

notes from the underground

ASSOCIATION OF GROUND WATER AGENCIES NEWSLETTER Fall 2005



Local Water Project Will Benefit Foothill Region

Numerous Southern California water agencies, municipalities and AGWA member agencies are collaborating to develop water supply enhancement projects that will provide huge benefits to the entire San Gabriel Mountain foothill region.

From as far as La Canada Flintridge in the west to Rancho Cucamonga/Fontana in the east and Alhambra, Monterey Park and Chino/Chino Hills in the south, the Southern California Foothill Communities Water Supply Reliability Program (WSRP) will be constructed and operated cooperatively to bring surplus seasonal water into local groundwater basins, replenish

diminished supplies, utilize available groundwater storage and enhance

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the efficiency and reliability of regional raw water delivery systems.

Specific study projects will include:

- A Reconnaissance and Feasibility Study of local storm runoff recharge enhancement opportunities.

- Emergency interconnections from the San Gabriel Valley Municipal Water District (SGVMWD) pipeline to several treatment plants in the eastern San Gabriel Valley and Inland Empire.
- An interconnection between the Metropolitan Water District Foothill Feeder to the SGVMWD pipeline in the San Dimas/Laverne area.
- A raw water pipeline from the San Gabriel River to spreading facilities within the Raymond Basin.

A target authorization of \$50 million is sought for planning, design and construction of groundwater quality and supply projects throughout the San Gabriel Mountain foothill region,
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OCWD

Taps Into Excess Water Supplies

One of the wettest winters on record has created a unique opportunity for Southern California—where to store all the water?

Under a program adopted recently by Metropolitan Water District's board of directors, local agencies will be offered additional financial incentives to store available water supplies in Southern California reservoirs and groundwater basins.

Under the approved program, AGWA member agency the Orange County Water District (OCWD) and county imported water provider the Municipal Water District of Orange County will be the first two agencies to take advantage of discounted rates to purchase and store water in fiscal year 2005-06.

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Foothill Project

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including the Six Basins, Chino, San Gabriel and Raymond groundwater basins, projected over a 15-year planning period.

An appropriation to provide for concurrent funding in FY 2006 in the amount of \$500,000 is sought for Phase 1 of the project. This would include the preparation of a WSRP report aimed at identifying programs and projects to be completed within a 15-year program period. An additional appropriation of \$250,000 will be sought in FY 2007 to complete analysis and study work. Future cost sharing ratios under the program would be assumed at 65 percent federal and 35 percent local for planning, design and construction.

HR 2864, which was received in the Senate in July 2005, authorizes \$5 million for the program. This authorization will help facilitate the planning and construction of the program's components.

Agencies participating in the program and serving the foothill communities include:

- Raymond Basin Management Board
- San Gabriel Valley Water Association
- Main San Gabriel Basin Watermaster
- Chino Basin Watermaster
- Foothill Municipal Water District
- City of Pasadena
- Upper San Gabriel Valley Municipal Water District
- Three Valleys Municipal Water District
- Inland Empire Utilities Agency
- San Gabriel Valley Municipal Water District

For more information on the WSRP, please contact Tony Zampiello, Main San Gabriel/Raymond Basin Watermaster, at tonyz@watermaster.org.

Excess Water Supplies

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Philip L. Anthony, president of OCWD's board of directors, said, "We're pleased that Metropolitan has developed a program that allows storage of surplus water supplies in Southern California groundwater basins and reservoirs. In future emergencies and droughts, the entire region will benefit by having these supplies stored in our own backyard."

Orange County Water District officials say the program provides

driving down demands for MWD's imported supplies.

In addition, rain and snow-pack levels were above average in the Feather River and southern Sierra watersheds of the State Water Project, as well as the Colorado River system. As a result, the Metropolitan's state project water allocation has been set at 90 percent, and the district's Colorado River supplies are higher than anticipated.

"We're pleased that Metropolitan has developed a program that allows storage of surplus water supplies in Southern California groundwater basins and reservoirs."

many benefits, including allowing the district to further refill the groundwater basin, pre-delivering water to the basin, self-financing the program cost (through future 'excess' water sales that cover the carrying cost of purchasing the water), maximizing the district's in-lieu capabilities and allowing water to be stored in Southern California rather than outside the region.

Metropolitan expects to execute similar agreements with other MWD member public agencies to store as much as 50,000 acre-feet in local reservoirs and groundwater basins in 2005-06.

Dennis Underwood, Metropolitan's chief executive officer/general manager, noted that calendar year 2005 is the second wettest on record in Southern California,

"To take advantage of these abundant supplies, we've capitalized on all of our existing storage options inside and outside our service area," Underwood said. "This new program allows us to creatively supplement storage accounts in Southern California to ensure we make the most of all the available water this year."

