



# MAKING FULL USE OF RECYCLED WATER IN THE MALIBU CREEK WATERSHED

FEBRUARY 2016

## TARGET: TOTAL BENEFICIAL REUSE

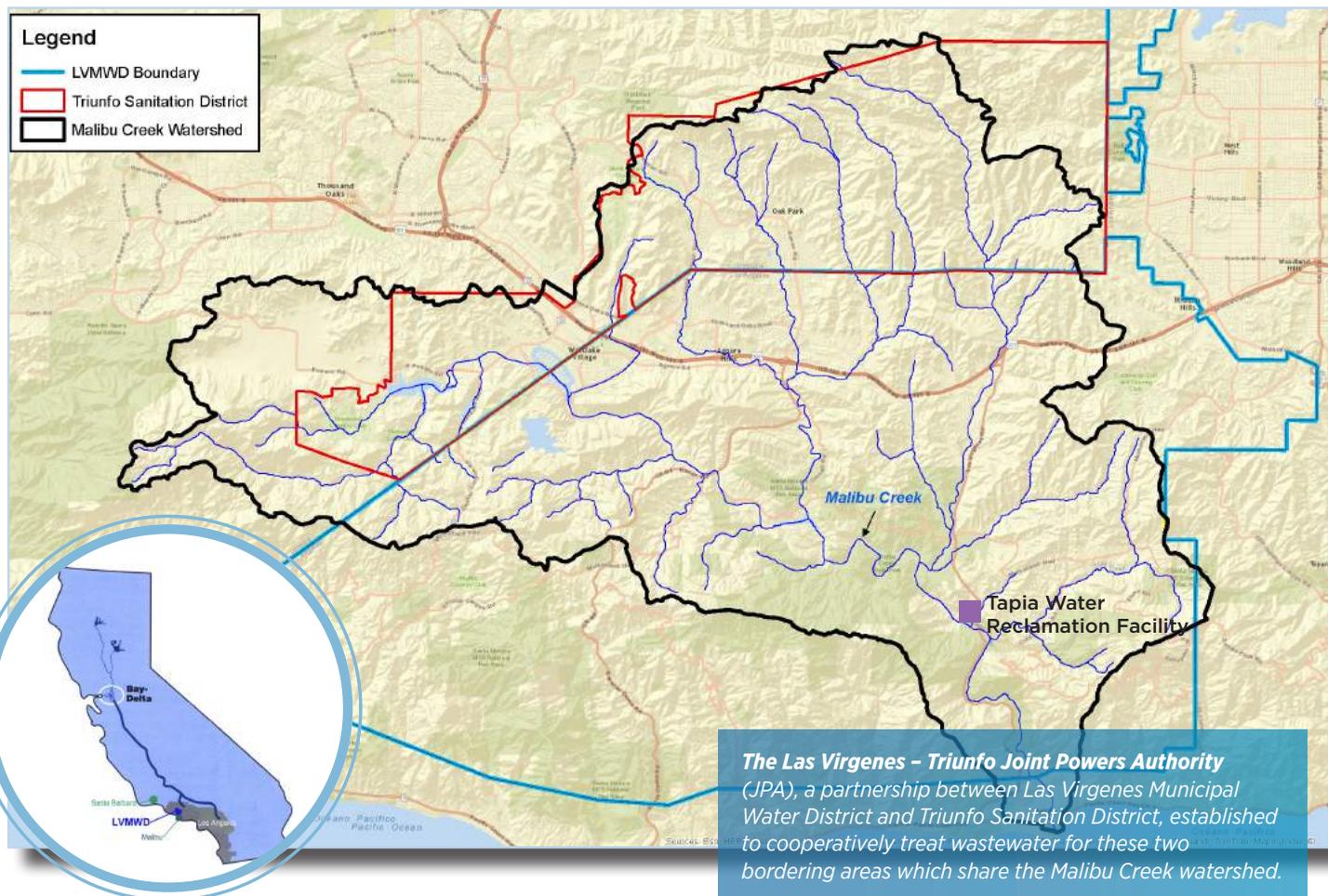
The environmentally sensitive Malibu Creek Watershed stands to benefit from either of two proposals currently under consideration by the Las Virgenes - Triunfo Joint Powers Authority.

A stakeholder-driven process is in the second year of exploring ways to maximize the beneficial reuse of the region's recycled water. Their efforts have resulted in two options, either of which can all but eliminate discharges of recycled water to Malibu Creek during times of low demand.

### TAPIA WATER RECLAMATION FACILITY

- ◆ Each day, the JPA's Tapia Water Reclamation Facility (TWRf) treats upward of nine million gallons to Title-22 Tertiary Treated Recycled Water standards.
- ◆ In summer months, all of TWRf's recycled water is used for irrigation.
- ◆ During the low-demand seasons, surplus recycled water is discharged to Malibu Creek.
- ◆ There are two plans on how to beneficially use the off-season surplus recycled water.

## THE MALIBU CREEK WATERSHED



# PROPOSED OPTIONS

## OPTION A

### ENCINO RESERVOIR SEASONAL STORAGE PROJECT

- ◆ In cooperation with the City of Los Angeles, a pipeline would convey surplus recycled water to the currently dormant Encino Reservoir.
- ◆ As the warm-weather demand increases, recycled water could be drawn from the reservoir.
- ◆ A sharing agreement with Los Angeles could “fine tune” uses between agencies, providing regional benefits.



