



Treynor Wastewater Treatment Facility

The Need for Improvements

The City of Treynor is in the process of planning improvements to its wastewater treatment facility (WWTF) to comply with changing regulations and address issues related to the facility's age.

- ▶ The facility was converted to an aerated lagoon system in 1988 with limited major updates or modifications since, providing adequate treatment for more than 30 years.
 - ▶ The City received a new National Pollutant Discharge Elimination System (NPDES) permit that includes more stringent requirements for ammonia-nitrogen, E. coli, and dissolved oxygen levels, and the existing wastewater treatment facility is unable to reliably meet these new treatment requirements without significant upgrades to the facility.
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The Scope

Following a study of the existing wastewater treatment facility and evaluation of potential alternatives that would meet the new NPDES permit limits, it was determined that covered aerated lagoons with a post lagoon polishing reactor and ultraviolet (UV) disinfection system would provide the best value and functionality for Treynor.

- ▶ This upgrade option was chosen in part due to its ability to provide the required levels of increased treatment inside the footprint of the existing facility.
- ▶ Additionally, future community growth can be accommodated with minor upgrades while still remaining within the existing facility footprint.
- ▶ The proposed improvements include covering the existing aerated lagoons with an insulated cover, replacing the existing blowers and diffusers, expanding and remodeling the existing blower building, upgrading the electrical service, providing a standby generator, adding a nitrification polishing reactor along with UV disinfection, and various other improvements.



What is NPDES?

As part of the Clean Water Act of 1972, the National Pollutant Discharge Elimination System (NPDES) was created to regulate discharge of wastewater to surface waters. All facilities discharging pollutants into waters of the United States are required to obtain an NPDES permit. These permits limit the amount of pollutants a wastewater treatment facility can discharge into the receiving stream and are renewed in 5-year cycles.

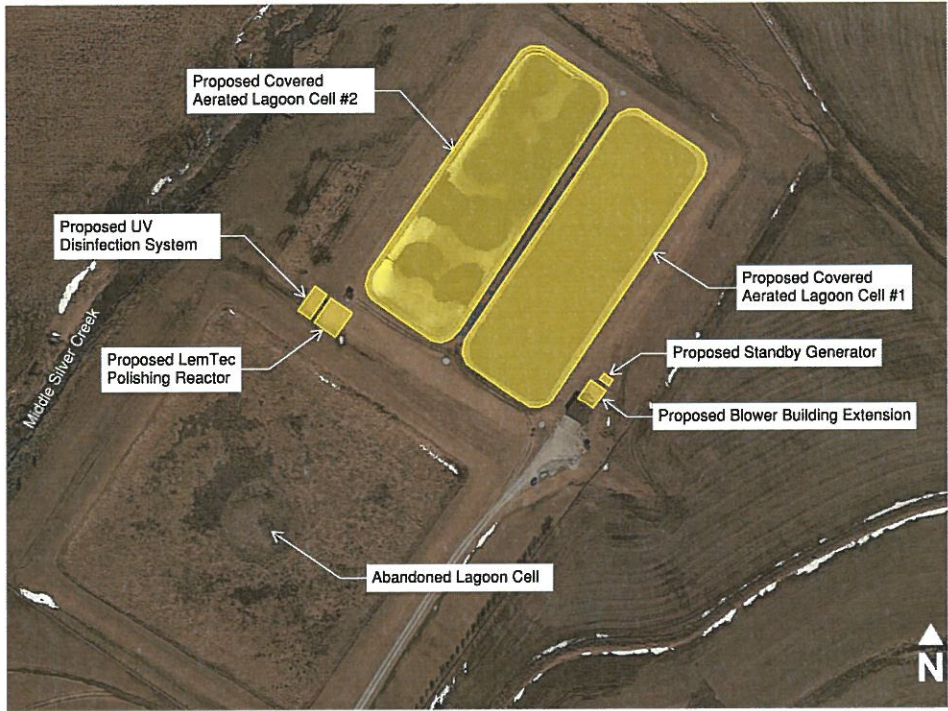
The City of Treynor received a new NPDES permit in October 2017, which requires additional treatment for ammonia-nitrogen, E. coli, and dissolved oxygen. As a result of the new permit, the City is working to upgrade the wastewater treatment facility to achieve compliance with the new effluent permit limits.



What is an Aerated Lagoon?

An aerated lagoon is an earthen pond that is artificially aerated using blowers and diffusers. Low pressure air from the blowers is piped to diffusers installed near the bottom of the lagoon to provide oxygen for the microorganisms responsible for treating the wastewater. This type of wastewater treatment system is preferred for small to medium sized communities, like Treynor, due to its ease of maintenance and operation.

Conceptual Treatment Facility Site Plan



Schedule



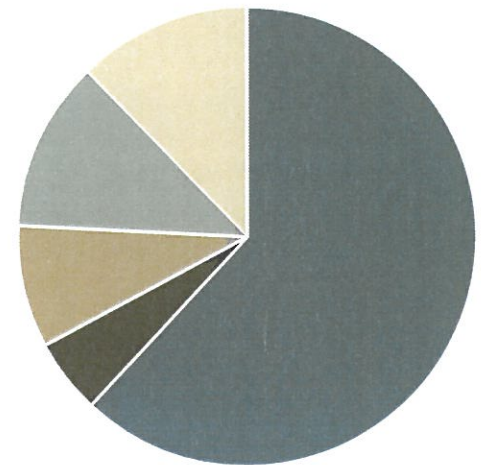
*Please note the schedule is tentative and subject to change

Funding

The improvements are estimated to cost more than \$5 million and will primarily be funded through a loan with the Clean Water State Revolving Fund (CWSRF) program. This project will have a significant impact on utility user rates; however, the City is also pursuing a number of grant opportunities to lessen the impact on the community.

- ▶ The City of Treynor received a \$300,000 grant from the Iowa Finance Authority's Wastewater and Drinking Water Treatment Financial Assistance Program in 2021. The City has applied for additional grant funds from this program in 2022 as well.
- ▶ Pottawattamie County is exploring opportunities to allow local communities to apply for a portion of the county's American Rescue Plan Act (ARPA) funds as a grant. Initial indications include a \$700,000 grant from Pottawattamie County, along with a \$700,000 grant match from the Iowa West Foundation.
- ▶ The recently passed federal infrastructure bill in November 2021 contains potential opportunities for substantial CWSRF loan forgiveness. The City is closely monitoring the requirements of this loan forgiveness opportunity as details of the program are being finalized at the state and federal level.
- ▶ City officials are working with a municipal financial advisor to review additional scenarios and grant opportunities to reduce resident impacts.

\$5.8 M Total Cost



- \$3.6M Low Interest SRF Loan
- \$300,000 2021 WTFAP Grant Award
- \$500,000 2022 WTFAP Grant Request
- \$700,000 Pottawattamie County ARPA Grant (pending)
- \$700,000 Iowa West Foundation Grant (pending)



For more information, contact the City of Treynor at 712-487-3787