



TOWN OF AMHERSTBURG

MCGREGOR SEWAGE SYSTEM EXPANSION

**MUNICIPAL CLASS
ENVIRONMENTAL ASSESSMENT –
PRESENTATION OF THE
ENVIRONMENTAL STUDY REPORT**

SEPTEMBER 21ST, 2026



Municipal Class EA Process Overview & Purpose

The Municipal Class Environmental Assessment (Class EA) establishes a planning process for a variety of municipal infrastructure projects.

Municipal Class EA Process	
Phase 1 – Identify the Problem or Opportunity	
Phase 2 – Identify & Evaluate Alternative Solutions, Select a Preferred Solution	
Phase 3 – Identify & Evaluate Alternative Design Concepts for the Preferred Solution	
Phase 4 – Prepare Environmental Study Report and Make it Publicly Available	
Phase 5 – Implementation of the Preferred Design (Not Included in this Study)	

This project is being conducted in accordance with the Class EA requirements for ‘Schedule C Projects’ under the *Environmental Assessment Act*.

The purpose of this Municipal Class Environmental Assessment (Class EA) is to determine the preferred solution and conceptual design to accommodate future wastewater servicing demands in the community of McGregor.



Background

McGregor Sewage Treatment Facility (Lagoons)

- Located at 9420 Walker Road
- Originally constructed in 1982 with a treatment capacity of 568 m³/d
- Expanded and upgraded in the early 2000s, increasing treatment capacity to 1,127 m³/d
- Influent Pumping Station Capacity of 2,912 m³/d
- Strong operating performance with historically good effluent quality

Year	Average Daily Flow	% Capacity
2019	800 m ³ /d	71%
2020	812 m ³ /d	72%
2021	812 m ³ /d	72%
2022	662 m ³ /d	59%
2023	800 m ³ /d	71%
2024	1,005 m ³ /d	89%





Background

MSTF Process Overview

1. Influent Pumping Station

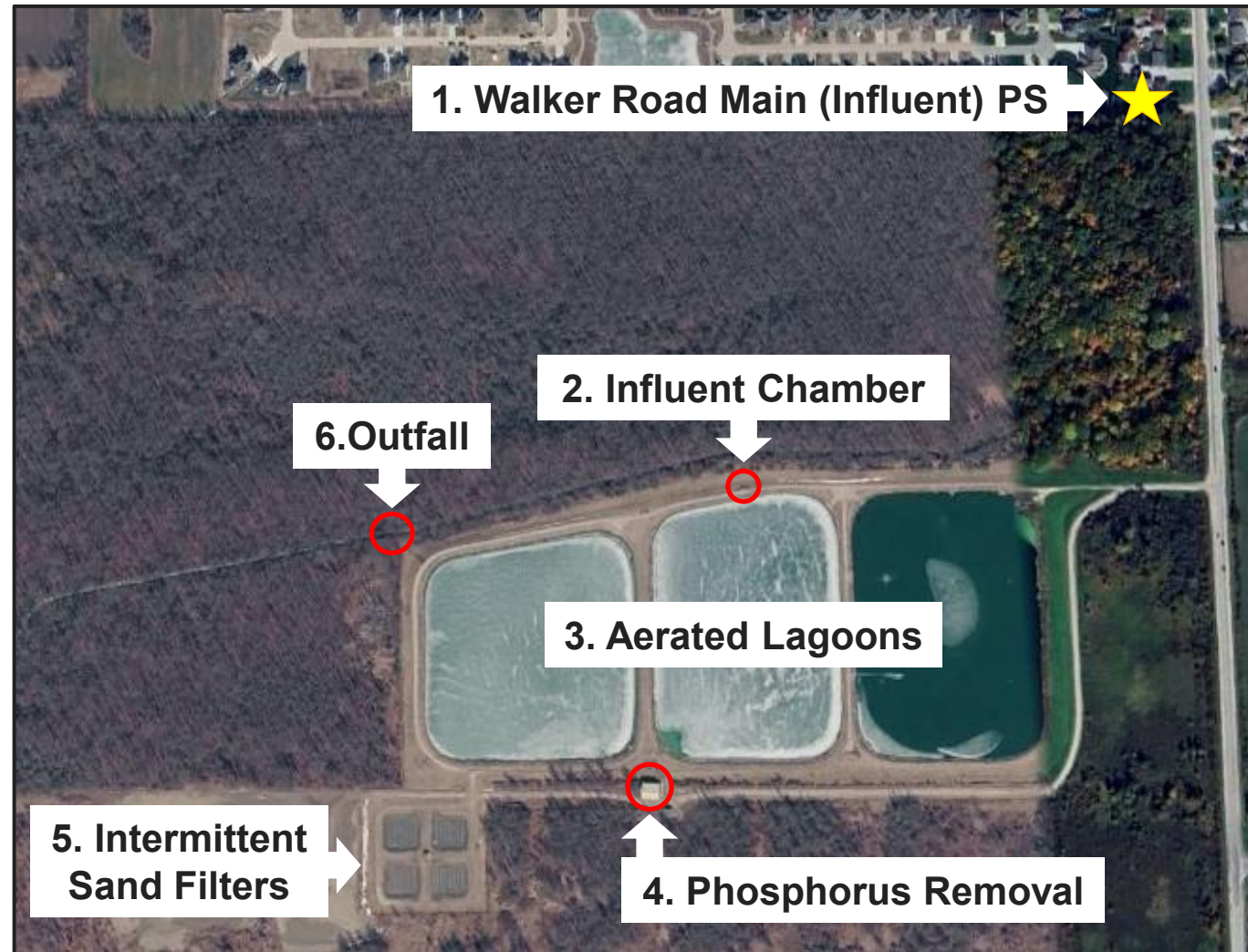
- Pumps raw sewage to the influent chamber

