

ENVIRONMENTAL ASSESSMENT DOCUMENT

A. Project Identification:

Applicant: Village of Adams
Project No.: D311613
Village: Adams **County:** Gage **State:** NE
Total Project Amount: \$3,832,316
DWSRF Loan Amount: \$3,066,000
DWSRF Loan Forgiveness: \$766,463

B. Community Description:

Location: Adams is located in eastern part of Nebraska, situated northeast of the City of Beatrice, to the south of the intersection of State Highways 41 and 43.

Population: The 2010 census population of Adams is 573, and also is the location of a regional high school.

Current Water System Facilities: The Village's public water system (PWS) consists of two municipal wells, a 50,000 gallon water storage tank and a distribution system, which is fed from blending point that originally was an ion exchange treatment plant (IX plant). The IX plant was primarily used to remove Nitrates from the oldest of the Village's wells; however it was built in the early 1990's, and since the most recent Well No. 2006-1 has levels of Nitrates below the drinking water standard, the IX unit of the plant is no longer used. The plant currently feeds caustic soda and fluoride, and provides disinfection for the water system. There is a ground storage reservoir at the plant site, from which two 500 gallon per minute high service pumps supply treated water to distribution system, in order to meet current system demands.

C. Project Description:

In April 2015, the Village's Engineer completed a Water Study that evaluated the siting of a replacement well with transmission main, as well as distribution system improvements and replacing the water storage tower. Due to the age of the plant, the water study recommended the Village pursue another better quality supply well, in order for the IX plant to be formally decommissioned. The plant will be replaced with a new chemical feed building.

With that plant offline, the existing 80 year old water tower would be undersized to meet the system's average day demand. Thus the need for a replacement water tower, which will be reasonable sized to meet future growth of the community. Lastly, there are numerous sections of the water distribution system which are undersized and in need of replacement.

D. Alternatives Considered:

Three alternatives studied were:

1. No Project; or
2. Replacement Supply Well, with high service pump and distribution system improvements.
3. Replacement Supply Well and Water Tower, with distribution system improvements.

Evaluation and Selection of the Alternative: Without the project, the Village would essentially remain a one supply well system, since the IX plant is old, and no longer being operated or maintained. Further the long-term supply needs would require future high service pump maintenance and/or replacement. A second alternative was studied to make those pump improvements, while maintaining use of the ground reservoir for storage. The concerns with that alternative would be continued maintenance of or eventual replacement of the existing water tower and/or ground storage.

The Village is completing a test hole study, wherein several well sites were investigated. There are two with low Nitrates that may be acceptable sites, which can supply water measurably below the drinking water standard of 10 mg/L. If confirmed, then the recommended project alternative would simplify the operation and lessen the future maintenance and replacement costs for the water supply infrastructure in Adams.

E. Environmental Impact Summary:

Primary:

Construction: Temporary impacts caused by construction include noise and dust, a limited potential for soil erosion, and fuel/oil spills. The Village will make application to the Nemaha Natural Resources District for a well construction permit. The new well will be registered with the Nebraska Department of Natural Resources (NDNR). Review and approval for a construction permit will be required from the Engineering Services Program of DHHS.

Environmental: The construction contracts will require that the contractors return the area to its original or better condition. The wellhouse and water tower will occupy a very small area of land (<10,000 square feet) and will have little, if any effect on area species.

The proposed project was reviewed by numerous Federal and State agencies for environmental impacts. The State Historical Society noted that no historic

properties would be affected by the project. The Department of the Army noted the applicability of their Section 404 permit requirements, should it be determined that fill material would be placed into Waters of the U.S. Typically during project design, activities can be planned to avoid fill placement, such as boring of the transmission lines or proper routing of pump test discharges. Regardless, if necessary, a Section 404 permit from Department of the Army will be obtained if filling activity in the Waters of the U.S. will take place.

Financial: An application for a DWSRF loan has been received for \$3,832,316 to fund the system improvements. The Village is eligible for a 30-year loan with an interest rate of 2% plus an administrative fee of 1% on the outstanding principal balance assessed annually. Further, Adams qualifies for 20% of loan forgiveness State Fiscal Year 2016 program criteria. Therefore, the projected annual DWSRF Debt Service (including 10% coverage) is estimated at \$183,554. Adams' current water rate for a typical residential connection is \$21.10 per month, with an additional \$1.25 use charge for every 1,000 gallons of water furnished thereafter. That equates to a water bill of \$27.35 per month, based on a common household water use of 5,000 gallons. With 250 active service connections, household rates will need to be raised \$61.20 to address the new debt service, to just over \$88.55 per month. Following construction, Adams will make a final assessment of revenues and cost to determine what rate adjustments are necessary.

