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Name: Mary L. Vorissis, P.E.
Title: Senior Project Manager
Organization: CH2M HILL
Address: 325 East Hillcrest, Suite 125 Thousand Oaks, CA 91360
Phone: 805.371.7817

Session Title: City of Oxnard California Advanced Water Purification Facility

Abstract: The 6.25 million gallon per day Advanced Water Purification Facility (AWPF) is the cornerstone of the City of Oxnard's Groundwater Recovery, Enhancement And Treatment (GREAT) program. The City developed the GREAT program to address its long-term-water supply and wastewater reuse requirements. The AWPF, as a part of the City's GREAT program, is an original and innovative application of wastewater reuse to provide for state-wide, regional and local economic, environmental and social benefits. The GREAT Program exemplifies innovation and excellence by integrating and improving proven technologies into a comprehensive program that addresses sustainable water resource needs while protecting, enhancing, and restoring the environment.

The City of Oxnard, located in Ventura County, California, with a population of about 200,000 residents, relies on imported water from Northern California to meet most of its water needs and discharges its sewage to the Pacific Ocean. The City is looking at substantial growth and associated water demands. The City obtains its water supply from three sources: United Water Conservation District (UWCD), local Oxnard groundwater (Oxnard) and Calleguas Municipal Water District, who is a wholesale water supplier that obtains its water from the Metropolitan Water District of Southern California, who in turn imports water from the northern California Bay Delta and Colorado River. The Bay Delta and Colorado River are severely stressed, so the reliability and cost of these water supplies is uncertain.

The design of the AWPF shows how engineers can turn problems, such as water supply and wastewater disposal, into opportunities to enhance the environment and create public assets that provide higher value purposes that go beyond their original, more limited focus, for little or no additional cost. The AWPF not only treats water for water supply and to reduce wastewater disposal to the ocean, using the most advanced treatment technologies including microfiltration (MF), reverse osmosis (RO), and ultraviolet light disinfection (UV), it provides a sustainable water supply, allows for restoration and enhancement of coastal wetlands, reduces seawater intrusion into the coastal aquifers, preserves agriculture, and provides a meeting and community facility to educate the professional community, decision makers, and public at large.

Professional Background:

Mary Vorissis is a Senior Project Manager with CH2M HILL and works from their Thousand Oaks California Office. She graduated from Marquette University with a degree in Civil Engineering and has spent 30 years in the water/wastewater field. Mary is a PE and is a Chartered Engineer in the UK. In recent years, Mary has provided project management for designs of advanced wastewater treatment facilities in Southern California and has prepared Title 22 Engineering reports for permitting of recycled water facilities. She is a member of the Water Environment Federation and the Chartered Institute for Water and Environmental Management. Prior to working for CH2M HILL, Mary worked for United Utilities in the UK as the company's Wastewater Policies and Standards Manager.