2. Influent Chamber

- Receives raw sewage and discharges to the north end of Cell 1

3. Secondary Treatment

- Three (3) waste stabilization pond cells remove suspended solids
- Four (4) aerators located in Cell 1 to help break down organic material



4. Phosphorus Removal

- Chemicals are added to Cell 2 to remove phosphorus

5. Post-Secondary Treatment

- Four (4) intermittent sand filters to polish and purify the effluent

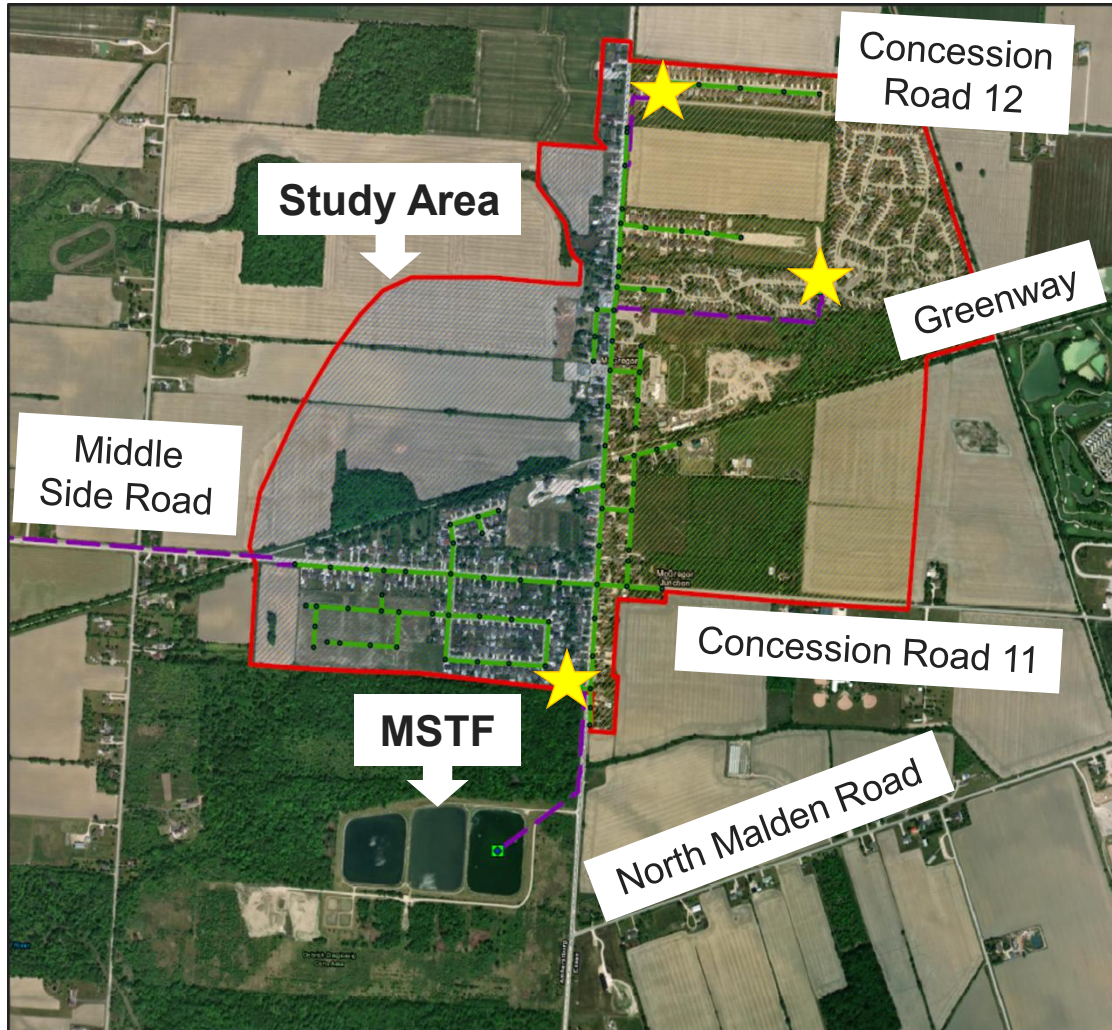
6. Outfall

- Treated effluent is discharged to King Creek



Background

MSTF Sanitary Servicing Area



The sanitary collection system, serving portions of both the Town of Amherstburg and the Town of Essex, was constructed in the 1980s

Consists of a gravity sewer system with four (4) pumping stations

Wastewater is collected and directed to the Walker Road Main Pumping Station and from here it is pumped to the MSTF

