WASTEWATER TREATMENT PLANT

FORT DODGE, IOWA

COMPLETION DATE

2013

COST OF SERVICES

$18M

REFERENCE

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PROJECT DESCRIPTION

In October 2011, Cargill purchased the former Tate & Lyle wet corn mill plant in the City's North Central Ag-Park with plans to begin production in October 2013. Cargill also brought an over-the-fence (OTF) partner to be located adjacent to the site with production beginning concurrently. Both industries generate a wastewater stream and anticipated future development at the Ag-Park will bring industries that generate additional wastewater. The City needed to provide crucial infrastructure to the North Central Ag-Park capable of handling both the initial industries and future expansion. Changes to Iowa Water Quality Standards in 2006 resulted in new NPDES effluent limits that the WPCF could not meet with the large addition of industrial flows.

McClure worked with the City in the completion of the infrastructure related negotiations with both Cargill and the OTF industry. The aggressive timeline for start-up of production required a concerted design effort and a strong working relationship with Iowa DNR.

McClure completed a Facility Plan to determine the improvements necessary to convey and provide treatment of the wastewater generated at the Ag-Park, as well as future wastewater loads generated in the City over a 20-year design period. McClure also completed an Anti-Degradation Alternative Analysis to evaluate alternative treatment improvements capable of meeting the proposed effluent limits, and offer a range of treatment and disposal capabilities with non-degrading and less-degrading impacts to water quality in the Des Moines River.

McClure also worked closely with the City and Cargill in negotiating the financial structure and wastewater service agreements instrumental in financing over $20 million of improvements. Detailed design was completed and the project was bid on schedule and under the original estimates established during project planning.

PROJECT HIGHLIGHTS:

- Vertical Loop Reactor (VLR) and Blower Building.
- Conversion of existing VLR to MLE Process to meet NPDES permit effluent limits for nitrate (NO_3-N).
- UV Disinfection Expansion and Increased Effluent Pumping.