



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

Project Summary and Preliminary Environmental Impacts Determination

Date: ~~MAR 01~~ 2023

Loan Applicant: Northern Moraine Wastewater Reclamation District (NMWRD)

IEPA Loan Project Numbers: L176371; L173672; L176373

To all interested persons:

Section 365.330 of the Illinois Procedures for Issuing Loans from the Water Pollution Control Loan Program requires that the Illinois Environmental Protection Agency (IEPA) conduct an assessment of the environmental impacts of proposed wastewater projects to be funded with loans. This review is carried out in conjunction with the Agency's review of the applicant's project plan.

Prior to final approval of the project plan, the public's comments are sought regarding environmental impacts of the proposed project. Unless new information obtained through the public comment process causes reconsideration, the Agency will approve the project plan at the close of the public comment period.

The applicant will make the attached Project Summary and Preliminary Environmental Impacts Determination (PEID) available for public inspection. Within 60 days of receiving this letter, the applicant must conduct a public hearing regarding both the PEID and project planning. Advertisement of the hearing must be made at least 10 days in advance. The advertisement must include the purpose of the project along with the date, time, and location of the hearing. A comment period of at least 10 days shall be provided after the hearing in which written comments may be submitted to the loan applicant or to the IEPA contact person identified in the attached document.

For information purposes only, a copy of this document is being provided to your local newspaper.

Your participation in this process is appreciated.

Sincerely,

Heidi Allen
Pre-Construction Unit Manager
Infrastructure Financial Assistance Section
Bureau of Water

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Attachment

2125 S. First Street, Champaign, IL 61820 (217) 278-5800
1101 Eastport Plaza Dr., Suite 100, Collinsville, IL 62234 (618) 346-5120
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000
595 S. State Street, Elgin, IL 60123 (847) 608-3131

2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

**Project Summary and
Preliminary Environmental Impacts Determination (PEID)**

The following project summary and environmental assessment has been prepared by the IEPA to assist the loan applicant in complying with the public notice requirements. Information in this report was obtained, in part, from the following sources: the 2014 Facility Plan Update, dated April 2015; Supplemental Memorandum, dated October 2022, all prepared by Trotter & Associates, Inc.

Part I – Project Information

Loan Applicant: Northern Moraine Wastewater Reclamation District (NMWRD)

Project Name: Wastewater Treatment Facility (WWTF) Upgrades

Project Number: L176371; L173672; L176373

County: McHenry

Current Service Population: 15,614

Future Population (20 year): 27,921

Project Description: Solar Array (L176371)- The project includes building a solar array located south of the existing WWTF site on property owned by the NMWRD. The proposed system would utilize 1,884 solar panels, generating 450 Watts each, equating to a system size of 847.8 kW. The existing electric utility will be replaced with 100% self-sustaining, renewable solar energy.

Ultraviolet Light (UV) Disinfection (L176372)- The project includes conversion of the WWTF disinfection process from chlorine chemical addition to UV light disinfection. One existing chlorine contact tank will be converted into a concrete channel. Disinfection units, gates, aluminum canopy, and channel plating will be installed.

Garage Replacement (L176373)- The existing garage and operator breakroom will be demolished. The new 4,600 square foot building will include garage space for NMWRD vehicles and equipment, with attached storage space. 2,600 square foot of breakroom space will be attached to the new structure.

Project Location: 420 Timber Trail, Island Lake, Illinois.

Project Justification: Solar Array (L176371)- NMWRD currently utilizes traditional electric utility to supply approximately 1,246,000 kWh to the treatment plant annually. With an end goal of net zero energy use through energy efficiency and renewable energy generation, a comprehensive solar panel system would create significant energy savings in a 30-year projection, and a multitude of practical and environmental benefits. Estimated cost is \$3,500,000.00.

Ultraviolet Light (UV) Disinfection (L176372)- UV Disinfection is an environmentally friendly method of disinfecting wastewater. Micro-organisms, including viruses, are inactivated when exposed to UV light in a controlled environment and dosage. The UV causes a physical reaction with the organism. This reaction prevents cell division and reproduction of potentially dangerous organisms and viruses. Estimated cost is \$1,900,000.00.

Garage Replacement (L176373)- The existing garage was constructed in 1986 as a pole barn on a concrete slab. Pole barns have a typical service life of 30 years. The existing garage has reached the end of its service life and requires replacement. The proposed building will contain a garage space for NMWRD vehicles and equipment with an attached storage space. Vehicles and equipment necessary to keep the treatment plant in good condition will be better protected, and temperature regulated. Operators and treatment plant staff will be better equipped for healthy, comfortable, and cohesive meals and breaks, allowing for higher overall productivity. Estimated cost is \$3,000,000.00.

Construction Time Frame: Construction is projected to begin in April of 2024 and will take approximately 1 year to complete once in progress.

Project Cost Estimate: \$8,400,000.00

Part II – Environmental Review and Impacts

Project construction impacts: Temporary adverse environmental impacts such as construction-associated noise, blowing dust, air emissions, traffic disruption, and soil erosion will likely occur during construction.

Illinois Department of Natural Resources-Office of Historic Preservation Agency: The District submitted project information to the Illinois Department of Natural Resources, Illinois State Historic Preservation Office (IDNR-SHPO) for compliance with section 106 of the National Historic Preservation Act. IDNR- SHPO indicated there are no historic properties affected by the proposed projects and the NMWRD is in compliance with the National Historic Preservation Act.

