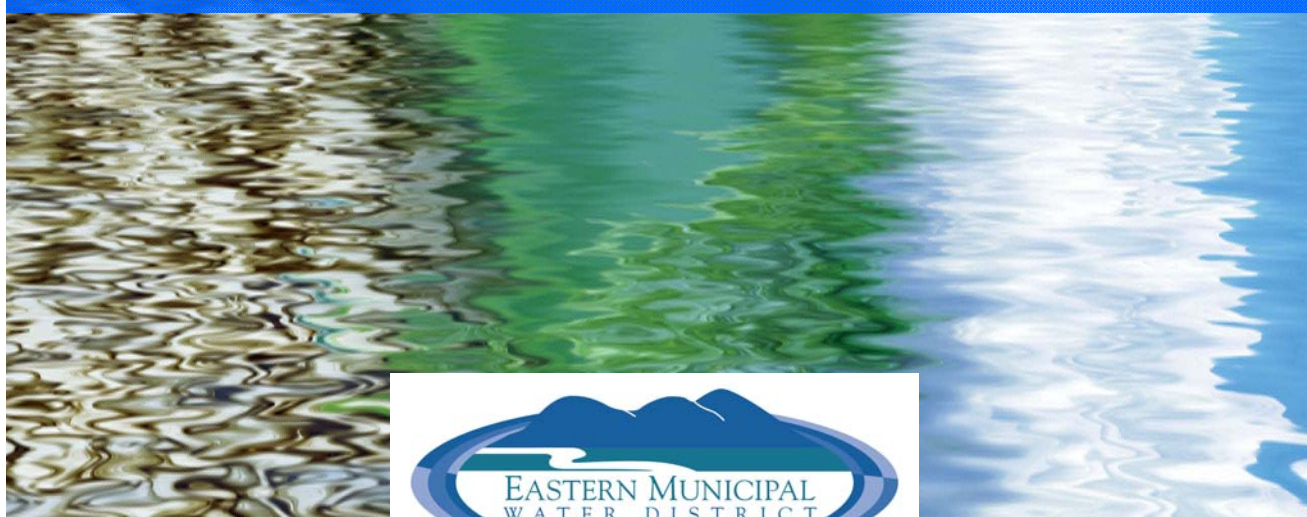




Maximizing EMWD's Resources



Eastern Municipal Water District



www.emwd.org

Maximizing EMWD's Resources

in design to process 24 mgd. It treats raw water from the Colorado River and from State project water to produce potable water. The Hemet ultra-filtration facility treats State project water at 12 mgd. They both are state-of-the-art facilities using reverse osmosis and ultra violet.

Groundwater: EMWD was among the first in the state in 1995 to have a comprehensive groundwater management plan under AB3030. The plan addresses issues and resolutions for such issues as managing overdraft and salinity. They are also working to implement the Hemet/San Jacinto Plan.

Integrated Recharge and Recovery Program: This is designed to mitigate overdraft and provide supplies to meet future water demands and enhance groundwater basins in the Hemet/San Jacinto area. Four agencies participate – City of Hemet, City of San Jacinto, Lake Hemet Municipal Water District, and EMWD.

Desalination: The Menifee and Perris I Desalination Plants convert salty, non-consumable groundwater into potable water, using a reverse osmosis process. More importantly, desalination protects higher quality groundwater nearby by keeping brackish water from intruding. The desalters also remove waste brine from the commercial and industrial operations. A third desalter, Perris II, is in design.

Wastewater: EMWD treats and recycles effluent from four wastewater treatment plants. With a capacity of 56 mgd, the plants typically treat approximately 45 mgd.

Recycled water: EMWD is one of the largest recycled water providers in California. This supply is sold to the California Department of Fish and Game, to agriculture, for golf course irrigation, and schools to reduce the demands for potable water. The Inland Empire Energy Center uses up to 5,000 acre feet per year. Recycled water retrofits of recycled water are being investigated where feasible to further reduce potable water use.

