OPS.25.018
Attachment #1

Date: February 26, 2025

JLR No.: 31000-010

Town of The Blue Mountains
Wastewater Master Plan
Public Information Centre No. 2

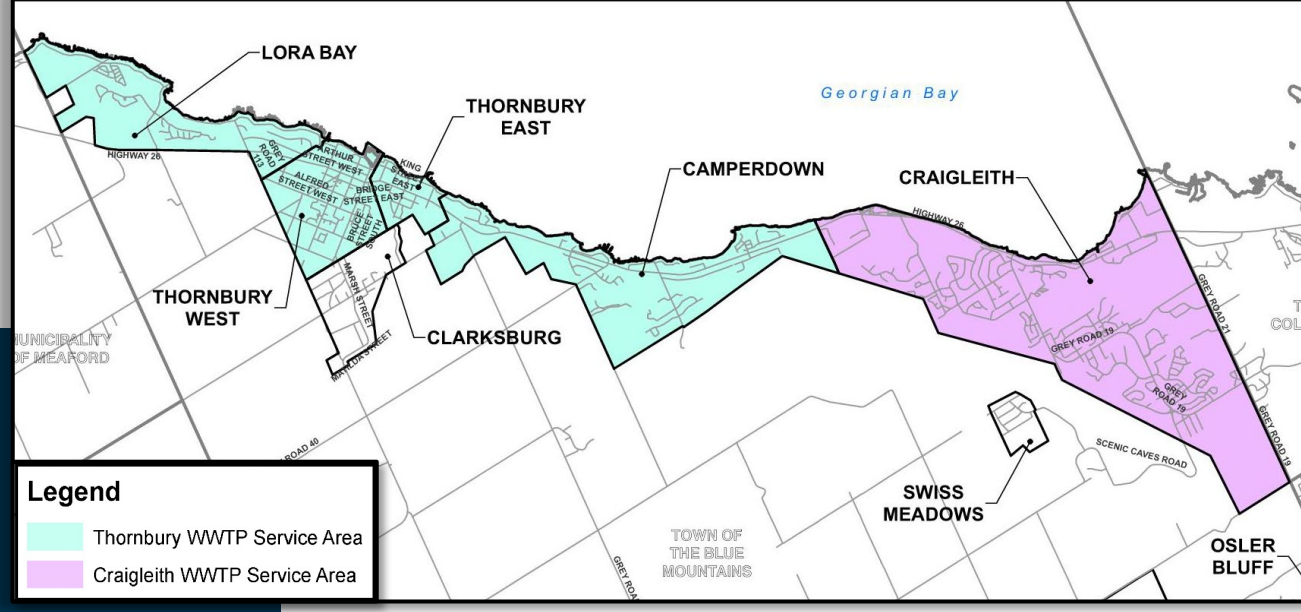
TOWN OF THE BLUE MOUNTAINS

CIVICA

J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS

Project Overview

J.L. Richards & Associates Limited (JLR) and Civica have been retained to complete a **Wastewater Master Plan** under the **Municipal Class Environmental Assessment (MCEA)** process to assess short- and long-term wastewater infrastructure improvements to support growth within the Town of The Blue Mountains.



MCEA Process Overview

Phase 1
Problem and/or Opportunity

Data Collection and Review

Identify Problems and Opportunities

Consult with Council and Public

Phase 2
Alternative Solutions

Identify and Evaluate Alternative Solutions

Prepare EA document for comment and review

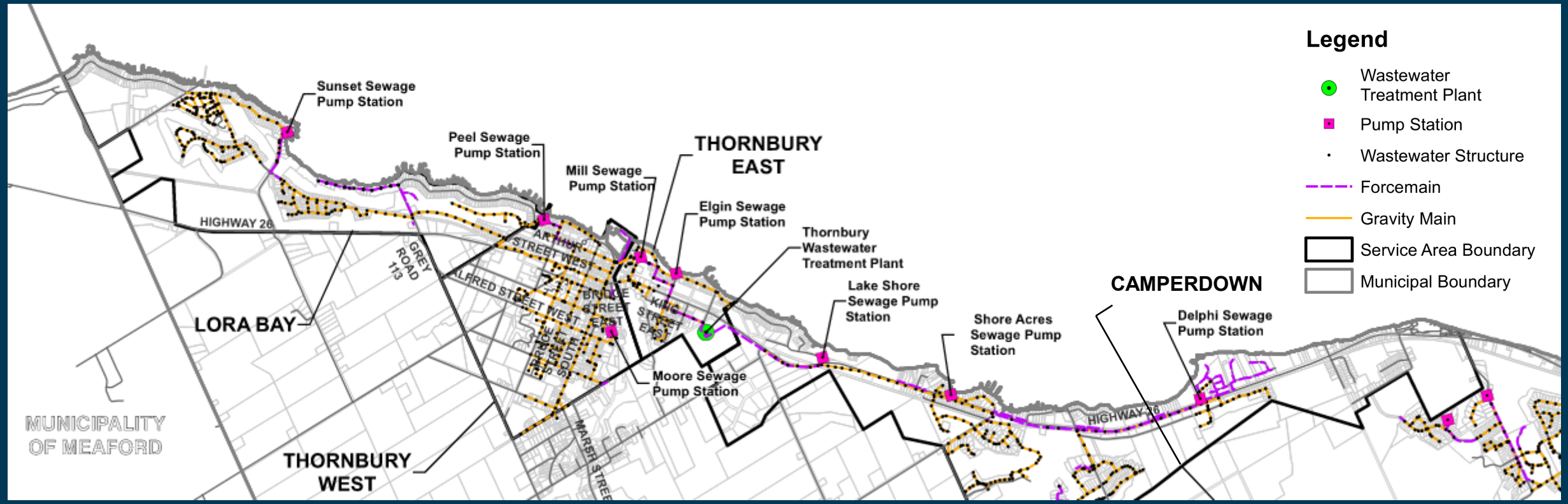
Consult with Council and Public

Address Public & Stakeholder Comments

Overview

- Under the Environmental Assessment Act, municipalities must consider potential environmental effects before a potential water and/or wastewater project begins
- The streamlined MCEA process allows municipalities to consider impacts without having to obtain project specific approval under the Environmental Assessment Act

