

Los Angeles Chapter of the WaterReuse Association MEETING SUMMARY



Location: Carollo Engineers
Address: 707 Wilshire Blvd.
Auditorium (ground floor)
Los Angeles, CA 90017
Purpose: Bi-Monthly Meeting
Date and Time: December 2, 2014 from 11:30 a.m. – 1:30 p.m.
Distribution: Los Angeles WaterReuse Association Chapter Members

Lunch: Sponsored by Carollo Engineers

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

1) Venue host/sponsor presentation: How Satellite Treatment Facilities Can Help the City of Los Angeles Meet its Water Recycling Goals (*Harmik Aghanian*)

Harmik provided some background on the driver for considering the use of satellite recycled water facilities. Noting that the City of LA's dependence on imported water purchased from Metropolitan Water District has increased significantly due to reductions in the availability of LA Aqueduct imported water as well as groundwater resources. The City's recycled water usage goal, established during the development of its 2012 Recycled Water Master Plan includes 9,650 afy of potential non-potable reuse that has yet to be identified. As there is currently no purple pipe network in the west side of LA, this study is part of the City's exploration for opportunities to serve non-potable recycled water to this area. Other strategies include expanding the existing reclamation plants or purchasing recycled water from adjacent agencies, such as Burbank Water and Power.

Potential benefits of satellite treatment plants include providing recycled water to areas without purple pipe, reducing flow and loadings to sewers and regional treatment plants (if such systems are at or near capacity), public education and research.

This case study considered the UCLA Campus as a candidate site for a satellite treatment facility. UCLA developed a Water Action Plan in 2013 to reduce its water usage by more than 180 million gallons per year. Providing a satellite treatment plant for reuse would account for 80 percent of this water savings. The other components include use of a greywater system, housing fixture replacement and use of recycled water in their cogeneration plant. A site on the campus called Strathmore Hill was selected, although they have not yet identified a location for an equalization tank.

With capital costs estimated at \$13.3M and O&M costs estimate at \$930,000/yr for a 0.5-mgd membrane bioreactor (MBR) plant, a 16-year return on investment was calculated, without factoring in any grant funding. Variations on cost sharing options were



considered that affected the return on investment (ROI) somewhat for the 3 parties involved, i.e., LADWP, LA Sanitation and the end user.

A 0.2-mgd satellite treatment facility was also considered for the Wilshire Country Club, but the ROI was much longer, and so the project was deemed infeasible.

A question was raised about odor concerns. Harmik indicated that a similar facility in Anaheim is fully contained and odor-free.

Harmik's presentation can be found on the LA Chapter WateReuse website.*

2) Water Recycling Legislative/Regulatory Updates (Raymond Jay)

The legislative session ended in October and has since been fairly quiet. Below are some proposed legislative items for 2015:

- Irvine Ranch Water District is proposing that recycled water should not be restricted by local or other agencies, e.g., Caltrans is trying to restrict use of recycled water in Burbank, striving to conserve even recycled water as part of statewide drought response.
- Bottling recycled water for demonstration purposes. While it cannot legally be transported, perhaps it might be possible to get administrative approval to do so.
- Looking at greywater and stormwater to offset potable water use.
- Use wastewater effectively before discharging to the ocean. This was considered in 2012 and may return.
- Other suggestions?
 - Carlos Borja suggested addressing the use of swivel ells as cross connection protection devices that would allow use of backup potable water.
- The next CA WateReuse Legislative/Regulatory Committee meeting/conference call is scheduled for Jan. 16.
- Federal legislation for the CA drought - Senator Feinstein will bring these issues back to the next Congress rather than attempting to push it through this one.
- Water Bond:
 - Might be able to fund recycled water under groundwater sustainability
 - WateReuse has a group closely examining the implications of the Water Bond
 - Storage funding - for reservoirs only? Perhaps it can have broader implications? Raymond thinks it can be used for recycled water.
- 2015 WateReuse CA Regulatory Priorities:
 - Reservoir augmentation regulations and direct potable reuse statewide outreach
 - Changing the general permit from WDRs to WRRs



- Pursuing Title 17 and Title 22 changes; going to discuss with State Board. Raymond will share proposed revisions with the Chapter.
- Recycled water storage issues and decorative lakes
- State Board Drought Emergency Regulations - How do the drought regulations affect recycled water and permit issuing?

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

3) Regulatory Agency Update:

a. LA County Department of Public Health (*Carlos Borja*)

County DPH has been talking with LADWP about putting together a proposal for local Building Departments to accept swivel ells inside facilities (not at service connections); Draft potentially by February; could tie in to related revisions to Title 22. County DPH has no concern about using swivel ells for infrastructure like buildings. This should be communicated to the Leg/Reg Committee.

b. LA Regional Water Quality Control Board

- They are pushing the water code issue, if recycled water is available, but need to convince the customer to use recycled water rather than mandate.
- Update on Salt and Nutrient Management Plan at the Regional Board meeting on Thursday, December 4 at 1pm in Culver City.
- WRD has released West and Central Basin SNMP - plan to approve in Feb.

