LAWSS Master Plan Update

Municipal Class Environmental Assessment Study (MCEA)

Virtual Public Information Centre 1

LAWSS
Lambton Area Water Supply System

CIMA+

Lambton Area Water Supply System

The Lambton Area Water Supply System (LAWSS) supplies water to over 100,000 customers within three supply zones that service six member municipalities:

- Sarnia
- Point Edward
- St. Clair
- Lambton Shores (Forest)
- Plympton-Wyoming
- Watford/Warwick

LAWSS also supplies Brooke-Alvinston and has emergency connections to Petrolia and Chatham-Kent.

LAWSS is reviewing and updating its 2021 Master Plan with a 20-year planning horizon (2026–2046).

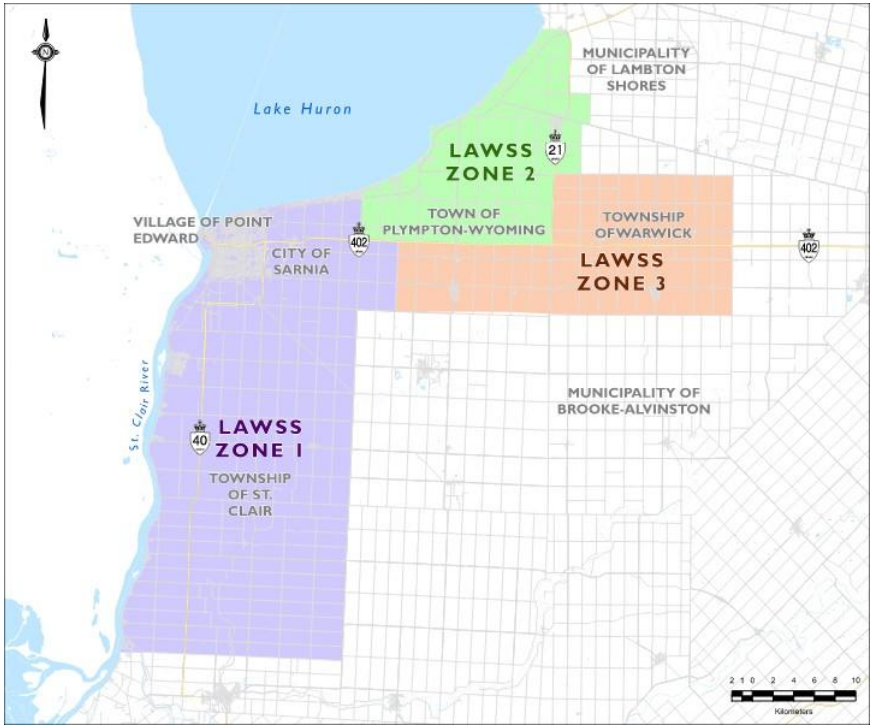

Fig 1. LAWSS Service Area

Objectives

Main objectives of this MCEA:

1. Carry out meaningful consultation with the public and other interested parties, then apply feedback in Master Plan development
2. Satisfy requirements for MCEA Approach #1 for Master Plans

   → Identify high-level potential impacts of the LAWSS Master Plan projects to inform future project-specific EA studies

This virtual Public Information Centre (PIC) presents:

- Introduction to the study and EA process
- Draft problem / opportunity statement
- Overview of the existing system, challenges, and opportunities
- Evaluation criteria