Thornbury Service Area

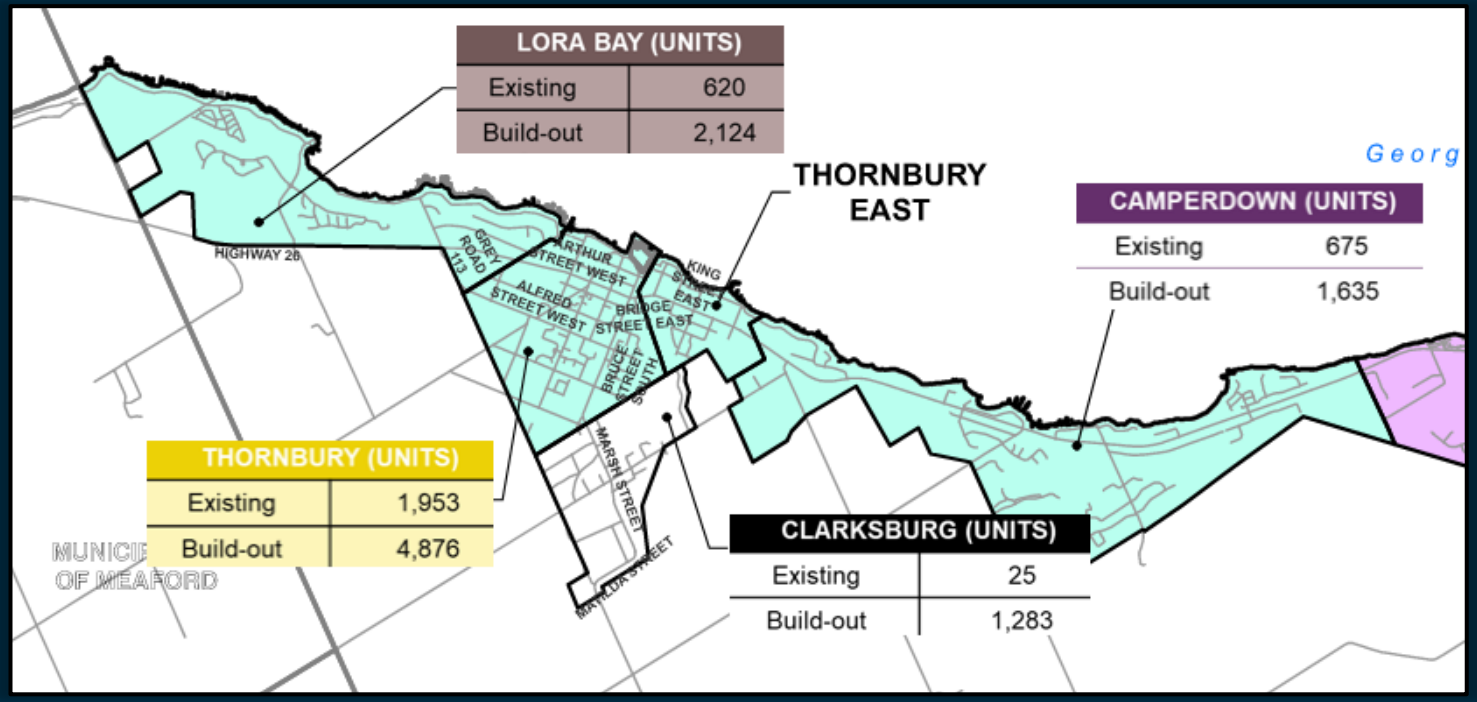


- Services the areas of: Lora Bay, Thornbury, Camperdown
- Thornbury Wastewater Treatment Plant (3,580 m^3/day, upgrades are ongoing)
- 8 Sewage Pumping Stations

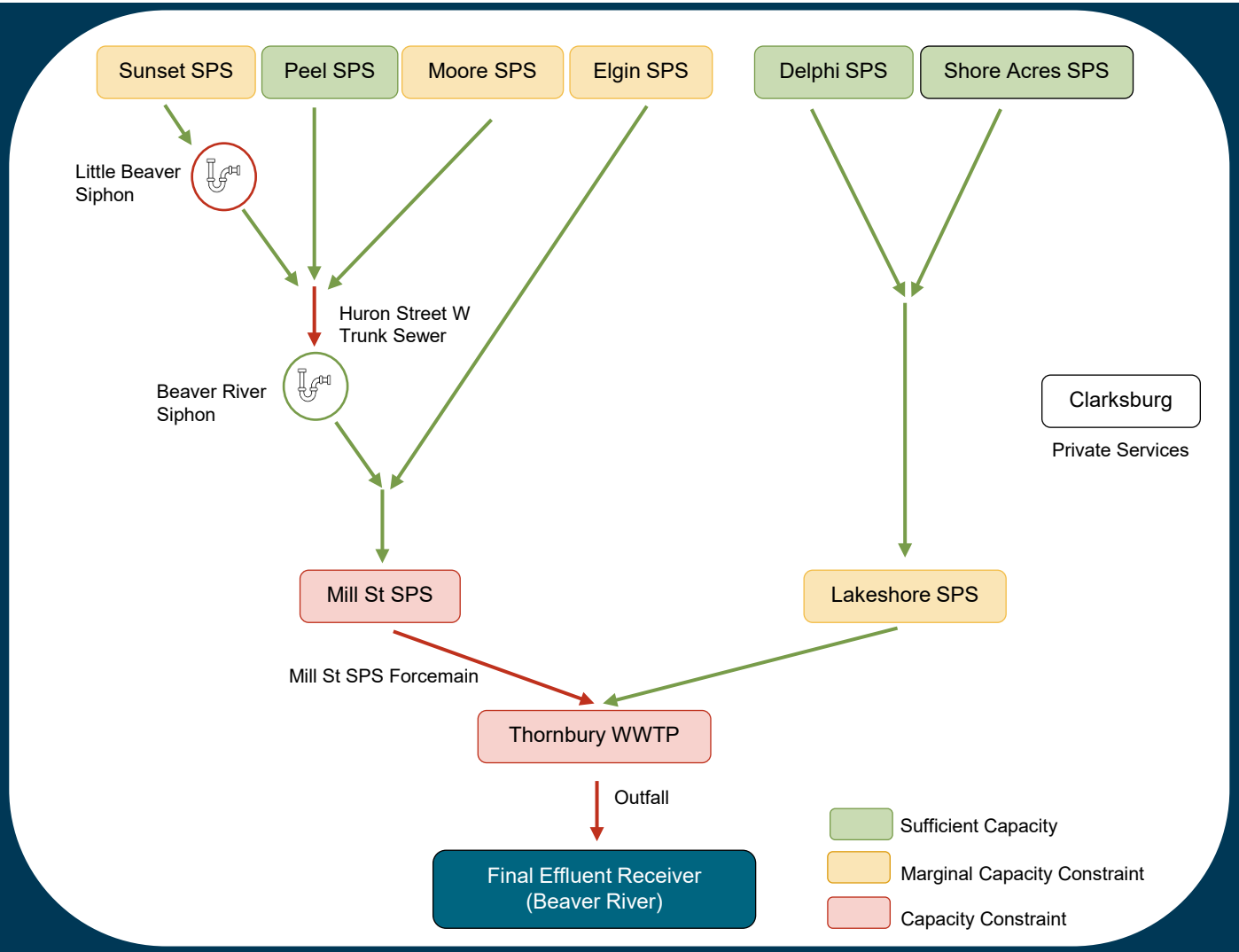
Growth Projections - Thornbury

Thornbury Service Area – Total Growth Included in Master Plan (Units)	
Existing	**3,273**
Growth (2023 to Build-out)	+6,645(1)
Total Build-out	9,918(1)

Table Notes:
(1) Thornbury growth include 1,442 units for Secondary Plan Areas in Thornbury



Future Issues and Constraints - Thornbury



1. Clarksburg: Clarksburg does not have municipal wastewater servicing
2. Sewer System: there are several sewer constraints along the trunk sewer (Peel Street / Little Beaver Siphon, Huron Street W)
3. Pumping: four SPS have marginal capacity under future conditions (Sunset, Moore, Elgin, and Lakeshore SPS); Mill Street SPS has insufficient capacity under existing and future conditions
4. Treatment : the Thornbury WWTP has insufficient capacity under future conditions

Projects are currently ongoing or planned to resolve capacity issues at:

- Thornbury WWTP
- Mill Street SPS
- Elgin Street SPS

Thornbury Issue No. 1: Clarksburg Servicing

Legend

= Alternative 1 FM

= Alternative 2 FM – Option A

= Pumping Station

= Wastewater Treatment Plant

The 2019 Clarksburg Master Plan identified that municipal gravity sewer services should be extended to all properties in the Clarksburg.

Alternatives were evaluated to connect Clarksburg to the existing gravity system:

- Alternative 1: **Connect Clarksburg North to Existing System on Marsh Street**
- Alternative 2: **Direct Connection to Thornbury WWTP**

