

## ENVIRONMENTAL ASSESSMENT DOCUMENT

### A. Project Identification:

**Applicant:** City of Sidney  
**Project No.:** D311604  
**City:** Sidney **County:** Cheyenne **State:** NE  
**Total Project Amount:** \$11,100,000  
**DWSRF Loan Forgiveness:** \$ 100,000  
**DWSRF Loan Amount:** \$11,000,000

### B. Community Description:

**Location:** Sidney is located in western Nebraska, along Interstate 80.

**Population:** The community has a population of 6,757 according to the 2010 census.

**Current Water System Facilities:** The public water system consists of twelve active municipal wells that mainly supply water to a 1.5 million gallon (MG) blending station, where it is then re-pumped to the City's initial pressure zone. That zone has three storage tanks with a combined capacity of 1.225 MG and two booster stations, which then re-pump Sidney's supply to its upper pressure zone. That zone has a single 250,000 gallon water storage tower. The water supply is chlorinated for disinfection prior to delivery into the distribution system.

- C. Project Description:** In April 2014, a Water System Master Plan was prepared was developed to address the City's needs through 2034. Then in June 2014, a Five-Year Implementation Plan of Water System Improvements was prepared that detailed the preliminary scope of this project. It was concluded that replacement of the pumps at the systems booster stations was needed along with construction of a new 500,000 gallon water tower in the upper pressure zone to meet the needs of the City's existing users per current design standards. Associated with those projects, new transmission mains and distribution system improvements will be constructed.

### D. Alternatives Considered:

Three main project alternatives studied were:

1. No Project;
2. New Water Tower, Booster Station Pump Replacements, Transmission Main and Distribution System Improvements; or
3. Additional Improvements including four New Wells, Undersized Distribution System Replacements and a Replacement Water Tank.

**Evaluation and Selection of the Alternative:** The Master Plan was prepared to study the needs of the water system, both for the existing system users and those for the continued

growth and/or fire flow capabilities. The proposed project is needed to address system deficiencies, meeting the needs of existing City's residents, while being reasonably sized for future growth. The pumps at the East Booster Pump Station were installed in the late 1980's, have been rehabilitated on several occasions, and now due their age and inability to locate replacement parts need to be replaced. The pumping capacity for the station will be increased and new distribution system improvements are needed to maintain an adequate supply of water to the station at the minimum service pressures required by regulation. The pumps at the Sidney's Summit Booster Station will be rebuilt and replaced as part of the project, to maintain supply to the upper pressure zone while the East station is out of service.

The new upper pressure zone water tower is needed as the existing tower cannot meet the present 310,100 gallon average day demand need. The current peak day demand is 837,000 gallons, so the new 500,000 gallon water tower is being reasonably sized, and the new transmission mains needed for connection to the distribution system from the tower site. The last project phase is a trunk main to increase water supply from the blending station to the 600,000 gallon tank in the low pressure zone. Presently due to limitations in the distribution system, the City must rely upon water from the upper pressure zone to fill the tank, which is inefficient. The new water main will allow the low pressure zone to operate independently of the upper zone.

If the project was not constructed, at times the City's water system would not operate in accordance with good practices and recommended design standards for public water systems.

The additional improvements will be needed in the future, some to replace aging undersized infrastructure, and others due to anticipated growth in the community or to increase fire flow capabilities. New supply wells will not be needed until that growth occurs and two of the Sidney's existing low pressure zone storage tanks will be repainted, so there is no immediate need to replace that infrastructure. Of 60,000 feet of the 4" sized distribution mains identified for replacement to increase fire flow capabilities, if any are in immediate need for replacement due age or a deteriorated condition, it can be added to the scope of the proposed project, at determination by the City.

#### **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 at the DHHS.

**Environmental:** The construction contracts will require that the contractors return the project areas to their original or better condition. The tower will occupy a small area of land (<10,000 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 or within established road right of ways.

