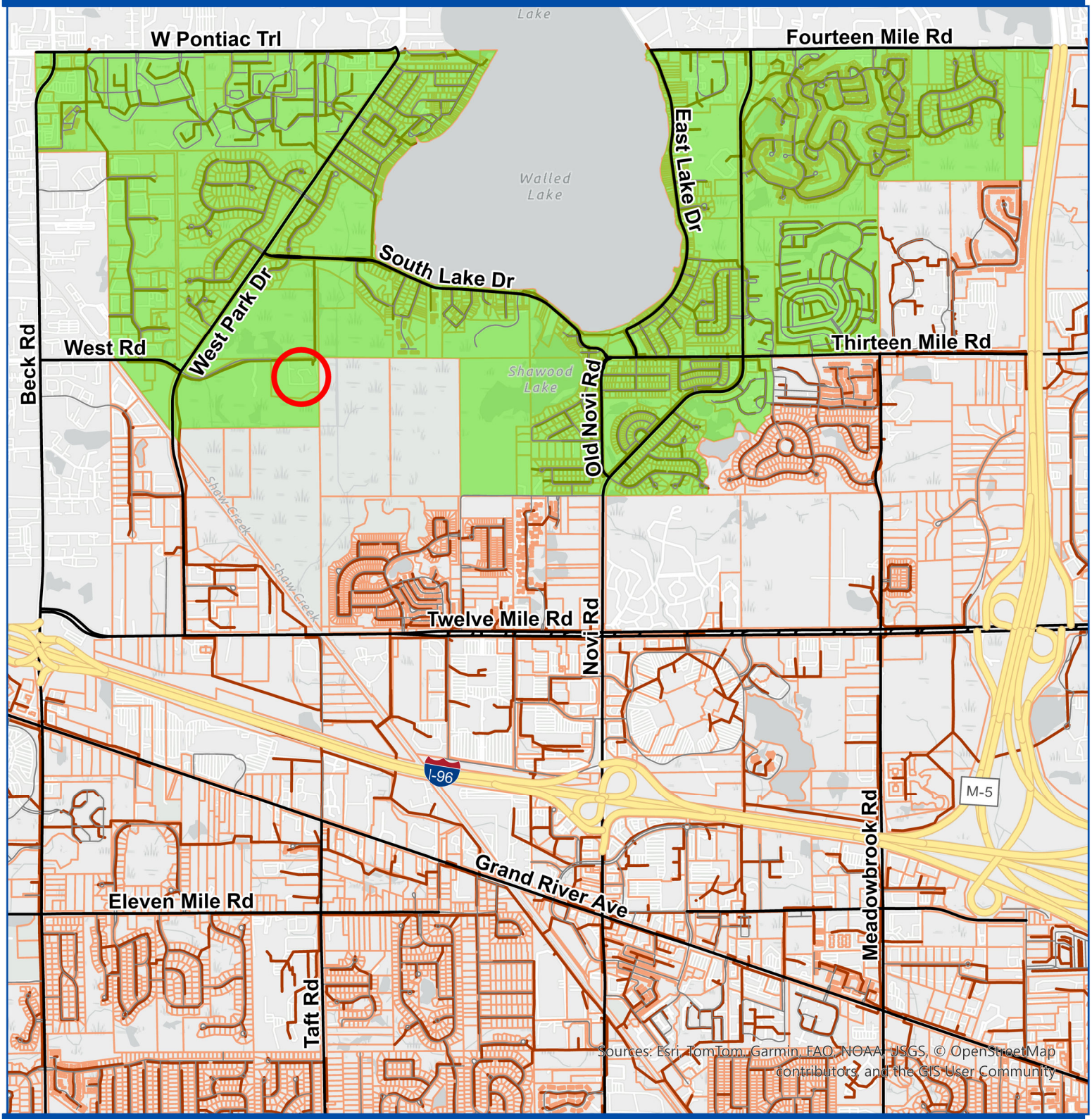
Walled Lake - Novi Wastewater Treatment Plant

Location Map



CITY OF NOVI
cityofnovi.org

Sanitary Service District

DISTRICTNAME

WALLED LAKE DISTRICT

Feet

0 1,450 2,900 5,800

Map Author: Croy
Map Print Date: Aug 2026

CITY OF NOVI

COUNTY OF OAKLAND, MICHIGAN

RESOLUTION CONSENTING TO IMPROVEMENTS TO WALLED LAKE – NOVI WASTEWATER TREATMENT PLANT AND AUTHORIZING PAYMENT TO THE OAKLAND COUNTY WATER RESOURCES COMMISSIONER (WRC) FOR SAME.

