City of Windsor
LITTLE RIVER POLLUTION CONTROL PLANT STUDY

PUBLIC INFORMATION CENTRE NO. 2
WELCOME

Municipal Class Environmental Assessment Study
April 23rd, 2025

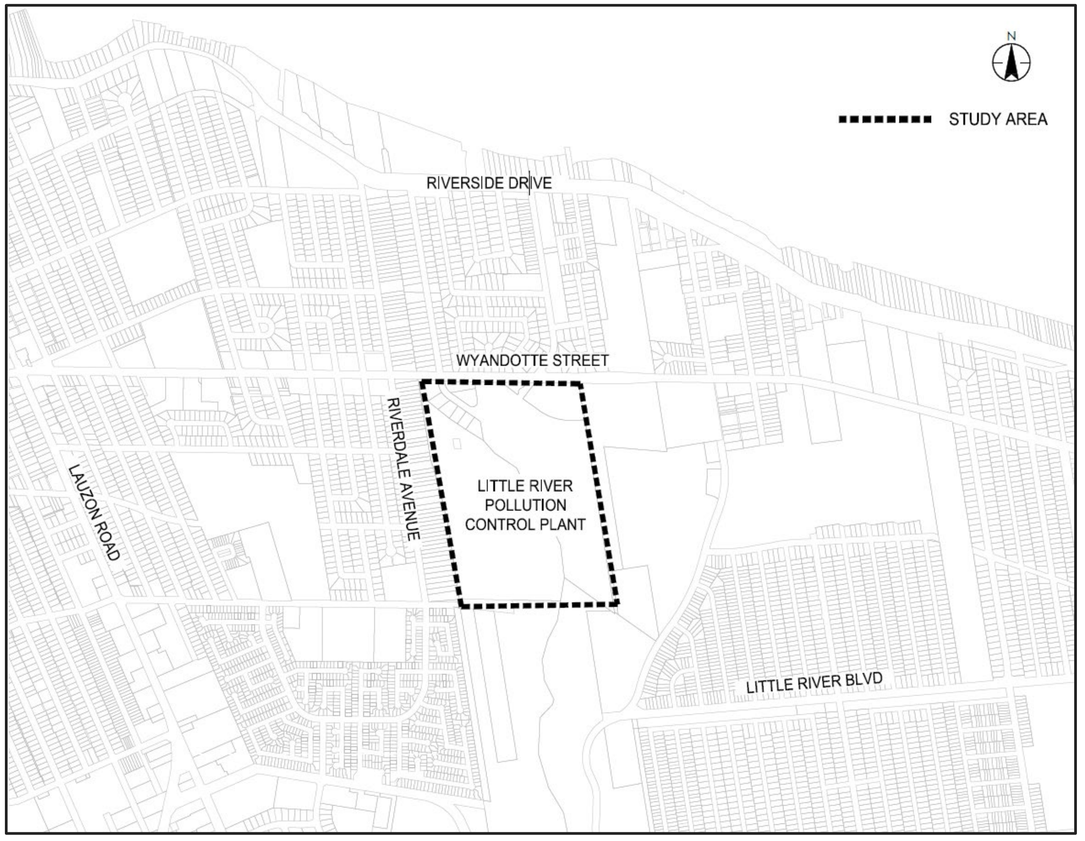
Introduction

Purpose of this Study

The purpose of this study is to determine the preferred solution and conceptual design to address the need for additional wastewater capacity at the Little River Pollution Control Plant (LRPCP).

The purpose of this Public Information Center (PIC) is to:

- Describe the Class Environmental Assessment (EA) Process
- Review the Study Background
- Present an Evaluation of and Obtain Public Input on Alternative Design Solutions
- Include Feedback in the Evaluation Process



Introduction

Key Features of the Class EA Process

This study is being conducted in accordance with the Class EA requirements for Schedule ‘C’ Projects.

