STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
LANSING

GRETCHEN WHITMER
GOVERNOR

AARON KEATLEY
ACTING DIRECTOR

May 24, 2023

TO: All Interested Citizens, Organizations, and Government Agencies

SUBJECT: **FINDING OF NO SIGNIFICANT IMPACT**
Allendale Charter Township
Wastewater Treatment Plant & Collection System Improvements
Clean Water State Revolving Fund Project Number 5730-01

The purpose of this notice is to seek public input and comment on a preliminary decision by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) that an Environmental Impact Statement (EIS) is not required to implement recommendations discussed in the attached Environmental Assessment of a wastewater project plan submitted by the applicant mentioned above.

HOW WERE ENVIRONMENTAL ISSUES CONSIDERED?

Part 53, Clean Water Assistance, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, being Sections 324.5301 to 324.5316 of the Michigan Compiled Laws Annotated, requires EGLE to evaluate all environmental implications of a proposed wastewater project. EGLE has done this by incorporating a detailed analysis of the environmental effects of the proposed alternatives in its review and approval process. A project plan containing information on environmental impacts was prepared by the municipality and reviewed by the State. EGLE has prepared the attached Environmental Assessment and found that the proposed project does not require the preparation of an EIS.

WHY IS AN EIS NOT REQUIRED?

Our environmental review concluded that no significant environmental impacts would result from the proposed action. Any adverse impacts have either been eliminated by changes in the project plan or will be reduced by the implementation of the mitigative measures discussed in the attached Environmental Assessment.

HOW DO I GET MORE INFORMATION?

A map depicting the location of the proposed project is attached. This information is also available on our website at www.michigan.gov/cwsrf under “Related Links.” The Environmental Assessment presents additional information on the project, alternatives that were considered, impacts of the proposed action, and the basis for our decision. Further information can be obtained by calling or writing one of the contact people listed below.

HOW DO I SUBMIT COMMENTS?

Any comments supporting or disagreeing with this preliminary decision should be submit-ted to me at EGLE, Constitution Hall, P.O. Box 30457, Lansing, Michigan 48909-7957. We will not take any action on this project plan for 30 calendar days from the date of this notice in order to receive and consider any comments.

WHAT HAPPENS NEXT?

In the absence of substantive comments during this period, our preliminary decision will become final. The applicant will then be eligible to receive loan assistance from this Agency to construct the proposed project.

Any information you feel should be considered by EGLE should be brought to our attention. If you have any questions, please contact Ms. Sara Brown, Project Manager, at 517-231-8916, by email at BrownS93@michigan.gov, or you may contact me. Your interest in this process and the environment is appreciated.

Sincerely,

Dan Beauchamp

Dan Beauchamp, Section Manager
Water Infrastructure Funding & Financing Section
Finance Division
517-388-3380

Attachment

DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
Clean Water State Revolving Fund (CWSRF)
Finding of No Significant Impact
Allendale Charter Township, Ottawa County
May 2023

PROJECT IDENTIFICATION

Applicant:	Allendale Charter Township
Address:	11624 40th Avenue Allendale, Michigan 49401
Authorized Representative:	Mr. Adam Elenbaas, Township Supervisor
Project Number:	5730-01

PROJECT SUMMARY

The Allendale Charter Township (Allendale) wastewater treatment plant (WWTP) is located at the eastern boundary of the township just west of the Grand River and north of Lake Michigan Drive (M-45). Allendale Public Utilities operates and maintains the WWTP and collection system that serves a population of 14,900 residents. The West Michigan Regional Planning Commission has shown that Allendale is one of the fastest growing communities in the region due to urban sprawl from the city of Grand Rapids. It's estimated that the population served will increase to 31,800 residents by 2040. Allendale intends to replace aging and inefficient WWTP infrastructure with more modern and efficient technology to provide safe, reliable treatment with increased capacity for the next 20-plus years. The project will also include influent sewer relocation, replacement, and repairs.

Allendale is seeking a $39,475,000 low interest loan through Michigan's CWSRF program administered by the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Allendale is eligible to receive 10 percent principal forgiveness on the loan which cannot exceed $3,947,500. As a result of this project, the typical Allendale WWTP residential customer may experience a sewer rate increase of approximately $10.13 per month.

EXISTING SYSTEM AND PROJECT NEED

The Allendale WWTP is comprised of a mechanical drum screen, grit removal, four rectangular primary treatment settling basins, eight rotating biological contractors (RBCs) for biological treatment, two circular secondary clarification tanks, and a chorine disinfection chamber. The current average design flow is 1.60 million gallons per day (MGD) with peak flows of 4.20 MGD. The existing equipment and tanks are aging and in need of replacement. The average influent raw sewage loadings are above the design value for the treatment system, which causes extra stress on the systems and potential for effluent water quality violations when discharged into the Grand River. The WWTP also includes sludge streams for waste activated sludge, two 33-foot diameter anaerobic digesters with 150,000 gallons of capacity in each tank, and biosolids disposal which occurs every few years by spreading onto a nearby farm field in accordance with Allendale's Biosolids Residuals Management Program.

