

ENVIRONMENTAL ASSESSMENT DOCUMENT

A. Project Identification:

Applicant: Village of Allen
Project No.: C317838
City: Allen **County:** Dixon **State:** NE
Total Project Amount: \$1,146,000
CWSRF Loan: \$796,000
Potential Small Town Grant: \$250,000
Potential Principal Forgiveness: \$100,000

B. Community Description:

Location: Village of Allen is located in the south-central portion of Dixon County in the extreme northeast portion of the Nebraska and is located approximately three miles south of the intersection of U.S. Highway 20 and State Highway 9.

Population: The 2010 census population of Allen was 377. The population has been stable since 1980. The design population for the year 2035 is 420.

Current Methods of Waste Treatment: The Allen wastewater collection and treatment system includes two satellite lift stations, gravity sewers and a two-cell lagoon system. The wastewater collection system consists of mostly vitrified clay pipe. The Allen 2-cell lagoon facility was constructed in 1970 and was designed as a controlled discharge lagoon system and has a surface area of 2.5 acres. Due to high flows the lagoon system has continuously discharged at times. The operating depth in the lagoons is only two feet and the lagoons are undersized. The Village's lagoon system is out of compliance with their NPDES permit.

C. Project Description:

Purpose: Allen proposes to upgrade their facilities in order to comply with all applicable regulations and requirements.

Type: The Village is proposing to use the existing two cells as primary cells. Flow from the primary cells will be pumped via a new lift station to a new secondary cell with a surface area of 3.0 acres at normal operating depth of five feet. The new secondary cell will be located at the southwest corner of the existing cells and will be at a higher elevation than the existing cells. The new lift station will also be used to pump effluent from the secondary cell to a center pivot irrigation system. The pivot will irrigate approximately 36 acres at about 12 inches per year. The new lagoon and the existing lagoons are located about 700 feet from the Village's back-up drinking water well No. 73-1. This distance is less than the 1000 foot design standard stated in Title 179 NAC 7-007 of the Nebraska Department of Health's Regulations. The lagoons and the land application site are also located in the Village's mapped Well

Head Protection area. Approval information for locating the new lagoon siting is provided later in the Environmental Assessment.

Design Factors: The project is based on the following design criteria:

Design Population	420
Design Year	2035
Average Daily Flow	42,000 Gallons per Day
CBOD ₅	50 Pounds per Day
Total Suspended Solids	50 Pounds per Day
Net Annual Lake Evaporation	15 Inches per Year
Annual Seepage Rate	11.4 Inches per Year

Receiving Stream: Undesignated Tributary of South Creek (Segment MT2-10540/Missouri Tributaries River Basin).

D. Alternatives Considered:

Types: The wastewater treatment system alternatives considered for Allen include (1) complete retention lagoons, (2) use existing lagoon system with the addition of a land application system and (3) upgrade of the existing lagoon system with the addition of a land application system.

Reasons for Selection of Proposed Alternative: The proposed alternative was selected on the basis of cost, environmental impacts and requirements and operational considerations. The Village at the moment has an NPDES permit with stringent limitations for ammonia. Land application was the first choice of the community because it exempts the community from their NPDES permit program. Also, the land application alternative will utilize the existing lagoons and result in a beneficial use of an important resource.

E. Environmental Impact Summary:

Primary:

Construction: A number of Federal, State and local agencies were asked to review the project. At the request of the Nebraska State Historic Society, a survey was conducted by a qualified archaeologist. The survey concluded that there are no known historical or archaeological resources at the proposed construction site. The Corps of Engineers (COE) determined that there might be "waters of the U.S.", located at the project site, which would be subject to Section 404 of the Clean Water Act. The COE indicated that the need for a 404 permit would be determined once design of the proposed system was complete. Temporary impacts that may be caused by construction include noise and dust and a limited potential for soil erosion and fuel and oil spills. No wastewater bypasses are expected during construction. The Nebraska Department of Environmental Quality and the Nebraska Department of Health reviewed a request from Allen's consulting engineer to approve an alternative

design, allowing the new lagoon to be constructed within the normal design standard of 1000 feet from Allen's backup well 73-1. Both Agencies approved the consulting engineer's alternative design submittal. There were no other significant concerns or comments received from the agencies. Seepage from the existing lagoons and the proposed lagoon may adversely impact area groundwater.

