

PUMPING STATION 15 REHABILITATION

STATE PROGRAM: Wisconsin Department of Natural Resources

ASSISTANCE RECIPIENT: Madison Metropolitan Sewerage District

ASSISTANCE AMOUNT: \$6,897,393



PROJECT DESCRIPTION

The Madison Metropolitan Sewerage District (MMSD) began a major rehabilitation project in 2016 of Pumping Station 15 due to its age and anticipated nearby land development. This regional pumping station is located between a boat ramp and a heavily used bike path in Marshall Park. The project's structural and mechanical engineering costs included installation of a photovoltaic cell array on the roof, new high efficiency pumps, variable frequency drives, and two separated electrical feeds. These upgrades make the pump station more resilient against extreme weather events. The station conveys an average of 1.32 million gallons of wastewater per day with capacity up to 8.8 million gallons per day, which is expected to meet the needs of the service area through 2045. In addition to the pump upgrades, the heavily-trafficked location prompted the construction of public restrooms, two aquatic invasive species boat wash hydrants, and a bike repair station. Sustainable design practices were incorporated and included installation of bioretention ponds, a green roof, rain gardens, and permeable pavement walkways. The project includes a real-time information display that is visible to the public, showing information about pumping speeds, water flow, and other data associated with the pumping station. Incorporating educational aspects into this project provides a community engagement opportunity while addressing water quality issues by updating an outdated pumping station.

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