WATER RECYCLING

Helping Meet Our Water Needs

SANITATION DISTRICTS OF LOS ANGELES COUNTY

Converting Waste Into Resources

WASTEWATER TREATMENT FACILITIES

Recycled Water

The Sanitation Districts of Los Angeles County operate 11 wastewater treatment plants that serve about 5.6 million people in 78 cities and unincorporated areas within Los Angeles County. Ten water reclamation plants, stretching from the high desert to the Pacific Ocean, produce approximately 135 million gallons of recycled water each day. About two-thirds of the recycled water produced is either filtered through the soil to recharge the groundwater or utilized at more than 880 local reuse sites throughout the County.

The treated water from the Joint Water Pollution Control Plant, located in Carson, is too salty to reuse without further treatment and is currently released into the ocean. The Sanitation Districts and the Metropolitan Water District of Southern California are working together to explore purification of this treated water to create a significant new source of local water.

CONVERTING WASTE INTO RESOURCES

The Environmentally Sound and Cost-Effective Way

The Sanitation Districts have a proud tradition of providing economical, high-quality wastewater management for Los Angeles County. Since 1962, the Sanitation Districts have recycled more water than anyone else in the country. Currently, the Sanitation Districts help about 5.6 million people every day by delivering clean, recycled water throughout drought-prone Los Angeles County.

Wastewater isn't just water from toilets. It comes from many sources in the home, including washing machines, sinks, and showers, as well as from commercial and industrial processes. Our wastewater recycling system replicates natural processes to clean water in an environmentally sound and cost-effective way. These plants produce about 135 million gallons of recycled water per day, which reduces the region's dependence on imported water. The wastewater treatment process produces other important resources such as electricity and nutrient-rich soil amendments.

Follow the Flow

Home/Business | *Water Reclamation Plant* | *Water Reuse (e.g., Landscape Irrigation)*

WE TAKE OUR CUE FROM MOTHER NATURE TO CREATE CLEAN WATER

When it comes to recycling wastewater, no one is a better teacher than Mother Nature. After all, she's been doing it since the beginning of time through her own purification system, which includes lakes, streams, and rivers. The Sanitation Districts' water reclamation plants replicate what happens in nature—we just speed up the process using modern technology.

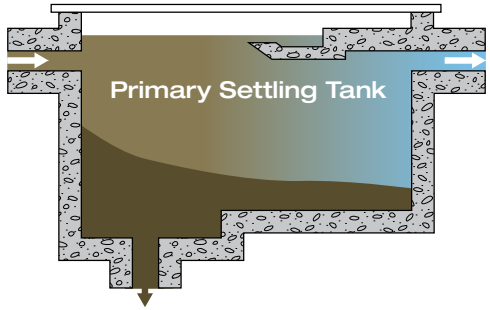
As the population grows, so does the need for sustainable sources of water. Water recycling is a tested and proven method for providing a safe and sustainable supply of water that can help to meet domestic, industrial, and environmental demands in an economical and environmentally friendly fashion.

WATER RECYCLING

It's a 3-step process

1 PRIMARY TREATMENT *Remove Large Particles*

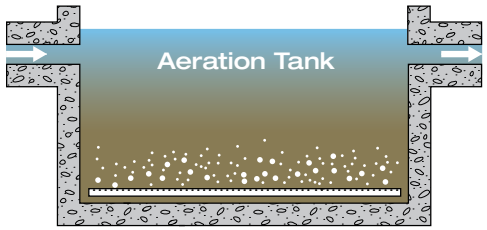
When rain runoff first enters a river, heavier solid particles settle to the bottom while lighter materials float to the top and are carried away. At a water reclamation plant, long concrete tanks mimic what nature does in the river. After the solid materials (both sinking and floating) are removed for further treatment, the remaining wastewater containing dissolved and suspended materials (mostly organic) moves to the second step of treatment.



Solid Materials Removed

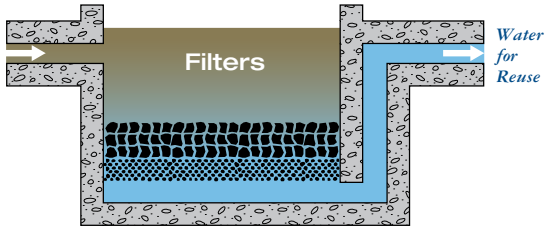
2 SECONDARY TREATMENT *Biodegrade Organic Materials*

As water in a river flows downstream, naturally occurring microorganisms feed on the dissolved and suspended organic materials while using oxygen in the water to breathe. At a water reclamation plant, the same microorganisms grow in wastewater as they feed on organic materials in these tanks, creating more microorganisms. Air is bubbled into aeration tanks to provide oxygen in support of dense microbial populations. In secondary settling tanks, the microorganisms clump together and settle to the bottom, where some are removed and the rest are recycled back to the beginning of the aeration tanks to eat more organics.



3 TERTIARY TREATMENT *Eliminate Fine Particulates*

Finally, in a river, water percolates through the soil beneath the river and joins the underground water supply. At a water reclamation plant, percolation is done through filters, which remove any remaining suspended materials from the water. The water is then disinfected and is now free of harmful bacteria and viruses. This recycled water is safe for human contact, replenishing groundwater, and a wide variety of other uses.