Municipal Class EA Process for Master Plans

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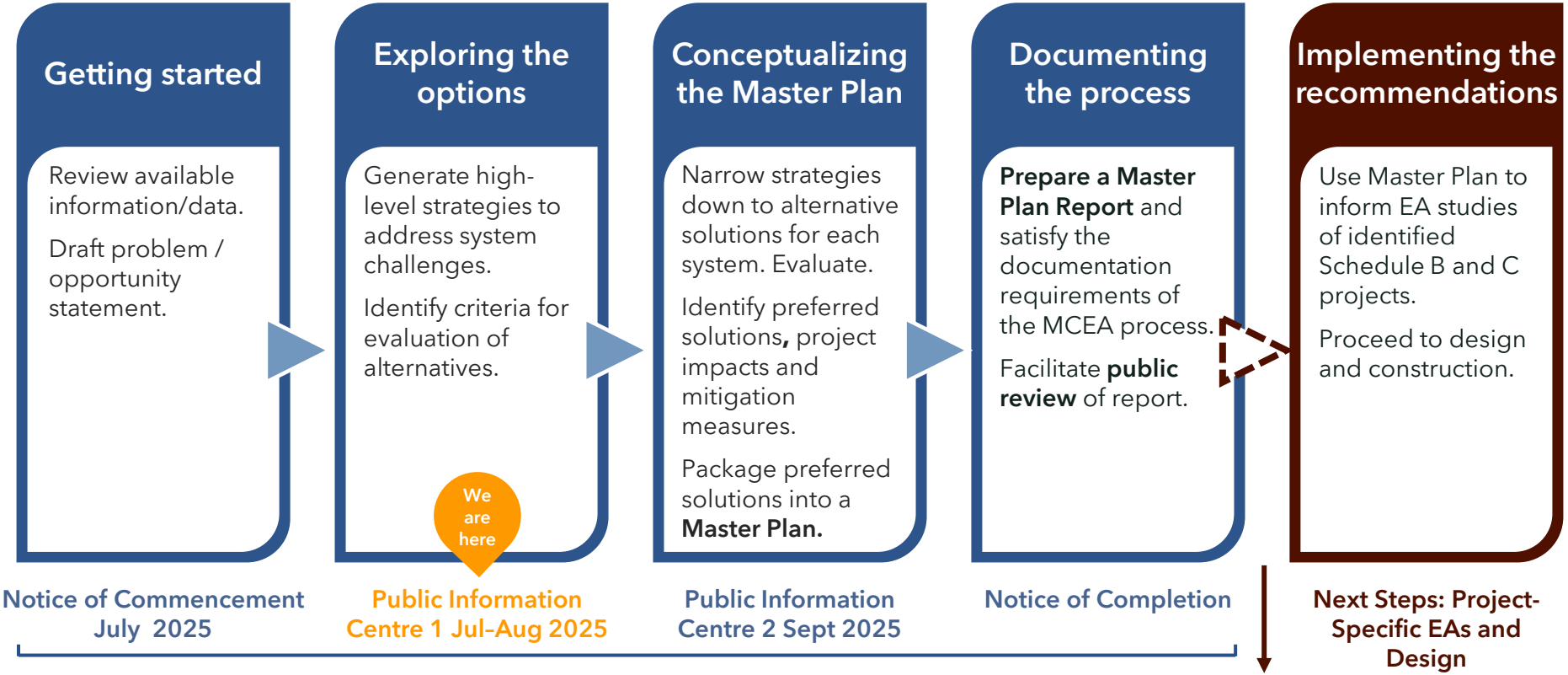

We want to hear from you

- Current or future water service concerns?
- Feedback on the 2021 Master Plan?
- What key priorities should the updated Master Plan consider?
- What criteria should be used to evaluate solution alternatives?

View the virtual PIC any time between July 23rd and August 13th. Access at the LAWSS website.

Email us your feedback by August 13th. **Please include your address or postal code.**

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To request access to PIC materials in a different format, please contact LAWSS at (519) 344-7429 or by email.

Role of Master Planning

Master plans for water supply systems are critical to ensuring that a **safe and sustainable water supply** can be provided as communities grow and develop. Master Plans aid with:

- Long-term planning and budgeting
- Delivery of infrastructure
- Emergency preparedness and system resilience
- Resource management

LAWSS is reviewing and updating its 2021 Master Plan. This Master Plan update will reflect recent population growth and address current and projected service challenges.

The Master Plan will be used as a basis for planning future projects and completing project-specific EA studies.

