

## ENVIRONMENTAL ASSESSMENT DOCUMENT

### A. Project Identification:

**Applicant:** Village of Lindsay  
**Project No.:** D311618  
**Village:** Lindsay **County:** Platte **State:** NE  
**Project Total** \$1,650,500  
**DWSRF Loan:** \$1,320,400  
**DWSRF Loan Forgiveness** \$330,100

### B. Community Description:

**Location:** The Village of Lindsay is located in eastern Nebraska, to the northwest of the City of Columbus.

**Population:** The 2010 census population of Lindsay is 255.

**Current Water System Facilities:** The Village's public water system (PWS) consists of three municipal wells, an elevated 50,000 gallon water storage tower, and a distribution system. The source water is fluoridated prior to the distribution system. The Village's primary Wells No. 89-1 and 2013-1 have a capacity of 500 gallons per minute and is in operable condition. Lindsay's backup Well No. 83-1 had a similar pumping capacity but was previously placed on emergency use only status due to high nitrate levels. A 2015 inspection report of the tower recommended to plan for an interior renovation and noted that the center riser pipe insulation package was beginning to collapse. The majority of the distribution system was constructed in 1938 with 40% of the system comprised of pipe sized at 4 inches or less.

**C. Project Description:** A replacement water tower with a 100,000 gallon capacity and distribution system improvements through replacement of 4 inch with 6 inch and looping of water mains will be constructed.

### D. Alternatives Considered:

Three potential tower sites were studied looking at both a 150,000 gallon and 100,000 gallon water tower.

**Evaluation and Selection of the Alternative:** The Village Engineer's hydraulic analysis of the system showed that the existing 50,000 gallon tower is much less than the current 123,258 gallon average day demand for the Village.

Based upon that information it was recommended that the Village proceed with a replacement tower project and distribution system improvements through replacement

and looping of water mains. The tower will be sized at a 100,000 gallon capacity and placed at an elevation to provide a minimum 30 to 60 psi service pressure to the entire Village.

An alternative evaluated was the construction of a 150,000 gallon capacity tower but the Board selected the 100,000 gallon capacity.

## **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 Nebraska Department of Health and Human Services.

**Environmental:** The construction contracts will require that the contractors return the area to its original or better condition. The new tower will occupy a very small area of land (~1 acre) and will have little, if any affect on area species. All of the land area to be disturbed during construction will be Village owned, or within established right-of-way. Based on a review of the available mapping, a small portion of the water main replacement lies within the 100-year flood plain. A flood plain construction permit will be necessary from the flood plain administrator for the Village.

The proposed project was reviewed by numerous Federal and State agencies for environmental impacts. The majority of responses indicated that the project had no effect. The Nebraska State Historical Society noted that the project will have no effect for archeological, architectural, or historic properties.

**Financial:** An application for a DWSRF loan has been received to fund the system improvements. The Village is eligible for a 20-year loan with an interest rate of 2% plus an administrative fee of 0.78% on the outstanding principal balance assessed annually. Therefore, the projected annual DWSRF Debt Service (including 10% coverage) is estimated at \$99,683. The revenues from Village's water utility will be dedicated to repay the loan. Currently, the average bill for a residential water service is \$11.00 per month for typical 8,000 gallon per monthly use. Based on 161 active service connections, monthly household rates may need to be raised \$25.80 to address the new debt service. A final assessment of revenues and costs will determine what rate adjustments are necessary.

## **Secondary:**

**Population Impacts:** The replacement tower and water main improvements are not primarily needed for future growth, but rather to meet the needs of current service connections.

**Land Use and Trends:** The location of the proposed replacement tower is south of the existing water tower. The tower site will take up little land in an area already owned by the Village. In addition, all new water mains will be placed in existing street right of way and will only temporarily detour traffic during construction.

**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 improvements will be placed in areas previously disturbed, on Village owned property or within the right-of-way, and the services provided by the proposed project will be available to everyone in Lindsay, 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 Meeting was held December 20, 2017, with 35 days advanced posted notice. A presentation of the proposed project was made by the Village's Engineer, including the alternatives considered and project cost with the associated funding available.

**Public Opposition or Opinions:** Those residents in attendance posed numerous questions regarding the project need, scope and location, the subsequent cost and impacts to user rates. All questions and concerns were addressed. This meeting satisfies the public participation requirements of Title 131 for a commitment of DWSRF funds.

**Coordination and Documentation with Other Agencies and Special Interest Groups:**

**Facility Planning:** Village of Lindsay Preliminary Design Report, March 2012, 2017 Water System Evaluation Update, May 2017, JEO Consulting Group

**Federal:** Corps of Engineers, November 14, 2017, letter  
U.S. Department of Agriculture, Natural Resources Conservation Service, November 13, 2017, email  
U.S. Fish & Wildlife Service, December 19, 2017, email

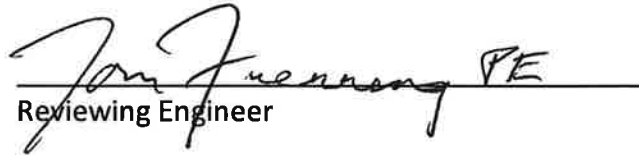
**State:** Nebraska Department of Natural Resources, November 29, 2017, letter  
Nebraska State Historical Society, November 14, 2017, letter  
Nebraska Department of Transportation, Division of Aeronautics, November 17, 2017 email  
Nebraska Department of Health and Human Services, October 7, 2016, Routine Sanitary Survey