Environmental: The project would have a positive impact on the environment since the existing two cell lagoon system which has been out of compliance with their NPDES permit will no longer discharge to the an Undesignated Tributary of South Creek (Segment MT2-10540/Missouri Tributaries River Basin).

Financial: A Clean Water State Revolving Fund (CWSRF) loan in the amount of \$796,000 is proposed to fund the project. The Village is also eligible to receive principal forgiveness in the amount of \$100,000 and is also eligible to receive \$250,000 in small town grant funding. The project is included in the Funding List of the FY2016 Intended Use Plan (IUP). The project qualifies as a Green project. The Village of Allen is eligible for a 20-year loan at an interest rate of 1.25-1.50 percent. In addition to principal and interest payments, an administrative fee of 1.0 percent of the loan balance will be assessed each year. A residential customer pays a flat rate of \$19.00/month. In the past 3 fiscal years, Allen has not collected revenues that have met expenses associated with the sewer utility. Sewer rates will need to be increased to \$45-\$50/month in order to pay for the operation & maintenance of the sewer utility, the debt service due to an existing CWSRF loan and the estimated debt service due to the proposed project.

Secondary:

Population Impacts: The project would have little or no impact on growth or population density in the community.

Land Use and Trends: The project would have no significant impact on land use and trends in the area.

Environmental: No significant increases in noise levels or odors are expected.

Environmental Justice: This project has been planned to ensure that no segment of the community's population suffers disproportionately from human health or environmental effects.

Mitigation Measures Necessary to Eliminate Adverse Environmental Effect: The construction documents will require the contractor to protect the site with storm water pollution controls, and to satisfy requirements of the Federal Migratory Bird Treaty Act.

Irreversible and Irretrievable Commitment of Resources: The resources committed to the project include the pipe and other construction materials and the energy used in construction.

F. Measure Taken to Insure Environmental Soundness:

Public Involvement: A public hearing on the proposed project was held on June 22, 2015.

Public Opposition or Opinions: There was no opposition expressed at the hearing.

Coordination and Documentation with Other Agencies and Special Interest Groups:

Facility Plan: October, 2012 and update addressing the proposed lagoon & land application alternative dated June 30, 2015.

Prepared by: JEO Consulting Group

Federal: US Army Corps of Engineers
US Fish and Wildlife Service

State: Nebraska Department of Environmental Quality
Nebraska Game and Parks Commission
Nebraska Department of Natural Resources
Nebraska State Historical Society
Nebraska Department of Aeronautics

Local: Allen Village Board

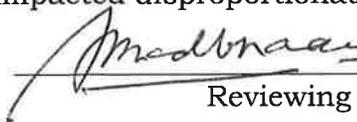
Consulting Engineers: JEO Consulting Group

Public Groups: None

G. Positive Environmental Effects to be Realized from the Proposed Project:

The project will comply with Title 119 – Rules And Regulations Pertaining to the Issuance of Permits Under the National Pollutant Discharge Elimination System. With irrigation, the water and nutrients in the effluent will be used beneficially.

H. Reasons for Concluding there will be No Significant Impacts: Review of the facility plan and supporting documents indicates that the proposed project will result in positive environmental effects and benefits. No threatened or endangered species or recorded historical or archaeological sites will be affected by construction. Adverse impacts if any on wetlands will be mitigated. The construction documents will specify storm water pollution controls, and protection of nesting migratory birds. Irrigation of lagoon effluent will have little or no impact on ground water quality. No segment of the community's population will be impacted disproportionately by the project.

