

ENVIRONMENTAL ASSESSMENT DOCUMENT

A. Project Identification:

Applicant: City of Fairbury
Project No.: D311601
City: Fairbury **County:** Jefferson **State:** NE
Total Project Amount: \$3,700,000
DWSRF Loan Forgiveness: \$740,000

B. Community Description:

Location: Fairbury is located in the southeastern part of Nebraska, at the intersection of State Highways 15 and 136.

Population: The community has a population of 3,942 according to the 2010 census, which has slightly declined over the prior decade.

Current Water System Facilities: The City's raw water supply originates from two sources. The Crystal Springs wellfield is comprised of six wells, which feed water to a cartridge filtration treatment plant, in combination with an infiltration gallery. The East wellfield has three vertical supply wells that directly feed the City's distribution system. Over the past decade levels of nitrates detected from both sources typically ranged from 7 to 9 milligrams/liter (mg/L), consistently below the drinking water standard of 10 mg/L. Beginning in 2013 though, numerous detections from 9 to 10 mg/L were measured through routine monitoring, with one result at 10.2 mg/L. Subsequent testing has shown levels below the standard, but even before the detected increases Fairbury proactively hired an engineer to complete a Preliminary Engineering Report (PER) of their water system.

C. Project Description: In April 2012, the City's engineer completed the PER which focused on the groundwater supply for Fairbury's water system. Subsequent though, the City fell out of compliance with the copper standard, and was directed to complete an Optimal Corrosion Control Treatment (OCCT) evaluation, which is underway. The City must complete a chemical feed installation to address the copper issue. Lastly, replacement of the significantly aged undersized transmission mains and rehabilitation of the City's water tower were identified as needed project phases.

D. Alternatives Considered:

The report evaluated centralized treatment of the Crystal Springs wellfield for nitrate removal, including alternatives for blending the treated supply with the East wellfield, with Ion Exchange as the apparent alternative. Should nitrates rise again towards or

above the drinking water standard, the City will be well positioned to address that concern.

Evaluation and Selection of the Alternative: An OCCT study will be prepared by April of 2019, which will recommend the type of chemical feed system needed to address the City's copper advisory. That along with replacing or rehabilitating significantly aged infrastructure is all necessary to ensure the City is able to provide an adequate supply of safe drinking water to its residents on a continuous basis.

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. Review and approval for a construction permit will be required from the Engineering Services Program of the DHHS.

Environmental: The construction contracts will require that the contractors return the area to its original or better condition. Any new feed system improvements will occupy a small area of land (<2,000 square feet) and will have little, if any effect on area species. All of the land area to be disturbed during construction will be City owned and was previously disturbed through normal City development practices (e.g., roadway construction, etc.). Based on a review of the available mapping, portions of the transmission main lie within the 100-year flood plain. A permit will be required from the local floodplain administrator prior to proceeding with construction.

The proposed project was reviewed by numerous Federal and State agencies for environmental impacts. The majority of the responses were positive in that they indicated that the project would have no effect, was cleared of any significant concerns, was not subject to their jurisdiction or they did not find that there would be any significant environmental impacts created. The comments offered by the Corps of Engineers and Department of Natural Resources (DNR) were somewhat related in that Corps indicated that the transmission mains cross Waters of the United States, and the DNR noted that potential for floodplain impacts. Boring of the transmission lines is planned though in the areas identified to avoid and/or minimize any impacts to the areas of concern. Regardless, if necessary, a permit from Corps will be obtained if filling activity in the Waters of the United States will take place and another from the local floodplain administrator, if impacts cannot be avoided during final project design. Lastly, the U.S. Fish and Wildlife Service and Nebraska Game and Parks Commission advised that care should be taken during construction for complying with the Migratory Bird Treaty Act, which is a mandatory requirement of all DWSRF funded projects.

