

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
FINDING OF NO SIGNIFICANT IMPACT

March 22, 2024

To: All Interested Citizens, Government Agencies, and Public Groups

An environmental review has been performed based on the procedures for implementing the National Environmental Policy Act (NEPA), for the proposed agency action below:

Applicant: City of Ames

SRF Number: CS1921109 01

County: Story

Iowa DNR Project Number: W2023-0016A

State: Iowa

The City of Ames, Iowa is planning an upgrade to their wastewater treatment facility. The city has applied for financial assistance through the State Revolving Fund (SRF) loan program to build the project. The State Revolving Loan Program is a program authorized by the Environmental Protection Agency (EPA) and administered by the Iowa Department of Natural Resources (DNR) in partnership with the Iowa Finance Authority.

The City of Ames is located in Story County, Iowa approximately 30 miles north of Des Moines, Iowa and 40 miles southeast of Fort Dodge, Iowa. The population of Ames according to the 2020 US Census was 66,427. The design population equivalent for the year 2045 is 83,850.

The City of Ames (City) operates wastewater conveyance and treatment facilities that provide services to the residents, businesses, and industries in the City. Treatment facilities include one water pollution control facility (WPCF) and its associated separate sanitary sewer collection and conveyance systems. The WPCF was originally constructed in 1989 and has undergone upgrades and modifications over the years. Liquid treatment at the WPCF consists of screening, influent pumping, flow equalization basins, grit removal, primary clarification, two-stage trickling filters, biological contact activated sludge, intermediate and secondary clarification, and ultraviolet (UV) disinfection. Effluent from the WPCF is discharged to the South Skunk River. Biosolids treatment consists of sludge co-thickening in the primary clarifiers, anaerobic digestion, and a sludge storage lagoon.

Some of the equipment within the WPCF have reached the end of their service life and are in need of replacement or are unable to meet capacity needs. Updates to the WPCF are necessary to continue meeting NPDES and overall nutrient reduction goals.

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 Ames's wastewater system for the next 20 years.

The proposed project involves: the construction of two activated sludge basins, a new ML Splitter Structure, aeration equipment for the new activated sludge system, an expansion of the existing solids contact splitter box, and a new electrical building; the installation of RAS pumping station and centrifugal pumps, a sludge densification hydrocyclone system, a multirake bar screen, screening wash press, manual bar rack, grit handling equipment in a new grit removal building; and the demolition of the existing administration building and construction of a new administration and maintenance building; and all necessary connections and appurtenances.

The treated wastewater from the proposed facility will discharge to the South Skunk River. It has a use stream designation of A1, B(WW2). The is classified as a water stream. Class A1 are waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing. B(WW2) indicates 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.

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 provided that any tree cutting is conducted between October 1 and March 31 to avoid impacting endangered bats. 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 provided that an NPDES General Permit Number 2 (for storm water discharge associated with construction activities) is obtained and the terms of which are abided by.

Minimum separation distances will be maintained. Noise during construction will be maintained at tolerable levels through controls on construction activities. Any construction debris will be removed from the site for proper disposal. Adverse environmental effects from construction activities will be minimized with proper construction practices, inspection, prompt clean up and other appropriate measures. Areas temporarily disturbed by the construction will be restored.

It has been determined that the proposed action will result in no significant impacts to the surrounding environment. This determination is based on a careful review of the engineering report, the environmental assessment and other supporting data which are on file at the Department of Natural Resources' office in Des Moines, Iowa. These are available for public review upon request. A copy of the environmental assessment is attached. This Department will not take any administrative action on the project for at least thirty (30) calendar days from the above date. Persons disagreeing with the above environmental decision may submit comments to the department during this period. Your comments can be sent to SRF-PC@dnr.iowa.gov or directly to me at hailey.andersen@dnr.iowa.gov or by phone at (515) 321-7385.

Sincerely,

Hailey Andersen
Environmental Specialist
502 E 9th St
Des Moines, IA 50319-0034

Enclosures: Environmental Assessment
Project Map

Distribution

List (email): Strand Associates, Inc.
Edward Boling, Council on Environmental Quality
Jake Hansen, Iowa Department of Agriculture and Land Stewardship
Ken Sharp, Iowa Department of Public Health
Mindy Wells, Iowa Department of Public Health
Dan Narber, Iowa Economic Development Authority
Alicia Vasto, Iowa Environmental Council
Michael Schmidt, Iowa Environmental Council
Tracy Scebold, Iowa Finance Authority
Tony Toigo, Iowa Finance Authority
Lee Wagner, Iowa Finance Authority
Mickey Shields, Iowa League of Cities
Jane Clark, Sierra Club
Josh Mandelbaum, Environmental Law and Policy Center
Kate Sand, USDA Rural Development
Tokey Boswell, USDO, National Park Service, Midwest Region
Kraig McPeck, Fish and Wildlife Service, Rock Island Field Office
Ann D'Alfonso, USEPA Region VII
Kelly Beard-Tittone, USEPA Region VII
The Ames Tribune

