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Public Comment
Recycled Water Policy
Deadline: 7/3/12 by 12 noon

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ORANGE COUNTY WATER DISTRICT
ORANGE COUNTY'S GROUNDWATER AUTHORITY

July 3, 2012

Charles R. Hoppin, Chair and Members
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814



Via Email: commentletters@waterboards.ca.gov

SUBJECT: COMMENT LETTER – AMENDMENT TO THE RECYCLED WATER POLICY

Dear Chair Hoppin and Members of the Board:

Orange County Water District (OCWD) staff is pleased to comment on the State Water Resources Control Board's (SWRCB) proposed Amendment to the Recycled Water Policy regarding monitoring of constituents of emerging concern (CECs) in recycled water used for groundwater recharge and landscape irrigation.

OCWD is the public agency responsible for groundwater resource management in the Orange County Groundwater Basin. We represent the interests of more than 20 cities and water agencies that serve groundwater to nearly 2.4 million people in northern Orange County. OCWD operates the Groundwater Replenishment System (GWRS), the country's largest indirect potable reuse project that provides up to 70 million gallons per day (MGD) of purified recycled water for groundwater recharge under permit from the Santa Ana Regional Water Quality Control Board (RWQCB). We also operate the Green Acres Project (GAP), a non-potable reuse project that supplies recycled water for landscape irrigation.

For the most part, we concur with the Amendment, which largely incorporates the Science Advisory Panel's (SAP) recommendations and many of our comments provided at the December 15, 2010 public hearing. As a general principal, we support adhering as closely as possible to the SAP's recommendations, consistent with science-based process specified in the Policy. We believe that serious consideration should be given to the additional clarification and recommendations provided in the comment letter submitted on behalf of the SAP by its chairman, Dr. Jorg Drewes.

We also generally support the recommended modifications to the Amendment and the associated Attachment A as stated in the joint comment letter produced by the Association of California Water Agencies (ACWA), the California Association of Sanitation Agencies (CASA) and WateReuse California (collectively, the Associations).

Furthermore, it will be of great benefit if the CEC provisions in the Amendment are aligned with the California Department of Public Health's (CDPH) Groundwater Recharge Reuse regulations. While these regulations are in the process of being finalized, CDPH staff has indicated that the CEC provisions are not likely to change from the latest set of draft regulations released on November 21, 2011. Consistency between the Recycled Water Policy (as amended) and the CDPH recharge regulations is critical to providing efficient, purposeful, and non-duplicative regulation of recycled water use.

As enumerated below, OCWD staff has a number of specific comments and recommended changes to the Amendment and the associated Attachment A.

1) Amended Recycled Water Policy, 8b.(2): Priority Pollutant Monitoring for Groundwater Recharge projects

In compliance with the RWQCB permit to operate the GWRS project, an independent advisory panel administered by the National Water Research Institute (NWRI) has provided on-going periodic scientific peer review of the GWRS since 2004. In 2009, the Panel's regular report to contained the following statement on priority pollutant monitoring:

“Although monitoring for priority pollutants currently is required by regulatory agencies, there is serious question as to whether there is a need to include priority pollutants as a group. Our understanding of toxic chemicals has come a long way since this list was first developed in 1977. It may be worthwhile to initiate meetings with CDPH and the Santa Ana Regional Water Quality Control Board (RWQCB) to investigate the potential of eliminating monitoring for priority pollutants that historically have not been found in either the untreated wastewater or product water. The Panel supports reducing or eliminating monitoring for non-detected priority pollutants based on historical monitoring results.”

Thus it is recommended that this provision be revised as follows (see double underline text):

“Groundwater recharge projects shall include monitoring of recycled water for ~~CECs on an annual basis~~ and priority pollutants ~~on a twice annual basis~~ per year. Monitoring shall be reduced or eliminated for priority pollutants that have not been detected in the untreated wastewater or recycled water used for recharge based on the most recent five years of historical data.”