Wastewater is collected and flows by a series of gravity sewers and lift stations to the influent pressure sewers to the WWTP. The influent pressure sewer conveys all flow from the collection

system to the treatment plant through 14-inch and 20-inch diameter pipes. This sewer is located along a creek bed that has experienced significant erosion over the years and has exposed this pipe in several locations. A portion of these pipelines is inaccessible with equipment, which prevents Allendale from performing proper maintenance and repairs. The structural integrity of the influent pressure sewers is of concern. The existing trunk sewer from the south (Sewer B) was installed in 1964. The existing sewers from 48th Avenue to 40th Avenue were installed in 1964 and 1990. Structures along Sewer B have been given structural ratings of 3s and 4s on a scale of 1 to 5 (5 being most critical) based on the National Assessment Certification Program Pipeline Assessment Certification Program rating system. If these issues are not addressed, the trunk sewer could become more exposed and eventually fail, resulting in a catastrophic sewage spill. Because of this, the influent sewer is in need of relocation.

PROPOSED PROJECT

A. Alternatives Considered

Alternative 1: No-action

No-action includes continuing to operate the WWTP and collection system with no improvements. In its current condition, the WWTP is receiving high loading capacities and it's likely the system will not be able to provide reliable treatment for 20 years. The collection system improvements are currently at risk of a catastrophic failure because of their location within the eroding stream bed. As such, the "No Action" Alternative does not meet the project objectives and was not considered further.

Alternative 2: Optimize Existing Facilities

The existing facility is already running at its optimum performance. The existing facilities cannot meet the proposed ammonia limits by EGLE's next National Pollutant Discharge Elimination System permit without the addition of more dissolved oxygen introduced to the biological treatment system. Without upgrades, it would not be feasible for the existing facilities to function with an effluent ammonia limit. The existing equipment ranges from 20 to 40 years old. As a result, at least half of the equipment at the plant is at or past its expected useful life. The existing sewer mains are already performing at or near their optimum performance. This is not a concern for the Allendale, but the risk of failure and inability to access this failure are concerns.

Alternative 3: Regional Alternative

The nearest WWTPs in the region are located in the city of Coopersville (Coopersville) and the city of Grandville (Grandville). The Coopersville WWTP would need full-scale upgrades and new process tankage and equipment to accept Allendale's wastewater. The Grandville WWTP is nine miles away and would require a cross-county force main and many other upgrades. The structural integrity of the collection system would still need to be addressed regardless of where the waste goes. Because this alternative would be much more expensive than upgrades to the Allendale WWTP and collection systems, this alternative was not considered further.

Alternative 4: WWTP Improvements and Sewer Relocation and Replacement

Alternative 4 includes the full WWTP upgrades of MBBR & Nitrification Tower, Extended Aeration with VLR, Extended Aeration with Oxidation Ditch, and *AquaNereda*® Activated Granular Sludge (AGS) reactors option. This is a new technology in Michigan that utilizes a unique sludge wasting configuration that allows large granules of sludge to form inside the reactor tanks. These granules have the capability of supporting aerobic and anaerobic microbial growth. These granules settle much faster than a conventional clarifier once the reaction phase is complete. As a result, these reactors are efficient at the removal of

Biochemical Oxygen Demand, Nitrogen, and Total Suspended Solids, with shorter residence times than conventional methods. They also utilize biological phosphorus removal, which treats phosphorus to less than permit levels with minimal or no chemical addition. Numerous options of repair/replacement/relocation were explored during the Trunk Sewer evaluation. These included iterations of relocating Sewer B (serves portions of the township south of M-45 and includes Grand Valley State University (GVSU)), relocating Sewer A (runs from M-45 just west of 48th Avenue in the ravine all the way to the WWTP), replacing both in-kind, and repairing/lining each sewer segment. The chosen alternative from the report was to relocate Sewer B and replace Sewer A.

B. Proposed Project

Alternative 4 was selected because it is the most fiscally responsible project over the life cycle of these assets. The WWTP expansion with the *AquaNereda*® ACS reactors is the selected option because it is the lowest capital cost and lowest total present worth over the 20-year life cycle. It also uses a much smaller footprint, less chemicals, and less electricity. Headworks improvements will include screen upgrades to reduce waste and allow for an increased flow capacity through the system, grit pump replacement, and installation of a headworks effluent chamber. The AGS system will include four reactor tanks, a new building, four positive displacement blowers, air piping in, process water piping in/out, solids piping out, and buffer water piping out. Ultraviolet (UV) disinfection will replace the chorine tablets currently used for disinfection. A proposed 30-inch diameter pipe would connect the UV effluent to the existing final effluent chamber. The existing clarifiers will be modified to accommodate waste solids holding/settling form the reactor tanks and mechanically thicken the waste solids prior to digesting (See Figure 1). Operation of the digester shall be similar to current operations. Because the solids will be thickened, further evaluation of the digester performance with higher organic loading will be performed during the design phase.

