



WATERREUSE

ORANGE COUNTY

Chapter Newsletter

Spring/Summer 2015

IN THIS ISSUE

Legislative and Regulatory Corner
Page 2

2015 WaterReuse Annual Conference Recap
Page 2

Funding Your Next Project
Page 3

What's Your Number
Page 4

Chapter Members
Page 5

NEXT MEETING

Thursday,
June 18th
11:30 - 1:30 P.M.

LOCATION:

El Toro Water District
24251 Los Alisos Blvd.
Lake Forest, CA 92630

MISSION STATEMENT:

To advance the beneficial and efficient uses of high-quality, locally produced, sustainable water sources for the betterment of society and the environment through advocacy, education, and outreach, research, and membership.

Mesa Water Reliability Facility

by Stacy Taylor | Mesa Water® and Andrew Price | DDB Engineering, Inc.

The The WaterReuse OC Chapter meeting was hosted by Mesa Water® in April with a presentation and tour led by Assistant General Manager and District Engineer Phil Lauri.

In 2012, Mesa Water® completed the Mesa Water Reliability Facility (MWRF), improving the preexisting Colored Water Treatment Facility (CWTF). While not recycled water, the MWRF recovers and treats a local water supply for drinking water uses, representing a tremendous water asset in our extended drought.

Two of Mesa Water's eight operational wells provide feed water to the MWRF. These wells extract groundwater from a deep water aquifer located below the Orange County Groundwater Basin principal aquifer. The 12,000-14,000 year old water held within this deep aquifer has been "stained" by 30,000 year old redwood deposits leftover from redwood trees that once flourishing in the area. These deposits leached into the deep aquifer tinting it an amber color. While the deep aquifer water complied with drinking water standards, its amber color was a concern in terms of general aesthetics.

Previously, the CWTF used

ozone treatment to breakdown this natural amber color. However, from 1997 to 2009 the amber discoloration in the groundwater gradually increased from 125 color units (CU) to over 200 CU, challenging the ozone treatment process.

In response, Mesa Water® upgraded and expanded the facility, replacing the ozone treatment system with nanofiltration membranes and state-of-the-art pumps. The production capacity of the MWRF is 8.6 million gallons per day (MGD). The MWRF uses sand separators to remove larger particulates in raw groundwater. It is then fed through two-stage nanofiltration membranes, clarifying the water of its amber color. Air strippers remove odorous hydrogen sulfide gas from the water supply before disinfection and distribution of the final drinking water to the customer. Overall recovery is 98%. Concentrate is discharged to the sewer.

The MWRF does much more than just clarify colored water. At a glance, the MWRF provides a drought-resilient supply of local water. It protects the Orange County clear water main aquifer from colored water migration between the deep water and

principal aquifers. The MWRF also significantly reduced Mesa Water's reliance on expensive imported water. In fact, Mesa Water® is now completely reliant on local water supplies: approximately 72% clear groundwater; 22% MWRF water; and 6% recycled water in 2014. The capital cost of the MWRF upgrade was approximately \$22 million. The MWRF improvements provided the facility with increased energy efficiency and reduced noise generation at a net zero sum effect on local water rates.

The MWRF was named as a top project of 2011 in Water and Waste Digest Magazine, as well as being featured in Engineering News-Record Magazine. For more information check Mesa Water's website at www.MesaWater.org or call (949) 631-1200.

