

**Los Angeles Chapter of the WateReuse Association
MEETING SUMMARY**



Location: Long Beach Water Department
Long Beach Ground Water Treatment Plant

Address: 2950 Redondo Ave
Long Beach, CA 90808

Purpose: Bi-Monthly Meeting

Date and Time: February 9, 2016 from 11:30 a.m. – 1:30 p.m.

Distribution: Los Angeles WateReuse Association Chapter Members

Lunch: Sponsored by Rain Bird Corporation

Below is a summary of highlights from the February 2016, bimonthly member meeting of the LA Chapter of the WateReuse Association.

1) Venue host presentation: Overview of Long Beach Recycled Water Program
(Chris Pincherli)

The City of Long Beach recycled water program, which began in 1978, had 123 accounts with a demand of 6,200 AF in 2015. The system includes one main pump station and 30 miles of pipelines that serves customers for purposes such as irrigation, industrial uses, and dual-plumbing in an office building. Significant additions to the system included El Dorado Park in 1980, Virginia Country Club in 1986, WRD/Alamitos Barrier in 2003 and Douglas Park Development in 2008.

The treatment plant is located in the eastern portion of the city with purple pipe extending from that location. Recycled water is supplied to large parks and customers, and the City of Long Beach is looking to add customers along the existing purple pipe. An example was the addition of Stanford Junior High, which would have required a pipe alignment that was too expensive for 20 AF of demand. The City of Long Beach decided to repurpose an existing water line going under the 405 freeway to get water to the school at a cost of only \$60,000.

Question and Answer Session:

- Question: Will the City of Long Beach extend purple pipe to the harbor?
 - This was explored in the master plan but there is not enough water during 6 months of the year to supply the demand at that location. Additionally, the expansion would cost \$17M.
- Question: What does port do for ballast water?
 - The port operates as tenant management and the best management practice is to dump and redo ballast in ocean before entering the port. Potable water and reuse water are not used for that purpose.
- Question: Was the center divide near Stanford Junior High being irrigated with purple pipe?

- No. The center divide only used 1500 gal per year and there was concern about the integrity of the pipes if they were tapped for recycled water.
- Question *Not Recorded*
 - The McDonald Douglas facility was redeveloped to another purpose and the new facility wanted the highest LEED certification available. The cost of the water meters was high compared to the new facility's actual usage, but this has opened up the possibility for others to use purple pipe in this area.
- Question: Is California Resources Corporation (formerly THUMS) a large industrial customer for the City of Long Beach?
 - Yes, they drill off the coast but 97% of what they extract is water and they are required to inject 105% of what is withdrawn to prevent subsidence. They inject recycled water from the City of Long Beach to fulfill this requirement.
- Question: Does the City of Long Beach have filling stations for street sweeping?
 - There are 16 fill stations but those are mostly used for sewer cleaning. Last year was the first year of using more purple pipe water than potable water to clean the sewers. Street sweeping is managed under a separate department, and they are not required to use recycled water. Sewer cleaning is under the Long Beach Water Department so the use of recycled water can be made a priority.
- Question: Is the treatment facility at capacity?
 - WRD's Leo J. Vander Lans Advanced Water Treatment Facility just completed an expansion from 3 to 8 mgd. Once the plant is operational at 8 mgd there will be no excess wastewater effluent during the summer months. Reliability issues can become a problem if a customer wants a lot of water, but installing new purple pipe is not cost effective unless there is a big customer. The cost of recycled water varies by time of use. It costs \$800/AF during times of peak demand for recycled water and \$500/AF when using the water around the clock. If a customer is willing to agree to not use recycled water for up to 3 weeks if necessary, that customer will also pay the lower rate for recycled water used during peak demand. There is a golf course that pumps into its lake during the day and on weekends and uses lake water for irrigation overnight. This strategy allows it to pay the lower rate for recycled water.
- Question: What is a "big user" to Long Beach?
 - There is no set rule for this. The City of Long Beach makes an evaluation of the amount of recycled water consumed versus the cost to produce and convey the recycled water. This evaluation considers items such as subsidies from the Metropolitan Water District of Southern California (Metropolitan), the sale of water, and the cost of electricity for pumping. Long Beach does not pay for the water it treats for recycling. If the payoff period is 20 years or less, there is a good chance it will happen. If the payoff period is near 100 years, it is unlikely to happen. Anything in between is a judgment call.