Minutes of a Meeting of the City Council of the City of Novi, County of Oakland, Michigan, held in the City Hall of said City on _____, 2026, at ____o'clock P.M. Prevailing Eastern Time.

PRESENT: Councilmembers_____

ABSENT: Councilmembers_____

The following preamble and Resolution were offered by Councilmember _____ and supported by Councilmember _____.

RECITALS

WHEREAS, the Walled Lake – Novi Wastewater Treatment Plant (the "WL-N") was established by the County of Oakland (the "County") and located within the City of Novi (the "City") to serve the City; and

WHEREAS, the County acquired and constructed the WL-N facilities pursuant to the Huron-Rouge Sewage Disposal System Contract dated as of April 20, 1962, among the County, the Village of Novi, and the Township of Novi, as amended (the "Contract"); and

WHEREAS, the County owns and operates the WL-N pursuant to the Contract, and has designated the Oakland County Water Resources Commissioner as the county agency (the "County Agency") for the HRSDS with all powers and duties with respect thereto as are provided by, Act 342, Public Acts of Michigan, 1939, as amended; and

WHEREAS, the City and the County entered into Walled Lake – Novi Wastewater Treatment Plant Wastewater Disposal Services Agreement dated October 18, 2018 (the "Services Agreement"), and the City of Novi Sewer System Operation and Maintenance Agreement (the "O&M Agreement") dated October 18, 2018.

WHEREAS, Paragraph 3.12 of the Services Agreement confirms that the City is responsible for its share of the cost of capital improvements to the WL-N. Paragraph 3.2 of the O&M Agreement authorizes the County to expend funds from the System Enterprise Fund for capital replacement or improvement projects only with prior approval from the City.

WHEREAS, the County through the WRC, has identified corrective actions required to maintain effective delivery and treatment of sewage for the communities served; and

WHEREAS, the County plans to implement capital projects including new HVAC system components, rehabilitation of concrete tanks, repairs to the collection system, the installation of new process blowers, the installation of a new electrical control center and panel, and an overhaul of an operations lift (the "Improvements"); and

WHEREAS, the total estimated cost of the Improvements is $3,000,000; and

WHEREAS, the cost of this project is based on engineer-developed capital projections in accordance with prior agreements between the City of Walled Lake and the City of Novi, and costs will be apportioned based on average flow volumes treated over the preceding 3-year period from 2023 through 2025, resulting in the City of Novi's portion being 67.7% of the total volume treated; and

WHEREAS, the City has determined to prepay its assessed portion in the amount of $2,031,000 from the City's Water & Sewer Fund reserves in order to pay a portion of the costs of the Improvements in accordance with the invoice from the County Agency requesting payment.

The following resolution was offered by _____ and seconded by _____:

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Novi, Oakland County, Michigan, that:

1. The City in accordance with the terms of the Services Agreement & O&M Agreement, as well as Act 342, Public Acts of Michigan, 1939, as amended, consents and agrees to the proposed Improvements to the WL-N, and to payment of the cost of the Improvements.

2. The Improvements shall consist of improvements to portions of the WL-N as described.

3. The City shall pay the amount of $2,032,000 from Water & Sewer Fund reserves to the County not later than October 30, 2026 as invoiced by the County.

AYES:

NAYS:

RESOLUTION DECLARED ADOPTED.

_____
Cortney Hanson, City Clerk

CERTIFICATION

I hereby certify that the foregoing is a true and complete copy of a resolution adopted by the City Council of the City of Novi, County of Oakland, and State of Michigan, at a regular meeting held this _____ day of _____, 2026, and that public notice of said meeting was given pursuant to and in full compliance with Act No. 267, Public Acts of Michigan, 1976, and that the minutes of said meeting have been kept and made available to the public as required by said Act.

_____
Cortney Hanson, City Clerk
City of Novi

WRC
WATER RESOURCES COMMISSIONER
Jim Nash

August 6, 2026

Mr. Victor Cardenas, City Manager
City of Novi
45175 Ten Mile Road
Novi, MI 48375

Subject: Walled Lake-Novi Wastewater Treatment Plant
Treatment Facility Corrective Action Plan

Dear Mr. Cardenas:

My staff and I will soon implement a variety of capital projects as part of a $3 million project designed to improve the Walled Lake-Novi Wastewater Treatment Plant. These corrective actions are required to maintain effective delivery and treatment of sewage for the communities served by this important treatment facility. These improvements are an integral part of a planned, sequenced approach designed to proactively manage aging infrastructure and maintain reliable treatment operations well into the future.

