



California Regional Water Quality Control Board
Los Angeles Region

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



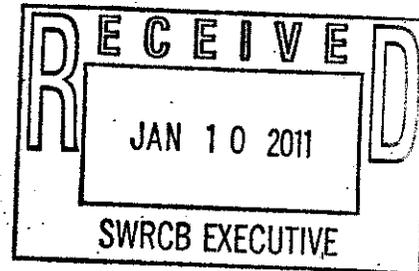
Linda S. Adams
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Edmund G. Brown Jr.
Governor

January 10, 2011

Jeanine Townsend, Clerk of the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000



Dear Ms. Townsend:

**SUBJECT: COMMENT LETTER – CONSTITUENTS OF EMERGING CONCERN (CECS)
MONITORING FOR RECYCLED WATER**

Thank you for the opportunity to review the Science Advisory Panel's final report and associated Staff Report outlining monitoring strategies for CECs in recycled water. We appreciate the recommendations provided by the Panel and State Board staff, and we continue to offer further suggestion regarding the proposed framework for monitoring of CECs.

The Panel was asked to focus its recommendations for development of a monitoring program for CECs in recycled water for three reuse practices in which CECs may represent a potential threat to human and aquatic health: 1) indirect potable reuse via spreading of recycled water; 2) indirect potable reuse via subsurface injection of recycled water into a potable aquifer; and 3) urban landscape irrigation with recycled water.

The Panel further chose to focus its recommendations on toxicological relevance of CECs to human health, because according to the Panel, most water reuse practices have limited impact on ecological receptors. Unless the *Advisory Panel for CECs in Coastal and Marine Ecosystems* effort is broadened to address inland freshwater impacts from CECs, Regional Board staff believes that this focus is too narrow, given that in the Los Angeles Region most dischargers that recycle treated wastewater containing CECs also discharge directly to surface waters where resident aquatic life is exposed full time to nearly 100% effluent containing these compounds. In addition, water reuse practices, including food crop irrigation and urban landscape irrigation, have the potential to result in discharges of CECs to surface waters. Therefore, we believe that it is imperative to consider toxicological impacts on ecological receptors in developing a monitoring strategy for CECs.

The Panel originally recommended monitoring of three indicator compounds (17-beta estradiol, caffeine and triclosan) for groundwater recharge. However, in the final report, the Panel added five additional constituents based on toxicological relevance and viable indicators of treatment performance. State Board staff also added fifteen constituents to be monitored when groundwater recharge/reuse facilities use surface spreading, based on consultation with California Department of Public Health (CDPH) staff. Because the CDPH periodically updates

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their recommended CEC monitoring list, the Staff Report should also allow for the State Board's list of constituents to be updated as needed.

The Panel's final report mentions that the limited data used to develop the proposed monitoring framework may not reflect site-specific situations around the entire state. Given this fact, Los Angeles Regional Board staff would appreciate having access to the data reviewed by the Panel and suggest making the database accessible on the State Board's website. This will help guide us in the development of appropriate monitoring strategies for the many dischargers in our region.

We support the Panel's recommendation that the State should conduct a more thorough review of CEC literature and potential effects and should develop a secondary list of constituents that could be monitored less frequently than the primary list. We further recommend that the secondary list should consider the impact on fresh waters given the large number of wastewater treatment plants discharging to inland streams in our region.

We also concur with the State Board staff's recommendation to fund the development of a bioanalytical screening technique. However, we believe it would be better to combine this approach with the Panel's other recommendation to conduct a comprehensive review of CECs likely to occur in recycled water. To this end, facilities that are currently monitoring for constituents not included in the initial list should continue to do so. This would not only help reduce the existing data gaps but would also support the additional recommendations to conduct a triennial review to update the CEC indicator list and to develop a secondary monitoring list including CECs with limited or no information on measured environmental concentrations (MECs).

We noted a few oversights that should be addressed in the Staff Report. First, in accordance with Endnote 2 of Title 22, page 3 of the Staff Report should be revised to require that analytical methods should be approved by either the CDPH or the U.S. Environmental Protection Agency (USEPA), not just the CDPH. Second, the Staff Report indicates that dissolved organic carbon (DOC) should be used as a surrogate to evaluate treatment system performance. Because this recommendation differs from the CDPH's Groundwater Recharge Reuse Regulations which require that total organic carbon (TOC) be monitored, the Staff Report should be revised to require TOC instead of DOC as a surrogate. Third, page 4 of the Staff Report should be revised to include groundwater monitoring for direct injection operations.

We appreciate the efforts of the Panel to develop a framework for monitoring of CECs in recycled water. We look forward to continuing to work with State Board as we review new monitoring data in this rapidly evolving field, which is of great concern in our region given 1) the large number of wastewater treatment plants discharging to freshwater streams and ocean; 2) our freshwater, estuarine and marine aquatic life being exposed to often high levels (sometimes 100 percent) of effluents; and 3) the importance of protecting and restoring our local groundwater supplies due to dwindling imported supplies.

Should you have any questions, please don't hesitate to contact Brandi Outwin-Beals, Senior Water Resources Control Engineer, at (213) 576-6664.

Sincerely,



Deborah J. Smith
Chief Deputy Executive Officer

Cc: Darrin Polhemus, Division of Water Quality, State Water Resources Control Board
Gary Dickenson, Division of Water Quality, State Water Resources Control Board
Colleen Ingram, Division of Water Quality, State Water Resources Control Board