both municipalities to potentially reduce the daily supply from the Town of Collingwood to approximately 1,000 m<sup>3</sup>/day (high cost issue with Take or Pay System).

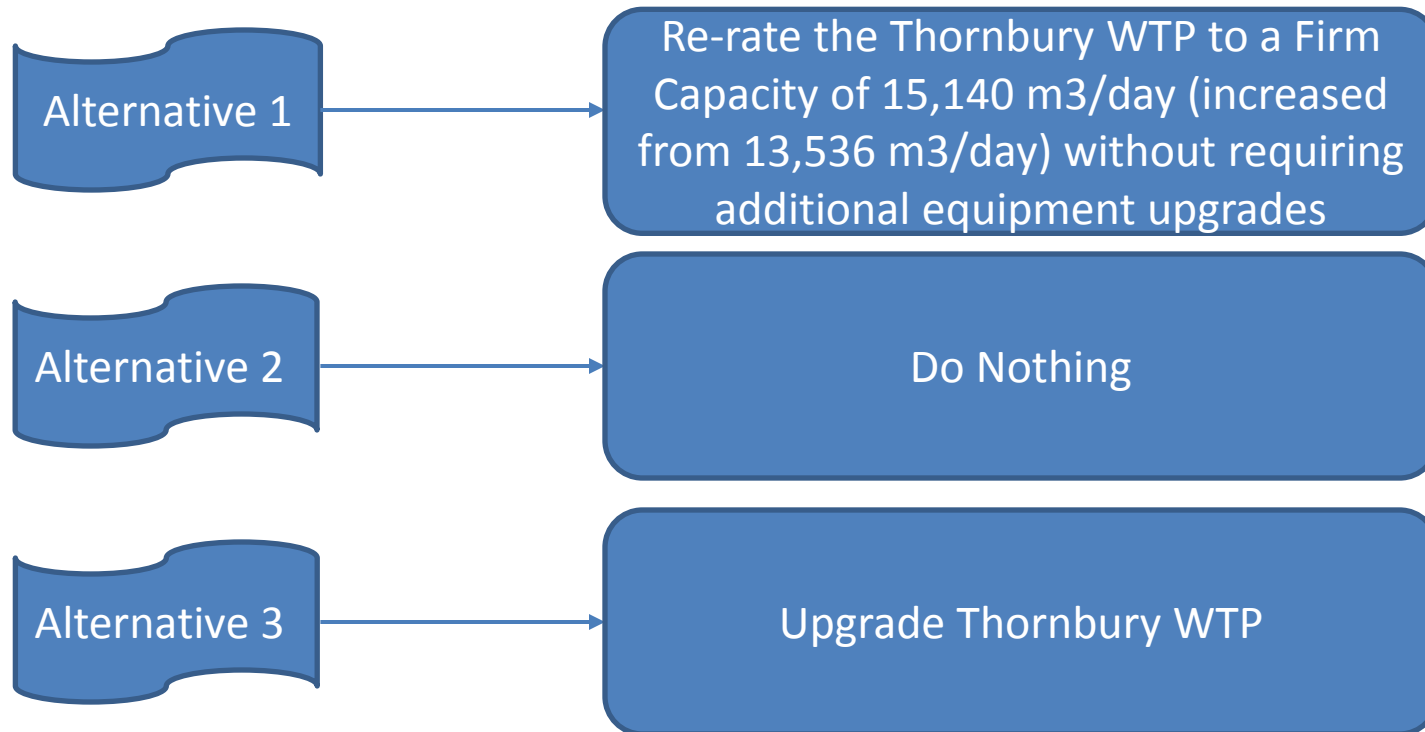


## Phase 1: Problem Statement

- Due to the existing treated water supply agreement with the Town of Collingwood potentially being modified, reducing the daily supply from 4,000 m<sup>3</sup>/day to approximately 1,000 m<sup>3</sup>/day, the Town of The Blue Mountains has identified the need to identify alternative solutions for the best method for increasing the rated capacity of the Thornbury Water Treatment Plant.
- The current rated capacity of the Thornbury Water Treatment Plant is 13,536 m<sup>3</sup>/day.
- As per the 2012 Water and Wastewater Capacity Assessment for the Town of The Blue Mountains, the total capacity allocated (currently connected, allocated and reserved) is 13,789 m<sup>3</sup>/day.
- With the potential of the daily supply from the Town of Collingwood being reduce to approximately 1,000 m<sup>3</sup>/day (if the supply agreement is modified), the total treated water supply capacity would be 14,536 m<sup>3</sup>/day.
- The resulting available water supply for future connections would reduce to 747 m<sup>3</sup>/day (i.e. 3,000 m<sup>3</sup>/day less if Collingwood supply is reduced).





