	Municipal Class EA Phases	
	Phase 1 – Review and identify problem or opportunity	This EA Study
★	Phase 2 – Alternative solutions to problem	This EA Study
	Phase 3 – Alternative design concepts for the preferred solution	This EA Study
	Phase 4 – Prepare Environmental Study Report	This EA Study
	Phase 5 – Implementation of the preferred design	Future Work

Problem / Opportunity Statement

Prior planning reports identified the need to upgrade the existing LRPCP.

- The Sewer & Costal Flood Protection Master Plan (SMP) outlined **immediate wet weather flow capacity issues** at the LRPCP and confirmed that during severe wet weather conditions the facility is unable to accommodate all flows resulting in combined sewer overflows.
- The Sandwich South Master Servicing Plan (SSMSP) identified the **long-term treatment capacity limitations** of the LRPCP and the need to increase capacity to accommodate future development.

In general, the study objective is to follow the planning process defined under the *Environmental Assessment Act* to arrive at an environmentally responsible and cost-effective solution to address the need for additional capacity at the LRPCP.

Future Requirements

Service Area and LRPCP Capacity

The anticipated wastewater flow in millions of liter per day (MLD) was determined to be:

Flow Projections	2045 (20-Year)	2065+ (Ultimate)
Average Daily Flow (ADF)	77.2 MLD	104 MLD
Peak Dry Weather Flow (DWF)	201 MLD	259 MLD
Peak Wet Weather Flow (WWF)	393 MLD	474 MLD

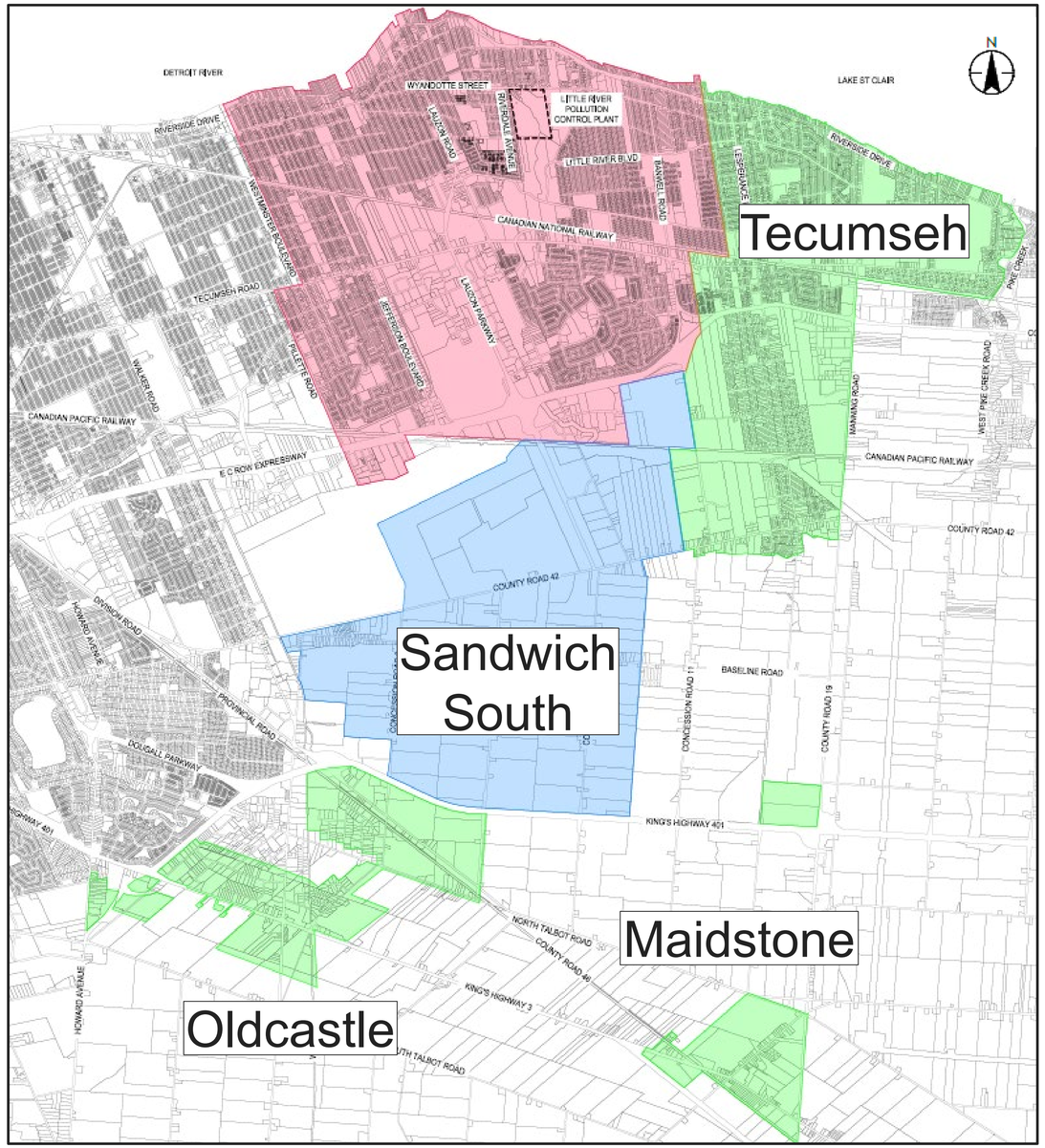
Note: Flow values were updated since last PIC based on new projections in the Town of Tecumseh. The Peak WWF varies with Inflow and Infiltration (I&I) Reduction Factor (equivalent to ± 13 MLD).

