TO: All Interested Citizens, Organizations, and Government Agencies

SUBJECT: FINDING OF NO SIGNIFICANT IMPACT
Village of Dundee, Monroe County
Wastewater System Improvements
State Revolving Fund Project No. 5648-01

The purpose of this notice is to seek public input and comment on a preliminary decision by the Michigan Department of Environmental Quality (DEQ) 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 the DEQ to evaluate all environmental implications of a proposed wastewater project. The DEQ 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. The DEQ 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/cleanwaterrevolvingfund 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 submitted to me at DEQ, Office of Drinking Water and Municipal Assistance, Revolving Loan Section, Constitution Hall, P.O. Box 30241, Lansing, Michigan 48909-7741. 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 the DEQ should be brought to our attention. If you have any questions, please contact Ms. JoAnn Kalemkiewicz, the project manager, at 517-284-5411, or you may contact me. Your interest in this process and the environment is appreciated.

Sincerely,

[Signature]

Sonya T. Butler, Chief
Revolving Loan Section
Office of Drinking Water and Municipal Assistance
517-284-5433

Attachments
I. PROJECT IDENTIFICATION

Applicant: Village of Dundee, Monroe County

Authorized Representative: Mr. David Uhl, Village Manager

Address: 350 West Monroe, Dundee, Michigan 48131

SRF Project No.: 5648-01

II. PROJECT SUMMARY

The village of Dundee has developed a project plan for its wastewater treatment plant (WWTP) and collection system to meet current and future demands. The village has applied for funding under the SRF program to improve system reliability and compliance as outlined in the comprehensive plan. The proposed project, No. 5648-01, will repair, replace, and upgrade the membrane bioreactor (MBR) system, including membranes, inflow screening, flow splitter, backpulse system, chemical cleaning system, and blowers, which will improve treatment at the WWTP. This project will also construct a relief sewer, along the north side of the River Raisin, to improve capacity and reduce sanitary sewer overflows (SSO) in compliance with its Administrative Consent Order (ACO). The total project cost is estimated to be $7,500,000. The SRF program awards low-cost federal and state-funded loans for repairs and upgrades to publically owned wastewater treatment and sewer systems. This loan will be repaid through sewer revenues. The typical household will see an increase of approximately $14.79 to its existing monthly wastewater fee.

III. PROJECT BACKGROUND

Land use in Dundee consists of varied uses with some areas of potential future development. The major land use in the village is agricultural (31.6 percent), followed by residential (30.0 percent), then industrial (17.2 percent), open land (9.1 percent), commercial and office (7.6 percent), and public/municipal use (4.5 percent). According to the 2010 census, the current population of Dundee is 3,957 and is projected by the Southeast Michigan Council of Governments to be 4,304 in 2020 and 4,470 in 2030. The predicted future land use is primarily residential with a few areas of commercial and industrial land use.

Dundee’s WWTP was constructed in 1957. The facility has subsequently had two major upgrades. The facility was upgraded to a secondary treatment facility with an activated sludge sequencing batch reactor (SBR) in 1989 and retrofitted with a MBR system in 2005 to increase treatment capacity. The WWTP receives wastewater from the village through nine lift stations. The WWTP has a design flow capacity of 1.5 million gallons per day (MGD). The current average daily flow is 0.833 MGD. The WWTP does not currently
have any operational problems during dry weather, however, during high flow periods, the sanitary waste system has experienced problems including wear on the membrane systems and capacity issues. High flow periods are generally caused by stormwater entering the system through cracked pipes, manholes, and downspout connections into the sanitary sewer, known as infiltration and inflow (I/I), and can cause capacity exceedances.

The Dundee sewer system was originally constructed as a combined sewer system for sanitary and stormwater conveyance. This system overflowed during wet weather events sending the untreated sewage into the River Raisin. The system has been separated, but even after constructing separate sanitary and stormwater sewers, flow rates in the village’s sanitary sewers have remained high during wet weather and high river stages. These flows have resulted in operational problems at the WWTP and SSOs. The village had 49 reported SSOs from July 2, 2008, through April 8, 2014. As a consequence, the Michigan Department of Environmental Quality (DEQ) issued an ACO specifying compliance dates for control and elimination of the overflows.

