



WATERREUSE

LOS ANGELES Chapter Newsletter

SPRING 2017

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**NEXT
MEETING**

Tuesday, April 11th
11:30am-1:30pm

LOCATION:

Central Basin Municipal
Water District
6252 Telegraph Rd.
Commerce, CA 90040-2512

Many thanks to our lunch
sponsor:
RMC, A Woodward &
Curran Company.

2017 WaterReuse California Annual Conference

March 19-21, 2017

Westin San Diego, San Diego, California

The WaterReuse California Annual Conference is the largest state-wide conference presenting what's new and what's next in recycled water policy, operations, technology and public perception.

The conference is 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 will feature more than 60 technical presentations, poster presentations, technical tours, receptions, an awards luncheon, the annual Gordon Cologne Breakfast, and the ever popular exhibition component.

WaterReuse is internationally-recognized as a thought-leader on alternative water supply development. It is the go-to organization for applied research, policy guidance and educational tools on water reuse as well as the principle influencer of public opinion, lawmakers and policymakers on policy and projects related to water reuse.



The 2017 WaterReuse California Annual Conference in San Diego will feature more than 60 presentations, tours, receptions, and special events. We hope to see you there!

Agency Spotlight: Los Angeles County Department of Parks and Recreation

Water conservation has never been more critical, and the Los Angeles County Department of Parks and Recreation is responding to the urgency of safeguarding this precious resource. As California copes with historically unprecedented drought conditions, the Department is balancing water conservation efforts with park users' expectations for outdoor spaces that meet recreational needs in the community.

In 2008, the Board of Supervisors ordered all County Departments to achieve an across-the-board 20% reduction in potable water consumption. By setting a goal to exceed that directive by an additional 10%, Parks and Recreation has been empowered to explore and implement creative water conservation strategies that have produced measurable results.

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President's Column

Dear LA Chapter Members:



There is good news about our water supply. California has seen one of the wettest winters on record. Most of the state reservoirs are at capacity and a large snow pack will ensure significant runoff. California always has had extreme weather cycles, but climate change likely exacerbated our recent weather conditions. The US drought monitor estimates that over 75% of California is no longer in any of the four drought categories. Last year at this time, 99% of the state was in a drought with almost 40% in the

most critical category - exceptional drought. Although there are a few spots in the state that are still abnormally dry or in moderate drought, the dramatic change is unprecedented. Even though the drought is not officially over until the Governor declares it, it appears to be over for many Californians.

We as water stewards should not forget that one wet season does not resolve all of our water issues. Groundwater basins which supply approximately 1/3 of the state's water are still at record low levels and need several more wet

years before they could be replenished. Recycled water is still very important to our water supply and can help bridge the gap between wet and dry years. Expanding groundwater augmentation projects would help many groundwater basins recover faster.

There have been several advances in recycled water regulations over the past year. The SWRCB's feasibility report on direct potable reuse reinforces our ability to treat municipal wastewater safely for potable purposes. In addition, AB 2022 authorizes the bottling and distribution of advanced purified water for demonstration purposes. There are also several pieces of legislation that could impact future use of recycled water including legislation to clarify the different types of potable reuse, development of onsite treated water regulations, and additional funding from a new water bond.

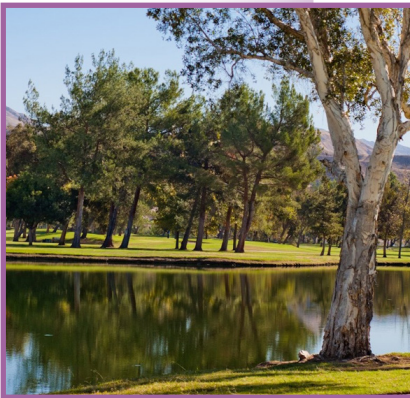
I look forward to seeing you at the 2017 WaterReuse Annual Conference and finding out what your challenges to expanding recycled water are. Please feel free to contact me or the other Los Angeles Chapter Officers.

Sincerely,

Raymond Jay, President

WaterReuse California, Los Angeles Chapter

Agency Spotlight: Los Angeles County Department of Parks and Recreation (cont'd)



With recycled water projects at 22 parks and golf courses, the Department is taking a leadership role by irrigating turf with water that is not suitable for drinking, but is safe and nourishing for plants. The savings are significant: At Whittier Narrows Recreation Area alone, the project supplies more than 300 million gallons of recycled water each year.

With close to 30 parks across the County — including the Hollywood Bowl, Kenneth Hahn State Recreation Area, Cerritos Community Regional Park, Arcadia County Park and Belvedere Community Regional Park — “smart controller” technology allows the Department to irrigate turf based on real-time weather data collected by orbiting satellites. To date, the smart controllers, funded by the Chief Executive Office, have saved 219 million gallons of water at parks Countywide — enough to fill 331 Olympic-sized swimming pools.