The scope of work includes the installation of new HVAC system components, rehabilitation of concrete tanks, repairs to the collection system, the installation of new process blowers, the installation of a new electrical control center and panel, and an overhaul of an operations lift.

The cost of this project is based on engineer-developed capital projections in accordance with prior agreements between the City of Walled Lake and the City of Novi. Costs will be apportioned based on average flow volumes treated over the preceding 3-year period from 2023 through 2025. That accounts for 67.7% of the total volume treated. Both municipalities have elected to prepay their respective assessments.

Although Novi has indicated it intends to prepay its assessed $2,031,000 portion of the project, written confirmation of that decision must be submitted no later than September 1, 2026. If the City Council adopts a resolution authorizing prepayment, a copy of the adopted resolution should be included with your notice of intent.

One Public Works Drive • Building 95 West • Waterford, MI 48328-1907
Phone: 248.858.0958 • Fax: 248.858.1066 • www.oakgov.com/water

Please email the notice of intent to prepay to Raphael Chirolla (chirollar@oakgov.com). In addition, please mail a hard copy of the notice of intent to my office at the following address.

The Office of the Oakland County Water Resources Commissioner
Attention: Raphael Chirolla
One Public Works Drive, Bldg. 95-West
Waterford, MI 48328-1907

Oakland County's Fiscal Services Department will send prepayment invoices along with payment instructions on or about September 10, 2026. Payment will be due on or before October 30, 2026.

If you have any questions about the project, please contact Chief Engineer Mary Skywinter, P.E., who is the Project Manager of this project. Her phone number is, 248.534.3717 and her email address is, skywinterm@oakgov.com.

Fund and prepayment questions should be directed to Raphael Chirolla, the rate and charges specialist in my Financial Services Department. His phone number is, 248.296.2507 and his email address is, chirollar@oakgov.com.

Thank you, I look forward to our continued relationship as we move forward with this critically important project.

Sincerely,

Jim Nash

c: Ben Croy
Jeff Herczeg
Megan Mikus

Capital Planning:
Investing in Sustainable Infrastructure

2027 through 2031

March 3, 2026

Oakland County Water Resources

Mary Skywinter, P.E.
WRR Chief Engineer

WRC
WATER RESOURCES COMMISSIONER
Jim Nash

Executive Summary

This capital planning report has been developed to provide a comprehensive financial overview supporting the approval to fund critical capital improvements for the Walled Lake-Novi Wastewater Treatment Plant (WLN WWTP). As our community continues to age whilst sustaining itself, maintaining and upgrading wastewater infrastructure is essential to ensuring regulatory compliance, environmental stewardship, and long-term operational efficiency.

The Oakland County Water Resources Commissioner's Office proposes $3 Million funding to effectively enable necessary investments in structural integrity, equipment modernization, and system enhancements to improve treatment, reliability, and resilience. These improvements are vital to meeting current and future regulatory requirements, protecting water quality, and ensuring the continued health and safety of the community.

This report outlines the financial strategy for these capital improvements, detailing projected costs, anticipated long-term savings, and positive environmental impacts. With these projects, our collective communities can proactively address aging infrastructure and equipment, sustain biosolids handling, and reduce risk of permit violations. Overall, an investment in the WLN WWTP ensures a sustainable future for the communities that the collection system and facility serve.

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Introduction

The Walled Lake-Novi Wastewater Treatment Plant (WLN WWTP) serves Walled Lake and Novi, as well as their surrounding communities, by ensuring effective treatment and safe discharge in compliance with environmental regulations. The facility is designed to manage 3.5 MGD of wastewater, playing a vital role in protecting public health and the environment.

The treatment process begins with preliminary treatment, where large debris are removed. Flow then moves through primary and secondary treatment, where biological and chemical processes remove solids. Following secondary treatment, water undergoes tertiary filtration and ultraviolet (UV) disinfection to meet regulatory standards prior to discharge. Biosolids generated during treatment are beneficially reused through land application.

