

## ENVIRONMENTAL ASSESSMENT DOCUMENT

### A. Project Identification:

**Applicant:** City of Pierce  
**Project No.:** D311625  
**City:** Pierce **County:** Pierce **State:** NE  
**Total Project Amount:** \$655,000  
**DWSRF Loan Forgiveness:** \$131,000

### B. Community Description:

**Location:** Pierce is located in north eastern part of Nebraska, at the intersection of State Highways 13 and 98.

**Population:** The 2010 census population of Pierce is 1,767. Pierce is the county seat for Pierce County. The city has seen a 2.2% population decrease from 2000 to 2016.

**Current Water System Facilities:** The City's public water system (PWS) consists of three municipal wells, a 300,000 gallon water storage tank, and a distribution system. Two of the City's wells were drilled before 1964 which is long past the average useful life of drinking water wells in Nebraska.

- C. Project Description:** In February 2018, the City's Engineer completed a report that evaluated the siting of a new well with a tie into the distribution system and the abandonment of a recently inactivated municipal well at a different site. The City of Pierce has experienced water capacity problems during the summer in recent years due to its "Middle Well" placed into inactive status on 3/17/16. The well and screen are 12-inches in diameter rendering the well ineligible for renewal through relining. The screen has developed holes resulting in the pumping of fine sand. The nominal capacity of this well is 350 gpm. The project proposes a new well replacement with a 500 gpm capacity. The City has tested and acquired the well site. The project will restore the city back to a drinking water system with three primary wells with good quality water. In addition, one of the wells is expected to be mechanically reliable for a long time.

The project will consist of drilling a new well approximately 100 feet in depth; 30-inch bore hole; 16-inch casing and well screen; masonry well house; pump, motor, well house piping; electrical line to the well; standby generator; water transmission line; and abandonment of the old well.

**D. Alternatives Considered:**

The City looked at five sites prior to the selected well site.

- Site 1 east of the City.
- Site 2 located north of the City.
- Site 3 was located in the fairgrounds. That site was not approved due to the proximity of the livestock barns and horse corrals.
- Site 4 was located approximately one-half block southeast of the selected site.
- Site 5 The fifth site was located in the City Park. That site was rejected in order to avoid high nitrates.

**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). Nebraska Department of Health and Human Services (DHHS) engineering program has reviewed and approved for a construction permit for well casing and screen as of February 21, 2018.

**Environmental:** The construction contracts will require that the contractors return the area to its original or better condition. The wellhouse will occupy a very small area of land (<8,184 square feet) and will have little, if any effect on area species. All of the land area to be impacted during construction are previously disturbed by surrounding urban development.

The proposed project was reviewed by numerous Federal and State agencies for environmental impacts. All Other Agency responses received, indicated that the project would either have no affect or iterated their basic programs permit requirements.

**Financial:** The City is eligible for a 20-year loan at an interest rate of 2.00% with an additional 1.00% administration interest rate fee for an overall effective loan interest rate of 3.00%. The Drinking Water SRF program plans to finance the estimated \$655,000 project. The City of Pierce is eligible for the 20.00% loan forgiveness. The revenues from Pierce's water utility will be dedicated to repay the loan. The projected annual loan debt service including 10% coverage of principle and interest is \$38,539.70.

Pierce's current water rate for a typical residential connection is \$8.50 per month, with an additional \$2.00 use charge for every 1,000 gallons of water furnished thereafter. That equates to a water bill of \$24.50 per month, based on a common household water use of 8,000 gallons. With 762 active service connections, household rates may need to be raised approximately \$4.21 to service the new debt. The recommended rate including the new debt servicing is \$24.50 plus \$4.21 equals \$28.71.

**Secondary:**

**Population Impacts:** The new well is not primarily needed for future growth, but to address concerns with existing wells that are aging. However, the improvements will be reasonably sized to accommodate peak demands.

