

# notes from the underground

ASSOCIATION OF GROUND WATER AGENCIES NEWSLETTER Winter 2006



## Perris Valley Pipeline Improves Regional Reliability

By John Rossi

**A** GWA member agencies Western Municipal Water District and Eastern Municipal Water District, along with Metropolitan Water District, are jointly cooperating to build the Perris Valley Pipeline, a six and one-half mile, 96-inch diameter pipeline that will improve water reliability in western Riverside County by providing up to 150 million gallons per day of water to the region.

The Metropolitan Water District's Henry J. Mills Treatment Plant lies within Western's district boundaries and treats water from the State Water Project that is then delivered to both Western and Eastern. The plant has additional treatment capacity available, and the Perris Valley Pipeline is designed to take advantage of that by adding delivery capacity. Ultimate project beneficiaries include the City of Riverside, March Air Reserve Base, the March Joint Powers Authority, the City of Moreno Valley, the City of Perris, Sun City and Menifee.


The first leg of project construction will occur on Alessandro Boulevard, east to the 215 freeway, a major north/south arterial for commuter traffic in Riverside. All three agencies are working closely with the community to create awareness about the project, and they have pledged to work to minimize traffic and noise impact and



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to address concerns in a timely fashion. To that end, the districts currently are making presentations to the Chambers of Commerce in both Riverside and Moreno Valley and are planning other outreach activities such as a project web site and an open house.

Project cost is estimated at \$80 million, and construction is expected to begin this spring with the initial water deliveries into Eastern's service area this summer. The balance of the pipeline project will be completed by mid-2007. Concurrent with the Perris Valley Pipeline Project, Western is expanding its Alessandro Pump Station at the Mills Plant, with two 500-horsepower pumps that will add 26-cubic feet per second of pumping capacity. The expansion will cost \$7.5 million.

Western Municipal Water District provides water supply, wastewater disposal, and water resource management to the public in a safe, reliable, environmentally sensitive and financially responsible manner. To view the project's EIR or executive summary, please visit Western's Web site at [www.wmwd.com](http://www.wmwd.com). 

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## Pasadena Progresses In Cleaning Up Perchlorate

**A** GWA member the Raymond Basin Management Board (RBMB) and Pasadena Water and Power (PWP) are steps closer to restoring the operations of four City of Pasadena wells that were shut down in 2002 due to high levels of perchlorate.

The four wells extract groundwater from the Monk Hill Sub-basin of the Raymond Basin and are located in the Arroyo Seco, adjacent to the 176-acre Jet Propulsion Laboratory (JPL) site in Pasadena. Decades-old chemical disposal practices at JPL resulted in perchlorate and volatile organic compound (VOC) contamination in the wells.

In December 2005, the city reached an agreement with NASA—which now has jurisdiction over the site—for the organization to fund the design, construction and operation of a proposed water treatment plant near the impacted wells. Once operational, the new system will remove chemicals from the Raymond Basin groundwater, allowing the city to re-activate its wells and provide its customers with clean drinking water that once again meets the State of California Department of Health Service's potable water requirements.

Pasadena Water and Power expects the construction of the treatment plant to be completed in the summer of 2007, with the delivery of drinking water to its customers by fall 2007.

In a related effort, members of the RBMB have proposed the Raymond Basin Conjunctive Use Project (RBCUP), which would

make available 75,000 acre-feet of additional water in storage received during wet years for use during periods of drought. The RBCUP would require Pasadena to increase its groundwater production capacity; therefore, additional wells will be needed to maximize the benefits of the program.

Cleaning up Pasadena groundwater, however, goes beyond the JPL region. Predictive simulations from the Raymond Basin Ground Water Flow Model show that VOCs and perchlorate from JPL and the Arroyo Seco region will continue to migrate southeast, affecting other city wells in the Pasadena Sub-basin of the Raymond Basin. For the RBCUP to be successful, it is essential that PWP wells are free from not only existing—but also from potential—contamination.

Addressing that concern, Senator Dianne Feinstein helped PWP secure a \$375,000 grant from the Environmental Protection Agency (EPA) for perchlorate treatment research that could one day benefit Pasadena's wells. PWP is proactive in preventing any potential contamination and continues to seek funding to ensure that all PWP wells are free from contamination.