Illinois Department of Natural Resources: The loan applicant submitted project information to the Illinois Department of Natural Resources (IDNR) EcoCAT to determine compliance with the Illinois Endangered Species Act, Illinois Natural Areas Preservation Act, (Title 17 Illinois Administrative Code Part 1075) and the Illinois Interagency Wetlands Policy Act of 1989 (Illinois Administrative Code Part 1090). IDNR determined the UV sterilization (L176372), and Garage Replacement (L176373) were both in compliance with Title 17 Illinois Administrative Code Part 1075 and 1090.

The Solar Array (L176371) project has requirements that need to be followed to preserve the integrity of natural resources. The NMWRD shall incorporate all required environmental protective and mitigative measures into the design and bidding specifications for construction of the projects. The IDNR letter dated March 13, 2022, identified protected resources (Blanding's Turtle, Cotton Creek Marsh Illinois Natural Areas Inventory (INAI) Site & Cotton Creek Marsh Nature Preserve) that may be in the vicinity of the project location that require actions to avoid

adversely impacting these resources. Given the recommendations below are adopted, the Department concluded adverse effects are unlikely.

IDNR recommendations for Solar Array (L176371) project: The state-listed Blanding's turtle is known to occur in the vicinity of this project. The Department recommends all construction on the project occur during the Blanding's Turtle's inactive season from approximately November 1st to March 1st. If construction must occur during the active season the following steps will be taken during construction:

- Educate personnel working on site about the Blanding's Turtle. Post photos of juvenile and adult Blanding's turtles at a central location.
- Install exclusionary silt fence around the project area to prevent turtles from entering.
- Conduct daily inspections during construction to ensure that exclusionary fencing is properly installed (dug into the ground) and to check if turtles are present.
- Trenches should be covered at the end of each workday. Before starting each workday, trenches and excavations should be routinely inspected to ensure no turtles (or other wildlife) have become trapped within them.
- Exclusionary 6-inch curbing around parking lot areas should be incorporated into project plans to prevent any turtles from entering parking lots and being crushed by vehicles.
- If Blanding's turtles are encountered, crews should stop work immediately, allow the turtle to move out of the way and contact IDNR at 815/675-2386, ext. 216.

The project area is adjacent to Cotton Creek Marsh Nature Preserve. To avoid impacting these areas, the following steps will be taken during construction:

- Only natural sand and/or gravel should be used as fill for this project and it is readily available nearby.
- Equipment should be washed before entering the work site.
- Soil erosion and sediment control BMP's should be implemented and properly maintained.

US Army Corps: The District submitted project information to the U.S. Army Corps of Engineers (USACE) to determine USACE jurisdiction. The USACE determine no permit was required in an October 7, 2022 letter.

Illinois Department of Natural Resources-Office of Water Resources (IDNR-OWR): No consultation was required.

Part III – Project Affordability for Residents and Utility Customers

Total Estimated Project Costs: \$8,400,000.00

The applicant is proposing to finance the project costs with three loans from the IEPA Water Pollution Control Loan Program (WPCLP). Loans totaling \$8,400,000.00 with an estimated

interest rate of 1.24% for a twenty (20) year period, would have an annual repayment of approximately \$476,815.89.

The interest rate adjusts annually on July 1st. All loans are subject to the interest rate in effect at the time a loan agreement is issued. The loan program rules include provisions for incentives such as reduced interest rates, partial principal forgiveness, and extended repayment periods for qualifying applicants. The criteria used to determine incentive qualifications are found in Section 365.210 and 365.250 of the Procedures for Issuing Loans from the WPCLP, which is available on the Agency's website. The final decision for incentive qualifications will be determined at the time a loan agreement is issued using updated Census Bureau and Department of Labor data. Using current data, NMWRD is not eligible for any incentives. The Agency adjusts qualifying criteria annually on July 1st and the community specific information is also subject to change.

Source of Loan Repayment: NMWRD proposes to repay the loan with user charges. The NMWRD completed a Strategic Financial Plan Model Review in March 2020 which considered sewer rate and connection fee increases to self-fund the proposed projects. NMWRD rates are adjusted annually, in April.

Scheduled Rate Increases are as follows:

- 8.0% in FY 2022-FY 2026
- 4.0% in FY 2027-FY 2029

Average Monthly Residential Water Use: 10,000 gallons

Current Average Monthly Residential Cost of Service: \$42.50 per month

Projected Average Monthly Residential Cost of Service: \$42.50 per month or \$510.00 annually.

How is the monthly residential rate/cost of service calculated? Current users pay a fee of \$42.50 for the first 10,000 gallons consumed. Since 95% of users consume less than 10,000 gallons per month, that is the average monthly user rate. Usage above 10,000 gallons a month is charged \$4.25 per 1,000 gallons consumed per month.

Number of Service Connections: 5,495 customers.

Median Household Income (MHI): The majority of the NMWRD population is contained within the Villages of Island Lake, Lakemoor and Port Barrington. The Island Lake MHI is \$83,970; Lakemoor is \$80,966; Holiday Hills is \$53,751; and Port Barrington is \$137,583. The prorated MHI for the District as a whole is therefore \$87,169.

Financial Evaluation of the Proposed Project: To evaluate the costs of the proposed project for the community, a percentage comparison of the MHI to the average, annual cost for water services is utilized. The prorated MHI listed above is from the current year's census information. The projected annual cost of service is \$510.00, which is 0.59% of the MHI. The percentage is for comparison only and has no impact on whether a project qualifies for funding from the IEPA. The

percentage comparison and MHI are two of several criteria used to determine whether a loan project qualifies for interest rate reductions or principal forgiveness.

Public comments are invited on the proposed project. For further information contact:

George Lambert, Project Manager
Infrastructure Financial Assistance Section
Illinois Environmental Protection Agency
Bureau of Water

1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
(217)782-2027