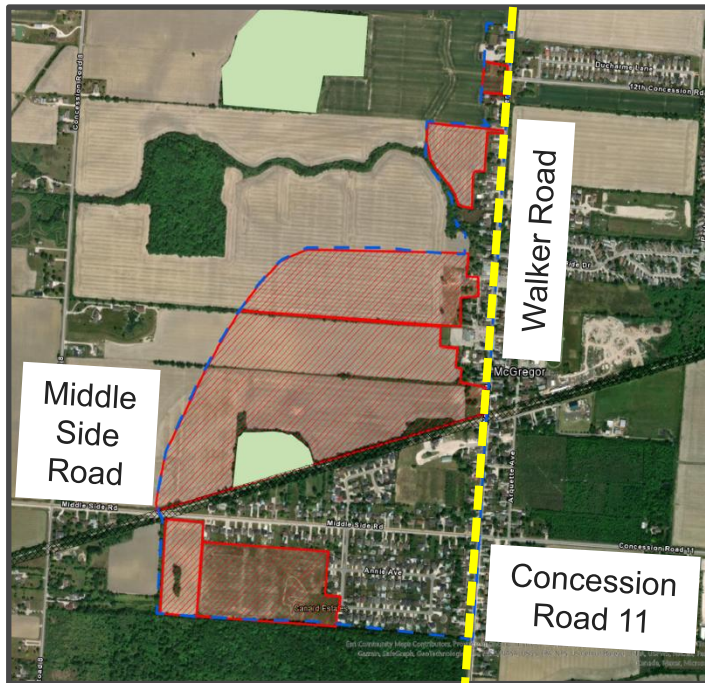


Background

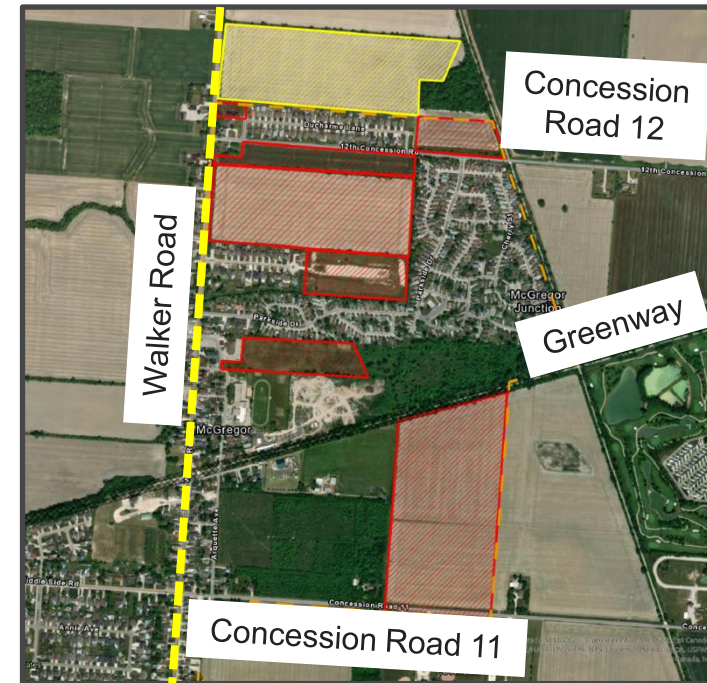
Rationale for Expansion

An analysis completed in 2018 and historical flow records indicated that the MSTF was approaching its capacity limit.

The Town of Amherstburg and the Town of Essex are exploring options to accommodate future development within the community of McGregor.



Potential development areas in McGregor within the Town of Amherstburg.



Potential development areas in McGregor within the Town of Essex.

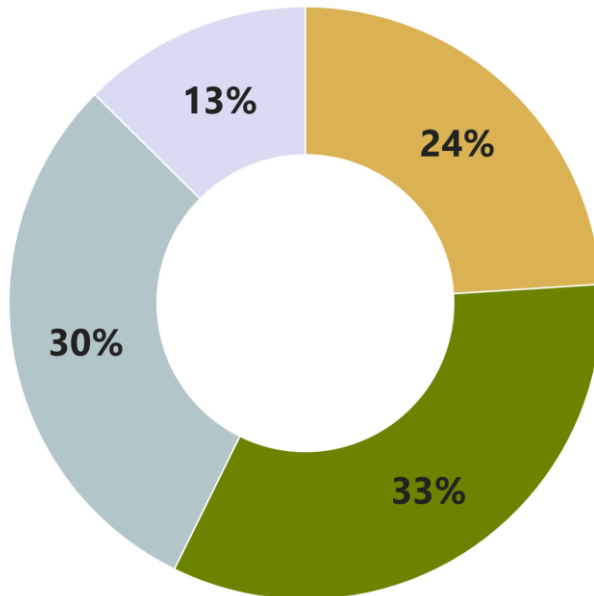