Operating under a National Pollutant Discharge Elimination System (NPDES) permit, the Walled Lake-Novi WWTP maintains strict compliance with regulatory requirements. Continuous monitoring of effluent quality ensures that the plant meets or exceeds environmental standards. By supporting the surrounding communities while preserving Michigan's water resources, the Walled Lake-Novi WWTP plays a crucial role in environmental protection and wastewater management. Ongoing investments in infrastructure and process upgrades are vital to the facility's efficiency, reliability, and sustainability.

This capital planning report is submitted to request approval for the issuance of $3 million, allocated in accordance with service area and flow ratios, to fund essential capital improvements at the Walled Lake-Novi Wastewater Treatment Plant. These projects are critical to maintaining the facility's operational efficiency and regulatory compliance. The proposed will support the rehabilitation of deteriorating concrete tanks, repair of collection system piping, and improvements to the pump station manlift, as well as the purchase and installation of new process blowers, the installation of a critical electrical control center and associated panels, and the modernization of the laboratory's temperature and humidity control systems. While these projects do not represent the full extent of the facility's longer-term capital needs, they address the most immediate priorities. This office maintains a rolling five-year capital improvement plan, through which additional projects will be evaluated and incorporated based on priority, condition, and system needs as they evolve.

The need for these improvements stems from ongoing aging infrastructure and compliance with evolving standards. This investment is pivotal to ensuring the long-term sustainability of the wastewater treatment plant, empowering it to continue providing safe and reliable service. The projects outlined in this report are not only essential for maintaining current operations but also for positioning the facility for future growth and environmental compliance.

Scope of Work

The proposed capital improvements for the Walled Lake-Novi Wastewater Treatment Plant include a series of vital upgrades aimed at improving operational efficiency, maintaining compliance with regulatory standards, and enhancing the overall safety and reliability of the facility. The successful completion of these improvements will address immediate infrastructure concerns. To address continued long-term sustainability, infrastructure will be prioritized and addressed over the course of the next decade and progressively accounted for in WRC's 5-year long range plan. These projects are detailed below including project justification, key milestones, and an overview of benefits to the facility and the surrounding communities.

Waste Activated Sludge (WAS) and Biosolids Storage Restoration

The concrete tanks used for Waste Activated Sludge (WAS) and Class B biosolids storage at the Walled Lake-Novi Wastewater Treatment Plant are essential to the facility's wastewater treatment and land application processes. Due to their age and ongoing wear, these tanks require rehabilitation to restore their structural integrity and extend their useful life. This project involves rehabilitating four concrete tanks to ensure they remain operational and compliant with safety and environmental standards.

Key *Milestones*:

1. **Initial Assessment and Inspection**: A thorough evaluation of four (4) concrete tanks to identify cracks, leaks, and other structural issues. This will involve detailed inspections, and the creation of a repair plan based on the findings.

2. **Concrete Repair and Surface Preparation**: Removing damaged or deteriorated concrete and repairing cracks, defects, and other damage. This phase will also involve surface preparation to ensure proper adhesion of the new concrete repairs.

3. **Curing and Final Inspection**: A final inspection will be carried out to ensure all repair work meets the necessary standards.

Benefits Overview:

1. **Restoration of Structural Integrity**: The rehabilitation will restore the structural integrity of the four concrete tanks, ensuring that they remain safe and reliable for storing WAS and biosolids. This will help prevent failures and the need for more expensive emergency repairs.

2. **Retained Storage Capacity**: By repairing the tanks, their storage capacity will be maintained and improved, ensuring they can handle the required volumes of biosolids and waste sludge effectively.

3. **Prevention of Leaks and Contamination**: The application of a specialized lining will prevent leaks, which could otherwise lead to contamination of the surrounding environment. This is crucial for maintaining regulatory compliance and minimizing environmental risks.

4. **Regulatory Compliance**: The project will ensure that the tanks meet current environmental regulations and safety standards, helping the facility avoid potential fines and ensuring continued legal compliance.

5. **Cost-Effective Solution**: By rehabilitating the existing tanks, the plant can avoid the high costs associated with building new tanks. This will provide significant long-term cost savings and extend the useful life of the infrastructure.

By rehabilitating the concrete tanks, the treatment plant will ensure the continued safe and efficient storage of biosolids and WAS. This project will enhance the facility's reliability, compliance, and long-term operational efficiency while providing significant cost savings.

Secondary Treatment Blower Replacement

The secondary treatment process is a critical part of the facility's operations, with blowers providing essential oxygen to the aerated clarifier tanks for biological treatment. The existing blowers are outdated and no longer meet the plant's operational needs in terms of energy efficiency and performance. The replacement of these blowers will improve treatment and reduce energy consumption, ensuring the system operates at peak performance.

