

NEW 3.5 MGD WASTEWATER TREATMENT PLANT

ADEL, IOWA



PROJECT DESCRIPTION

The City of Adel, Iowa, has experienced substantial growth in population over the past decade. As a result, the City's existing aerated wastewater lagoon was insufficient to meet the community's growing needs.

McClure was hired to develop a comprehensive facility plan to meet the existing and future demands of the community. Through the planning process, it was determined to proceed with the design and construction of a 3.5 MGD Sequential Batch Reactor (SBR) facility. Of specific importance to the Owner, the new facility SBR is capable of being expanded to 7.0 MGD within the existing land area footprint. With the small footprint of the SBR system, the facility was able to be constructed on the same site as the existing wastewater lagoons.

The final design was completed, approved, and bid for construction in 2020. The final project includes the re-use and conversion of the existing lagoons for sludge storage and flow equalization. Not only will the new facility achieve regularity compliance and volume capacity, but it will also achieve optimal Nutrient Removal requirements. Final construction is anticipated to be completed in 2022.

PROJECT HIGHLIGHTS:

- Modular Sequential Batch Reactor (SBR) with influent pumping station, fine screening, grit removal and Ultra-Violet (UV) disinfection.
- Granular Activated Sludge (GAS) conversion. Modifications included:
 - » Larger and deeper SBR tanks
 - » Influent distribution piping
 - » Sludge wasting decanter
- Plant design based on high future growth potential and low TMDL limits in receiving stream.
- Design flows: Current 3.5 MGD (Average 0.8 MGD), expandable to 7.0 MGD.
- Project repurposed the existing lagoon for sludge holding and flow equalization.

COMPLETION DATE

On-Going

COST OF SERVICES

Initial: \$14M | Final: TBD

REFERENCE

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