

Science Advisory Panel for CECs in Recycled Water

December 15, 2017

Joe Serna Jr. Cal EPA Headquarters Bldg.
Sacramento, CA

[http://sccwrp.org/ResearchAreas/Contaminants/
RecycledWaterAdvisoryPanel.aspx](http://sccwrp.org/ResearchAreas/Contaminants/RecycledWaterAdvisoryPanel.aspx)



HOUSEKEEPING

- **This meeting is open to the public and is being webcasted.**
 - <https://stateofcaswrcbweb.centurylinkccc.com/CenturylinkWEb/SimoneHalbert>
- **For more information on the Panel's work, please visit the project webpage at**
 - <http://sccwrp.org/ResearchAreas/Contaminants/RecycledWaterAdvisoryPanel.aspx>
- **If you would like to receive project updates, please contact**
Keith Maruya keithm@sccwrp.org
Tessa Fojut Tessa.Fojut@waterboards.ca.gov

EXPERT PANEL REVISIT

- **Panel first convened in 2009**
- **CEC monitoring recommendations delivered in 2010 report**
 - Eight (8) CECs for indirect potable reuse (groundwater recharge) uses
 - No individual CECs identified for Title 22 landscape irrigation practices
- **Panel recommendations adopted and incorporated into CA Recycled Water Policy (amended in 2013)**
- **This effort charges the Panel to revisit and update recommendations, based on new monitoring data and toxicological information**

RECYCLED WATER USES HAVE EXPANDED

- **NON-POTABLE USES (“TITLE 22”)**
 - specifies level of treatment and bacterial standards for intended use
- **POTABLE REUSE**
 - Groundwater recharge - Surface spreading
 - Groundwater recharge - Subsurface injection
 - Surface water augmentation (new!)
- **DIRECT POTABLE REUSE (DPR)**
 - report on feasibility of regulating DPR released in 2016
 - this Panel will NOT address DPR practices

Source: CADWR (2016) *Municipal recycled water, a resource management strategy of the California Water Plan.*

ANTIBIOTIC RESISTANCE

- **Knowledge of ARBs/ARGs in recycled water is incomplete**
 - Most bacteria removed by advanced treatment, but genes can be transferred across species
- **Provide recommendations for research on ARBs/ARGs associated with allowable non-potable Title 22 and IPR uses to further understand their potential to impact human health.**
- **Supplement recommendations/findings from Expert Panel for DPR (Olivieri et al. 2016, Chapter 7)**
 - Determine human health risk due to ARBs/ARGs in recycled water
 - Develop standardized tests for ARBs/ARBs
 - Characterize ARB/ARG removal by recycled water treatment processes

GROUND RULES

- **Protection of human health is the focus of this effort**
 - ecological impacts in waters receiving intentional or incidental runoff of recycled water are not under consideration
- **Primary focus on updating recommendations from 2010**
 - Panel to consider all allowable Title 22 uses and surface water augmentation
- **Ingestion of food crops irrigated using Title 22 recycled water will NOT be considered by this Panel**
 - Occupational exposure and consumption of potable water produced by potable reuse practices are to be addressed

STAKEHOLDER ADVISORY GROUP

- Sean Bothwell, CA Coastkeeper Alliance
- Ann Heil, Sanitation Districts of Los Angeles County
- Roberta Larson, CA Association of Sanitation Agencies
- Mark Millan, Town of Windsor
- Jeff Mosher, Water Environment & Reuse Foundation
- Megan Plumlee, Orange County Water District
- Toby Roy, San Diego County Water Authority*
- Debbie Webster, Central Valley Clean Water Association
- Jennifer West, WateReuse CA

- *Lesley Dobalian, San Diego County Water Authority
(alternate)

AGENDA FOR TODAY

- **Updating the Recycled Water Policy**
 - Claire Waggoner, Division of Water Quality
- **Updated recommendations for monitoring of CECs in recycled water**
 - Dr. Jörg Drewes, Panel Chair
- **Public Comments**
 - Stakeholder Advisory Group
 - Other members of the public
- **Release of the Panel Report**
 - scheduled for January 15, 2018
 - 30-day public comment period

SCHEDULE

- **Panel Meeting #1: July 19-21**
 - Day 1 Kickoff (open to public)
 - Day 2 Panel Deliberation (closed session)
 - Day 3 Panel Report Out (open to public)
- **Panel Meeting #2: Dec 11-15**
 - Days 1-4 Panel Deliberation (closed session)
 - Day 5 Final Panel Recommendations (open to public)
- **Draft Panel Report Release: January 15, 2018**
 - 30 day public comment period
- **SWB Staff Recommendations: March 2018**