**Land Use and Trends:** The location of the well is on land owned by the City. The well site has been approved by the DHHS. 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 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 Pierce, 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 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. 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 May 7, 2018 to discuss the proposed project and the potential impacts to existing water rates, with 40 days advanced posted notice. A presentation of the proposed project was made by the Engineer.

**Public Opposition or Opinions:** No comments were made by the public.

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

**Facility Planning and Consulting Engineer:** Design Summary and Project Manual for the 2018 Municipal Well 2018-1, City of Pierce, NE, Gilmore & Associates No. 491-059, February, 2018

**Federal:** Department of the Army, March 22, 2018, letter  
Department of the Interior, March 26, 2018, letter and June 8, 2018 email.  
Department of Agriculture, March 13, 2018, letter

**State:** Department of Health and Human Services, Division of Public Health, February 21, 2018 letter.  
Department of Natural Resources, March 6, 2018, memorandum  
Nebraska State Historical Society, March 5, 2018, letter

**Tribal:** No response

**Public Groups:** City of Pierce Residents – May 17, 2018 public hearing.

**G. Positive Effects to be Realized from the Proposed Project:** The project will allow Pierce to maintain compliance with the Nebraska Safe Drinking Water Act and ensure future water availability. Test hole data shows that the proposed well should 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 Pierce.

**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 historical and tribal resources. All necessary permits for construction will be obtained from the appropriate agencies (e.g., NRD, etc.), if necessary.



\_\_\_\_\_  
Reviewing Engineer

6/14/18

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Date

FNSI DISTRIBUTION LIST  
PIERCE, NEBRASKA

DEPARTMENT OF ENVIRONMENTAL  
QUALITY  
Office of Public Affairs  
P.O. Box 98922  
Lincoln, NE 68509-8922

DEPARTMENT OF HEALTH AND HUMAN  
SERVICES – DIVISION OF PUBLIC HEALTH  
Steve McNulty  
P.O. Box 95026  
Lincoln, NE 68509-5026

DEPARTMENT OF NATURAL RESOURCES  
Mitch Paine  
P.O. Box 94676  
Lincoln, NE 68509-4676

NEBRASKA GAME & PARKS COMMISSION  
Schuyler Sampson/Carey Grell  
P.O. Box 30370  
Lincoln, NE 68503-0370

DIRECTOR, NEBRASKA STATE  
HISTORICAL SOCIETY  
P.O. Box 82554  
Lincoln, NE 68508-2554

STATE OFFICE OF POLICY RESEARCH  
Policy Advisor  
Rm 1319, State Capitol  
P.O. Box 94601  
Lincoln, NE 68509-4601

DEPARTMENT OF ECONOMIC  
DEVELOPMENT  
Abigail Anderson  
P.O. Box 94666  
Lincoln, NE 68509

DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
Jeff Runge  
9325 South Alda Road  
Wood River, NE 68883

NATIONAL PARK SERVICE  
Nick Chevance  
Environmental Coordinator  
Midwest Regional Office  
601 Riverfront Drive  
Omaha, NE 68102-4226

USDA RURAL DEVELOPMENT  
Ken Shaw  
Room 308, Federal Building  
100 Centennial Mall North  
Lincoln, NE 68508

ENVIRONMENTAL PROTECTION AGENCY  
Chris Simmons and Kelly Beard-Tittone  
11201 Renner Blvd  
*Mail Code: WWPDWIMB*  
Lenexa, KS 66219

STATE CONSERVATIONIST  
Natural Resources Conservation Service  
Federal Building, Room 152  
100 Centennial Mall North  
Lincoln, NE 68508-3866

DEPARTMENT OF THE ARMY  
John Moeschen  
State Program Manager  
US Army corps of Engineers  
Nebraska State Office, Suite 1  
8901 South 154<sup>th</sup> Street  
Omaha, NE 68138-3621

LOWER ELKHORN NATURAL RESOURCES  
DISTRICT  
601 E Benjamin Ave, Ste 101  
PO Box 1204  
Norfolk, NE 68702-1204

CITY OF PIERCE  
Chad Anderson  
106 S 1<sup>st</sup> St  
Pierce, NE 68767