The village, with an SRF/Strategic Water Quality Initiatives Fund (S2) grant for project planning, performed a Sanitary Sewer Evaluation Survey (SSES) and I/I studies to determine the source of the excess flow. The SSES and I/I studies identified a number of repairs, replacements, and upgrades needed to bring the system into compliance per the ACO. The majority of these needs were addressed under the previous project, No. 5609-01, which is nearing completion. This proposed project, No. 5648-01, will continue to address the high flow issues with the construction of a relief sewer on the north side of the River Raisin. Upgrades, repairs, and replacements proposed for the WWTP will include rehabilitating the MBR system; replacing the membranes, which are beyond the expected functional life; and replacing, repairing, and upgrading inflow screening, flow splitter, backpulse system, chemical cleaning system, and blowers (see Figure 1). These items are described below in Section IV.

IV. PROPOSED PROJECT

A. Alternatives Considered

If no action is taken, the village will continue to be in violation of the ACO, SSOs will continue to impact the River Raisin, and the MBR system will continue to deteriorate, risking failure, which would result in expensive emergency repairs and violations of the WWTP discharge permit. Therefore, the no-action alternative was eliminated from further consideration.

The village considered transporting collected wastewater to a neighboring facility. The Milan WWTP is the closest facility at a distance of approximately 10 miles, but this alternative was rejected because the cost of building the system, transportation, and treatment costs outweighed the costs of all other alternatives. Therefore, the regional alternative was eliminated from further consideration.

The village examined various combinations of repairs, replacements, and upgrades to the WWTP to address aging and failing systems. The village examined the sewer system to determine the most cost-effective long-term solutions to address the wet weather SSO issues and comply with the ACO. Alternatives were evaluated for cost-effectiveness and reliability.
Install Relief Sewer

The installation of a relief sewer on the north side of the River Raisin (see Figure 2) was part of a previous project, determined to be the most cost-effective solution for removing I/I. No feasible alternatives to this installation are available. This portion of the project was initially to be completed under the previous project, but was postponed for logistical reasons.

<table>
<thead>
<tr>
<th>Item</th>
<th>Install Relief Sewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capitol Cost (Piping)</td>
<td>$460,000</td>
</tr>
<tr>
<td>Salvage Value in 20 years</td>
<td>$276,000</td>
</tr>
<tr>
<td>Present Worth of Salvage Value</td>
<td>($217,500)</td>
</tr>
<tr>
<td>Total Present Worth – Capitol Cost Less Present Worth Salvage Value</td>
<td>$242,500</td>
</tr>
</tbody>
</table>