Thornbury Issue No. 1: Clarksburg Servicing

Legend

= Alternative 1 FM

= Alternative 2 FM – Option A

= Pumping Station

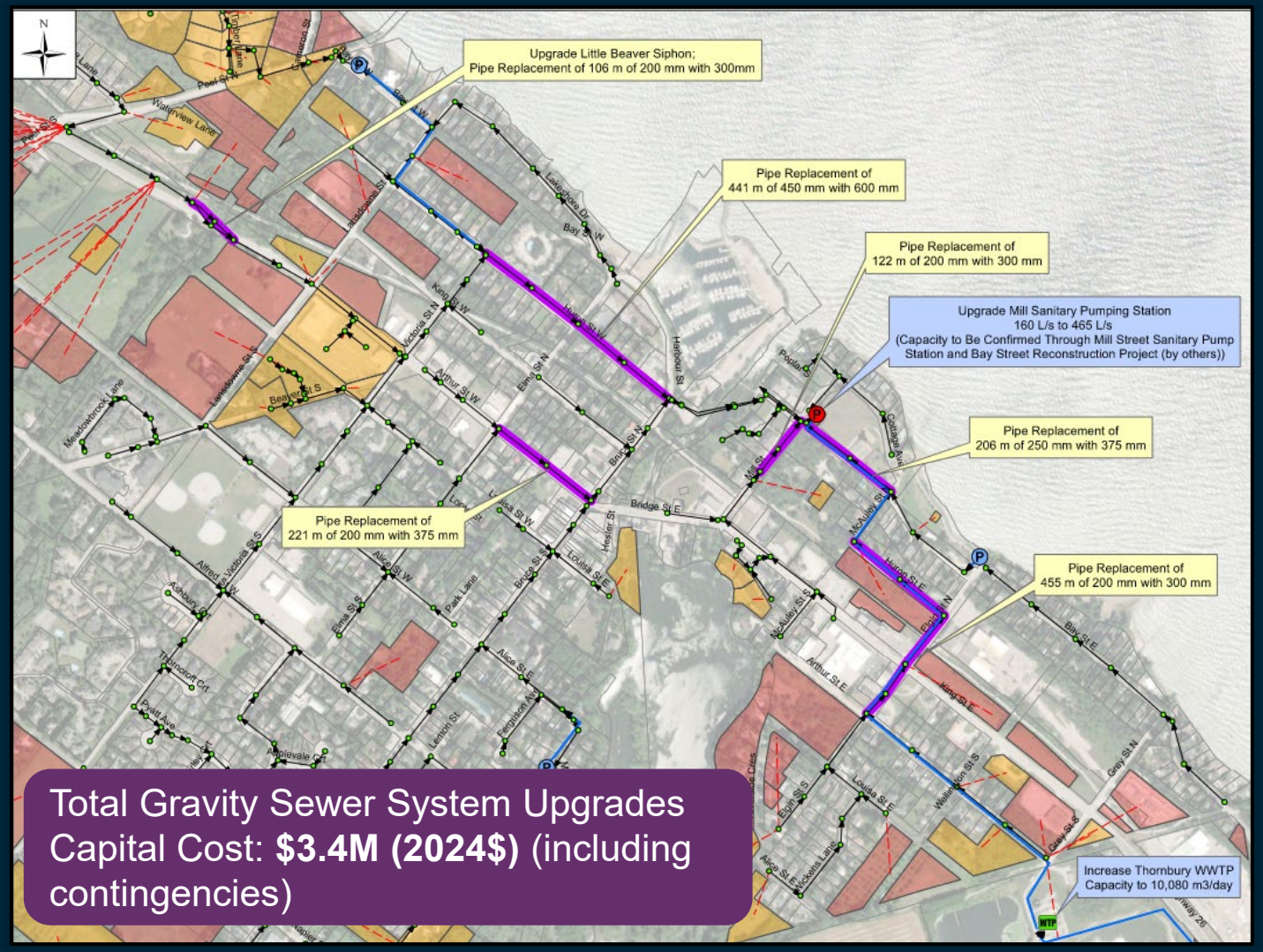
= Wastewater Treatment Plant

The 2019 Clarksburg Master Plan identified that municipal gravity sewer services should be extended to all properties in the Clarksburg.

Alternatives were evaluated to connect Clarksburg to the existing gravity system:

- Alternative 1: **Connect Clarksburg North to Existing System on Marsh Street**
- Alternative 2: **Direct Connection to Thornbury WWTP**

Thornbury Issue No. 2: Gravity Sewer System Deficiencies



Total Gravity Sewer System Upgrades Capital Cost: **$3.4M (2024$)** (including contingencies)

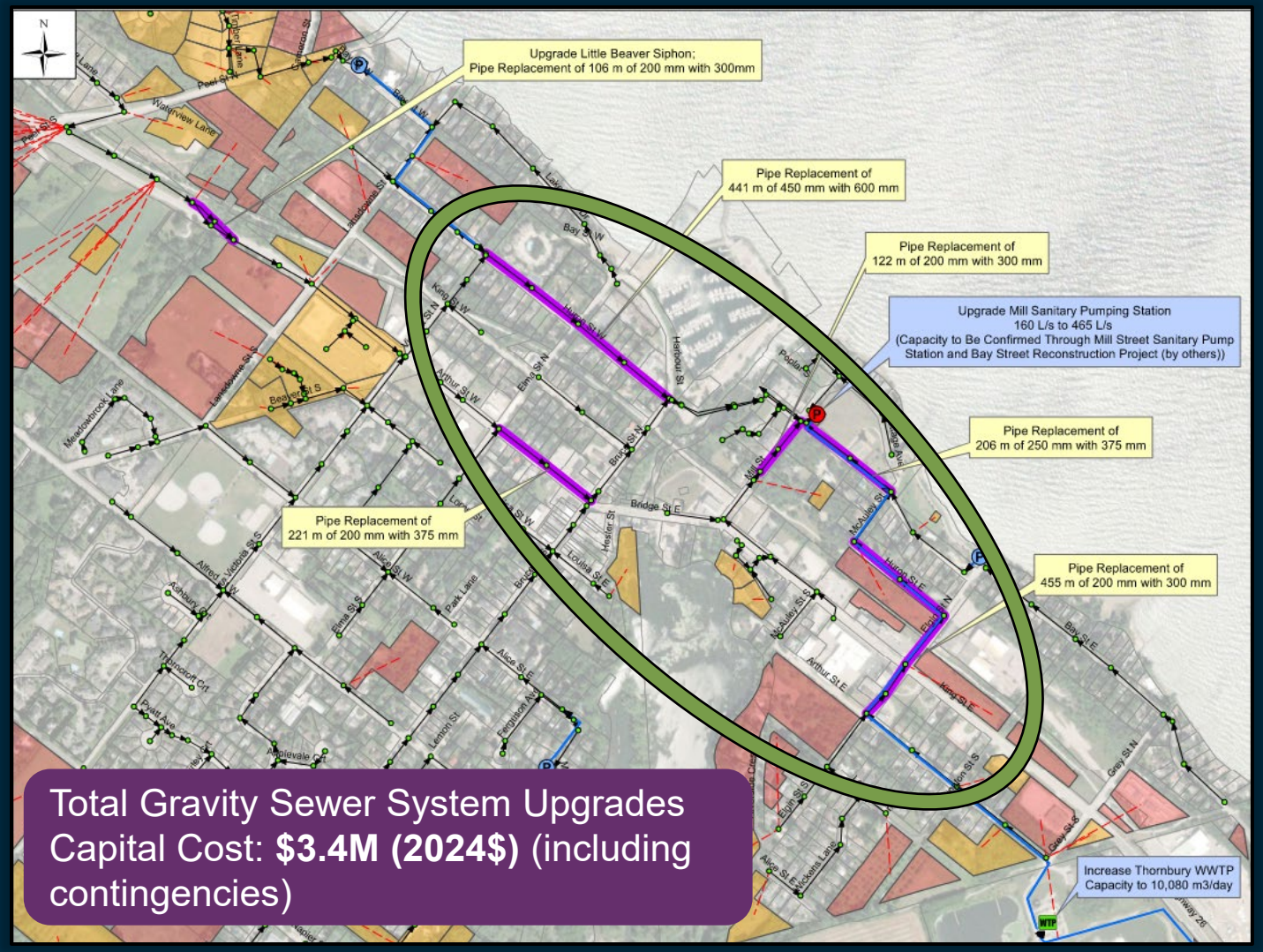
Gravity System Upgrades

- Approximately 1.4 km of sewer upgrades are needed throughout Thornbury

Little Beaver Siphon

- Little Beaver Siphon requires upgrades to accommodate additional flows from upstream developments

Thornbury Issue No. 2: Gravity Sewer System Deficiencies



Total Gravity Sewer System Upgrades Capital Cost: **$3.4M (2024$)** (including contingencies)

