

# Irvine Ranch Water District. Syphon Reservoir Recycled Water Storage Project

**IRWD. WELL GROUNDED IN WATER RELIABILITY.**



## Project Overview:

The Irvine Ranch Water District (IRWD) is in the planning stages of the Syphon Reservoir Recycled Water Storage Project. Syphon Reservoir, in the northern portion of the City of Irvine, is a 60-year-old facility historically used to store irrigation water supplies. The Syphon Reservoir Recycled Water Storage Project has two components: 1) Conversion of Syphon Reservoir to a recycled water seasonal storage facility including upgrading the reservoir to contemporary design and safety standards; and 2) Capacity augmentation to increase storage capability from its current 500 acre-feet to 5,000 acre-feet. By providing additional storage, this project will allow IRWD to recycle nearly all of the District's treated sewage flows, bolster IRWD's supply reliability, and reduce the District's dependence on imported water supplies.



Projected increase in storage capacity of Syphon Reservoir from 500 acre-feet to 5,000 acre-feet

The current 500 acre-foot Syphon Reservoir has been integrated into the IRWD recycled water system as a seasonal storage facility. The cost to upgrade the reservoir to contemporary design and safety standards and increase its current capacity to 5,000 acre-feet is estimated at approximately \$70 million (in 2014 dollars). This includes, among other things, de-silting, dam and spillway construction, upsizing onsite strainers, outlet structures and onsite appurtenances, and environmental mitigation.

The District has completed the necessary design and feasibility studies to move the project into the CEQA/NEPA stage. The next step will be to complete the required environmental compliance documents, complete the pre-design report and work with adjacent property owners to provide for environmental mitigation.



For more information please visit:

[www.irwd.com/Construction/Future Projects](http://www.irwd.com/Construction/Future%20Projects)

Call us: (949) 453-5500

## Background: IRWD's Recycled Water Program

IRWD owns and operates one of the most robust recycled water systems in the country. With over 400 miles of recycled water pipelines, 12 storage reservoirs, and almost 5,000 metered recycled water connections, the District delivers approximately 27,000 acre-feet of recycled water per year. IRWD promotes the use of recycled water for non-potable purposes by providing a 10% discount for irrigation uses and a 40% discount for industrial uses. Nearly a quarter of the District's total water demand is met through the use of recycled water.

Recycled water is used within the District's service area for:

- Landscape irrigation: 80% of all public, commercial and school landscapes are irrigated with recycled water.
- Agriculture irrigation: Including orchards and row crops.
- Commercial uses: 50 commercial buildings use recycled water for toilet/urinal flushing and in cooling towers.
- Industrial uses: Including concrete production and composting.

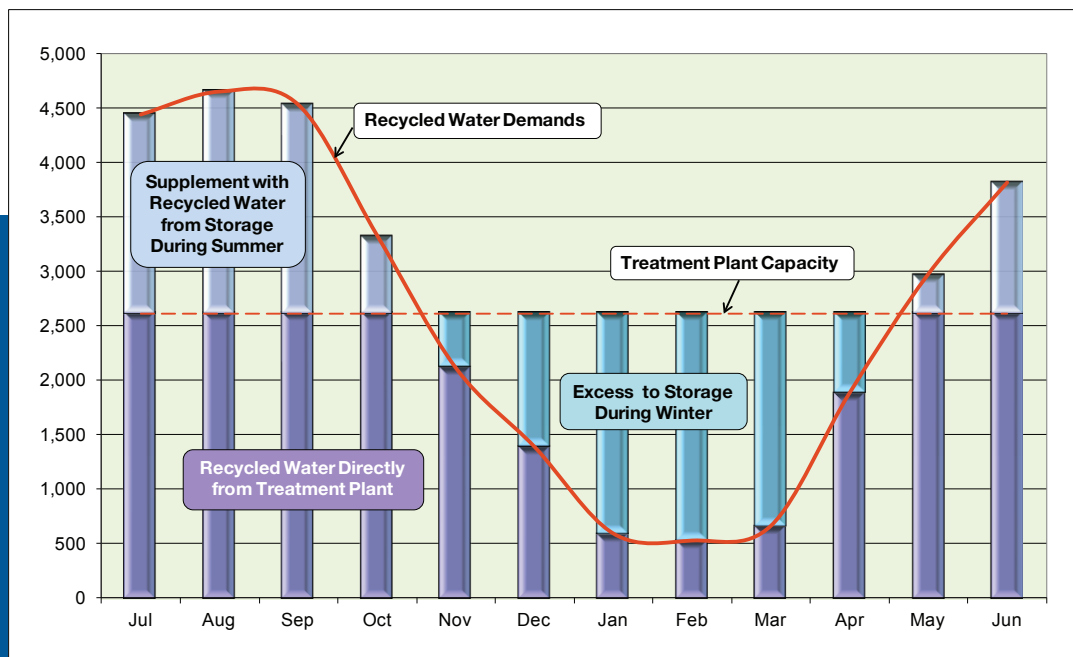
## Seasonal Storage of Recycled Water:

Each year, recycled water demands, dominated by irrigation uses, fluctuate considerably due to variations in weather patterns. IRWD's recycled water storage reservoirs allow for excess recycled water produced in the cooler and wetter winter months to be stored for use in the hotter and drier summer months when irrigation demands are higher. Without adequate seasonal storage, the excess supplies are lost to ocean disposal in the winter, and IRWD must purchase supplemental imported water to meet summer demands.

The addition of Syphon Reservoir to IRWD's existing network of seasonal recycled water storage reservoirs will allow the District to store and use 100% of its recycled water. Every gallon of recycled water used for irrigation, toilet flushing or industrial processes, saves a gallon of drinking water for potable purposes.

## IRWD Recycled Water Seasonal Supply / Demand

Graph shows average acre-feet per month



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