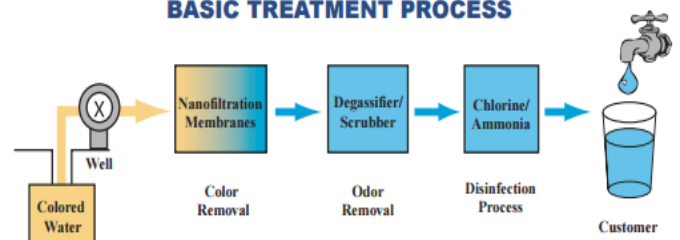


COLORED WATER



Before & After Treatment

BASIC TREATMENT PROCESS



Regulatory & Legislative Corner

by Christine Compton | Irvine Ranch Water District

Governor's May Revise Proposes \$2.2 Billion for Emergency Drought Response

Since the Governor first declared a state of emergency for the drought in January 2014, approximately \$1.9 billion has been appropriated towards emergency drought response. The Governor's May Revise, which was released in early May, includes an additional \$2.175 billion of one-time resources to continue the State's response to the drought. Of the \$2.175 billion proposed to be expended for drought response in Fiscal Year 2015-2016, \$1.8 billion will come from Proposition 1, which is significantly higher than the \$532.5 million proposed as part of the Governor's January budget. The \$1.8 billion in Proposition 1 funds will be available over the next three years.

A summary of the funding proposed for drought response is provided below:

Emergency Drought Response Funding (Dollars in Millions)

Investment Category	Department	Program	Amount	Fund Source
Protecting and Expanding Local Water Supplies	State Water Resources Control Board (SWRCB)	Groundwater Contamination	\$784.0	Prop 1
	SWRCB	Water Recycling	\$475.0	Prop 1
	SWRCB	Safe Drinking Water in Disadvantaged Communities	\$180.0	Prop 1
	SWRCB	Wastewater Treatment Project	\$160.0	Prop 1
	SWRCB	Stormwater Management	\$100.0	Prop 1
	Dept. of Water Resources	Groundwater Sustainability	\$60.0	Prop 1
	Dept. of Water Resources	Desalination	\$50.0	Prop 1
Water Conservation	Dept. of Water Resources/ Energy Commissions	Urban Water Conservation	\$104.0	Prop 1/Cap & Trade Rev.
	Dept. of Water Resources/ Dept. of Food and Agr.	Agricultural Water Conservation	\$75.0	Prop 1/Cap & Trade Rev.
	Dept. of Water Resources/ Energy Commissions	Make Water Conservation a Way of Life	\$43.0	Prop 1/Cap & Trade Rev.
	Dept. of General Services	Water Conservation at State Facilities	\$23.4	General Fund/Special Fund
Emergency Response	Dept. of Forestry and Fire Protection	Enhanced Fire Protection	\$61.8	General Fund
	Office of Emergency Services	California Disaster Assistance	\$22.2	General Fund
	Dept. of Community Services and Development	Farmworker Assistance	\$7.5	General Fund
	Dept. of Housing and Community Development	Rental Relocation Assistance	\$6.0	General Fund
	SWRCB	Executive Order Implementation	\$1.4	General Fund
TOTAL			\$2,175.0	

2015 WaterReuse Annual Conference Recap

The WaterReuse California Annual Conference took place March 15-17 at the Millennium Biltmore Hotel in Los Angeles. This year's statewide conference titled "Endless Water Reuse" was devoted to sustaining supplies through water recycling. It was designed for individuals, organizations, and agencies that are associated with or interested in the design, management, operation, and use of water recycling facilities and projects in California. The conference featured technical presentations, technical tours, receptions, the awards luncheon, the annual Gordon Cologne Breakfast, town hall sessions, and the ever popular exhibition component.

A special congratulations to all of our 2015 WaterReuse California Award Winner.

Recycled Water Agency of the Year - Small
City of San Clemente

Recycled Water Agency of the Year - Medium
Rincon del Diablo Municipal Water District

Recycled Water Agency of the Year - Large
Irvine Ranch Water District

Recycled Water Community Outreach and Public Education Program of the Year
Dublin San Ramon Services District's Residential Recycled Water Fill Station



Funding Your Next Project

by John Robinson | John Robinson Consulting and Debbie Burris | DDB Engineering, Inc.

