

WATER RECLAMATION FACILITY MODIFICATIONS & EXPANSION

STATE PROGRAM: Tennessee Department of Environment and Conservation

ASSISTANCE RECIPIENT: City of Franklin

ASSISTANCE AMOUNT: \$100M



PROJECT DESCRIPTION

With a loan from the Tennessee Department of Environment and Conservation, the City of Franklin will expand its existing WWTP from its current capacity of 12 MGD to 16 MGD to accommodate a growing population. The project will also expand the existing on-site reclaimed water pump station to serve additional reclaimed water customers. This system will greatly reduce energy consumption and annual operating costs and include a new UV disinfection system, a new biosolids treatment system, and a biogas recapture system. The UV system is expected to result in an operating cost savings of approximately \$2.3 million over a 20-year period. The system will also reduce power consumption by approximately 15.6 million kWh over 20 years. The biosolids treatment system is expected to provide a 20-year net present worth hauling and disposal cost savings of approximately \$58 million. The system will also eliminate approximately 3.3 million hauling miles over 20 years, resulting in a significant reduction in vehicle emissions and diesel fuel consumption. This will also eliminate the dependence on a single disposal option for sludge that depends on continuation of a disposal facility permit. Lastly, the new combined heat and power system is anticipated to provide a net present worth savings in electricity of about \$8.5 million.

To read more about this case study, please visit https://www.epa.gov/sites/default/files/2019-11/documents/pisces_2019_compendium.pdf.