Benefits for the City of Conversion from Act 342 System to a Chapter 20 / Chapter 21 Drain

- Chapter 20 and 21 of the Michigan Drain Code both allow for governance by a "Drainage Board" comprised of elected officials rather than by a county designee as provided in Act 342.

- A Drain Code system provides for improved transparency and communication of business and financials through regularly scheduled open public meetings, formal minutes, and formal approval by the Drainage Board of invoices and contracts.

- The Drain Code allows for public participation through public hearing to solicit comments from community leaders and from the public for all future projects.

- A Chapter 20/21 Drain would eliminate the need for the City to seek full faith and credit resolutions from City Council for financing a project.

- Act 342 requires negotiated agreements for the acquisition, construction or financing of facilities. The Drain Code does not require such contracts.

- Under Act 342, communities can collect funds through rates, charges, or assessments. Under the Drain Code, the funds may be collected by levying of a special assessment, fee, charge, or may be funded directly from the general fund.

- Act 342 requires a notice of intent to enter a contract to acquire facilities, construct facilities, or finance projects and a referendum period of 45 days must be satisfied. Act 342 then allows electors to petition for a referendum (which may stop or at least delay a project). With a Chapter 20/21 project, there is no referendum period, and the process for acquiring, constructing, and financing is much easier.

- The Drain Code provides enforcement remedies vis a vis interaction with railroads and other public utility companies to ensure uninterrupted service.

- A Drain Code system insulates the City from EGLE enforcement actions because a Drainage District is a separate legal entity that is responsible for the system and, therefore, the City would not be subject to or responsible for any regulatory enforcement actions.

- The Drain Code provides greater enforcement remedies for obstructions of the system, including the recovery of any and all costs associated with removal of an obstruction.

- In Act 342, the maintenance and operation of the system is at the sole discretion of the County Agency. Under Chapter 20 and 21, the oversight belongs to the Drainage Board.