Existing LRPCP Rated Capacity:

ADF = 72.8 MLD

Peak DWF = 90 MLD

Peak WWF = 225 MLD

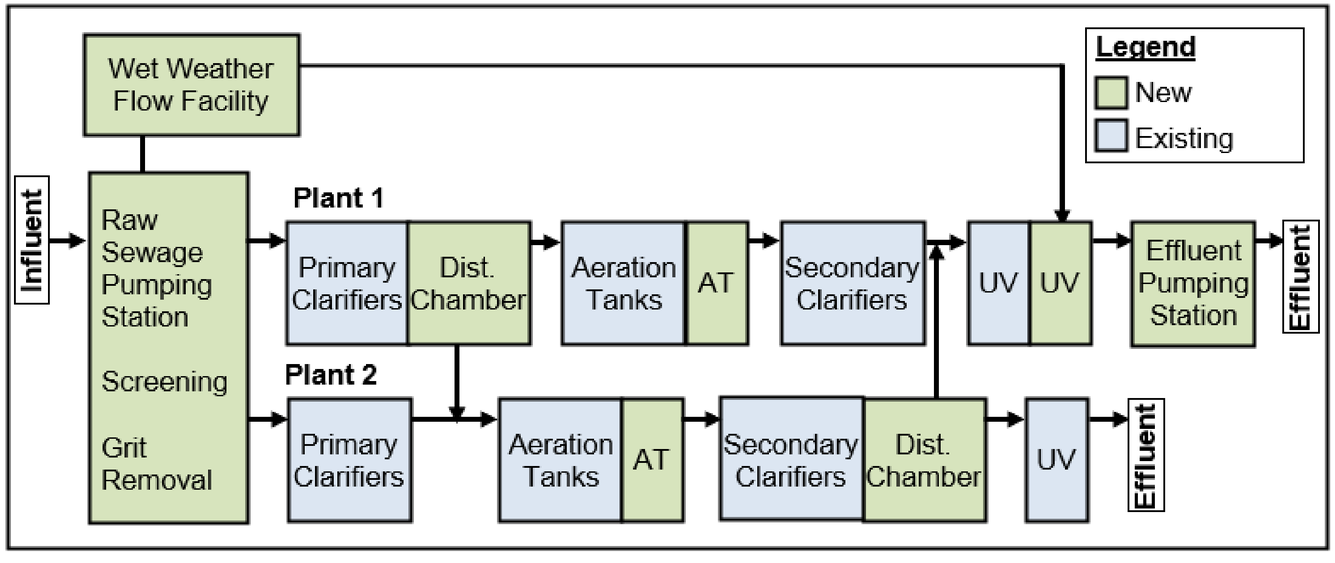


Alternative Solutions
Long-List of Potential Design Solutions

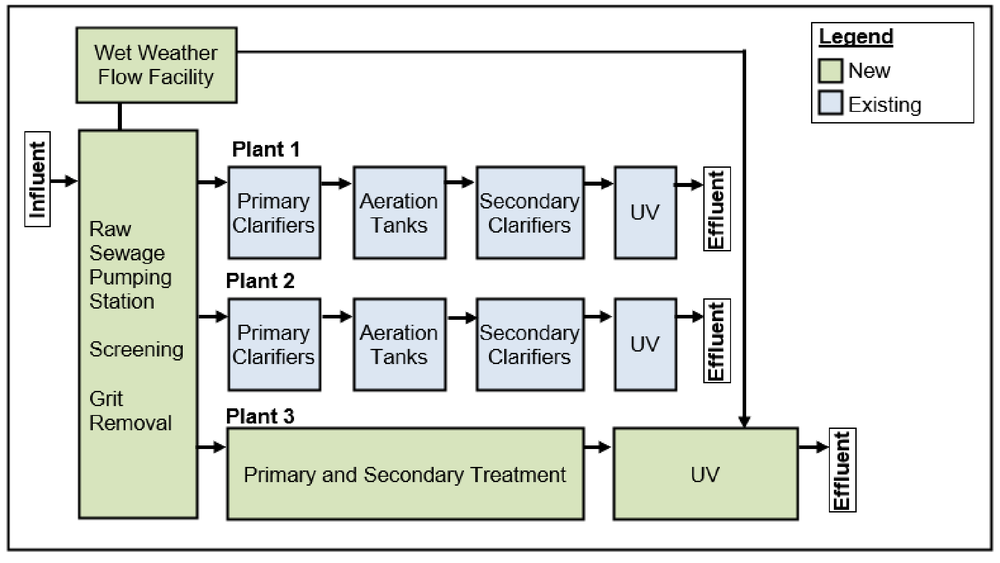
The following broad planning level alternative solutions were considered:

1. Do Nothing
2. Reduce WWFs through Inflow and Infiltration (I&I) Reduction Efforts
3. Construct a WWF Management Facility
4. Modify Operations of Existing Infrastructure
5. Discharge to New Sewage System
6. Upgrade Existing Treatment Trains at LRPCP
7. Add an Additional Treatment Train at LRPCP
8. Combination of Above Alternatives

Schematic for Alternative No. 3 + 6



Schematic for Alternative No. 3 + 7



Alternative Solutions
Evaluation Criteria

Component	Evaluation Criteria
Technical Suitability	• Ability to meet current and future wastewater servicing needs • Constructability, implementation timeline, and phasing • Flexibility to meet future needs and/or climate change projections • No adverse impacts on existing infrastructure (operations and/or maintenance)