The program will offer MWD's member agencies a discounted rate to purchase and store additional supplies from Metropolitan, above what the agency had already planned to store this year. The water, which would be stored for up to six years, would be made available at Metropolitan's call.

For more information about the in-lieu program, visit Metropolitan's Web site at www.mwdh2o.com.

Bunker Hill Groundwater Levels Challenge SBVWCD

Managing groundwater levels in the Bunker Hill Basin poses a particular challenge to AGWA member agency the San Bernardino Valley Water Conservation District (SBVWCD). Groundwater in this basin tends to flow from east to west. During dry years, when recharge of the basin decreases, this flow magnifies the effects of pumping at the east end of the valley, and groundwater levels can drop precipitously.

District recharge in the Bunker Hill area becomes critical as a result of east/west flow and dropping groundwater levels. At the same time, groundwater pools behind the San Jacinto Fault to the west—a natural barrier to groundwater flow—and rises up beneath the city of San Bernardino in an area called “The Pressure Zone.” Sustainable groundwater levels in the basin require recharge in the east and additional pumping in the west.

The district is participating in a multi-agency program called the Pilot Dewatering Project, designed to pump low-quality water out of the Pressure Zone and send it downstream. Such efforts allow the district to continue recharging the basin with high-quality native water—benefiting both water supply and water quality in the region.

For more information, log on to SBVWCD's Web site at www.sbvwcd.com

News Drops

- Orange County Sanitation District's general manager, Blake Anderson, has resigned and is receiving six months of severance pay, the district's board decided on October 26. The board members met in closed session, then announced that he would be out effective November 1. Anderson's judgment came into question after he hired Dharma Consulting for \$180,000 a year. The company, first hired in 2002, is known for bringing a spiritual dimension to business and was paid a total of \$400,000. The contract was severed after it was reported in *The Orange County Register*. The district's director of technical services, Bob Ghirelli, was named acting general manager.
- Governor Arnold Schwarzenegger announced on October 14 the appointment of six individuals to the Regional Water Quality Control Boards. The nominees are from a variety of backgrounds. All nominations require confirmation by the Senate and are compensated \$100 per diem. Included among the nominations are former Department of Water Resources Director Linda Adams and Dick Richardson of United Water Conservation District.
- The State Water Resources Control Board announced that it has resumed offering new loans from the State Revolving Fund program. The program makes low-interest loans to communities throughout California to improve wastewater treatment and recycling systems, to correct nonpoint source pollution and to carry out programs that enhance estuaries. The board approved the sale of \$300 million in revenue bonds in September to provide funding for additional loans. These funds, along with existing loan repayments and federal grants, will be used to provide low-interest loans. More information about the SRF Program, and the board's other financial assistance programs, can be found at: <http://www.waterboards.ca.gov/funding/index.html>

Save The Date

AGWA Conference Monday February 6th, 2006

“Hydrologic, Environmental and Legislative Challenges to Southern California's Present and Future Managed Aquifer Recharge Programs”

Association of Ground Water Agencies
American Ground Water Trust

A one-day program—Ontario, California

Details will be posted at: www.agwt.org (conferences)
and at www.agwa.org (calendar)



House Approves Bill To Protect Local Water Quality

HR 177 Expands Local Desalination Project and Increases Federal Authorization Amount for Groundwater Replenishment System

To help supplement Southern California's water resources and provide water diversity throughout the region, the House of Representatives unanimously approved HR 177 on Tuesday, Oct. 18, 2005. The bill, sponsored by Congressman Gary Miller (R-Brea), will authorize the federal government to spend \$153.9 million to naturally improve water quality in the Santa Ana River and increase the region's water supply by 65.2 billion gallons per year.

"The Orange County Water District (OCWD) and the Inland Empire Utilities Agency (IEUA) are very pleased with Congressman Miller's bill, HR 177, and what it will mean to our future water supplies," stated Phil Anthony, AGWA member agency OCWD's board president. "Southern California is projected to grow rapidly over the next few years and the need for a new local supply of water will provide reliability and water diversity to communities in the Inland Empire and Orange County."

Specifically, HR 177 includes the following:

- **Wetlands Development in the Prado Basin.** HR 177 authorizes the federal government to spend \$20 million to develop wetlands along the Santa Ana River in the Prado Basin, creating an expanded natural treatment system to purify the river before it replenishes Orange County's groundwater supplies.
- **Expanded Groundwater Desalination in the Chino Basin.** HR 177 authorizes \$50 million to increase groundwater desalination in the Chino Basin from the current 9,000 acre-feet per year to 40,000 acre-feet per year, which would provide a new fresh drinking water supply for Jurupa Community Services District, Santa Ana Mutual Water Company in Riverside County, and the cities of Norco, Chino, Chino Hills and Ontario in San Bernardino County.
- **Regional Brine Lines Construction.** HR 177 authorizes \$40 million to safely and efficiently discard excess saltwater, also known as brine, from nearby desali-

nation plants by constructing a new pipeline to the Pacific Ocean. This will ensure salt water does not contaminate fresh groundwater supplies.

