

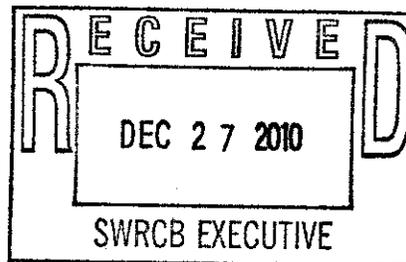


# ORANGE COUNTY SANITATION DISTRICT

We protect public health and the environment by providing effective wastewater collection, treatment, and recycling.

Public Hearing (12/15/10)  
CEC - Recycled Water  
Deadline: 1/10/11 by 12 noon

December 21, 2010



Jeanine Townsend, Clerk to the Board  
State Water Resources Control Board  
1001 I Street, 24th Floor  
Sacramento, CA 95814

SUBJECT: Comment Letter - CEC Monitoring for Recycled Water

The Orange County Sanitation District (OCSD) is pleased to submit comments on the State Water Resource Control Board's (SWRCB) recommendations for Constituents of Emerging Concern (CEC) monitoring for recycled water. Since 2008, OCSD, in partnership with Orange County Water District, has been providing approximately 70 million gallons per day of secondary treated water to the Ground Water Replenishment System (GWRS). GWRS produces highly treated water to meet the needs of 500,000 people in Orange County. As such, OCSD has a vested interest in the outcome of the final CEC monitoring recommendations of SWRCB. Recycled water is a cornerstone of the State's water supply strategy, and it is vital that SWRCB's promulgation of regulations and policies is scientifically supported.

OCSD appreciates the effort expended by the State Water Board members, their staff, the expert Panel and the Panel facilitators at the Southern California Coast Water Research Project. The Panel has provided a sound set of recommendations that can and should be implemented, and has also recommended an appropriate framework for identifying which CECs and surrogate constituents should be monitored in association with groundwater recharge and irrigation projects that use recycled water. However, OCSD is concerned with the deviations of SWRCB's Staff Report from the Panel's recommendations. The deviations may, inadvertently, reduce the effectiveness of the Panel's recommendations and unnecessarily divert scarce public resources. These deviations are as follows:

- The Panel report appropriately differentiates between the monitoring recommended for irrigation projects and the monitoring recommended for groundwater recharge projects. This differentiation is grounded in the difference in relative risk between these activities. The Staff Report does not clearly represent this differentiation. Any final action by the SWRCB should more clearly distinguish monitoring requirements between these applications. This is important as the Panel considered CEC monitoring for landscape irrigation to be unnecessary based on their review.
- OCSD is concerned that including the following information in the Staff Report may in some cases be misinterpreted as some sort of performance standard that recyclers are required to meet:
  1. Tables 1 and 2 in the Staff Report provide information about expected removal rates for CEC indicators and surrogate parameters that go beyond the Panel's recommendations.
  2. The Staff Report provides information about expected response actions when MEC/MTLs exceed certain levels. The Panel's recommendations clearly noted that it did not intend for the response actions to be a regulatory approach, but that the recycler should work with California Department of Public Health (CDPH) and Regional Water Boards on possible actions based on monitoring results.

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While OCSD believes the staff's intent is to use these for informational purposes only, OCSD does not see this information as central to the SWRCB decision, and ask that this information be removed from any final document or that an explicit statement be added that these response actions are not mandated and should not be used as such in a regulatory context by Regional Boards.

- The Staff Report does not propose that a key Panel recommendation for the study of particular CECs be implemented and, instead, suggests that it would be appropriate to give the Regional Boards the authority to require collection of CEC occurrence data by individual recycling projects without respect to the Panel's recommendations. OCSD disagrees with this approach because:
  1. The CDPH has statutory authority to protect public health. As a result, CDPH – not the Regional Boards – has authority to recommend CEC monitoring for groundwater recharge projects on a statewide basis.
  2. It is important to remember that the inconsistent implementation of water recycling requirements and disregarding the advice of CDPH, in part, prompted SWRCB to begin its efforts to develop a consistent statewide policy on water recycling, including CECs. After undertaking an informed scientific process, it makes no sense to encourage individual Regional Boards to add monitoring requirements for CECs on a case-by-case basis.
  3. SWRCB staff has indicated that one of the goals of such additional monitoring is to obtain additional data on the presence and concentration of CECs. Those data are currently being collected by numerous research efforts in controlled scientific studies. OCSD believes that such studies are the best way to ensure that SWRCB and CDPH have good data upon which to make policy decisions, provided that the analytical methods used to develop the data are identical and that the precision or repeatability of the methods are calculated and reported.
  4. OCSD assumes that the goal of the SWRCB in asking for CEC monitoring is to ensure protection of public health. OCSD believes that the best way to achieve this goal is for SWRCB to establish a consistent set of statewide monitoring data for recycled water groundwater recharge projects, rather than hit-or-miss monitoring of a number of different CECs. With a consistent data set derived from use a single analytical method, the SWRCB and CDPH will be better able to compare conditions in different areas. Disparate monitoring does not constitute a useful or efficient approach to obtain this objective.

