Why You Should Read This: The document below 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, raise them now. We encourage public input in this decision making process.

IOWA STATE REVOLVING FUND
ENVIRONMENTAL INFORMATION DOCUMENT

PROJECT IDENTIFICATION

Applicant: City of Wheatland
County: Clinton
State: Iowa

SRF Number: CS1921022 01
Iowa DNR Project Number: S2020-0296A

Other Federal Funding: CDBG ($300,000)

COMMUNITY DESCRIPTION

Location: The City of Wheatland is located in Clinton County, Iowa approximately 50 east miles of Cedar Rapids, Iowa and 30 miles northwest of Davenport, Iowa.

Population: The population of Wheatland according to the 2010 US Census was 764 people. The current 2020 population for the City of Wheatland has been assumed at 717. The design population equivalent for the year 2040 is 780.

Current Waste Treatment: The existing wastewater treatment facility (WWTF) is located on the south side of town in a relatively uninhabited area of the city on the south side of HWY 30. It is a covered aerated lagoon system which was most recently updated in 2006 and completed in 2007. The treatment system consists of an influent lift station, blower & screening headworks building, a 2-cell covered aerated lagoon system with a final quiescent cell and a disinfection basin utilizing gas chlorine. Discharge leaves the facility through a gravity outlet structure to the Yankee Run Creek.

All existing WWTF structures and equipment were installed in 2007 and are therefore, in excellent condition. Diffuser membranes have not been replaced in the life of the facility and should be replaced with the proposed improvements project. The City is missing a unit heater in the chemical room. Also, the current disinfection system is operated by means of

a manual dose setting which presents a challenge for the operator. All of the existing WWTF will continue to be utilized. Treatment processes will be added to the existing facility for further treatment of ammonia nitrogen to meet the City's updated NPDES permit and associated compliance schedule.

PROJECT DESCRIPTION

Purpose: The purpose of this project is to make improvements to the wastewater treatment facilities to enhance their reliability, increase capacity and to replace obsolete system to safely and reliably operate the City of Wheatland's wastewater system for the next 20 years.

Proposed Improvements: The proposed project includes adding an attached growth polishing reactor between the existing covered aerated lagoon and chlorine contact tank to further treat for ammonia-nitrogen and boost effluent dissolved oxygen levels. The existing facility is equipped with a gas chlorine disinfection system which will be upgraded to allow for flow-paced dosing. Excavation of an area to install a 38ft by 15ft by 12ft concrete tank will be necessary. This project will also include replacement of membranes on the existing diffuser units in the aerated lagoon.

Receiving Stream: The treated wastewater from the proposed facility will discharge to Yankee Run, tributary to the Wapsipinicon River. It has a use stream designation of A-2, B(WW2). Class A-2 are waters in which recreational or other uses may result in contact with the water that is either incidental or accidental. During the recreational use, the probability of ingesting appreciable quantities of water is minimal. Class A2 uses include fishing, commercial and recreational boating, any limited contact incidental to shoreline activities and activities in which users do not swim or float in the water body while on a boating activity. B(WW2) are waters in which flow or other physical characteristics are capable of supporting a resident aquatic community that includes a variety of native nongame fish and invertebrate species. The flow and other physical characteristics limit the maintenance of warm water game fish populations. These waters generally consist of small perennially flowing streams.

ALTERNATIVES CONSIDERED

Alternatives Considered: 1. This option consists of the addition of LemTec Polishing Reactor Tertiary Treatment. The LemTec Polishing Reactor is an advanced technology biological wastewater treatment process that promotes nitrification. This polishing step, consisting of a concrete tank to house submerged, fixed, media modules to provide a high surface area on which to promoted fixed film bacteria growth. The media is stacked within modules in the reactor and has been recently improved to increase the amount of surface area available for attached growth with increased strength to avoid issues with media collapse. The reactor would be covered, same as the lagoon, to retain as much heat from the wastewater as possible and inhibit algae growth. Submerged

aeration diffusers will be used to provide the air required to complete the nitrification process. Air will be supplied by two 5-hp blowers, housed in weatherproof enclosures for outdoor operation with the intent of avoiding the expense of a building to house the blowers in. The controls will consist of a hand-off-auto control panel.