Problem / Opportunity Statement

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Problem:

Population growth in the LAWSS service area from 2021 to the present has created a need to review and adjust capital plans to ensure that the objectives are in alignment with evolving servicing requirements. As growth is anticipated to continue in both the near- and long-term, **sustainable improvements to water servicing** will need to be logically phased. Additional infrastructure and improvements to the existing system must be in place in a timely and orderly manner to service approved growth over a **20-year planning horizon**.

Tell us what you think

Opportunity:

Provide an updated and realistic water utility infrastructure master plan or "road map" that will **support future capital works planning**, including funding opportunities, and meet the needs of existing and future water customers. The update will consider opportunities to **improve system efficiency and levels of service**.

Projected Growth in LAWSS Service Area

- Population growth has accelerated in much of Lambton County since the 2021 Master Plan and will likely continue
- Possibility of new members and increased customer demands

Population Year	2024	2046
Sarnia	72,318	83,635
St. Clair	15,002	19,988
Point Edward	1,991	2,290
Plympton-Wyoming	9,640	14,000
Warwick/ Watford	3,865	5,040
Lambton Shores (Forest)	2,521	3,093

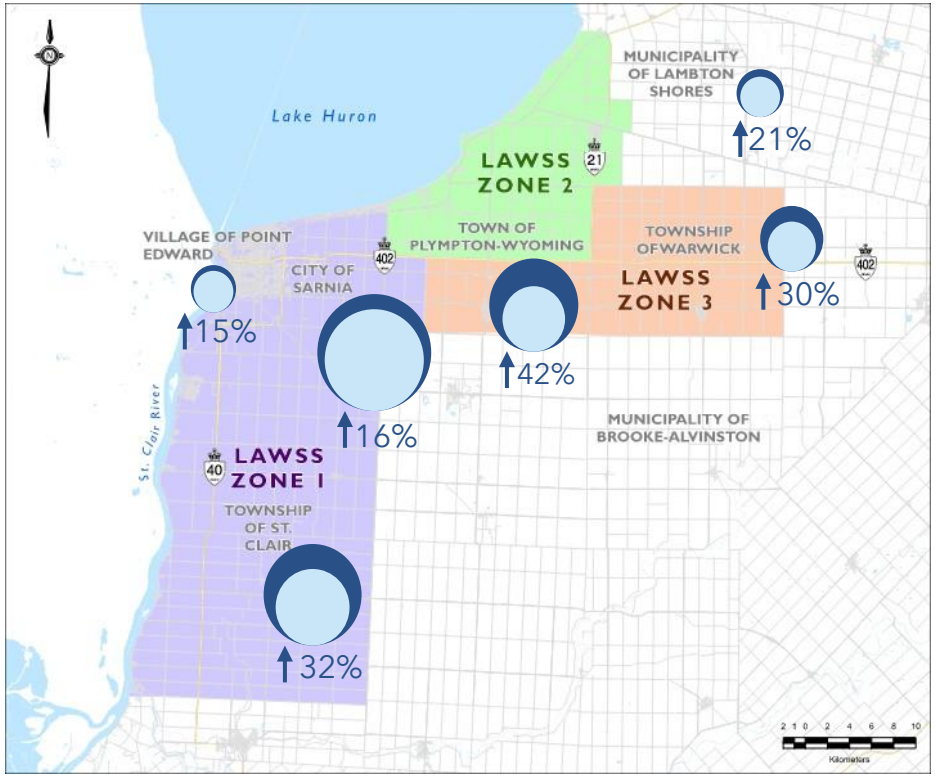

Fig 2. Projected growth by municipality (2024–2046)