The proposed project was reviewed by numerous Federal and State agencies for environmental impacts. The Nebraska State Historical Society (NSHS) identified locations within the project area where various activities associated with Fort Sidney were reported to have occurred, and then more importantly where a burial was discovered with the remains of a ~4,000 year old Native American. A qualified archaeologist performed a survey of the areas identified by the NSHS, which recommended that a portion of one be monitored during trenching for the water main installation. The State's Preservation Archaeologist noted that the recommendation was appropriate, and the detailed area will be monitored by a qualified archaeologist during construction.

The Corps of Engineers from preliminary project information indicated there may be the presence of waters of the U.S. in the proposed project area. The Lodgepole Creek and its' associated small tributaries are ephemeral water bodies, which if are trenched across for water main placement as part of this project, a Section 404 permit will be obtained prior to construction. The Nebraska Department of Natural Resources identified those same areas to be similarly located in the regulated floodplain. Thus a development permit(s) will be required from the local floodplain administrator, wherever water mains will be placed within the floodplain.

The U.S. Fish and Wildlife Service (USFWS) raised a concern that since the proposed project is in the Platte River basin, and any project resulting in a water depletion in the basin, would further or continue the deterioration of stressed habitat conditions. The Service's letter referred to the State agreed Platte River Recovery Implementation Program, that the City could participate in to address any Endangered Species Act coverage. Prior to that request being implemented though, DHHS responded with information showing that the City's water use trend line, from actual to projected, is consistent with that shown in 2003 when the DWSRF funded Sidney's Northwest Wellfield project. Further, a review shows that the City's average daily water use has dropped, resulting in a nearly 30,000,000 gallon reduction when comparing their usage from 2002 vs. 2014. That is a primary result of their water conservation efforts, as noted on their Water Department's webpage. The current project is needed to replace aging or supplement undersized infrastructure to meets the needs of the City's existing users, while being reasonably sized for future growth. Should that growth occur as planned, as noted above, the system would then construct four addition supply wells at a later date, separate from this project. Based on the additional information provided, the USFWS provided correspondence that there concerns have been addressed.

**Financial:** An application for a DWSRF loan has been received for \$11,100,000 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 0.585% on the outstanding

principal balance assessed annually. Therefore, the projected annual DWSRF Debt Service (including 10% coverage) is estimated at \$772,056. Up to \$100,000 in loan forgiveness assistance is being provided to pay for the costs of the required archeological survey and field archeological monitoring efforts. The revenues from City's water utility will be dedicated to repay the loan. Sidney's current water rate for a typical residential connection is approximately \$22 per month. Based on 4,162 active service connections, monthly household rates may need to be raised \$4.76 to address the new debt service, to just over \$20 per month. Following construction, the City will make an assessment of revenues and cost to determine the needed rate adjustments. Based on 3,053 active service connections, normally an approximate \$21 per month water rate increase would be needed following construction; however, a portion of the City's existing bond payments will be made prior to completion of the project. As such, it is projected that only a minimal water rate increase, if any, will likely be needed. Following construction, an updated rate structure will be established by Ordinance through the City Council.

**Secondary:**

**Population Impacts:** The infrastructure improvements address system deficiencies, and meet current recommended design standards. The project will ensure that City will provide an adequate supply of safe drinking water at the minimum service pressures required by regulation to the residents of Sidney.

**Land Use and Trends:** The project will be built on City owned land or within established road right of ways. In addition, all new water mains will be placed below ground at depths that will not interrupt any planned practices. The National Park Service and Nebraska Game and Parks Commission raised a concern about potential impacts to the Legion Park. Upon review of the preliminary project plans submitted to DHHS for review, no section of that park will be converted to other than a public outdoor recreation use.