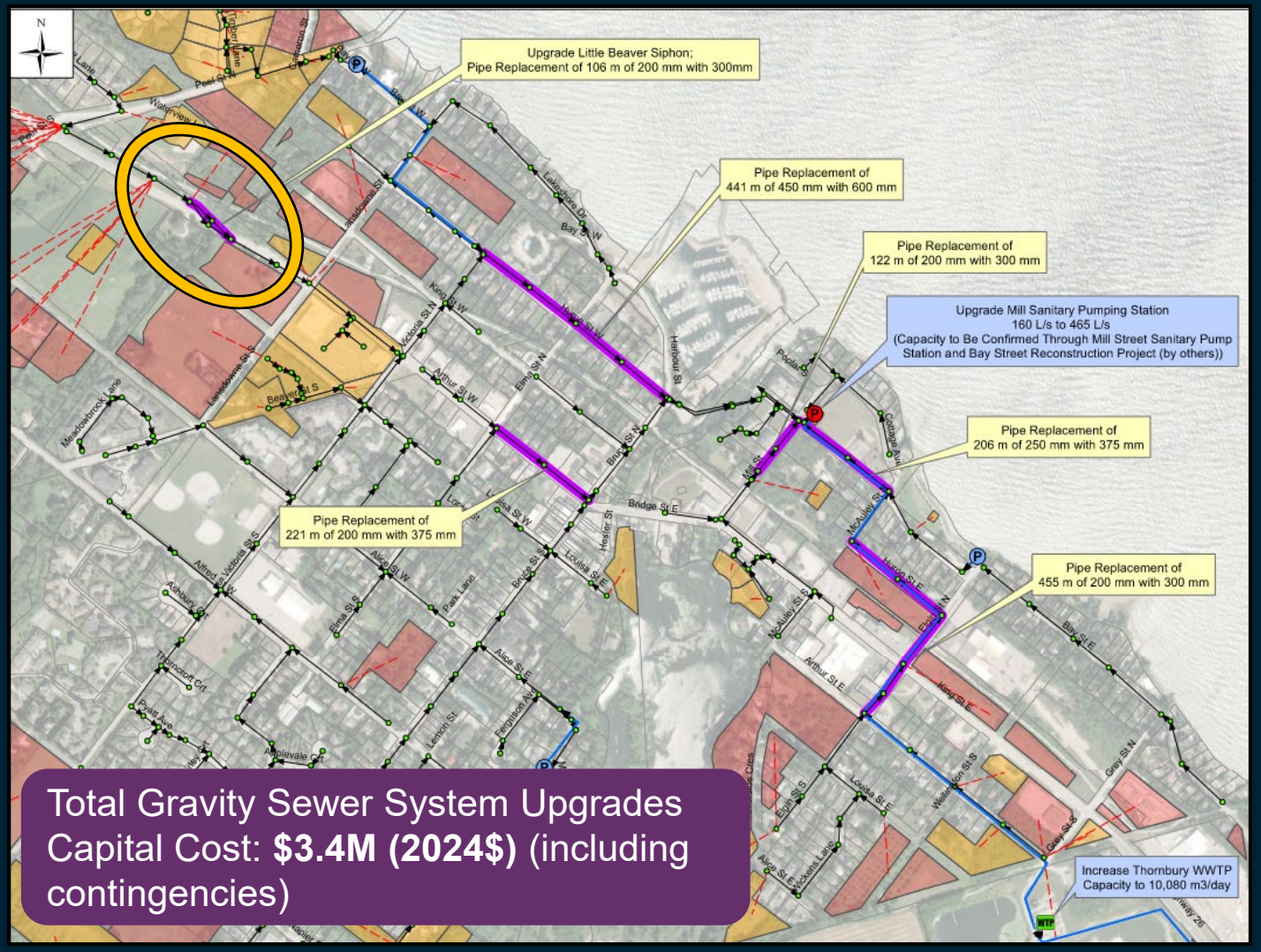
Gravity System Upgrades

- Approximately 1.4 km of sewer upgrades are needed throughout Thornbury

Little Beaver Siphon

- Little Beaver Siphon requires upgrades to accommodate additional flows from upstream developments

Thornbury Issue No. 2: Gravity Sewer System Deficiencies



Total Gravity Sewer System Upgrades Capital Cost: **$3.4M (2024$)** (including contingencies)

Gravity System Upgrades

- Approximately 1.4 km of sewer upgrades are needed throughout Thornbury

Little Beaver Siphon

- Little Beaver Siphon requires upgrades to accommodate additional flows from upstream developments

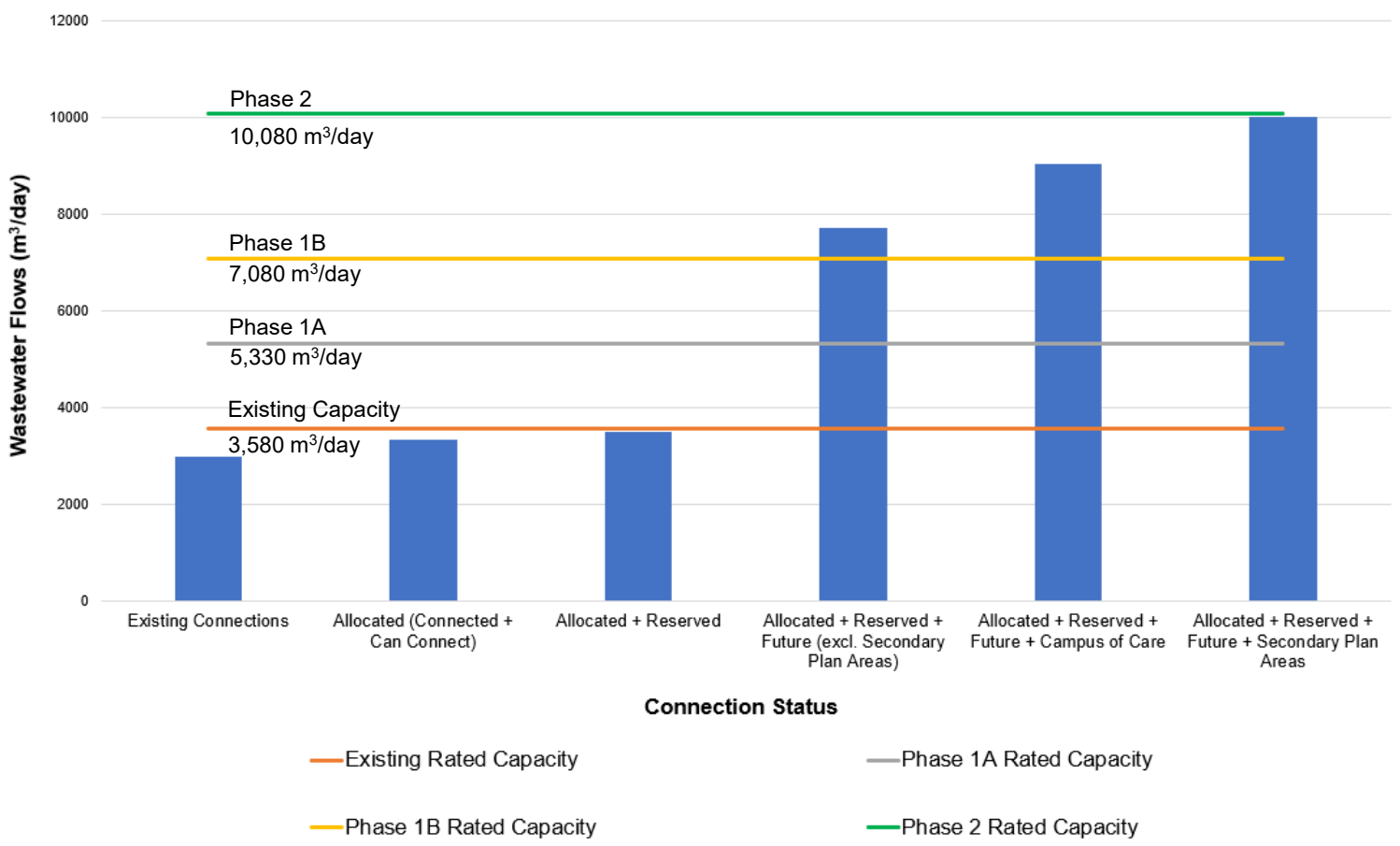
Thornbury Issue No. 3: Pumping Deficiencies

Mill Street SPS	• Upgrades are required for the SPS and forcemain to accommodate future flows • Design is currently underway
Lakeshore, Sunset, Elgin & Moore SPSs	• No upgrades have been identified, however periodic monitoring is recommended

Total Pumping Upgrades Capital Cost: **TBD***

*Costs to be confirmed during detailed design of Mill Street SPS and Forcemain Upgrades

