



Water Matters

News for the
Orange County
Water Community

FEBRUARY, 2016

Californians Most Concerned about Drought, Economy

By JENNY MAYFIELD, *The Stanford Report*

As California begins a new year and a hectic legislative session in Sacramento, a new Golden State Poll conducted by the Stanford University-based Hoover Institution finds California's voters most concerned with the ongoing drought and the state's economic recovery.

"California's electorate is, in a word, adult," said Hoover Institution research fellow Bill Whalen, who follows California politics and policy. "Despite the distractions of an election year and surplus revenue to spend in Sacramento, it expects lawmakers to act responsibly and sensibly."

The latest Hoover Golden State Poll, administered by the survey research firm YouGov and designed in conjunction with

Stanford's Bill Lane Center for the American West, sampled 1,800 Californians (age 18 and above) statewide from Nov. 30 to Dec. 13.

Among the poll's questions, voters were asked to prioritize 21 policy concerns facing the state. The top finishers were dealing with

California's water problems, strengthening the state's economy, improving the job situation and balancing the state's budget.

The full poll results for the survey, which has a margin of error of ± 3.31 percent for the full weighted sample, can be found [here](#).



OCSD Named Featured Facility by WERF Newsletter

The Orange County Sanitation District is the Water Environment Research Foundation's newest Featured Facility. Profiled in the WERF's *Lift* newsletter because of OCSD's innovative approach to solids treatment and resource recovery. OCSD Senior Engineer Jeff Brown was interviewed by the newsletter.

What new technologies have you been evaluating/implementing and are interested in investigating?

After two years of study, the Orange County Sanitation District (OCSD) is moving toward a full-scale demonstration of the solids processing technology known as supercritical water oxidation (SCWO)

as implemented in the AquaCritoX[®] process (SCFI Group, Cork, Ireland). If it is successful, SCWO could provide a one-step approach that would replace multiple solids and biogas treatment processes at significantly lower cost and higher efficiency.

In SCWO, organic materials are reacted with liquid oxygen at elevated temperature and pressure (above 705°F and 3206 psia). At these conditions, oxidation of any organic substance is virtually

complete, resulting in a gaseous product stream composed of pure carbon dioxide (CO₂) and nitrogen (N₂). In addition, large amounts of recoverable heat are released, resulting in an overall thermal efficiency of about 90%. The only solid waste stream is a dewaterable granular material (typically 3-5% of the feed solids) containing minerals such as phosphorus, iron, and silica. Recovering the excess heat as steam allows it to be used for process heating if desired, or it can be fed to a steam turbine/generator to produce electricity. As a rule of thumb, one dry ton of feed solids can generate one megawatt-hour of electricity, which is about four times the electricity produced from anaerobic digestion followed by a biogas-fueled internal combustion engine.

What are your facility drivers/needs?

OCSD has anaerobic digesters, gas compressors, and related equipment that are nearing the end of their useful lives, making this an opportune time to consider alternatives to simple like-for-like replacements. In addition, with a Class B biosolids program that manages about 700 wet tons per day, there is ample opportunity for cost savings if the biosolids amounts can be reduced or

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2016 OCWA Member!

See Page 4 for Details
or Visit oc-water.org and
click on **Membership**
to sign up today.

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NACWA, the National Association of Clean Water Agencies, **Toilets Are Not Trashcans** campaign is focused on protecting the pipes, pumps, plants, and personnel of wastewater utilities across the nation by reducing the materials that are inappropriately flushed or drained into the sewer system. Products such as wipes, paper towels, feminine hygiene products should not be flushed but often are, causing expensive problems for utilities. Other consumer products contain ingredients, such as plastic microbeads and triclosan, may harm water quality and the environment. FOG (fats, oils, and greases) and unused pharmaceuticals should also be kept out of the sewer system.

NACWA is working collaboratively with other associations and groups to find common ground and safe solutions for both utilities and the environment.

