

# Wellesley Water and Wastewater Master Plan

Virtual Public Meeting  
Public Consultation Center #2  
June 20, 2024, 7-8:00 p.m.



Region of Waterloo

# Topics to cover tonight

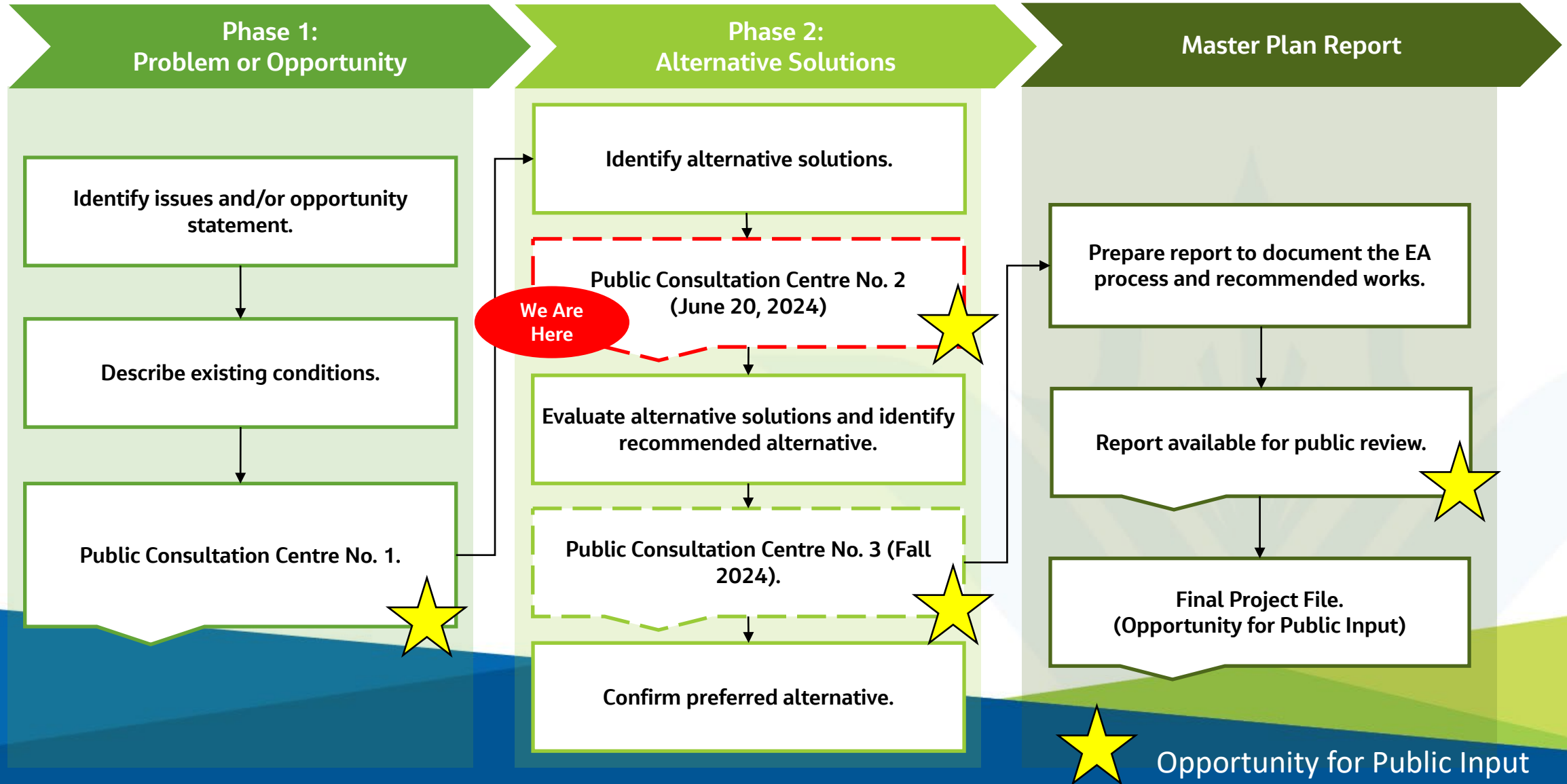
1. Master Plan context
2. Water alternatives
3. Wastewater alternatives
4. Presentation of evaluation criteria

