LAS VIRGENES MUNICIPAL WATER DISTRICT EST. 1958

TRIUNFO SANITATION DISTRICT
A PUBLIC AGENCY

STEWARDSHIP OF THE MALIBU CREEK WATERSHED

FEBRUARY 2016

BACKGROUND

The Malibu Creek watershed drains a 144 square-mile area of Southwestern Los Angeles and Southeastern Ventura counties including the Santa Monica Mountains National Recreation Area. Occupied by a population just above 100,000, Malibu Creek and its tributary streams have three sources of water:

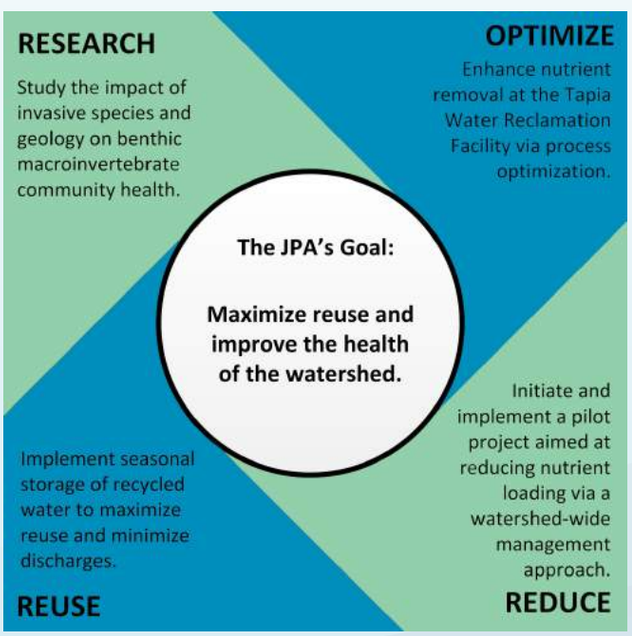
- Natural seasonal flows that vary through the year and with drought cycles
- Storm flows and urban runoff that enters the system largely untreated
- The downstream Tapia Water Reclamation Facility (TWRF), which is prohibited from discharging surplus tertiary-treated recycled water between April 15 and November 15.

The Malibu Creek system is listed as "impaired" under the USEPA Clean Water Act, Section 303(d) primarily for recreational use and warm and cold freshwater habitat impaired by the presence of algae, which is a result of the unique features of Malibu Creek. Algae is also cited as a cause for low dissolved oxygen levels at certain times.

THE JPA'S STEWARDSHIP ROLE

The Las Virgenes-Triunfo JPA has demonstrated its long-term commitment to a stewardship role in the watershed:

- A leader in developing recycled water as a resource since the early 1970s.
- Built $50 million in watershed improvements including a composting facility to eliminate land application of bio-solids.
- Invested over $12 million in nutrient reduction facilities.
- Borne annual expenses of $1 million for creek discharge avoidance.
- Contracted for 20 years of solar power used to pump recycled water to reduce green house gases.
- Funded creek monitoring and the compilation of 40 years of monitoring data.
- Active participant in the Santa Monica Bay Restoration Commission.
- Conducted tours and educational programs for elected officials, residents and students on their respective roles in sustaining and improving the watershed.



Addressing Malibu Creek Watershed Water Quality Standards

The JPA has adopted a multi-pronged approach to address stringent USEPA water quality standards for Malibu Creek with the goal to maximize use of recycled water and improve the health of the benthic macroinvertebrate community.

STEWARDSHIP OF THE MALIBU CREEK WATERSHED

UNIQUE TRAITS

The headwaters of Malibu Creek rise in the Monterey Formation, which contributes salts, selenium and nutrients naturally to the creek system. Data shows that sulfate levels are three times greater than the allowable standard and nearly ten times greater than nearby coastal streams. Certain tributaries and stretches of the creek dry up in the summer months and in recent years, flows at the L.A. County gaging station often fall below 2.5 cubic feet per second (cfs). Downstream, Malibu Lagoon (where the creek meets the ocean) collects additional flows including urban runoff and significant contamination from waterfowl traversing the Pacific Flyway. When the sand berm forming the lagoon opens, the presence of these contaminants often results in the closing of nearby Surfrider Beach.

