

RECYCLED WATER — *Ensuring a reliable water source*

Fact Sheet

Background

As drinking water continues to be a scarce resource in our state and region, EVMWD continues to expand the use of recycled water to meet the irrigation water needs of our growing community.

Through nature's cycles, all water on Earth is recycled water. But, typically, when we hear the term **recycled water**, it means wastewater that is sent from our homes and businesses through pipelines to a treatment facility where it is cleaned and safe to return to the environment.

Recycled water is the last line of defense against pollution. The sewer water arrives at the waste water treatment plant and undergoes many levels of treatment before it is released through purple pipes for landscape irrigation and as a supplemental supply for Lake Elsinore. EVMWD's highly treated recycled water has been approved by the federal government to be used for non-drinking purposes.

Importance

Recycled water is highly valuable for our community. Using precious drinking water for irrigation greatly increases demand and puts a tremendous strain on our limited water supplies, particularly during dry years. It is one of the most innovative and promising solutions to meet our region's water supply needs. It provides a health and safety conscious choice for local businesses to irrigate their landscapes without tapping into our precious drinking water supply.

Utilizing recycled water also protects our water quality and public health. Treatment of waste water protects the public from disease causing bacteria and viruses. EVMWD's treatment facility uses a state-of-art ultraviolet light system to remove germs before water is released for replenishment.

Benefits

Recycled water offers great value and benefits, while maintaining high health and safety standards for our community. It will help offset future dry spells while shoring up the reliability of our overall water supply, keeping water rates low, filling our lakes, streams and

oceans, and providing a promising water source for the future. Recycled water can be used for irrigating local parks, playgrounds, golf courses, commercial and agricultural landscapes, and maintaining stable water levels in Lake Elsinore.

Wastewater treatment process

EVMWD uses recycled water produced by Eastern MWD in the Wildomar and Summerly areas. Eastern MWD has created a wastewater treatment process that provides a reliable and safe source of recycled water supply. Sewer water carried to the wastewater treatment plant where it goes through extensive treatment processes.

The plant removes solids, pollutants, and organic matter and restores oxygen. The process is as follows:

- *Primary treatment* removes 60 percent of solids through bar screens, grit chambers and a primary sedimentation tank.
- *Secondary treatment* removes 85-90 percent of pollutants through an aeration tank and a secondary sedimentation tank.
- *Tertiary treatment* removes 99.9999 percent of germs and pathogens using disinfectants.

All tertiary treated wastewater has been approved by the state and federal government for these uses.

Challenges

The waste water treatment process does not include a step to rid the recycled water of salts. These salts are released into back into the environment and can affect the quality of our ground water and surface water supply. One way you can help is to eliminate your use of a water softener. Water softeners release high amounts of salt into sewer water and it cannot be removed during the treatment process.



How the Recycled Water Treatment Process Works

Water is used in homes and businesses and carried back to the wastewater treatment plant.



STEP 1- PRELIMINARY TREATMENT

Removing rags and debris mechanically along with inorganic materials such as grit, coffee grounds, and egg shells prevents damage to the equipment as well as the process.



SCREEN

PRIMARY CLARIFIER



STEP ONE



ACTIVATED SLUDGE PROCESS

SECONDARY CLARIFIER

STEP 2 - SECONDARY TREATMENT

Air is added to the water in the ditch to increase oxygen for germ destroying microbes, which consume any unseen organic particles. It is then sent to a clarifier where the water is separated from the organisms.



STEP TWO

TERTIARY FILTERS

Water is sent through a filtration and chemical addition process to remove any remaining particles. The water is then treated with a state-of-the-art ultraviolet light system to remove 99.999% of all germs and pathogens.

STEP THREE

STEP 3 - TERTIARY TREATMENT



DISINFECTION CONTACT CHAMBER

A WATER SOURCE CREATED

The water is now safe for outdoor uses. The recycled water can be released to a lake, river, ocean or used to irrigate local parks, median strips and other industrial sites. Recycled water is delivered through purple pipes.

