

## TREATMENT PLANT IMPROVEMENTS

**STATE PROGRAM:** Alabama Department of Environmental Management

**ASSISTANCE RECIPIENT:** City of Cullman

**ASSISTANCE AMOUNT:** \$4.1M



### PROJECT DESCRIPTION

The City of Cullman Wastewater Treatment Plant operates a two-stage anaerobic digestion system for reduction of sludge. For many years, the system operated with only one heat exchanger because the other heat exchanger was worn and inoperable, which caused biogas collection inefficiencies. An SRF loan was used to replace the existing heat exchangers with two new units that are capable of being fueled with either natural gas or biogas from the digestion process. Additional upgrades included a new biogas collection system, a new waste gas burner system, new pressure relief valves for each digester basin, new plastic cross-flow filter media, and recirculation pumps. A mixing system was also installed within the primary digester basin to maintain a homogeneous sludge matrix and increase the efficiency of the digestion process. Prior to the project, the City spent approximately \$2,300 a month to power the single heat exchanger unit. With the new biogas system in operation and powering the system, those costs are now \$330 a month—a monthly savings of \$1,970 for the City.

To read more about this case study, please visit [https://www.epa.gov/sites/default/files/2018-11/documents/pisces\\_2018\\_compendium\\_0.pdf](https://www.epa.gov/sites/default/files/2018-11/documents/pisces_2018_compendium_0.pdf).