The Army developed and operated JPL between 1945 and 1957. In 1958, jurisdiction was transferred to NASA. The California Institute of Technology conducts research and development at JPL under a NASA contract in the areas of aeronautics, space technology, and space transportation.

Sources of contamination at the site include approximately 35 seepage pits where liquid and solid wastes were reportedly disposed of, a settling chamber in the JPL storm drain system; contaminated soil excavated from part of that system, and an area where waste solvents were dumped into three separate holes. Hazardous substances located at JPL include waste solvents, solid rocket fuel propellants, cooling tower chemicals, sulfuric acid, freon, mercury, and chemical laboratory wastes.

In 1990, JPL detected significantly elevated levels of contaminants in the groundwater underneath and down-gradient of the site. Due to volatile organic compound (VOC) contamination in the groundwater, four municipal wells were shut down between 1989 and 1990 and two Lincoln Avenue Water Company wells were shut down in 1987. NASA installed treatment systems, and municipal wells began operating again in October of 1990.

The Pasadena wells were shut down again in 2001 because of perchlorate contamination. The perchlorate plume reached the Lincoln Avenue wells at levels above the State of California standards in 2004, and NASA paid for the installation of an ion-exchange/ carbon filter treatment system.

For more information about the JPL site and the well cleanup issue, please visit:

<http://www.ci.pasadena.ca.us/waterandpower>

<http://epa.gov>

<http://www.arroyoseco.org> 

## Three Valleys' Project Provides Extra Storage And Extraction

### Innovative Conjunctive Use Project Manages Groundwater Levels in Upper Claremont Heights Basin

**A** GWA member agency Three Valleys Municipal Water District is embarking on a conjunctive use project to supplement storage and extraction of groundwater to manage groundwater levels in the Upper Claremont Heights Basin.

The district will be constructing the infrastructure necessary to spread and recharge untreated, imported Metropolitan Water District (MWD) water during surplus years in the existing San Antonio Spreading Grounds, just below San Antonio Dam. The groundwater recharge will supplement natural recharge that occurs

from rainfall—an amount that is generally inadequate in Southern California. The project also includes a production well on Three Valleys' adjacent Miramar property, which can then be introduced into Three Valleys wholesale transmission pipeline for distribution to retail customers. The production well will blend inexpensive groundwater with treated surface water from the Miramar Treatment Plant and also will be used to help control rising groundwater “down basin” if necessary.

The project will enhance groundwater management and reduce the amount of State Water Project water

imported by MWD, thereby increasing water supply reliability for all customers in the area. Additionally, the project will reduce the cost of water by facilitating the purchase of MWD water at its lower replenishment


rate—rather than the full treated water rate. It should help local groundwater producers by raising groundwater levels during dry years and reducing their production costs, and it also will benefit water quality in the Miramar distribution system and delay the need for capacity-related capital improvements at the Miramar Water

Treatment Plant.



Pictured Above: Probable location of storage basin connection at Miramar.

The project is now in the design and permitting phase. All CEQA requirements have been completed with the development and approval of an EIR in 2005. Ultimately, the conjunctive use project will have the ability to recharge up to 15,000 acre-feet annually over approximately 140 acres in the spreading grounds. Construction of pipelines and wells are expected to begin in September of 2006 and completed by February of 2008. Total project cost is estimated at \$2.7M.

For more information about the project or to view the Environmental Impact Report, log on to Three Valleys' Web site at <http://www.threevalleys.com> 

## Eastern Municipal Water District's

### "Curious Beings" wins CASA Award

**A** GWA member agency Eastern Municipal Water District (EMWD) was honored on Jan. 20, 2006, with a California Association of Sanitation Agencies (CASA) 2005 achievement award. The award recognizes the achievements of publicly owned wastewater treatment agencies throughout California.



EMWD's "Curious Beings" Presentation

Malea Ortloff,

EMWD education specialist, accepted the award for her education program's "Wastewater Treatment for Curious Beings" presentation. The presentation uses entertaining and colorful characters to explain the basics of the wastewater treatment process from the time sewage leaves a home until the treated wastewater and solids are recycled.

Eastern was one of two winners in the Public/Outreach Education Award category. This category

recognizes an agency's efforts for development and implementation of programs intended to impact or educate a segment of the local community on issues important to the agency. EMWD's presentation was created with a \$5,000 grant from Metropolitan Water District's Community Partnering Program. The grant also will fund an activity book that will be distributed to schools within EMWD's service area in 2006.