# 1. Master Plan Context



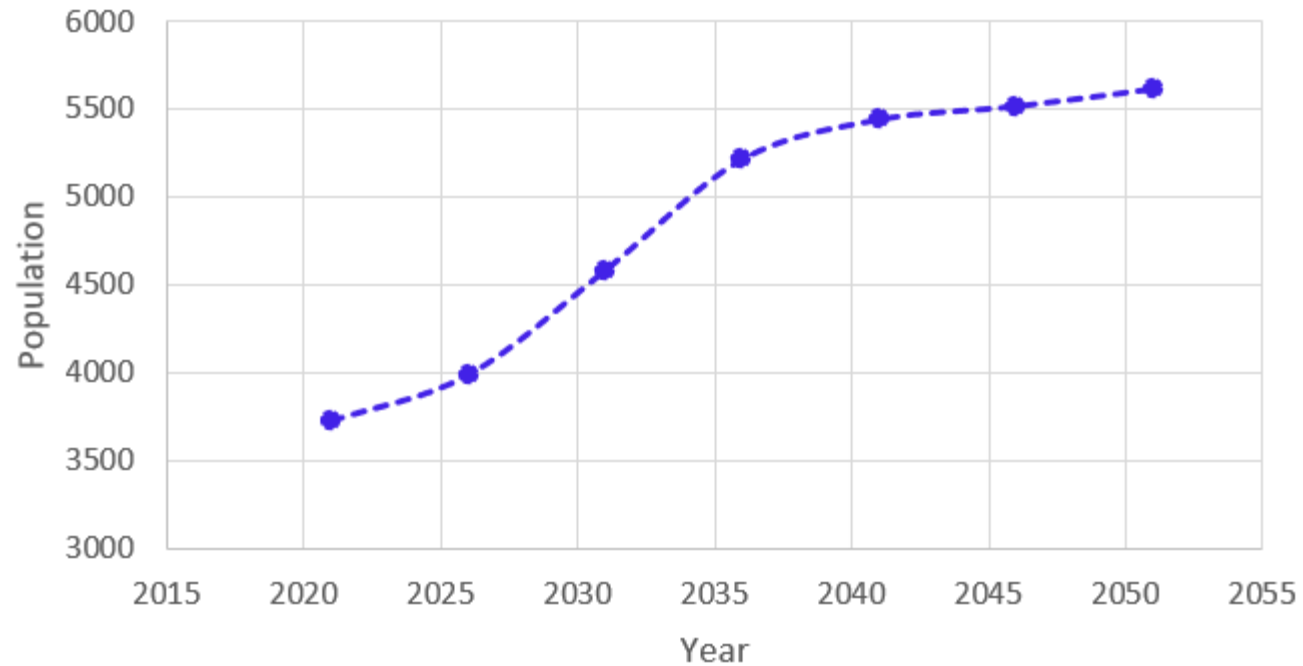
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# Environmental Assessment Process



# Overview of population projections

Village of Wellesley Population Projections



Current population is roughly 3,700  
The estimated population by 2050 is roughly 5,600

# Problem and opportunity

The Water and Wastewater Master Plan will....

- Identify water and wastewater needs over the next 30 years.
- Determine how the needs can be addressed.