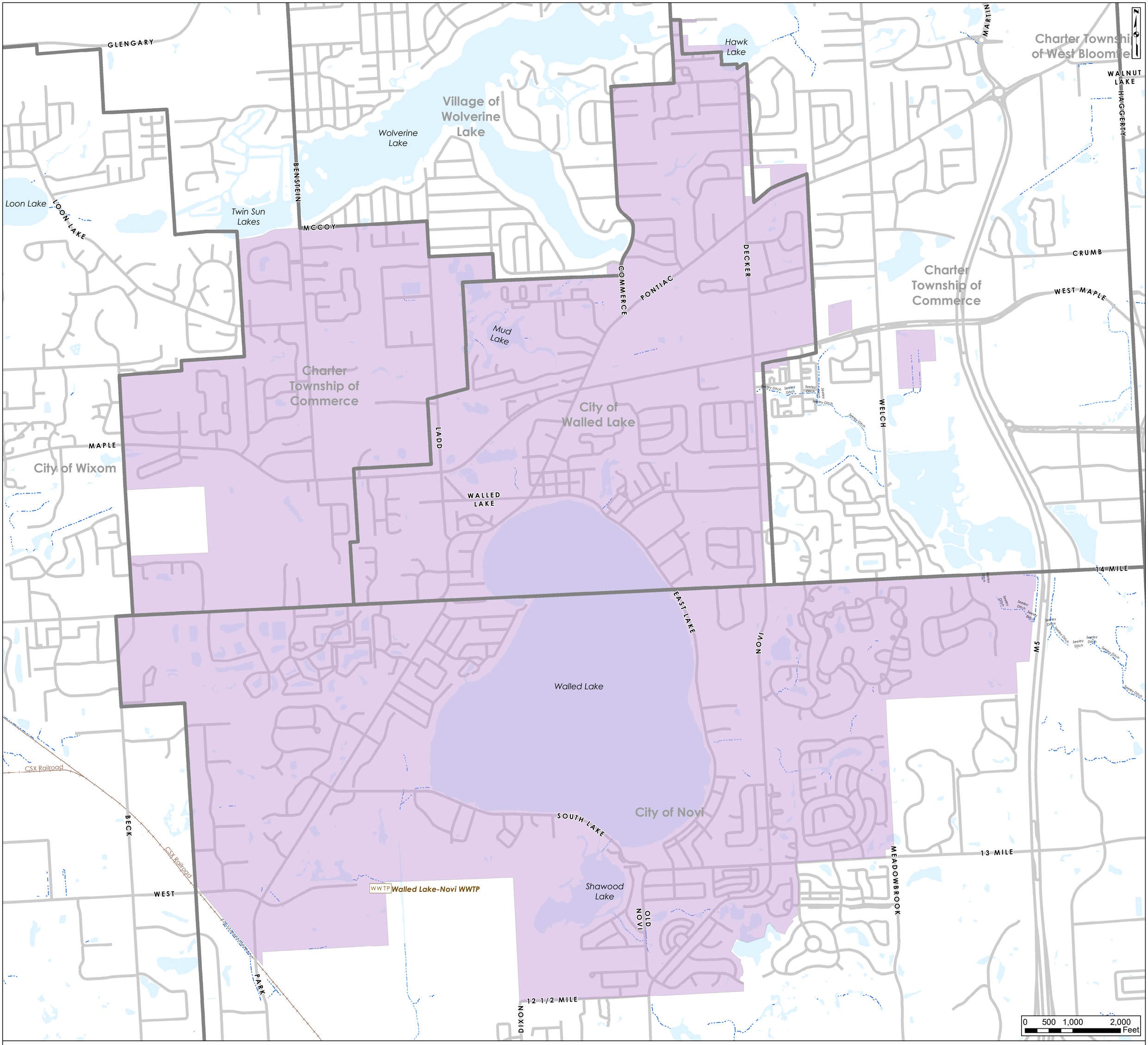

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EXHIBIT A
Chapter 20
Walled Lake-Novi Water Resource Recovery System Drain Customer Service Area

WWTP Wastewater Treatment Plant

Walled Lake-Novi WWTP Service Area

Date: 4/24/2025

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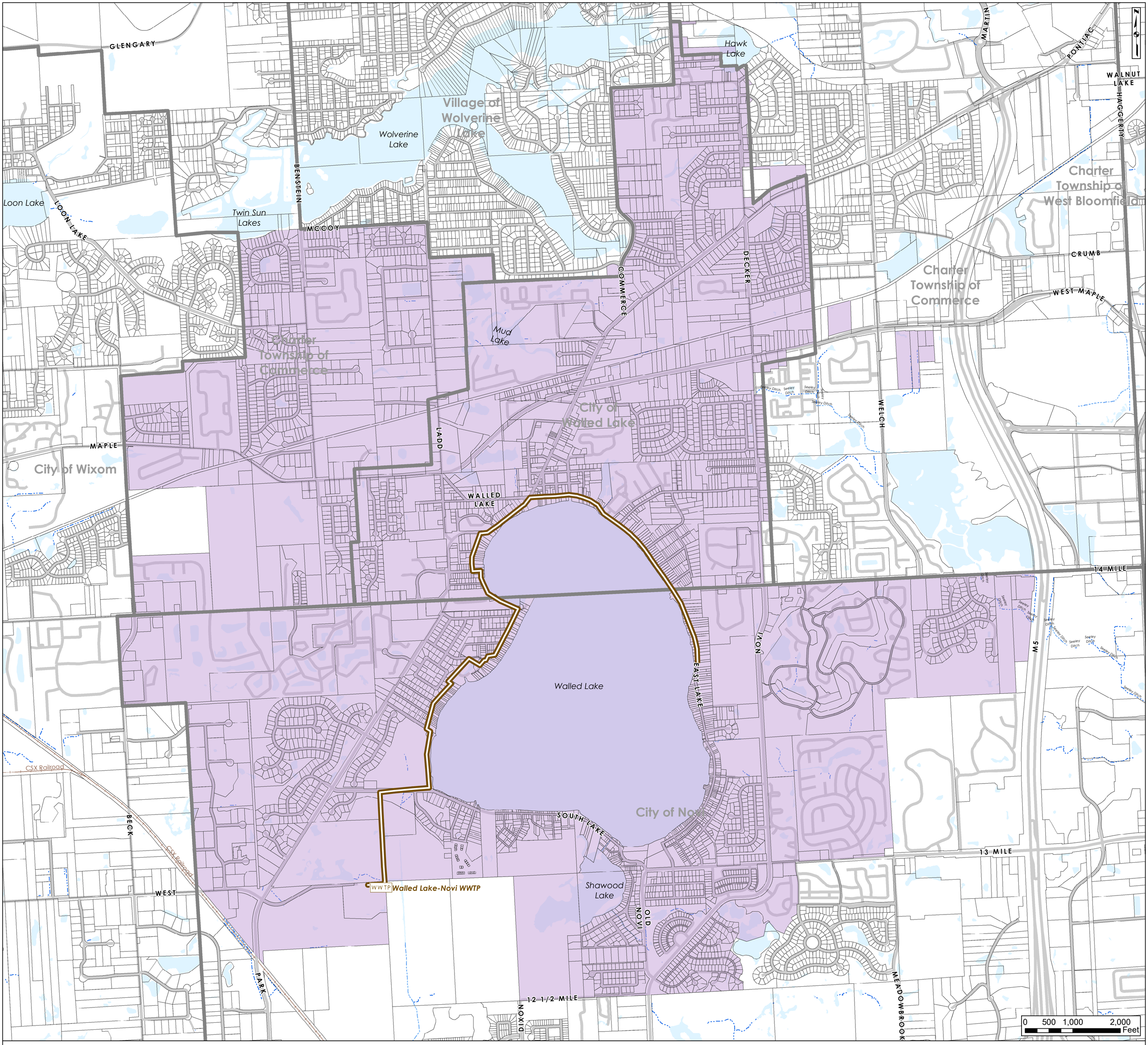

