

## DELL RAPIDS WASTEWATER TREATMENT FACILITY

**STATE PROGRAM:** South Dakota Department of Agriculture and Natural Resources

**ASSISTANCE RECIPIENT:** City of Dell Rapids

**ASSISTANCE AMOUNT:** \$2.4M



### PROJECT DESCRIPTION

The City of Dell Rapids has a population of approximately 4,000 people and has been experiencing a 2% growth rate in recent years. To meet growing capacity needs and future permit conditions, the CWSRF funded nearly half of a \$5.8 million expansion and upgrade project for the City's WWTP. The facility is located near the Big Sioux River and the Dells of the Sioux River, which present physical design constraints. The bedrock obstructed new construction and made it difficult to access additional potable water. Based on the land availability, operational flexibility, expandability, design life, and capital costs the city constructed a sequencing batch reactor treatment system, new inlet works building, an on-site surge watering tank, and an ultraviolet disinfection system. To minimize the startup time needed to achieve adequate effluent levels, the City obtained free seed sludge and placed it in the sequencing batch reactor to accelerate the treatment process. This allowed limits to be met only 14 days after starting to accept raw sewerage. This new and reliable system reduces odors and produces cleaner effluent than the former lagoon systems.

To read more about this case study, please visit [https://www.epa.gov/sites/default/files/2019-11/documents/pisces\\_2019\\_compendium.pdf](https://www.epa.gov/sites/default/files/2019-11/documents/pisces_2019_compendium.pdf).