

Los Angeles Chapter of the WaterReuse Association MEETING SUMMARY



Location: Water Replenishment District
Address: 4040 Paramount Blvd.
Lakewood, CA
Purpose: Bi-Monthly Meeting
Date and Time: April 14, 2015 from 11:30 a.m. – 1:30 p.m.
Distribution: Los Angeles WaterReuse Association Chapter Members

Lunch: Sponsored by Black & Veatch

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

1) **Sponsor presentation:** Evaluation of Source Control Options and the Impact of Selected Strategies on Direct Potable Reuse (*Sunny Wang*)

This presentation discussed WaterReuse Research Foundation Project 13-12 (WRRF 13-12), which was included in the Water Reuse and Desalination Research Conference in May in Newport Beach. WRRF 13-12 is examining the upstream impacts of wastewater treatment on direct potable reuse using 4 case studies:

- Orange County Water District's Groundwater Replenishment System (GWRS).
- Hyperion Treatment Plant and West Basin Municipal Water District's Edward C. Little Water Recycling Facility (ECLWRF).
- The City of San Diego's Advanced Water Purification Facility (AWPF) at the North City Water Reclamation Plant (NCWRP).
- Singapore Public Utilities

GWRS receives a blended source water that is 75% from activated sludge with nitrification and denitrification (NDN) and 25% from trickling filters. No flow equalization is provided, and there is a minimal contribution from return streams at the wastewater treatment plant because those streams are sent elsewhere.

ECLWRF receives 40 MGD of secondary effluent from the Hyperion Treatment Plant, a high-purity oxygen activated sludge plant with a low hydraulic retention time (HRT). The secondary effluent from the plant is lower quality than effluents from wastewater treatment plants providing NDN. Hyperion treats its return streams, which can impact secondary effluent water quality.

AWPF treats tertiary effluent from NCWRP, which includes NDN and does not treat return flows. Flow equalization is provided. At Singapore Public Utilities, the advanced water treatment facility treats effluent from an MBR process with NDN.

Analysis of these facilities is ongoing but preliminary data is available for GWRS. When the upstream wastewater treatment included tertiary effluent with carbonaceous biological oxygen demand removal before early 2010, the transmembrane pressure (TMP)



for the microfiltration unit was higher than it is now. The TMP has been better since NDN implementation, although the TMP trend has been trending higher in recent years. Turbidity data is being used to track the proportion of trickling filter effluent in the water feeding GWRS to determine if that might explain the increasing TMP.

The ongoing work for this project include quantifying performance of other potable reuse facilities with different source water qualities to demonstrate the importance of source water quality on direct potable reuse treatment. The source control and industrial pretreatment programs of each utility will be evaluated and site visits will be performed to complete the study.

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

2) Venue host presentation: Groundwater Reliability Improvement Program (GRIP) (Ken Ortega)

The Water Replenishment District of Southern California (WRD) is a water agency established by California statute that is not a water wholesaler or a water retailer but something in between. WRD established an initiative entitled Water Independence Now (WIN), which set a goal of achieving independence from imported water by replenishing the groundwater basin with recycled water only. To achieve this goal, WRD has created the Groundwater Reliability Improvement Program (GRIP) to build a new advanced water treatment facility. WRD has purchased a 5.2 acre parcel in Pico Rivera for the new facility with plans to complete construction and begin producing water by 2018.

This aggressive schedule for project completion has prompted WRD to consider alternative project delivery methods. The previous iteration of GRIP stalled because pipeline costs of \$30M pushed the overall project cost about \$100M. WRD also has limited staff available to assist with project implementation, and aligning this project with other projects would not be easy with a traditional design-bid-build (DBB) approach. The risk of a project such as GRIP ultimately lies with the owner, particularly if the owner is an operating agency. Therefore, WRD feels alternatives to DBB provides more flexibility in schedule and cost while still providing an acceptable level of control over the design. However, any agency considering alternative delivery options must consider the advantages and disadvantages of each approach and understand what the consequences of this decision.

WRD decided to pursue a "progressive" design-build-operate (DBO) project delivery method that is not prescriptive and maximizes owner flexibility. WRD is responsible for the EIR and Title 22 report. The contractor will be responsible for the design, construction, and startup/optimization of the new facility. WRD estimates this approach will leave the door open for innovation while reducing the project delivery schedule by 12 to 18 months.