Thornbury Issue No. 4: Treatment Deficiencies



- Following the ongoing Phase 1 Expansion of the Thornbury WWTP (to 7,080 m^3/day), the Thornbury WWTP should undergo the Phase 2 Expansion per the recommendations in the 2006 ESR and 2017 ESR Addendum for the Thornbury WWTP
- The Phase 2 Expansion to 10,080 m^3/day is sufficient to meet build-out average day flow demands

Total Treatment Upgrades Capital Cost: **~$25-40M (2024$)** (including contingencies)

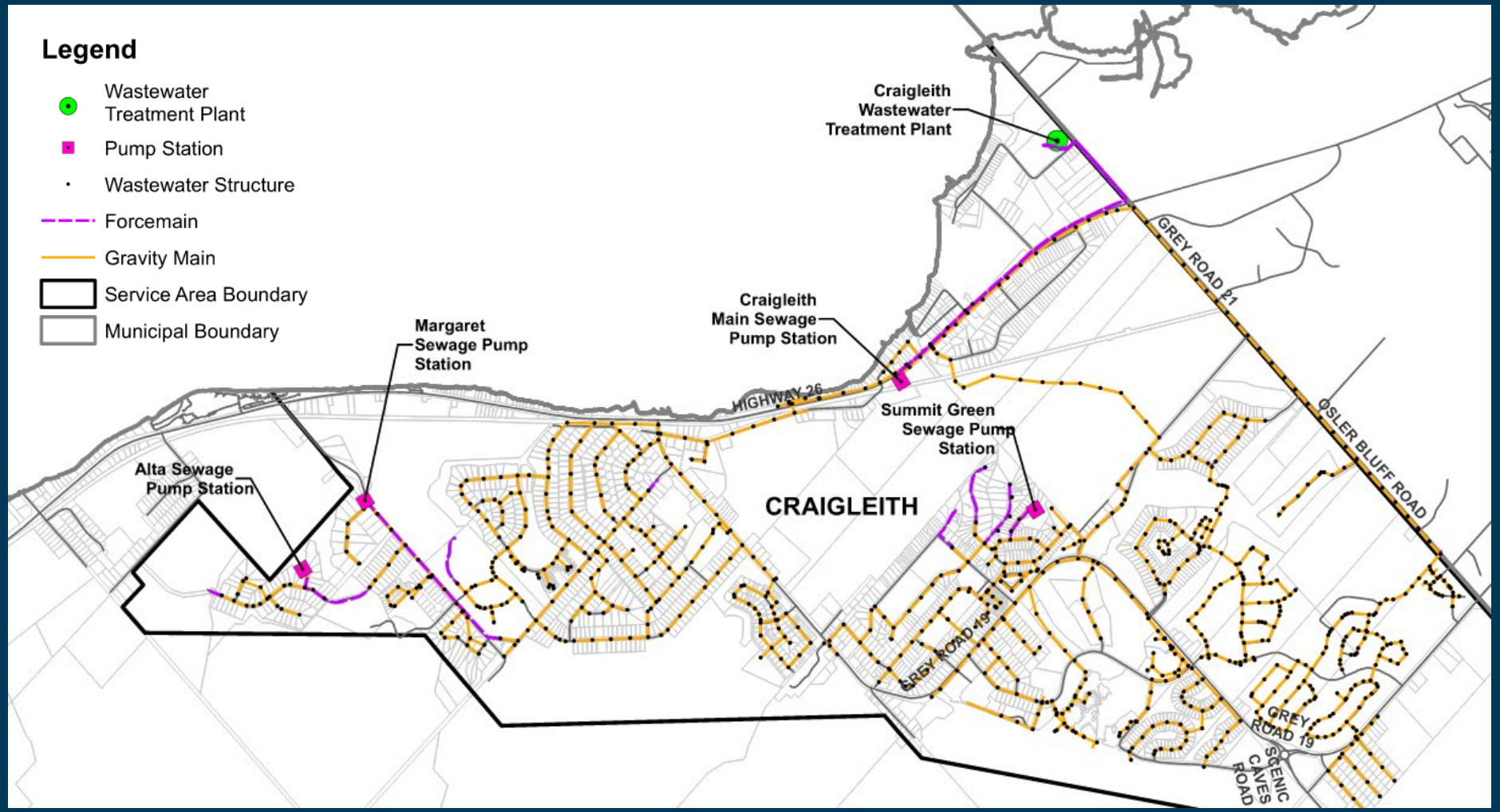
Thornbury Service Area: Implementation Plan

Improvements	Cost[(1)] (2024$)	Funding Source	Timing	EA Schedule
Issue No. 1: Clarksburg Servicing Extension (SPS and Forcemain)	$12M	Non-growth	TBD – As Funding Is Available	SPS – Schedule B Forcemain - Exempt
Issue No. 2: Gravity Sewer System Deficiencies	$3.4M	Growth	Development Based	Exempt
Issue No. 3: Pumping Deficiencies	TBD[(2)]	Growth	Immediate	Schedule B
Issue No. 4: Treatment Deficiencies	~$25M	Growth	5 – 10 years	Schedule C

Notes:
(1) Costs include contingencies, including 1.5% to cover legal, C of A, advertising, and miscellaneous costs, 15% to cover engineering, design and contract administration, 15% for general contingencies, and 2% for Town Project Management.

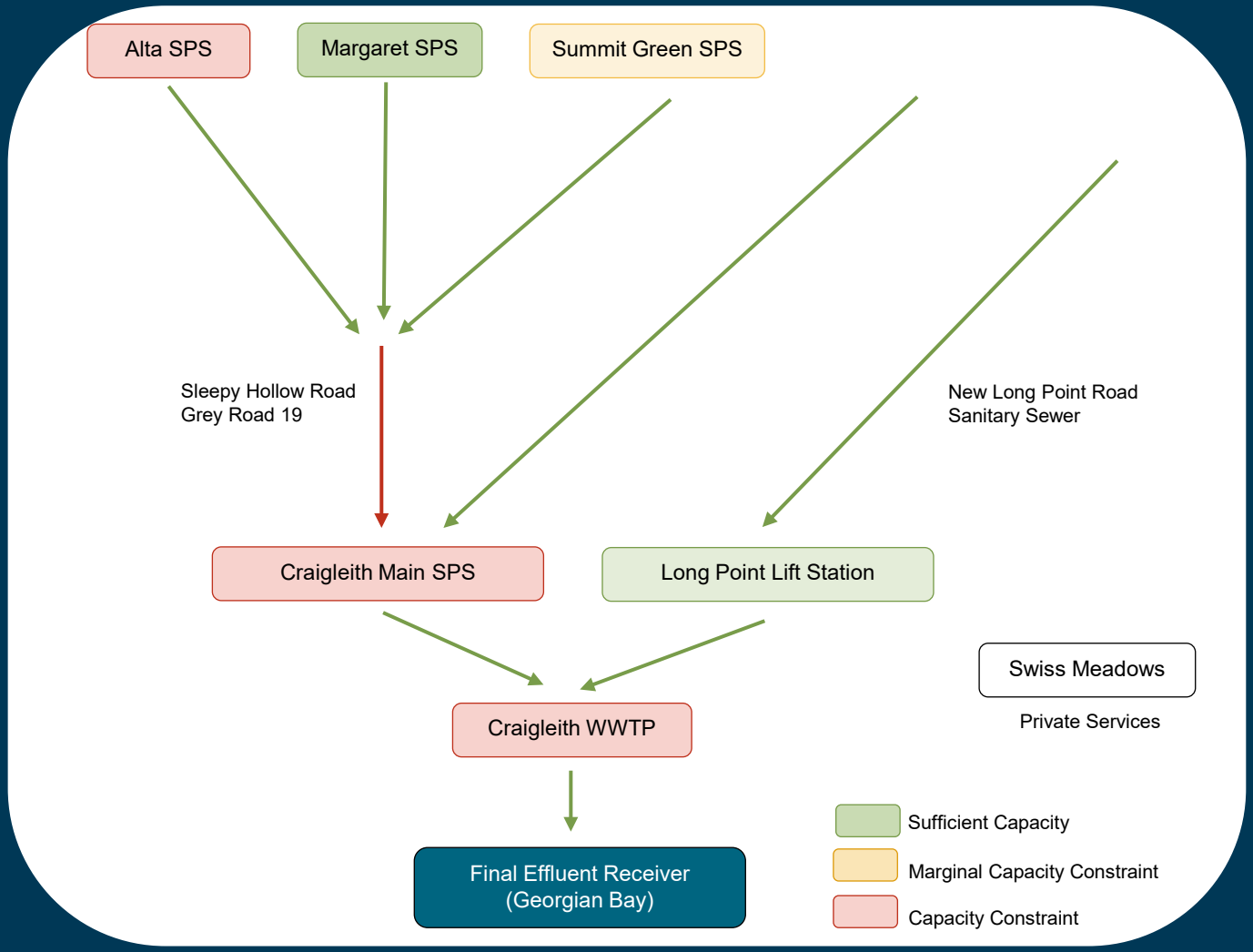
(2) OPCC of the Mill Street SPS Upgrades will be confirmed as part of the detailed design of the Mill Street SPS upgrades.