LAWSS System Components

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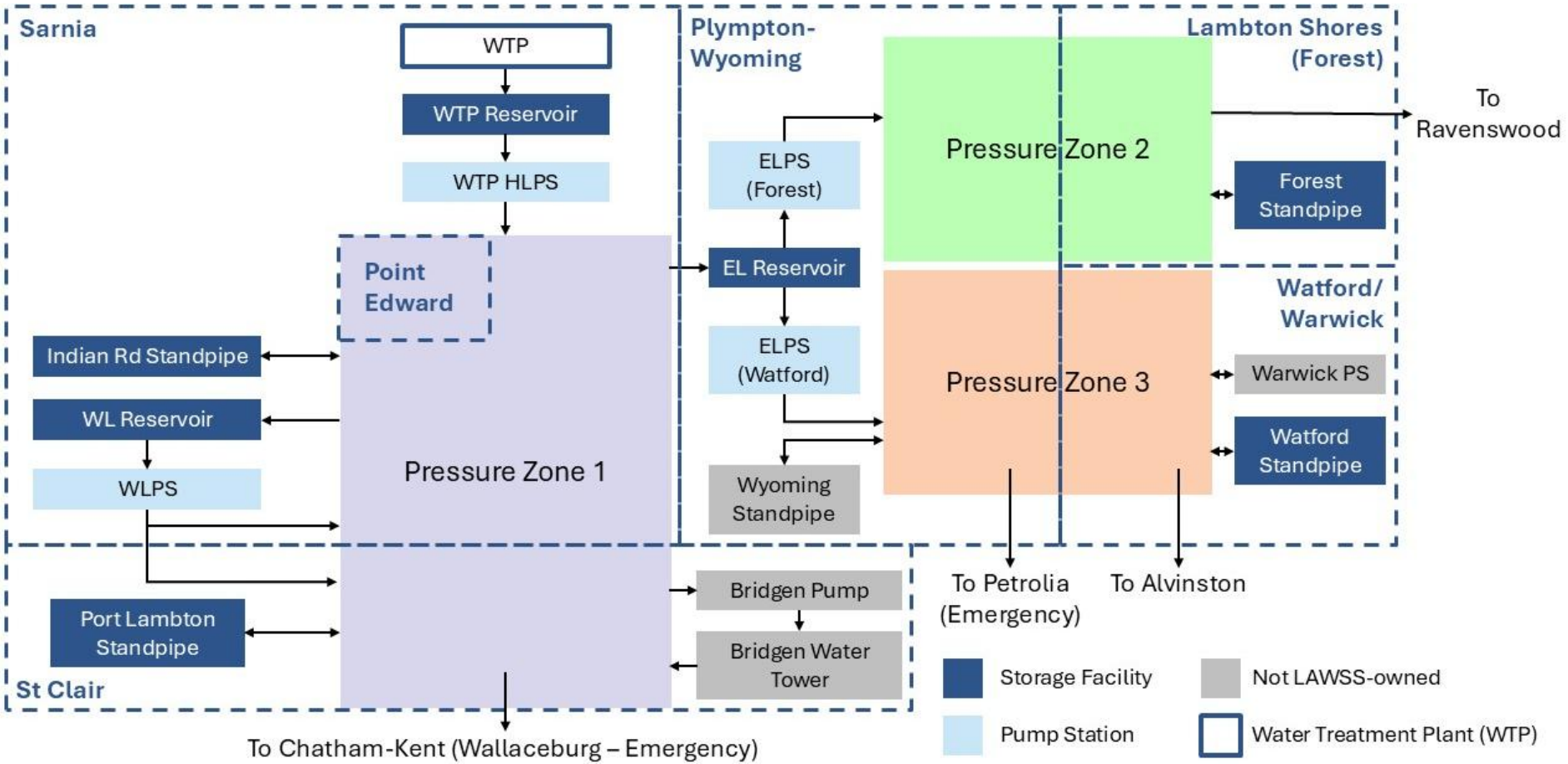
Lambton Area Water Supply System



Master Plan Opportunities and Challenges

Opportunities

- Increase storage capacity and emergency preparedness when existing infrastructure requires replacement
- Optimization of West Lambton Pumping Station
- Optimization of LAWSS Water Treatment Plant High Lift Pumping Station
- Assess 2021 Master Plan projects to ensure alignment with population growth
- Improve monitoring of large customers

Challenges

- Low pressure areas at east boundary of Zone 1
- Substantial anticipated growth throughout service area
- Aging infrastructure
- Pumping capacity limitations
- Elevated storage limitations
- High localized industrial / commercial water usage