Chris' presentation can be found on the LA Chapter WaterReuse website.*

2) Lunch Sponsor presentation: Rain Bird – Recycled Water: Managing Your Irrigation System (*Anita Matlock*)

Using recycled water can impact irrigation systems, as was shown at Legoland in 1998. After switching to recycled water, sprinkler heads were failing by getting stuck in the up position. Upon inspection, there was black gummy material in the rotor that was the result of a valve diaphragm deteriorated by the relatively high chlorine concentration in the purple pipe water. Consequently, the valve diaphragm material was changed to EPDM, which has better resistance to chlorine.

At Legoland in 2009-2011, spray heads were failing due to high chlorine concentrations. This led to a redesign of the spray heads and the addition of the color purple to the spray heads to indicate it is being used and is appropriate for recycled water applications.

Frequently, a facility switching from potable water to recycled water for irrigation needs to add pumps and filtration. Potable water systems typically have pressures that are higher than recycled water systems. If a potable water supply was at 80 psi and it is replaced with a recycled water supply at 40 psi, then the irrigation system will not work as designed. The pressure can be boosted by a pump with a variable-frequency drive (VFD), although there are other options without a VFD that are cheaper. Proper controls can help compensate for the absence of a VFD. Rain Bird can manufacture pumps as long as they are not intended to be used with potable water.

Rain Bird can provide technical support for irrigation and industrial applications, and rebates for irrigation equipment are usually available from water agencies. Examples are the Metropolitan's Water Savings Incentive Program for customized projects and the On-Site Retrofit Pilot Program. Information about these programs are available at socialwatersmart.com and bewaterwise.com. A handout with information about the rebates was provided.

Question and Answer Session:

- Question: One of the slides has a filtration unit. Who uses that?
 - Golf courses, industrial customers and others can require filtration. These filtration systems are designed by Rain Bird in Tucson.
- Question: How much more rapidly does recycled water cause system degradation?
 - The effect of the higher chlorine concentration can be seen within a year of switching to recycled water.
- Question: When doing a retrofit, when would you recommend replacing valves?
 - That is a potential extra cost for the customer but some can be paid for with retrofit programs.
- Question: How often are there problems after a switch?
 - Problems were more common 10 years ago but new products have reduced the likelihood of these occurrences.

Anita's presentation can be found on the LA Chapter WaterReuse website.*

3) Water Recycling Legislative/Regulatory Updates (*Kraig Erickson for Raymond Jay*)

- Review legislative dates
 - Bills must be introduced by February 19 to be considered in next legislative session.
- 2015 recycled water legislation
 - The presentation handout showed a slide with key bills. The ones in red were the ones of primary concern and are listed here.
 - SB 163
 - This bill lists ocean wastewater discharge as a “waste and unreasonable use”.
 - It is being held in committee and a coalition is drafting a letter of recommended changes.
 - This bill raises many questions, such as do rivers count as discharge if they flow to the ocean? The current bill only targets ocean discharge.
 - There have been discussions about adding the San Francisco Bay to the bill as being prohibited for receiving discharges.
 - There is no feasible way to get to 100% recycled water now because there will always be a waste stream.
 - The bill also puts the responsibility on the wastewater agencies and fines for non-compliance would go against them even though they would have no authority to force anyone to use recycled water. Some utilities are required to put treated effluent into rivers.
 - If the DPR regulations do not go through, the requirements of this bill would decrease.
 - WaterReuse does not favor mandates such as this bill.
 - AB 1463
 - Onsite treated water
 - Amended and re-referred to committee in September
 - AB 1738
 - Dark graywater is defined as wastewater that comes from kitchen sinks and dishwashers.
 - A stakeholder group would be convened about ensure protection of water quality, existing research, and other relevant topics
 - AB 1749
 - This bill would provide CEQA exemption for recycled water pipelines until 2022
 - Question: Are you aware of anyone who has used that exemption?
 - The emergency provision in place because of the drought but the project must be online by Jan 1 to qualify for the exemption, which might limit those who can use it.
- See the handout for the federal legislative update and regulatory items
- Comments on the recycled water general permit are due February 22 and there is a working group developing comments