Convert to SBR System with Tertiary Treatment vs. Rehabilitate MBR System

The village developed two primary alternative options for the MBR treatment system. Alternative 1 replaces the MBR with an activated sludge SBR with tertiary treatment. Alternative 2 refurbishes the MBR system restoring it to like new condition. Cost analysis of the two options is in Table 2. The village has determined that Alternative 2, refurbishing the MBR, will cost significantly less than replacing it with the SBR system and, therefore, the most cost-effective option. The refurbishing of the MBR includes replacement of the spent filter cartridges, upgrades to inflow screening, flow splitter, backpulse system, chemical cleaning system, and blowers.
<table>
<thead>
<tr>
<th>General Requirements</th>
<th>Alternative 1: Convert to SBR Tanks with Tertiary Filters</th>
<th>Alternative 2: Rehabilitate MBR System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrofit MBRs with SBRs</td>
<td>$705,000</td>
<td>$0</td>
</tr>
<tr>
<td>Construct new SBR Tank</td>
<td>$1,451,000</td>
<td>$0</td>
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<tr>
<td>Equalization Tank</td>
<td>$2,042,000</td>
<td>$0</td>
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<tr>
<td>Tertiary Filters</td>
<td>$1,569,000</td>
<td>$0</td>
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<tr>
<td>Misc. – Piping, Demolition, Sitework</td>
<td>$1,269,000</td>
<td>$552,000</td>
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<tr>
<td>Replace Screening</td>
<td>$1,576,000</td>
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<tr>
<td>Flow Split Improvements</td>
<td>$122,000</td>
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<tr>
<td>Backpulse System</td>
<td>$0</td>
<td>$33,000</td>
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<tr>
<td>Chemical Cleaning System</td>
<td>$0</td>
<td>$209,000</td>
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<tr>
<td>Blower Modifications</td>
<td>$0</td>
<td>$88,000</td>
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<tr>
<td>MBR Replacement</td>
<td>$0</td>
<td>$2,580,000</td>
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<tr>
<td>Sampling and Disinfection</td>
<td>$24,000</td>
<td>$24,000</td>
</tr>
<tr>
<td>Electrical and Instrumentation</td>
<td>$778,000</td>
<td>$505,000</td>
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<tr>
<td><strong>Total Capital Cost</strong></td>
<td><strong>$9,536,000</strong></td>
<td><strong>$6,405,000</strong></td>
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<tr>
<td>Electrical Cost</td>
<td>$37,640</td>
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<tr>
<td>Chemical Cost</td>
<td>*</td>
<td>$36,150</td>
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<td>Labor</td>
<td>$36,500</td>
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<td>Miscellaneous Maintenance</td>
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<td><strong>Total Operation &amp; Maintenance Cost</strong></td>
<td><strong>$132,890</strong></td>
<td><strong>$120,040</strong></td>
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<td><strong>Present Worth of Operation Maintenance &amp; Repair Cost</strong></td>
<td><strong>$2,351,000</strong></td>
<td><strong>$2,124,000</strong></td>
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<tr>
<td>Piping Salvage Value</td>
<td>$150,000</td>
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<tr>
<td>Structures Salvage Value</td>
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<td>$180,000</td>
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<tr>
<td>Equipment Salvage Value</td>
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<td>$0</td>
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<tr>
<td><strong>Total Salvage Value</strong></td>
<td><strong>$1,130,000</strong></td>
<td><strong>$312,000</strong></td>
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<tr>
<td><strong>Present Worth of Salvage Value</strong></td>
<td><strong>$891,000</strong></td>
<td><strong>$246,000</strong></td>
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<tr>
<td>MBR Cassette Replacement</td>
<td>$0</td>
<td>$800,000</td>
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<tr>
<td><strong>Present Worth of MBR Cassette Replacement</strong></td>
<td><strong>$0</strong></td>
<td><strong>$711,000</strong></td>
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<tr>
<td><strong>Total Present Worth</strong></td>
<td><strong>$10,996,000</strong></td>
<td><strong>$8,994,000</strong></td>
</tr>
</tbody>
</table>

Note: ^ General Requirements are included as a 10 percent allowance within the SBR costs.
* Chemical costs would include increased alum for phosphorus removal and chlorination and dechlorination addition. These costs have not been quantified as part of this analysis.
B. Description of the Proposed Project

The project will make system capacity improvements and remove I/I under the SRF program loan, as follows:

WWTP Improvements

Rehabilitate MBR system, including replacing the membranes, which are beyond the expected functional life, and replacing repairing and upgrading inflow screening, flow splitter, backpulse system, chemical cleaning system, and blowers.

Capacity Improvements

Construct a relief sewer along the north side of the River Raisin from Manhole 2-15, southwest nearly to Manhole 2-8, just east of the village offices. The proposed relief sewer includes 919 linear feet of 15-inch sewer. The construction, using open cut with some jack and bore methods, includes all associated manholes, service laterals, and pipe interconnections, as well as site restoration, including repaving existing parking lots.

C. Project Cost and Implementation Issues

The total cost of the SRF project is estimated to be $7,500,000, including construction, contingencies, engineering, administration, and legal services. The village will receive $50,000 Green Project Reserve (GPR) as principal forgiveness for this project based on energy savings that will result from plant improvements. Construction will start in May 2017 and continue through June 2018.

The village has chosen to proceed with an SRF loan to implement the project plan. The loan will be paid over a 20-year period at an interest rate of 2.5 percent. The average home will experience an increase of approximately $14.79 per month to cover the cost of the loan. A portion of this project is eligible for principal forgiveness; as a result, the total project cost may be less.

V. ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT

A. Primary Impacts

This project will increase efficiency and reliability of the sewer and treatment system, and reduce environmental impacts and permit violations from SSOs.

Impacts of construction activities associated with this project are considered short-term disruptions that, for the most part, do not extend beyond the period of construction. Short-term adverse impacts associated with the construction include noise, dust, and exhaust fumes.