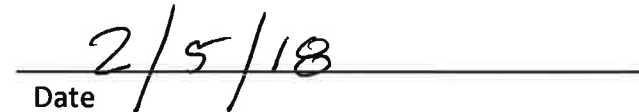
**Local:**  
**Consulting Engineers:** JEO Consulting Group, Norfolk, NE

**Public Groups:** Village of Lindsay Residents

- G. Positive Effects to be Realized from the Proposed Project:** The project will allow Lindsay to maintain compliance with the Nebraska Safe Drinking Water Act and ensure future water availability. The tower project achieves the goals of the U.S. Environmental Protection Agency's Drinking Water Infrastructure Sustainability Policy for the upgrade and/or replacement of existing infrastructure. 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 Lindsay. The public water system improvements identified in the 2017 Water System Evaluation are fundable under the DWSRF as they are needed to maintain compliance with the Safe Drinking Water Act.

H. **Reasons for Concluding there will be no Significant Impacts:** Review of the design memorandum 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 threatened and endangered species, the floodplain, historical, or groundwater resources. All permits for construction will be obtained from the appropriate agencies (i.e., flood plain, NDEQ, etc.), if necessary.

  
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Reviewing Engineer

  
\_\_\_\_\_  
Date

FNSI DISTRIBUTION LIST  
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CONSULTING ENGINEERS:  
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LOCAL NEWSPAPER  
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PO Box 126  
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NEBRASKA DEPARTMENT OF TRANSPORTATION  
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Figure 5-1: Water Tower Site Alternatives

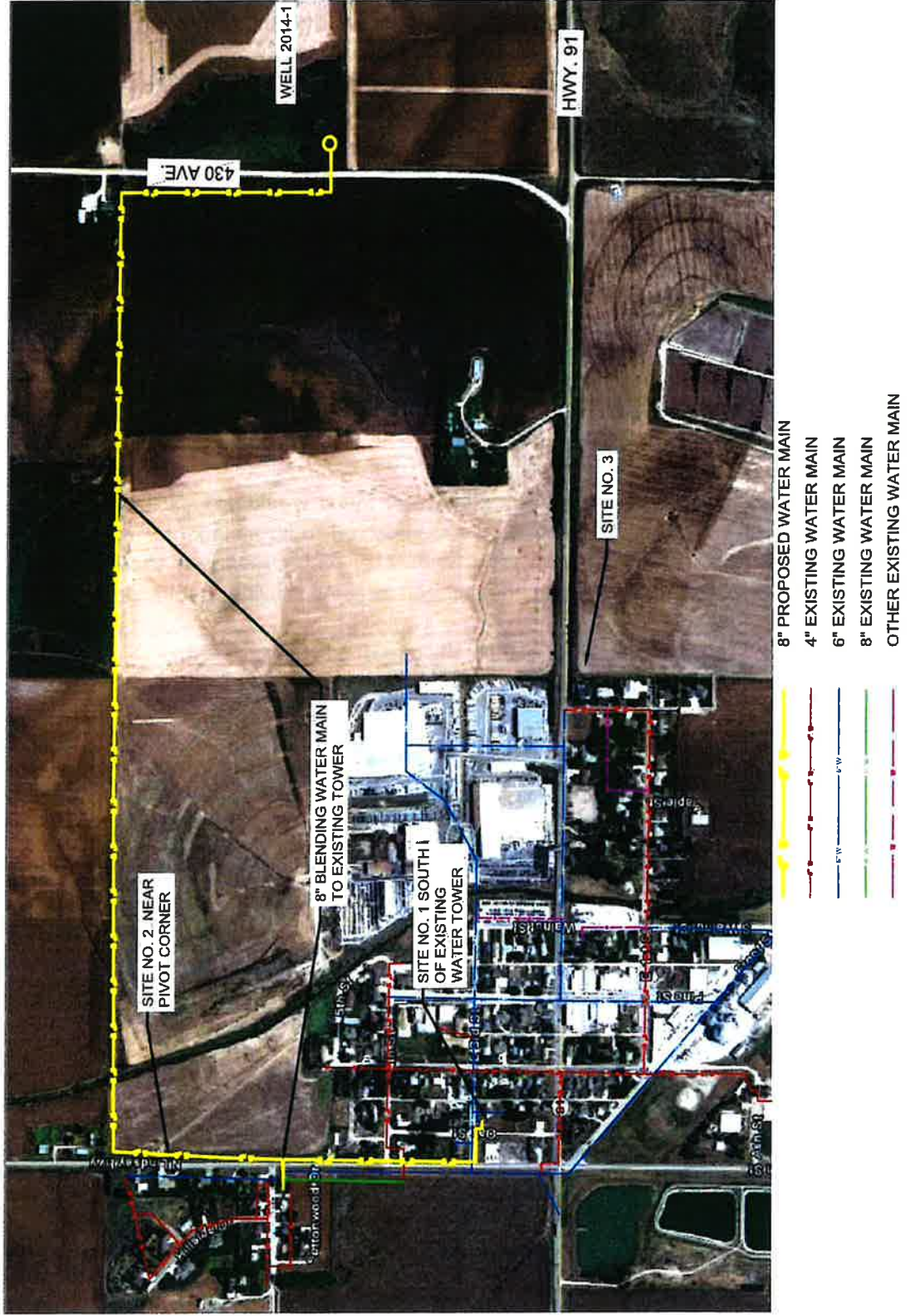


Figure 5-2: Distribution System Improvements Layout

