

ENVIRONMENTAL ASSESSMENT DOCUMENT

A. Project Identification:

Applicant: City of Wisner
Project No.: D311622
City: Wisner **County:** Cuming **State:** NE
Total Project Amount: \$4,346,000
DWSRF Loan Forgiveness: \$1,086,500

B. Community Description:

Location: Wisner is located in the eastern part of Nebraska, situated east of the City of Norfolk, to the southeast of the intersection of State Highways 51 and 275.

Population: The 2010 census population of Wisner is 1,170.

Current Water System Facilities: The City's public water system (PWS) consists of three municipal wells, a booster pump station, a 120,000 gallon water storage standpipe, and a distribution system. The booster pump station provides pressure to the higher elevation part of Wisner while the standpipe provides pressure to the lower elevation part of Wisner.

C. Project Description: In June 2017, the City's Engineer completed a Water System Study that evaluated the siting of a replacement well with transmission main, distribution system improvements, and replacing the water storage standpipe.

The construction of the new well would allow the City to disconnect a high nitrate well from the system and allow the well with historic high selenium concentrations to be placed on emergency status. The existing 120 year old water storage standpipe is undersized to meet the system's average day demand. Thus the need for a replacement water tower, which will be reasonably sized to meet future growth of the community, and eliminate the need for the 30-year-old booster pump station. Lastly, there are numerous sections of the water distribution system which are undersized, prone to breakage, and in need of replacement and/or looping.

D. Alternatives Considered:

Five alternatives studied were:

1. Alternative water sources.
2. Construction of new elevated water tower.
3. Water distribution improvements.
4. Construction of a new water supply well.

5. Construction of selenium water treatment plant (ion exchange, reverse osmosis, or electro dialysis reversal).

Evaluation and Selection of the Alternative: Without the project, the City would be at risk of becoming a one well system given one well currently on emergency status (nitrates above the MCL) and another well with historical selenium and nitrate concentrations above the MCL. Further, the existing water storage standpipe is aged and undersized for the needs of the City and the booster station is roughly three decades old.

Two nearby communities (water systems) were considered as alternative water sources. One community was smaller than Wisner and would require substantial upgrades itself to provide the quantity of water necessary to replace a pumping well at Wisner, in addition to nine miles of transmission main. Connection to the other community would have required seven miles of transmission main and a pumping station. Estimated cost of conveying the water and upgrades to the systems eliminated them as viable alternatives. A rural water district adjacent to Wisner was considered but it was assumed the district would not have the capacity to service Wisner's needs and the connection was eliminated as an alternative.

Construction of a selenium water treatment plant at the high selenium well was considered as an alternative removing the risk associated with the past MCL exceedences. The cost associated with construction of the treatment system would be roughly four times the cost for new well construction. Additionally, waste disposal from the treatment processes may require improvements at the waste water treatment plant in Wisner. The considerable cost and disposal issues eliminated the water treatment plant as an alternative.

Construction of a new water supply well is selected as an alternative. A test well was constructed on the proposed site and water quality/quantity data was collected. Water quality appears to be satisfactory even though the water is harder, but comparable to the existing wells, and may have elevated suspended solids. Water quantity appears to be sufficient to replace the production from the high selenium well, allowing that well to be placed on emergency status. The well site will need to be approved by NDHHS prior to construction.

Construction of a new elevated water tower is selected as an alternative. The existing water storage standpipe is 120 years old and undersized for current needs. Replacement of the floor and roof of the existing standpipe have been recommended in the event a new water tower is not constructed. The construction of the new elevated water tower would also eliminate the need for the 30-year-old booster station maintaining pressure in the northern part of the city.

Water distribution improvements were selected as an alternative. Distribution system improvements include water main construction to connect a new well and water tower to the distribution system, along with pressure zone modifications, replacement of aging cast iron pipe, looping distribution mains, and addressing areas prone to water main breaks.