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

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

Here are the important remaining legislative dates for 2015:

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- February 27 – Last day for bills to be introduced
- June 5 – Last day for bills to pass house of origin
- September 11 – Last day for any bill to pass the legislature
- October 11 – Last day for the Governor to sign or veto bills passed by the legislature

The last WaterReuse California Legislative & Regulatory Committee meeting was on 4/4/15

- Prop 1 Q&A with SWRCB
- See slides

Proposed California Legislation

- AB 606 – Requires state agencies to conserve water on their own sites and to look into incorporating recycled water for irrigation.
- AB 725 – Seeks to prevent unnecessarily wasting recycled water from a basin used to capture runoff during a storm event.
- AB 888 – Wants to ensure plastic microbeads can be treated by wastewater treatment plants to avoid them from being discharged to the environment.
- AB 957 – Proposes to increase Prop 1 funding for water recycling and advanced technology project to \$725M.
- AB 1463 – Would establish requirements for onsite recycled water (gray water, stormwater, other sources treated onsite). Gray water or stormwater would need to be treated onsite to Title 22 standards. This is expected to be a 2-yr bill.
- SB 47 – Requires studying the health impacts that might be caused by potential cancer-causing agents in synthetic turf, which is made from recycled tires. If passed, agencies would be prevented from installing synthetic turf until the study is completed in 2018.
- SB 385 – Provides additional time for utilities to determine how to meet the new chromium 6 regulation. This bill has a lot of support in the legislature.
- AB 585 & 603 – Approves tax credits for outdoor landscape improvements and lawn replacement, respectively.
- AB 1173 – Requires local agencies to have a certification process for backflow prevention testing.

Governor's Drought Emergency

- First mandatory restriction in California history
- Require 25% mandatory urban use reduction, based on 2013 usage
 - Actual restriction ranges from 20 to 35% depending on historic water usage.
- Conservation specifically exempts recycled water from reductions.
- California's landscape ordinance was updated.

Title 17 and 22 changes

- State asked for the requested changes to be prioritized
 - The subcommittee identified priorities for revisions, although help is needed to determine how much water would be saved with each of these changes to justify their implementation
 - Use of changeover devices and swivel ell
 - Protection of water systems and how often do they occur and when does that happen



- Use of recycled water can include zoo operations and pressure testing of pipelines
- Dual plumbing requirements
- Clarify use area requirements to irrigate outdoor eating areas and use of hose bibs and quick couplers.
- Request SWRCB to consider changes and DDW may pursue simultaneously with IPR changes

WRCA regulatory priorities

- Reservoir augmentation regulations and DPR statewide outreach.
- Changing general permit from WDR to WRRs.
- Pursuing Title 17 and 22 changes.
 - There have been subcommittee meetings for the past 18 months.
 - The subcommittee meeting is receiving feedback from entities regarding challenges with Title 17 and 22.
 - The subcommittee will request SWRCB consider administrative changes that were suggested from WRCA.
 - It is expected DDW will pursue IPR and DPR simultaneously.
- Recycled water storage issues and decorative lakes.
- SWRCB drought emergency regulations.

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

4) Regulatory Agency Update:

Los Angeles County Department of Public Health (*Carlos Borja*)

- The state granted the Los Angeles County Department of Public Health authority to approve projects where cross-connections might be an issue.
- Approval should be obtained before construction begins on project that include recycled water to avoid problems, delays or shutdowns.
- AB 1463 is trying to get away from the monitoring requirements for T22.
- Recycled water should not be used for irrigation of public spaces (e.g., golf courses and parks) from 6 am to 10 pm to limit the risk of exposing sensitive populations (e.g., the elderly and those with compromised immune systems) to Legionella.
 - There have been more incidences of legionella, and patients are tested for it if they enter the hospital with pneumonia.
 - Recycled water is a perfect environment for Legionella, which becomes an infectious agent when it is aerosolized and inhaled
- When a construction project is using domestic water for toilets and urinals, LA County will ask why for irrigation but not for toilets and urinals because that should be done, although enforcement options are not clear.
 - Raymond Jay thought the legislation had flexibility in it that probably allows customers to do this.

LARWQCB (*Elizabeth Ericksen*)



- The Governor's emergency drought declaration order
 - Governor is talking directly to employees at SWRCB, asking what has already been done and how did you make it work.
 - SWRCB has a presentation describing what activities have been done over the years.
 - There is not enough info in the presentation for non-SWRCB audience.
 - Those who build and operate projects will be contacted to find what works and what does not work.
 - Document what has been done in Southern California over the decades (not SWRCB but all agencies)
 - It does take last time now to permit recycled projects than in the past.
 - Permits and technologies are being pushed forward
 - Help SWRCB with questions they are being asked
- Regarding the question about using domestic water rather than recycled water for toilets and urinals when recycled water is used for irrigation, there are lots of things that were not given attention in the past, but that is changing.
- Elizabeth Ericksen's phone number is 213-576-6665
- General permit (Earle Hartling)
 - LARWQCB non-irrigation general permit is for street sweeping, dust control, etc.
 - Castaic and Valencia area are covered under this permit
 - Newhall Ranch will build many homes behind Magic Mountain and will change the permit to include irrigation and other uses once enough homes have been built.
 - Using non-potable water to mix concrete mixing is an allowed use under this permit.
 - The general permit for the state is uncharted waters