Financial: An application for a SRF loan has been received for \$3,700,000 to fund the system improvements. The City is eligible for a 20-year loan with an interest rate of 2% plus an administrative fee of 0.94% on the outstanding principal balance assessed annually. Further, Fairbury qualifies for 25% of loan forgiveness on all eligible project costs based on the State Fiscal Year 2019 program criteria. Therefore, the projected annual DWSRF Debt Service (including 10% coverage) is estimated at \$214,331. The revenues from City's water utility will be dedicated to repay the loan. Fairbury's current water rate for a typical residential connection is \$15.30 per month, with a \$1.044 use charge for every 100 cubic feet of water furnished. That equates to an approximate water bill just under \$26 per month, based on a common household water use of ~7,500 gallons. In addition to debt payments, operation and maintenance (O&M) costs will increase with the chemical feed costs to control copper corrosion. Based on 1,961 active service connections, the City's monthly household rates may need to be raised approximately \$10 to address the new debt service and O&M costs, to an overall amount of \$36 per month. Following construction, Fairbury will make a final assessment of revenues and cost to determine what rate adjustments are necessary.

Secondary:

Population Impacts: While the majority of the improvements are needed to replace or rehabilitate existing infrastructure, they will also be reasonably sized for future growth.

Land Use and Trends: Any new building area will take up a small amount of land in a previously developed area of the City. In addition, all new water mains will be placed below ground at depths that will not interrupt any planned practices. The Nebraska State Historical Society noted that the project will have no effect for archeological, architectural, or historic properties.

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 building and water main construction.

Environmental Justice: The proposed 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 Fairbury, equally. No segment of the City'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. 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 Meeting was held on October 21, 2014, with 14 days advanced posted notice. An initial presentation of the project was made by the Assistant Utilities Superintendent and the engineer, including the types of treatment, transmission main layout, availability of funding and impact to water rates. Then a Public Hearing was held on January 15, 2019, with 34 days advanced posted notice. A presentation of the project was made by the engineer, including the scope of the project and impact to water rates. It was noted that the project is under design and anticipated to start construction in 2020.

Public Opposition or Opinions: At the meeting, there were several questions made by City Council members and the City Attorney, which were adequately addressed by the engineer. No other comments were made by the City residents in attendance and no other input was received from the public in the meeting nor the hearing.

Coordination and Documentation with Other Agencies and Special Interest Groups:

Facility Planning: Preliminary Engineering Report – Groundwater Supply Study for Nitrates, Olsson Associates, April 2012

Federal: U.S. Department of Agriculture, Natural Resources Conservation Service, July 21, 2014, email
U.S. Department of the Army, July 24, 2014 and January 3, 2019, letters
U.S. Fish and Wildlife Service, July 18, 2014 and December 10, 2018, letters

State: Nebraska Department of Natural Resources, December 19, 2018, memorandum

Nebraska Game and Parks Commission, August 12, 2014 and December 20, 2018, letters
Nebraska State Historical Society, July 15, 2014 and December 18, 2018, letters

Regional: Little Blue Natural Resources District, December 11, 2018, letter

Other: Pawnee Nation, August 4, 2014 and December 17, 2018, letters

Consulting Engineers: Olsson Associates, Lincoln, NE

Public Groups: City of Fairbury Residents

- G. Positive Effects to be Realized from the Proposed Project:** The project will allow Fairbury to maintain compliance with the Nebraska Safe Drinking Water Act and ensure future water availability. 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 Fairbury.
- 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 to the environment. Federal and State agencies reported no impact will result to endangered or threatened species, historical or farming resources. All necessary permits for construction will be obtained from the appropriate agencies (e.g., local floodplain, etc.), if necessary.