- **Continued Federal Support of the Orange County Groundwater Replenishment (GWR) System.** HR 177 authorizes \$51.8 million, up from the current level of \$20 million, to continue federal support of the GWR System. The GWR System is a wastewater reclamation project that will be the nation's largest indirect potable reuse project using membrane purification. The purification process will use microfiltration, reverse osmosis and ultraviolet disinfection to produce 70 million gallons of purified water per day to be put into the local groundwater basin.
- **Establishment of a Center for Technological Advancement of Membrane Technology and Education.** HR 177 authorizes \$12 million to build an advanced water filtration technologies research center to find better, more cost-effective approaches to water purification. The proposed location of the center is Fountain Valley, Calif.



Congressman Gary Miller

OCWD Board President Phil Anthony said, "We would like to thank the entire Orange County delegation led by Congressman Gary Miller for all their hard work and dedication to ensure that our community secures a reliable source of water for today and for the future."

IEUA Board President John Anderson said, "Congressmen Gary Miller and Ken Calvert have done a wonderful job of supporting the efforts to expand our local water supplies and assist in protecting the water quality of the Santa Ana River. Their leadership and

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WRD Tests New Seawall Building Method Underground Seawalls Would Protect Drinking Water

AGWA member agency The Water Replenishment District of Southern California (WRD) has test-activated a deep earth machine in Long Beach that demonstrates a potential new method of creating “underground seawalls” to prevent seawater from contaminating local drinking groundwater sources. The underground seawalls could help save millions of gallons of water currently being lost to the ocean.

“Given the dire state of the Colorado River and the eroding levees in the San Francisco/San Joaquin Bay-Delta, the source for a high percentage of Southern California’s water, we have to find ways to save water rather than using it to push out seawater. Lake Powell along the Colorado River, for example, is not likely to be refilled during our lifetime,” said climatologist Dr. William Patzert of Jet Propulsion Laboratories in Pasadena, who was present during the project demonstration. “Otherwise, if our imported sources fail us, our local groundwater that provides 40 percent of our supplies will be vulnerable, too.”


Current methods for stopping seawater intrusion into drinking water supplies under the ground involve “injecting” millions of gallons of water into the earth to create repelling pressure against the sea. Ten percent of the “injected” water is lost and it could take up to four gallons of fresh water to push away one gallon of seawater. The \$1 million pilot project to construct a seawall with use of the Deep Earth Machine (DEM) is co-funded by the federal Bureau of Reclamation and involves the cooperation of the City of Long Beach, AGWA member agency the Orange County Water District, and the Los Angeles County Department of Public Works.

The DEM was invented in Japan and has been used to block seepage of water around building foundations and to block contaminants from reaching aquifers. It has never been used to block seawater from intruding into freshwater aquifers. The machine operates by recombining soil 100 feet in the ground, building a “seawater wall.”

“Call it climate change or drought, when you are running out of water after failing to act, anyone would

call standing still irresponsible,” stated WRD Board President Willard H. Murray, Jr. “Given the certainty of uncertainty, we must have all the tools available in our arsenal to protect the groundwater we have. We can’t afford losing it to the ocean no matter what the cause.”

“We can no longer act like Southern California and Northern California do not share equal water supply challenges,” said WRD director Pat Acosta who represents Southern California on the state and federally appointed Bay-Delta Advisory Board. “The ocean affects our groundwater basins and its impact on the Bay-Delta and its levees is becoming something of which the public should be aware.”

Hayward Baker has been contracted for testing the seawall technology. Two small subsurface cutoff wall test cells will be installed and tested on the Pacific Terminals, LLC (parent company for Pacific Energy) property at the corner of Studebaker and Second Streets in Long Beach. Pacific Terminals, LLC is contributing to this project by allowing test cell construction on their property at no cost. 

HR 177 *Continued from page 4*

assistance on congressional authorization for these very important projects will provide significant environmental benefits.”

Chino Basin Watermaster chief executive officer Ken Manning stated, “The Chino Basin Watermaster is very appreciative of the efforts of our congressional delegation to help drought-proof the Santa Ana Watershed and the Chino groundwater basin. These projects are very important to increasing our local drinking water supplies

and enhancing the water quality of the Santa Ana River.”

Carole McGreevey, secretary to the Chino Desalter Authority, said, “The Chino Desalting Authority is very pleased with the efforts of Congressman Gary Miller. These funds will be used to expand the existing Chino 1 and 2 desalters and potentially a new Chino 3 desalter that will be the key new water supply for the cities of Chino, Norco, Chino Hills, Ontario and the Jurupa Community Service District.” 