Study Area: Village of Wellesley

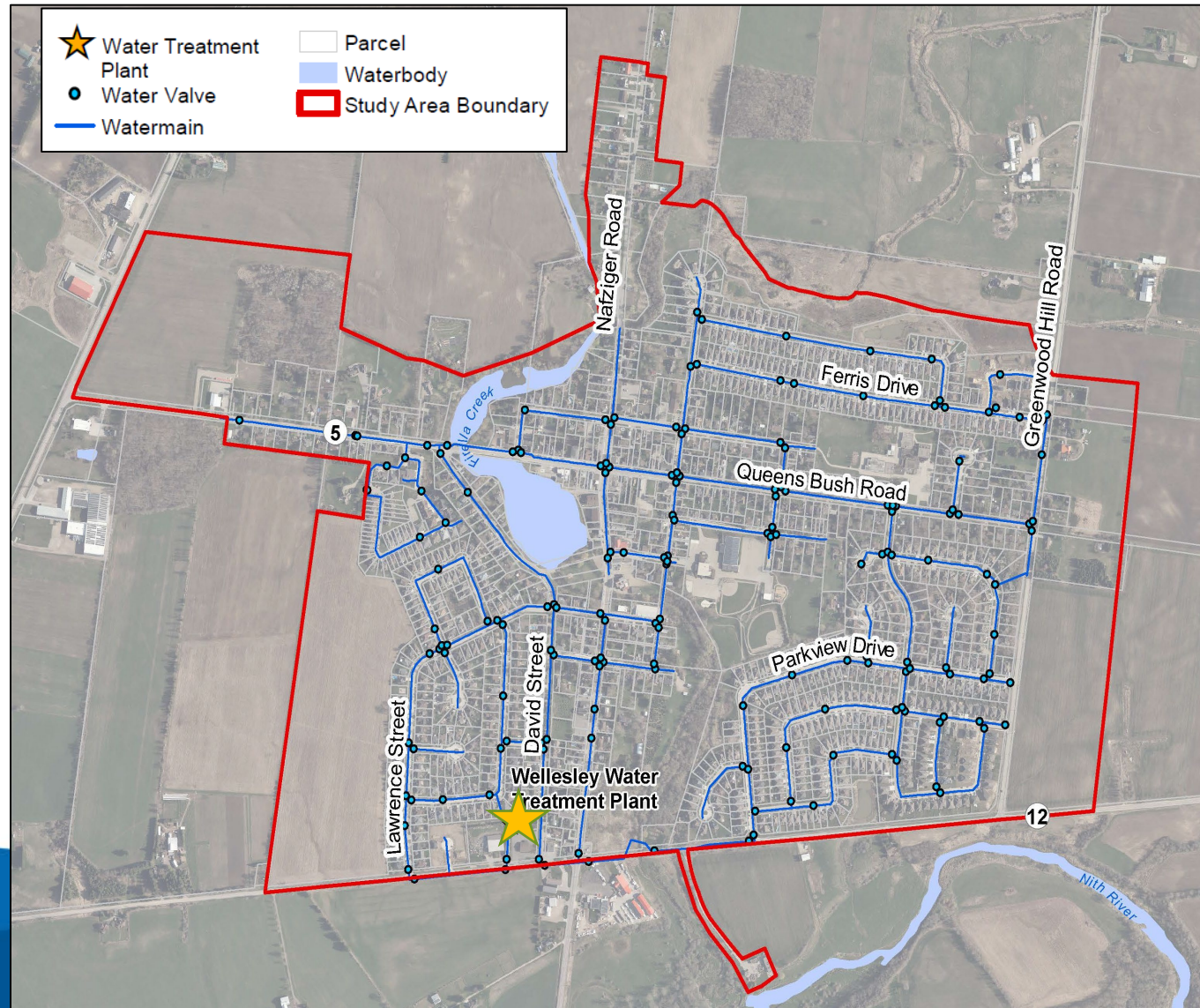


# 2. Water Alternatives



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# Water system overview



# Identified water supply needs



**A. Future Well  
Capacity Needs**

**B. Future Disinfection  
and Water Storage  
Needs**

## A. Alternatives to address well capacity needs

The alternatives will be subjected to screening and evaluation.

Alternative	Description & Considerations	Pass/Fail
Do Nothing	Maintain existing well supply only	Fail
Water Conservation	Implement conservation efforts	Fail *
Increase Existing Well Supply	Explore additional taking from existing well sources	Pass
Supplement Existing with New Well Supply	Maintain existing well supply and supplement with new wells	Pass
Supplement Existing with External Supply	Maintain existing well supply and supplement with supply from another drinking water system such as from KW	Pass

\* - does not meet project objectives but continued efforts should be carried out

## B. Alternatives to address future disinfection and water storage needs



The alternatives will be subjected to screening and evaluation.