According to Malea, "What the presentation really shows well is how we recycle during the entire wastewater treatment process—even the methane gas. Kids and adults can gain a greater understanding of the wastewater treatment process and how to be conscious of what they put down the drain."

CASA was formed in 1955 to provide proactive leadership, innovative solutions, timely education and information to CASA members, legislators and the public. CASA promotes partnerships on wastewater issues with other organizations to achieve sound public health and environmental goals. The presentation is available online by visiting <http://www.emwd.org/learning>.

## WRD To Transfer Operations Of Recycled Water Treatment Facility

### Facility to be Transferred to Long Beach Water Department

**T**he Water Replenishment District of Southern California (WRD) has held a ceremony to transfer the operations of the Leo J. Vander Lans Water Treatment Facility (LVL Facility), a state-of-the-art recycled water treatment center, to the Long Beach Water Department (LBWD).

The Long Beach-based LVL Facility's central role is to treat recycled water to ensure that Southern California's groundwater supply is

sufficient, clean and safe. Recycled water treated at the site is used to protect the Central Basin—one of this state's most utilized groundwater basins—from seawater intrusion and to protect the drinking water for the region.

"WRD is pleased to be working with the Long Beach Water Department at the Leo J. Vander Lans Facility on innovative ways to protect the region's groundwater,"

said WRD Board President Willard Murray. "We also are pleased to know that we are transferring the operation of this state-of-the-art water treatment facility to an agency that is on the cutting edge of water treatment technology."

WRD's innovative and advanced treatment of recycled water from the Long Beach Water Reclamation Plant at the LVL Facility is the first of its kind to use the process of

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## News Drops

- The California Bay-Delta Authority has approved a 10-year action plan framework that sets the stage for major changes to the governance structure and focus of the CALFED Program. At a December 20 meeting in Sacramento, the Authority voted to approve the plan and forward it to the Administration for additional consideration and incorporation into the Governor's proposed state budget in January. The plan embraces several changes recommended by the Little Hoover Commission to improve program governance and accountability. Though it does not recommend immediate elimination of the Authority, the plan calls for establishing a high-level Executive Leadership Council and an independent oversight body that would ultimately replace the existing Authority board. Legislative action would be required to make the changes to the Bay-Delta Authority Act.
- In anticipation of President Bush releasing his 2007 budget on Feb. 6, U.S. Senator Dianne Feinstein (D-Calif.) and Governor Arnold Schwarzenegger on Jan. 26 urged President Bush to provide \$92.4 million in his 2007 budget to fund "urgent flood control needs" in Sacramento and the Sacramento-San Joaquin Delta. "A major levee breach could imperil hundreds of thousands of people and endanger most of the State's water supply," Senator Feinstein said. "We believe that the best course of action is to proceed expeditiously on the projects that will provide the most protection to population centers and infrastructure."
- More than 100 chemical plants on the banks of China's rivers pose safety hazards that could jeopardize drinking water and spread contamination widely, China's environment chief has said. The announcement, based on a government survey of the nation's 21,000 riverside chemical plants, amounts to a sobering acknowledgment by the Beijing government that rapid industrial development has outstripped the nation's ability to regulate environmental hazards. An article discussing China's water contamination crisis appears in the Jan. 25, 2006, edition of the *Los Angeles Times*.

## WRD Transfer Operations


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microfiltration, reverse osmosis and ultraviolet light to treat recycled water, distinguishing the LVL Facility as a leader in the treatment of recycled water.

"The Long Beach Water Department is proud to take over the operation of the Leo J. Vander Lans Water Treatment Facility. WRD

"The two agencies coming together on the LVL Facility is a natural partnership; true and effective."

is known for its stewardship in groundwater protection and to that end LBWD will use its expertise in advanced treatment technologies to extract efficiencies from the plant," said Long Beach Water Department General Manager Kevin Wattier. "The two agencies coming together on the LVL Facility is a natural partnership; true and effective."

WRD refills and protects 10 underground aquifers stretching from the cities of Manhattan Beach to Whittier and Los Angeles to Long Beach. These aquifers store drinking water and reach depths of more than a quarter mile into the ground. For additional information on the official Leo J. Vander Lans Water Treatment Facility transfer ceremony, please contact Samara Ashley at 562/407-1979. 

