

Location: Metropolitan Water District of Southern California (MWD)
Address: Weymouth Water Treatment Plant
Water Quality Laboratory – Building 50
700 North Moreno Avenue
La Verne, CA 91750
Purpose: Bi-Monthly Meeting
Date and Time: December 5, 2017 from 11:30 a.m. – 1:30 p.m.
Distribution: Los Angeles WaterReuse Association Chapter Members

Lunch: Sponsored by Stantec

Below is a summary of the highlights from the December 2017, bimonthly member meeting of the Los Angeles Chapter of the WaterReuse Association.

The presentations from this meeting can be found at:
<http://www.watereuse.org/sections/california/losangeles/meetings>

1. **Welcome and Introductions**
2. **Venue host presentation: Detection and Occurrence of Sensory Compounds in Recycled Water** (*Stuart Krasner, Tiffany Lee/MWD*)

Wastewater is typically a mix of domestic and industrial waste which impact water quality in different ways. There has been research at UC Berkley to look at sensory compounds in recycled water using reverse osmosis/advanced oxidation processes (RO AOP) and ozone biologically active filtration (ozone-BAF) treatment technologies. The study also looked at secondary and tertiary wastewater as well as drinking water for comparison since drinking water is about 2 percent wastewater impacted.

Several analytes were identified for their odor threshold concentrations. For geosmin, low levels were found in drinking water where conventional treatment did not remove it. Secondary and tertiary waters have higher levels of geosmin than drinking water. Through treatment, RO removed a significant amount of geosmin and the remaining levels were undetectable by human smell.

TCA was not detected in drinking water but found in wastewater at varying levels and high in industrially impacted wastewater. RO removed most of the TCA but not all and odor may still be present. The same was shown with AOP. When summarizing removal through RO versus AOP for all compounds, RO is able to remove most of the compounds. The combination of RO with AOP is effective at treating most odors especially since a number of compounds can collectively produce odor in water.

When looking at the ozone-BAF, the ozone was able to remove 50 percent of the analyte, at best. Biofiltration can produce odor which caused some samples to have more odor after treatment.

Relative odor intensity is a ratio of chemical concentration divided by odor threshold to indicate the most significant odors. Treated wastewater can contain natural odorants that are drinking water-derived or anthropogenic. The odor threshold and odor intensity for geosmin and TCA are low and should be watched.

Q: Can the TCA formed by the biological filter be driven down if chlorinated after?

A: No. Ozone can destroy some compounds but only 50 percent at best. Chlorine is a weak oxidant compared to ozone.

Q: What is the driving force for MWD to study odor in recycled water?

A: MWD has researched taste and odor compounds for decades. Research indicates there can be unintended consequences that impact the aesthetics of water.

3. **Sponsor presentation: Regional Recycled Water – Advanced Purification Center** (*Sun Liang/MWD and Zakir Hirani/Stantec*)

MWD has a three-pronged approach to water security: stabilize imported water supply, develop local supply, and implement conservation. The idea for recycled water started in 2008 and MWD has since partnered with the Los Angeles County Sanitation Districts (LACSD). LACSD's Joint Water Pollution Control Plant in Carson has a design flow rate of 400 MGD but currently only treats 265 MGD due to conservation. The facility has primary clarification, high purity oxygen activated sludge, anaerobic digestion and energy recovery, solids processing, and dewatering/drying.

The initial pilot study was conducted from 2010 to 2012 to test the treatment processes including UF/RO and MBR/RO trains. MBR/RO was more effective in removing TOC, NDMA, NDPA, NDMAF, and biodegradables. The UF membrane was irreversibly fouled by the end of the 2-year testing period. The study concluded the non-nitrified secondary effluent can be treated to provide high quality recycled effluent. Currently, MWD is constructing a demonstration facility for scale testing. The objectives of the demonstration facility are to achieve acceptance of MBR as an alternative treatment technology and collect data for a full-scale design. The facility will need to demonstrate the ability of the MBR/RO/UV/AOP process train to meet basin plan objectives. Testing will begin in 2018 and regulatory approval will be sought in 2019. The demonstration facility will be followed by a phased 150-MGD regional recycled water plant. Next steps for the program include public outreach and finalizing financial agreements and agreements with LACSD.

Q: What will be the cost of the water?

A: \$1,600 per acre foot

Q: What is the environmental process?

A: There is a separate schedule for the full scale regional facility. The CEQA process will be started in 2019.

Q: Who will operate the full-scale facility?

A: Operation of the full-scale facility has not yet been decided. Trussell Technologies will operate the demonstration plant for the first year.