Top – Surfrider Beach, Malibu, CA
Middle – Algae in Malibu Creek
Bottom – Tapia Water Reclamation Facility in Malibu Canyon

ALGAE, NUTRIENTS AND THE JPA

The unique traits of Malibu Creek also mean that there is presence of algae in the watershed and in Malibu Creek's tributaries miles above the reclamation facility's discharge point and in tributary streams far removed from the presence of recycled water. This creates a major point of frustration for the JPA since the 2005 and 2010 National Pollutant Discharge Elimination System (NPDES) permits mandated TWRF to reduce nitrogen and phosphorous levels to 8 milligrams per liter (mg/l) and 3 mg/l respectively. **Compliance with these mandates cost ratepayers in excess of $12 million, causing sewage treatment rates to double, escalating to a level among the highest in California.** There has been no study conducted by EPA to determine if this investment has any beneficial effect and EPA has now placed even more stringent measures on the Malibu Creek Watershed.

CONSENT DECREE – EXPEDIENCE DISPLACES SCIENTIFIC FOUNDATION

Although the JPA was not a party to a consent decree developed in 1999, a consent decree rising from litigation among EPA, Heal the Bay, Santa Monica Baykeeper, et al., stipulated USEPA would establish 530 TMDLs (or Total Maximum Daily Load) which describes the maximum amount of a pollutant that a body of water can receive for the Los Angeles region over a 13 year period. In 2010, the court approved a "Modified Amended Consent Decree" resulting in an additional TMDL for Malibu Creek for sedimentation and nutrients impacting the benthic macroinvertebrate (BMI) communities. As a good steward of natural resources, we have completed extensive studies and know that the TMDL dismisses the creek's unique chemistry and geology. **We need your help to protect our ratepayers on whom the costs for compliance will fall. Please help us reach out to the highest levels of the EPA to ensure this issue is studied.**

19 YEARS OF COSTLY REGULATIONS — NO TANGIBLE BENEFITS

Since 1997, TWRF has:

- Been prohibited from creek discharge for seven months each year (Apr 15 – Nov 15).
- Invested $1 million annually in creek avoidance measures and practices including pumping excess water a considerable distance to the Los Angeles River watershed, increasing costs and greenhouse gas emissions.
- Spent $12 million on nutrient reduction and process improvements.
- Assembled 40 years of monitoring data for the Malibu Creek Watershed.
- Conducted extensive research on the geology and chemistry of the watershed.
- Expanded the beneficial use of recycled water.

In spite of the seven-month discharge prohibition, failing grades at Surfrider Beach due to bacteria levels continue, along with proliferation of algae above and below TWRF's discharge point.

We also ask that you help convince EPA to conduct a cost-benefit analysis for its past and proposed actions in the watershed. We are happy to help by providing years of scientific data.