Social	• Impacts to archaeological sites or areas of archaeological potential • Impacts to known or potential built heritage resources and cultural heritage landscapes • Noise, vibration, odour, or air pollution emissions • Permanent changes or impacts to society / community • Development policies and agreements • Ability to increase development and improve housing supply
Natural Environment	• Impacts to vegetation, fish and wildlife, areas of natural and scientific interest, environmentally sensitive areas, and soil / geology • Regulatory compliances • Development and planning policies
Economic	• Capital, operational and maintenance (O&M) costs • Ability to improve development and generate economic growth

Alternative Solutions
Screening of Alternatives

Poor
Fair
Good
Very Good

Alternative	Technical	Social	Natural Environmental	Economic	Screening Result
1. Do Nothing	Poor	Poor	Poor	Fair	Poor
2. Reduce WWFs through I&I Reduction Efforts	Fair	Good	Fair	Good	Fair
3. Construct a WWF Facility	Very Good	Good	Good	Fair	Good
4. Modify Operations of Existing Infrastructure	Poor	Poor	Poor	Fair	Poor
5. Discharge to New Sewage System	Poor	Poor	Poor	Poor	Poor
6. Upgrade Existing Treatment Trains at LRPCP	Fair	Fair	Fair	Fair	Fair
7. Add an Additional Treatment Train at LRPCP	Very Good	Good	Good	Fair	Good
Combination of Above Alternatives	Very Good	Good	Very Good	Good	Very Good