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EXHIBIT B
Chapter 20
Walled Lake-Novi Water Resource Recovery System Drain
Route and Course

WWTP Wastewater Treatment Plant

Sanitary Gravity Main

Walled Lake-Novi WWTP

Date: 4/24/2025

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Walled Lake-Novi WWTP
Projects

Mary Koeger, P.E.
Oakland County WRC

Walled Lake-Novi WWTP

Introduction

The Walled Lake Arm and Walled Lake-Novi WWTP were originally constructed in 1966 with the original intention of being a temporary facility.

Overtime, it has become realized to be more permanent with many upgrades over the years.

However, these upgrades were not to sustain the existing infrastructure that was originally built.

Walled Lake-Novi WWTP

Background
Plant Overview

Capacity

- Design 3.5 MGD
- Peak 7.0 MGD

Treatment

- Solids and Fecal Coliform
- Phosphorus
- Ammonia-Nitrogen
- Nutrient Recovery and Reuse

8 Employees

- 2 Chemists
- 4 Operators
- 2 Supervisors

Walled Lake-Novi WWTP

Background Flow Data Summary

Community	RY 2024	
	Average Flow Rate (cfs)	3-yr Average Percentages
Novi	2.38	68.1%
Walled Lake	1.12	31.9%
Total	3.5	100.0%

Walled Lake-Novi WWTP

Background Facility Timeline

- 1970: Raw Sewage Pump Station (RSPS Building), EQ Tank, Clarifiers and Sludge drying beds
- 1986: Tertiary Filters, Clarifier Upgrade
- 1990: Admin Building, Aerated Clarifiers
- 1993: Sludge Storage Tanks Addition
- 2000: Sludge Storage Tanks
- 2003: UV Disinfection System
- 2014: Retention Basin

Current Trends in Wastewater

Inflow and Infiltration (I&I)	Managing I&I water entering the sanitary system is a priority to sustain reasonable treatment costs, prevent overflows, and extend plant capacity without new construction.
Per/Poly-fluoroalkyl Substances (PFAS)	PFAS consists of human-made chemicals used in products like nonstick cookware, shoes, and firefighting foams. It is known as a “forever chemical” because it does not easily break down.
Class B Biosolids Demand	Many facilities are upgrading to Class A biosolids production, which is a higher quality product, reducing demand for Class B along side fear associated with PFAS in biosolids.
Aging Infrastructure	Much of the nation’s wastewater infrastructure is well beyond its lifespan. Reinvestment in pipes, tanks, electrical, and treatment processes is critical for compliance, reliability, and safety.
Public Engagement and Transparency	Sanitary systems are no longer “out of sight – out of mind”. Communicating the value of water, treatment, and sustainability efforts is vital.

