

From your drains & showers ...



First life

Most homes and businesses are hooked up to a sewer system that takes used water from sinks, showers, toilets and appliances to one of CVWD's six Wastewater Reclamation Plants (WRPs).



Step 1

Wastewater is recycled for reuse at three of CVWD's plants. When wastewater enters a plant, it is first mechanically screened at the "Headworks." Any large items are taken out of the wastewater and hauled by dump truck to a landfill. Examples of screened items that arrive at the WRP include coins, sticks and jewelry. Sedimentation tanks are used to capture sand and other gritty solids.



Step 2

The screened wastewater is sent to large aeration basins where it acts as the food for trillions of bacteria that break down and digest the sewage. This process creates a sludge that settles to the bottom of a clarification tank. The sludge is sucked off the bottom and sent to a belt press that presses all the water out of it. The dry sludge, also called biosolids, is hauled by dump trucks to mulching companies to create fertilizer. The clear water that is separated from the sludge in the clarification tank is called secondary effluent.



Clarification tank

Step 3

The water is then sent to a filtering station where it is filtered through 13 feet of activated charcoal, 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 and requirements and is only one step below drinking water standards. Tertiary recycled water can be used for virtually all non-potable applications and is safe for full human contact, but can't be consumed. Recycled water is so clear and odorless, it's hard to tell with the naked eye the difference between it and drinking water.



... to their terrain & flowers

Second life

Recycled water currently is sent to 15 large customers, including golf courses and homeowners' associations for irrigating landscaping. The recycled water is used in lieu of precious groundwater.



Clean, clear and odorless recycled water is sent through purple pipes to golf courses and green belts to irrigate grass and trees throughout the Coachella Valley.



Highly trained employees perform on-site testing of treated wastewater on a daily basis to ensure compliance with state regulations.

About CVWD

■ CVWD recognizes the importance of water recycling as one way to conserve potable water, protect the aquifer and reverse its overdraft.

■ CVWD is more than a wastewater agency. The district imports and provides domestic and irrigation water, provides stormwater/flood protection, manages the groundwater supply and promotes water conservation through public education and incentive programs.

■ The water district provides domestic water to more than 103,000 residential and business accounts and sanitation service to more than 95,000 accounts throughout a 1,000 square-mile service area.

■ All the valley's drinking water comes from an underground aquifer that produces pristine water. Most farmers in the east valley irrigate crops with Colorado River water imported by the Coachella Canal, an off-shoot of the All-American Canal. Golf courses, depending on their location, use either of these sources or recycled water from one of our Wastewater Reclamation Plants.

■ The district's entitlement of State Water Project is traded with Metropolitan Water District (MWD) of Southern California for an equal amount of Colorado River water released from the Colorado Aqueduct near Windy Point. The water is routed to percolation ponds to recharge the aquifer and help replace what is taken out.



Palm Desert High School irrigates its football field with recycled water.

What You Can Do to Help

■ Residents who care about the valley's long-term drinking water supply should show their support for the use of recycled water by encouraging current users to continue the practice and new customers to come online when recycled water is made available. The more we utilize recycled water for irrigation, the more high quality aquifer water available for drinking purposes.

■ Coachella Valley residents should be aware of what they are putting into the wastewater system. Large items flushed down the sink or toilet can result in the need for costly repairs at the Wastewater Reclamation Plant. Use the trash instead.

■ Unused prescription and over-the-counter medications also should not be flushed down the sink or toilet. Properly dispose of them at a household hazardous waste collection site or throw them away in a sealed container.



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The Wonder of Water Recycling



Facts & Figures

■ Coachella Valley Water District (CVWD) owns and operates six Wastewater Reclamation Plants (WRPs) that receive a combined average of 18 million gallons of wastewater per day. The amount is lower in the summer months when the valley's population decreases.

■ Tertiary treatment is an advanced, multi-step process that filters out solids, organic materials, chemicals and germs to make wastewater of high enough quality for human contact, groundwater replenishment and irrigation purposes, but not human consumption.

■ At two of the water district's WRPs, wastewater is put through this tertiary treatment process and, as of March 2007, sent to 15 large customers. These customers include golf courses, homeowners' associations and a high school that use it to irrigate landscaping and fill lakes and ponds.



■ While CVWD currently has no agricultural customers for recycled water, it is a common practice statewide.

■ 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.

■ CVWD's \$70 million Mid-Valley Pipeline Project will deliver Colorado River water to the Palm Desert WRP, supplementing the existing supply of recycled water to meet the needs of 50 golf courses. These golf courses mostly use groundwater, so converting them to the new mixture would significantly reduce demand on our precious aquifer, making more of our groundwater available for drinking. Construction of the first phase of this project is scheduled to start in Spring 2007.



■ Bus loads of school children, civic groups and water industry professionals tour the Palm Desert WRP each year to learn about the wastewater recycling process.

For More Information

CVWD produces a number of educational brochures and videos about the history of water in the desert, the water delivery system, water conservation and more. To request any of the items listed below, learn about scheduling a group tour of the Wastewater Reclamation Plant or request a speaker for your group event, call (760) 398-2651 ext. 2549.

■ *Water Vision* is a free DVD detailing the history of water in the Coachella Valley, including the formation of the Salton Sea and the Coachella Valley Water District.

■ *Water and the Coachella Valley* is a free, 32-page brochure providing an overview of the district's various fields of service including water delivery, wastewater reclamation and groundwater management. It also outlines the valley's water sources, including the aquifer, Coachella Canal and State Water Project entitlement.

■ The *Annual Review* is a free, 24-page report to water users and registered voters about the district's important activities, financial statements and the Water Quality Report.

■ *Lush & Efficient Landscape Gardening in the Coachella Valley* is a 160-page, full-color book on water-efficient landscaping and proper irrigation. Hundreds of plants are described. An interactive CD-ROM on landscape design is included. Cost is \$15.