

Irvine Ranch Water District. Syphon Reservoir Improvement Project.

IRWD. WELL GROUNDED IN WATER RELIABILITY.



Project Overview:

The Irvine Ranch Water District (IRWD) is in the planning stages of the Syphon Reservoir Improvement Project. Syphon Reservoir, in the northern portion of the City of Irvine, is 1949 facility historically used to store irrigation water supplies. The Syphon Reservoir Improvement 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 region'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 small 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 \$72 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.

IRWD 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. This phase is scheduled to commence in 2018.



Irvine Ranch
WATER DISTRICT

For more Information please visit:
www.irwd.com/Construction/Future Projects
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 approximately 500 miles of recycled water pipelines, 12 storage reservoirs, and over 5,000 metered recycled water connections, the District delivers more than 25,000 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 year-round industrial and commercial uses. More than 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 landscape areas are irrigated with recycled water.
- Agriculture irrigation: Orchards, row crops, along with commercial nurseries.
- Commercial uses: More than 90 commercial buildings use recycled water for toilet/urinal flushing and in cooling towers.
- Industrial uses: Examples include concrete production and composting.

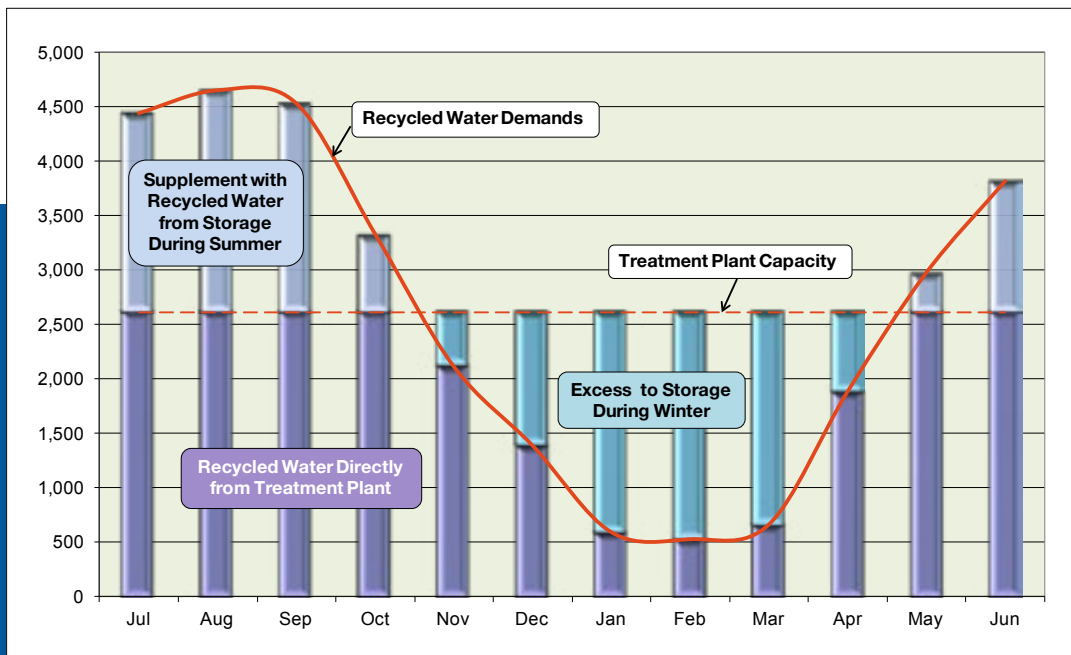
Seasonal Storage of Recycled Water:

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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