Los Angeles Chapter of the WateReuse Association

M E E T I N G S U M M A R Y

Location:	Glendale Water and Power
Address:	141 N. Glendale Ave, Perkins 1st Floor Community Room #118 Glendale, CA 91206
Purpose:	Bi-Monthly Meeting
Date and Time:	December 3, 2013 from 11:30 a.m. – 1:30 p.m.
Distribution:	Los Angeles WateReuse Association Chapter Members

Lunch: Sponsored by Carollo Engineers

Below is a summary of highlights from the December member meeting of the LA Chapter of the WateReuse Association.

1) Venue host presentation: Glendale Water & Power's Recycled Water Activities (Raja Takidin)

Raja provided some background and an overview of Glendale Water and Power's (GWP) recycled water use. Beginning in 1974, GWP provided recycled water to a power plant for cooling water. Today, GWP delivers 2,000 afy of the 8,500 afy of recycled water available from Los Angeles-Glendale Water Reclamation Plant (LAGWRP).

The following activities are underway for expand GWP's recycled water deliveries:

- The City of Los Angeles (LADWP) is extending a recycled water pipeline through Bette Davis park. This is GWP's first design/build project and is currently in the preliminary design phase.
- GWP is extending a recycled water pipeline to public works facilities for trucks washing, landscaping and fire training.
- GWP is working with LADWP on a new line to Los Feliz Golf Course and a couple of other parks.
- GWP is working with the City of Burbank on agreement to exchange water.
- GWP is also arranging for delivery of recycled water to the City of Pasadena.

Raymond Jay asked what the limiting factor to further expansion of recycled water use by GWP. Raja noted that the biggest limiting factor for selling recycled water is its cost. A recent feasibility study indicated a cost of $1500/AF for recycled water (vs. $800/AF for potable water from Metropolitan). Certainly as the cost of imported water increases, the use of recycled water might become more appealing. GWP provides 25 percent discount to encourage recycled water use.

Raja also noted that the use of dual-plumbing is restricted due to the inability of using of swivel ell connection and the need for potable water backup/redundancy. When Glendale College wanted to use dual plumbing years ago they were able to employ a swivel ell connection, but this no longer allowed. Raja believes this restriction discourages industry from hooking up. He also noted that an interconnection with the system will allow GWP to serve Disney by providing a backup supply source.

Carlos Borja asked whether WateReuse was willing to spearhead the use of swivel-elbow connections. Raymond indicated that he will bring this suggestions to the CA Section Regulatory and Legislative Committee.

Reymundo Trejo asked about the benefits of using a design/build delivery model for small pipeline construction. Raja noted that this was a common practice in power industry as it provides time savings.

2) Lunch sponsor presentation: "AOP Piloting at the Terminal Island Water Reclamation Plant" (Harmik Aghanian)

Harmik presented the testing plan for advanced oxidation process at the City of Los Angeles' Terminal Island Water Reclamation Plant (TIWRP). TIWRP influent contains a substantial component of industrial flows. Most of the 16 mgd of tertiary-treated flows are discharged to the Los Angeles Harbor. An existing advanced water treatment facility (AWTF) is designed to treat up to 5 mgd with MF/RO for injection into the Dominguez Gap Barrier Project. The AWTF will be expanded to up to 12 mgd to eliminate potable water blending at the Barrier and provide 100 percent recycled water contribution (RWC). It will also provide 2 mgd of permeate to Machado Lake to improve its dissolved oxygen concentration. Expanding the AWTF will enable the City to more fully reuse the TIWRP flow, thus effectively eliminate discharge to the harbor.

California's draft Groundwater Replenishment Reuse Regulation are expected to be promulgated this year. It will require advanced oxidation for subsurface injection projects with a requirement of 0.5 log reduction of 1,4-dioxane. The advanced oxidation process (AOP) is typically a combination of hydrogen peroxide (H2O2) with ultraviolet light (UV) or ozone (O3). AOP generates hydroxyl radicals that have been demonstrated to be highly effective at removing trace contaminants.