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IOWA STATE REVOLVING FUND
ENVIRONMENTAL ASSESSMENT DOCUMENT

PROJECT IDENTIFICATION

Applicant: City of Ames
County: Story
State: Iowa

SRF Number: CS1921109 01
Iowa DNR Project Number: W2023-0016A

COMMUNITY DESCRIPTION

Location: The City of Ames is located in Story County, Iowa approximately 30 miles north of Des Moines, Iowa and 40 miles southeast of Fort Dodge, Iowa.

Population: The population of Ames according to the 2020 US Census was 66,427. The design population equivalent for the year 2045 is 83,850.

Current Waste Treatment: The City of Ames (City) operates wastewater conveyance and treatment facilities that provide services to the residents, businesses, and industries in the City. Treatment facilities include one water pollution control facility (WPCF) and its associated separate sanitary sewer collection and conveyance systems. The WPCF was originally constructed in 1989 and has undergone upgrades and modifications over the years.

Liquid treatment at the WPCF consists of screening, influent pumping, flow equalization basins, grit removal, primary clarification, two-stage trickling filters, biological contact activated sludge, intermediate and secondary clarification, and ultraviolet (UV) disinfection. Effluent from the WPCF is discharged to the South Skunk River. Biosolids treatment consists of sludge co-thickening in the primary clarifiers, anaerobic digestion, and a sludge storage lagoon.

Some of the equipment within the WPCF have reached the end of their service life and are in need of replacement or are unable to meet capacity needs. Updates to the WPCF are necessary to continue meeting NPDES and overall nutrient reduction goals.

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 Ames's wastewater system for the next 20 years.

Proposed Improvements: The proposed project involves: the construction of two activated sludge basins, a new ML Splitter Structure, aeration equipment for the new activated sludge system, an expansion of the existing solids contact splitter box, and a new electrical building; the installation of RAS pumping station and centrifugal pumps, a sludge densification hydrocyclone system, a multirake bar screen, screening wash press, manual bar rack, grit handling equipment in a new grit removal building; and the demolition of the existing administration building and construction of a new administration and maintenance building; and all necessary connections and appurtenances.

Receiving Stream: The treated wastewater from the proposed facility will discharge to the South Skunk River. It has a use stream designation of A1, B(WW2). The is classified as a water stream. Class A1 are waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing. B(WW2) indicates 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: In the City's 2019 Nutrient Reduction Feasibility Study, several potential nutrient reduction technologies were evaluated and shortlisted. The technologies evaluated included conventional BNR activated sludge, simultaneous nitrification-denitrification (SNDN) activated sludge, membrane aerated biofilm reactors (MABRs), integrated fixed film activated sludge (IFAS), and aerobic granular sludge (AGS). In the 2019 study, three alternatives were shortlisted for future evaluation: conventional BNR activated sludge, SNDN activated sludge, and AGS. Based on feedback from the City conducted as part of the development of the Facility Plan, the same shortlisted nutrient reduction technologies were considered. Several bar screens and perforated plate/band screens were evaluated in the facility plan for their effectiveness. Three grit removal technologies are evaluated for improved grit removal performance at the WPCF to protect equipment downstream of the Raw Wastewater Pump Station.

Reasons for Selection of Proposed Alternative: Based on the monetary and nonmonetary evaluation for the nutrient reduction alternatives presented in the Facility Plan, the City has selected to proceed with Alternative BNR2– Simultaneous Nitrification-Denitrification (SNDN) Activated Sludge (as numbered in the Facility Plan). In this alternative, a new SNDN activated sludge system is constructed to replace the trickling filters.

The nutrient reduction selection impacts the screening technology selection, as finer screening (particularly perforated plate screens) is recommended for the AGS alternatives (BNR3a or BNR3b) but are not required for Alternatives BNR1 or BNR2. Therefore, the City has chosen to install bar screens. The selection of headworks alternatives is also impacted by the location of the proposed nutrient reduction infrastructure. Alternative BNR2 includes construction of the activated sludge system to the west of the Raw Wastewater Pump Station. However, this would not allow implementation of a headworks alternative that includes a new screening or grit facility in the same location as the proposed activated sludge tanks

While Alternative BNR2 assumed a new activated sludge system would be installed west of the Raw Wastewater Pump Station for the purposes of a nutrient reduction technology selection, there are other options to site the activated sludge system at the WPCF that would allow a new screening or grit facility to be constructed in this location.

