

Questions & Answers about Water Recycling

Q What is Water Recycling?

A Recycled water is wastewater that has been purified through a high level of treatment. Recycled Water is treated to strict standards set by the California Department of Health Services and is constantly monitored by local, State, and Federal Regulatory agencies to ensure it continuously meets those standards. In fact, all water on earth is in some way recycled. Mother Nature has been recycling water and wastewater through a natural cleansing process of purification. Modern wastewater treatment technology essentially speeds up this natural process through sedimentation, organic consumption, natural filtration and disinfection.

Q Why is Inland Empire Utilities Agency Recycling Water?

A To protect the environment and meet local water needs. Water recycling is not a luxury but a necessity as water is a precious natural resource that is in short supply in semi-arid Southern California. There is no new water so recycled water reduces dependence on our limited water supplies helping to drought-proof the rapidly growing Inland Empire. 100 percent of IEUA's recycled water is reused. Recycled water provides a safe, cost-effective and reliable supply of high quality water.

Q Is Water Recycling a New Technology?

A No. California's first recycling project began in 1929 when the city of Pomona started using treated municipal wastewater for landscape irrigation.

Q Is Recycled Water Safe?

A Yes, recycled water is safe. Recycled water is a highly treated, filtered and disinfected product that meets criteria established by the California Department of Health Services. Recycled water is appropriate for all human contact, except drinking.

Q How is Recycled Water Treated?

A Water treatment technology has been developed to mimic nature's cleansing process. Prior to its use, recycled water undergoes four stages of purification to produce a high-quality water that meets or exceeds standards making it safe to reuse. The three different stages of purification at a water recycling plant is an accelerated and controlled version of what occurs in nature, and can be as good as or even better than the natural process. The fourth stage occurs in the soil during recharge following purification at the water recycling plant.

In the primary stage of purification, the wastewater entering a water recycling plant is collected in large tanks where settled and floatable materials are removed for further treatment and disposal. The wastewater, which still contains dissolved and suspended organic material, continues to the next stage of processing.

In the secondary stage of purification, the wastewater from the primary process is further treated in aeration tanks which contain naturally occurring microbes and enzymes that consume the dissolved and organic material that remains suspended in the water. Air is bubbled through the tanks to supply the microbes with oxygen. Following treatment, settling is used to separate these microbes from the water being treated. This highly treated water is then sent to the final process at the water recycling facility.

In the tertiary stage of purification, filtration and disinfection are conducted. Any remaining suspended solids are removed using specialized granular material or membrane filters. Similar to water plants that produce drinking water, the water in this process is fully disinfected to kill any remaining organisms in this final step of the water recycling process. Following this highly regulated, controlled, and complex purification process, the recycled water is distributed via its own dedicated pipeline system for a wide variety of reuse applications, including landscape irrigation, industrial, manufacturing and groundwater recharge.



Q Who Monitors the Safety of IEUA's Recycled Water?

A IEUA conducts daily, weekly, quarterly, and annual sampling of recycled water based on a sampling schedule as required by regulatory permits and reports the results to the California Department of Public Health and Regional Water Quality Control Board.

Q How is Recycled Water Distributed?

A Recycled water and potable water lines are kept separate. All pipes used to distribute recycled water are colored purple and labeled with the words "Recycled Water - Do Not Drink" for easy recognition. Each site using recycled water must post signs to notify the public of its use.

Q Can Recycled Water be used on Food Crops?

A Yes, tertiary treated recycled water is perfectly safe for crop irrigation.

Q Can You Eat Fish that have been Swimming in Recycled Water?

A Yes, it is perfectly safe to consume fish that swim in recycled water. Prado Lake, a popular fishing spot in the Chino area, uses IEUA's recycled water.



Q Is Recycled Water Cost-effective?

A Yes. Recycled water is cost-effective because large amounts of recycled water can be used at a relatively modest cost. Because of economies of scale, a regional water recycling project is more cost-effective than several smaller projects serving the same service area. As reliability and availability of existing local and imported water supplies decreases and the marginal cost of producing additional water increases, water recycling becomes a more cost-effective alternative for supplementing the existing water supplies.

Q Why Should My City use Recycled Water?

A Water is in short supply in California. A great deal of the State's developed water supply is transported hundreds of miles from the water-rich area of the north for use in the more populated southern cities. This long-term water import dependency, coupled with all the recent droughts, makes future water supply a vital concern to residents. The need for water is expected to grow, driven by increasing population, need for protection of the San Joaquin Sacramento River Delta, and greater industrialization. Increased conservation efforts will slow but not stop this growth in demand: THE ANSWER IS WATER RECYCLING.

KEY TERMS

ACRE FOOT

Measurement for water equaling 325,851 gallons, or to cover a football field to a depth of one foot. An acre foot of water is enough to supply the water needs of two households for one year. ■

RECYCLED WATER

Wastewater that, as a result of appropriate treatment, is suitable for subsequent beneficial use. ■

WASTEWATER

Water and wastes discharged from homes, businesses and industry to the sewer system. ■

POTABLE WATER

Water that is suitable for drinking. ■



6075 Kimball Avenue
Chino, California 91708

Phone 909.993.1600
Fax 909.993.1985

■ www.ieua.org