Raymond's presentation can be found on the LA Chapter WaterReuse website.*

4) Regulatory Agency Update:

Los Angeles County Department of Public Health (*Robert Bueras*)

- LA DPH clarified T22 with regard to dual plumb and dual use sites
 - Dual plumbing refers to a site that has a separate recycled water delivery system for toilets and urinals
 - These facilities require an annual visual inspection and a 4-year shutdown test.
 - Dual use refers to a site where recycled water is used for irrigation
 - These facilities require an annual visual inspection but do not require a 4-year shutdown test.
- When doing the annual visual inspection, make sure the water supervisor has taken the required class from LA DPH.
- LA DPH has a template for filling station guidance material
- Phone number: 626-430-5290
 - Call for new construction or surveys
- Question: Some purveyors offer filling stations to the public. Does the filling station need to be manned? Is a signature sufficient for trusting the customer to use the water properly? Some trucks in Long Beach are using it to spray down streets.
 - Support for this is available from LA DPH. Once recycled water enters a water trunk for spray down, it becomes industrial water. Las Virgenes Municipal Water District has a similar filling station project where customers have to sign waivers. For Catalina, totes of recycled water are picked up and taken to use there.
- Question: What is the turnaround time for plan approval?
 - It is about 21 days, but the actual time will vary depending on project specifics. LA DPH is not trying to stop projects, but it is trying to make sure the project is done right.

LARWQCB

- No update

SWRCB Division of Drinking Water Programs

- No update

5) California State Section Update (Monica Gasca)

- WaterReuse is supporting a bill to allow bottling of advanced treated recycled water.
- Work is continuing on the surface water augmentation regulations.
 - They must be written by end of 2016 and an expert panel is helping with that.
 - There is a working group that will review the proposed regulations, which will address dilution and retention time requirements.
 - San Diego is working on a project where this is relevant

- California is also working on a study of the feasibility of implementing direct potable reuse.
 - The same expert panel as the surface water augmentation rules is helping with this task.
 - A draft will be available for public review by Dec 2016. Let Monica Gasca know if you are interested in being on the working group to review the draft feasibility study.
- Upcoming conference include the California WaterReuse Conferences in March and the WaterReuse Annual Symposium in September. Abstracts for the Annual Symposium are due soon.

6) Chapter Updates

- Approval of October 2015 Member Meeting Summary (*Judi Miller*)
 - Motion to approve: Monica Gasca
 - Second: Kraig Erickson
 - No opposition to approval
- A volunteer is needed to take notes during the June meeting. Please see Judi Miller if you can help.

7) Focus Areas

- Funding Opportunities (*Kraig Erickson on behalf of John Robinson*)
 - There is \$2M remaining in the Onsite Retrofit Program from Metropolitan. The money will probably be spent by March, although the application deadline is June 30.
 - Metropolitan's Local Resource Program is still accepting applications so submit them if you can.

John Robinson's handout can be found on the LA Chapter WaterReuse website.*

8) Other Topics

- Industrial Reuse Committee (*Elise Goldman*)
 - There have been stand-alone conferences for the past couple of years, but this year the committee will solicit abstracts for Tampa to get industrial reuse projects presented.
 - The WaterReuse website has been revamped to create a page for industrial reuse.
 - WRRF 15-03 has a score card for onsite reuse and municipally treated reuse for industrial sites.
 - See or email Elise Goldman for information about joining this committee.
- Technical topics (*Amy Martin*)

- A poll to identify technical topics of interest for these meetings was distributed to the attendees for their feedback.
- Conference poll (Amy Martin)
 - A poll to identify other conference forums in which recycled water issues are discussed that are attended by our LA Chapter members, and whether members would be willing to brief that chapter on information garnered from these other events.
- A draft updated map of recycled water systems in LA County was distributed. Further updates or changes should be submitted to Amy Martin.