2) *Attachment A, Section 1, ¶ 4, pg. 2: Selection of CEC monitoring for treatment processes not addressed in the Policy*

Attachment A states here “CEC monitoring requirements for groundwater recharge reuse projects implementing treatment processes that provide control of CECs by processes other than soil aquifer treatment or RO/AOPs shall be established on a case-by-case basis by the Regional Water Boards in consultation with CDPH.”

First, we strongly recommend that the attachment be clarified here and in other related sections to indicate that the monitoring requirements for Subsurface Application projects employing RO/AOPs would also be applicable to projects which elect to use RO/AOPs treatment prior to surface application. OCWD’s GWRS project is an example of such a project and this practice is currently under consideration by agencies planning future reuse recharge projects such as Los Angeles Department of Water and Power (LADWP), Water Replenishment District of Southern California (WRD), and the Rancho California Water District (RCWD). In such cases, the monitoring requirements for the RO/AOP treatment are much more appropriate as compared to those required for Surface Application of tertiary-treated recycled water to assess soil aquifer treatment.

Additionally, until such time as a future Board SAP addresses additional recycled water treatment processes and CEC monitoring, CDPH should be the lead in designating CEC monitoring for groundwater recharge projects as they have the most expertise, both in terms of health relevance and alternative technology performance. In addition, the CDPH groundwater recharge regulations include a defined process for assessing alternatives to any provision in the regulations, including alternative technologies. To obtain approval for an alternative, the project sponsor must demonstrate that the alternative provides the same level of public health protection; if required by CDPH or Regional Board the project sponsor must conduct a public hearing; and unless otherwise specified by CDPH, an expert panel must review the alternative.

Our suggested language changes below conform to that process and our request for CDPH to be the lead in making CEC and surrogate monitoring decisions related to technologies not yet addressed by an SAP.

“This Policy provides CEC monitoring requirements for recycled water which undergoes additional treatment by soil aquifer treatment or RO/AOPs. CEC monitoring requirements for groundwater recharge reuse projects implementing treatment processes that provide control of CECs by processes other than soil aquifer treatment or RO/AOPs shall be established on a case-by-case basis by the Regional Water Boards per CDPH’s written recommendations in consultation with CDPH.”

3) *Attachment A, Section 1.1, ¶ 2, pg. 4: CEC Analytical Methods*

In Attachment A, the Board specifies that if the U.S. Environmental Protection Agency (EPA) has “approved” an analytical method for a CEC or surrogate, that method must be used (see Attachment A, pg. 4). It is our understanding, in accordance with the Board’s standard provisions, that only a method that has been promulgated in 40 Code of Federal Regulations (CFR) Part 136 or Part 141 is an approved method. We are concerned that any published EPA method could be improperly interpreted to mean that it is an approved method (for example, two published but not promulgated methods; Method 1694 for the analysis of pharmaceuticals and personal care products and Method 1698 for the analysis of steroids and hormones). The primary concern with these two stated EPA methods is their documented poor performance, especially in light of the Policy’s required response actions to CEC monitoring results.

We believe that the approach in the CDPH November 2011 draft groundwater recharge regulations for CEC analytical methods should be utilized in the Policy amendment because it recognizes the current status of CEC analytical methods and would allow for more reliable monitoring; namely, that unless a promulgated method is available for use, other methods for CECs should be proposed by the project sponsor in the project’s CDPH approved Operations Plan. As such, with regard to this specific provision, we recommend the following revision:

“If the United States Environmental Protection Agency (U.S. EPA) has approved promulgated an analytical method or methods for analysis of a CEC or a surrogate in 40 CFR Parts 136 or 141, then the CEC or surrogate shall be analyzed in conformance with such the analytical method unless the project sponsor and Regional Water Board agree that an alternative U.S. EPA test method can be used. The CDPH shall be consulted for the use of analytical methods for CECs or surrogates that do not have analytical methods approved by U.S. EPA. If a U.S. EPA promulgated method is not available, a project sponsor will propose a method for use in a project’s CDPH approved Operations Plan.”