Bench scale testing was conducted to compare the effectiveness of the following treatment schemes:

- H_2O_2 followed by UV
- sodium hypochlorite (NaOCl) followed by UV
- O_3 followed by H_2O_2

- H_2O_2 followed by O_3

Both medium pressure and low pressure UV systems were tested. All treatment schemes included post treatment with NaOCl followed by sodium hydroxide (NaOH) and calcium chloride ($CaCl_2$).

Bench-scale testing indicated that O3/H2O2 combinations did not sufficiently inactivate protozoa (Giardia and Cryptosporidium) and formed bromate under specific dosages Pilot testing will include UV following the O3/H2O2 treatment schemes. The UV/ H2O2 scheme did not adequately remove 1,4-dioxane, but this will be reassessed during pilot testing. The NaOCl/UV treatment scheme was effective for all constituents tested.

Pilot testing will be conducted with UV equipment provided by Wedeco as well as Trojan Technologies.

Carlos Borja expressed surprise that the results of the bench testing using RO-treated permeate did not sufficiently remove protozoa. As a follow up, Harmik provided the following discussion to further clarify this limitation:

> *The June 2013 Draft Groundwater Replenishment with Reclaimed Water (GRRW) requires 12-log virus reduction, 10-log Giardia cyst reduction, and 10-log Cryptosporidium oocyst reduction (Section 60320.108). All three pathogen targets are granted log reduction credits based on demonstrated performance, however, any one single treatment process (including RO) cannot be credited with more than 6-log reduction. One of the reasons CDPH does not allow RO, or any other technology to completely fulfill reduction requirements is based on the current inability to continuously monitor performance in a way that verifies high log reduction of pathogens. The concern is that an undetected membrane failure would compromise the water quality. Thus, a second and sometimes third treatment process is needed to meet the 12/10/10 goals from CDPH.*

John Robinson noted that since Machado Lake is a 303d listed waterbody, coordination with the Regional Board is needed to get a permit to discharge recycled water into the lake.

A question was raised as to why the TIWRP discharge was being eliminated. Reymundo Trejo explained that for compliance with the 1994 Enclosed Bays and Estuaries Policy, the City of LA and the Regional Board agreed to reuse an initial 5 mgd of the plant effluent and to fully eliminate discharge by 2020.

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

3) Legislative/Regulatory Updates (Raymond Jay)

Raymond noted that Governor saw over 800 bills and vetoed 96 of them.

Below is a summary of Raymond's presentation on the status of key regulations related to recycled water use:

He started us out with a primer on the upcoming legislative schedule:

- January 1 Statues take effect
- January 6 Legislature reconvenes
- January 10 Governor submits budget
- January 31 Last day to pass 2013 bills out of house of origin
- February 21 Last day for bills to be introduced
- August 31 Last day for each house to pass bills/Final Recess begins

- *AB 803 Water Recycling Act of 2013* – Sponsored by WateReuse, this bill was signed into law. It includes authorization for use of hose bibs in cemeteries for tertiary-treated recycled water which could drive increased recycled water demand.
- *SB 322 Water Recycling* – Sponsored by the San Diego County Water Authority and the City of San Diego this bill was signed into law. It presses CDPH to move forward more quickly with developing recycling criteria for direct potable reuse (DPR). The Governor indicated in a signing message that he thought the 3-year allotted timeframe was too long and that this process should be expedited. Raymond noted that project-specific expert panels might also be needed for the first few DPR projects until the relevant technologies are more fully established.
- *AB 1200 Recycled Water Agricultural Impoundments* – Pilot testing of the water quality impacts of using recycled water to augment agricultural impoundments. This bill was vetoed by the Governor indicating that the State Board already has authority to do this and that the irrigators should indeed be using more recycled water.

WateReuse Association's National Legislative Committee activities:

- Develop 2014 work plan
- WRRDA 2013 bill – provides Federal funding for infrastructure. The Committee supports it but is concerned about SRF funds being limited if WRRDA goes through; also concerned that Buy America should not be included if it is not necessary, slows down project progress or limits funding.

CA Reorganization Task Force: Looks likely that the CDPH Drinking Water Programs will move to the State Water Resources Control Board, likely through an administrative process. The Task Force is gathering feedback. It is not expected that this change will affect relationships with local CDPH for recycled water retrofit permitting.