Background

Projected Future Flow at MSTF

**20-Year
Projected Flows
3,252 m³/day**

- Existing Flows
- Town of Essex Future Developments
- Town of Amherstburg Future Developments
- Town of Amherstburg Howard Industrial District Park

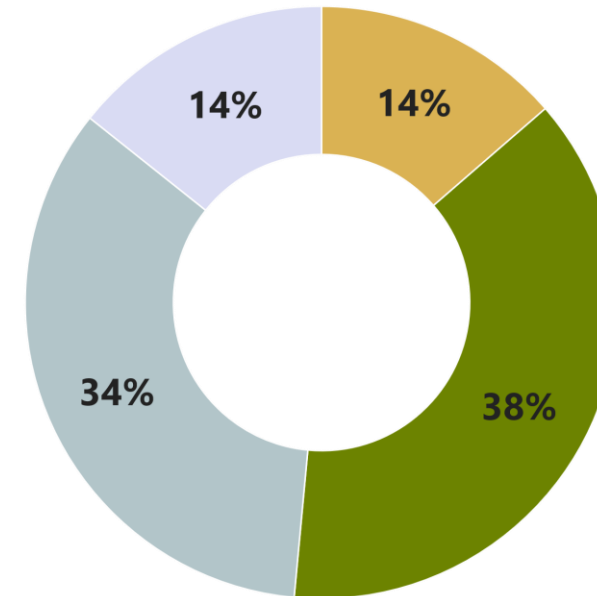


**Current MSTF
Treatment Capacity**

1,127 m³/day

**Ultimate Build-Out
Projected Flows
5,724 m³/day**

- Existing Flows
- Town of Essex Future Developments
- Town of Amherstburg Future Developments
- Town of Amherstburg Howard Industrial District Park