The Association is advocating for elimination of harmful products and ingredients when possible and education of the public about proper disposal practices. In addition, the Association is working with its members and other partners to create and support programs that continue to bring this vital issue to the forefront.

“As NACWA continues to work on this problem with the Water Environment Federation and the American Public Works Association, it is becoming more and more apparent just how expensive this problem is for utilities,” says Cynthia Finley, director of regulatory affairs for NACWA.

For example, the City of Vancouver, Washington, has spent \$650,000 on new pumps and equipment in the past five years

and spends more than \$100,000 each year in extra maintenance and electricity costs because of clogged pumps.

In addition, the Orange County Sanitation District in California has spent \$2.4 million in the past five years on new equipment and more than \$300,000 in one year to unclog pumps.

Columbus Water Works in Georgia spent \$550,000 in the past two years on new inline grinding equipment and spends \$250,000 each year on additional operations and maintenance costs.

According to a 2014 Bloomberg Businessweek article, New York City, which runs the largest U.S. sewer system, has spent

more than \$18 million during in the past five years replacing and repairing sewer plant pumps, gears, valves and screens clogged when the cloth-like material.



TOILETS ARE NOT TRASHCANS

Utilities across the country are looking to educate their ratepayers on the appropriate disposal of these products and the NACWA Toilets Are Not Trashcans logo seen here may be used free of charge on any consumer education materials.

To obtain the logo, or for further information about the Toilets Are Not Trashcans campaign, please visit the NACWA website.

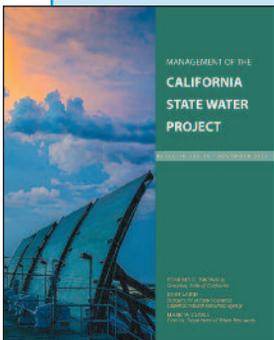
NACWA was established in 1970 by a group of individuals representing 22 large municipal sewerage agencies to secure federal funding for municipal wastewater treatment and discuss emerging national interest in improving the quality of the nation's waters. The organization currently has about 300 nationwide members. For more information, visit www.nacwa.org.

Bulletin 132: Management of the State Water Project

Bulletin 132 is the latest in an annual series of reports describing State Water Project status, operations and water deliveries.

Each report updates project costs and financing, water supply planning, power operations and significant events that affect State Water Project management. Hydrologic information for the water year, capital construction information for the fiscal year, and water delivery,

operations, maintenance and other activities for the calendar year are included as well. To download this report, or any of the others dating back to 1963, visit the DWR website.



OCSD Recognized by WERF

Continued from Page 1

eliminated. Finally, there is always a desire to increase treatment operating efficiencies, reduce costs, and make better use of wastewater solids as a renewable resource. With single train feed capacities up to 17,000 ft₃/day (at 15% solids), AquaCritox holds promise for providing notable improvements in each of these areas.

If there were one technology you would pilot or collaborate on tomorrow, what would it be?

Currently, OCSD is engaged in a detailed engineering study to determine the optimum location in its treatment plants for an AquaCritox installation, the performance expectations, and the projected capital and operating costs. Following the completion of that study in mid-2016, the agency will decide whether to proceed with the construction of a SCWO plant.

How has LIFT helped, or how would you like LIFT to help your facility?

SCWO is one of the technologies identified by LIFT's Biosolids to Energy subgroup. OCSD would welcome the participation of other LIFT utilities as we move into demonstrating this uniquely disruptive approach to solids treatment and resource recovery.

ENSO It's Raining. The 2016 Drought So Far – February 1

California Water Blog, by JAY LUND, Director, Center for Watershed Sciences, UC Davis

January 2016 has been much wetter than the previous Januaries during this drought. Precipitation is modestly above average, as is snowpack, and climatic conditions remain promising. The largest reservoirs are mostly fuller than a year ago, although not nearly to average conditions for this time of year. Groundwater is likely to be recharging, as it should this time of year in most places, but we still sit atop a large hole.