In summary, a new well, water tower and water distribution improvements were selected the alternatives for the project.

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 City will make application to the Lower Elkhorn 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 be located on land owned by the City (1.8 acres) 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 US Army Corps of Engineers noted the applicability of their Section 404 permit requirements if it is 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. The NDNR noted that a portion of the project located within a regulated (1% annual chance) floodplain and/or floodway. The local floodplain administrator will be contacted concerning floodplain management and permitting. The Nebraska Natural Resources Conservation Services indicated no concerns related to the Farmland Protection Policy Act.

Financial: An application for a DWSRF loan has been received for \$4,346,000 to fund the system improvements. The City is eligible for a 30-year loan with an interest rate of 2.0% plus an administrative fee of 0.98% on the outstanding principal balance assessed annually. Further, Wisner qualifies for 25% of loan

forgiveness based on State Fiscal Year 2019 program criteria. Therefore, the projected annual DWSRF Debt Service (including 10% coverage) is estimated at \$194,435. Wisner's current water rate for a typical residential connection is \$9.00 per month for the first 6,000 gallons, with an additional \$1.50 use charge for every 1,000 gallons of water furnished thereafter. That equates to a water bill of \$12.00 per month, based on a common household water use of 8,000 gallons. With 644 active service connections, household rates will need to be raised \$25.16 to just over \$37 per month to address the new debt service. Following construction, Wisner 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 City's past reliance on a well with historic selenium exceedences to a quality supply well, ensuring that compliance with the selenium drinking water standard is maintained. The new water tower will provide the recommended storage for a community this size and eliminate the need for the aging booster station. 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 City and all new water mains will be placed below ground at depths that will not interrupt any planned practices

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 City owned property, and the services provided by the proposed project will be available to everyone in Wisner 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 undertaken along the City 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.

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 February 20, 2018, with 41 days advanced posted notice. A presentation of the proposed project was made by the City Administrator, including the project scope, impact on water rates, and source of funding.

Public Opposition or Opinions: It was noted that during the Public Hearing, concerns about the project impact on the City budget were heard, and in response, it was stated that the entire project will be funded through the SRF. Subsequently, a resident has raised concerns about the new well and tower location through open letters posted in the local newspaper, a letter to the City, and action in court. The City issued a response, summarized in a local newspaper article, detailing items in the preliminary engineering report, acquisition of funding, and the decision to place the water tower and well at the proposed location.

Coordination and Documentation with Other Agencies and Special Interest Groups:

Facility Planning: Water System Study, City of Wisner, Olsson Associates, June 2017

Federal: US Army Corps of Engineers, August, 2017, letter

State: USDA – NRCS, August 22, 2017, email
Department of Health and Human Services, Division of Public Health, May 18, 2016, letter
Nebraska Department of Natural Resources, August 23, 2017, letter
Nebraska Game and Parks Commission, June 14, 2016, letter
Nebraska State Historical Society, August 24, 2017, letter

Consulting Engineers: Olsson Associates, Lincoln, NE

Public Groups: City of Wisner Residents

G. Positive Effects to be Realized from the Proposed Project: The project will allow Wisner to maintain compliance with the Nebraska Safe Drinking Water Act and ensure

future water availability. Test hole data shows that, prior to a construction permit being issued by DHHS, the proposed well will likely meet all drinking water standards per Title 179, Regulations Governing Public Water Supply Systems. As such, the project is considered reasonable, not contrary to conservation or the public welfare and is a beneficial use of resources by the City of Wisner.