Instead of delegating authority to Regional Boards to deviate from the Panel's recommendations, OCSD suggests that SWRCB adopt the Panel's recommendation to conduct a one-year study of a particular class of CECs for which the Panel felt it had insufficient information on their occurrence in recycled water (Table 8.4 in the Panel Report). These constituents are believed to exhibit toxicity at low concentrations (less than 500 ng/L). OCSD thinks these should be studied to gather data to determine if there is need for longer term monitoring. Regional Boards are not equipped with sufficient expertise and should not be expected to make these judgments. The data should be provided to the Panel for review



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and for a determination if any particular CECs should be added to the monitoring list pursuant to the Panel's recommended framework.

- The Staff Report suggests monitoring frequency of surrogate compounds that goes beyond the Panel's recommendations. OCSD does not believe SWRCB needs to determine this as a matter of policy, and instead recommend that this matter be determined on a project specific basis by CDPH, Regional Boards, and the water recycler. In addition, OCSD believes that a sunset provision should be included whereby a recycling facility may request for a CEC to be removed from its monitoring list if it is consistently non-detected. Also, OCSD believes that monitoring should only include CECs for which there is a robust and peer-reviewed method available at reasonable cost.
- The June 30, 2010, Final Panel Report of the State Water Resources Control Board Science Advisory Panel on Chemicals of Emerging Concern in Recycled Water defines CEC as follows: *"In considering the charge, the Panel defined CECs to represent personal care products, pharmaceuticals including antibiotics and antimicrobials; industrial, agricultural, and household chemicals; natural hormones; food additives (e.g., phytoestrogens, caffeine, sweeteners); transformation products, inorganic constituents (e.g., boron, chlorate, gadolinium); and nanomaterials. The Panel also chose not to consider the occurrence of waterborne microbial pathogens or their acquisition of antibiotic resistance."* The report also lists constituents for monitoring, in particular, those constituents which already have numerical limits or standards and are regulated such as n-nitrosodimethylamine. OCSD believes that the CECs under consideration for monitoring should be limited to those constituents that do not have numerical limits or standards, in essence, unregulated constituents since the key objective of the CEC monitoring will be to identify and establish thresholds for these new and unregulated constituents thereby protecting the public health.
- The June 30, 2010, Final Panel Report of the State Water Resources Control Board Science Advisory Panel on Chemicals of Emerging Concern in Recycled Water defines Monitoring Trigger Level (MTL) as the product of the screening level acceptable daily intakes (ADIs) and USEPA's default bodyweight of 60 kilograms for an adult female and relative source contribution (RSC), ratioed by 2 liters per person per day. Further, the report advocates using the derived MTL over existing benchmarks, specifically the CDPH notification levels, MDL and advisory level. OCSD believes that doing this will create a dichotomy of regulatory levels. If the MTL methodology proposed by the staff is applied only to unregulated constituents, then the dichotomy will not be created. OCSD also suggests that the MTL numbers should be used with caution as ADIs and RSC are empirically derived and already have conservative margins on top of the margin expressed by the MEC/MTL ratios. The numbers can be misinterpreted and misused. It's also important to recognize that MTLs are often derived from developing scientific information (thereby "emerging"). As such MTLs may be adjusted up or down or eliminated altogether based on new information.

By sticking closely to the recommendations of the Panel, SWRCB can communicate to the public that recycled water supplies are receiving appropriate scrutiny. The Panel's approach ensures that agencies will identify the presence and concentrations of CECs well before those concentrations can pose any risk to public health.



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Thank you for considering these comments. If you have any questions, please contact Chris Stacklin at (714) 593-7403.

*Jim Colston for*

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