## OCWD Awarded \$2.8 Million For Wetlands Restoration



The U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) announced a federal grant for the State of California, associated with severe storms and flooding from last winter's rains. Included in the funding is more than \$2.8 million to AGWA member agency Orange County Water District. The grant will assist in repairing and restoring the Prado Wetlands behind Prado Dam.

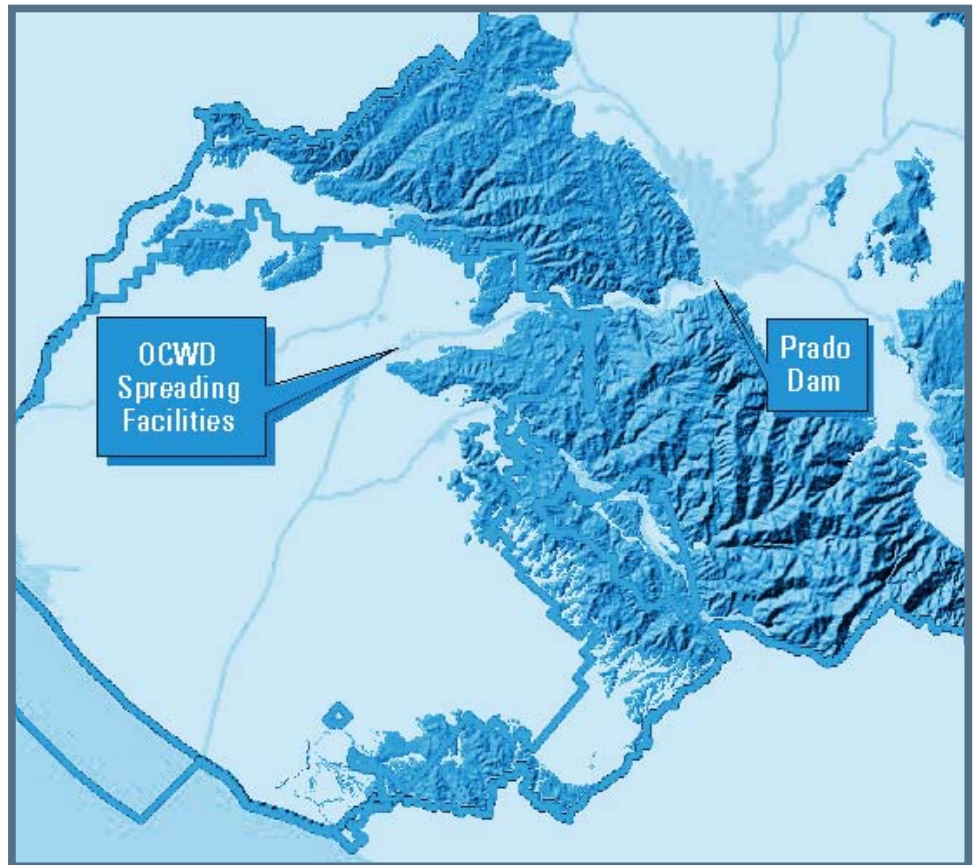
When in use, the Prado Wetlands treat one-half of the Santa Ana River flow, naturally removing nitrates. The treated Santa Ana River water is then percolated downstream into the Orange County groundwater basin. During last year's severe winter storms, extremely high water levels caused debris and sediment to block the river adjacent to the wetlands, causing the wetlands to flood and facilities to be destroyed or severely damaged.

### Restoration of the wetlands includes:

- Removing debris from the Santa Ana River;
- Restoring the river to a course that does not threaten the Prado Wetlands;
- Rebuilding levees;
- Installing culverts;
- Replacing damaged canal gates;
- Removing 300,000 cubic yards of sediment and debris from the wetland ponds.

"We would like to thank the entire Orange County Congressional Delegation, Congressmen Miller, Calvert, Royce, Rohrabacher, Sanchez and

the wetlands is an important part of OCWD's groundwater recharge system. The wetlands provide natural treatment by removing unwanted nitrates



Campbell, and our two U.S. Senators, Diane Feinstein and Barbra Boxer, for their assistance with this grant and having the foresight to ensure Orange County's water is of the highest quality," said OCWD board president Phil Anthony. "Rebuilding

from the Santa Ana River water before the water is percolated into the Orange County groundwater basin."

For more information on the Prado Wetlands, visit <http://www.ocwd.com>.