2021 Master Plan Progress

Issue #1: East Lambton Pump Station (ELPS) Fill Constraint / Low Pressures

- *Detailed design underway*

Issue #2: Watford Standpipe Fill Constraint / Low Pressures

Issue #3: West Lambton Pump Station (WLPS) Fill Constraint / Low Pressures

- *Detailed design underway*

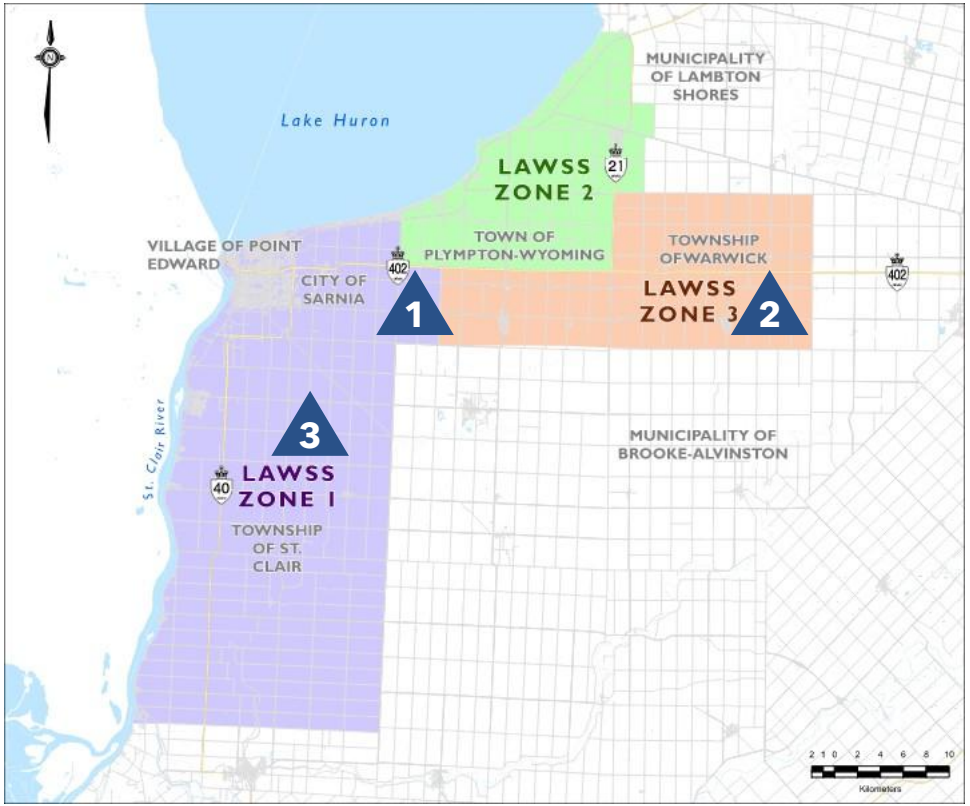
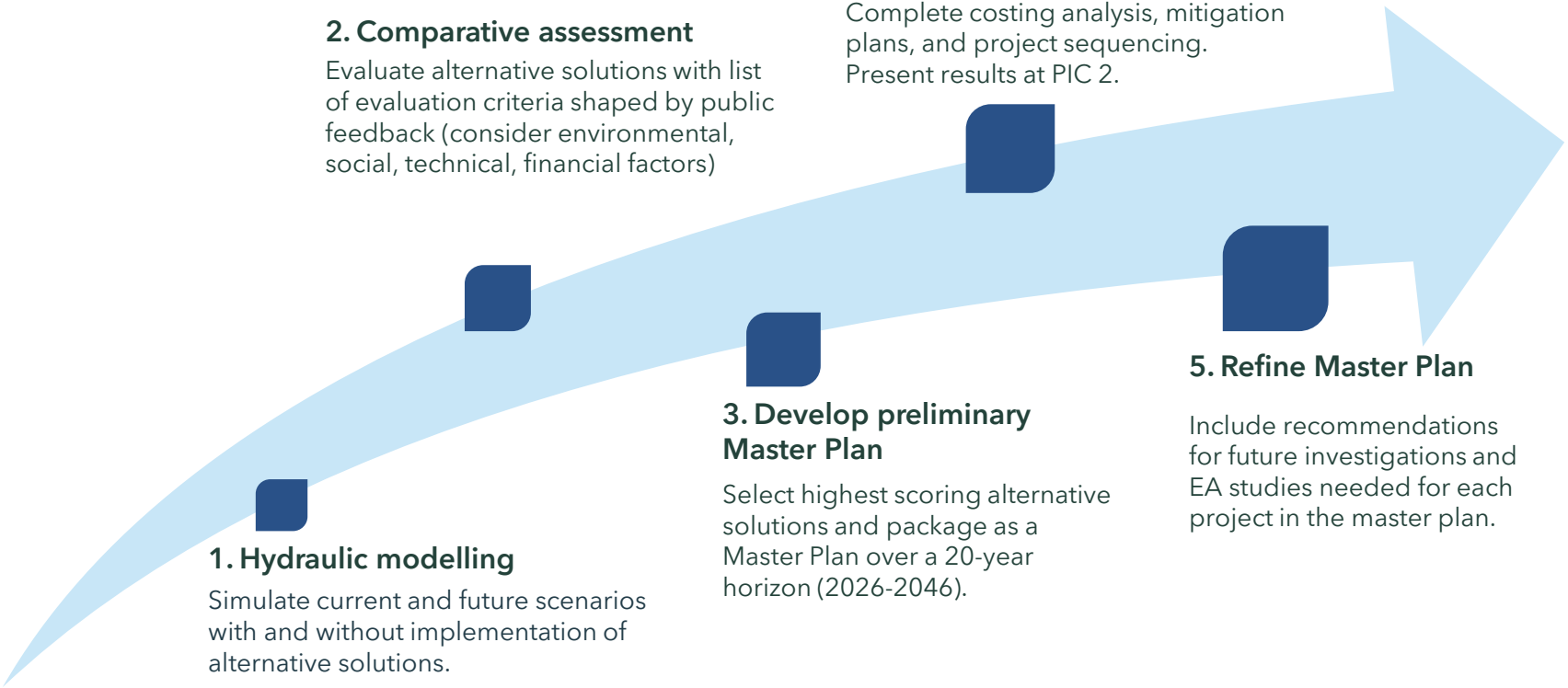


