

## Emerging Constituents Workgroup

July 14, 2009

### ATTENDEES:

LeAnne Hamilton, IEUA  
Andy Campbell, IEUA  
Bonita Fan, IEUA  
Greg Woodside, OCWD  
Marsha Westropp, OCWD  
Gina Pineda, OCWD  
Steve Fitzsimmons, OCWD  
Jason Dadakis, OCWD  
Nira Yamachika, OCWD  
Kathy Kunysz, MWDSC  
Melissa Dale, MWDSC  
Roger Lewis, LACSD  
Jodie Nygaard, LACSD  
Linda Garcia, WMWD  
Bobby Gustafson, City of SBMWD  
Valerie Housel, City of SBMWD  
Carrie Guo, MWDSC

Sean McCarthy, CDPH  
Jack Nelson, YVWD  
Karen Baroldi, OCSD  
Chandra Johannesson, City of Riverside  
Lyndy Lewis, City of Corona  
David Aladjem, SBVMWD/WMWD  
Sam Fuller, SBVMWD  
Mark Bulot, SBVMWD  
Edward Filadelfia, EMWD  
Jayne Joy, EMWD  
Julius Ma, EVMWD  
Gerry Thibeault, CRWQCB  
Cindy Li, CRWQCB  
Tim Moore, Risk Sciences  
Joe LeClaire, WE Inc.  
Mark Norton, SAWPA  
Regina Patterson, SAWPA

### Call to Order / Introductions

The Emerging Constituents Workgroup (EC) meeting was called to order at 1:35 p.m. at the Santa Ana Watershed Project Authority located at 11615 Sterling Avenue, Riverside, California. Introductions were made.

### Approval of May 19, 2009 Meeting Summary

This item was deferred.

### Draft Results of NWRI/MWD/OCWD Study on PPCPs – Carrie Guo, Ph.D.

Tim Moore reported the NWRI/MWD/OCWD study has been underway for close to two years. Back in February the final samples were collected and analyzed, and a final report is being prepared. There was some concern about this presentation because it is a preliminary analysis and draft. Therefore, the electronic copy presented today will not be posted to SAWPA's website.

Carrie Guo, MWD, presented a preliminary report on results of representative PPCPs in all three watersheds reporting that three sources of water were studied, State Project water (SPW), Colorado River water (CRW) and Santa Ana River (SAR) water. The first six months were used for method development. The quarterly survey started in April 2008, is when samples were collected from selected wastewater treatment plants, upstream and downstream of the dischargers. We are now in the data analysis and report preparation stage. The final report will be ready for distribution following NWRI's review later this year. This is a collaborative effort

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among many agencies. The source, fate and transport of pharmaceuticals and personal care products in SPW, CRW and SAR water are studied. She reviewed sampling locations in the SPW system and presented a schematic map of the Colorado River and the Santa Ana River stating there are 13 sites within the SAR watershed. She reviewed three lists of analyte method reporting limits (MRLs) ranging from 10 mg/L to 50 mg/L, anything below the MRLs were listed as ND (non detected). The list includes the 14 pharmaceuticals in the different categories. She explained the QA/QC procedures reporting that field blanks were collected to determine if there is contamination from complex procedures. Method blanks are run to assess possible contamination from the analytical procedures in the lab. Duplicates are also run to assess precision and accuracy. The isotope dilution approach is used for LCMS analyses to compensate for matrix effects. Split samples are being run on a regular basis.

She presented a table of preliminary results listing the most frequently detected PPCPs and organic wastewater contaminants (OWCs) based on each individual watershed. There are only surface water samples for SPW, with no wastewater treatment plant samples collected. Based on the flow, one blended effluent sample from three wastewater treatment plants was collected for CRW. She described OWCs as covering anything other than pharmaceuticals and personal care products and can include industry-wide products and pesticides. Wastewater effluents are separated out for the SAR from three wastewater treatment plants.

Ms. Guo reported that she tried to list the ten most frequently detected within each group, with two exceptions. The wastewater treatment plant blended effluent in CRW had all 12 PPCPs, and OWCs were detected at 100% detection frequency, meaning they were detected in each of the 4 samples collected. Fate and transport was a part of the objective for the SAR, but it is difficult to follow the fate and transport when it is at or lower than 10 mg/l.

In summary, Ms. Guo reported 126 samples were collected for the three watershed and analyzed for 49 PPCPs and OWCs. Detectable amounts were found at all locations. The five most commonly detected PPCPs were caffeine, Carbamazepine, Primidone, Sulfamethoxazole and TCEP. Twenty-two PPCPs and OWCs were not detected in all samples. Currently, data are continuing to be reviewed, work continues on fate and transport, and the final report is being prepared for submittal to NWRI by October 2009.

Mr. Moore asked how many of these chemicals would they want to look at to get a good picture of what's going on? Ms. Guo said at least five, because they are looking for indicators. Mr. Moore asked if there is a rational basis for preserving the categorization scheme in selecting a chemical or a tracer? Ms. Guo said in some instances yes, but in the list of analytes there was nothing seen for hormones or steroids. Gerry Thibeault asked if the correlation study should be dealt with before saying that certain things can generally be surrogates for others? Mr. Moore said the correlation study is fairly watershed specific.

Mr. Moore referred to the QA/QC data presented stating fairly high frequency was detected in the field blank data, but they were not high in concentration. Why? Ms. Guo said they have not found the source of it. The MRL is 1 mg/L and some of those will go away if the MRLs are 10 mg/L. Sulfamethoxazole has one of the lowest MRLs, that is why we are seeing more of that in the field blanks.

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#### Other

Mr. Moore reported the Navajo Indian nation is suing the U.S. Forest Service for trying to prohibit the use of reclaimed water for making snow. Their concern was that reclaimed water violated their religious beliefs. There is a federal law that says the use of reclaimed water violated their religious rights. If this was upheld, it could have had significant implications for reclaimed water use, the presence or absence of some pharmaceuticals and personal care products, and if they are offensive to some religions. The courts rejected it as an impact to their worship rights.

#### Blue Ribbon Panel – Status Update

Mr. Moore reported there is a draft outline circulating on the results of the NWRA/SCCWRP workshop in February. That document is guiding the Blue Ribbon Panel. We may see something in four to six weeks. The outline and summary are being worked on.

Mr. Moore said at the next meeting we will explore some of the myths of risk communication and perception.

#### Future Meeting

Tuesday, August 25, 2009 at 1:30 p.m.

Tuesday, September 22, 2009 at 9:30 a.m.

#### Adjournment

The Emerging Constituents Workgroup meeting adjourned at 3:55 p.m.

#### Handout (s)

None