



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

JAN 24 2023

Loan Applicant: City of Belvidere

IEPA Loan Project Numbers: L174188

To all interested persons:

Section 662.330 of the Illinois Procedures for Issuing Loans from the Public Water Supply Loan Program requires that the Illinois Environmental Protection Agency (IEPA) conduct an assessment of the environmental impacts of proposed public water supply 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 of record.

Your interest and participation in this process are appreciated.

Sincerely,

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

HA:EW:N:\BOW\Grants\COM_DOCS\Watters\BELVIDERE\L174188\BELVIDERE L174188 PEID.docx

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. This report is based on information submitted to the IEPA by the City of Belvidere. Sources of information include the following documents: the February 2022, Per- and Polyfluoroalkyl Substances Evaluation and Well No. 11 Preliminary Design project planning submittal, prepared by Strand Associates, Inc., and, in response to IEPA requests for additional information, correspondence dated January 17, 2023, also prepared by Strand Associates, Inc.

Part I – Project Information

Project Name: New Well No. 11 and Well Facility

Project Numbers: L174188

Loan Applicant: City of Belvidere

County: Boone

Current Population: 24,731

Future Population (20 year): 34,640

Number of Service Connections: 7,479 residential connections

Project Description: The City of Belvidere owns, operates, and maintains its own drinking water system. Seven wells, numbered 3-5 and 7-10, supply groundwater sourced from the Glenwood-St. Peter, Ironton-Galesville, and Elmhurst-Mt. Simon sandstone formation aquifers. Wells 1, 2, and 6 were previously taken out of service. The remaining wells combined can provide a total average flow capacity of 9.44 million gallons per day (MGD), with Well No. 8 being the highest producing at 2.63 MGD.

Raw water is treated at each well site by separate water treatment processes, primarily sodium hypochlorite disinfection and chlorine and fluoride feed systems. A 435,000-gallon ground-level Main Plant Reservoir exists adjacent to Well No. 3. Combined with the three elevated water tanks collocated with Wells No. 6, 7, and 8, and the Southwest Elevated Tank, the system presently has a total storage capacity of 3,035,000 gallons.

Recently, monitoring detected that Wells No. 3 and 4, first drilled in 1908 and 1942 respectively, are exceeding the Illinois Health Advisory Guidance Level for perfluorooctanoic acid (PFOA), a PFAS chemical. While the U.S. Environmental Protection Agency has not yet set a maximum contaminant level for any PFAS, PFOA has been identified as a potential source of concern to the public's health and is on the Contaminant Candidate List. Future regulation is anticipated. Additionally, bacterial contamination has been detected in Well No. 4.

The City has determined that these wells should be decommissioned. Through this project, Wells No. 3 and 4 would be replaced by a new Well No. 11 and well facility.

Project Location: The new well facility will be constructed on the southeast side of the City, just north of U.S. Highway 20. See attached map for further detail.

Project Justification: This project will decommission two existing wells that are contaminated with PFOA and bacteria. A new Well No. 11 will replace these wells. The well capacity will be sized for approximately 2,000 gallons per minute (gpm) to account for the abandonment of Wells No. 3 and 4, which have a combined total capacity of 1,500 gpm. A well facility will be built to treat the pumped water. This well and well facility would, like Well No. 10, be a deep sandstone aquifer well with an iron filter and chemical feed. Given the potential for PFAS contamination at this new site, the facility will be configured to accommodate future addition of a Granular Activated Carbon (GAC) filtration system for PFAS reduction.

Estimated Construction Start Date: July 2023

Estimated Construction End Date: November 2023

Project Cost Estimate: \$4,545,000

Part II – Project Affordability for Residents and Utility Customers

Probable Project Cost: New Well No. 11 and Well Facility

Description	Cost
Construction	\$3,950,000
Construction Contingency (approx. 10%)	\$395,000
Design and Construction Engineering	\$200,000
Total Project Cost	\$4,545,000

The City of Belvidere is proposing to finance the cost for this project with a loan from the IEPA Public Water Supply Loan Program (PWSLP). The current loan program interest rate is 1.24%. A loan of \$4,545,000 with an estimated interest rate of 1.24% for a 20-year period would have an annual repayment of approximately \$256,079. A rate increase will be necessary to repay this loan. 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 (a reduction in the amount of principal borrowed that would otherwise have to be repaid), and extended repayment periods for qualifying applicants. The criteria used to determine incentive qualification are found in Sections 662.210 and 662.250 of the Procedures for Issuing Loans from the PWSLP, which is available on the Agency’s website. The final decision for incentive qualification will be determined at the time a loan agreement is issued, using updated Census Bureau and Department of Labor data. Using current data, the City of Belvidere is eligible to receive a small community interest rate (75% of the base rate of 1.24%, or 0.93%) and partial loan principal forgiveness. For FY2023, the principal forgiveness provided to any loan recipient

was equivalent to 50% of the initial loan amount, up to a maximum of \$1,125,000. The Agency adjusts qualifying criteria annually on July 1st.