California remains in a drought. Precipitation and snowpack are now mostly above average for this time of the water year (the 2016 Water Year began October 1, 2015). So far, El Niño is delivering a somewhat above normal water year. But, overall 2016 drought conditions are likely to remain unclear until March.

Reservoir and Groundwater Storage Conditions

Most major reservoirs in California have more storage than at this time last year, but still have only about 60% of historical average for this time of year. Folsom Lake is now at 100% of average for this time

of year, rising from a record-low level in November. But California's reservoir storage remains about 7 maf (about 7 full Folsom reservoirs) less than average for this time of year.

Groundwater statewide is harder to assess, but is doubtlessly making some recovery from last year's levels. It still has a long way to recover from the drought in many places.

The drought so far has depleted total storage in California by about 22 maf cumulatively or nearly a year's worth of water use in agriculture. Soil moisture conditions were also unusually dry following 2015, diverting and delaying some runoff from early storms.

Precipitation and Snowpack

December and January storms have helped, with precipitation and snowpack mostly a bit above average for this time of year. We seem to have overcome the Curse of Zero Januaries; January precipitations for the last three years was nearly zero. This January precipitation in the Northern Sierras is above average and exceeds the sum of all January precipitation for the last five years!

Snowpack in California is mostly above average for this time of year and already greatly exceeds last year's snow accumulations. There is a ski season.

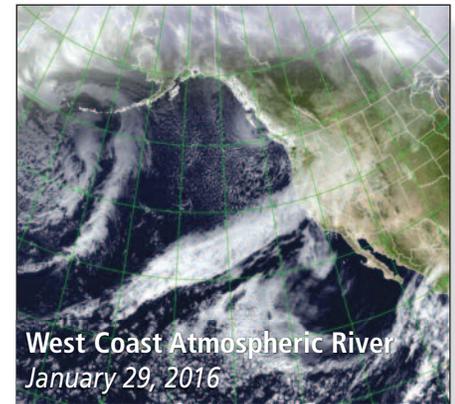
Is it El Niño yet? Apparently, yes. But it is giving us slightly better than average conditions, which so far are much better than the last four years. No major floods yet. So far, the forecast for February looks good.

Concluding Thought

Steady, above average precipitation and a decent snowpack, so far. Much better than the last four years. Let's hope it continues, but remain prepared for another drought year, or at least lingering drought effects even if conditions are modestly wet this year.

Wonks might be interested in UC Davis' ongoing seminar series on drought impacts and policy (most Mondays at 4pm on the UC Davis campus). The public is welcome and videos are posted some days after each talk.

For the entire article, please visit www.californiawaterblog.com



West Coast Atmospheric River
January 29, 2016

Water Commission Soliciting Papers for Potential Storage Projects



The California Water Commission is soliciting concept papers that summarize potential water storage projects and their benefits in an effort to gather information on projects that may qualify for Water Storage Investment

Program public benefit funding under Proposition 1.

Concept papers will be accepted electronically until 5:00 p.m. March 31 at cwc@water.ca.gov.

California voters passed Proposition 1 in November 2014. The proposition dedicated \$2.7 billion for investment in the public benefits of water storage projects and designated the CWC as the agency responsible for allocating these funds.

The solicitation of concept papers is intended to benefit both the commission and potential project proponents. The concept papers will be made public, so project proponents will be able to identify potential regional partners or potential conflicts with other projects. Project proponents also will be able to identify potential eligibility issues early and judge the potential competitiveness of their projects.

The concept papers also will allow commission staff to assess the number and scope of potential projects that may apply for WSIP funding to determine how to best assist applicants through the application process. Commission staff also will be able to refine and adjust the application review timeline for the WSIP based on information in the concept papers.

Submission of a concept paper is not mandatory to be eligible for WSIP funding, but the information collected through will assist the commission in its mission to maximize the potential public benefits of water storage projects funded by the WSIP.

All of the information provided through these concept papers will be made available on the commission's website.

*ENSO – What is it?