4. **Water Recycling Legislative/Regulatory Updates** (*Raymond Jay*)

California Legislation

- AB 574 – changes the way recycled water is defined. This bill requires the state board to administer an expert panel and adopt uniform regulations for water recycling by 2023.
- SB 5 – goes to voters in June and only provides a small amount of funding for water recycling.
- AB 967 – allows licensed hydrolysis facilities to dispose into sewer upon agreement of the accepting wastewater facility. Bill passed.
- AB 1668 – This is a conservation bill that incorporates recycled water.

Federal Legislation

- HR 4419 – may reduce the amount of funding for Title 16 reuse.
- HR 4492 – provides five more years of WIFIA funding.

Surface Water Augmentation

- Draft regulations were released on July 21, 2017 with public hearings in September 2017.
- The 15-day public comment period ends on December 18, 2017.

Recycled Water Policy Update

- The public consultation meetings were December 1 and 5.

Recycled Water Survey

- SWRCB and DWR requesting revisions to survey
- Expect SWRCB to make changes in RW Policy
- WRCA to submit comments to SWRCB by 12/11/17

WRA Action Agenda 2017-2021

The National WRA has identified the following priorities:

- Action 1 – Develop a national vision and strategy for water
- Action 2 – Support science needed to safely increase water supplies
- Action 3 – Leverage federal funding to increase investments in water infrastructure
- Action 4 – Provide financing options for water infrastructure projects
- Action 5 – Incentivize private investment in water reuse
- Action 6 – Transform Title XVI into a competitive grant
- Action 7 – Reform the permitting process for advanced treated water
- Action 8 – Amended WaterSense program to protect WQ

Q: Which wastewater treatment plants are planning to accept the alkaline hydrolysis? What is the cost of the procedure versus traditional cremation?

A: This is a green-type of cremation since traditional cremation requires the burning of fuel and impacts air quality. There are 14 states that have approved it and UCLA does it on a specialized basis.

Q: Will there be future regulations for the use of recycled water to brew beer?

A: There will likely be no special regulations other than those developed for the use of recycled water for drinking water.

{Refer to Legislation & Regulation Update presentation for more details}

5. Regulatory Agency Update:

- a. LA County Department of Public Health (*Robert Bueras*)
LA County plans to approve onsite treatment system program (similar to SB 740). Sources include grey water, rain water, stormwater, black water, foundation drainage, and condensate for residential and commercial buildings. This will significantly increase the plan checking effort. There are a number of sites coming online. As always, let DPH know of any new systems or anything that looks out of the ordinary.
- b. SWRCB Division of Drinking Water Programs (*Saeed Hafeznezami*)
The second public comment period for the Surface Water Augmentation regulation ends December 18. The expert panel has reviewed the text and changes from the first round of comments. Therefore, new comments should only be on the changes.
- c. Los Angeles Regional Water Quality Control Board (*Veronica Cuevas*)
The LA Regional Board would like to provide feedback for recycled water projects before the Engineering Report is completed. For projects that have stormwater comingling, the stormwater needs to meet Title 22 requirements before mixing.

6. California State Section Update (*Monica Gasca*)

The state conference is March 25-27 in Monterey. The call for award nominations deadline is January 22. Check the website for a series of upcoming webinars.

7. Chapter Updates

- a. Approval of October 2017 Member Meeting summary (*Judi Miller*)
 - October 2017 Member Meeting Summary was approved without opposition.

8. Focus Areas

- a. Funding Opportunities (*John Robinson*)
 - A summary of funding opportunities has been prepared and distributed.

9. Technical Topic presentation: How to Navigate a Water Code Section 1211 Petition (*Patricia Fernandez/State Water Resources Control Board*)

Patricia Fernandez, a Senior Water Resources Engineer in the State Water Board Division of Water Rights Petition, Licensing, and Registration Section, presented on the wastewater change petition required under Water Code Section 1211. Submittal of a wastewater change petition to the State Board is required of the owner of any wastewater treatment plant “prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater” if the change results in a decrease of flow to the watercourse.

The State Water Board must make certain findings in order to approve a change petition, including that the change will not in effect or initiate a new right, not injure any legal user of water including the environment, and that the change is in the public interest. The State Water Board also must find that the petition complies with the requirements of the Fish and Game Code and the federal Endangered Species Act.

No petition is needed if the discharge is to land, the ocean or a bay; discharge to a tidal area of a river does require a petition. The State Board is currently considering whether a petition is needed if a party increased water conservation that resulted in decreased discharge flows.

Patricia provided guidance on how to file a wastewater change petition, and described an example of a city requesting approval to cease discharge to a river to provide all of their effluent to recycled water users for irrigation.