Applicants that qualify for principal forgiveness will not have a repayment obligation for a portion of their loan. Principal forgiveness and/or a reduced interest rate will reduce the loan payment amount and possibly the associated increases to the user charges. Principal forgiveness is not guaranteed until a loan agreement is issued. If the City receives program incentives as described, the annual repayment required would be reduced to approximately \$187,462. Split between the City's 7,479 residential water system customers, this amounts to \$2.09 per customer per month.

Source of Loan Repayment: A user rate increase will be necessary to repay the debt burden associated with this project.

Current Average Monthly Residential Water Use: 1,194 cubic feet (c.f.)

Current Average Monthly Residential Cost of Service: \$22.00

Projected Average Monthly Residential Cost of Service: \$24.09

How the Average Monthly Residential Cost of Service is Calculated:

The user rate charge consists of a flat fee of \$3.25 plus an additional \$1.57 per 100 c.f. of water used. Assuming the average use of 1,194 c.f., this amounts to $\$3.25 + \$1.57(1194 \text{ c.f.}/100) = \22.00 . An additional \$22.50 fee for meter service is charged annually. This charge applies to residents with 1-inch meters.

In the future, a debt service charge of approximately \$2.09 will be added, resulting in an average monthly cost of \$24.09 for system users.

Median Household Income (MHI): \$52,609

Percentage of MHI needed to pay the projected average annual residential cost of service: 0.55%

Financial Evaluation of the proposed project: To evaluate the costs of the proposed project for the community, a percentage comparison of MHI to the average, annual cost for water service is utilized. The projected average annual water cost per customer living within Village limits of \$289.08 is 0.55% of the MHI for the City of Belvidere. 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.

Part III – Environmental Issues Associated with the Project

Project construction impacts: Temporary adverse environmental impacts such as construction-associated noise, blowing dust, air emissions, and soil erosion will likely occur during construction. This project would add a new water source at a new site to the system.

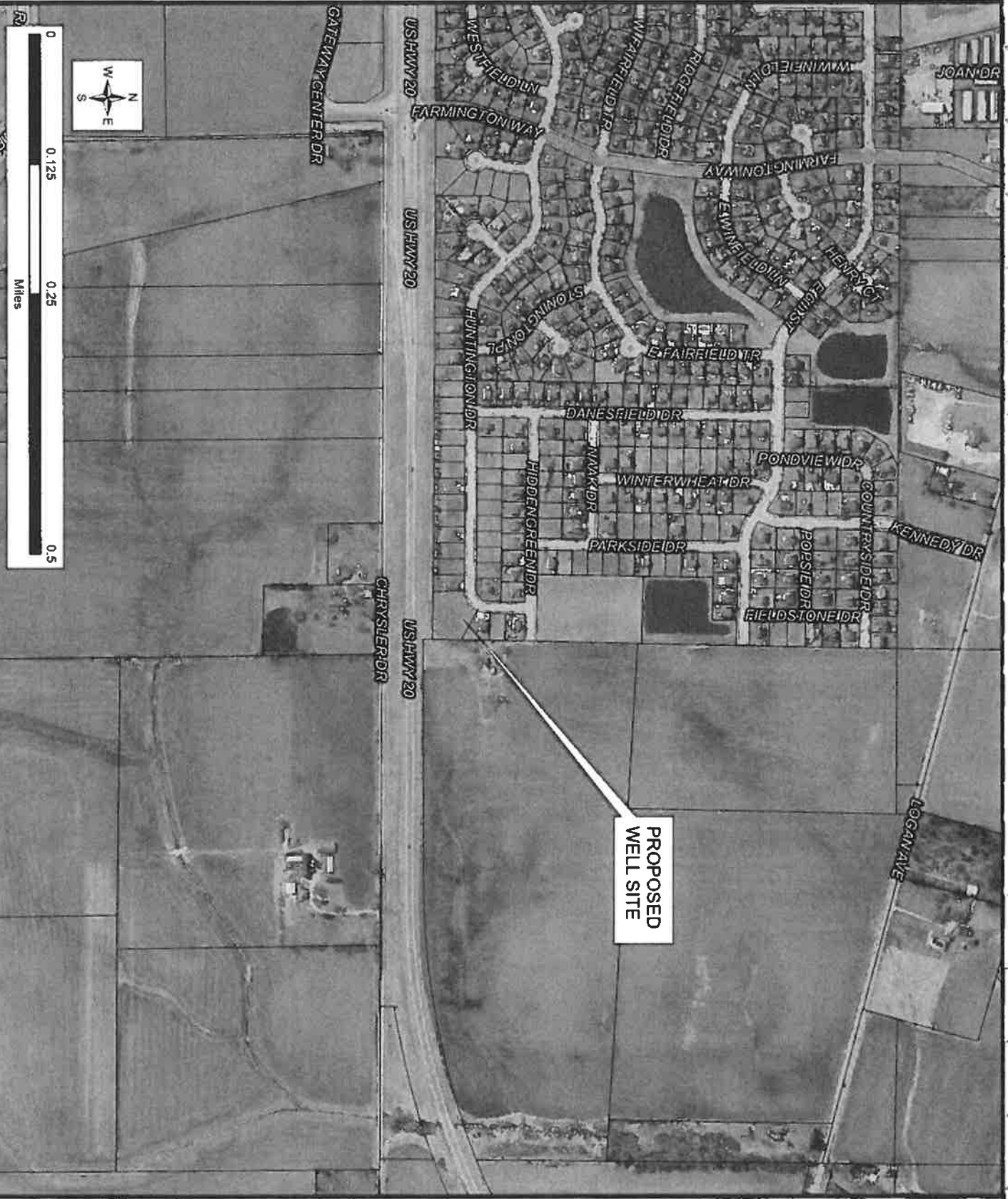
Illinois Department of Natural Resources: The City of Belvidere submitted project information to the Illinois Department of Natural Resources (IDNR), State Historic Preservation Office (SHPO), for consultation under Section 106 of the National Historic Preservation Act of 1966. The Department has concluded that adverse effects are unlikely.