- Alternative 1, 4, and 5 were not considered viable solutions
- Alternative 2 and 3 were considered for addressing Peak WWF
- Alternative 6 and 7 were considered for addressing the Peak DWF
- A combination of alternatives 2, 3, 6, and 7 would be considered as a holistic solution for the LRPCP servicing needs

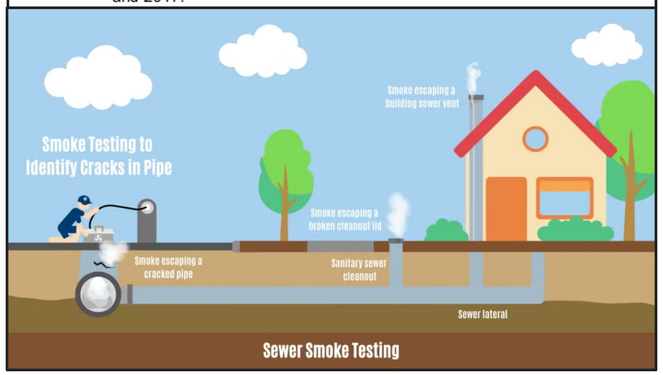
Alternative Solution No. 2

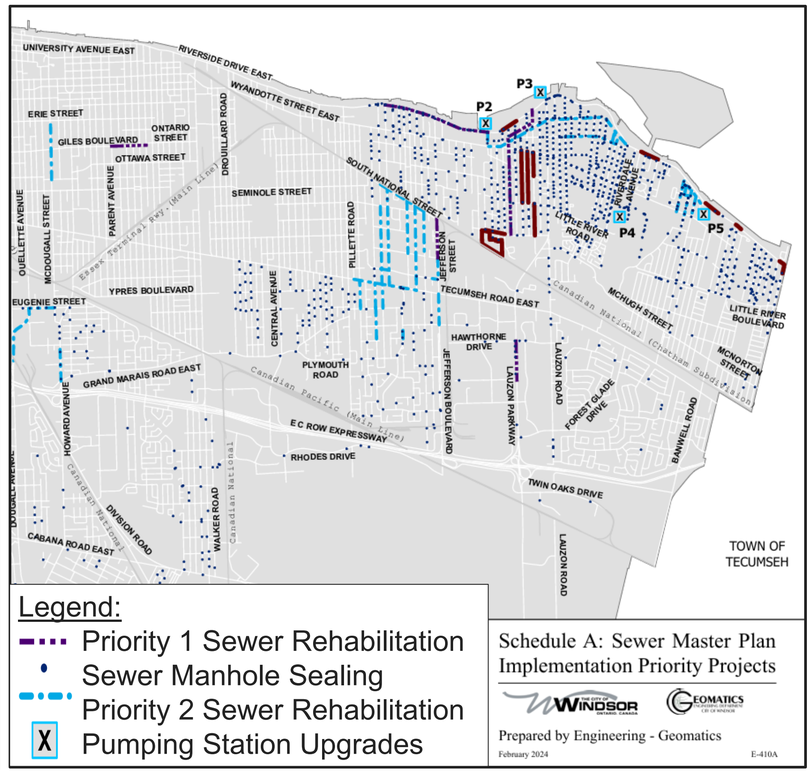
Reduce WWFs through I&I Reduction Efforts

City has numerous initiatives, programs, plans, and construction projects aimed at identifying sources and mitigating impacts of I&I:

Select Flood Risk Reduction Project and Programs:

- **Smoke and Dye Testing Projects**
  - Summary: Smoke and dye testing programs to assess illegal and damaged connections were completed throughout the City. Smoke testing includes the placement of smoke in the sanitary sewer system and a subsequent observation identifying where the smoke escapes. Dye testing includes placing a dye tablet in a home's yard drain to verify whether it is connected to a sanitary sewer.
  - Benefits: Smoke and dye testing are both useful tools to identify illegal connections or breaks, where unintended stormwater may enter the sanitary system, which can lead to increased basement flooding risks.
  - Progress: From the smoke testing, nearly 200 instances of failure with the property owner's private drain connection clean-out were identified. The work was undertaken in numerous areas including Forest Glade. Nearly, 9,000 work orders were issued for smoke and dye testing between 2014 and 2017.