2014 Water Bond – There are two pieces of legislation proposed related to Water Bond– both are approximately $6.5B: *AB 1331* - specifies use of IRMWPs as primary tool for identifying projects to increase regional self-reliance. A concern here is that recycled water projects could be competing with other IRWMP-listed projects. This version would be subject to annual appropriations. *SB 42* includes funding for flood management projects. This version provides continuous appropriations. Both bills were held in committee and will be considered next year. ACWA (Association of

California Water Agencies) has prepared a table that identifies the differences between the two bills.

2014 Recycled Water Legislation:

Suggestions for focus this year include:

- Swivel ells should be reconsidered
- Title 22/Title 17 road blocks i.e., what stalls your projects? Raymond Jay and Monica Gasca will be polling the membership in mid-December.
- Metropolitan Water District has proposed a bill to ACWA to get CEQA exemption for pipelines <8 mile in rights-of-way. Might include additional CEQA issues.
- Other suggestions? Tell Raymond!

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

4) Los Angeles County Department of Public Health Update (Carlos Borja)

The updated 2013 California Plumbing Code will be effective January 1st, 2014. Purple pipe will be used for all non-potable water, although County DPH wanted to restrict it for recycled water use (tertiary-treated recycled water can be sprayed, but others, such as gray water, cannot). Thus purple pipe will not be able to have pre-stenciling as it currently does.

This IAPMO version will be adapted to LA County's Plumbing Code, which can be more restrictive.

Other note considerations from County DPH:

- Developers using one recycled water service for all parcels on large properties comprising several parcels: DPH policy has been one service connection per parcel because individual parcels could be sold off. Parcels have to be served by both domestic as well as recycled water.
- DPH is having trouble keeping track of Water Supervisors for individual sites. In Master Permits, the producer (e.g., LACSD) is responsible for the end user (e.g., school). Have approved and are trying to implement permit fees of $65/yr for inspection per project for sites with domestic service. If there are changes during the previous year, it will trigger inspection and the fee. There is no administrative process to communicate this. He is planning to set up database that would be broadly accessible. Carlos welcomes comments/feedback on this proposed process. Email him at caborja@ph.lacounty.gov.
- Dual-plumbing – Designers need to incorporate vents on the roof to allow the system to drain properly.

- School districts and DSA approvals: The school district is looking at the Dept. of State Architecture as all sole approval needed for project implementation and objects to LA County DPH's inspections. Pipeline ID is an issue. Water lines are buried under roads and they then have to dig them up for DPH.
- Hose Bibs for Cemeteries: Hose bibs will be provided for people to fill vases and the like, but cultural traditions in use of water at cemeteries, e.g., for hand washing, may be challenging. There will not be any potable water on site other than at restroom facilities. Informational signs, pamphlets, educational information, etc. will need to be provided. Testing/chlorination could be beneficial.

5) California State Section Update (Monica Gasca)

The 2015-2019 Strategic and Business Plan will begin preparation to establish goals for next 5 years re: membership, water reuse, industry involvement, etc. This can serve as guidance for chapter activity planning.

6) Award Nominations (Monica Gasca)

Annual CA Section Conference 2014 in Newport Beach in March – Let's have a strong representation from the LA Chapter. Award applications are due January 10 and Monica is willing to help prepare the applications or you can send recommendations to Monica at mgasca@lacsd.org. Award winners are selected by the committee consisting of reps from each chapter. There were no nominees (or no suitable nominees) for many of the categories last year.

7) Chapter Updates

a. October Chapter Meeting Notes – approved.
b. Chapter Newsletter Update (Matt Elsner) – Articles contributions are needed for the next newsletter by December 10th. Would like to get another one out by year end. Also need questions for Earle's *Ask the Guru* column.