Water Harvesting: Construction has been completed to use an old MWD reservoir to capture water from Riverside County Flood Control and the Water Conservation District storm drains.

Water Diversion: Water is diverted, when available, at

*Below/Recycled water irrigation
Bottom/San Jacinto River water diversions*



Grant Avenue in the San Jacinto Valley. This enhances ground water percolation by not allowing water to run down the river. The area totals 60 acres of storage ponds, but are not true recharge facilities.

Conservation: EMWD is a charter signatory agency of the California Urban Water Conservation Council, which coordinates Best Management Water Conservation Practices. Ongoing residential water conservation programs, such as free home water surveys, and water efficiency devices help rate payers save water and money.

Tiered rates and water budgets were implemented to encourage water efficiency. Also, a drought-tolerant garden at the District headquarters helps to illustrate appropriate plants and materials in landscaping.

Maximizing EMWD's Resources

Fuel cells using digester gas at Moreno Valley Regional Water Reclamation Facility



Other Resources

People: A philosophy of continuous process improvement uses the criteria of the National Malcolm Baldrige Award. In 2007, EMWD was the first public utility to receive the silver-level California Award for Performance Excellence (CAPE).

Employee turnover rate is among the lowest in the nation, attributed in part to the policy of educating, training, and promoting from within and favorable relationships between management and the labor union – which represents 80% of EMWD's employees.

EMWD was the first public agency to receive Cal/STAR recognition from California's Division of Occupational Safety and Health (Cal/OSHA) for excellence in its job-related safety record.

Biosolids: Solids resulting from wastewater treatment are removed and digested to produce energy, with the remaining residual delivered offsite. Currently, EMWD is evaluating biosolid dryer facilities at two of the four District reclamation plants to create Class A beneficial soil amendment. The rest will be land applied as Class B material in Arizona.

Power: EMWD can generate between 12% - 15% of its peak electrical energy requirements. As an example, the District recently completed installing a 750-kilowatt (kw) digester gas fuel cell at its Moreno Valley Water Reclamation Facility. The fuel cell, which operates on renewable fuel, provides about 40% of that facility's energy requirements and produces virtually zero emissions.

EMWD received grant funding from the South Coast Air Quality Management District (SCAQMD) for nine 60-kw

micro turbines. They are located at the headquarters and recover waste heat to convert to chilled air for the air conditioning system. Two 30-kilowatt micro turbines have also been received from SCAQMD

Technology: Using the most appropriate technology, many facilities are managed remotely through a 24-hour/day Supervisory Control and Data Acquisition System (SCADA). Geographical Information Systems (GIS) provides precise mapping of the District's water systems.

Decerto Water Optimization Software saves energy by using reservoir levels, water demands, system pressures and supply constraints to determine optimal schedules for operating pumps.

Wetlands: As a steward of the environment, EMWD converted nearly 60 acres of property into wetlands adjacent to one of its water reclamation facilities. Originally, this provided additional treatment to secondary treated water. This project creates a lush habitat for over 120 species of birds. Thousands of students visit the wetlands education center each year.

Education: Reaching over 65,000 students a year, the water education program instills a conservation mindset among youth. This award-winning program offers facilities tours, a theater production, free water education materials, a poster contest and a literacy awareness contest.

Grants: Since 2001, EMWD has been awarded \$50 million in grant funding from the US Bureau of Reclamation, California Energy Commission, Environmental Protection Agency; State Bond Funds, and SCAQMD. In addition, \$85 million in low interest loans from the State Water Resources Control Board have been received, with another \$46 million approved. These grants and loans have helped fund wetlands modifications, alternative energy, water management and development, feasibility studies, regulatory compliance projects, and recycled water infrastructure. EMWD continues to actively pursue grants and loans.

Finances: EMWD has \$2.3 billion in assets and an annual operating budget of \$217 million. EMWD maintains an "AA" rating from each of the major rating agencies: Moody's, Standard & Poor's and Fitch.