Mid-Clay Wastewater Treatment Facility

Florida, USA

Areas Used
CHLORINE CONTACT CHAMBER INFLUENT STRUCTURE

Products
ADMIX

Project Type
WASTEWATER TREATMENT PLANT

The Clay County Utility Authority in Orange Park, Florida, is constructing an expansion to its Mid-Clay Wastewater Treatment Facility. This $13 million expansion will increase the capacity of the plant from 650,000 gallons per day to 1,500,000 gallons per day. The state-of-the-art facility will be capable of treating the wastewater to advanced treatment levels which will be suitable for public access reuse. It will employ the processes of screening, grit removal, biological treatment with nutrient removal, filtration, and disinfection.

The finished water (known as effluent) will be disposed of via irrigation of residential neighborhoods and/or application to on-site rapid infiltration basins (i.e., percolation ponds). The project has the potential to remove roughly 2,000 septic tanks from the Mid-Clay service area as future developments install both water and wastewater infrastructure.

The methods of effluent disposal are beneficial to the environment in that they do not involve discharge to surface waters and they result in recharge of the aquifer. Mittauer & Associates specified Xypex waterproofing admixture for both the chlorine contact chamber and the influent structure. Both structures are cast in place concrete and exposed to a higher potential for chemical corrosion.

Furthermore, the influent structure is an elevated structure where even small leaks will be readily apparent. It was deemed appropriate that these tanks receive the additional chemical protection and waterproofing qualities of the Xypex crystalline admixture.