Malibu Lagoon, Malibu, CA

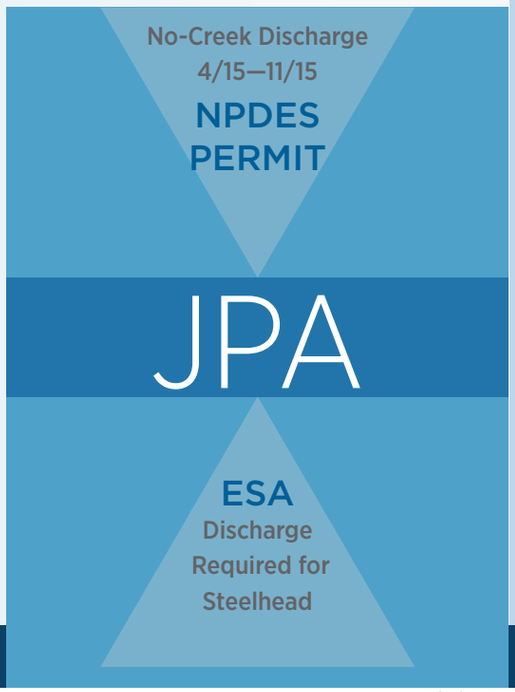
COMPLIANCE COSTS

While it seems doubtful Malibu Creek will ever return to being a "natural" (pre-Spanish explorer) watershed, we need your help to work with EPA to develop a real solution. We know that we can achieve the nutrient limits proposed for Tapia's discharge advanced nutrient removal facilities by including Reverse Osmosis treatment. This could cost our community members approximately $200 million. The composting facility would have to double in size to treat the additional solids generated by the nutrient removal. But operating costs would be substantial and we would need to dispose of brine in an environmentally sensitive region. Wastewater treatment costs would escalate, affecting residential and institutional customers such as businesses and school districts, placing the region at a serious economic disadvantage, impacting real estate and employment. Again, **we need your help to find solutions that allow us to be the good stewards we intend to be while ensuring that the region's ratepayers do not face unusually harsh impacts from costs that we believe will not reduce algae in the watershed.**


Spray fields dispose of excess treated wastewater during Malibu Creek discharge period.

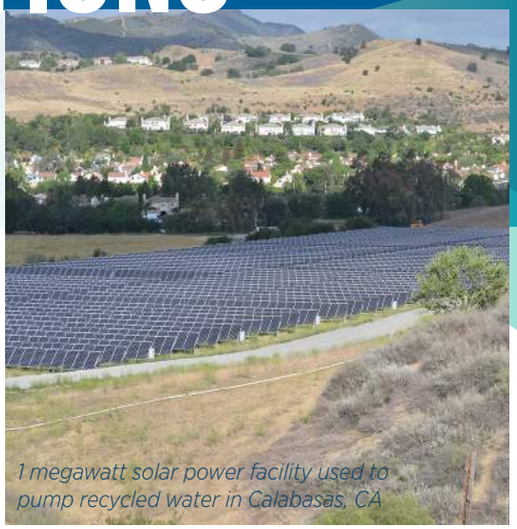
JPA IN A REGULATORY CROSSFIRE

While TWRF may not discharge to Malibu Creek from April 15 to November 15, there is an exception rising from the Endangered Species Act, which seeks to protect the Steelhead Trout. When flows at the L.A. County gaging station fall below 2.5 cfs for a sustained period, TWRF **must** discharge recycled water to provide habitat for those threatened species. Ironically, that water is not permitted to reach Malibu lagoon, some seven miles south of the discharge point. Consequently we have released nearly 240 million gallons of recycled water between 2013 and 2015 to supplement the creekflow. These releases impact our customers who depend on recycled water during the peak demand season – so we have had to supplement our recycled water system with imported potable water during the worst drought in California's recorded history. **This just doesn't make sense, and we ask for your assistance to meet with EPA to work out a solution that protects the creek, the species who live there, and our customers – we are confident such common sense solutions can be found.**