Craigleith Service Area



- Services the area of: Craigleith
- Craigleith Wastewater Treatment Plant (8,133 m^3/day)
- 4 Sewage Pumping Stations

Future Issues and Constraints - Craigleith



1. Swiss Meadows: Swiss Meadows does not have municipal wastewater servicing
2. Sewer System: there are capacity constraints within the sewer system (Grey Road 19, Sleepy Hollow Road)
3. Pumping: Summit Green SPS has marginal capacity under future conditions; the Alta SPS and Craigleith Main SPS have insufficient capacity under future conditions
4. Treatment : the Craigleith WWTP has insufficient capacity under future conditions

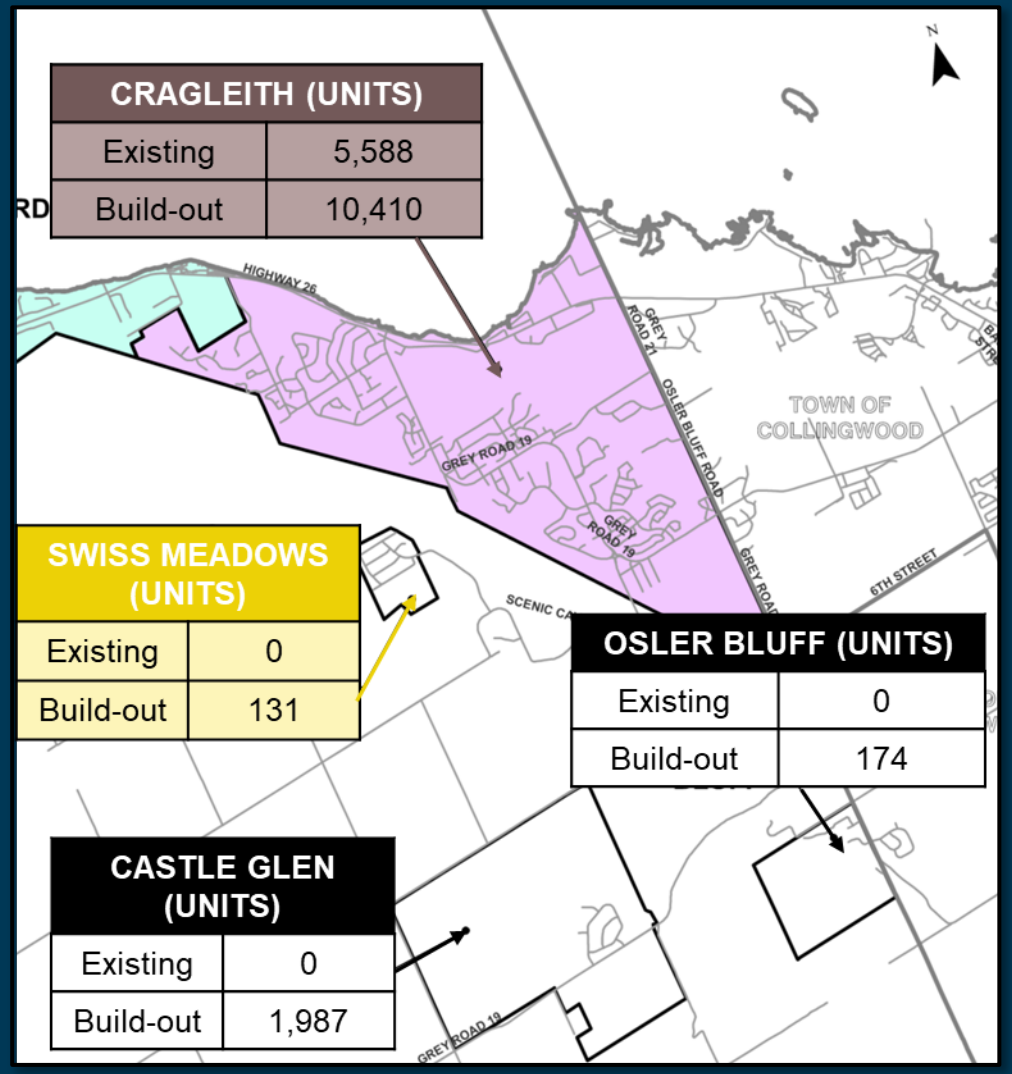
Projects are currently ongoing or planned to resolve capacity issues at:

- Craigleith Main SPS

Growth Projections - Craigleith

Craigleith Service Area – Total Growth Included in Master Plan (Units)	
Existing	**5,588**
Growth (2023 to Build-out)	+7,114(1)
Total Build-out	12,702(1)

Table Notes:
(1) Craigleith growth includes 682 units for Sites E&F and 370 units for Site B in Blue Mountain Village for a future village commercial resort



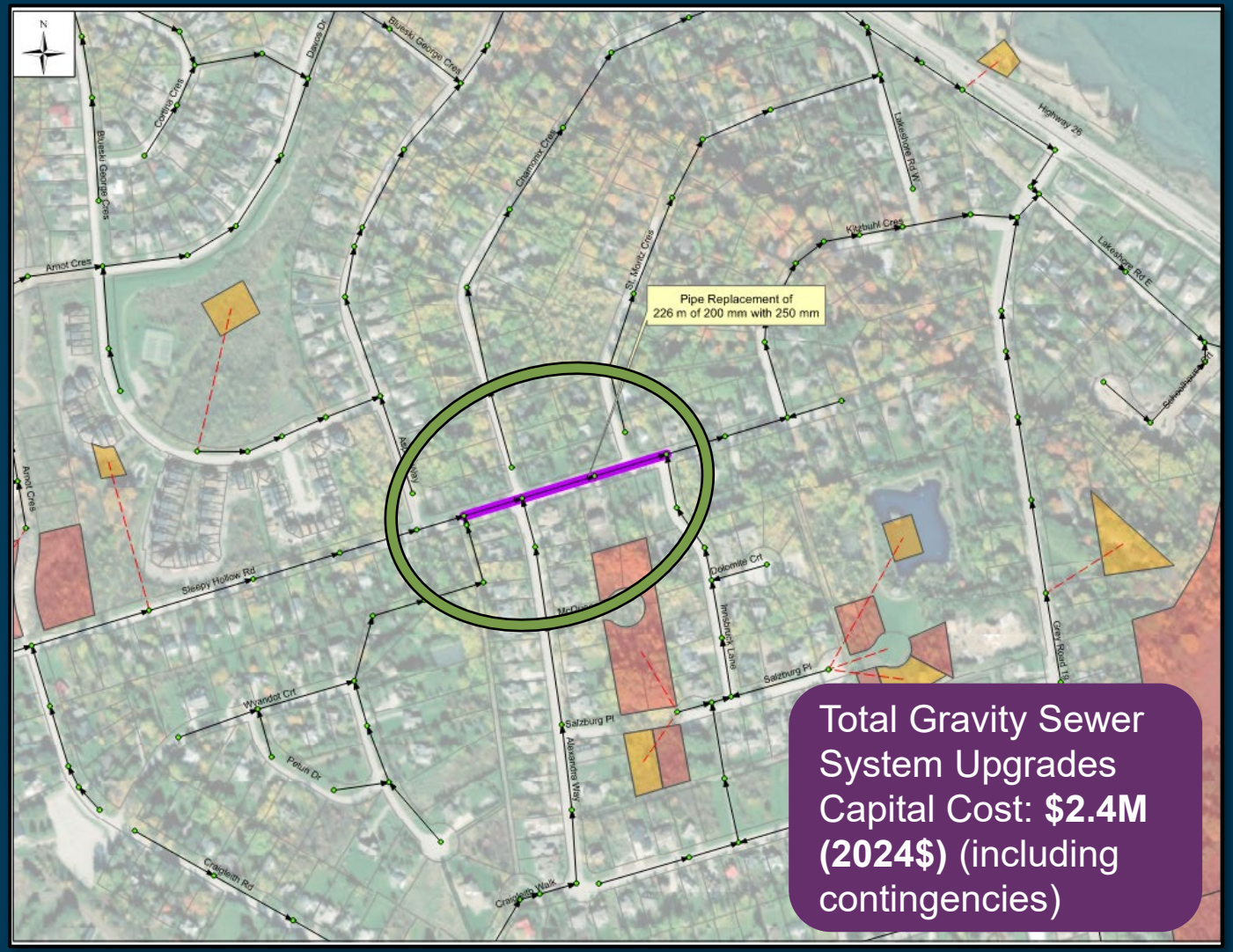
Craigleith Issue No. 1: Swiss Meadows Servicing

