



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

## Project Summary and Preliminary Environmental Impacts Determination

Date: **NOV 09 2023**

Loan Applicant: City of Naperville

IEPA Loan Project Numbers: L174129, L174130, L174131, L174132, L174133, L174134

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 State'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,

Gary Bingenheimer, P.E.

Manager

Infrastructure Financial Assistance Section

Bureau of Water

GB:JM:n:\bow\grants\com\_docs\mallory\projects\wastewater\naperville - 4129 -peid (springbrook wrc plant improvements).docx

### Attachment

2125 S. First Street, Champaign, IL 61820 (217) 278-5800  
2009 Mall Street 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 source: Naperville Springbrook Water Reclamation Center Facilities Plan dated March 29, 2022, with a Cover Letter dated March 30, 2022, and updated Facilities Plan dated March 29, 2023, prepared by Donohue & Associates, Inc.

### **Part I – Applicant and Project Information**

**Loan Applicant:** City of Naperville

**Project Numbers:** L174129, L174130, L174131, L174132, L174133, L174134

**Project Name:** Springbrook Water Reclamation Center Facility Treatment Plant Improvements

**Counties:** Will and DuPage

**Current Population:** 149,540

**Future Population (20 year):** 186,922

The City of Naperville is located in Will and DuPage Counties and owns and operates a wastewater treatment plant known as the Springbrook Water Reclamation Center (SWRC). The SWRC was constructed in the 1970's and receives wastewater from the City of Naperville and the City of Warrenville. The SWRC utilizes a common influent pump station and screening facility before wastewater flow is divided into two treatment trains: the North Plant, which currently treats 22.5 million gallons a day (mgd) of the average flow and the South Plant, which currently treats 3.75 mgd; both plants discharge into the DuPage River.

**Project Description:** The City of Naperville is proposing to update both North and South Treatment Plants through a multi phased wastewater project. At the South Plant, the City is proposing to replace the existing aerated grit tanks with vortex style grit tanks; replace the raw activated sludge pumping system; add four aeration tanks and two secondary clarifiers; and replace the existing blowers with four high speed turbo blowers. At the North Plant, the City is proposing to remove all 24 mechanical aerators and replace them with five high speed turbo blowers and fine bubble diffusers; construct a new blower building; and replace the electrical and control systems. These upgrades will also include adding a second 500,000-gallon biosolids holding tank; modifying the chemical building; and replacing the existing sand filtration units with four cloth media disk filters for the North Plant and three cloth disk filters for the South Plant. At both plants, the City is proposing to add selectors with mixers into the aeration tanks and side stream raw activated sludge fermentation tanks to increase phosphorus removal efficiency; and all associated appurtenances.

**Project Location:** The treatment plants are located at 3712 Plainfield-Naperville Road in Naperville Illinois. Proposed project locations are shown on the attached site map.

**Project Justification:** Both plants have structures that are deteriorating, parts that are no longer manufactured, and are experiencing capacity limitations due to undersized tanks. These improvements will change the flow structure to allow both the North and South Plants to treat half of the total flow equally. The South Plant improvements will convert the existing single pass basin

into a three-pass basin, add three additional aeration basins for a total of four three-pass basins to increase capacity for equal treatment. The North Plant improvements will convert six complete mix basins into similar three-pass basins. These improvements will allow the system to remove phosphorus, first biologically with the Modified University of Cape Town (MUCT) process and chemically if needed. The cloth media filters will be used as tertiary filtration and additional phosphorus removal. These projects will improve performance, reliability and keep the City in compliance with State and Federal regulations.

**Construction Time Frame:** Construction is projected to begin for the first phase in the fall of 2024 and will take approximately eighteen months to complete once in progress. Each subsequent phase will begin the year following the previous phase. All phases of this project are projected to be complete by the winter of 2028.

**Total Project Cost Estimate:** \$106,858,200

South Plant Upgrades (Phase 1): \$26,059,000

South Plant Grit and RAS Improvements: \$8,700,000

South Plant Upgrades (Phase 2): \$29,496,000

Biosolids Holding Tank: \$1,650,000

North Plant Aeration Improvements and Nutrient Removal: \$40,953,200

## **Part II – Environmental Review and Impacts**

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

**Illinois Department of Natural Resources (IDNR):** The loan applicant submitted project information to the IDNR EcoCAT to determine compliance with the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act and the Illinois Wetlands Act. Review results dated October 31, 2023, concluded adverse effects are unlikely and terminated their consultation for 17 Ill. Adm. Code Parts 1075 and 1090.