Access, Plan, Collaborate

Aging & Emerging Issues

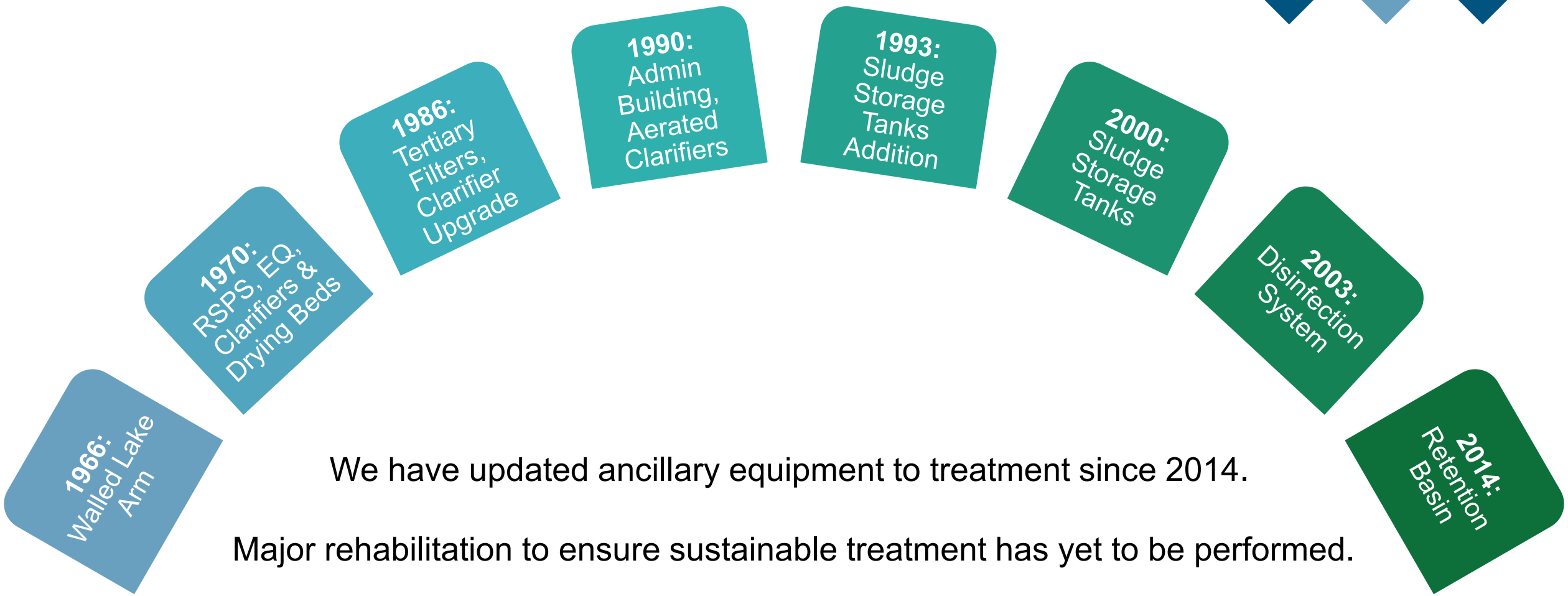
Assess Site and Determine Future Need

Engage Municipal Partners

Unite for Collaborative Action

Reliable Water Recovery

Assessing Past Projects



We have updated ancillary equipment to treatment since 2014.

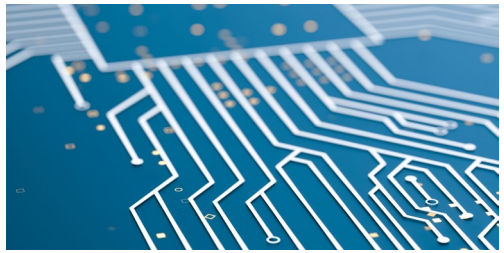
Major rehabilitation to ensure sustainable treatment has yet to be performed.