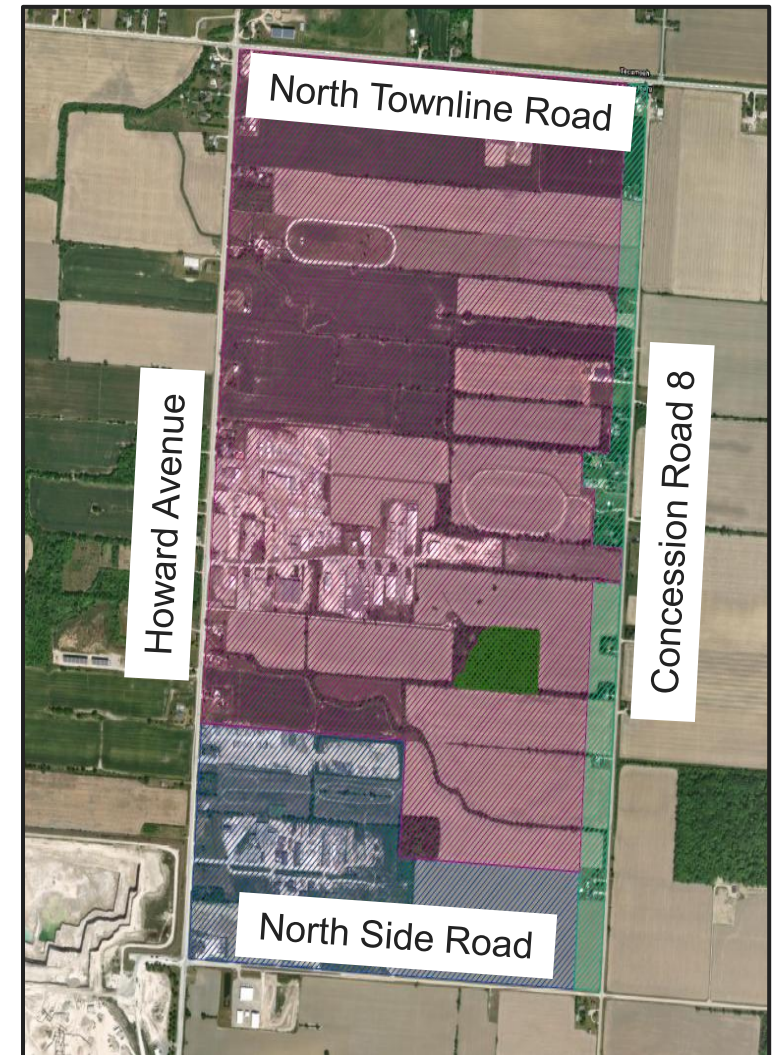
Howard Industrial Sanitary Servicing Overview

A review was completed in parallel with the McGregor Sewage Works Class EA to assess the feasibility of servicing the Howard Industrial Area through the MSTF.

Flows to the MSTF were evaluated using the following design criteria:

- **Population Density (Light Industrial):** 3,200 L/ha/day (7 ppl/ha)
- **Average Domestic Flow Rate:** 450 L/cap/day
- **Infiltration Allowance:** 0.28 L/ha/s

The preferred solution identified in the review was to discharge flows from the Howard Industrial Area to the MSTF. However, the servicing route remains subject to further review.