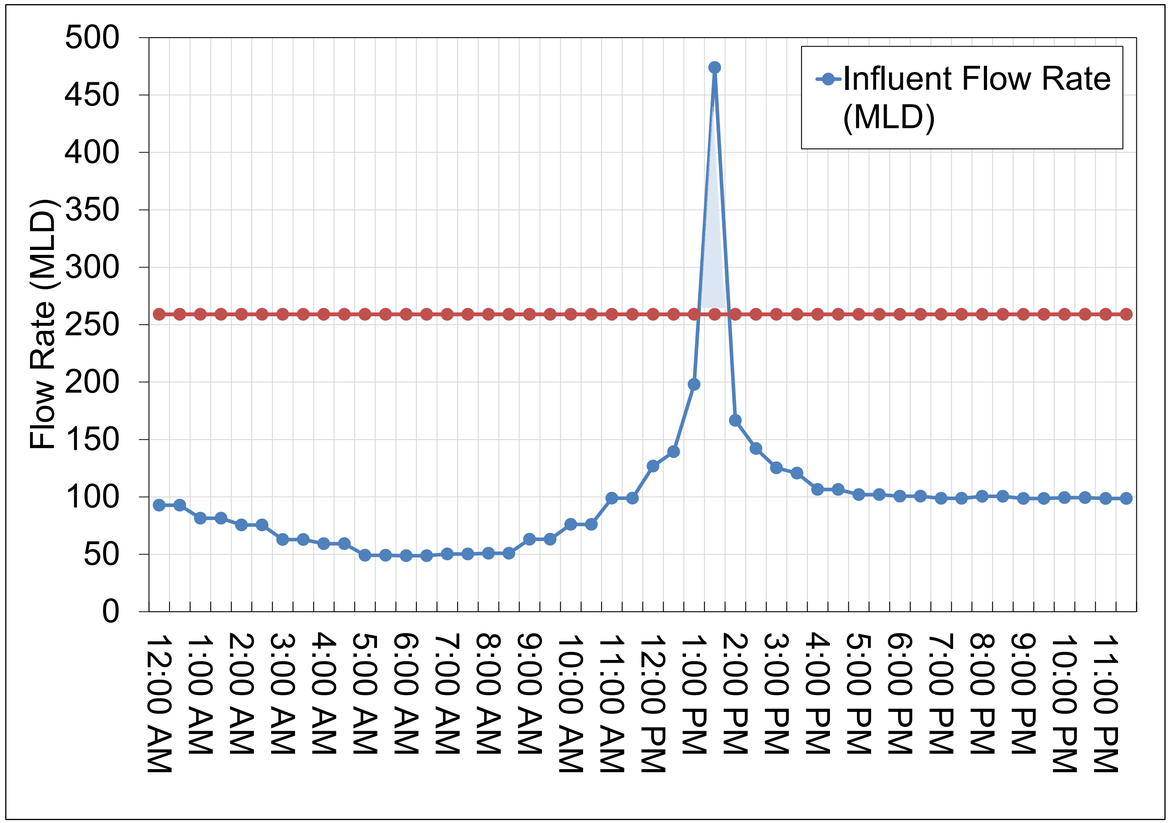




- These projects will assist in reducing WWFs to the sanitary sewer system and therefore could delay the LRPCP expansion or reduce the capacity requirements at the LRPCP
- For this study, the anticipated peak WWF is presented as a range that will be refined accordingly during the detailed design phase

