

Wastewater & recycled water facts

- 1** CVWD owns and operates five wastewater reclamation plants (WRPs) and **recycles more than 2 billion gallons of wastewater each year**, subjecting it to an advanced multi-step process that filters out solids, organic materials, chemicals and germs. 
- 2** At two of the water district's WRPs, wastewater is put through a tertiary filtration treatment process and is delivered to 21 irrigation customers. These customers include golf courses, homeowners' associations and high school athletic fields that either use it to irrigate landscaping or fill lakes and ponds.
- 3** Tertiary (third stage) treatment is an advanced, multi-step treatment process that disinfects and filters microscopic particles, organic chemicals and pathogens from the water. This treatment is performed to clean the water to a high enough quality for full-body contact and irrigation purposes, but not for consumption.
- 4** Recycled water is tested daily for coliform bacteria and must meet stringent standards for treatment and distribution set by the California Department of Health Services and the California Regional Water Quality Control Board. 
- 5** Increasing the supply and use of recycled water is a key component of CVWD's long-range water management plans. Visit www.cvwd.org for more information on long-term water management goals.

Help keep recycled water flowing

Show your support for recycled water by encouraging current users to continue the practice and new customers to come online when recycled water is available to them. The more we use recycled water for irrigation, the more high quality groundwater we can save for drinking purposes.

Be aware of what you dispose into the wastewater system. Large items flushed down the sink or toilet can result in damages and costly repairs to sewer pipelines and wastewater treatment plants. Use the trash instead. 

Scrape hardened grease into the trash can, not the sink drain or garbage disposal. Grease is a common by product of cooking with meat fats, oil, butter, margarine, lard and shortening. When it enters a home or business's plumbing system it ends up sticking to the inside of sewer pipes causing costly damage.

Properly dispose of unused prescription and over-the-counter medications at a household hazardous waste collection site or throw them away in a sealed container. Drugs should never be flushed down the sink or toilet. 

Learn more. Group tours of the district's wastewater reclamation plant in Palm Desert are available year-round upon request by calling (760) 398-2651.

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Coachella Valley Water District
www.cvwd.org
(760) 398-2651



RECYCLED WATER

A reliable source for a sustainable future



Recycled and non-potable water use continues to grow

Increased use of recycled and other nonpotable water sources helps to alleviate overdraft of the aquifer and increases the ability of water agencies such as CVWD to balance the new supply of water with demand, including that brought about by growth and development.



45 holes at one golf club and other grass areas at its HOA were added to CVWD's recycled water distribution pipeline system in 2015 and 2016.

37,759 acre-feet of nonpotable water was used in 2015, a 6% increase over 2014, making a like amount of water available for drinking and other potable purposes.



16.5 golf courses within CVWD's boundaries will be using recycled water by the end of 2016 after three more are added to the system.

30.5 golf courses will use canal water delivered directly from the canal distribution system by the end of 2016 and another 5 receive imported water via the Mid-Valley Pipeline.



52 of the **105** golf courses in the Coachella Valley within CVWD's boundaries will be using a water source other than groundwater by the end of 2016.

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Water Recycling Process

First life



Most homes and businesses are connected to a sewer collection system that takes used water from sinks, showers, toilets and appliances to one of CVWD's five wastewater reclamation plants



Step 1

Wastewater is recycled for reuse at two of CVWD's plants. When wastewater (raw sewage) enters a plant, it is first mechanically screened at the head of the plant. Large debris and inorganic material are removed from the wastewater and hauled to a landfill.

Examples of inorganic materials include rocks and sticks, paper products and jewelry. Grit sedimentation tanks are used to settle grit and sand for removal.

CVWD's wastewater reclamation plant in Palm Desert processes approximately **10 million gallons of water per day**. The current maximum capacity is 18 million gallons per day.



Step 2

The screened wastewater flows into large aeration basins where it acts as food for millions of microorganisms that absorb and digest the raw sewage. This process is called activated sludge. The activated sludge flows through a series of aeration tanks and clarifiers where the microbes (pictured below) biologically treat and clean up the wastewater.



In the clarifier, the activated sludge settles to the bottom of the tank where a portion of the sludge is pumped back into the aeration tank to keep the cycle going.

To keep the activated sludge balanced, the remaining portion of sludge is pumped to a belt press system where about 15 percent of its water is removed, which produces

a nutrient-rich organic material called biosolids. The biosolids are then transported to composting facilities to be used as fertilizer.

The clear water that is separated from the sludge in the clarifier is called secondary treated effluent.



Step 3

Secondary treated effluent flows to a tertiary filtering station where it is filtered through six feet of anthracite coal, sand and gravel.

The filtered water is then chlorinated to kill any residual bacteria. When the process is finished, the tertiary disinfected recycled water meets state regulations.

CVWD's tertiary recycled water can be used for virtually all non-potable applications and is safe for full-body contact, but is not approved for consumption.

Recycled water is so clean and clear, it is difficult to tell with the naked eye the difference between it and drinking water.



Second Life

Recycled water currently is sent through purple pipes to 21 large landscape customers, including golf courses and homeowners' associations for irrigation purposes. Using recycled water in lieu of precious groundwater helps reduce overdraft of the aquifer.

Purple is the universal color for recycled water. Purple pipes, sprinkler heads, valve boxes and signs help distinguish between potable and non-potable water lines.