If you are in need of funding for your next project, be sure to check out the grant/loans that are available. We have provided a quick guide to them below:

1	Grant	<p>On Site Retrofit Pilot Program Metropolitan Water District of Southern California http://www.bewaterwise.com/</p> <p>Purpose: Provides financial incentives directly to public and private owners to convert potable water irrigation or industrial water systems to utilize recycled water. First come first serve basis starting 7/1/14 through 6/30/16 or until funds are exhausted.</p> <p>Funding Limit: Authorization has increased and distributed at \$195 per acre-feet for five years of estimated use, up to actual retrofit costs.</p>
2	Grant	<p>Local Resources Program Metropolitan Water District of Southern California http://www.mwdh2o.com</p> <p>Purpose: Provides financial incentives for the development of water recycling, groundwater recovery, and seawater desalination projects.</p> <p>Funding Limit: MWD has changed the program to have three incentive payment options: sliding scale incentives up to \$340/AF over 25 years, sliding scale incentives up to \$475/AF over 15 years, or fixed incentive up to \$305/AF over 25 years. In addition, MWD will provide reimbursable services to member agencies to expedite development of ready-to-proceed projects. The Application package for new program will be online in early 2015. MWD will host an information session for its member and retail agencies in December 2014.</p>
3	Grant	<p>So Cal WaterSmart Metropolitan Water District of Southern California http://www.bewaterwise.com/</p> <p>Purpose: Provides businesses generous rebates to help encourage water efficiency and conservation. Case by case evaluation.</p>
4	Grant	<p>Water Saving Incentive Program Metropolitan Water District of Southern California http://www.bewaterwise.com/</p> <p>Purpose: Open to all commercial, industrial, agricultural, institutional and large landscape customers who implement qualifying projects. Examples include replacement of older, less water-efficient equipment, comprehensive changes to industrial processes that reduce water consumption, improvements to existing irrigation systems and landscaping to improve water use efficiency.</p> <p>Funding Limit: Payment amount is up to \$0.60 per 1,000 gallons saved per year over the project live, up to a maximum of 10%. Incentives are limited to 50% of eligible project costs.</p>
5	Loan/ Grant	<p>Integrated Regional Water Management Grants (Proposition 84, 2015 Applications) Department of Water Resources http://www.water.ca.gov/irwm/grants/prop84index.cfm</p> <p>Propose: Provide low interest loans or grants to assist public water systems in achieving or maintaining compliance with the Safe Drinking Water Act. Eligible grant applicants are local public agencies and non-profit organizations. Federally recognized Tribes can be members of a Joint Powers Agreement (JPA), per Government Code §6500 et seq. IRWM Grant Program 2014 Drought Guidelines 13 For the IRWM Implementation Grant Program, the grant applicant is the agency submitting an application on behalf of an IRWM region. The grant applicant is also the agency that would enter into an agreement with the State, should the application be successful. Tribes, partner entities, or IRWM stakeholders, as defined in CVC §10541(g), may be part of the proposal as a project proponent and access grant funding through their relationship with the applicant, at DWR's discretion.</p> <p>Cost Share Requirement: 25% minimum match and no limit per project</p> <p>Funding Limit: \$27.2M (2014 for Round 3, Part 1). Total of \$200M</p>
6	Loan/ Grant	<p>Division of Financial Assistance Programs State Water Resources Control Board http://www.waterboards.ca.gov/water_issues/programs/grants_loans/</p> <p>Purpose: SWRCB is administering the funding for RW with a total of \$625 million. DWR is administering the funding for RW with a total of \$100 million. SWRCB has divided the \$625 million into 50% low interest loans via CWSRF and 50% grants administered through then Water Recycling Funding Program. Planning grants have a maximum of \$75,000 with a proposed state share of 75%. Construction Grants have a proposed max of \$15 million (\$20 million for SDAC's) with a state share of 35% (40% for SDAC's). Loans are proposed 30 year term at half the general obligation bond rate, approximately 1.7% (Lower than 1% available). Local agencies and private utilities are eligible. No Deadline, apply anytime via SWRCB "FAAST" online. Eligible projects are funded in the order applications are completed and approved. (CEQA has a long lead time item and must be completed)</p> <p>Funding Limit: \$725M for recycled water and desalination projects funding by Proposition 1.</p>

continued on page 5

What's Your Number?

by Debbie Burris | DDB Engineering, Inc.