2. Another type of biological attached media polishing reactor to promote additional nitrification is an MBBR (Moving Bed Bio Reactor). An MBBR polishing reactor could be constructed on the backend of the aerated lagoon process, similar to the LemTec layout. Moving bed bioreactor media could be installed within the polishing reactor to provide a high surface area on which to promoted fixed film bacteria growth. Submerged aeration diffusers will be used to provide the air required to complete the nitrification process. The MBBR Lagoon Guard is an advanced technology biological wastewater treatment process that promotes nitrification. A removable piping grid and blowers provide aeration to wastewater in this process. Media, termed “biocarriers,” are introduced to this treatment system in the form of small floating plastic shapes that resemble wagon wheels. The media has many openings and a large surface area for attached growth of biofilm. The aeration system provides oxygen and mixing to the wastewater for suspended and continuous movement within the reactor.

3. Another type of biological attached media polishing reactor to promote additional nitrification is an RBC (Rotating Biological Contactor). An RBC polishing reactor could be constructed on the backend of the aerated lagoon process, similar to the LemTec layout. It is the most cost effective option to utilize the existing WWTF constructed in 2006 as much as possible, as this facility is still in good working condition. In order to promote additional nitrification, a polishing reactor could be constructed on the backend of the aerated lagoon process. Drums filled 60% full with attached growth media could provide a high surface area on which to aid fixed film bacteria growth. This technology relies on the rotating drum and tumbling media to provide aerobic conditions and does not supply any supplemental aeration systems.

Reasons for Selection of Proposed Alternative: The LemTec Polishing Reactor is the most advantageous and cost-effective option to utilize the existing WWTF as much as possible. It is capable of achieving more stringent year-round effluent limits within a reduced footprint. The reactor will fit within the existing footprint of the wastewater treatment facility, without needing to purchase additional property and bringing in fill to build the site up above floodplain elevation. Operational qualifications required by the additional treatment will remain the same as is already required by the existing treatment. This technology allows for additional modules to be added to accommodate increased future flows as needed. This is a DNR-approved technology. It also has the same equipment manufacture as the existing facility allowing for one point of contact.

The project site was selected for the availability of land (it is already City-owned) as well as minimization of the impacts to the environment.

MEASURES TAKEN TO ASSESS IMPACT

Coordination and Documentation with Other Agencies and Special Interest Groups:
The following Federal, state and local agencies were asked to comment on the proposed project to better assess the potential impact to the environment:

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
State Historical Society of Iowa (State Historical Preservation Office)
Iowa DNR Conservation and Recreation Division
Iowa DNR Water Resources Section
Citizen Band Potawatomi Indian Tribe
Flandreau Santee Sioux
Ho-Chunk Nation
Iowa Tribe of Kansas and Nebraska
Iowa Tribe of Oklahoma
Kickapoo Tribe in Kansas
Kickapoo Tribe of Oklahoma
Lower Sioux Indian Community Council
Miami Tribe of Oklahoma
Omaha Tribal Council
Osage Tribal Council
Otoe-Missouria Tribe
Pawnee Nation of Oklahoma
Peoria Tribe of Indians of Oklahoma
Ponca Tribe of Indians of Oklahoma
Ponca Tribe of Nebraska
Prairie Band Potawatomi Nation
Prairie Island Indian Community
Sac & Fox Nation of Mississippi in Iowa
Sac & Fox Nation of Missouri
Sac & Fox Nation of Oklahoma
Santee Sioux Nation
Shakopee Mdewakanton Sioux Community
Sisseton-Wahpeton Oyate
Spirit Lake Tribal Council
Three Affiliated Tribes Mandan, Hidatsa & Arikara Nations
Upper Sioux Tribe
Winnebago Tribal Council
Yankton Sioux Tribal Business and Claims Committee
Clinton County Historic Commission

No adverse comments were received from any agencies or general public. Conditions placed on the applicant by the above agencies in order to assure no significant impact are included in the Summary of Reasons for Concluding No Significant Impact section.

ENVIRONMENTAL IMPACT SUMMARY

Construction: Traffic patterns within the community may be disrupted and above normal noise levels in the vicinity of the construction equipment can be anticipated during construction and should be a temporary problem. Adverse environmental impacts on noise quality will be handled by limited hours of contractor work time during the day. Other adverse environmental effects from construction activities will be minimized by proper construction practices, inspection, prompt cleanup, and other appropriate measures. Areas temporarily disturbed by the construction will be restored. Solid wastes resulting from the construction project will be regularly cleared away with substantial efforts made to minimize inconvenience to area residents. Care will be taken to maintain dirt to avoid erosion and runoff. No significant impact to surface water quality, fish, shellfish, wildlife, or their natural habitats is expected.

