



# Water Update

UNITED WATER CONSERVATION DISTRICT

106 North 8th Street ♦ Santa Paula ♦ California 93060 ♦ (805) 525-4431 ♦ [www.unitedwater.org](http://www.unitedwater.org)

*Winter 2010*

## UWCD Studying Largest Possible Storm in Piru Watershed



United's safety program for Santa Felicia Dam is regulated by both the Federal Energy Regulatory Commission (FERC) and the California Division of Safety of Dams (DSOD). The safety of the public below the dam is paramount. Accordingly, it is vitally important that Santa Felicia Dam be able to survive the largest earthquake and the largest flood. The determination of the magnitude of these largest events is subject to continually growing scientific understanding. In the case of flooding, dams must be able to safely pass what is known as the probable maximum flood (PMF). The PMF is typically determined by first considering the probable maximum precipitation (PMP), which represents the largest storm that could reasonably ever occur in the dam's watershed.

In 2006 United applied the latest National Weather Service (NWS) PMP model to the Piru Watershed. This analysis indicated that the largest possible precipitation event, which was vastly larger than any of several previous updates to the PMF, would result in a flow at the dam's spillway of 309,000 cfs. By contrast, the

1994 update of the Dam's PMF yielded a discharge of approximately 185,000 cubic feet per second (cfs) at the spillway, which is slightly less than the spillway's maximum capacity.

While it is imperative that earthen dams, such as Santa Felicia, be designed to never overtop, the modifications necessary to contain a flood of the magnitude of this new PMF would represent a very major expenditure. Many other California dams are discovering the same dilemma when updating their PMF to the new NWS rainfall model. Indeed, similar issues were discovered by the operators of Pyramid Dam, which shares the Piru watershed with Santa Felicia.

A careful review of the NWS rainfall model leaves several unanswered questions. FERC rules allow dam owners to develop and employ site specific PMP, provided it is approved by a panel of independent experts. United staff negotiated with Pyramid Dam's owners, the California Department of Water Resources (DWR), and arrived at an agreement to create a site specific PMP for the Piru Watershed. Since DWR already had their engineering firm GEI under contract; they agreed to fund the technical work for the study at a cost of approximately \$350,000. United agreed to provide and fund the independent panel of experts, who would review and approve the work, at a cost of approximately \$135,000.

The work is progressing and a report is expected from the panel this fall. While it appears that United will be required to make significant modifications to Santa Felicia Dam, it believes that PMF values will be lower and more defensible than those derived from the NWS model. Even a nominally smaller PMF will result in substantial savings in any constructed modification.



## United Gears Up for Groundwater Studies

In an effort to protect and enhance our valuable local groundwater supplies United is undertaking a series of studies to better understand local geology. First and foremost is the need to determine the extent of seawater intrusion under the Oxnard Plain and to collect much more detail about the area's geology to understand how to control and even reverse the saline intrusion.

A survey to comprehensively map the areal and vertical extent of seawater intrusion has not been completed since 1990, and data at that time showed significant variation of saline levels at different depths. In the intervening 20 years the progress of saline intrusion has been tracked primarily through well sampling.

Learning the current extent of seawater intrusion will require a three-step process by UWCD staff: an electromagnetic survey that will define the inland extent of intrusion compared to 1990 data, sampling from existing production wells near the leading edge of the intrusion using spinner flowmeter technology, and peizometer testing. The information from these three sets of tests will not only identify the current extent of seawater intrusion, but will also help to show where the greatest danger for further intrusion exists.

This work will complement data from a seismic study which will soon be conducted along the coast side of the Oxnard Plain. The seismic study, funded through a \$250,000 grant from the state, will greatly add to the knowledge of the geology of the area and how seawater intrusion is occurring.

Besides the seawater intrusion problem, United is also facing the need to gather additional information with respect to the adjudicated Santa Paula Basin to understand why that basin has not responded as well as expected given the amount of pumping and re-charge in it over the last several years.