On April 1, 2015, Governor Jerry Brown imposed the first ever water restrictions in California, prompted by the Sierra snowpack at just 5% of the normal level. Executive Order B-29-15 required that the State Water Resources Control Board (SWRCB) impose restrictions to achieve a statewide 25% reduction in potable urban water use. Water use reductions are based on the amount of water used in 2013. The Order requires the Department of Water

Resources to provide assistance for replacement of lawns with drought-tolerant landscaping. The Order included eight measures for saving water and eight requirements for increasing enforcement against wasting water. It also provides for investment in new technologies to manage water and for expedited government actions for drought relief.

On May 5, 2015, the SWRCB adopted an emergency regulation implementing the mandatory water reductions and assigning each of California's 411 urban water suppliers a tier water reduction percentage. The regulation became effective on May 15, 2015. The nine tiers mandate water use reductions ranging from 4% to 36%. The SWRCB set reduction tiers based on historical reductions in water use per region. Here is a summary of the water conservation/reduction percentages along with recent residential per capita per day water use for water agencies in Orange County.

On May 11, 2015, WaterReuse California teamed up with California Water Environmental Associate (CWEA) to present a one-day drought summit in Sacramento. The summit called, "Reinventing Urban Water, Potable Reuse", explored potable reuse and recycled water as new sources of water for the State as well as discussing the opportunities and regulatory hurdles they face.

Locally, water agencies are doing their part to educate the public on the State's emergency protocols. Agencies are offering outreach events to educate the public as well as rebate programs to upgrade old wasteful household appliances. Some agencies have implemented tiered water rates to discourage heavy water users while other agencies are proposing fines to moderate excess water use. Orange County water agencies understand the severity of the situation and are doing what is necessary to reduce water use in order to meet the State's mandatory water reduction.

So, what's your number? That seems to be the question on everyone's mind these days. Friends and neighbors are sharing water conservation tips in an effort to save water and meet the targets. How will you save water?

Orange County Water Supplier	Residential Use Jul - Sept 2014 (GPCD)	Tier	Conservation/ Reduction Standard
Water Districts			
East Orange Co. Water District	278.2	9	36%
El Toro Water District	119.9	6	24%
Emerald Bay Service District	121.0	6	24%
Golden State Water Company (West Orange)	94.2	4	16%
Golden State Water Company (Cowan Heights)	401.6	9	36%
Golden State Water Company (Palcentia)	118.9	6	24%
Irvine Ranch Water District	91.7	4	16%
Laguna Beach County Water District	121.0	6	24%
Mesa Water District	99.0	5	20%
Moulton Niguel Water District	99.2	5	20%
Santa Margarita Water District	126.8	6	24%
Serrano Water District	539.2	9	36%
South Coast Water District	121.7	6	24%
Trabuco Canyon Water District	194.9	8	32%
Yorba Linda Water District	220.2	9	36%
City Water Departments			
City of Anaheim	108.6	5	20%
City of Brea	125.9	6	24%
City of Buena Park	118.9	6	24%
City of Fountain Valley	100.2	5	20%
City of Fullerton	136.8	7	28%
City of Huntington Beach	109.0	5	20%
City of La Habra	137.5	7	28%
City of La Palma	75.9	3	12%
City of Orange	148.7	7	28%
City of Newport Beach	137.8	7	28%
City of San Clemente	157.7	7	28%
City of San Juan Capistrano	133.3	7	28%
City of Santa Ana	78.3	3	12%
City of Seal Beach	64.7	2	8%
City of Tustin	156.5	7	28%
City of Westminster	98.0	5	20%

Source: SWRCB Supplier Tiers dated 4/28/15. www.waterboards.ca.gov/water_issues/programs/conservation_portal/