**Illinois Department of Natural Resources-State Historic Preservation Office (IDNR-SHPO):** The loan applicant submitted project information to the IDNR-SHPO to ensure compliance with the National Historic Preservation Act. An IDNR letter dated May 5, 2022, indicated there are no anticipated impacts to historic, architectural, and archaeological resources from the proposed project and the City is in compliance with Section 106 of the National Historic Preservation Act.

## **Part III – Project Affordability for Residents and Utility Customers**

The applicant is proposing to finance the project costs with a loan from the Water Pollution Control Loan Program (WPCLP). For a total of \$106,858,200 for all loans with an estimated interest rate of 1.81% for a twenty (20) year period, would have an annual repayment of approximately \$6,372,181.

The current loan program interest rate is 1.81%. 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 Sections 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.

**Source of Loan Repayment:** Revenue bonds.

**Current Average Monthly Residential Cost of Service:** \$35.10

**Projected Average Monthly Residential Cost of Service:** \$35.10

**How is the monthly residential rate/cost of service calculated?** The City of Naperville residents are charged a combined water and wastewater rate per month. For wastewater, residents are charged \$3.00 per 100 cubic feet of water used, plus a fixed monthly customer charge of \$10.64, plus a fixed monthly phosphorus surcharge of \$1.96. When calculated, an average residential user is charged \$35.10 for using 750 cubic feet (5610 gallons) of water per month.

$$(\$3.00 \times 7.50) + \$10.64 + \$1.96 = \$35.10$$

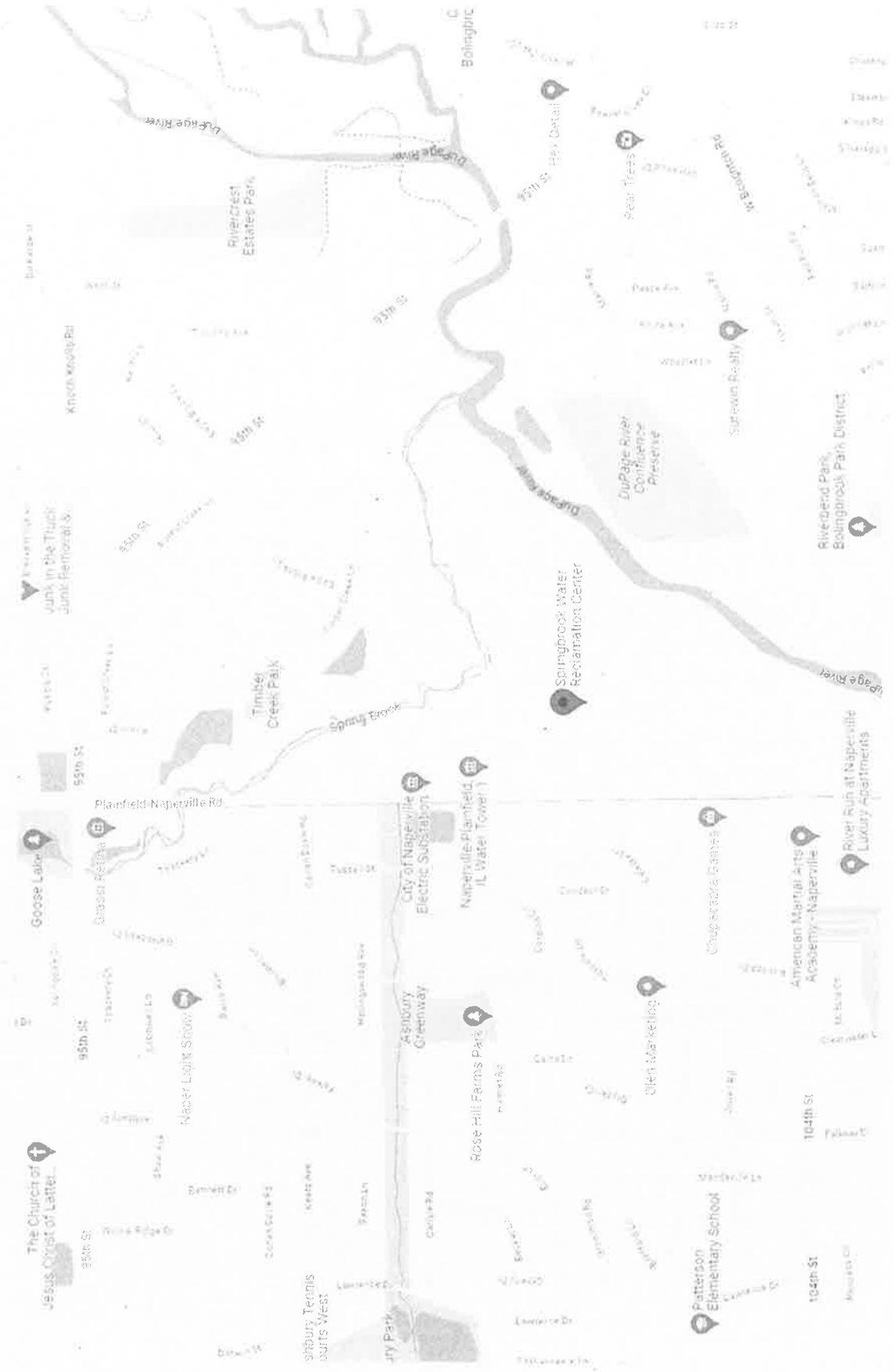
**Number of Customers or Service Connections:** 43,951 service connections of which 40,797 are residential and 3,154 non-residential.

