



PURE WATER PROJECT LAS VIRGENES-TRIUNFO

Bringing Our Water Full Circle

Water Reuse Meeting December 4, 2018 David Lippman, P.E







User Community



JPA Accomplishments

1. Water Recycling

60% of wastewater flow reused in the community

2. Composting

 \$50M facility to treat 100% of the biosolids locally, eliminating impact to Malibu Creek

3. Nutrient Reduction

\$11M in nutrient reduction facilities to meet the 2003 Nutrient TMDL

4. Creek Avoidance

About \$600,000/yr. to divert flow from Apr 15 to Nov 15 since 1997





Major Challenges/Opportunities

- Address RW supply/demand imbalance
- Meet regulatory requirements for discharge
 - Total Maximum Daily Loads
 - Discharge prohibition (April 15 to November 15)
 - Flow augmentation (November 16 to April 14)
- Maximize beneficial reuse
- Minimize impacts to cost of service
- Improve drought resiliency and supply reliability
- Reduce dependence on imported water





Supply/Demand Imbalance









2003 Malibu Creek Watershed Nutrient TMDL

- Implemented in 2005 NPDES Permit
 - 8 mg/L (nitrate + nitrite)
 - 3 mg/L (phosphorous)
 - Discharge Prohibition remains (April 15 to November 15)
- Compliance
 - \$11M in nutrient reduction facilities
 - About \$600,000/yr. to comply with prohibition







2013 Malibu Creek and Lagoon Sedimentation & Nutrient TMDL to Address Benthic Community Impacts

- Established by EPA July 2013 and implemented by the LARWQCB May 2017
- Summer Limits (April 15 November 15)
 - 1 mg/L (total nitrogen) & 0.1 mg/L (total phosphorous)
 - By May 16, 2022
- Winter Limits (November 16 April 14)
 - 4 mg/L (total nitrogen) & 0.2 mg/L (total phosphorous)
 - By November 16, 2030





New Seasonal Storage Reservoir

- New dam and reservoir
 - 2,000 AF storage
 - 1,000 to 2,000 feet in length
 - Up to 200 feet high
- Three potential sites
- \$114 to \$165 million

Proposed Locations

There are three possible sites for locating a reservoir; any of which would provide more recycled water for beneficial reuse each year.

Stokes Canyon –

Near King Gillette Ranch, state and federal administrative center for the Santa Monica Mountains National Recreation Area

Storage volume:1,900 acre-feet Area: 48 acres Dam dimensions: 2,000' x 165'





April Canyon -

Just south of the City of Agoura Hills in an area adjacent to state park resources

Storage volume: 2,200 acre-feet Area: 58 acres Dam dimensions: 1,000' x 185'

The Hope Property –

A combination of parcels adjacent to LVMWD facilities

Storage volume: 2,000 acre-feet Area: 45 acres Dam dimensions: 950' x 200'







Stakeholder-Driven Process

- Began in January 2015
- Developed a "roadmap" to fully utilize recycled water
- Established "Guiding Principles"
 - Maximize beneficial reuse
 - Seek cost-effective solutions
 - Seek partnerships beyond JPA
 - Gain community support
 - Govern with a partnership
 - Be forward thinking









The Process

Individual	Orientation	Interviews
Small Group	Workshop #1 Context	PESTLE
"The Team"	Workshop #2 Convergence	BPAT
	Analysis	
	Workshop #3 Affirmation	
	Implementation "Road Map"	







Potable Reuse w/ Las Virgenes Reservoir









What are we doing now

- Building a Demonstration Project
- Completed a AWT siting study
- Completed a Title XVI Feasibility Study
- Considering brine disposal options
- Seek Funding; USBOR, WIFIA, WRDA, Prop 1, LRP







What's next

- Consider brine disposal options
- Additional modeling of Las Virgenes Reservoir
- Start preliminary design and environmental analysis
- Consult with regulators; DDW, RWQCB
- Seek Funding; USBOR, WIFIA, WRDA, Prop 1, LRP







Potable Reuse In California







Thank you