Key *Milestones*:

1. **Blower System Design and Specification**: Defining the specifications for the new blowers, including capacity requirements, energy efficiency, and compatibility with existing systems. This phase will also involve selecting the type of blowers best suited for the plant's needs.

2. **Vendor Selection and Procurement**: Issuing request for proposals (RFP) and selecting a qualified vendor to supply the blowers. The procurement process will include evaluating proposals based on cost, quality, references and delivery timelines.

3. **Delivery and Installation**: Coordinating the delivery and installation of the new blowers, ensuring minimal disruption to ongoing operations. This phase will also include the installation of any necessary infrastructure, such as electrical connections and control systems.

4. **System Integration**: Integrating the new blowers into the existing aeration system, ensuring that they function properly within the current setup and that all control and monitoring systems are correctly configured.

5. **Commissioning and Implementation**: Conducting thorough testing of the new blowers to ensure they are functioning as expected. This will also include any manuals for future operations or maintenance tasks.

Benefits Overview:

1. **Improved Treatment Efficiency**: The new blowers will provide more efficient aeration, which is crucial for the growth of microorganisms used in biological treatment.

2. **Energy Savings**: The new blowers will be more energy-efficient than the existing equipment, reducing overall energy consumption and lowering operational costs.

3. **Enhanced System Reliability**: Replacing the outdated blowers with new, more reliable equipment will reduce the risk of system failures and unplanned downtime.

4. **Regulatory Compliance**: The new blowers will help the plant maintain compliance with environmental regulations. This will help avoid violations and penalties, allowing the plant to continue to meet all required permitted water quality limits.

5. **Reduced Maintenance Costs**: The installation of modern blowers will lower the frequency of repairs, reducing downtime and reducing associated costs.

6. **Operational Flexibility**: The new blowers will offer greater flexibility, allowing the plant to adjust aeration levels more precisely based on operational needs.

By replacing the outdated blowers, the plant will significantly improve efficiency and reliability, reduce energy consumption, and ensure operational savings and regulatory compliance.

Collection System Restoration

The Walled Lake-Novi Wastewater Treatment Plant relies on an extensive collection system, consisting of approximately 70 manholes and 30,000 linear feet (LF) of concrete piping, to transport wastewater to the plant's influent. Over time, the collection system has experienced wear, deterioration, and damage that could lead to potential risks such as leaks, blockages, or system failure. To maintain the system's integrity, reduce inflow and infiltration (I&I), and extend the service life of the infrastructure, a comprehensive rehabilitation project is needed.

Key *Milestones*

1. **Design and Planning**: Based on the assessment results, a detailed design and rehabilitation plan will be developed. This plan will specify the materials and methods for rehabilitating the concrete pipes and manholes, with a focus on addressing areas with the highest levels of deterioration or damage. Manholes will not be included in this work; however, knowing their integrity is vital to the system and will be part of the planning phase.

2. **Procurement and Contractor Selection**: A request for proposals (RFP) will be issued to select a qualified contractor to carry out the rehabilitation work. The contractor will be chosen based on experience, cost-effectiveness, and the ability.

3. **Rehabilitation of Concrete**: The collection system will be rehabilitated, restoring structural integrity and preventing further deterioration.

4. **Inspection**: Post-rehabilitation, the collection system will undergo inspections to ensure that all work meets required standards. This will include visual assessments to confirm that the system is fully operational and free from leaks.

5. **Project Completion and Handover**: Once all rehabilitation work is completed and passes visual inspection, project will be considered complete.

Benefits Overview:

1. **Improved System Reliability**: The rehabilitation will restore the integrity of the collection system, reducing the likelihood of system failures and blockages.

2. **Reduced Inflow and Infiltration (I&I)**: By sealing cracks and defects in the concrete pipes, the project will significantly reduce inflow and infiltration. This will help prevent excess water from entering the system during wet weather, reducing the risk of overflows and improving the efficiency of the treatment process.

3. **Extended Asset Life**: The rehabilitation will extend the service life of the existing infrastructure, delaying the need for costly replacements.

4. **Cost Savings**: Rehabilitation is more cost-effective than completely replacing the collection system and manholes. This approach will reduce overall project costs while still achieving the desired improvements in system performance.

5. **Environmental Protection**: Reducing leaks and I&I will help prevent wastewater from contaminating the environment.