## Phase 2: Identification of Alternatives

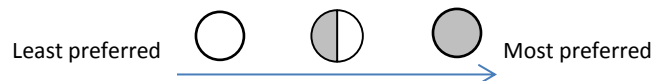




## Phase 2: Evaluation of Alternatives for the Preferred Alternative



| Evaluation Criteria   | Identified Alternatives  |   |  |
|---|--|---|--|
|   | Alternative 1  | Alternative 2   | Alternative 3*   |
|   |  | Re-rate the Thornbury WTP to a Firm Capacity of 15,140 m <sup>3</sup> /day (increased from 13,536 m <sup>3</sup> /day) without requiring additional equipment upgrades. | Do Nothing   |
| <b>Minimize Impact on Natural Environment:</b><br>considering potential impact on natural landscape, vegetation, aquatic habitat, wildlife, valley lands and watercourses and receiving water quality | <br>No modifications required within the existing footprint of the building                               | <br>No impact  | <br>Upgrades done within the existing footprint of the building   |
| <b>Minimize Impact on Social Environment:</b><br>considering planned land use at the site, compatibility with surrounding land use, construction impacts (noise, dust, traffic, etc.)                 | <br>No modifications required within the existing footprint of the building                               | <br>No impact  | <br>Upgrades done within the existing footprint of the building   |
| <b>Maximize Technical Suitability:</b><br>considering ability for staged construction, operation and maintenance requirements, ease of construction, impact on existing utilities                     | <br>Feasible – no impacts expected  | <br>No impact  | <br>Feasible  |
| <b>Maximize Security of Supply</b>  | <br>Supply increased to offset a portion of loss of Collingwood water supply                              | <br>Loss of Collingwood water supply not made up for                                 | <br>Existing system needs to be evaluated to ensure sufficient security of supply   |
| <b>Minimize Cost:</b><br>Considering capital and operating costs and 20 years Life Cycle Present Value  | <br>No capital cost increase, some operating cost increase (additional hydro, disinfection costs, etc.) | <br>No cost  | <br>Estimated capital cost is \$9M. Greater control over O&M costs. Estimated 20 years life cycle present value is \$13M. |
| <b>Preferred Alternative</b>  |   |    |   |



\*Alternative #3 is the same as found in the 2009 Class EA “Long Term Water Supply”, for the Town of The Blue Mountains 8





## Phase 2: Preferred Alternative

- The preferred alternative involves re-rating the Thornbury Water Treatment Plant Firm Capacity to 15,140 m<sup>3</sup>/day, from 13,536 m<sup>3</sup>/day.
- The re-rated Firm Capacity of 15,140 m<sup>3</sup>/day is equivalent to the overall design capacity for the existing Pall Membrane Ultrafiltration System. Currently, the operation of the filtration system is restricted to 13,536 m<sup>3</sup>/day.
- To achieve the re-rated capacity, no upgrades are required at the existing water treatment plant.
- Combined with the potentially reduced daily supply from the Town of Collingwood (reduced to approximately 1,000 m<sup>3</sup>/day), the overall available treated water supply capacity would be 16,140 m<sup>3</sup>/day.
- The available water supply for future connections would increase from 747 m<sup>3</sup>/day (as discussed in the Problem Statement) to 2,351 m<sup>3</sup>/day.



# Preferred Alternative Overview of Potential Impacts

- There are minimal potential environmental impacts in relation to re-rating the Firm Capacity of the Thornbury Water Treatment Plant as no modifications to the water treatment plant interior or exterior are required.
- There will be some operating cost increases including hydro and disinfection treatment (more chlorine gas required). No additional costs for operations personnel are expected.



## Next Steps...

- After review of Public and Review Agency comments, select preferred solution.
- Finalize Schedule B EA Report.
- Issue Notice of Completion of EA to Public and Review Agencies and file EA Report for mandatory 30 calendar day public review period.
- Implement the re-rating process by submitting an application to the MOECC for approval of the re-rating and subsequent issuance of an amended Drinking Water Permit and License for the Plant.



## How to Get Involved?

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