- 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

10 / 31 / 2018

Date

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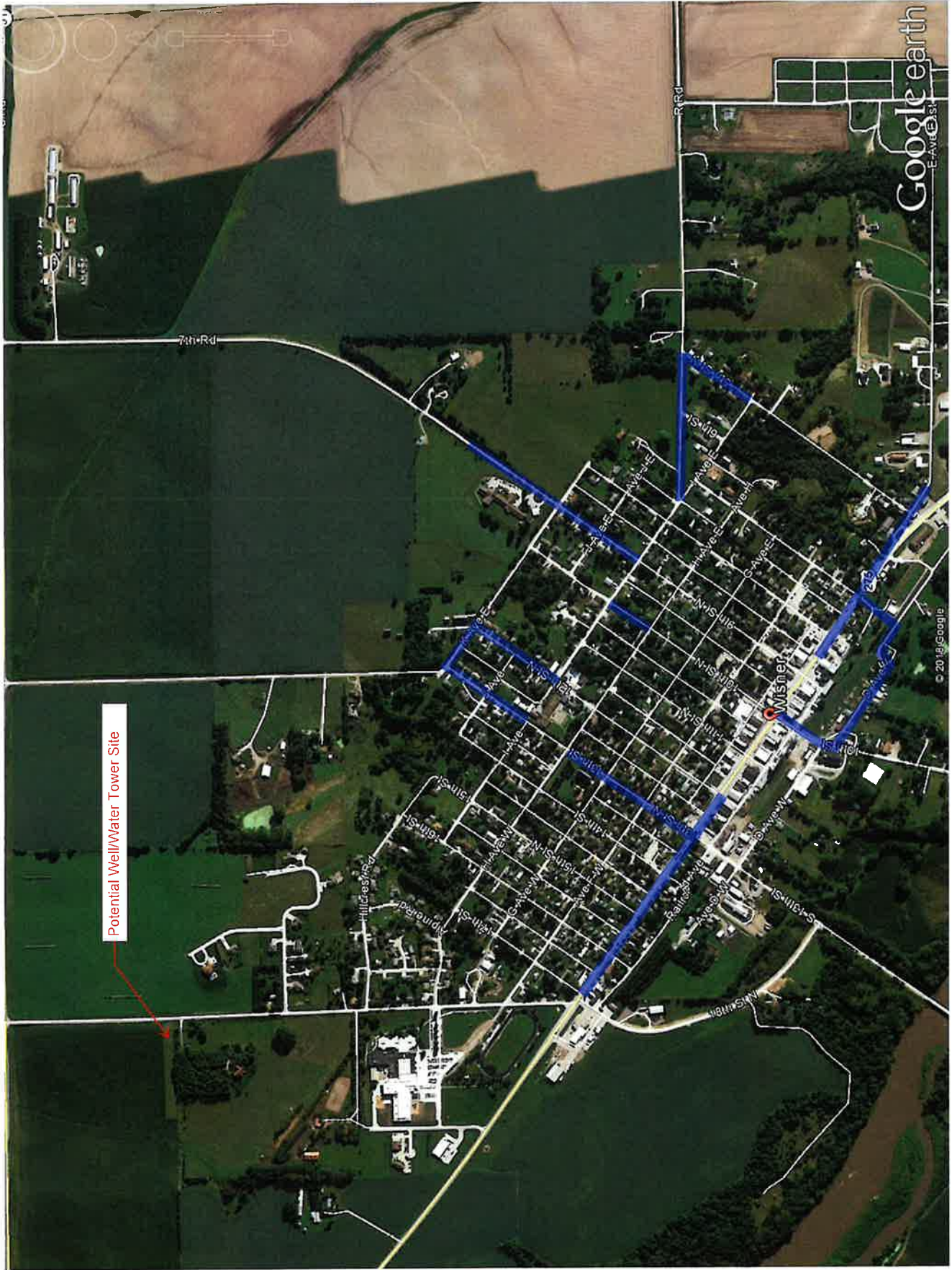
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LOCAL NEWSPAPER
Wisner News Chronicle
1014 Avenue E
Wisner, NE 68791

LOWER ELKHORN NATURAL RESOURCES
DISTRICT
1508 Square Turn Boulevard
Norfolk, NE 687



Potential Well/Water Tower Site

Main Replacement Projects

Google earth

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