The preliminary location of the proposed activated sludge system for Alternative BNR2 (west of the Raw Wastewater Pump Station) was chosen based on the available space on-site without the demolition or relocation of significant existing structures or buildings. However, this location has some drawbacks, including limited space for expansion, relocation of existing utilities, and significant sitework associated with constructing tanks into the existing hill. Concurrently with the nutrient reduction and headworks planning included in this Plan, the City is planning renovations to the Administration Building at the WPCF. The existing Administration Building is in need of updating and is also located in a relatively flat space adjacent to the final clarifiers. This provides an opportunity for relocation of the Administration Building to another location on-site and construction of the proposed activated sludge system in the location of the existing Administration Building. Two siting alternatives for the nutrient reduction and headworks improvements were evaluated based on monetary and nonmonetary considerations. 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

Public Involvement: A public hearing was held on March 12, 2024 at 6:00PM at the City's regular council meeting. The public notice of this hearing was made available by publication in the Ames Tribune on February 7, 2024; posted to the City social media accounts on several dates between February 10, 2024 and March 11, 2024; and posted in public locations. The purpose of this hearing was to present the environmental and financial impacts of the proposed improvement project. No written or oral comments were received.

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 Flood Plain Management 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
Ames Historic Preservation 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. The proposed project will disturb one or more acres of soil; therefore, the applicant is required to obtain an NPDES General Permit Number 2 (for storm water discharge associated with construction activities) and abide by its terms. Provided that this permit is obtained and the terms of which are abided by, 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”).

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#240285085), that this undertaking will result in

“no adverse effect” to historic properties based on the scope of the project and the prior use of the 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).

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 protected species or their habitats provided that any tree cutting is conducted between October 1 and March 31 to avoid impacting endangered bats. 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 Flood Plain Management Section, this project will not impact the 100-year flood plain. No adverse impacts are expected to result from this project, such as those to surface water quantity, or groundwater quality or quantity. Therefore, 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 boundaries of the Water Pollution Control Facility. This in an A-1 Agricultural Zone with an existing conditional use permit that allows the use as a wastewater treatment facility within that A-1 zone. 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

Environmental Justice: Based on the current EPA EJSscreen tool, this project area has been evaluated for Environmental Justice (EJ) and is not considered a community of concern at the time of this review and for the purposes of this proposed project. The EJSscreen report is available upon request.

Nondiscrimination: All programs, projects, and activities undertaken by DNR in the SRF programs are subject to federal anti-discrimination laws, including the Civil Rights Act of 1964, section 504 of the Rehabilitation Act of 1973, and section 13 of the Federal Water Pollution Control Amendments of 1972. These laws prohibit discrimination on the basis of race, color, national origin, sex, disability, or age.

POSITIVE ENVIRONMENTAL EFFECTS TO BE REALIZED FROM THE PROPOSED PROJECT

Positive environmental effects will be improved treatment of the wastewater from the City of Ames, 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