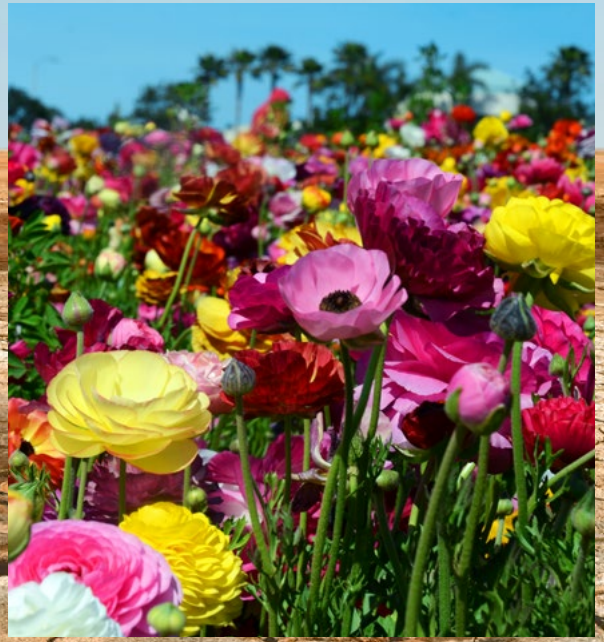
SUSTAINING OUR QUALITY OF LIFE

How Water Recycling is Changing the Face of Southern California

How did a vast and arid region the size of Los Angeles County turn into neighborhood after neighborhood of tree-lined streets, landscaped parks, swimming pools, and beautiful gardens? What allowed for booming businesses and industries to take hold and attract an ever-expanding population?

Unfortunately, the answer does not lie in an abundant supply of native water. Over the past century, Southern California has relied heavily on imported water from the Owens Valley, Northern California rivers, and the mighty Colorado River to meet our drinking water needs and support agriculture, industry and landscaping.

Water recycling plays a vital role in reducing the area's dependence on imported water that is often delivered from distant and unreliable sources. Recycling our finite water supply is a much more responsible and efficient method of quenching the thirst of arid Southern California. The Sanitation Districts provide approximately 90 million gallons per day (100,000 acre-feet per year) that is reused. More than half of that amount goes to recharging the groundwater supply. The remainder is distributed to reuse sites such as schoolyards, parks and more. Today, the Sanitation Districts are one of the top producers of beneficially reused recycled water in the United States.



THE VERSATILITY OF RECYCLED WATER

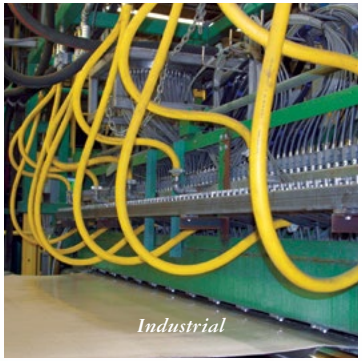
The recycled water produced by the Sanitation Districts is sold through many public and private water suppliers. A network of pumps and purple pipes delivers the recycled water throughout Los Angeles County. These colorful pipes add more than just a splash of green to the landscape. This high-quality water helps to stabilize the region's economic base and protect the environment.

WHERE DOES IT GO?

The California State Water Resources Control Board's Division of Drinking Water and local health departments oversee the distribution and use of recycled water. Approximately 50 million gallons (57,000 acre feet) of recycled water are delivered to groundwater recharge sites each day. More than 880 sites use the Sanitation Districts' recycled water–including schoolyards, nurseries, parks, golf courses, cemeteries, and sea water intrusion barriers. Other applications include freeway landscaping, agricultural irrigation, fire fighting, water supply for livestock, toilet flushing, construction grading, street cleaning, and industrial processes such as cooling towers.

FIVE EXAMPLES OF RECYCLED WATER USE


Agricultural


Industrial


Landscaping


Groundwater Recharge


Environmental

HOW DOES IT HELP?

Today, recycled water supplements existing supplies and allows local agencies to provide recycled water often at prices lower than potable water. Businesses and industries receive an affordable, dependable water supply, providing them with an incentive to remain in Southern California. This adds to a healthy economic climate. Public areas such as parks, golf courses, schools, and roadway greenbelts stay green, enhancing the quality of life for neighboring residents. Additionally, recycled water replenishes the groundwater supply, which contributes to local potable water resources. Producing water locally also helps save energy by not having to pump as much imported water over the mountains into the Los Angeles Basin. These energy savings result in less air pollution and greenhouse gas production, which may improve air quality and help everyone breathe easier.

A PROMISING FUTURE

The evolution of proper sanitary practices, including wastewater management, has virtually eliminated waterborne disease in the United States and contributed to longer life expectancy. The Sanitation Districts are at the forefront of research and technology that protect public health and the environment. Years of ongoing testing and monitoring have shown that the Sanitation Districts' tertiary-treated recycled water is virtually free of pathogenic viruses, regularly meets state and federal drinking water standards, and is so clean that it is essentially indistinguishable from tap water.

This is good news for Southern California, where the water supply must serve an increasing population. The Sanitation Districts' water recycling efforts are helping the region meet its growing needs for a safe and reliable water supply.

California Poppies

6/2018

OUR MISSION

To protect public health and the environment through innovative and cost-effective wastewater and solid waste management and, in doing so, convert waste into resources such as recycled water, energy, and recycled materials.

SanDistricts

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