WASTEWATER TREATMENT PLANT IMPROVEMENTS

JESUP, IOWA

PROJECT DESCRIPTION

McClure led the planning, design, and construction of a new wastewater treatment facility for the City of Jesup, required to address more stringent ammonia and E.coli requirements in the City's discharge permit. McClure evaluated multiple treatment technologies and ultimately selected a Sequencing Batch Reactor (SBR) process to replace the existing four cell Aerated Lagoon system. This project includes a new Headworks Building with influent screening, control equipment, and laboratory, a Flow Control Structure to direct excess flows to Flow Equalization (EQ) Basins repurposed from the aerated lagoon cells, a two-train, four-cell Fluidyne ISAM SBR system for primary and secondary treatment, including biological nutrient removal, and a Wedeco UV Disinfection system before wastewater is discharged to the receiving stream.

PROJECT HIGHLIGHTS:

- The Fluidyne ISAM SBR treatment process is designed to treat the City's Average Wet-Weather (AWW) flow of 1.3 MGD and provide biological nutrient removal to meet Iowa Nutrient Reduction Strategy goals for effluent total nitrogen and total phosphorous.
- The Flow Control Structure is designed to passively allow flows exceeding AWW to flow directly to the EQ basins without manual operator input.
- McClure helped the City obtain a $500,000 Water Treatment Financial Assistance Program (WTFAP) grant from the Iowa Finance Authority.
- McClure helped the City obtain a $900,000 funding commitment, effectively paid as a grant through an interest rate reduction, for water quality improvement projects in the watershed through the Iowa SRF Sponsored Project program.
- Total project cost of $9.9 million.

COMPLETION DATE

2024

REFERENCE

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