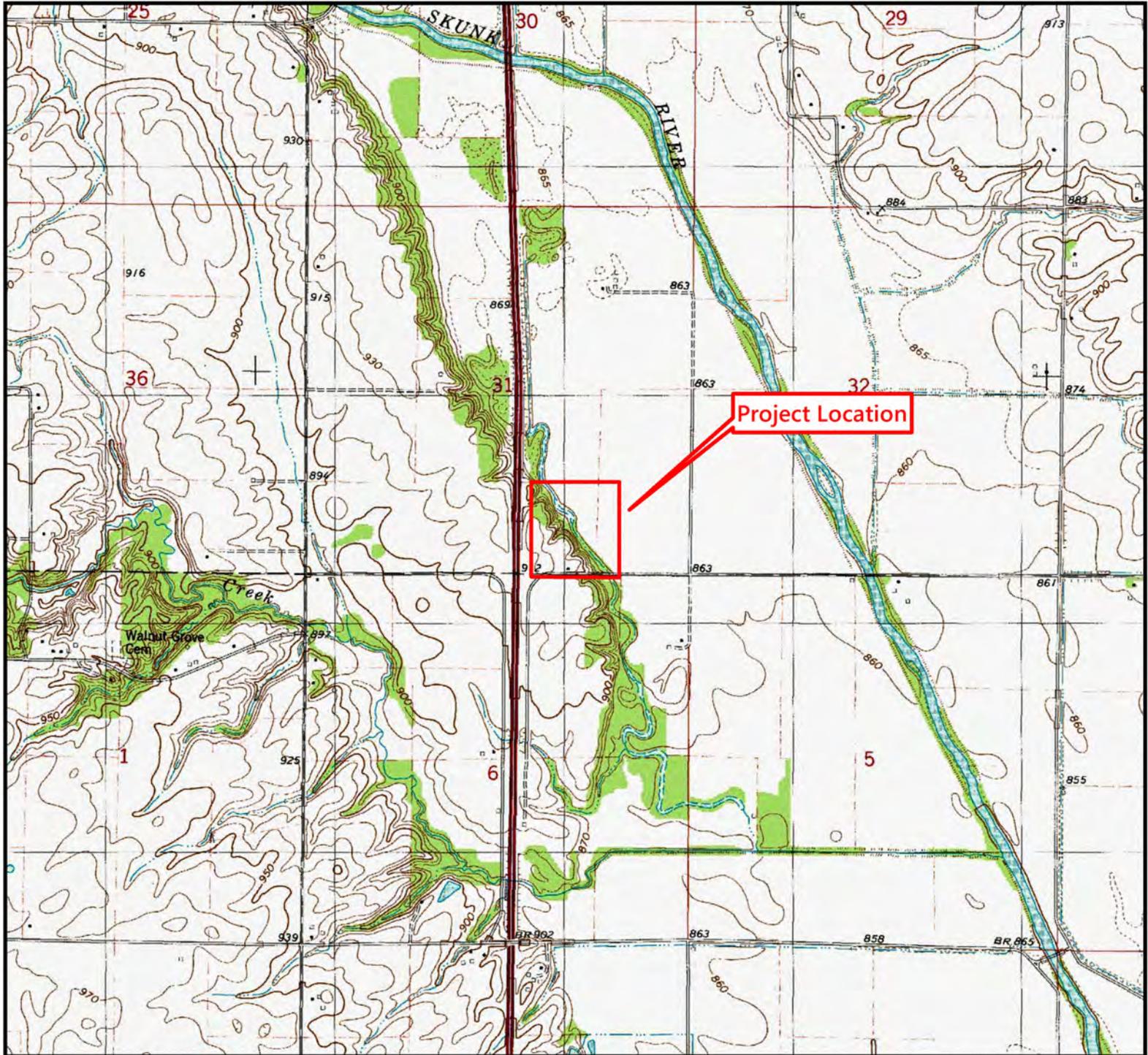
- The project will not significantly affect the pattern and type of land use (industrial, commercial, agricultural, recreational, residential) or growth and distribution of population.
- The project will not conflict with local, regional or State land use plans or policies.
- The project will not impact wetlands.
- The project will not affect threatened and endangered species or their habitats provided that any tree cutting is conducted between October 1 and March 31 to avoid impacting endangered bats. 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 provided that an NPDES General Permit Number 2 (for storm water discharge associated with construction activities) is obtained and the terms of which are abided by.

THEREFORE:

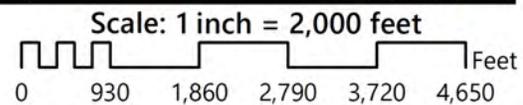
The above project conforms to the criteria in 567 Iowa Administrative Code 92.8(1)"b" for wastewater relating to compliance with the National Environmental Policy Act of 1969. No adverse effect or significant environmental impact is foreseen at this time.

Hailey Andersen

Environmental Review Specialist
State Revolving Fund
Iowa Department of Natural Resources



WPCF Nutrient Reduction Project - Phase 1
Ames, Iowa



USGS 7.5 Minute Quadrangle: Huxley
Section: 31; Township: 83 N; Range: 23 W
Section: 06; Township: 82 N; Range: 23 W
Date: 1975



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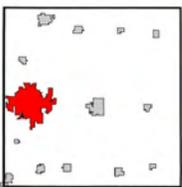
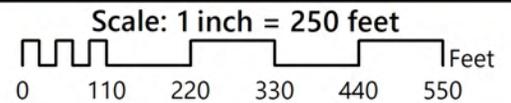
Aerial Photograph



Legend

 Project Location

WPCF Nutrient Reduction Project - Phase 1
Ames, Iowa



USGS 7.5 Minute Quadrangle: Huxley
Section: 31; Township: 83 N; Range: 23 W
Section: 06; Township: 82 N; Range: 23 W
Date: 2016

Story County. Image source: Wikipedia, 2024