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# Operating a Water Recycling Plant

## NOW AND IN THE FUTURE

### Lunch:

Passion Fruit Catering Sandwiches, salads, sodas and cookies.

### RSVP:

RSVP by 9/12 please  
[alecm@jwc.com](mailto:alecm@jwc.com)  
or call Alec Mackie  
(714) 428-4614

### Location:

Long Beach Water Dept.  
Vander Lans AWTF  
7380 E. Willow  
Long Beach 90815  
(next to LACSD Long Beach Plant)



Thursday, Sept. 15<sup>th</sup> 11am to 1pm

[www.cwea.org/sarbs](http://www.cwea.org/sarbs)

[www.labsforcwea.com](http://www.labsforcwea.com)



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## GMs Pioneer Recycled Water Use in SoCal

The American Academy of Environmental Engineers (AAEE) is presenting a dinner and networking seminar on September 22, 2011 at the Orange County Water District.



**Mike Markus** is the General Manager for the Orange County Water District (OCWD). OCWD provides reliable, high quality groundwater to 20 cities (2.3 million customers) using environmentally sustainable practices.



**Jim Herberg** is the Assistant General Manager for the Orange County Sanitation District (OCSD). OCSD collects, treats and or reclaims the wastewater generated by 2.5 million people about 230 MGD of wastewater.

Program: 5PM Tour of GWRS, 6 PM Networking, 6:30 Dinner, 7:30 Presentations, 8:30 Adjourn

RSVP by September 15<sup>th</sup> [swilliams@lacsd.org](mailto:swilliams@lacsd.org)

## CWEA Hosts Biosolids Specialty Conference in Whittier, California

By Wendy Wert

Marylynn Yates, UC Riverside presented an overview of *Microorganisms in Biosolids* at the CWEA hosted, Biosolids Specialty Conference in Whittier, CA held on May 19th.

Marylynn opened with a review of the types of waterborne pathogens: viruses, bacteria, and parasites. She then explained a related exposure scenario. Through the fecal-oral route of transmission, the host is exposed to enteric pathogens by ingesting contaminated water, food, etc. After exposure the pathogen infects the hosts' gastrointestinal tract and undergoes replication. New organisms are shed in fecal material at high concentrations (up to 1,011/gram). Shed fecal material contaminates food, water, etc. and the cycle perpetuates. It is the primary mission of treatment facilities to halt this cycle.

EPA's Part 503 Rule sets pathogen and indicator density limits to verify pathogen kill through treatment processes. Marylynn explained that it is cost and labor prohibitive to sample and test for all possible pathogens, so indicator organisms are relied upon. An indicator is a natural inhabitant of the digestive tract whose presence indicates that the sample may be contaminated with fecal material.

Marylynn then provided an update on UC Riverside research related to environmental fate and transport using biosolids related microorganisms. A primary transport factor is the relative sizes of microorganisms; bacteria are large (0.1 – 10  $\mu\text{g}$ ) whereas viruses are an order of magnitude smaller (0.01-0.1  $\mu\text{g}$ ). UC Riverside investigated subsurface transport through field studies using microorganisms in leachate from a biosolids-amended sand lysimeter. Findings indicate that: "traditional" indicators may not be suitable for assessing biosolids treatment, pathogens may be present in biosolids (depending on treatment), subsurface transport is limited, and atmospheric transport is limited.



*Yates Provides Update on UC Riverside Research*

## Gold Rises As Infiltration Concerns Mount

*By Matthew Copeland*

A slight variation on a headline that seems all too familiar these days. However, this article isn't about the precious metal, but another precious commodity – water. On June 16<sup>th</sup>, President of Heal the Bay, Mark Gold D.Env. rose to the occasion and gave a special presentation to a packed house at the C&O Cucina restaurant in Marina Del Rey, the topic; using stormwater as a resource.

Gold has dedicated his work for the last 22 years in the field of coastal protection and water pollution. In addition to being president of Heal the Bay, Mark has served on the EPA Urban Stormwater Federal Advisory Committee, was vice chair of the California Ocean Science Trust, is vice chair of the National Estuary Program's Santa Monica Bay Restoration Commission and he sits on the Board of UCLA's Institute of the Environment and Sustainability. His presentation, *Getting Your Mind in the Gutter: Using Stormwater as a Resource*, was about the opportunity to sustainably harvest rainwater for infiltration and reuse to solve California's impending water scarcity crisis.