4) California State Section Update (Monica Gasca)

a. 2015 CA Section Conference in LA - awards, mentoring, moderators, LA Chapter poster

- Felicia Markus and Cindi Forbes will present
- \$395 for pre-registration (by January 31); \$245 for speakers; \$50 for students
- Site Supervisor Training on Sunday, March 15 by Earle Hartling
- Cooling Towers Workshop on Sunday, March 15
- CEUs for Operator Certification for the workshops and for one track of conference
- Tours of Hyperion Treatment Plant and Edward C. Little Water Reclamation Facility
- Warner Bros. Studios backlot tour
- Volunteers needed: moderators (Kraig Erickson coordinating); door monitors for CEU credits; student poster contest judges (Matt Elsner coordinating)
- Awards nominations due January 12
- LA Chapter poster - let Raymond/Monica know if interested
- Moderators get speaker rate; possible discount for door monitors
- Next CA Section Board meeting - January 27

5) Chapter Updates

- a. The October Chapter meeting summary will be distributed with the December meeting summary.

6) Focus Areas

- a. Funding Opportunities (*John Robinson*)

John or Raymond offered to help with funding applications.

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

7) Other Topics

- a. Industrial Use Committee (*Elise Goldman*)

- Conference will be held February 1-3, 2015 in Austin, TX. Early bird registration ends December 5, and will increase afterwards from \$449 to \$499 for members.
- Case studies will be used to illustrate how to make a business case for industrial reuse.
- Will have speakers from industry, government, innovative technologies, including onsite water reuse technologies and water strategies.
- Will address oil and gas, food and beverage, cogeneration, and what can government do to encourage industrial reuse.

8) Technical Topics

- a. Preparing Industrial Engineering Reports (*John Robinson, Earle Hartling*)

John and Earle gave an overview of what comprises Industrial Engineering Reports (IERs) and provided a few examples.

IERs must be prepared in the process of converting an industrial system to recycled water use. The entire process from recycled water pipeline construction to site connection can take anywhere from 9 months to 5 years, depending on the complexity of the system. The reports themselves, however, are straightforward, particularly if drawings are available.

Although IER approval is provided by the Division of Drinking Water, County DPH also needs to be involved at the early stages and throughout the process.

Below is a typical IER outline:

1. Introduction
 - a) Recycled Water Source
 - b) Proposed Project
2. Industrial Recycled Water Customer
3. Existing Potable Water Uses
4. Facility Industrial Operations
5. RW/Industrial Piping System
 - a) Industrial Piping

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- b) Recycled Water Implementation Schedule
- 6. Construction and Testing the RW Distribution System
- 7. Emergency Response Plan Procedures
- 8. Conditions of Recycled Water Use

The piping system section of the IER relies heavily on drawings.

An Emergency Response Plan is needed to address if there is a cross connection.

Conditions may apply to specific approved drawings. For example, air gaps may need and a simple, clear drawing would be included.

Customers are often concerned about the safety using recycled water.

The 2001 State Board/DDW *Guidelines for the Preparation of an Engineering Report for the Production, Distribution and Use of Recycled Water* is attached to the presentation provided on the LA Chapter website.

Example projects:

- Local refineries having using recycled water in their cooling towers and boiler feed water for many years.
- Tuftex/Shaw Carpet, winner of the 2014 CA Section Recycled Water Customer award. Tuftex has had a Sanitation Districts' operating permit since about 1980, predating the 2000 T22 update when landscape and agriculture were the only acceptable uses. They petitioned and were approved by the Regional Board for additional use in their carpet cleaning process. Tuftex started w/30%, is now at 80%, and plans to go to 100% recycled water use within their processes.

Industrial sites typically have separated pipelines, with much of it exposed. Identification painting was only required for those pipes that could be reached without a ladder. (John noted that 1-inch purple bands could be used instead of using purple pipe.)

This industry also benefits from higher suspended solids of filtered water. It helps dye adhere to carpet better. Drinking water also had too much chlorine, counteracting the dying.

- Robertson's Ready Mix had been using recycled water in their operations. Caltrans modified their concrete spec to give a 3-point credit to firms that used recycled water and Robertson has won a bid for a major project by 3 points! Higher temperatures of recycled water (ranges from 69-82 degrees) has been an issue for concrete mixing.

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- Malburg Generating Station in the City of Vernon was a greenfield project. Use of potable water was restricted to 6 days per year and so they turned to recycled water use from the Los Coyotes WRF instead. They do have a backup raw water storage tank.
- GenOn Etiwanda Generating Station is a 1,000 MW facility in Rancho Cucamonga that had relied solely on groundwater supply. The plant uses 500-600 AFY. Fire protection was provided from reservoir that was converted to recycled water. Fire Department approval was obtained and it has been used for nearby fire.

Earle noted that it is important to keep up momentum with specific industries as they begin to convert to recycled water use.

John and Earle's presentation can be found on the LA Chapter WaterReuse website.*

9) Elections - Elections were held and the newly elected chapter officers, who will serve for 2-year terms, are listed below.

10) Membership Roundtable (Kraig Erickson)

LAUSD will be holding the Academic Decathlon on Sat. Jan. 23 and is seeking volunteers.

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>