El Niño and the Southern Oscillation, also known as ENSO is a periodic fluctuation in sea surface temperature (El Niño) and the air pressure of the overlying atmosphere (Southern Oscillation) across the equatorial Pacific Ocean. El Niño is so termed because it generally reaches full strength toward the end of the year, and early Christian inhabitants of western equatorial South America equated the warm water current and the resulting impacts with their holiday celebrating the birth of Jesus (known as El Niño in Spanish).

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Monthly Luncheon Sponsorship Opportunities

OCWA is soliciting for sponsorship of OCWA Luncheons. Sponsorship is available for \$250. Sponsors must be a current OCWA member. A table is made available at the meeting for the sponsor to display their company or agency information, and the sponsor receives one free lunch. Sponsors will be provided announcement space in the newsletter and will be verbally recognized before and after the luncheon. During lunch, sponsors can play a PowerPoint slide presentation, and will be given a few minutes to address the group about their company before the Speaker's presentation.

If you are interested in participating, please contact John Robinson, (626) 375-9389, or you may email him at jrobinson@johnrobinsonconsulting.com

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OCWA's Board of Directors meets on the third Wednesday of each month, unless notified otherwise. The next meeting is scheduled for:

February 17, 2016 ♦ 10:30 am to Noon

Dave & Buster's Restaurant ♦ Irvine Spectrum Entertainment Center

February Luncheon Topic

MWD Water Supply Conditions, Conservation, and Allocation Update

Presenter:

Deven Upadhyay

Manager, Water Resource Management Group
Metropolitan Water District of Southern California

Deven Upadhyay is the manager of the Water Resource Management Group at the Metropolitan Water District of Southern California. He is responsible for managing the district's planning activities and policy guideline development related to Metropolitan's water supply plans and integrated resources plans. He also oversees the development and implementation of Metropolitan's resources programs for conservation, local resources projects and ground-water recovery and conjunctive use programs. In addition, he directs the management and negotiations of resource contracts related to the State Water Project and Colorado River deliveries as well as water transfers and purchases.



Upadhyay began his career with Metropolitan in 1995 as a resource specialist in the Planning and Resources Department. In 2005 he left Metropolitan to work for the Municipal Water District of Orange County as a principle on policy issues. In 2008 he returned to Metropolitan as the manager of the Budget and Financial Planning Section in the Office of the Chief Financial Officer, where he managed Metropolitan's annual budget process. He also handled the district's process for administering rates and charges and managed business continuity and financial planning.

An avid tennis player and a devoted Angel's baseball fan, Upadhyay earned a bachelor's degree in economics from California State University, Fullerton and a master's degree in public administration from the University of La Verne.

Wednesday, February 17, 2016

Dave & Buster's Restaurant ♦ Irvine Spectrum Entertainment Center

11:30 am: Registration ♦ 12:00 – 1:30: Lunch & Presentation

OCWA Members with Reservations.....	\$30	Non-Members with Reservations.....	\$40
OCWA Members without Reservations..	\$40	Non-Members without Reservations.....	\$40

Reservations must be made by Noon, Tuesday, February 16, to qualify for the Reservation Rate. Cancellations received AFTER this date CANNOT be refunded.

To make reservations, please go to the OCWA website: www.oc-water.org

For more information, contact Leticia Villarreal at (714) 378-3203

Please identify yourself by name and membership number (number is printed on the newsletter mailing label.)

RSVP IS A FINANCIAL COMMITMENT. NO-SHOWS WILL BE BILLED

Deadline to Renew OCWA Membership Extended

**2016 Membership Dues New Deadline:
Friday, February 26, 2016**

The deadline for annual membership dues for the Orange County Water Association **has been extended to Friday, February 26, 2016.**

Those who make payment by the end of this month will ensure a listing both for themselves and their organization in this year's Membership Directory.

Dues for 2016 are \$60.

Checks, made payable to OCWA, can be mailed to the Membership Committee at P.O. Box 51404, Irvine, California 92619-1404.

If you have any questions concerning membership, please email them to membership@oc-water.org.