**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 main and tower construction.

**Environmental Justice:** The proposed project will not produce any environmental justice concerns. The service provided by the proposed project will be available to everyone in Sidney, 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 on April 14, 2015, with 33 days advanced posted notice. The Mayor announced the hearing with a general description of the project, then the City's Water Superintendent reviewed each step of the Implementation Plan and the project presentation concluded with the City Manager detailing a review of the interest rates and fees available through the DWSRF. City Council discussions resulted in that it must be determined whether the DWSRF loan would impact Sidney's bonding cap and an assessment of projected Water Department revenues must be brought back to the Council.

**Public Opposition or Opinions:** No comments were made by the residents in attendance and no other public input (e.g., written objections) was received.

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

**Facility Planning:** Water System Master Plan, City of Sidney, Short Elliott Hendrickson, Inc., April 2014  
Five Year Implementation Plan, Water System Improvements, City of Sidney, Diamondback Engineering & Surveying, June 17, 2014

**Federal:** U.S. Department of Army, Corps of Engineers, March 27, 2015, letter  
U.S. Department of the Interior, Fish and Wildlife Service, March 23, 2015, letter and July 29, 2015, email  
U.S. Department of the Interior, National Park Service, March 16, 2015, letter

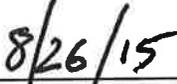
**State:** Nebraska Department of Health and Human Services, July 7, 2014, letter  
Nebraska Department of Natural Resources, March 17, 2015, memorandum  
Nebraska Game and Parks Commission, February 24, 2015, letter  
Nebraska State Historical Society, March 9 and July 13, 2015, letters

**Consulting Engineers:** Diamondback Engineering & Surveying, Lakewood, NE

**Public Groups:** City of Sidney Residents

- G. Positive Effects to be Realized from the Proposed Project:** The project will allow Sidney to maintain compliance with the Safe Drinking Water Act. The booster station project phases achieve 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 City of Sidney.
- H. Reasons for Concluding there will be no Significant Impacts:** Review of the engineering reports and supporting information indicates that the proposed project will result in no significant impact on the environment. Should any historic areas of significance or buried remains be discovered during construction, the State's Preservation Archaeologist will be contacted immediately. All necessary permits for construction (i.e., Section 404, Floodplain, etc.) will be obtained from the appropriate agencies, if necessary.