Further, United must gather considerable extra data about the Piru Basin in preparation for implementation of the Alternative Water Resource Management Project in the east county. The project was developed as a "win-win" solution to the problem of high-chloride water coming down the Santa Clara from Los Angeles County. When implemented it will lower chlorides to acceptable levels while ensuring maximum water flow for the benefit of Ventura County needs.

It is because of these large, looming projects, as well as numerous other anticipated future projects, that United recently added a full-time geophysicist position to its Groundwater Department. The position will complement the skills of current staff and help to address the large amount of highly-technical work before the District. In the coming months and years United will be sharing its findings from these studies and working with pumpers to develop strategies to further protect and enhance local groundwater resources.



*Staff member Jess Lopez draws water from a UWCD monitoring well along the coast.*

## United Elects New Officers

At its January meeting United's Board of Directors elected new officers for 2010. Robert Eranio was elected President, after serving as Vice President the past two years. He replaces Bruce Dandy who was United's President in 2008 and 2009. District bylaws limit officers to two consecutive one year terms in the same office.

Succeeding Mr. Eranio as Vice President is Dan Naumann who the past two years served as Secretary/Treasurer, and moving into the Secretary/Treasurer position is Lynn Maulhardt.

Mr. Eranio, who represents the District's Division 3 which includes most of the City of Ventura, first served on the Board from 1998 to 2000 representing the District's Division 2. He then returned to the Board in 2002 to represent Division 3 and was re-elected in 2006. He has worked in the California water industry since 1986, and since 1995 has been the General Manager of Crestview mutual Water Company in Camarillo.

Mr. Naumann represents UWCD's Division 6, the Pleasant Valley area of the District to the south and east of Oxnard. He has served on the Board since 1991 and previously served as Vice President from 1997-99 and as Board President from 2000-01.

Mr. Maulhardt has been on United's Board since 1985 representing Division 4 which includes an area consisting primarily of northeast Oxnard. He has previously served as the District's President from 1987 through 1993.

The other four members of United's Board are Sheldon Berger, representing Division 7 which includes portions of the Cities of Oxnard and Port Hueneme, Port Hueneme Navy Base and unincorporated beach communities; Bruce Dandy, representing Division 5 in Northwest Oxnard; Roger Orr, representing Division 2 which includes the unincorporated area between Santa Paula and Ventura, the towns of Saticoy and El Rio, and portions of east Ventura; and F.W. (Dick) Richardson, representing Division 1, which includes Piru, Fillmore and Santa Paula.

## UWCD Facing Ever-Increasing Regulatory Requirements

Anyone working in a field subject to state or federal regulation knows that the requirements continue to build without much hope that a reversal of this trend is likely any time soon. United is no stranger to this, especially with regard to environmental issues. Complying with regulatory requirements and lawsuits related to the federally-endangered Southern California steelhead alone, have consumed a large amount of staff time and funds for consulting services.

Among the many environmental matters with which United has been dealing are: development and operation of a multi-species, district-wide Habitat Conservation Plan pursuant to the Endangered Species Act; continued review and likely modification of the Freeman Diversion to improve fish passage; on-going studies required by FERC pursuant to the new license for operation of Santa Felicia Dam; design and operation of required changes to the Piru Diversion; and CEQA and NEPA compliance for numerous looming projects, including utilization of new spreading facilities, delivery of recycled water, resolution of high chloride levels in the river from Los Angeles County, construction of a new intake tower at the dam, and study of a seawater barrier.

To date United has utilized existing engineering and water resources staff to address these issues, staff whose training and experience in environmental compliance is limited. This has come at the expense of time for other engineering and water resources management work necessary to provide for local water needs.

