

Big Plans for Improving Wastewater Infrastructure in San Francisco

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Session Title: Bay Area Water Infrastructure Planning and Implementation: The Future is Now

Speaker Biography: Michael Carlin was appointed as the Deputy General Manager and Chief Operating Officer of San Francisco Public Utilities Commission in 2009. In that role, Michael supervises the agency's efforts in capital planning, emergency response, asset management, and other functions across the three business lines – water, power and wastewater. Prior to this position, Michael serviced as the Assistant General Manager for Water where he led the effort to diversify the water supply portfolio. He continues in that role leading many of the environmental initiatives including addressing the impact of climate change on the organization.

Water Recycling Becomes Reality in the South Bay

Pamela John, Santa Clara Valley Water District, pjohn@valleywater.org

The Santa Clara Valley Water District (SCVWD), the water resources management agency in Santa Clara County, located in South San Francisco Bay, recently completed construction of an 8 million gallon per day (approximately 9,000 acre-feet per year) advanced recycled water treatment facility. This facility, named the Silicon Valley Advanced Water Purification Center (SVAWPC), has microfiltration (MF), reverse osmosis (RO) and ultraviolet (UV) disinfection treatment units. The SVAWPC became operational in March 2014 and blends its purified product water with disinfected tertiary recycled water from the South Bay Water Recycling (SBWR) system. SBWR, operated by the City of San Jose, serves non-potable water to approximately 800 customers for large-scale irrigation and industrial uses. In addition to enhancing the recycled water quality to improve recycled water marketability, the SVAWPC also serves as the SCVWD's demonstration facility for potable reuse testing and outreach ultimately leading to augmenting drinking water supplies with purified recycled water. The SVAWPC is a testament to the interagency cooperation and coordination between SCVWD and the City of San Jose.

The county is in the fourth successive year of an extreme drought and strategies are being formulated to expedite the construction of new recycled water and purified recycled water infrastructure. The SCVWD's long-term water supply plans identify purified recycled water as a significant water supply addition for the county. The SBWR master planning effort, a jointly funded effort by both agencies, was completed recently and it evaluated opportunities to maximize the use of recycled and purified water. This presentation will cover the SVAWPC, its capabilities and an overview of future opportunities to expand recycled and purified water.

Keywords: SCVWD; SVAWPC, purified water; Silicon Valley Advanced Water Purification Center

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Speaker Biography: Pamela John, P.E., is the North Water Treatment Manager for the Santa Clara Valley Water District. She currently manages the Penitencia Water Treatment Plant, the Silicon Valley Advanced Water Purification Center and the SCVWD-SFPUC Intertie Facility. She achieved bachelor and master degrees in Civil Engineering and is a registered professional civil engineer in California. She has 20+ years water resources engineering experience which includes 12 years of recycled water-specific experience. Previously as senior engineer, she was on the planning team for the purification center and managed the potable reuse piloting and demonstration effort. She was the 2013-2014 Board Trustee on the California WaterReuse Board. She is a committee member on the WaterReuse Regulatory-Legislation Committee.

Challenges of Water Recycling

Ashwini Kantak, City of San Jose, ashwini.kantak@sanjoseca.gov

This presentation will describe the challenges of City of San José's South Bay Water Recycling (SBWR) program as it finds itself at a critical juncture, balancing the needs of demand for recycled water through purple pipe while continuing to support the expansion of purified recycled water for potable uses.

Established in 1998, the SBWR program stands among the largest recycled water programs in California, serving the cities of San José, Santa Clara and Milpitas and delivering 5 billion gallons of recycled to nearly 800 customers.

SBWR began as a regulatory compliance measure to limit the amount of treated wastewater discharged from the San José-Santa Clara Regional Wastewater Facility (RWF) into the southern San Francisco Bay. Since 1998, sewage flows have decreased significantly due to water conservation efforts, code changes, and a shift towards industries with lower wastewater discharges.

While wastewater flows have decreased, the benefits of recycled water as a drought-proof and sustainable water source have increased. This paradigm shift has provided exciting opportunities for SBWR to re-evaluate program goals and funding, and explore regional partnerships.

A recently completed strategic plan, done in partnership with the Santa Clara Valley Water District (SCVWD), recommended purified recycled water as the best investment for integrating recycled water into the regional water supply system. Recycled water distribution has become cost comparable to purified recycled water, and results in duplicative infrastructure while providing water with limited uses. With the success of the pilot Silicon Valley Advanced Water Purification Center and the increased need for drought-proof water supplies, regional leaders including Mayors, SCVWD, Silicon Valley Leadership Group, and Chambers of Commerce are now increasingly promoting purified recycled water and advocating for fast tracking of purified recycled water projects. SBWR is uniquely positioned to be an important part of this regional effort.

Keywords: Purple Pipe Purified Recycled Water, South Bay Water Recycling, SBWR

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Speaker Biography: Ashwini Kantak is Assistant Director in the Environmental Services Department in the City of San Jose and oversees administrative services, the sustainability and compliance division, and a multi-billion dollar capital program for the San Jose/Santa Clara regional wastewater facility. Prior to this role, Ashwini was an Assistant to the City Manager and led the development and implementation of several citywide policies and programs related to infrastructure and environmental sustainability. Ashwini has an undergraduate degree in Architecture from Mumbai, India, a graduate degree in Architecture from Iowa State University, and a graduate degree in Public Policy and Administration from Northwestern University. She is a licensed architect in California since 1997 and a LEED Accredited professional. She enjoys combining her educational and professional training with her interest in sustainable communities to advance the City's goals of economic growth, environmental sustainability and a better quality of life for the residents of San Jose.

The Economics of Clean Water in San Francisco Bay

Ellen Hanak, Public Policy Institute of California, hanak@ppic.org

This talk takes a broad look at how economists can contribute to thinking about a broad spectrum of water-related environmental management issues in the San Francisco Bay. Despite People often think of economics as only measuring the directly observable costs and benefits of investments and regulatory actions. But in reality, economics can also tease out insights on issues for which the numbers are less obvious – such as the value of ecosystem services or the transactions costs of institutional arrangements. The talk will provide illustrations relating to the management of water quality (wastewater and stormwater) and riparian and coastal habitat in the region, with a nod to the broader issues of integrated water resource management that bring in supply and flood management considerations.

Keywords: Economics, water quality, ecosystem services, stormwater, wastewater, habitat, transactions costs

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Speaker Biography: Ellen Hanak is director of the PPIC Water Policy Center and a senior fellow at the Public Policy Institute of California. Under her leadership, the center has become a critical source of information and guidance for natural resource management in California. She has authored dozens of reports, articles, and books on water policy, including *Managing California's Water*. Her research is frequently profiled in the national media, and she participates in briefings, conferences, and interviews throughout the nation and around the world. Her other areas of expertise include climate change and infrastructure finance. Previously, she served as research director at PPIC. Before joining PPIC, she held positions with the French agricultural research system, the President's Council of Economic Advisers, and the World Bank. She holds a PhD in economics from the University of Maryland.