*Ultra Urban Biofiltration in Los Angeles*

reuse to solve California's impending water scarcity

According to Gold, The first step we need to take in resolving California's water shortage problem is changing the way we look at rainwater: from a nuisance to a resource. The changes we need to make to redefine the way we look at stormwater are:



*Mark Gold During Presentation*

- Low Impact Development (LID) requirements statewide
- Uniform public health criteria for rainwater harvesting
- Economic incentives from water agencies to capture and use stormwater
- Requirements on transportation dollars to use a minimum percentage of award for LID BMPs
- Water agencies need to raise fees specifically for rainwater capture and infiltration projects
- Modify voting so a 2/3rds majority of the voters isn't needed to pass fee increases for stormwater pollution and flood control
- County-wide stormwater fee vote

Some of these changes are already beginning to take place. Various municipalities in Southern California have already enacted legislation requiring the use of Low Impact Development techniques. Starting in the summer of 2009, Ventura

requiring the use of Low Impact Development techniques. Starting in the summer of 2009, Ventura

MS4 requires “all New Development and Redevelopment projects identified in subsection 5.E.II control



*Residential Rain Garden*

pollutants, pollutant loads, and runoff volume emanating from impervious surfaces through infiltration, storage-for-reuse, evapo-transpiration or bioretention/biofiltration, by reducing the percentage of Effective Impervious Area (EIA) to less than 5 percent of total project area.” Approved in the summer of 2010, Santa Monica requires all new and redevelopment to infiltrate or capture and reuse 100% of the runoff generated by the 85<sup>th</sup> percentile storm. In July of 2011, the City of Los

Angeles’ Board of Public Works approved the 4<sup>th</sup> Edition of the Development Best Management Practices Handbook. Amongst other requirements, this ordinance mandates the infiltration, capture and use, or highly effective biofiltration for 100% of the runoff generated by the 85<sup>th</sup> percentile storm.

The aforementioned municipalities hope to achieve these water conservation goals through the use of a variety of LIDs, such as:

- Vegetated Swales/Bioswales
- Rain Gardens
- Rain Cisterns
- Green Roofs
- Permeable Paving
- Porous Pavement
- Curb Bump-Outs
- Curb Cuts

For those of you who are thinking all those laws sound great, but want to know what can be done on a personal level; Mark laid out a few key strategies concerned citizens can use to become expert rainwater harvesters. 1) Pressure Los Angeles Department of Water & Power to increase its rainwater capture budget. 2) Pressure Metropolitan Water District of Southern California to offer economic incentives – Mark suggests \$250/af for new water derived from stormwater. 3) Organize cities and counties to take a run at Proposition 218. 4) Encourage the county stormwater user fee vote for spring 2012.



*Rain Barrel To Harvest Residential Rainwater*

Heal the Bay is a non-profit environmental organization dedicated to making Southern California coastal waters and watersheds, including Santa Monica Bay, safe, healthy, and clean. For more information visit: [Heal the Bay](#).



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## PAST PRESIDENTS 2011 EVENT

# The Getty

# Villa Malibu



- When: Saturday, August 27<sup>th</sup>, 2011
- Lunch: 11:30 AM - 2:00 PM - The Founder's Room
- Architectural Tour: 2:00 PM & 2:30 PM
- RSVP: Please RSVP to Hala Titus at [titush@bv.com](mailto:titush@bv.com) by August 19<sup>th</sup>
- COST: \$45.00 Members/\$55.00 Non-Members/\$25.00 Students
- Parking: Parking Reservations are under "California Water Environment Association" and each car costs \$15 to park.

### Directions:

The Getty Villa is located at 17985 Pacific Coast Highway in Pacific Palisades, California, one mile north of Sunset Boulevard and approximately 25 miles west of downtown Los Angeles.

From Los Angeles, take the I-10 (Santa Monica Freeway) west until it turns into Route 1 (Pacific Coast Highway) going north along the Pacific Ocean. Continue on Route 1 for approximately five miles to the Getty Villa.

*Please note that visitors must approach the Getty Villa from the south. Access to the Getty Villa entrance is only from the northbound right-hand lane of Pacific Coast Highway (PCH). Turning left across PCH is illegal and any attempt to enter the site via Coastline Drive is not permitted.*



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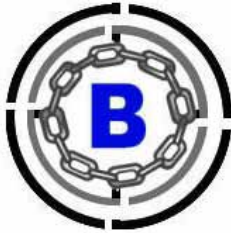
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### SPECIAL EVENTS CALENDAR

Aug 11 <sup>th</sup>	West Basin Desal Demo Facility Tour; Redondo Beach, <a href="http://www.labsofcwea.com">www.labsofcwea.com</a>
Aug 27 <sup>th</sup>	LABS Past Presidents Event; Getty Villa, Malibu, <a href="http://www.labsofcwea.com">www.labsofcwea.com</a>
Sept 8 <sup>th</sup>	Sustainability Conference; MWD Headquarters, <a href="http://www.labsofcwea.com">www.labsofcwea.com</a>
Sept 15 <sup>th</sup>	Long Beach Water Recycling Plant Tour; Long Beach, <a href="http://www.labsofcwea.com">www.labsofcwea.com</a>
Sept 22 <sup>nd</sup>	AAEE Dinner & Networking Seminar; Fountain Valley, <a href="http://www.labsofcwea.com">www.labsofcwea.com</a>

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Send your presentation, seminar or training ideas to [alecm@jwce.com](mailto:alecm@jwce.com) for consideration

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