

Aeration System Improvements

Client: John DiFonzo Water Reclamation Facility

City Of Cumberland, Allegany Co., MD

Year: 2020 Cost: \$1,500,000



In 2017, the City of Cumberland retained Gwin, Dobson & Foreman to perform a comprehensive evaluation of its 15 MGD wastewater treatment facility.

GDF recommended aeration system improvements and designed a project for replacement of low efficiency blowers with high speed turbo blowers, automatic control valves, air flow meters, and dissolved oxygen and oxygen reduction potential (ORP) probes.

These system enhancements allow plant operators to establish DO set points within each aeration zone to achieve complete nitrification while minimizing dissolved oxygen carryover into the anoxic zones and denite filters which maximize denitrification.

The project was funded by a \$1million energy efficiency grant from the State of Maryland subject to a verification process upon completion. The independent evaluation validated the performance of the aeration and process control improvements which resulted in substantial engery savings to the City.