Relocating and replacing the critical sewers will allow for easier maintenance access and greatly reduce the risk of catastrophic failure. The rerouting of Sewer B will provide a new sewer within an existing roadway corridor and will restore the corridor along the stream bed where the existing pipeline is. The Sewer B relocation will be within the median of M-45 to stay within the right-of-way. Knollwood Estates sanitary system is proposed to be routed back to M-45 and into the new lift station through Sewer B to the WWTP (See Figure 2).

C. Project Cost Estimate

Allendale is expected to receive a $39,475,000 CWSRF loan at a 2.125 percent interest rate over 30 years to finance the proposed project. The principal forgiveness on the loan is estimated to be up to $3,947,500 or 10 percent of the loan. The average residential user's rate will increase by approximately $10.13 per month as a result of this project.

EXISTING ENVIRONMENT AND POTENTIAL PROJECT IMPACTS

A. Water Quality Impacts

Beneficial impacts resulting from the project include a new mechanical WWTP to handle future capacity, new operating controls, UV disinfection, as well as the *AquaNereda*® ACS reactors which will provide sufficient treatment to protect water quality for the next 20-plus years. The sewer relocation and replacement will move the sewers within more urbanized settings instead of within a creek ravine and will improve flows within the collection system. All necessary soil erosion and sedimentation control measures will be taken to properly protect the wetlands within the area.

B. Construction Impacts

The WWTP project may impact the 100-year floodplain in small portions of the proposed upgrades. This impact will be mitigated on site at the WWTP facility. Wetland impacts are expected to be non-existent or less than the threshold for required mitigation as defined by EGLE in the Joint Permit Application guidance documents. Both portions of trunk sewers currently run through drainage stream beds. Any project for these sewers will reduce contamination of storm water runoff in the area.

The State Historic Preservation Office was contacted, and it was determined that there are no known protected historic or archaeological features within the project impact areas. The Tribal Historic Preservation Officers and the proper tribal authorities were also contacted and there were no known impacts on these features. Species identified through the Michigan Natural Features Inventory will be protected by practicing the recommended procedures. Dead trees will only be cut between October and April, proper soil erosion measures will be in place during all phases of construction, and mass clear cutting will be avoided whenever possible to prevent the removal of endangered plant species. The section of trunk sewer from GVSU experiences erosion along the drainage creek bed. This sewer will be removed or abandoned, and proper mitigation to the stream bank will occur to ensure erosion is not increased due to this project. Every effort will be made to avoid potential long-term or irreversible adverse impacts during the construction of the WWTP and collection system improvements.

Wetland, floodplain, and inland stream mitigation would be handled through the permit process as required per EGLE guidelines. If impacts cannot be avoided, wetland mitigation measures will be used. The design and project specifications will include the proper use of physical measures to reduce soil erosion to a manageable level and any disturbed slope areas will be immediately seeded, mulched and/or sodded to prevent soil erosion and/or sedimentation.

Short-term construction impacts are expected to be minimal. Typical construction disturbances including noise, dust, and traffic changes will occur. Service will be maintained for residents and businesses during construction. The contractor will control noise, dust, traffic, and surface restoration according to local ordinances and contract specifications. Soil erosion and sedimentation control measures will be required to ensure the Grand River is not impacted. Some of the WWTP work may emanate odors briefly during construction, but the odors will abate with project completion.

Secondary Impacts

No significant secondary impacts are anticipated for this project. The project is designed to address deficiencies at the WWTP and accommodate for the expected 20-year needs. The project will help the WWTP function at its projected 20-year needs of 4.2 MGD Maximum Daily Flow.

PUBLIC PARTICIPATION

The public hearing was advertised in the *Grand Rapids Press* on June 7, 2020. Copies of the project plan were made available for public review at the township hall. Allendale held a public hearing on the project plan on July 13, 2020, at Allendale Charter Township Community Park. A presentation was made that described the project alternatives, impacts, construction, financing, and estimated costs. No comments were received. Allendale unanimously passed a motion to adopt the project plan and implement the selected alternative at the conclusion of the hearing.

An amendment was made to remove the dewatering component, and include the influent sewer relocation, replacement, and repair. The amendment was advertised on the township website and presented during a public meeting on May 9, 2022, and all public comments were considered and addressed. The amendment was adopted unanimously via resolution on May 23, 2022.

REASONS FOR CONCLUDING NO SIGNIFICANT IMPACTS

The project will present no long-term significant impacts associated with its construction. No interruptions in sanitary sewer services to residents is expected to occur. Long term positive impacts are a higher quality effluent, meeting discharge limits, upgraded operational controls and collection system, and new AGS and UV disinfection system.

Questions regarding this Environmental Assessment should be directed to:

Ms. Sara Brown, Project Manager
Water Infrastructure Funding and Financing Section
Finance Division
Michigan Department of Environment, Great Lakes, and Energy
P.O. Box 30457
Lansing, Michigan 48909-4957
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Figure 1: WWTP Improvements

Figure 2: Sewer Relocation and Replacement