

CASE STUDY

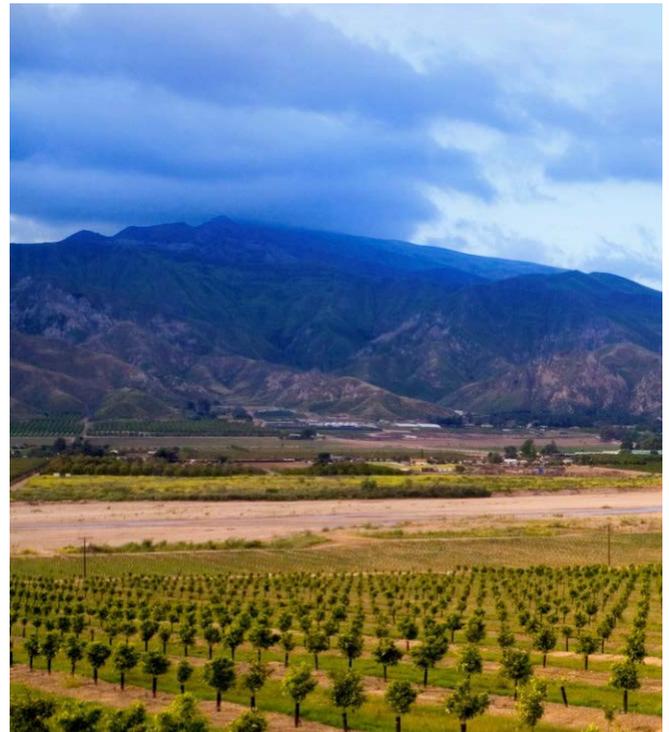
## Ventura County | Treated Wastewater as a Multi-Benefit Groundwater Sustainability Project



**Summary:** The Arroyo Las Posas, a creek in Ventura County, is a good example of a stream supported by flows from a wastewater treatment plant (WWTP). These flows are a significant factor in the basin’s water balance and support important GDEs. How this treated water is used in the future may therefore play a significant role in planning for the basin’s groundwater sustainability.

Recycled water from treated wastewater is recognized as an important source of water supply. Before proposing expensive water recycling projects though, water managers should consider the multiple benefits provided by the treated water being discharged to streams or rivers. As pressures increase to reuse this water to augment supplies, groundwater sustainability agencies (GSAs) should consider the potential negative impacts of discontinuing WWTP discharges to streams, including decreases in recharge and impacts to localized groundwater dependent ecosystems (GDEs).

**Program:** The Arroyo Las Posas is a historically ephemeral creek that has sections where it flows year round. For most of the year, the source of the surface water is from two WWTPs that discharge into the arroyo. On average, the WWTPs discharge about 9,900 acre-feet per year into the arroyo and percolate 2,300 acre-feet per year through recharge ponds adjacent to the arroyo. Currently one WWTP diverts some of its tertiary-treated wastewater for use as irrigation supply. The remaining water flows downstream at or near the surface.



Agricultural fields in Ventura County

The second WWTP discharges effluent into percolation ponds adjacent to the arroyo. The ponds recharge the shallow aquifer and provide flow to the gaining reach of the Arroyo Las Posas. As these waters flow to the west end of the basin, the groundwater also flows downward into the deeper regional aquifers, where the major regional water extraction occurs for agricultural irrigation and municipal use.

The Las Posas basin receives a significant amount of recharge from these percolating surface flows. They are an important water supply input within the water budget and are factored into calculating the basin's sustainable yield.

In addition to the recharge benefits to the regional aquifers, there is additional recharge into the shallow aquifer system that also supports a significant groundwater dependent ecosystem (GDE). GDEs are plants, animals and ecological communities that rely upon groundwater for some or all of their water needs. The Arroyo Las Posas GDE contains about 630 acres of riparian habitat along 5 miles of the Arroyo. Biological surveys have shown at least one federally endangered species, the Least Bell's Vireo, inhabits this GDE.

Considering the above factors, it is clear that the WWTP discharges into the Arroyo Las Posas have multiple benefits. If these discharges were diverted from the arroyo for a single-benefit use, the groundwater recharge and GDE benefits could be lost.

**Status:** The GMA has prepared and released a draft GSP for the Las Posas basin. The draft contains brief outlines of potential projects to help meet the plans sustainability goal. Maintaining the benefits of the existing WWTP into Arroyo Las Posas was included in the draft. The Nature Conservancy and others have commented on the importance of developing a project that will maintain these discharges indefinitely. We are working toward developing such a project now.

**Additional Resources:**

Fox Canyon Groundwater Management Agency  
<http://www.fcgma.org/>

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