6. **Improved Maintenance and Reduced Risk**: By proactively addressing issues in the collection system, the plant will reduce the need for emergency repairs, minimize downtime, and improve the overall efficiency of the maintenance program.

7. **Regulatory Compliance**: The project will ensure that the collection system meets environmental and regulatory standards, helping the plant avoid potential fines and ensuring continued compliance with wastewater management laws.

The rehabilitation of the collection system will significantly improve the performance, reliability, and environmental compliance of the Walled Lake-Novi Wastewater Treatment Plant. By addressing existing issues and preventing future deterioration, this project will help ensure the continued safe and efficient operation of the collection system.

Manlift Elevator Rehabilitation

The manlift within the Raw Sewage Pump Station (RSPS) is an essential piece of equipment, providing access for both operations staff and contractors across the three (3) floors of the building. Originally installed in the early 1970s, this custom manlift has reached the end of its useful life, and its continued operation poses safety risks and reliability concerns. Due to the custom building of this manlift, it is recommended to conduct major rehabilitation rather than full replacement. Therefore, to bring the manlift up to code and within safety regulations, parts of the manlift must be replaced in similar customization to its original fabrication.

Key *Milestones*:

1. **Design and Procurement**: A comprehensive assessment will be conducted including safety features, capacity, and compliance with building codes. A request for proposals (RFP) will be issued to select a qualified contractor.

2. **Vendor Selection and Contract Award**: The vendor selection process will focus on suppliers with proven expertise in manlift installations and safety compliance.

3. **Manlift Removal and Site Preparation**: The existing manlift will be safely decommissioned and removed from the RSPS building.

4. **Installation of New Manlift**: The new and customized parts will be installed, following safety guidelines and manufacturer instructions. This phase will include setting up electrical connections and any needed upgrades to the RSPS building to ensure compatibility.

5. **Testing and Safety Inspections**: Once all parts are installed, the manlift will undergo an inspection to ensure compliance with safety standards, proper functionality, and smooth operation. This will also include proper training on maintenance and use.

Benefits Overview:

1. **Enhanced Safety**: The updated manlift will significantly improve safety for plant personnel and contractors. New safety features, such as emergency stop buttons and secure access points, will reduce the risk of accidents. The updated manlift will meet safety and building code requirements, ensuring compliance with relevant regulations.

2. **Improved Reliability**: The updated manlift will be more reliable than the outdated system, reducing the frequency of breakdowns and minimizing downtime.

3. **Increased Operational Efficiency**: The updated manlift will improve access to all floors of the RSPS building. This will increase efficiency during maintenance, inspections, and routine operations, reducing downtime and improving productivity.

4. **Long-Term Cost Savings**: The investment in this manlift will provide long-term savings by improving safety, reliability, and operational efficiency. The new system will require less frequent maintenance and ensure consistent performance.

The replacement of the manlift in the RSPS building will enhance the overall safety, reliability, and operational efficiency of the plant. By upgrading to a modern, code-compliant system, the plant will ensure safe vertical access for personnel and contractors while reducing downtime and maintenance costs, contributing to the facility's long-term operational success.

Electrical Control Center and Panel Replacement

The electrical motor control center (MCC) and power panel (PP) within the Raw Sewage Pump Station (RSPS) building are critical components of the plant's infrastructure, but they are over 50 years old and in need of replacement. These systems control essential operations, including the regulation of motors, pumps, and other critical equipment. Given their age and the increasing risk of system failures, replacing these MCC and PP is crucial to ensuring the continued reliability and operational efficiency of the plant.

The replacement of the electrical control center and power panel will improve the overall reliability of the plant's electrical infrastructure and significantly reduce the risk of downtime or failures that could disrupt operations. Additionally, this update will enhance safety by bringing the equipment up to current standards, ensuring compliance with electrical safety protocols.

In addition to the replacement of the MCC and PP, the new control center and panel will require updated ventilation to ensure proper cooling and air circulation. This ventilation must meet the requirements outlined by the National Fire Protection Association (NFPA), specifically in accordance with NFPA 70, the National Electrical Code, and NFPA 91 for ventilation of electrical equipment. Ventilation upgrades will be designed and implemented alongside the replacement of electrical equipment to ensure the systems are compliant with safety regulations.

Key *Milestones*:

1. **Design of new MCC and PP**: Considering all current operational uses and building limitations for proper design and procurement.

2. **Removal of Existing MCC and PP**: Safely decommissioning and removing the outdated equipment from the RSPS building, including Implementation of generators.