Alternative	Description & Considerations	Pass/Fail
Do nothing	Maintain existing pump station and reservoir	Fail
New Storage On-site	Construct additional storage at the existing treatment plant site to meet future disinfection and storage needs	Fail *
New Storage Off-Site	Construct new off-site storage to meet future disinfection and storage needs; address redundancy	Pass

\* - existing property insufficient for required volume

# Off-site storage alternative locations

**Location 1**  
New community center lands to the west of the Village

**Location 2**  
Undeveloped land to the north of the Village

**Location 4**  
Undeveloped land in the north-east area of the Village

**Location 3**  
Centrally located near the former arena lands

**Location 5**  
Undeveloped land to the south of the Village



# Water storage examples

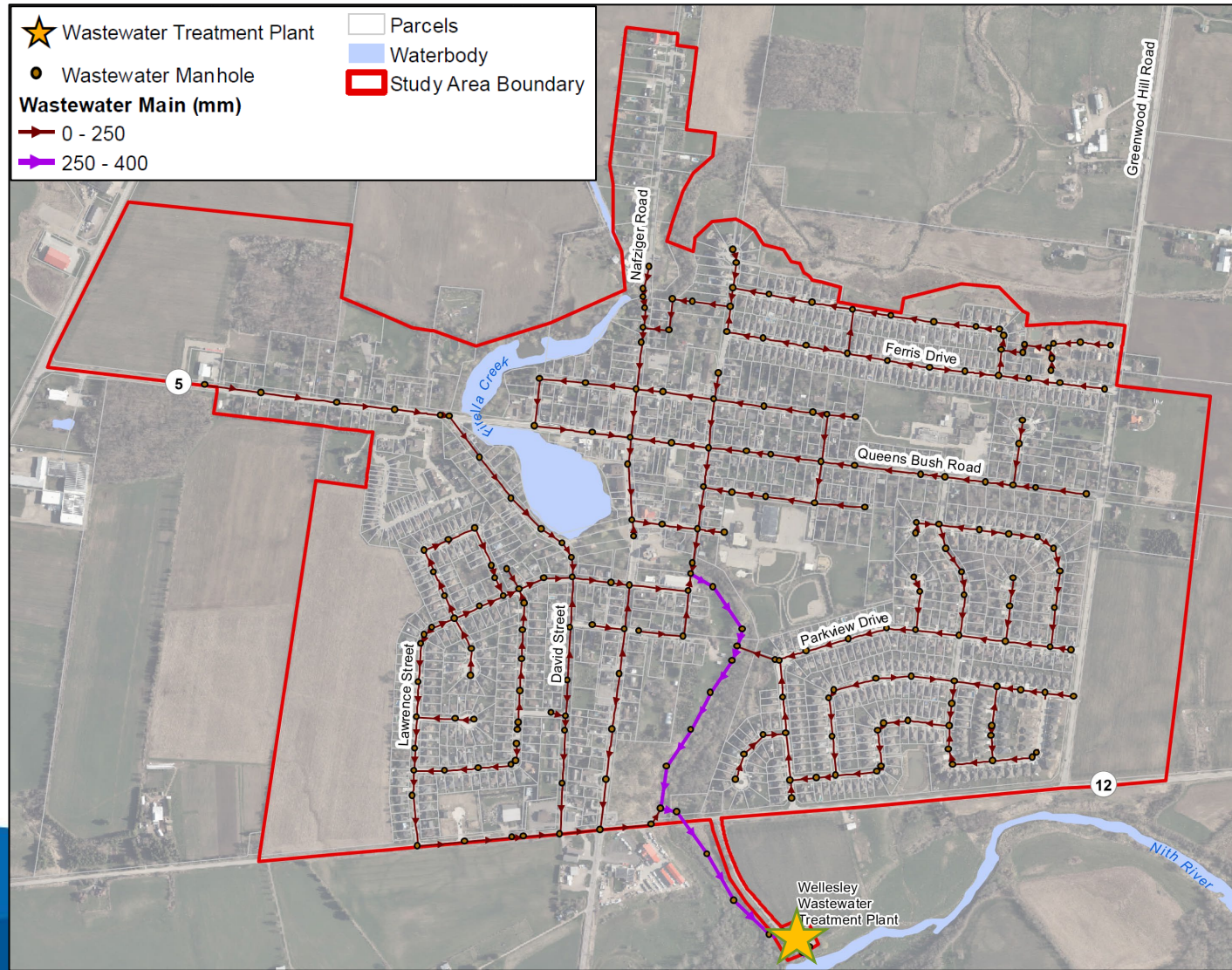


# 3. Wastewater Alternatives

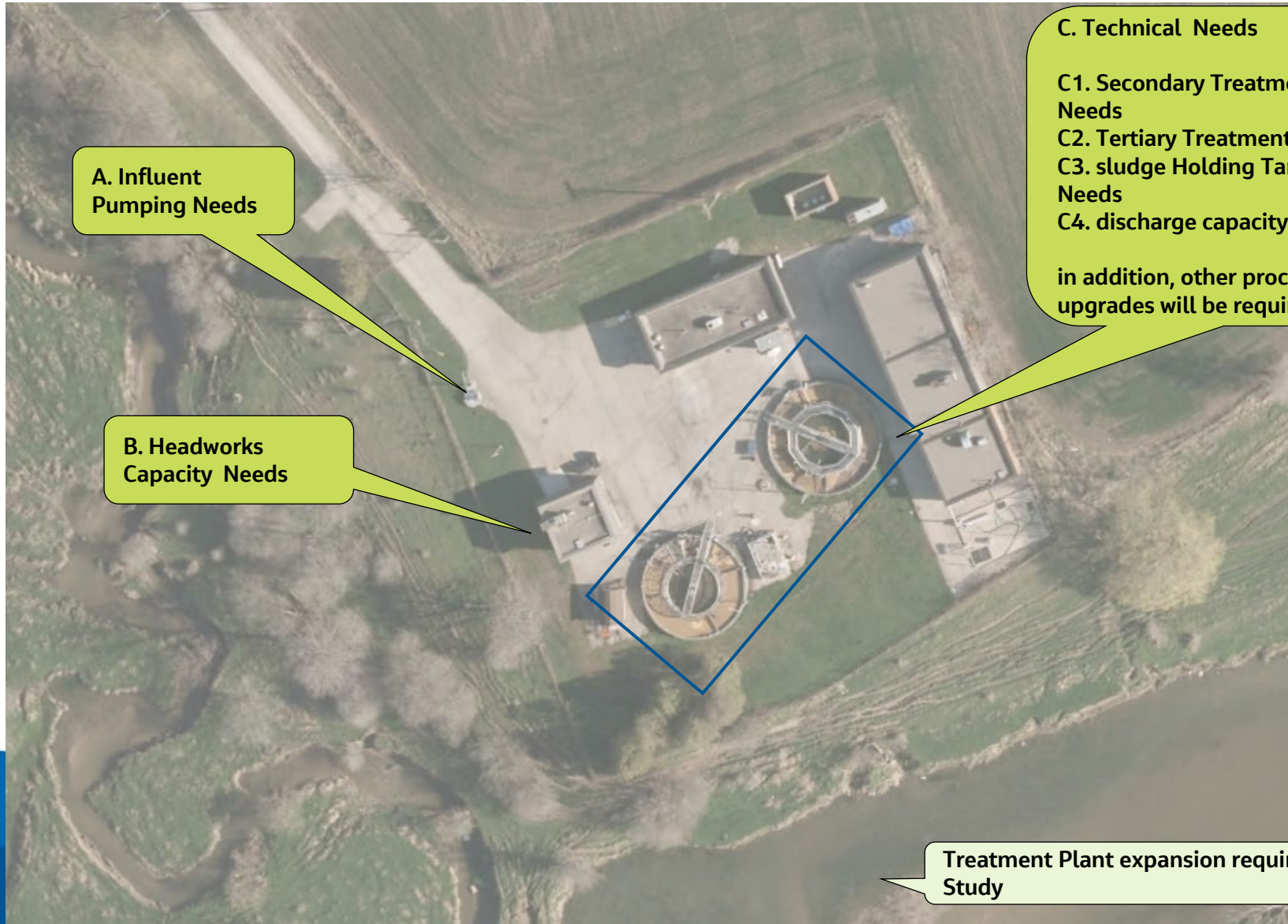


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# Wastewater system overview