5) California State Section Update (Monica Gasca)

- The annual conference at the Biltmore in LA on March 15-17 was the largest ever with 500 attendees.
 - The presentations were strong and there were a lot of sponsors.
 - The next conference will be in Santa Rosa in March 2016.
- The Water Reuse & Desalination Research Conference is in Huntington Beach from May 4-5.

6) Chapter Updates

- February 2015 meeting notes approved by unanimous voice vote.

7) Focus Areas

- Funding Opportunities (*Kraig Erickson*)
 - See the handout prepared by John Robinson and distributed at this meeting.

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- Raymond Jay noted Prop 1 draft guidelines are out for review. Submit comments if you are interested in doing so.

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

8) Other Topics

- Industrial Reuse Committee (*Elise Goldman*)
 - Some papers from Industrial Reuse Conference will be used in webinars.
 - The location of the 2016 conference is undecided, but volunteer opportunities are available.

9) Technical Topics (Inge Wiersema)

- There were nearly 40 responses to the technical topics poll. Here is the ranking of the topics:
 1. IPR, DPR and industrial reuse
 2. Recycled water quality monitoring
 3. Retrofit case studies
 4. Storm water, rain water and gray water
 5. Salinity management
- Fred Geringer will speak about IPR/DPR at the August meeting.
- Contact Inge if you want to speak on one of these topics at a future meeting.

10) Membership Roundtable (Kraig Erickson)

- Filling station requests for trucking water to locations without purple pipe.
 - A resident called about wanting recycled water for their front yard, which is not possible.
 - This would be a good discussion topic at a future meeting.

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
Andrew Lazenby	Black and Veatch
Bob Sun	Los Angeles Dept. of Water and Power
Carlos Borja	Los Angeles County Dept. of Public Health
Cathy Chang	Water Replenishment District of So. Cal.
Charles Guel	Los Angeles Dept. of Water and Power
Christine Tran	Los Angeles Dept. of Water and Power
Cory Heggveit	Tetra Tech
Dan Bacani	Los Angeles County Dept. of Public Health
Deb Whitney	US Bureau of Reclamation
Earle Hartling	Sanitation Districts of Los Angeles County
Elise Goldman	West Basin MWD
Elise Takebayashiec	CDM Smith
Elizabeth Erickson	Los Angeles Regional Water Quality Control Board
Elizabeth Sobczak	Castaic Lake Water Agency
Eric Smith	CDM Smith
Eric Wood	LA Dept. of Public Health
Fred Gerringier	Trussell Technologies
Gerry Filteau	Separation Processes, Inc.
Ian Prichard	Camrosa Water
Jason Yim	Castaic Lake Water Agency
Jennifer Jacobus	ESA
Jennifer Kong	LA Sanitation
Jennifer Valdez	Los Angeles Dept. of Water and Power
Jocelyn Carrillo	Los Angeles/Bureau of Sanitation
Jordi Fuentes	Los Angeles County Dept. of Public Health
Judi Miller	CH2M HILL
Julia Aranda	MNS Engineers
Julian Villa	Los Angeles Dept. of Water and Power
Kelvin Kasai	LA County DPH
Kraig Erickson	RMC Water and Environment
Mark Bush	Tetra Tech
Mir Fattahi	NCE
Monica Gasca	Sanitation Districts of Los Angeles County
Omar Moghaddan	AECOM
Paul Tinhpheng	Kennedy/Jenks Consultants
Phuong Ly	Water Replenishment District of So. Cal.
Quang Ly	Los Angeles County Dept. of Public Health
Ray Mokhtari	Metropolitan Water District of So. Calif.
Raymond Jay	Metropolitan Water District of So. Calif.
Reymundo Trejo	Upper San Gabriel Valley MWD
Scott Dellinger	AECOM
Shadi Bader	Burbank Water and Power
Sharona Sokolow	UCLA

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Sunny Wang	Black and Veatch
Tom Monk	Walnut Valley Water District
Tony Umphenour	Burbank Water and Power
Viet Ha	Los Angeles County Dept. of Public Health
TOTAL ATTENDEES:	48