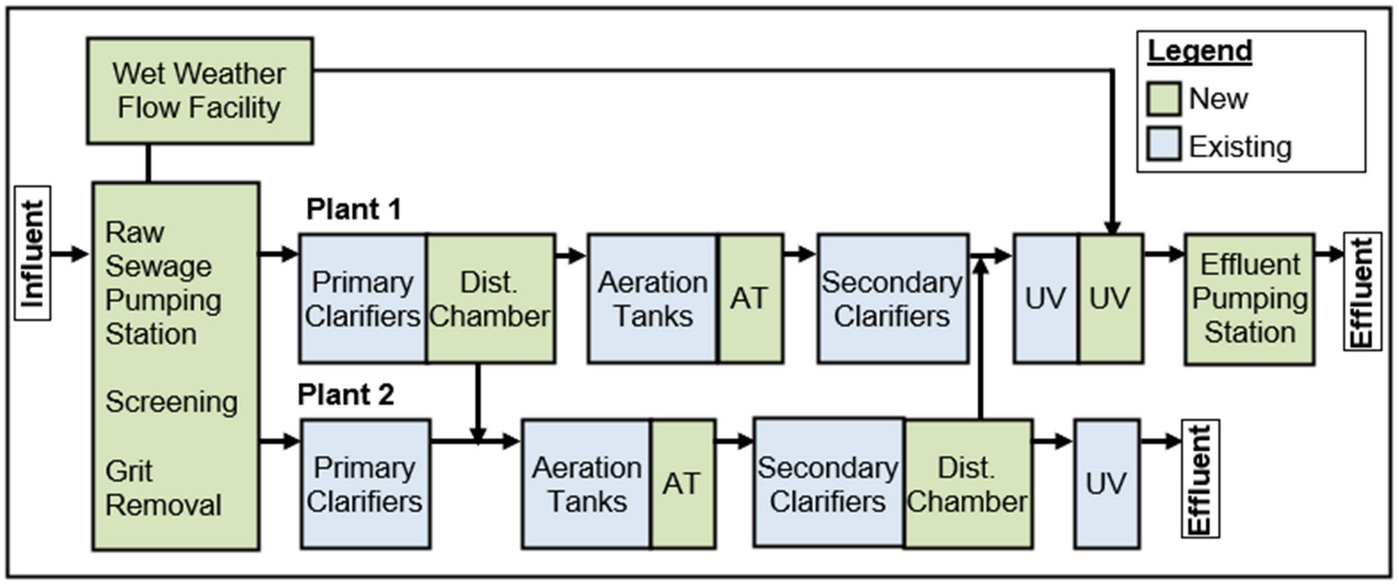
Alternative Solution No. 3
Construct a WWF Management Facility

- WWF Management Facility would be constructed to capture, store, and potentially treat flows to mitigate combined sewer overflows
- Location and conceptual design of this WWF Management Facility would be determined as a part the next phase of this study