# Identified wastewater treatment needs



**A. Influent Pumping Needs**

**B. Headworks Capacity Needs**

## **C. Technical Needs**

**C1. Secondary Treatment Capacity Needs**

**C2. Tertiary Treatment Capacity Needs**

**C3. sludge Holding Tank Capacity Needs**

**C4. discharge capacity needs**

in addition, other process/equipment upgrades will be required

Treatment Plant expansion requires a Receiving Water Quality Study

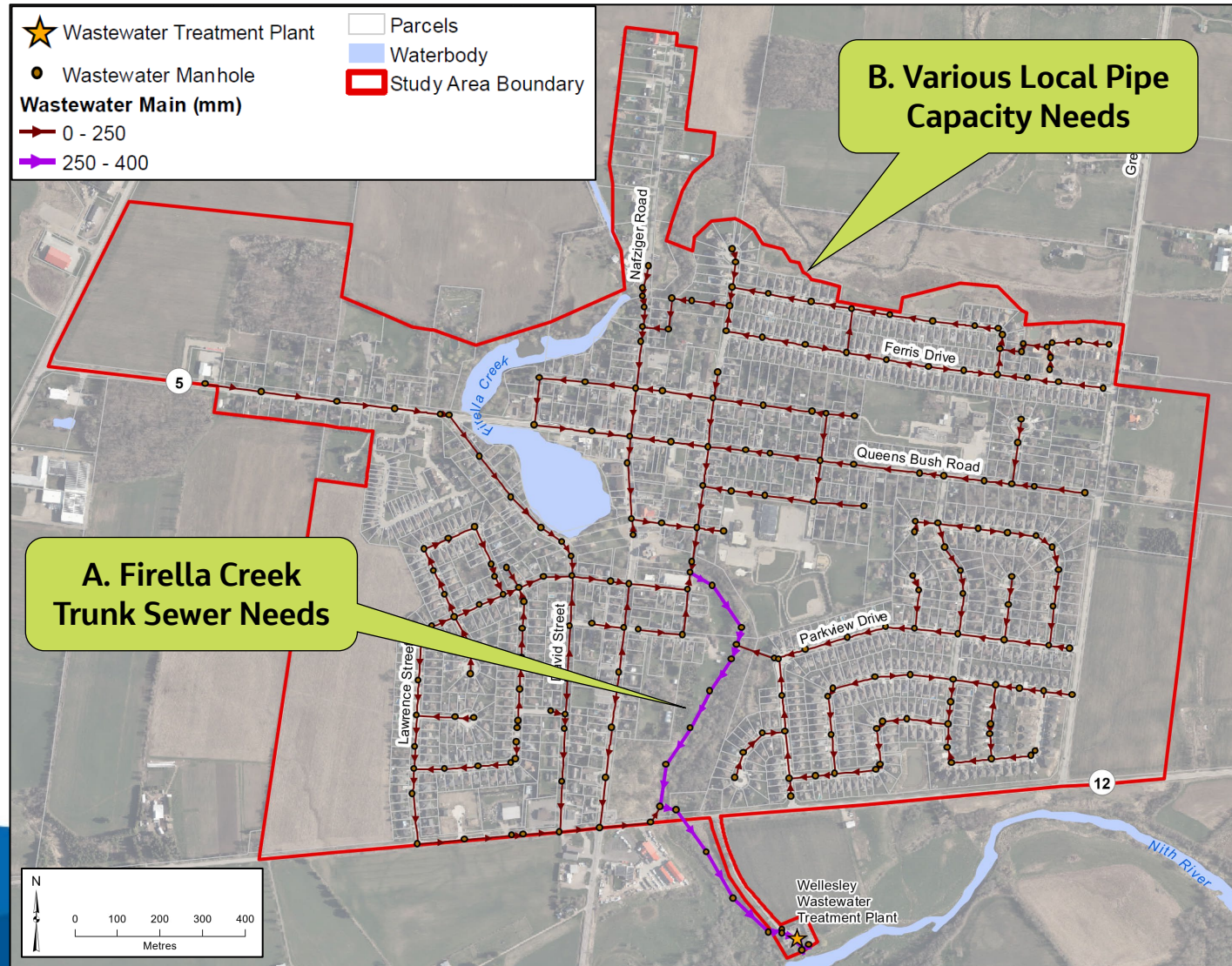
# Wastewater treatment alternatives

The alternatives will be subjected to screening and evaluation.

Alternative	Description & Considerations	Pass/Fail
<b>A. Influent Pumping</b>		
Do Nothing	Maintain existing pumping station capacity	Fail
Replace existing pumps /equalization tank	Replace existing pumps with larger capacity pumps and construct a new equalization tank	Pass
New pump facility/ equalization tank	Construct a new pump station/equalization tank; Will require land	Pass
<b>B. Headworks</b>		
Do Nothing	Maintain existing headworks	Fail
Replace existing	Replace existing screen and retrofit channel to increase capacity	Pass
New headworks	Construct a new headworks facility; Will require land	Pass

Influent pumping alternatives are subjected to the preferred alternative for the collection system upgrade

# Identified wastewater collection needs



## A. Alternatives to address Firella Creek trunk sewer needs

Category	Alternative	Pass/Fail
Do Nothing	Maintain existing pipe capacity	Fail
Source Control	Rain Barrel Program, Downspout Disconnection, Weeping Tile (Foundation Drain) Disconnection, etc.	Pass
Conveyance Control	Inline Storage	Fail
	Offline Storage	Pass
	Sewer Separation	Fail
	Pipe Upsizing or Twinning	Pass
Redirect Flows and End-of-Pipe Controls	Weir or Pipe Realignment (flow redirection)	Fail
	Capacity increases at end of the conveyance system *	Pass

\* - will be considered with the wastewater treatment plant alternatives