Alternative 1: Do Nothing	• Swiss Meadows would continue to be serviced with onsite septic systems
Alternative 2: Connection via Gravity Sewer to Craigleith	• Gravity sewer main would be constructed down the escarpment and sewage would be treated at Craigleith WWTP • Likely not technically feasible due to the steep grade of the escarpment *(not carried forward for further review)*
Alternative 3: Connection via Forcemain to Craigleith	• A SPS and forcemain would be constructed down the escarpment and sewage would be treated at Craigleith WWTP • This alternative is likely not technically feasible due to the steep grade of the escarpment (*not carried forward for further review)*
Alternative 4: Construct Package Treatment System	• A communal package treatment system would be constructed within Swiss Meadows

Craigleith Issue No. 1: Swiss Meadows Servicing

Alternative 1: Do Nothing	• Swiss Meadows would continue to be serviced with onsite septic systems
Alternative 2: Connection via Gravity Sewer to Craigleith	• Gravity sewer main would be constructed down the escarpment and sewage would be treated at Craigleith WWTP • Likely not technically feasible due to the steep grade of the escarpment *(not carried forward for further review)*
Alternative 3: Connection via Forcemain to Craigleith	• A SPS and forcemain would be constructed down the escarpment and sewage would be treated at Craigleith WWTP • This alternative is likely not technically feasible due to the steep grade of the escarpment (*not carried forward for further review)*
Alternative 4: Construct Package Treatment System	• A communal package treatment system would be constructed within Swiss Meadows

Craigleith Issue No. 2: Gravity Sewer System Deficiencies



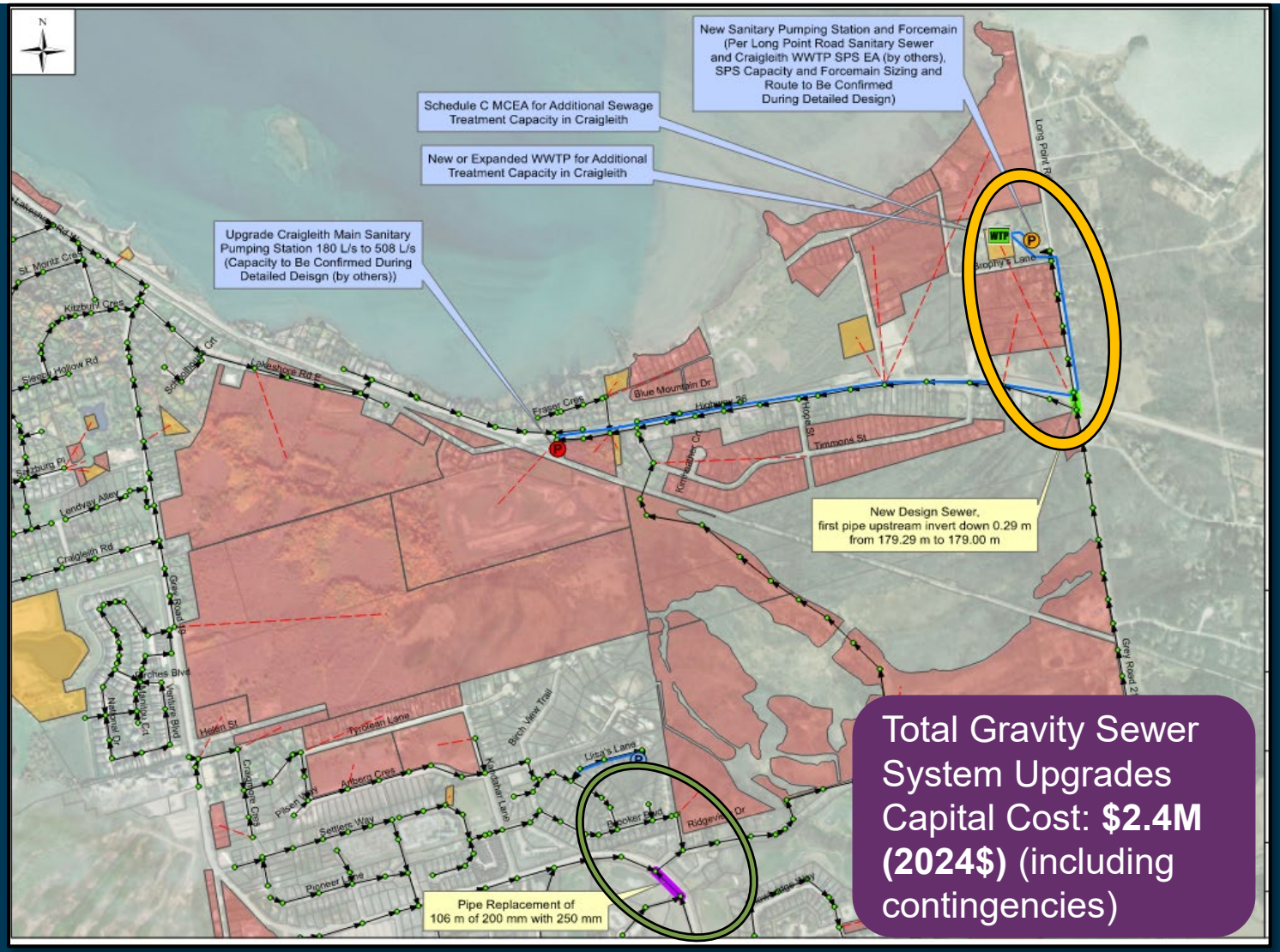
Gravity System Upgrades

- Approximate 0.3 km of sewer upgrades are needed throughout Craigleith

Long Point Road Sewer

- A 0.5 km sewer main is proposed to be constructed between Grey Road 19 and the Craigleith WWTP based on the results of the Long Point Road Sanitary Sewer and Craigleith WWTP Environmental Assessment

Craigleith Issue No. 2: Gravity Sewer System Deficiencies



Total Gravity Sewer System Upgrades Capital Cost: **$2.4M (2024$)** (including contingencies)

Gravity System Upgrades

- Approximate 0.3 km of sewer upgrades are needed throughout Craigleith

Long Point Road Sewer

- A 0.5 km sewer main is proposed to be constructed between Grey Road 19 and the Craigleith WWTP based on the results of the Long Point Road Sanitary Sewer and Craigleith WWTP Environmental Assessment