9) Membership Roundtable (Kraig Erickson)

- Question: Are any barricades or crowd control required for spray washing with recycled water?
 - No, the public usually is not present.
 - Long Beach has seen it done during the day and has another person present, primarily to make sure people do not slip, not because it is recycled water.
- The City of Long Beach jet cleans their sewer lines at least every 2 years.
 - Some sections of the sewer are on 90-day and 6-month cleaning cycles.
 - Question: Does this require special equipment?
 - No, it only requires a big hose with a nozzle.
 - There are two separate meters on the truck used to clean the sewers, one for potable water and one for recycled water.
 - The jet cleans are performed to address issues with fats, oils and grease (FOG) that accumulate in the sanitary sewers. The 2nd Street area gets cleaned every 90 days because of FOG.
 - Some residential areas near Anaheim get cleaned more often if surrounded by a lot of apartments.
- Question: Car washing can be problem with runoff that wastes water. Are there any campaigns to reduce residential runoff from car washing?
 - A shutoff valve is required for the hose but there are no public awareness campaign or other limitations on car washing.

10) Next Meetings

- April 12, 2016 – Host: *Pasadena Water & Power*; Sponsor: *RMC Water and Environment*
- June 14, 2016 – Host: **TBD**; Sponsor: *Xylem*
- August 9, 2016 – Host: **TBD**; Sponsor: *Carollo Engineers*

Los Angeles Chapter Officers for 2015

Raymond Jay, President	213-217-5777	rjay@mwdh2o.com
Kraig Erickson, Vice President	805-550-5232	kerickson@rmcwater.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

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

Meeting Attendees

Member	Organization
Amy Martin	Carollo Engineers
Anita Matlock	Rain Bird Corporation
Bertha Ruiz-Hoffmann	Los Angeles County Dept. of Parks and Recreation
Bob Yamaguchi	Walnut Valley Water District
Carlos Borja	Los Angeles County Dept. of Public Health
Charles Gruel	LADWP
Chris Pincherle	Long Beach Water Department
Chris Saenz	Valencia Water Company
Christine Tran	LADWP
Clint Granath	Forest Lawn
Cory Heggveit	Tetra Tech
Denise Chow	LASAN
Duong Ung	LADWP
Dusty Moisio	Rowland Water Company
Earle Hartling	LACSD
Elise Goldman	West Basin MWD
Erik Simmons	B&V
Flor Burrola	LASAN
Fred Gerringer	Trussell Technologies
Gary Roepke	Cannon
Gary Valladao	Cal Water
Gilbert Chacon	Burbank Water and Power
Jared Lee	Burbank Water and Power
Jason Yim	Castaic Lake Water Agency
Jim Smith	Los Angeles County Dept. of Parks and Recreation
Jinny Huang	Long Beach Water Department
Joe Walters	Purple Pipe Consulting
Joe Yersky	Walnut Valley Water District
Jose Huerta	Valencia Water Company
Judi Miller	CH2M
Julian Villa	LADWP
Kraig Erickson	RMC Water and Environment
Matthew Bequette	LASAN
Matt Elsner	Burbank Water and Power
Monica Gasca	Sanitation Districts of Los Angeles County
Nadia Hardjadinata	Metropolitan Water District of So. Calif.

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Nichole Horton	City of Pomona
Patrick Alanzo	LADWP
Patrizia Hall	Long Beach Water Department
Rachel Davis	Long Beach Water Department
Raul Garibay	City of Pomona
Ray Mokhtari	Metropolitan Water District of So. Calif.
Rick Zimmer	Eurofins
Robert Leamy	Rowland Water Company
Sandy Kitto	Purple Pipe Consulting
Shadi Bader	Castaic Lake Water Agency
Shieva Tat	LASAN
Stephanie Tong	ARCADIS
Steven Opot	LASAN
Tom Monk	Walnut Valley Water District
Tony Umphenour	Burbank Water and Power

TOTAL ATTENDEES: 52