## B. Alternatives to address local pipe capacity needs

Category	Alternative	Pass/Fail
Do Nothing	Maintain existing pipe capacity	Fail
Source Control	Rain Barrel Program, Downspout Disconnection, Weeping Tile (Foundation Drain) Disconnection, etc.	Pass
Conveyance Control	Inline Storage	Fail
	Offline Storage	Fail
	Sewer Separation	Fail
	Pipe Upsizing or Twinning	Pass
Re-direct Flows	New Trunk Sewer/Sub-Trunk Sewer	Pass

# 4. Evaluation Criteria



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# Detailed Evaluation Criteria

## Technical

- Provides reliable service
- Meets existing and future needs
- Aligns with existing and planned infrastructure
- Aligns with existing and future land use
- Aligns with approval and permitting process
- Manages and minimizes construction risks
- Ability to adapt to climate change



## Social

- Minimizes impacts to residents related to noise, odour, traffic, and aesthetics
- Minimizes impacts to businesses
- Manages and minimizes construction impacts
- Conserves built heritage and/or cultural heritage landscapes
- Conserves archaeological resources
- Protects health and safety



## Detailed Evaluation Criteria

## Environmental

- Protects environmental features
- Protects wildlife and species at risk
- Protects groundwater, streams and rivers
- Minimizes climate change impacts



## Financial

- Provides low lifecycle costs



# Next Steps!



**Share your thoughts on EngageWR: Wellesley Water by July 19, 2024**

**Public meeting #3 — share preferred alternative — Fall 2024**



**Council with preferred alternative — Winter 2025**

**Report available for the public — Winter 2025**



# Thank you

We want to hear from you.

Please provide your comments by July 19, 2024, at [engageWR.ca/wellesleywater](https://engageWR.ca/wellesleywater)

For project updates visit [regionofwaterloo.ca/wellesleywater](https://regionofwaterloo.ca/wellesleywater)

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