

NEBRASKA

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DEPT. OF ENVIRONMENT AND ENERGY



Pete Ricketts, Governor

CLEAN WATER STATE REVOLVING LOAN FUND PROGRAM (CWSRF)

FINDING OF NO SIGNIFICANT IMPACT

TO: All Interested Citizens, Government Agencies and Public Groups

In accordance with the Nebraska Clean Water State Revolving Fund environmental review process, which is based on the National Environmental Policy Act, an environmental review has been performed on the proposed agency action below.

This information reviews the environmental impact likely from a project. This project is planned to be federally funded through your tax dollars; therefore, you are entitled to take part in its review. If you have concerns about the environmental impact of this project, please provide them at this time. The Nebraska Department of Environment and Energy (NDEE) encourages public input in this decision-making process.

PROJECT NAME: South Sioux City Wastewater Treatment Facility
South Sioux City, Nebraska
APPLICANT: City of South Sioux City
COUNTY: Dakota County
POPULATION: 13,353
CWSRF PROJECT NUMBER: C318016
TOTAL PROJECT AMOUNT: \$31,591,000
ESTIMATED CWSRF LOAN AMOUNT: \$31,591,000

The City of South Sioux City (City) is located in Dakota County in northeastern Nebraska. The current population (2010 census) served by City sewer is 13,353. Pretreated industrial and domestic wastewater flows from the City currently are pumped to Sioux City, Iowa for treatment and discharge to the Missouri River. Sioux City, Iowa has indicated that it will no longer accept wastewater from the southern portion of the City in the future. The City is proposing to construct a new waste water treatment facility (WWTF) for treatment of the industrial wastewater from the southern portion of the City. City domestic wastewater from the northern portion of the City will continue to be pumped to Sioux City, Iowa, thereby eliminating costly investment in new conveyance of domestic wastewater to the proposed WWTF. The City has applied for funding for the above-referenced project through the Clean Water State Revolving Fund (CWSRF) program administered by the Nebraska Department of Environment and Energy (NDEE). This project is included on the Priority List in the CWSRF State Fiscal Year 2020 Intended Use Plan (IUP) and ranked with 48 points.

Based on a 2019 Feasibility Study, an annual average day flow of roughly 2.2 million gallon per day (MGD) from three industries including Empirical Foods (formerly Beef Products Incorporated), Richardson Milling, and Ingredion (plant-based protein processor under construction) will be treated at the new WWTF. Influent flow rate and waste strength was determined based on

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existing data from Empirical Foods and Richardson Milling, and input from Ingredion and their engineering representatives. The proposed WWTF will consist of covered anaerobic lagoons, granular activated sludge, ultraviolet (UV) disinfection, and direct discharge to the Missouri River. Waste activated sludge will be stabilized in aerobic digesters, dewatered with a belt filter press, stored and land applied for disposal. Biogas collected in the covered anaerobic cells will be piped to a flare for burning and/or utilized in a boiler/heat exchanger.

A National Pollutant Discharge Elimination System permit will be obtained for the new discharge to the Missouri River. Proposed WWTF effluent limits were obtained from Nebraska Department of Environmental Quality (now NDEE) based on treatment and discharge of both industrial and domestic wastewater at 7 MGD flow. Effluent limits for the permit will need to be determined for the actual plant design flows. The river segment to receive the discharge is designated as Segment MT1-10000 of the Missouri Tributaries River Basin. Assigned uses in the segment include recreation, warm water Class A aquatic life and public drinking water. Aquatic life in the segment is impaired by hazardous compounds.

Currently, all gravity flows from domestic and industrial sources flow to lift stations throughout the City, with all flow eventually pumped to the Sioux City, Iowa wastewater treatment facility. Conveyance system upgrades are included in the scope of this project. **The River Lift Station**, located on the north side of the City, is the largest lift station in the City, and one of two lift stations pumping wastewater to Sioux City, Iowa. The lift station consists of a Parshall flume, grinder, three dry pit pumps, and a wet well pump that operates when the dry pit pumps are down for service. Flows to the lift station consist of domestic strength wastewater that is pumped under the Missouri River to the Sioux City, Iowa wastewater collection system. The River Lift Station building is in good condition but the lift station requires repair due to hydrogen sulfide gas deterioration of the wet well. Domestic wastewater from the River Lift Station will continue to be pumped to the Sioux City, Iowa wastewater collection system under the proposed project. **The Bennet Lift Station**, located on the eastern edge of the City, is the other lift station that pumps wastewater to Sioux City, Iowa. The lift station consists of three dry pit submersible pumps. Flows to the Bennet Lift Station consist entirely of domestic strength wastewater that is pumped under the Missouri River to the Sioux City, Iowa wastewater collection system. The lift station building is in good condition and no upgrades are necessary for this project. **The Roth Lift Station** is located in the Roth Industrial Park. The lift station consists of three dry pit pumps. Flows to the lift station consist of domestic strength wastewater from a residential area northwest of the station, and gravity sewers east and south of its location to collect flows from industrial areas. The station previously had discharged to Big Ox Energy (BOE) but recent developments have necessitated bypass of BOE and discharge to a gravity sewer draining to the Empirical Lift Station or discharge directly to the Bennet Lift Station and the Missouri River crossing. Flow under the proposed project would increase with the addition of Ingredion industrial strength wastewater and be directed to the proposed WWTF. The Roth Lift Station has sufficient firm pumping capacity but electrical and generator improvements are included in the proposed project. **The Empirical Lift Station** is located east of the Roth Lift Station. The lift station consists of two wet pit submersible pumps. Flows to the lift station consist of high strength wastewater from Richardson Milling and Empirical (formerly BPI). Currently, the lift station pumps wastewater from the Roth Lift Station, Richardson Milling and Empirical through a force main to the Bennet Lift Station. Flow under the proposed project would be pumped to the proposed WWTF via a new force main. New pumps and a larger generator will be required for the project. A new **Ingredion Lift Station** is proposed to be sized to convey all flows from Ingredion to the WWTF. Use of the BOE Facility was not considered when selecting a final preferred alternative due to the uncertain

future and viability of the BOE facility at the time of the feasibility study.