Howard Industrial Secondary Planning Area Boundaries & Land Designations



Conceptual Design

Preferred Layout: Sequencing Batch Reactors (SBR) Tanks



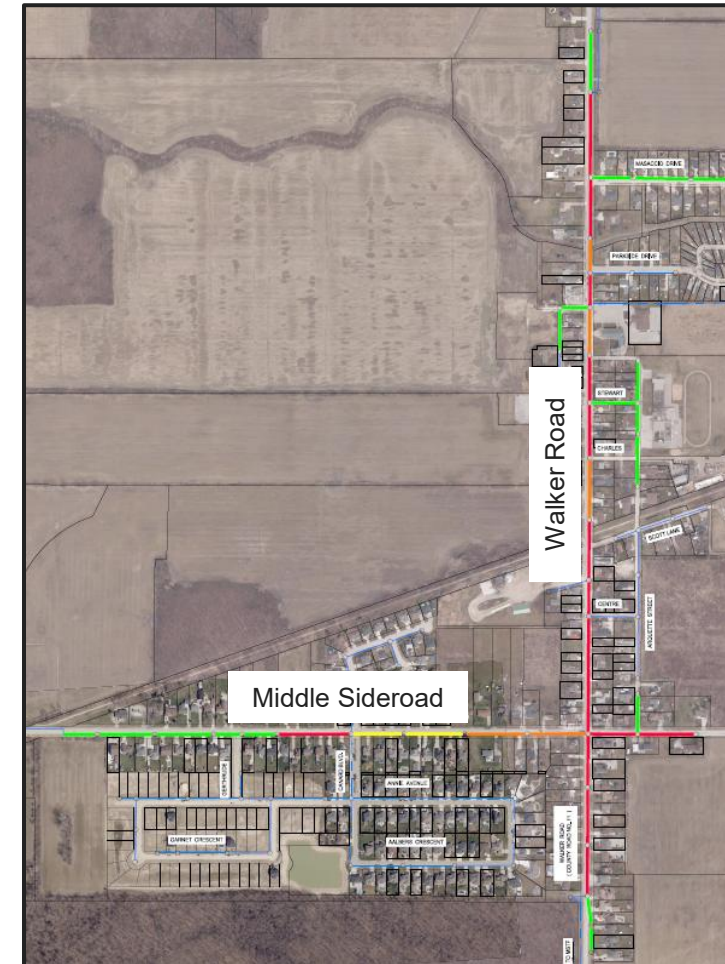
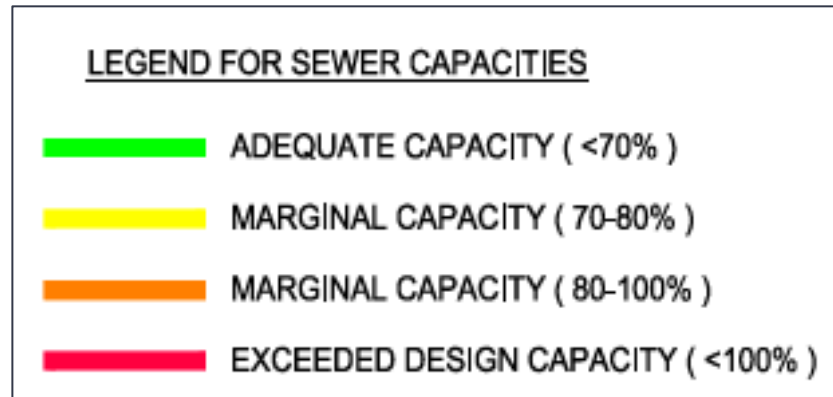


Conceptual Design

Anticipated Collection System Upgrades

Recommended Upgrades:

- To accommodate the ultimate design flow, the following sewer upgrades are recommended:
 - Eighteen (18) trunk sewers along Walker Road
 - Two (2) sewers on 11th Concession Road
 - One (1) sewer on Middle Sideroad



Projected Sewer Capacity of McGregor Collection System



Conceptual Design

Proposed Pumping Station Upgrades

PS No.	ECA Pumping Capacity (L/s)	20-Year Projection (L/s)	Ultimate Design Projection (L/s)
1 (Walker Road Main)	33.7	201.2	332.2
2 (Lucier Estates)	18.1	16.3	16.3
3 (Ducharme Lane)	4.5	5.6	5.6
4 (Fox Glen)	9.6	5.0	5.0

Recommended Upgrades:

- McGregor PS No. 1 – Construct a new pumping station with a firm capacity of 201.2 L/s, sized to accommodate the ultimate design flow of 332.2 L/s
- McGregor PS No. 3 – Upgrade the existing pumping station to a firm capacity of 5.6 L/s





Conceptual Design

Summary of Recommended Design for MSTF Expansion

Proposed Upgrades	Phase 1 (20-Year Design)	Phase 2 (Ultimate Design)	Probable Cost
McGregor Sewage Treatment Facility Expansion	• Screening and Grit Building • Blower Building • SBR (3 tanks) • Aerated Sludge Holding Tank (2 tanks) • Dewatering Building (1 centrifuge) • Tertiary Treatment • U.V. Disinfection Building (2 channels) • Decommission Pond Cells 2 & 3 • Repurpose Cell 1 as Wet Weather Flow Retention Pond	• Installation of 2 additional SBR tanks • Installation of additional aerated sludge holding tank • Installation of additional dewatering centrifuge • Installation of additional U.V. disinfection channel	\$35,525,000
McGregor Collection System	Proposed Collection Sewer System Upgrades may be completed in phases over the next 20 years and beyond. Recommended upgrades are subject to confirmation as part of the ongoing Sanitary Master Plan update.		\$6,135,000
McGregor Pumping Stations	• Construct a new Inlet PS (Firm capacity of 201.2 L/s) • Decommission McGregor PS No. 1 • Upgrade McGregor PS No. 3 (Firm capacity of 5.6 L/s)	• Add pumps to the Inlet PS to increase firm capacity to 332.2 L/s	\$10,455,000