Craigleith Issue No. 3: Pumping Deficiencies

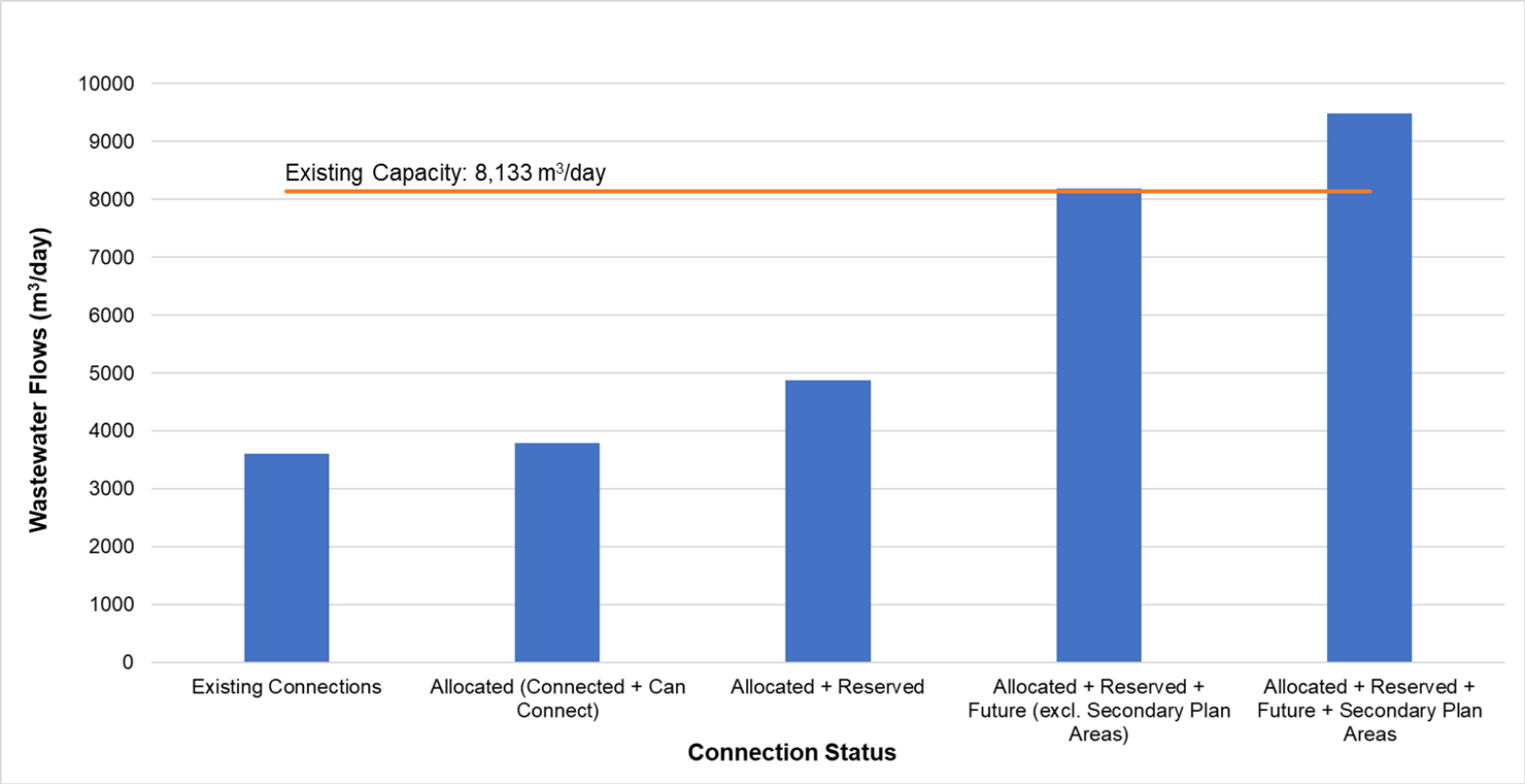
Craigleith Main SPS	• Upgrades are required for the SPS to accommodate future flows • Design is currently underway
Long Point Lift Station	• A new SPS at the Craigleith WWTP was recommended as part of the Long Point Road and Craigleith WWTP EA
Alta SPS	• Upgrades are required to accommodate future flows
Sunset SPS	• No upgrades have been identified, however periodic monitoring is recommended

Total Pumping Upgrades Capital Cost: **$3.5M (2024$)**

***Costs do not include costs for the Craigleith Main SPS Upgrades, which will be confirmed during detailed design**

Craigleith Issue No. 4: Treatment Deficiencies - Overview

- Future flow projections to Craigleith WWTP are beyond 85% of the rated capacity of the plant (if flows from Swiss Meadows are not considered)



Craigleith Issue No. 4: Treatment Deficiencies – Preferred Alternative

A Schedule C MCEA is required to identify the preferred alternative to increase treatment capacity. The Schedule C MCEA should consider the following alternatives, at a minimum:

Alternative 1: **Do Nothing**

Alternative 2: **Reduce Inflow and Infiltration** (to be considered in combination with other alternatives)

Alternative 3: **Increase Existing WWTP Capacity** (carried forward for interim budgeting purposes)

Alternative 4: **Build New WWTP at New Site**

Total Treatment Upgrades Capital Cost: **~$40-60M (2024$)** (including contingencies) (assuming Alternative 3)

Craigleith Service Area: Implementation Plan

Improvements	Cost[1] (2024$)	Funding Source	Timing	EA Schedule
Issue No. 1: Swiss Meadows Servicing	$0	N/A	N/A	N/A
Issue No. 2: Gravity Sewer System Deficiencies	$2.4M	Growth	Development Based	Exempt
Issue No. 3: Pumping Deficiencies	$3.5M[2]	Growth	Immediate or Near-term	Exempt – Alta SPS Schedule B – Craigleith Main and New Craigleith WWTP SPS
Issue No. 4: Treatment Deficiencies	$~40M[3]	Growth	Future (~20 years)	Schedule C

Notes:

1) Costs include contingencies, including 1.5% to cover legal, C of A, advertising, and miscellaneous costs, 15% to cover engineering, design and contract administration, 15% for general contingencies, and 2% for Town Project Management.
2) Sub-total SPS capital costs, SPS contingencies, and total SPS costs do not include costs for upgrades to the Craigleith Main SPS upgrades. Upgrades will be confirmed during detailed design.
3) For interim budgeting purposes, costs for Alternative 3 was be carried forward. Actual project costs will be contingent on the outcome of the Schedule C MCEA for Additional Sewage Treatment Plant Capacity in Craigleith.

Next Steps

Phase 1
Problem and/or Opportunity

Data Collection and Review

Identify Problems and Opportunities

Consult with Council and Public

Phase 2
Alternative Solutions

Identify and Evaluate Alternative Solutions

Prepare EA document for comment and review

Consult with Council and Public

Address Public & Stakeholder Comments

Overview

- Under the Environmental Assessment Act, municipalities must consider potential environmental effects before a potential water and/or wastewater project begins
- The streamlined MCEA process allows municipalities to consider impacts without having to obtain project specific approval under the Environmental Assessment Act

Questions?

Image Source: Town of The Blue Mountains

Thank You!

CIVICA

J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS

TOWN OF THE BLUE MOUNTAINS

Image Source: Town of The Blue Mountains

Jane Wilson, JLR
Associate, Senior Environmental Engineer
Phone: 226-780-7487
Email: jwilson@jlrichards.ca

Allison Kershaw, Town of The Blue Mountains
Manager of Water and Wastewater Services
Phone: 519-599-3131 ext. 226
Email: akershaw@thebluemountains.ca

www.jlrichards.ca

Frequently Asked Questions

How will the findings of the Clarksburg Master Servicing Plan be incorporated into the Wastewater Master Plan?

The Wastewater Master Plan is not intended to supersede any other studies that are focused on a more specific area of the Town, however it will incorporate the findings of these studies. While full servicing of Clarksburg was identified as the preferred alternative through the Clarksburg Master Plan, the Town is unable to pursue this alternative at this time as the costs are not considered affordable within the guidelines of the Town's Affordability Policy.

How were future growth projections calculated for this study?

Future growth projections are based on full build-out of all of the developable land within the Town's urban settlement area boundaries, excluding lands designated as secondary plan areas.

How is the number of users per household (2.15 users per household) calculated?

The Town's calculation of users per household is based on the 2021 census data. The calculations could be slightly distorted by the fact that there are a number of properties within the Town that are not listed as anyone's primary place of residence. The Town's infrastructure is sized in a manner that it would be able to accommodate the additional flow from these residences and any Accessory Dwelling Units.

Monitoring was conducted in areas of the Town with high numbers of short-term accommodations to determine the appropriate design criteria for assessing equivalent units counts for a variety of different types of users.