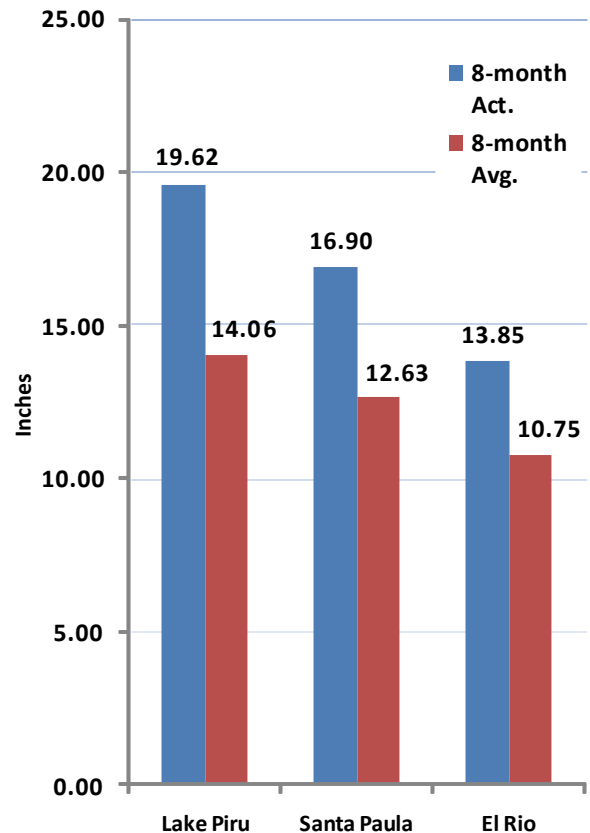
In recognition of this current and future reality, United is in the process of hiring a new Lead Environmental Scientist position, under which all environmental issues will be consolidated. This position's expertise will ensure United's ability to respond to the ever-widening range of regulations while protecting the limited local water supply and the environment.

### Noticias de United Water Conservation District

- De acuerdo con necesidades por agencias reguladoras, United está en el proceso de determinar la tempestad más grande posible en la divisoria de aguas de Piru Creek. Los resultados podrían resultar en transformaciones costosas a la Presa de Santa Felicia.
- United se está preparando para varios nuevos estudios para mejor comprender la dinámica de aguas subterráneas locales incluyendo un estudio actual aérea y vertical del entremetimiento de seawater.
- Reconociendo que fuertes regulaciones ambientales por agencias estatal y federal probablemente van a aumentar en el futuro, United está en el proceso de contratar una posición nueva de científico ambiental principal.

## District Rainfall YTD

(October 2009 - February 2010)



## Stop the Asian Citrus Psyllid NOW!

Please help stop the Asian citrus psyllid before it gets a foothold in Ventura County and brings along with it Citrus Greening Disease. If you suspect you have a tree with the psyllid or the disease immediately call the County Agricultural Commission or the CDFA hotline at **800-491-1899**.



For more information on identifying the psyllid or the disease visit **CaliforniaCitrusThreat.org**.



# **United Water Conservation District**

## **Mission Statement**

United Water Conservation District shall manage, protect, conserve and enhance the water resources of the Santa Clara River, its tributaries and associated aquifers, in the most cost effective and environmentally balanced manner.

## **Calendar**

April 14, 2010 - Board Meeting  
1:00 pm, UWCD Board Room  
April 15 - AWA Annual Water Symposium  
May 12 - Board Meeting  
1:00 pm, UWCD Board Room  
May 20 - AWA Water Wise Breakfast  
June 9 - Board Meeting  
1:00 pm, UWCD Board Room  
June 17 - AWA Water Wise Breakfast

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### **BOARD OF DIRECTORS**

**Robert Eranio**, President  
Division 3, Ventura

**Daniel C. Naumann**, Vice President  
Division 6, Oxnard

**Lynn E. Maulhardt**, Secretary/Treasurer  
Division 4, Oxnard

**Sheldon G. Berger**  
Division 7, Oxnard & Port Hueneme

**Bruce Dandy**  
Division 5, Oxnard

**Roger E. Orr**  
Division 2, East Ventura & El Rio

**F.W. Richardson**  
Division 1, Piru, Fillmore & Santa Paula

### **GENERAL MANAGER**

**E. Michael Solomon**



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