Science Advisory Panel for CECs in Recycled Water

December 15, 2017
Sacramento, CA

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

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**