At El Cariso Golf Course, 280,000 square feet of turf was removed and replaced it with decomposed granite — saving more than 9.2 million gallons of water annually, enough to supply more than 50 households for a year. Big-picture efforts like these may draw headlines, but because water

conservation requires every-day, every-individual effort, our active Water

& Energy Task Force is taking care of the details, too. Not only are work orders for water-related issues classified second only to health/safety concerns, but all employees are asked to place reinforced emphasis on basic water conservation behaviors — including aerating turf at least once per quarter to improve water absorption, and immediately reporting leaky fixtures.

It all adds up to a quintessential team effort: Pulling together to make certain the entire Department takes every possible step to consume less of a precious resource.

Jim Smith is the Development Division Chief

Bertha Ruiz-Hoffmann is the section head for the Water and Energy Conservation Planning Section

Leigh Adams developed and managed the Crescent Garden at the Arboretum and led the tour at our February meeting <http://www.arboretum.org/crescentfarm/learn/>



Known by his colleagues (affectionately or otherwise) as the “Guru”,



Earle Hartling, Water Recycling Coordinator for the Sanitation Districts of Los Angeles County, answers your burning questions on all issues regarding recycled water. His opinions are his own, and do not necessarily reflect those of the Sanitation Districts. He has been involved with water reuse for over 35 years, so ask your questions sooner than later, because he ain't getting any younger! Seriously, he really isn't. C'mon, people, the clock's ticking on this guy.

Ask the Guru: End Users' Water Quality

Question: “Our permit requires us to monitor recycled water quality where it enters the distribution system. How do we ensure our customers receive water of good quality?”

- Pipe Dreamer

Dear Dreamer,

I've found that most tertiary treatment plants produce recycled water that is darn close to drinking water quality. Assuming that you're not adding any impaired water supplies to supplement your recycled water distribution system, such as runoff or well water, then any degradation of the recycled water prior to reaching your customers would be the result of some phenomenon occurring within the pipes themselves.

Usually the culprit in any distribution system water quality degradation is biofilm formation from the regrowth of bacteria and other microorganisms remaining in the disinfected (not sterilized!) recycled water. Biofilms occur in all kinds of water transmission lines, even potable ones, although with the additional nutrients (nitrogen, potassium and phosphorous), this regrowth can be greatly accelerated in the recycled water.

The main problem associated with the biofilm is odor production which can be released into the atmosphere during irrigation. At one university that experienced this problem, the students christened the recycled water “butt water” (kids can be so cruel). A less common problem associated with this phenomenon is the clogging of meters, valves, sprinkler heads, etc.



remaining demand in the recycled water will use up the remaining chlorine residual. The length of transmission pipelines is not the only factor in the rate of regrowth. During the low demand winter months, recycled water can move very slowly through your pipelines, giving the biofilm much more time to become established. In the case of the university, above, a large diameter transmission line was installed to serve future downstream users, but that project was delayed. The university's demand was such that flow velocities in the extra-large pipe were very low, thus giving the biofilm a greater chance to become established.

If you have any of these conditions in your distribution system, your best bet is to install a dosing station to increase the chlorine residual in the pipes. The standard installation would most likely be a sodium hypochlorite facility; however, on-site chlorine dioxide generators may be a viable option. Chlorine dioxide is less corrosive than chlorine, avoids trihalomethane production, and some research studies indicate it is more effective than chlorine against biofilm growth and in the inactivation of bacteria, virus, protozoan cysts, and even Legionella.

Other than that, you can design your distribution system to avoid any overly long runs of pipeline or sections of pipe with very low flow velocities. Operationally, you can use the blow-off valves you designed into your system to regularly flush your system to reduce the amount of biofilm in your pipes.

with biofilm that has sloughed off of the pipe. Neither of these are generally health issues, as the regrowth is mainly opportunistic, environmental microorganisms, and not pathogens that require a host to propagate.

But don't we discharge recycled water into the transmission system with a chlorine residual? Ideally, yes, as we should take advantage of the savings in sulfur dioxide or sodium bisulfite by not dechlorinating the recycled water (that is, if you're not using an alternative disinfection process, such as UV or ozone). But these residuals don't last very long. If you have an extensive distribution system that spans many, many miles, the

Usually the culprit in any distribution system water quality degradation is biofilm formation...The main problem associated with the biofilm is odor production which can be released into the atmosphere during irrigation.

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Past-President: John Robinson

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. Email articles or ideas to Matthew Elsner (melsner@rmcwater.com) or Shelah Riggs (sriggs@dudek.com)

WateReuse Association: www.watereuse.org/sections/california/losangeles

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