Based on procedures established in the 2020 IUP, the City is eligible to receive \$31,591,000 in CWSRF loan funds at an interest rate of 1.50% plus the 0.50% administration fee on the outstanding principal balance per year for a 20-year term. A term of 30-years is also available at an interest rate of 2.0% plus the 0.50% administration fee on the outstanding balance. The impact to the City's sewer user charge is estimated as follows according to the 2019 Feasibility Study: The City's current Outside Industrial and Outside Municipality rate classes is \$2.160 per 1000 gallons. In FY 2020, the rate will be increased to \$2.376 per 1000 gallons and it is expected that rates will continue to be increased and reach approximately \$3.790 per 1000 gallons in 2024. Revenues generated by sewer user rates will be used to pay the debt service due to the CWSRF loan. A final analysis of the wastewater rates for industrial wastewater will be necessary as project design is refined.

The City conducted a public hearing for this project on December 23, 2019, having the required 30 day advertised notice. There was no one present requesting special services, or to speak in favor of or in opposition to the proposed project.

The City sent out 21 requests for comment to related state, federal and tribal agencies. Two tribal agencies were contacted via phone, invited to the public hearing and given engineering contact information to answer technical questions. Five written responses were received. The Department of Army, Corps of Engineers indicated that a Clean Water Act Section 404 permit is required to place fill material into any water of the United States in the project area. The Corps of Engineers will assess the project once detailed, site specific information is provided with a Section 404 permit application. The US Department of Interior - Fish and Wildlife Service stated that the project was reviewed with no concerns. The Nebraska Department of Natural Resources (NDNR) indicated that a portion of the proposed project, the wastewater return to Missouri River, is located within a regulated floodplain and/or floodway and needs to comply with local floodplain regulations. NDNR indicated no potential impacts to jurisdictional dams, registered groundwater wells, stream gages, or surface water rights. The Department of Transportation - Division of Aeronautics has no objection to the project provided height of equipment does not exceed any local airport's Height Restriction Zoning. Any contractor should file a 7560-1 Form with the FAA for all structures or equipment over 200 feet tall or that break a 100:1 slope from a public-use airport. The Nebraska State Historical Preservation Office (NeSHPO) indicated that the proposed project has the potential to affect historic properties eligible for listing on the National Register of Historic places, if present. NeSHPO requested that all areas within the project boundary slated for ground disturbing activities be surface surveyed and subsurface tested by a professional archaeologist, with the resulting report then reviewed by NeSHPO. A draft Cultural Resources Investigation report for the site, still requiring NeSHPO review, states nothing was discovered indicating a significant archaeological site and no historic properties are present within the project area. A water quality specialist of the Winnebago Tribe of Nebraska, one of the tribal agencies contacted via phone, voiced concerns over accidental discharge from the WWTF and quality of water. The water quality specialist was invited to the public hearing.

The proposed WWTF will be designed and constructed such that it will be constructed outside the 100-year floodplain other than the plant outfall. The appropriate flood plain permit for construction of the proposed WWTF will be obtained from the area flood plain administrator, if necessary. The proposed project is a mechanical WWTF with pretreatment lagoons and should not impact the area wells in an adverse manner. The only component of the proposed WWTF which could have any impact to area wells are the covered anaerobic lagoons. The proposed covered anaerobic

lagoons would be constructed with an impermeable liner on the bottom to eliminate percolation of wastewater into the subsurface. A wetlands delineation study was completed and presented in the 2019 Feasibility Study for the proposed WWTF. Four areas were identified within the study area meeting the criteria for wetland classification. The areas were classified as palustrine emergent temporarily/seasonally flooded. The dominant vegetation in the identified areas was corn or soybeans. No Waters of the U.S. or other special aquatic sites were identified within the study area.

The environmental impact will be positive, as the proposed WWTF is expected to provide treatment for wastewater that will no longer be treated at the Sioux City, Iowa WWTF. The proposed WWTF is designed to meet NPDES permit limitations based on preliminary feedback provided by NDEE. Therefore, water quality in the Missouri River should not be degraded. No significant negative impact has been identified. An Environmental Narrative Requirements report prepared by the City as part of an application for Economic Development Administration (EDA) grant funds did not identify any significant negative impacts. Consequently, a preliminary decision has been made that an environmental impact statement will not be prepared.

This action is taken on the basis of careful review of the 2019 Feasibility Study, the Environmental Narratives Requirements report, and other supporting data, which are on file in the office of the Nebraska Department of Environment and Energy. These are available for public review upon request. A copy of the Environmental Narratives Requirements report is attached. The NDEE will not take any administrative action on the project for at least 30 calendar days from the date signed. Persons having a comment on this determination are encouraged to submit directly to Cyril Martinmaas (email cyril.martinmaas@nebraska.gov or phone (402) 471-0513) or John Danforth (email john.r.danforth@nebraska.gov or phone (402) 471-3373) during this period.

Signed this 20th day of January, 2020.

Sincerely,


Jim Macy
Director

JM/cjm

Attachments: EDA Environmental Narrative Requirements
Distribution List
Maps