Maintenance Assessment

Unplanned Events
Older systems will have unforeseen issues occur

Aging Piping
Piping was installed between 1970-1990, aging past useful life

Pump and Valve Replacements
Many pumps around the facility are over 20 years old



Calibrations and Evaluations
Ancillary equipment, buildings, and electrical require evaluations and calibrations

Concrete Repairs
Minor concrete repairs around the facility for tanks, process rooms and buildings

Minor Facility Improvements
This includes gutters, roofs, exterior masonry repairs, etc.

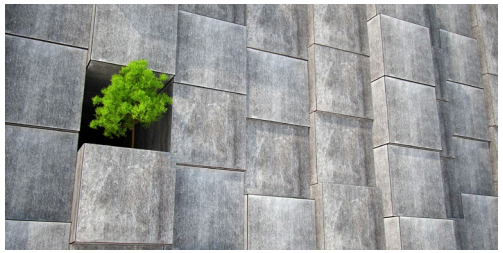
Diffuser Replacement
Diffusers are over 20 years old and supply biological treatment through oxygen delivery

Samplers, Meters, and Hoists
Samplers, Meters and Hoists from the 1990s and 2000s require repair or replacement

Maintenance Assessment

Diffuser Replacement
SCADA Upgrade – Security and Treatment Issue
Retaining Wall Replacement
Tertiary Filters Media Replacement

Major Improvements Assessment

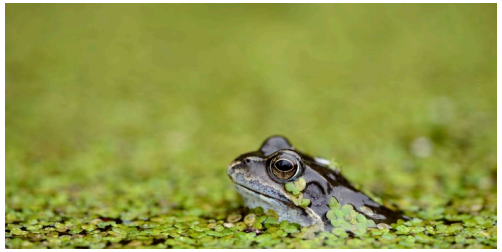


Biosolids Storage
Tanks updated in 1993
Time lapse of 32 years

Biosolids Dewatering Equipment
Dewatering Drum installed in 1970
Time lapse of 55 years

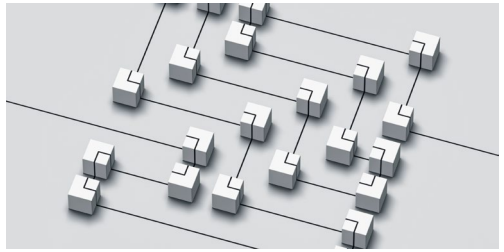
Process Blowers
Blowers updated in 1990s
Time lapse of 35 years

Walled Lake Arm Collection
Installed in 1966, last inspected in 2016
Time lapse for repair 59 years



Effluent Structure
Structure installed in 1970
Time lapse of 55 years

Administration Building HVAC
HVAC installed in 1990
Time lapse of 35 years with minor upgrades to keep functional