Secondary:

Population Impacts: The new well is not primarily needed for future growth, but to shift the Village's past reliance on water treatment to a quality supply well, while ensuring that compliance with the Nitrate drinking water standard is maintained. However, the improvements will be reasonably sized to accommodate population growth.

Land Use and Trends: The location of the well and water tower will be on land owned by the Village and all new water mains will be placed below ground at depths that will not interrupt any planned practices. To that, the National Park Service initially raised a concern about potential project impact to the Adams Village Park. Upon further review of the proposed scope, the Nebraska Game and Parks Commission, with certain added conditions that the park not be used as a staging area, issued permission for the project to proceed. Lastly, the Natural Resources Conservation Service indicated the project was located in an area identified as Prime Farmland. Subsequent, form NRCS-CPA-106 was completed by the Village's engineer and submitted to the Service. Following their review and based upon the accepted low assessment point total, a clearance for the project was issued.

Environmental: The proposed project will have no effect on the availability of water quantity in the area. The minimal amount of solid waste generated by the project will be disposed in a licensed landfill. No safety, vibration, noise or aesthetic considerations were identified other than the normal noise and disruptions associated with water supply infrastructure construction.

Environmental Justice: The project will not produce any environmental justice concerns. All structures will be placed in areas previously disturbed or on Village owned property, and the services provided by the proposed project will be available to everyone in Adams, equally. No segment of the community's population is impacted disproportionately from related effects.

Mitigation measures necessary to eliminate adverse environmental effect:

Proper construction techniques will be utilized to minimize soil erosion and other potential impacts of construction. Traffic flow may be affected by construction when water main construction is being done along the Village road right-of-ways; however, safety control measures (i.e., signs, etc.) will be implemented. An NPDES Construction Stormwater permit for runoff associated with construction activity and a Stormwater Pollution Prevention Plan will be required by NDEQ for this project if more than one acre of land is disturbed. The Community can designate the General Contractor as the authorized representative on the stormwater permit notice of intent submitted to the NDEQ. Authorization of stormwater runoff from the construction activity must be in place prior to commencing construction.

Irreversible and irretrievable commitment of resources: The resources committed to the project include the equipment, materials and energy used in construction.

F. Measures Taken to Insure Environmental Soundness:

Public Involvement: A Public Hearing was held June 13, 2016, with 34 days advanced posted notice. A presentation of the proposed project was made by the Engineer, including the current progress. Prior to that hearing on May 9, 2016, the Village Board and the Engineer also discussed the project and potential water rate increases at a regularly scheduled monthly meeting.

Public Opposition or Opinions: It was noted that all questions and concerns were addressed.

Coordination and Documentation with Other Agencies and Special Interest Groups:

Facility Planning: Water Study, Village of Adams, Olsson Associates, April 2015

Federal: Department of the Army, May 27, 2016, email
Department of the Interior, National Park Service, June 6, 2016, letter

State: Department of Health and Human Services, Division of Public Health, September 19, 2014, letter
Nebraska Game and Parks Commission, June 14, 2016, letter
Nebraska State Historical Society, May 19, 2016, letter

Consulting Engineers: Olsson Associates, Lincoln, NE

Public Groups: Village of Adams Residents

- G. Positive Effects to be Realized from the Proposed Project:** The project will allow Adams to maintain compliance with the Nebraska Safe Drinking Water Act and ensure future water availability. Test hole data shows that the proposed well will likely meet all drinking water standards per Title 179, Regulations Governing Public Water Supply Systems, prior to a construction permit being issued by DHHS. As such, the project is considered reasonable, not contrary to conservation or the public welfare and is a beneficial use of resources by the Village of Adams.
- H. Reasons for Concluding there will be no Significant Impacts:** Review of the engineering report and supporting information indicates that the proposed project will result in no significant impact on the environment. Federal and State agencies reported no impact will result to farming, historical or recreational resources. All necessary permits for construction will be obtained from the appropriate agencies (i.e., Section 404, NRD, etc.), if necessary.



Reviewing Engineer



Date

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LOCAL NEWSPAPER
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NEMAHA NATURAL RESOURCES DISTRICT
62161 Highway 136
Tecumseh, NE 68450



New Water Tower Location

Potential Well Site 1

Potential Well Site 2

Legend

Water Mains
 Size (in.)

- 2
- 4
- 6
- 8

Fire Hydrants
 Water Valves

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



SRF Water Projects-Adams, Nebraska