**Median Household Income (MHI):** \$135,772

**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 MHI listed above is from the current year's census information. The projected annual wastewater cost of \$421.20 is 0.31% of the MHI for Naperville. 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.

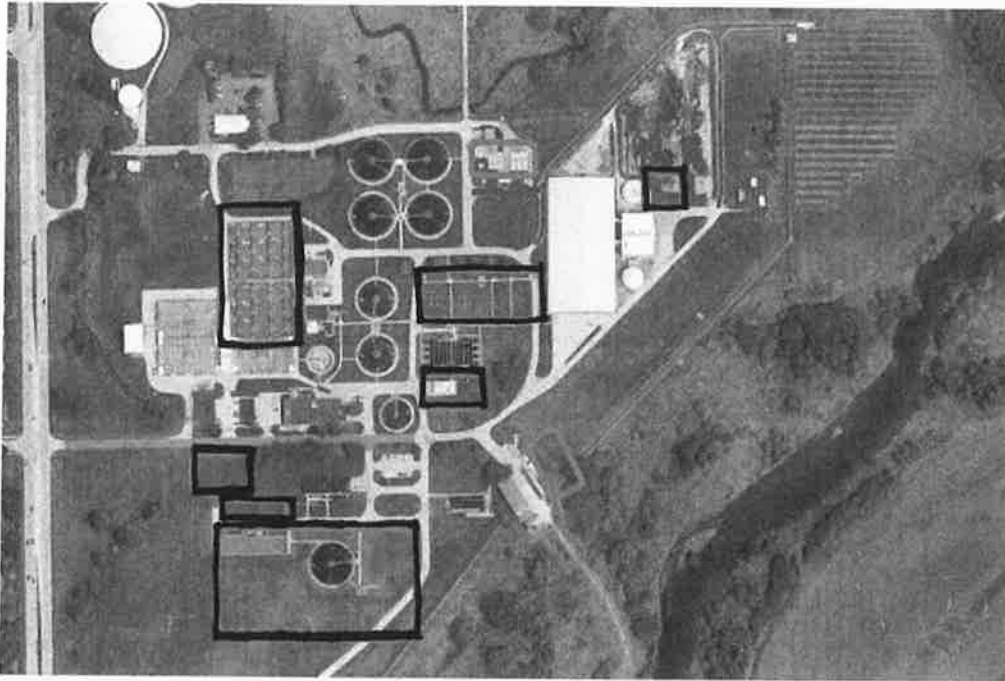
**Public comments are invited on the proposed project. For further information contact:**

Jasmine Mallory, 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



# Current and Planned Improvement Projects

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- UV Disinfection (SWRC1)
- Influent Pump Station Force-main (SWRC2)
- + South Plant Grit and RAS Improvements (SP1)
- + South Plant Aeration Basins and Clarifiers (SP2)
- + North Plant Aeration Improvements (NP1)
- + Biosolids Holding Tank (Phase 2) (SWRC3)
- + Chemical Phosphorus Removal (PR1)
- + Nutrient Removal Upgrades (PR2) – Selectors and RAS Fermentation
- + North Plant Tertiary Filter Replacement (Phase 1) (NP2)