OUR MEMBERS

PUBLIC AGENCIES

State Water Resources Control Board, Division of Drinking Water
Irvine Ranch Water District
Mesa Water District
Metropolitan Water District of Southern California
Moulton Niguel Water District
Orange County Sanitation District
Orange County Water District
San Diego Regional Water Quality Control Board
Santa Margarita Water District
South Coast Water District
South Orange County Wastewater Authority
El Toro Water District

ASSOCIATES

AECOM
ARCADIS
Black & Veatch
Brown & Caldwell
Carollo Engineering
CH2M
DDB Engineering, Inc.
Dudek
Eurofins Eaton Analytical Inc.
GHD
HDR
John Robinson Consulting, Inc.
Michael Backer International
MWH
PACE
Psomas
RMC Water and Environment
SPI
Stantec Consulting
Tetra Tech

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Funding Your Next Project Continued

7	Loan	<p>Clean Water State Revolving Fund (CWSRF) - Financial Assistance Programs State Water Resources Control Board http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srff/index.shtml</p> <p>Purpose: The State Water Resources Control Board (State Water Board) on March 18, 2014 approved new low-interest financing terms for water recycling projects to help California produce an additional 150,000 acre-feet of recycled water annually, one of several actions Governor Brown called for in his Drought State of Emergency. Beginning immediately, the State Water Board's Division of Financial Assistance is offering \$800 million in 1 percent loans — approximately half the current interest rate — for water recycling projects that can be completed within three years of the Governor's January 17 declaration. Applications for funding must be submitted by Dec. 2, 2015.</p> <p>Funding Limit/Deadline: Approximately \$25M Program ends on December 2, 2015</p>
8	Fund-ing Fair	<p>California Financing Coordinating Committee (CFCC) State Water Resources Control Board and Department of Water Resources http://www.cfcc.ca.gov/funding_fairs.htm</p> <p>Purpose: Infrastructure Funding Fair with representatives from California Conservation Corps, SWRCB, DWR, I-Bank, SCE, Southern California Gas Company, and US Bureau of Reclamation to discuss various funding programs with eligible projects.</p> <p>Location: Sept. 23, 2015 (8am - 3pm) - Sacramento County Sanitation, 10060 Goethe Rd, Sacramento, CA 95827 webcast https://meet.sacounty.net/baileyn/9f2hjvj2</p>
9	Grant	<p>U.S. Bureau of Reclamation WaterSMART: Drought Resiliency Project Grants for Fiscal Year 2015 Funding Opportunity No. R15AS00046 at www.grants.gov</p> <p>Purpose: Supports a proactive approach to drought by providing assistance to water users to (1) develop and update comprehensive drought contingency plans, (2) implement projects that will build long-term resiliency to drought, and (3) implement emergency response actions. This program supports drought resiliency projects that will build long-term resiliency to drought and reduce the need for emergency response actions.</p> <p>Funding Limit/Deadline: \$300,000 per award, \$3M total available. Application deadline is June 25, 2015</p>

2015 WaterReuse Annual Conference Recap Continued

Recycled Water Customers of the Year

City of Lake Forest
San Diego Gas & Electric
Citizens Business Bank Arena

Recycled Water Advocate of the Year

Kimberly Thorner, Olivenhain Municipal Water District

Congratulations again to all our winners! We look forward to seeing you next year!

Recycled Water Staff Person of the Year

Reza (Ray) Mokhtari, Metropolitan Water District of Southern California

2015 WaterReuse Annual Conference:

- 500 Total Attendees – the largest the CA Section Conference
- \$127,600 in sponsorships – the most sponsorship for the CA Section Conference
- First-ever student poster contest

2015 Research Conference:

- 255 Total Attendees – the largest attendance on record
- The most conference abstract submissions (99 abstract submissions)

CA Section
Conference
Stats

GOT NEWS?

We're always looking for interesting stories and informational articles to keep our members up to speed on all that's happening in water reuse and reclamation. If you would like to contribute an article or have other ideas about this newsletter, please email Debbie Burris (dburris@ddbe.com) or Lisa Knox (lknox@dudek.com)

WaterReuse Association www.watereuse.org/sections/california/orange-county

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