

EASTERN MUNICIPAL WATER DISTRICT, PERRIS, CALIFORNIA

HIGHLIGHTS

Design of a digester complex for two-phase digestion to produce Class A biosolids.

Master planning, predesign, and final design of the biosolids expansion to the Temecula Regional Water Reclamation Facility.

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Temecula Regional Water Reclamation Facility

Eastern Municipal Water District (EMWD) is one of California's fastest growing water and wastewater districts that serves approximately 400,000 persons. Carollo has completed all of the major wastewater treatment master planning, design, construction and startup assistance projects in all four of EMWD's rapidly growing regional waste water reclamation plants for over a decade. One of three projects at the Temecula Regional Water Reclamation Facility included planning and design to increase overall reliable capacity to 10 mgd. In addition to treatment objectives for biological nutrient removal and high level disinfection, the biosolids handling and treatment processes were master planned to accommodate expansions to approximately 30 mgd.

Our master plan evaluations determined that the increased waste activated sludge concentration produced by gravity belt thickeners provided significant economic and process benefits versus the existing dissolved air flotation thickeners. At that time, the only long-term operating experience for acid-phased digestion was in Dupage County, Illinois. Consequently, the new digester was designed to operate either in a parallel with the existing three digesters as a conventional high-rate digester or as an acid phase digester preceding the three methane phase digesters. Liquid storage of digested biosolids was added in order to isolate digester operation from dewatering and to provide biosolids with consistent dewatering characteristics to the dewatering facilities. The existing belt press dewatering facilities were adequate for the expansion to 10 mgd.

However, a subsequent study determined that additional biosolids cake concentration gained by installing centrifuges for future expansion, justified their use for biosolids dewatering.



State of the Art design from the Multiple Pass Step Feed Aeration Basin to the Phased Anaerobic digester will provide this plant increased performance and capacity.