The City submitted project information to the IDNR EcoCAT website to determine compliance with the Illinois Endangered Species Act, Illinois Natural Areas Preservation Act, the Illinois Wetlands Act, and Title 17 Ill. Adm. Code Parts 1075 and 1090. The Department has concluded that adverse effects are unlikely.

U.S. Army Corps of Engineers (USACE): No construction will occur at or near a body of water that will require review from the U.S. Army Corps of Engineers.

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

Ellen Watters, 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



PROPOSED WELL SITE

**SITE LOCATION MAP
PFAS TREATMENT EVALUATION
CITY OF BELVIDERE
BOONE COUNTY, ILLINOIS**



Part: S:\MAD11300 - 119811307\0271Drawings\GIS\Maps\Site Location Map 8.14.mxd

User: rhudn

Date: 5/14/2022

Time: 11:52:21 AM

Mailing List – Environmental Review

Project: Belvidere

L17: 4188

Check entities to receive Preliminary Environmental Impacts Determination/Notice of Categorical Exclusion. Agencies may be omitted if they have already provided an unconditional written sign-off on the planning.

Illinois Historic Preservation Agency (SHPO)

Illinois Department of Natural Resources
Office of Realty & Environmental Planning (for rare/endangered species, natural areas, and Interagency Wetlands Policy Act)

Illinois Department of Natural Resources
Office of Water Resources (for lakes, rivers and stream crossings, floodway/floodplain construction)

Illinois Department of Agriculture

U.S. Army Corps of Engineers – Check Appropriate Regional Office

Rock Island District St. Louis District Chicago District

Designated 208 Areawide Planning Agency – Check Appropriate Agency

CMAP

GERPDC

SWIPC

Green Infrastructure Coordinator: Chris Covert

IEPA Field Office (Rockford)

Loan Applicant

Mr. Brent Anderson, Director of Public Works

City of Belvidere

401 Whitney Boulevard

Belvidere, IL 61008

(Continued on Back)

Local Newspaper of Record

Boone County Journal

419 South State Street

Belvidere, IL 61008

Consulting Engineer

Sarand Associates, Inc.

Attn. Mike Forslund

910 West Wingra Drive

Madison, WI 53715

Other Interested Parties

planning folder

chron file

scan to Heidi Allen

scan to Ellen Watters

Project Manager: 

Date: 1-19-2023

Copies of the Preliminary Environmental Impacts Determination/Notice of Categorical Exclusion have been mailed to the above entities.

Signed: 

Date: 1-24-23