Temporary air quality degradation may occur due to dust and fumes from construction equipment. The applicant shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property during the proposed project (567 Iowa Administrative Code IAC 23.3(2)“c”). This project may require the disposal of sewage sludge. It is the responsibility of the applicant to ensure that the disposal of any sewage sludge complies with applicable requirements found in 40 CFR Part 503 and 567 Iowa Administrative Code IAC 67.

Historical/Archaeological: The State Historical Preservation Office (SHPO), the Certified Local Government and various Native American tribes with an interest in the area were provided information regarding the project. The DNR has determined, and the SHPO has concurred (R&C# 210923304), that this undertaking will result in “no historic properties affected” based on the scope of the project, the prior use of the project area. However, if project activities uncover any item(s) that might be of archaeological, historical, or architectural interest, or if important new archaeological, historical, or architectural data should be encountered in the project APE, the applicant should make reasonable efforts to avoid further impacts to the property until an assessment can be made by an individual meeting the Secretary of the Interior’s professional qualifications standards (36 CFR Part 61).

Environmental: According to the Iowa DNR Conservation and Recreation Division, the proposed project will not interfere with any State-owned parks, recreational areas or open spaces. The U.S. Army Corps of Engineers concurs that the project will not impact wetlands. The project will not impact any wild and scenic rivers as none exist within the State of Iowa. The U.S. Fish & Wildlife Service Section 7 Technical Assistance website consultation determined, and Iowa DNR Conservation and Recreation Division agree, that the project will not impact threatened or endangered species or their habitats. However, if any State- or Federally-listed threatened or endangered species or communities are found during the planning or construction phases, additional studies

and/or mitigation may be required. According to the Iowa DNR Water Resources Section, this project will not impact the 100-year floodplain. No adverse impacts are expected to result from this project, such as those to surface water quantity, or groundwater quality or quantity. No significant impact to surface water quality, fish, shellfish, wildlife, or their natural habitats is expected.

Land Use and Trends: The project will not displace population nor will it alter the character of existing residential areas. The proposed project is within the present corporate limits of Wheatland in areas zoned residential, commercial, or industrial. No significant farmlands will be impacted. This project should not impact population trends as the presence or absence of existing water/sewer infrastructure is unlikely to induce significant alterations in the population growth or distribution given the myriad of factors that influence development in this region. Similarly, this project is unlikely to induce significant alterations in the pattern and type of land use.

Irreversible and Irretrievable Commitment of Resources: Fuels, materials, and various forms of energy will be utilized during construction.

POSITIVE ENVIRONMENTAL EFFECTS TO BE REALIZED FROM THE PROPOSED PROJECT

Positive environmental effects will be improved treatment of the wastewater from the City of Wheatland, compliance with effluent discharge permit limits, reduced discharge of the pollutants and nutrients to the receiving stream, and improved water quality in the receiving stream.

SUMMARY OF REASONS FOR CONCLUDING NO SIGNIFICANT IMPACT

- The project will not significantly affect the pattern and type of land use (industrial, commercial, agricultural, recreational, residential) or growth and distribution of population.
- The project will not conflict with local, regional or State land use plans or policies.
- The project will not impact wetlands.
- The project will not affect threatened and endangered species or their habitats. If any State- or Federally-listed threatened or endangered species or communities are found during the planning or construction phases, additional studies and/or mitigation may be required.
- The project will not displace population, alter the character of existing residential areas, or convert significant farmlands to non-agricultural purposes.
- The project will not affect the 100-year flood plain
- The project will not have effect on parklands, preserves, other public lands, or areas of recognized scenic or recreational value.
- No historic properties will be adversely affected by the proposed project. However, if project activities uncover any item(s) that might be of archaeological, historical, or architectural interest, or if important new archaeological, historical, or architectural

data should be encountered in the project APE, the applicant should make reasonable efforts to avoid further impacts to the property until an assessment can be made by an individual meeting the Secretary of the Interior's professional qualifications standards (36 CFR Part 61).

- The project will not have a significant adverse effect upon local ambient air quality provided the applicant takes reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property during the proposed project (567 IAC 23.3(2)"c").
- The project will not have a significant adverse effect upon local ambient noise levels, surface water quantity, groundwater quality or quantity, or water supply.
- No significant impact to surface water quality, fish, shellfish, wildlife, or their natural habitats is expected.

The project description, scope, and anticipated environmental impacts detailed above are accurate and complete to the best to my knowledge.

Signature of the Mayor, City of Wheatland Date

Printed Name of the Mayor, City of Wheatland