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Session Title: Permitting the Obvious? A Recycled Water Success Story in Hermiston Oregon

Abstract:

The City of Hermiston (City) is located in northeast Oregon near the Columbia River with a high desert climate of cool winters and warm, dry summers. The City has a population of about 17,000 and an economy based in agriculture and food processing. The City currently operates a 30-year-old Rotating Biological Contactor (RBC) wastewater treatment plant (Plant). The Plant was sized adequately to accommodate future flows but needs improvements to handle the growing biological loadings, nutrient limits, and strict Total Maximum Daily Load requirements including temperature and ammonia restrictions. Furthermore, pending changes to Oregon's water quality standards are likely to impact the City's ability to maintain summer and fall shoulder season discharges to the Umatilla River. While the existing Plant is in good condition, the City is seeking to increase the capacity to meet future growth projections and upgrade the treatment facilities to meet the new effluent discharge regulations. Kennedy/Jenks Consultants has been working with the City for many years completing several key planning and design projects associated with upgrading the existing Plant. These efforts have included developing a Capital Improvement Plan, repair of the anaerobic digester covers, a new blower for the RBCs, dechlorination equipment, a gravity belt thickener, design of a new Membrane Bioreactor with 3.3 Million Gallon per Day capacity, and outfall modifications to manage temperature to remain in compliance with the existing National Pollutant Discharge Elimination System permit (NPDES) permit.

As the City awaits financing for the completed design a unique partnership has been formed between the City and a large, local irrigation district. This partnership involves discharging the Class A recycled water generated from the new MBR into the irrigation districts' distribution system for use on thousands of acres of food and fodder crops. This will provide the irrigation district with additional water as well as assist the City with meeting temperature TMDL requirements and future effluent discharge restrictions. The process for forging this relationship with the irrigation district has involved coordination among multiple federal, state, local, environmental, and tribal interests including providing congressional testimony. This presentation describes the various regulatory and technical elements being addressed to make this innovative project come to fruition including a Use Attainability Analysis and outreach among the interested parties.

Professional Background:

Mark is a senior scientist with Kennedy/Jenks Consultants in Portland, Oregon with 15 years of experience as a project manager, scientist and regulator. He is currently project managing two large reclaimed water planning projects in Washington and Oregon whose facilities account for approximately 61 MGD (average dry weather flow) and is working on three additional reclaimed water projects currently in design or construction. Mark primarily works on reclaimed water, biosolids, and stormwater projects in Washington, Oregon, California, and Nevada with expertise in nutrient cycling, pollutant fate and transport, temperature TMDL compliance, NPDES permitting, solids treatment and thermal conversion technologies. When not working, Mark enjoys anything outdoors such as fishing, bird hunting, and gardening but also likes playing the guitar. He holds bachelors and masters degrees in science from the University of Washington and is pursuing the completion of his Ph.D.