3. **Procurement and Installation of New Equipment**: Sourcing new MCC and PP that meet current operational and safety standards. Installing the new equipment in a way that minimizes disruption to ongoing operations.

4. **Ventilation System Upgrade**: Installing updated ventilation (NFPA 70 and NFPA 91), ensuring the new electrical infrastructure operates safely and efficiently.

5. **Compliance and Testing**: Ensuring all new equipment and ventilation systems are in full compliance with the latest codes and standards and performing necessary testing to verify system functionality and safety.

Benefits Overview:

1. **Improved Reliability**: The replacement of the MCC and PP will significantly enhance the reliability of the plant's electrical systems, reducing the likelihood of equipment failures that could lead to unplanned downtime or operational disruptions.

2. **Enhanced Safety**: Upgrading the electrical infrastructure and ventilation systems will improve safety by ensuring compliance with the latest electrical safety standards, reducing the risk of electrical fires, overheating, or other hazards.

3. **Regulatory Compliance**: The upgrade will bring the electrical systems in line with NFPA 70 and NFPA 91, ensuring compliance with the National Electrical Code and modern safety protocols, which are essential for maintaining operational certification and meeting environmental standards.

4. **Long-Term Cost Savings**: By replacing outdated equipment with more reliable and energy-efficient systems, the plant will benefit from reduced maintenance costs and fewer repairs over time, resulting in long-term savings and improved cost efficiency.

By upgrading the MCC, power panel, and ventilation system, this project will significantly improve the plant's operational reliability, safety, and compliance with industry standards, ensuring that the RSPS building can continue to function effectively for years to come.

Laboratory Temperature and Humidity Regulation

The administration building houses our permitted laboratory that is critical to our permitted testing. This building currently relies on an outdated HVAC system, originally installed in the 1990s. Over the years, the system has become inefficient, costly to maintain, and is required for laboratory testing and state and permitted limit results.

Key *Milestones*:

1. **Vendor Selection and Procurement**: A request for proposals (RFP) will be issued to select a qualified HVAC contractor. The procurement process will include evaluating vendors based on project cost and experience.

2. **Installation of the New HVAC System**: The system will be installed, with work carried out to minimize disruption to the building's operations.

3. **System Testing and Commissioning**: After installation, the new HVAC system will undergo thorough testing including checking temperature control, air quality, and system integration with the building's existing infrastructure.

Benefits Overview:

1. **Improved Energy Efficiency and Cost Savings**: The new system will be more energy-efficient than the outdated system, reducing energy consumption.

2. **Critical to Lab Testing and Permit:** HVAC improvements are critical for maintaining consistent temperature regulation within a wastewater treatment laboratory, where precise environmental conditions directly impact the accuracy of analytical testing. Many laboratory instruments and sample analyses (such as BOD, ammonia, and other nutrient testing) are temperature sensitive and require controlled conditions to ensure reliable and reproducible results. Inaccurate temperature regulation can compromise test integrity, potentially leading to non-compliant data reporting to regulatory agencies such as EGLE.

3. **Reduced Maintenance Costs**: The current HVAC system requires frequent repairs and maintenance due to its age. Replacing it with a modern system will reduce the need for repairs, as the new system will be more reliable.

An updated temperature regulation system for the laboratory system affects the accuracy of laboratory testing and results for permit required analyses. Additionally, this upgrade enhances energy efficiency, system reliability, and overall support for compliance with plant treatment operations.

Financial Overview

This financial overview outlines the total projected costs for each of the proposed capital improvement projects, along with their respective timelines. This section provides an understanding of the allocation of funds and the expected financial impact of each project. The funds approved will cover the following capital projects, ensuring the necessary funding is available to complete these improvements efficiently and on schedule.

Table 1. Capital Improvement Project (CIP) Breakdown

Project Description	Implementation Year(s)	Net Useful Life/ Extended Life	Estimated Cost
Biosolids Storage Restoration	2027 – 2030	50 years	$195,000
Process Blowers Replacement	2027 – 2030	20 years	$585,000
Collection System Restoration	2027 – 2030	40 years	$495,000
Electrical Control Center and Panel Replacement	2029 – 2031	30 years	$1,550,000
Laboratory Temperature and Humidity Regulation	2027	15 years	$75,000
Restore Manlift	2028	40 years	$100,000

Total Estimated Cost: $3,000,000

Table 1 serves as a breakdown of each project's cost, expected timeline, and impact on the facility through useful life. The cost allocations were determined through the combination of contractor proposals and engineer's estimates. The funding will be structured to ensure that all are allocated efficiently over a 5-year implementation period.