8) Focus Areas

a. Funding Opportunities (John Robinson)

John reminded the Chapter of the following funding sources for projects:

- Metropolitan Water District's Local Resources Program (LRP) funding
- SWRCB – uses a single application (FAAST) for all grants
- Department of Water Resources
    - IRWMP Round 3 has not been announced – depends on FY 2014/15 funding
    - Proposed Solicitation Package (PSP) - grant funding for ocean and groundwater desalination, including EIRs

- USBR – Water and Energy Efficiency grant – 2 yrs - $300K; 3 yrs - $1M, with $0.5M caps. 2 projects funded in So Cal: Corona Smart Water Meters; Torrance – storage basins for groundwater recharge with stormwater

9) Other Topics

a. *Industrial Use Committee* (Elise Goldman)

December 9/10 - first specialty conference, in Long Beach.
A webinar will be held on creative financing solutions for industrial reuse by the US Business Council for Sustainable Development and Sustainable Water, featuring Bill MacDonald/Metropolitan re: water savings incentive program Dec. 18, 11am-12:15pm.

b. *Firefighting with Recycled Water* and *Revision to LACRWAC Recycled Water Users Manual* (Earle Hartling)

Firefighting - Comments were provided by LACSD that need to be addressed. Earle will have the revised version for us by our next meeting.
Users Manual – Earle has comments from the Working Group and will try to distribute to the chapter shortly.

c. *Technical topics poll for future meetings* (Inge Wiersema)

Inge distributed a survey to the membership for input on preferences for potential technical topics for future meetings. She will report out on the results at the next member meeting.

10) Membership Roundtable – Projects, Regulatory Issues, Financing, etc. (Kraig Erickson)

Lively discussion earlier on in the meeting superseded the need for this agenda item.

11) Elections:

Ballots were completed for 2014 officer elections.

12) Next Meeting

- February 11, 2014 – Host: Las Virgenes MWD; Sponsor: RMC Water and Environment

<u>Los Angeles Chapter Officers for 2014</u>

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@lacsd.org
John Robinson, Past-President	626-375-9389	jrobinson@johnrobinsonconsulting.com

* The presentations from this December, 2013 meeting can be found at: http://www.watereuse.org/sections/california/losangeles/meetings

Meeting Attendees

Member	Organization
Anita Matlock	Rain Bird Corp.
Asif Sheikh	Burbank 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
Donald Cresse	Los Angeles Dept. of Water and Power
Dusty Moisio	Rowland Water District
Earle Hartling	Sanitation Districts of Los Angeles County
Elise Goldman	West Basin MWD
Elizabeth Sobczak	Castaic Lake Water Agency
Eric Smith	CDM Smith
Fabiola Wells	Glendale Water and Power
Fred Gerringer	Trussell Technologies
Gary Roephe	Cannon
Harmik Aghanian	Carollo Engineers
Inge Wiersema	Carollo Engineers
Jason Yim	Castaic Lake Water Agency
Jim Leserman	Castaic Lake Water Agency
Jocelyn Carrillo	Los Angeles/Bureau of Sanitation
Joe Yersky	Walnut Valley Water District
Joey Uy	City of Los Angeles/Bureau of Sanitaiton
John Robinson	John Robinson Consulting, Inc.
Joey Uy	City of Los Angeles/Bureau of Sanitaiton
Kirk Allen	Los Angeles County Dept. of Public Works
Kraig Erickson	RMC Water and Environment
Luis Macias	Los Angeles Dept. of Water and Power
Matt Elsner	Burbank Water and Power
Matt Knudson	Palmdale Water District
Monica Gasca	Sanitation Districts of Los Angeles County
Paul Liu	Los Angeles Dept. of Water and Power
Quang Ly	Los Angeles County Dept. of Public Health
Raja Takidin	Glendale Water and Power
Ray Mokhtari	Metropolitan Water District of So. Calif.
Ray Notario	Glendale Water and Power
Raymond Jay	Metropolitan Water District of So. Calif.
Reymundo Trejo	Upper San Gabriel Valley MWD
Rosalba Santana	Los Angeles Dept. of Water and Power
Rosanna Lau	Glendale Water and Power
Seth Carr	Los Angeles/Bureau of Sanitation
Shadi Bader	Burbank Water and Power
Tom Monk	Walnut Valley Water District

TOTAL ATTENDEES: 41