



# Monterey Peninsula Groundwater Replenishment Project

*Providing A Safe And Sustainable Water Supply*

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## MRWPCA'S RECYCLED WATER PROJECTS AGRICULTURE, URBAN REUSE AND GROUNDWATER REPLENISHMENT

### BACKGROUND

The Monterey Regional Water Pollution Control Agency (MRWPCA), like many other agencies in California, is studying ways to fully reuse its wastewater. Wastewater can be treated and used as a sustainable, local replacement water resource that helps conserve drinking water supplies. MRWPCA currently operates a water recycling treatment plant that generates an average of 21 million gallons per day during peak irrigation months. Recycled water is currently used for agriculture, and the Agency is pursuing other uses, as the water is too valuable a resource to waste.

Northern Monterey County needs additional safe, high-quality and dependable water supplies just to sustain its diverse population and economy. The region's existing water supply comes from local groundwater and surface water. Currently, Monterey County's coastal aquifers are over drafted – meaning that more water is being taken out than can be replenished by nature. In 2006, the main aquifer in the Seaside area was adjudicated. This designation mandates that new sources of water must be developed by 2009, or water rationing will be instituted in 10 per cent increments every three years. Because of the adjudication decree, the Monterey Peninsula needs to find new sources of water in the very near future.

Reuse of treated wastewater, called recycled water, is common in many California communities. Recycled water is approved for use in the following ways:

- Landscape irrigation of golf courses, parks, private yards, school grounds, highway median strips and greenbelts
- Industrial processing such as for cooling towers, boiler feed water, concrete batching plants and carpet manufacturing
- Agricultural irrigation of food crops and other crops
- Groundwater replenishment of aquifers
- Recreational impoundments such as lakes and reservoirs

### PROJECT DESCRIPTIONS

#### **Agricultural Reuse**

In the early 1990s, MRWPCA, in partnership with the Monterey County Water Resources Agency, embarked on an ambitious program to supply recycled water for agricultural crops. In northern Monterey County, the Salinas Valley aquifer that provides potable water was suffering from extensive seawater intrusion. The salinity of the water threatened to harm crops and the agricultural economy. The recycled water replaced the groundwater and is of such high quality that it is safe for irrigating food crops that are eaten raw. MRWPCA's agricultural program is world renowned because of its success and value to the agricultural economy due to the water's safety and the quality of crops produced.

#### **Urban Reuse Project**

The Urban Reuse Project, in partnership with the Marina Coast Water District, is being developed for landscape irrigation – golf courses, parks and playfields, new residential developments and greenbelts areas. Currently, the pipelines for the Urban Reuse Project are designed and ready for construction. Recycled water will be available for many areas around Marina, Seaside and Del Rey Oaks in the near future.

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## Groundwater Replenishment

A Monterey Peninsula Groundwater Replenishment Project is in the planning stages. Recycled water will be further purified using advanced treatment processes. This water would then be discharged where it percolates or filters through the soil naturally into the aquifer, just like rainwater. This process “recharges” or helps replenish the aquifer while safeguarding the water quality from seawater intrusion. Advanced treatment processes including microfiltration, reverse osmosis and ultraviolet disinfection with peroxide would be utilized. These processes have been commonly used in numerous industries including baby food and bottled water.

The California Department of Public Health, Monterey County Environmental Health, and the Regional Water Quality Control Board strictly monitor and regulate agricultural irrigation, landscape irrigation and groundwater replenishment. The regulations and monitoring requirements fully protect the public’s health and safety as well as the environment. In addition, a special advisory panel of experts is independently reviewing the Groundwater Replenishment Project.

Groundwater replenishment is used in many places around the world. As an example, Orange County California has operated a groundwater replenishment project since 1971. In this case, highly treated recycled water is used to prevent seawater intrusion into its aquifer by recharging it. Orange County has expanded its groundwater project so that it is providing 72,000 acre feet of drinking water per year.

## SUMMARY

MRWPCA’s Agricultural, Urban Reuse and Groundwater Replenishment projects are smart choices for Monterey County. Recycling water provides reuse of a local, sustainable, and drought-resistant resource that is too valuable to be discharged into the ocean. These projects will help reduce seawater intrusion into our aquifers and conserve drinking water for residents and businesses. Using recycled water compared to other new water projects, such as desalination, is smart because recycled water production is cost effective and energy efficient. This project will also help the Monterey Peninsula

## MRWPCA PROJECT MILESTONES FOR 2009:

- Continue providing high-quality recycled water for agriculture. This is the tenth year of operation. Over 30 *billion* gallons of water have been produced.
- Urban Reuse will be ready to bid construction in spring 2009. MRWPCA has applied for federal stimulus money for funding.
- Continued planning for the Groundwater Replenishment Project including:
  - Preparation of feasibility studies and modeling of the recharge site,
  - Coordination of meetings with regulatory agencies to determine permitting requirements,
  - Initiation of further engineering and environmental studies,
  - Exploration of research grant and loan funding opportunities, and
  - Implementation of a public information program about the reuse projects.

For more information contact:



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