Construction may cause brief inconveniences to those who live and travel near the project area. Noise and dust generated by construction activities will temporarily impact area residents. The WWTP construction for the MBR will occur within the existing treatment plant site. The majority of the construction of the relief sewer will occur on current village property. One right-of-way agreement for a small portion on
private property will be established prior to construction. Travel routes near the plant relief sewer street crossing will experience some increased traffic from construction related activities. Construction provisions will be enforced for compliance pursuant to Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), to prevent damage to the surrounding areas from soil erosion, dust, and sedimentation.

The project was reviewed by the DEQ Water Resources Division for floodplain impacts under the state’s Floodplain Regulatory Authority, found in Part 31, Water Resources Protection, of the NREPA, Part 301, Inland Lakes and Streams, and under Part 303, Wetlands. The WWTP is not in floodplain nor wetland areas, however, 20 feet of the relief sewer is in the floodplain. A permit application has been submitted and is currently under review. Initial review indicates there will be minimal impact to the floodplain. All permit conditions and requirements will be followed to minimize impacts to the floodplain.

In compliance with the U.S. Fish and Wildlife Service and the Michigan Department of Natural Resources Wildlife Division, the Michigan State University Extension, Michigan Natural Features Inventory (MNFI) have reviewed the project and have identified endangered or threatened species habitat that might be affected by the project. There are seven legally protected species that have been observed within 1.5 miles of the project location, although some have not been observed within the past 50 years. Those species are purple milkweed plant (Asclepias purpurascens), water willow plant (Justicia americana), purple lilliput mussel (Toxolasma lividus), silver shiner fish (Notropis photogenis), forked aster plant (Aster furcatus), cup plant (Silphium perfoliatum), and the rayed bean mussel (Villosa fabalis). There are also four special concern species that have been observed within 1.5 miles of the project location. Those species are Davis’s sedge (Carex davisii), gravel pyrg snail (Pyrgulopsis letsoni), rainbow mussel (Villosa iris), and the russet-tipped clubtail dragonfly (Stylurus plagiatus). Of the four special concern species, only one, the russet-tipped clubtail dragonfly, has been observed within the past 50 years. The MNFI has determined, due to the locations of construction for this project, it is not likely that negative impacts will occur. Any impacts on non-protected species of flora and fauna resulting from construction are expected to be temporary.

The State Historic Preservation Office has reviewed the proposed project for impacts on historical and archeological resources. It has been determined that there will be no impact on historical or archeological resources from the construction.

The appropriate Indian Tribes of Michigan were sent letters requesting they review the proposed project for impacts to tribal historic, religious, and archeological resources. The village received responses from the Little River Band of Ottawa Indians and the Pokagon Band of Potawatomi Indians to the 5609-01 project plan, which included the components of this project plan. Both tribes indicated they had no known archeological resources in the areas covered by the project, but requested that work stop and they be contacted if anything is discovered during work on this project. The tribes were notified that these segments of the of the previous project plan are moving ahead in this project. No comments were received.
B. Secondary Impacts

No significant adverse secondary impacts are anticipated for this project. The proposed project will not cause any change to the growth rate.

VI. PUBLIC PARTICIPATION

A public hearing for the project plan was held on June 7, 2016, at the Dundee Village Hall. Comments received were primarily on the increased cost to users and future costs of the disposable parts of the MBR system. There was also a discussion concerning the current system approaching life expectancy and the issue of compliance with DEQ requirements. All comments on the alternative selected, the proposed project, and the project costs were addressed at the meeting. A resolution was passed by the Dundee Village Council and signed on June 7, 2016, approving the project plan and agreeing to implement the recommended alternatives.

VII. REASONS FOR CONCLUDING NO SIGNIFICANT IMPACTS

No long-term significant impacts are associated with this project. The benefits of the proposed project are anticipated to outweigh the short-term adverse construction related impacts. The benefits include reducing SSOs to comply with the village's ACO and increasing efficiency and reliability of the sewer system and the WWTP.

Questions regarding this environmental assessment should be directed to:

Ms. Sonya T. Butler, Chief
Revolving Loan Section
Office of Drinking Water and Municipal Assistance
Michigan Department of Environmental Quality
P.O. Box 30241
Lansing, Michigan 48909-7741
Telephone: 517-284-5433
Email: butlers2@michigan.gov
Figure 1
Village of Dundee
SRF Project No. 5648-01
WWTP Site Diagram
Figure 2
Village of Dundee
SRF Project No. 5648-01
Relief Sewer Map

LEGEND

Existing Sewers
Proposed Relief Sewers