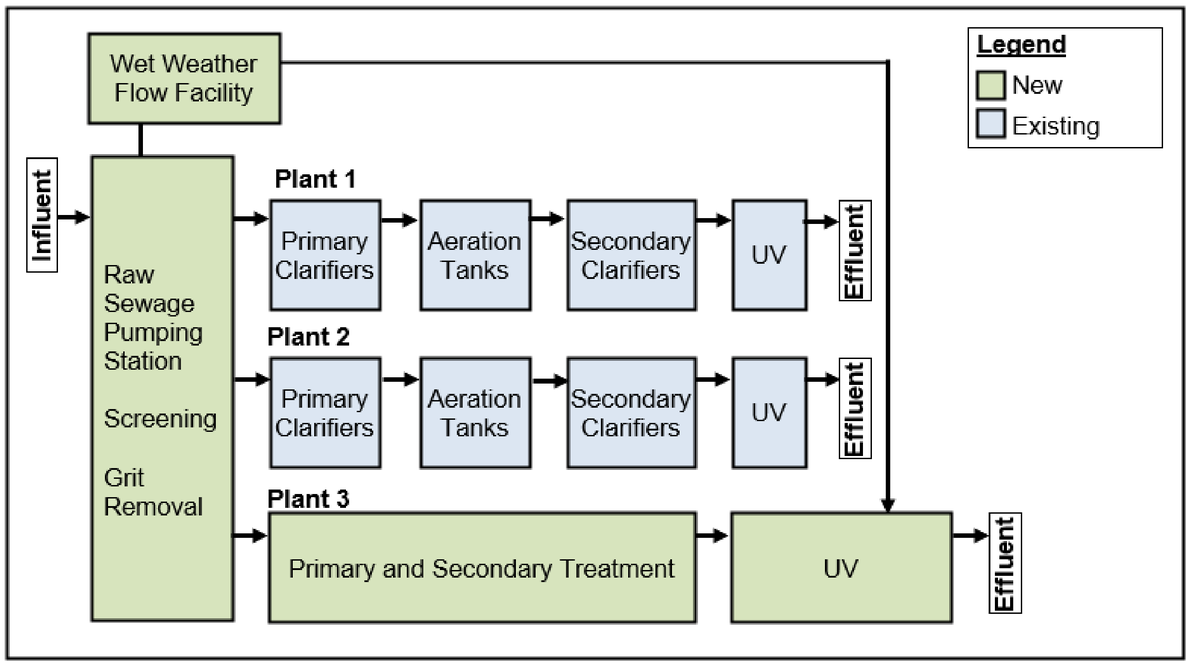
Alternative Solution No. 6
Upgrade Existing Treatment Trains at LRPCP

- LRPCP upgraded to accommodate the projected DWFs, assuming that no tertiary treatment (i.e., filtration) is required to comply with new effluent criteria
- This solution will address the needs for the next 15+ years and delay significant capital cost investments which would be required for the ultimate design projections
- Several conceptual design alternatives are available to increase the capacities of the unit processes, to be explored in the next phase of this study



Alternative Solution No. 7
Add an Additional Treatment Train at LRPCP

- Additional treatment train would be added to the LRPCP
- This solution will address the long-term needs for additional wastewater treatment capacity at the LRPCP while providing engineering redundancy and complying with stringent effluent criteria
- Several treatment technology alternatives and site layouts would be available and may be explored in more detail in a future study



Recommended Solution and Phasing
Combination of Alternatives

Recommendation is a combination of alternatives, which may be implemented in phases:

- Phase 1 is recommended in the immediate future to address WWF issues at the LRPCP
- Phase 2 is recommended in the short to medium term to address DWF capacity requirements, hydraulic grade line (HGL) concerns, as well as potential poor performance or condition of unit processes at the LRPCP
- Phase 3 is recommended in the long term and would meet ultimate treatment capacity requirements at the LRPCP and provide engineering redundancy

Phase	Planning Horizon	Description of Works
1	Immediate	Alternative 2 - Reduce WWFs through I&I Reduction Efforts Alternative 3 - Construct a WWF Facility
2	10-15 Years*	Alternative 6 - Upgrade the Existing Treatment Trains at the LRPCP (assuming that no tertiary treatment is required to comply with new effluent criteria) Otherwise, Alternative 7 would be preferred
3	20-30 Years*	Alternative 7 - Add an Additional Treatment Train at the LRPCP
* May be subject to change based on the pace at which developments progress within the City of Windsor and Town of Tecumseh.		

Next Steps

Complete Phase 3 and 4 of the Class EA Process:

	Project Component	Date
Phase 3	Evaluate Alternative Design Concepts for the Preferred Solution (Combination of Alternatives)	April 2025 – August 2025
	Public Information Centre No. 3 - Design Alternatives and Conceptual Design	August 2025
Phase 4	Environmental Study Report (ESR)	September 2025 – October 2025
	Council Presentation and Resolution – Preferred Design	October 2025
	Notice of Study Completion	November 2025

Thank You

Please visit the City of Windsor's project website to submit a feedback form.

Little River Pollution Control Plant Expansion Schedule C Municipal Class Environmental Assessment (citywindsor.ca)