Fig 3. Locations of 2021 Master Plan projects

What is the evaluation process?

Alternative solutions will be assessed and consolidated into a Master Plan with the following steps:



1. Hydraulic modelling

Simulate current and future scenarios with and without implementation of alternative solutions.

2. Comparative assessment

Evaluate alternative solutions with list of evaluation criteria shaped by public feedback (consider environmental, social, technical, financial factors)

3. Develop preliminary Master Plan

Select highest scoring alternative solutions and package as a Master Plan over a 20-year horizon (2026-2046).

4. Confirm preferred plan

Complete costing analysis, mitigation plans, and project sequencing. Present results at PIC 2.

5. Refine Master Plan

Include recommendations for future investigations and EA studies needed for each project in the master plan.

Evaluation Criteria

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Technical

- Ability to meet future servicing needs
- Constructability and ease of integration / implementation

Environmental

- Potential to impact sensitive ecosystems / habitats
- Potential to impact surface or groundwater
- Vulnerability to environmental change or hazards

Social

- Impact / disruption to adjacent properties
- Property acquisition requirements

Financial

- Construction costs
- Operations / maintenance costs

Land Requirements

- Other planned / designated uses
- Regulatory compliance

Did we miss anything? Let us know!

Thank you!

After the PIC, the project team will:

- Review and consider input received
- Identify and evaluate additional alternative solutions
- Package preferred solutions into a preliminary Master Plan

For more information about this project, please visit the LAWSS website and navigate to the 2025 Master Plan page:

https://lawss.org/lambton-area-water-supply-system-water-master-plan-update-2025/

Should you have any questions or comments at any time during the project, please contact a member of the project team:

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