  
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Reviewing Engineer

  
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Date

FNSI DISTRIBUTION LIST  
SIDNEY, NEBRASKA

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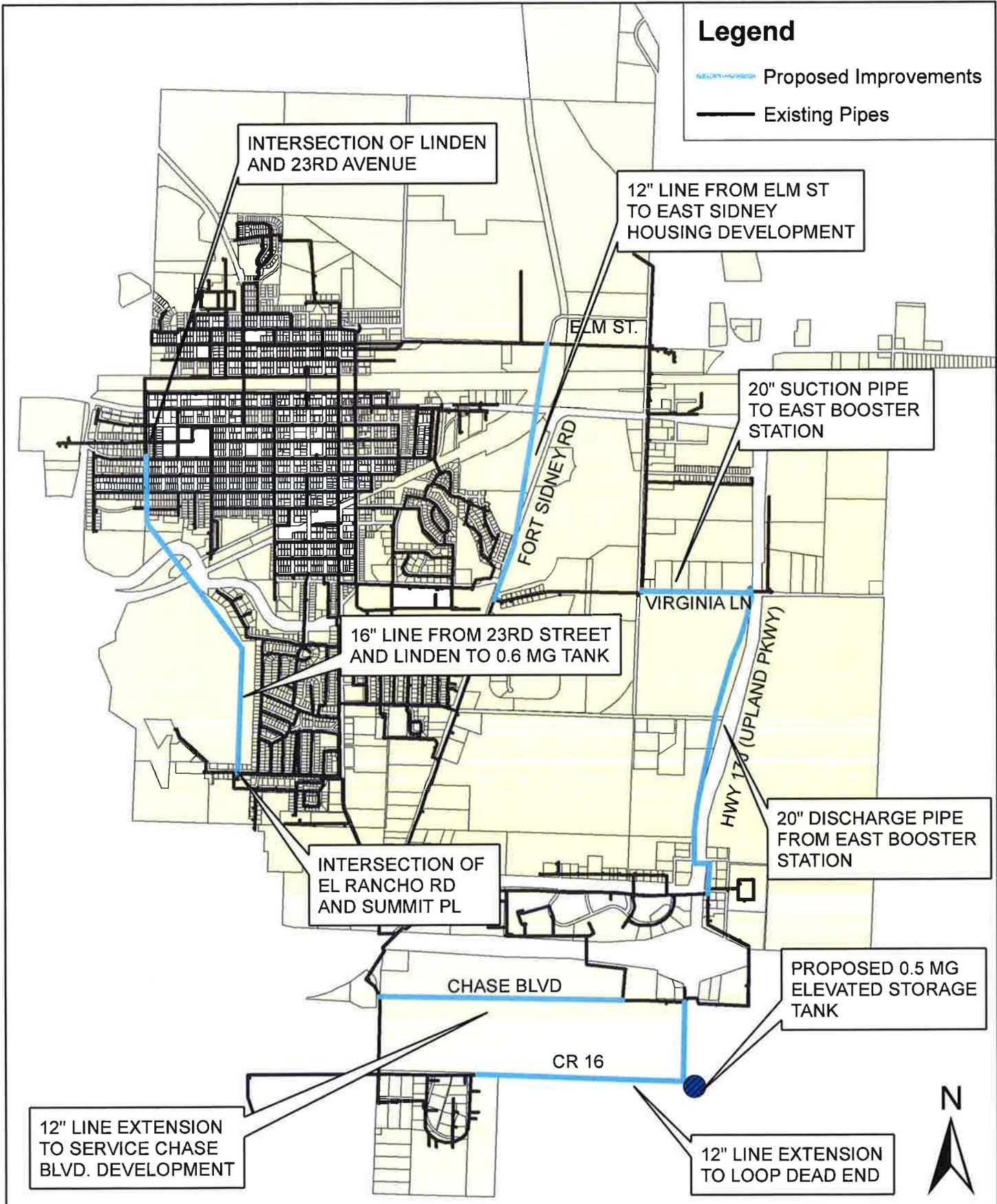
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APPLICANT:  
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Sidney, NE 69162-0079

CONSULTING ENGINEERS:  
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12640 West Cedar Drive, Suite C  
Lakewood, CO 80228

LOCAL NEWSPAPER  
Sidney Sun-Telegraph  
817 12<sup>th</sup> Avenue  
Sidney, NE 69162

SOUTH PLATTE NRD  
PO Box 294  
Sidney, NE 69162-0294



**Legend**

- Proposed Improvements
- Existing Pipes

INTERSECTION OF LINDEN AND 23RD AVENUE

12" LINE FROM ELM ST TO EAST SIDNEY HOUSING DEVELOPMENT

20" SUCTION PIPE TO EAST BOOSTER STATION

16" LINE FROM 23RD STREET AND LINDEN TO 0.6 MG TANK

20" DISCHARGE PIPE FROM EAST BOOSTER STATION

INTERSECTION OF EL RANCHO RD AND SUMMIT PL

PROPOSED 0.5 MG ELEVATED STORAGE TANK

12" LINE EXTENSION TO SERVICE CHASE BLVD. DEVELOPMENT

12" LINE EXTENSION TO LOOP DEAD END



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	<p>2000 SOUTH COLORADO BLVD, SUITE 6000          COLORADO CENTER TOWER ONE          DENVER, CO 80222-7938          PHONE: (303) 540-8800          FAX: (888) 308-8166          TF: (800) 490-4966          www.sehinc.com</p>	<p>Project: SIDNE 126126          Print Date: 4/9/2014</p> <p>Map by: dhach          Projection:          Source:</p>	<p><b>PROPOSED IMPROVEMENTS</b>  <b>WATER SYSTEM MASTER PLAN</b>  <b>SIDNEY, NEBRASKA</b></p>	<p><b>Figure</b>  <b>20</b></p>
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