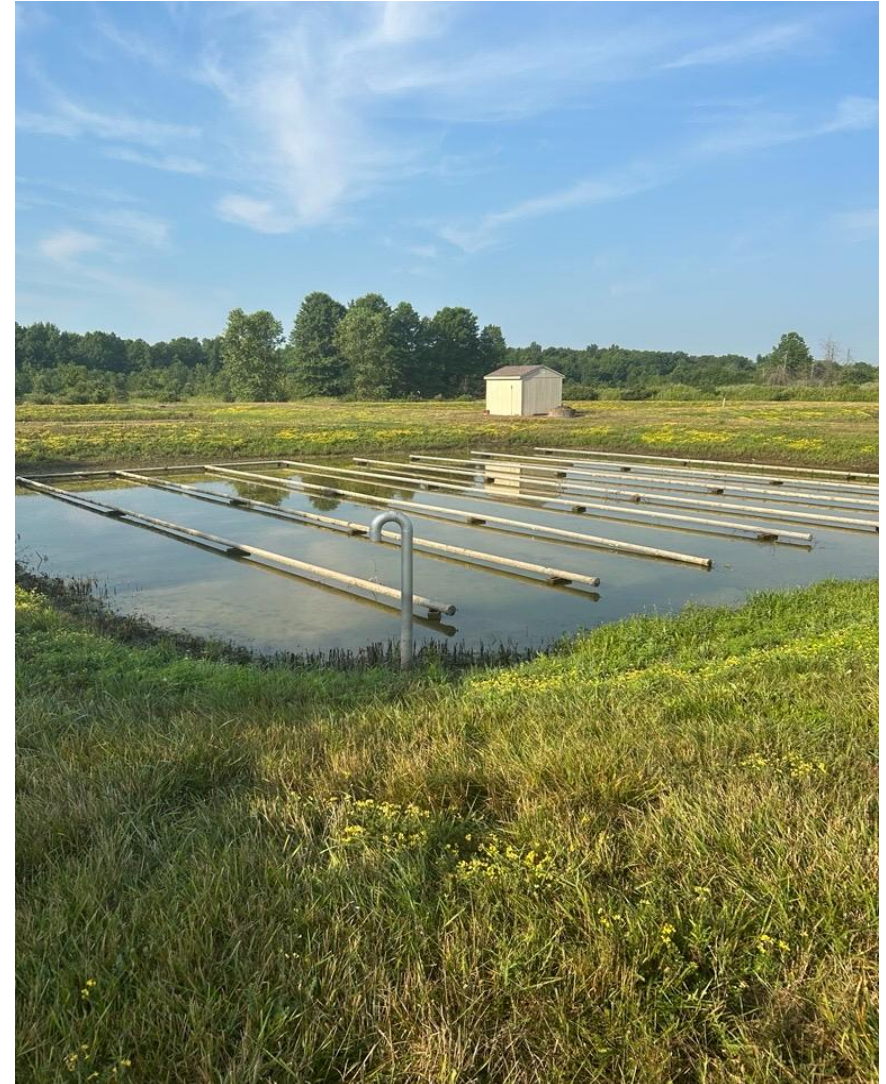
Next Steps

Phase 4 – Environmental Study Report (ESR)

- Notice of Completion was issued on June 25th, 2026
- Finalize the ESR including modifications as necessary to reflect input from review agencies
- Place the ESR on public record

Phase 5 – Implementation (Not Included in this Study)

- Future Council direction will be required





Questions?

Project Leads



Todd Hewitt

Manager of Engineering
Town of Amherstburg
519-736-3664 ext. 2313
thewitt@amherstburg.ca



Kevin Girard

Director of Infrastructure Services
Town of Essex
519-776-7336 ext. 1113
kgirard@essex.ca



Jian Li

Consultant Project Manager
Stantec Consulting Ltd.
519-562-7541
jian.li@stantec.com

For more information, please visit the
Project Website:
www.talktheburg.ca/mcgregorea