4) *Attachment A, Section 2.2.2, pg. 7: Groundwater recharge – performance-based CEC and surrogate monitoring locations for subsurface application projects*

To be consistent with the expert panel’s recommendations, is it not necessary for the specific monitoring locations for subsurface application projects to be provided in Attachment A. The SAP recommended that: “The location and monitoring criteria for selection and use of these sampling locations are site-specific and need to be defined on a case-by-case basis. The guidance provided within this report should be used to supplement the monitoring conducted as part of compliance with the draft CDPH regulations.” (June 2010 SAP Report, pg. 69)

With regard to first sampling location, the language is vague and not consistent with the suggestion from the SAP. The SAP report provided as an example “Between secondary

and membrane treatment processes.” In reality, the specific location will depend on the feedwater used for the advanced treatment system.

With regard to the other two locations, these should be selected in consultation with CDPH. There are conflicting recommendations in the June 2010 SAP Report. On pg. 67, the panel recommends monitoring “recycled water prior to and after RO/AOP,” and on pg. 69 at the locations included in Attachment A. Given that the purpose of the two surrogates (TOC and conductivity) and all of the indicator compounds other than NDMA are used to solely evaluate RO membrane performance, it does not make sense to establish two separate, duplicative locations (after RO and after AOP) for all of the test constituents.

We recommend that this language be modified as follows:

- “(1) Following upstream treatment units prior to treatment by RO At a point selected in consultation with CDPH that represents feedwater to the RO/AOP treatment process; and
- (2) At a point selected in consultation with CDPH that represents Following treatment by RO prior to treatment by AOPs or ; and
- (3) Following treatment by AOPs prior to discharge to the aquifer.”

We also recommend that a similar modification to monitoring locations be made to Attachment A, Section 4.1.2, ¶1, pg. 14: Performance – groundwater recharge subsurface application.

5) *Attachment A, Section 3.1, ¶ 3, pg. 8: Exemptions from the initial assessment*

Existing projects, including GWRS, have implemented monitoring programs or research projects that have captured some, but not all, of what is proposed for monitoring in Attachment A. These projects should receive credit for this monitoring to satisfy the monitoring requirements. Planned projects may have conducted pilot testing or other research that fulfills the requirements of the initial assessment. It would be beneficial to include language that allows those projects to be exempted from conducting some or all of the requirements set forth for the initial assessment.

We recommend the following language changes:

“For existing groundwater recharge reuse projects or agencies that have conducted or sponsored pilot testing or other relevant research regarding CEC indicators and surrogate occurrence and/or performance, credit for historic monitoring, piloting, or research data may should be used to modify assess the occurrence and removal of CECs and surrogates. Existing projects demonstrating prior assessment of CECs and surrogates equivalent to the initial assessment phase requirements of this Policy for health-based and performance indicator CECs and surrogates, including selection of constituents and monitoring

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frequency. In cases where all of the initial assessments requirements are satisfied using historic, piloting, or research data, projects may not be required to conduct the initial monitoring phase and are eligible for baseline monitoring phase requirements (Section 3.2). In cases where the initial assessment and baseline monitoring are satisfied, projects would be eligible for the standard monitoring phase (Section 4)."

Again, we commend the SWRCB for embarking on a science-based process to develop CEC monitoring requirements for recycled water and are supportive of the implementation of the Panel's recommendations. OCWD will continue to be a committed stakeholder on the CEC monitoring policy and encourages the SWRCB to continue on the path set forth by the Recycled Water Policy. Please do not hesitate to contact me at (714) 378-3364 or jdadakis@ocwd.com regarding any of the points we've raised in these comments.

Sincerely,



Jason Dadakis

Director of Health & Regulatory Affairs