### ADVANTAGES

- ◆ Results in a collaborative interagency project with mutual benefits
- ◆ Uses Encino Reservoir which already exists but is no longer used for potable water storage
- ◆ Retains “ornamental use” of the reservoir as a benefit to nearby homeowners
- ◆ Provides a recycled water pipeline to serve other customers along its pathway

### CHALLENGES

- ◆ Construction of a lengthy pipeline in an urban area
- ◆ Construction cost estimate: \$71 million
- ◆ Repurposing the reservoir may identify additional considerations

### A COLLABORATIVE APPROACH

In 2015, a study group representing numerous Malibu Creek Watershed stakeholders was assembled to explore the options on additional recycled water development. Through a series of facilitated meetings, the group has narrowed the options to those listed in this publication.

Organizations participating in the Recycled Water Options Study:

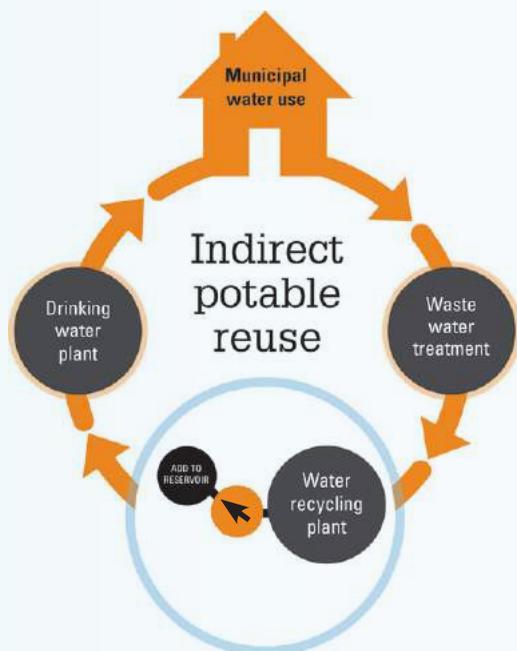
- ◆ Lead Agency: Las Virgenes Triunfo Joint Powers Authority
- ◆ Las Virgenes Municipal Water District
- ◆ Triunfo Sanitation District
- ◆ City of Agoura Hills

- ◆ City of Calabasas
- ◆ City of Los Angeles
- ◆ City of Thousand Oaks
- ◆ City of Westlake Village
- ◆ Los Angeles County
- ◆ Calleguas Municipal Water District

# OPTION B

## ADVANCED WATER TREATMENT FACILITY FOR INDIRECT POTABLE REUSE

- ◆ Expands the region's water supply portfolio.
- ◆ Construct an Advanced Water Treatment Plant to further treat recycled water for conveyance to Las Virgenes Reservoir, a nearby potable water storage facility.
- ◆ Retreat the reservoir water to drinking water standards using an existing drinking water plant.



### ADVANTAGES

- ◆ Makes use of a previously wasted water resource
- ◆ Takes advantage of several existing facilities
- ◆ Results in a multi-agency collaborative project
- ◆ Reduces operating costs due to limited production time
- ◆ Reduces demand significantly for imported potable water

### CHALLENGES

- ◆ Development of a brine disposal method
- ◆ Construction cost estimate: \$72 million
- ◆ Pipeline to reservoir would pass through an urbanized area
- ◆ Public acceptance of advanced treatment recycled water for potable reuse

- ◆ Los Angeles Department of Water and Power
- ◆ L.A. Sanitation
- ◆ Los Angeles Department of Public Works
- ◆ Metropolitan Water District of Southern California
- ◆ California State Parks
- ◆ National Park Service

- ◆ Office of State Senator Fran Pavley
- ◆ Office of Los Angeles County Supervisor Sheila Kuehl
- ◆ Mountains Restoration Trust
- ◆ Resource Conservation District of the Santa Monica Mountains
- ◆ Santa Monica Bay Restoration Commission
- ◆ Santa Monica Mountains Conservancy

- ◆ Los Angeles Regional Water Quality Control Board
- ◆ State Water Resources Control Board
- ◆ Heal the Bay
- ◆ L.A. River Keeper
- ◆ Malibu Surfing Association
- ◆ Surfrider Foundation



*Built in 1965, each day the Tapia Water Reclamation Facility, (TWRf) treats upward of nine million gallons to Title-22 Tertiary Treated Recycled Water standards.*

## FORTY YEARS OF LEADERSHIP IN DEVELOPING RECYCLED WATER AS A RESOURCE

The Las Virgenes – Triunfo Joint Powers Authority (JPA) was among the pioneers in developing recycled water as a substitute for irrigating with imported potable water. Beginning in 1972, programs were implemented and continually expanded, to the point where more than 20 percent of the water served in the region is recycled water that irrigates parks, golf courses, highway landscapes, commercial properties, homeowner associations and multi-family housing developments.

### NEXT STEPS

The JPA will continue working with the stakeholder group seeking the most viable alternative.

However, it is apparent that endeavors of this magnitude will require the JPA to seek assistance. Some examples may include:

- ◆ Feasibility Studies
- ◆ Environmental Impact Studies
- ◆ Design and Construction
- ◆ Research
- ◆ Public Outreach / Community Awareness
- ◆ Federal / State Grants
- ◆ Federal / State Loans
- ◆ Financing options

## FOR MORE INFORMATION

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