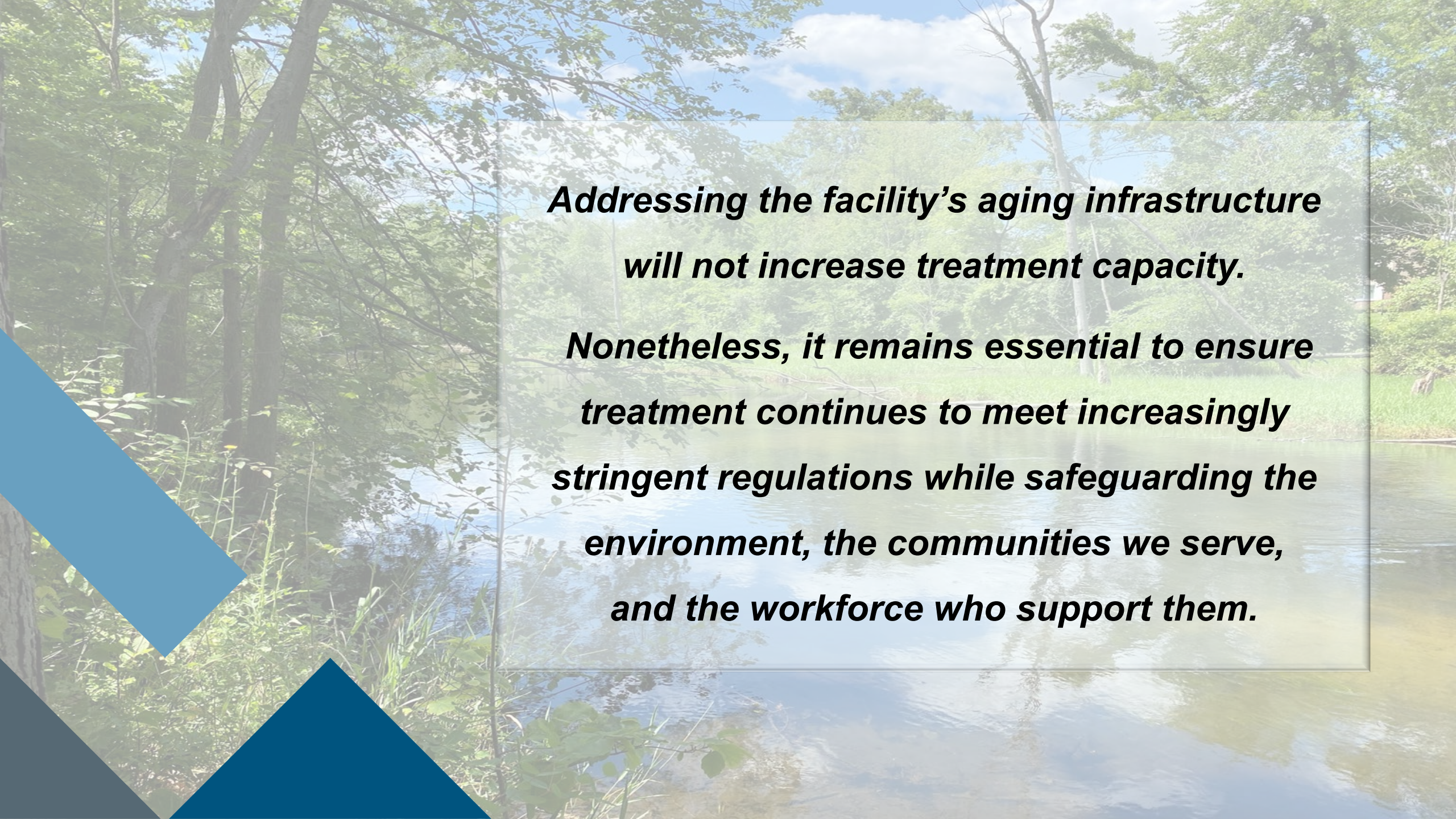
Electrical Panels and MCC-1
MCC-1 and PP installed in 1970
Time lapse of 55 years

Pump Station Elevator (Manlift)
Manlift installed in 1970
Time lapse of 55 years

Capital Improvement Projects

Project Description	Estimated Implementation Year(s)	Net Useful Life/ Extended Life	Estimated Cost
New Dewatering System	2026 - 2027	20 years	$600,000
Concrete Tanks Restoration	2026 - 2029	50 years	$895,000
Process Blowers Replacement	2026 - 2029	20 years	$585,000
Collection System and Manhole Restoration and Lining	2026 - 2029	40 years	$1,400,000
Electrical Control Center Replacement	2027-2029	30 years	$1,550,000
Effluent Structure Replacement	2028 - 2029	40 years	$150,000
Administration HVAC Replacement	2029	15 years	$200,000
Replacement of Manlift	2030	40 years	$620,000

Total Estimated Cost: $6,000,000



Addressing the facility's aging infrastructure will not increase treatment capacity.

Nonetheless, it remains essential to ensure treatment continues to meet increasingly stringent regulations while safeguarding the environment, the communities we serve, and the workforce who support them.

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Walled Lake-Novi WWTP

Projects and Rates

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