Petition processing time can take several years to complete. High priority projects can be expedited and generally satisfy the following criteria:

- The proposed petition is for a project of regional or Statewide significance;
- The proposed petition is for an unbuilt project and the petitioner is trying to abide by the law in developing the project;
- The proposed petition is consistent with the principles of the Policy for Maintaining Instream Flows in Northern California Coastal Streams;
- The petitioner has consulted with CDFW, NMFS, the Regional Water Quality Control Boards, and other agencies with permitting or jurisdictional authority, and the Division has documentation of the agencies' approval or support for the proposed petition.

Patricia's presentation can be found on the LA Chapter WaterReuse website and she can be reached directly at Patricia.Fernandez@waterboards.ca.gov, 916.319.9141.

10. Next Meetings

- February 13, 2018 – Host: *West Basin Municipal Water District*; Sponsor: Brown & Caldwell
- April 10, 2018 – Host: *Long Beach Water Department*; Sponsor: TBD
- June 12, 2018 – Host: *Burbank Water & Power*; Sponsor: *Burbank Water & Power*

Los Angeles Chapter Officers for 2016

Raymond Jay, President	213-217-5777	rjay@mwdh2o.com
Fred Gerringer, Vice President	626-463-0390	fredg@trusselltech.com
Judi Miller, Secretary/Treasurer	213-228-8236	judi.miller@ch2m.com
Monica Gasca, Chapter Trustee	562-908-4288 x2838	mgasca@lacs.org
John Robinson, Past-President	626-375-9389	jrobinson@johnrobinsonconsulting.com

Meeting Attendees

MEMBER		ORGANIZATION
Tracy	Abundez	Metropolitan Water District of Southern California
Michael	Adelman	Stantec
Gabriel	Aleman	LASAN
Matthew	Bequette	LASAN
Rich	Bichette	Woodard & Curran
Jim	Borchardt	Stantec
Robert	Bueras	LA County Department of Public Health
Rene	Carillo	LA BOE
Gilbert	Chacon	Burbank Water and Power
Susan	Chang	LASAN
Cecille	Coronel	LADWP
Veronica	Cuevas	LA Regional Water Quality Control Board
Patricia	Fernandez	SWRCB
Eryn	Fleming	LASAN
Steve	Friedman	HDR
Monica	Gasca	Sanitation Districts of Los Angeles County
Fred	Gerringer	Trussell Technologies
Roman	Gonzalez	Central Basin Municipal Water District
Clint	Granath	Forest Lawn
Carrie	Guo	Metropolitan Water District of Southern California
Saeed	Hafeznezami	DDW
Cory	Heggtveit	Tetra Tech
Ann	Heil	LACSD
Amanda	Heise	CH2M
Zakir	Hirani	Metropolitan Water District of Southern California
Scott	Hungerford	LADWP
Azy	Jackson	LASAN
Raymond	Jay	Metropolitan Water District of Southern California
Donald	Jones	Central Basin Municipal Water District
Sunny	Kim	Neotec
Stuart	Krasner	Metropolitan Water District of Southern California
Jewls	Lagman	LASAN
Gloria	Lai-Bluml	Metropolitan Water District of Southern California
Jodie	Lanza	LACSD
Joseph	Le	LADWP
Crystal	Lee	LA BOE
Jared	Lee	Burbank Water and Power
Joyce	Lehman	Metropolitan Water District of Southern California

Los Angeles Chapter of the WaterReuse Association
 December 5, 2017 MEETING SUMMARY



MEMBER		ORGANIZATION
Sun Liang		Metropolitan Water District of Southern California
Elena Lopez		LA BOE
Joseph Marcos		AECOM
Danielle Maurizio		LACSD
Kimberly McGeeney		Metropolitan Water District of Southern California
Dave Miller		Rowland Water District
Judi Miller		CH2M
Ray Mokhtari		Metropolitan Water District of Southern California
Tom Monk		Walnut Valley Water District
Stephen Opot		LASAN
Ochan Otim		LASAN
Shavon Paige		LADWP
Mariam Panasyan		LASAN
Shirkyah Phillips		LABOE
Chris Repp		LADWP
John Robinson		John Robinson Consulting
Julie Ann Robinson		Glendale Water & Power
Jesus Rocha		LASAN
Karen Scott		Metropolitan Water District of Southern California
Terri Slifko		Metropolitan Water District of Southern California
Eric Smith		CDM Smith
Austin Straus		LADWP
Bashar Subeh		LA County Waterworks
Shieva Tat		LASAN
Shea Thornbury		ESA
Melanie Tory		LADWP
Yoshiko Tsunehara		LADWP
Shradha Upadhayay		Metropolitan Water District of Southern California
Joe Walters		Purple Pipe Consulting
Sunny Wang		Brown and Caldwell
Bob Yamaguchi		Walnut Valley Water District
Rick Zimmer		Eurofins

TOTAL 70