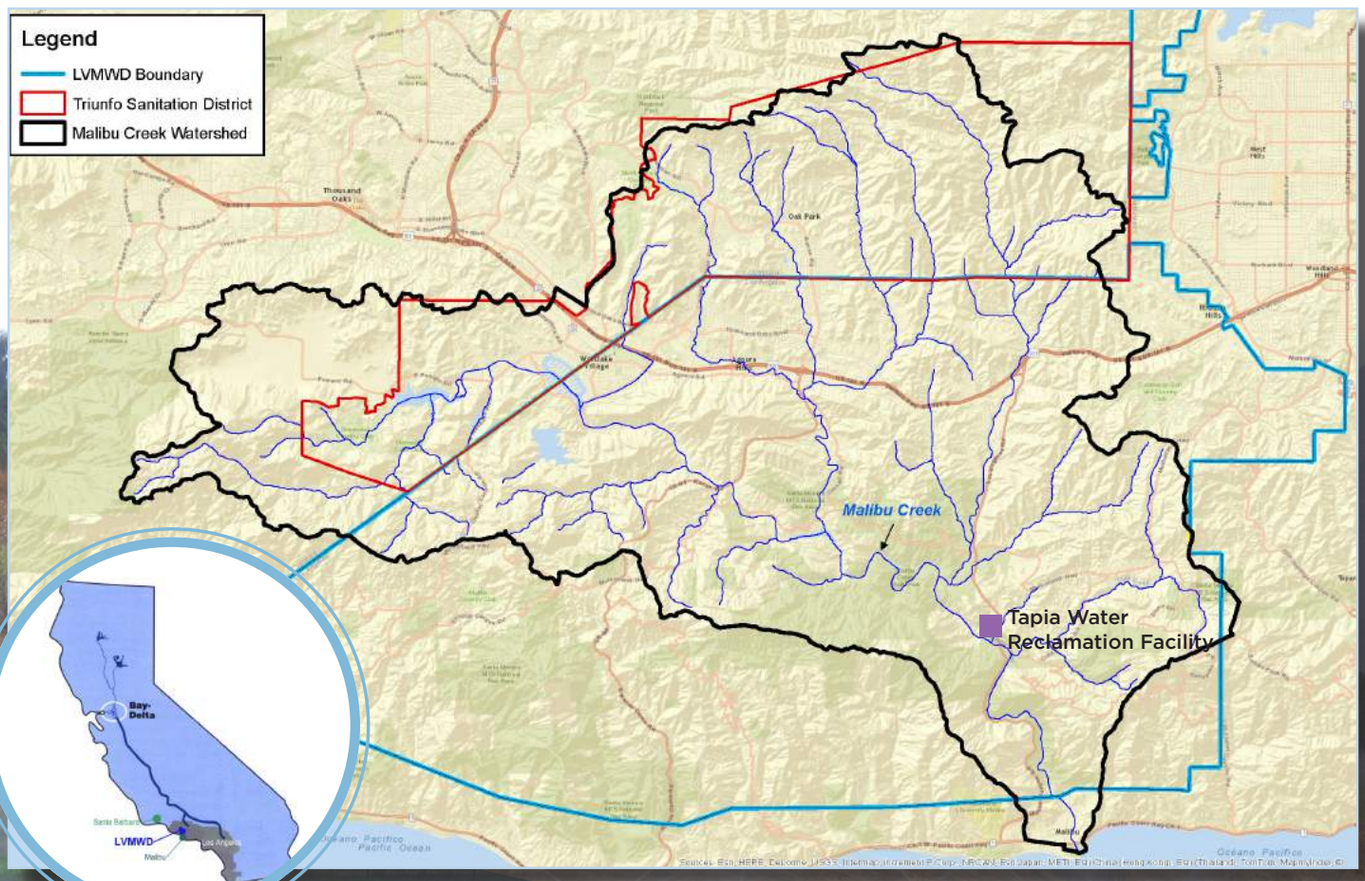
WORKING FOR SOLUTIONS

The Las Virgenes – Triunfo Joint Powers Authority (JPA), a partnership between Las Virgenes Municipal Water District and Triunfo Sanitation District, established to cooperatively treat wastewater for these two bordering areas which share the Malibu Creek watershed. The JPA has been a pioneer in the development of recycled water as a renewable resource. Since 1965, the JPA has operated the Tapia Water Reclamation Facility (TWRF), which today serves as one of three water sources for the Malibu Creek and its tributaries.



1 megawatt solar power facility used to pump recycled water in Calabasas, CA

THE MALIBU CREEK WATERSHED



FOR MORE INFORMATION

David W. Pedersen, P.E. General Manager
Las Virgenes – Triunfo JPA
4232 Las Virgenes Rd, Calabasas, CA 91302
dpedersen@lvmwd.com 818-251-2100

LAS VIRGENES MUNICIPAL WATER DISTRICT EST. 1958

TRIUNFO SANITATION DISTRICT
A PUBLIC AGENCY