Additionally, funding will be in accordance with the serviced area and flow ratios for each City. This is an average of flows over the last 4 service years.

Timeline

The following timeline outlines the start and completion years for each proposed capital project, with key milestones for each phase of the work. This timeline is designed to ensure that each project is completed efficiently and without disrupting operations at the facility.

Table 2. Capital Improvement Project (CIP) Timeline and Milestones

Project Description	Start Year	Completion Year	Key Milestones
Biosolids Storage Restoration	2027	2030	**2027:** Initial assessment and planning **2028-2029:** Tank restoration **2030:** Final inspection
Process Blowers Replacement	2027	2030	**2027:** Vendor selection and contract award **2028-2030:** Delivery and installation of blowers **2030:** System testing and integration
Collection System Restoration	2027	2030	**2027:** Inspection and preparation **2028-2030:** Repair work **2030:** Final CCTV inspections
Electrical Control Center and Panel Replacement	2029	2031	**2029:** Procurement and design **2030-2031:** Construction, installation and programming **2031:** System testing and handover
Laboratory Temperature and Humidity Regulation	2027	2027	**2027:** Assessment, installation and system operation
Restore Manlift	2028	2028	**2028:** Demolition, construction and installation, safety and operational tests, and final implementation

Each project will be closely monitored by the project management team, with regular updates provided to stakeholders. Adjustments to the timeline will be made as necessary to accommodate any unforeseen challenges, while maintaining a focus on minimizing delays and staying within budget.

Project Coordination and Monitoring

The coordination and monitoring of the capital improvement projects at the Walled Lake-Novi Wastewater Treatment Plant are crucial to ensuring that each is completed efficiently, on time, and within budget. The goal is to maintain effective communication with stakeholders, track progress through regular updates, and proactively manage risks. These projects involve several phases, and this section outlines the communication strategy, key partnerships, and reporting procedures for monitoring progress.

Communication with Stakeholders

Effective communication with both internal and external stakeholders is essential for keeping all parties informed and aligned throughout the project lifecycle. The key stakeholders include:

- **Internal Stakeholders:** Management team, project leaders, and facility staff.
- **External Stakeholders:** Contractors, consultants, and regulatory bodies.
- **Public Stakeholders:** Local government and community or council members.

To ensure smooth communication and transparency, the following practices will be implemented, regular updates will be shared with key stakeholders as requested.

Project Progress and Monitoring

Each project will be closely monitored by the WRC project management team including project progress, budget tracking, and as needed project meetings with consultants, contractors, and field inspection staff.

Regular updates will be provided to stakeholders annually unless otherwise requested. These meetings will also serve to review the project's status, assess risks or delays, and develop strategies for mitigation. The meetings will include updates on the project’s budget, timeline, and scope, and any changes will be addressed promptly.

Effective coordination will ensure that the proposed capital improvement projects are executed seamlessly. With a clear communication strategy, WRC will successfully complete these projects, providing long-term benefits to the Walled Lake-Novi Wastewater Treatment Plant and the communities it serves.

Conclusion

The proposed capital improvement projects outlined in this report are essential for the continued success and sustainability of the Walled Lake-Novi Wastewater Treatment Plant. By addressing critical infrastructure needs, such as the rehabilitation of concrete tanks, the replacement of outdated equipment, and the restoration of current systems, these projects will not only enhance the facility's operational efficiency but also ensure compliance with current and future environmental standards.

The strategic investments in systems such as the process blowers and the electrical control center, among others, will improve the plant's capacity, redundancy, and reliability, ultimately mitigating risks of system failure. Additionally, the upgrades to the laboratory's temperature and humidity regulation system and the manlift rehabilitation will improve worker safety, contributing to a more efficient operations and code compliant environment.

Securing the necessary funding will allow for the phased implementation of these improvements, providing the financial flexibility required to complete the projects while maintaining fiscal responsibility. The detailed timeline and financial overview ensure that the projects will be executed in a timely and cost-effective manner, with minimal disruption to ongoing operations.

In conclusion, these capital improvements are a vital step in the plant's efforts to maintain its existing infrastructure while maintaining environmental compliance. With implementation of these proactive measures, the Walled Lake-Novi Wastewater Treatment Plant will be well-positioned to continue providing safe, reliable, and efficient wastewater treatment services to the community for years to come.