 July 28, 2015
Reviewing Engineer

Allen, NE

Schematic

Legend

- Untitled Polygon

584 Ave

8685 Rd

Proposed Lagoon
Cell #3

Transfer Force Main /
Return Piping

Pump Station

Pipe going to Pivot

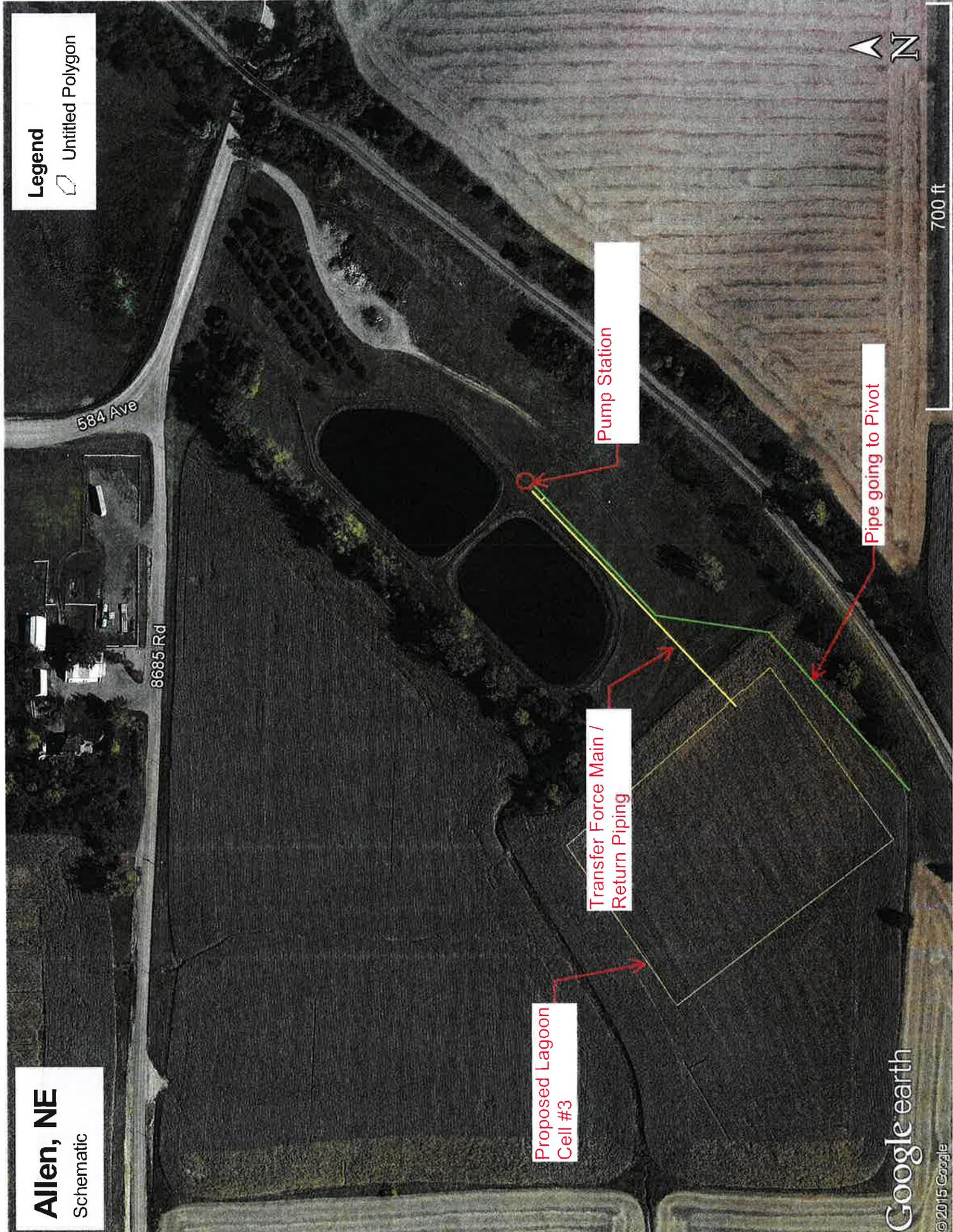


FIGURE 9-1
LOCATION OF PROPOSED LAND APPLICATION SITE



FINDING OF NO SIGNIFICANT IMPACT DISTRIBUTION LIST

Allen, NEBRASKA

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