Reviewing Engineer



Date

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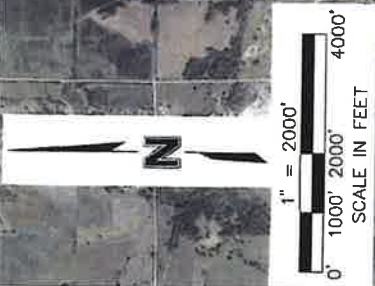
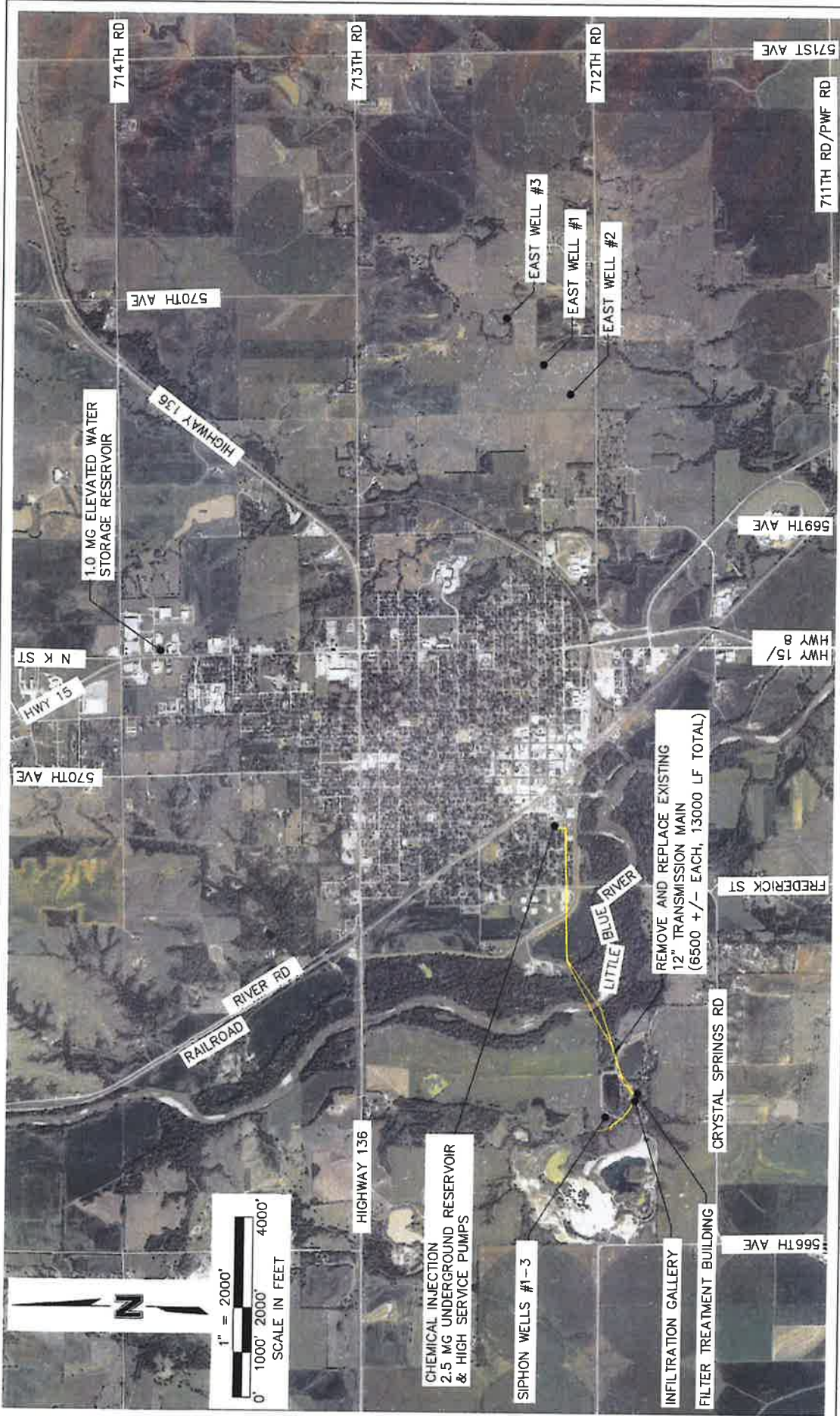
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LOCAL NEWSPAPER
The Fairbury Journal-News
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DWG: \\oad\oac\consulting.com\nts-nsi\projects\2016\3501-4000\016-3570\40-Design\Exhibits\18-11-20-WTW_A73570_Proposed
 DATE: Nov 20, 2018 10:28am XREFS:



PROJECT NO: A16-3570
 DRAWN BY: KEF
 DATE: 11/20/2018

**PROPOSED WATER SYSTEM IMPROVEMENTS
 FAIRBURY, NEBRASKA**

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