Public Comments
Report to the Legislature on DPR
Deadline:10/25/16 12:00 noon

EAST BAY
MUNICIPAL UTILITY DISTRICT

ALEXANDER R. COATE
GENERAL MANAGER

October 20, 2016

VIA EMAIL: commentletters@waterboards.ca.gov

State Water Resources Control Board
c/o Jeanine Townsend, Clerk to the Board
P.O. Box 100
Sacramento, CA 95812-0100

RECEIVED
10-20-16
SWRCB Clerk

Subject: Comment Letter - Report to the Legislature on DPR

Dear Members of the State Water Resources Control Board:

Thank you for the opportunity to comment on the State's draft Report to the Legislature on the Feasibility of Developing Uniform Water Recycling Criteria for Direct Potable Reuse (Report). The East Bay Municipal Utility District (EBMUD) operates a significant recycled water program in Northern California, and has plans to expand the program and explore the potential for potable reuse. We appreciate the State Water Resources Control Board's (SWRCB) efforts to further advance water recycling in California and to ensure that future regulatory requirements for Direct Potable Reuse (DPR) are protective of public health.

In general, we agree with and support the SWRCB's response to the expert panel's recommendations. Our comments below are intended to aid the SWRCB in its efforts to move forward with DPR in a manner that is wholly protective of public health and builds public trust and confidence in DPR.

1. Define the Reliability of DPR Advanced Treatment Process Train

While the expert panel indicates that it is technically feasible to move forward with developing uniform criteria for DPR, the public may not have high confidence in an engineered system that is designed to protect them from specific contaminants but not from emerging contaminants. Unlike the majority of consumer products, there are few alternatives to drinking water (only bottled or tap) and this product will be coming directly into homes for consumption.

The expert panel discussion does not mention the number of new unregulated chemicals that are produced every year, nor does the panel discuss how to determine if these emerging contaminants pose a threat to the drinking water supply through DPR. Given the rate that new chemicals are introduced into the marketplace each year, there needs to be the means of assessing the effectiveness of advanced treatment process train barriers to remove these contaminants.

The Report and recommendations assume that current advanced oxidation processes and membranes are sufficiently robust so as to remove future and emerging contaminants. These advanced treatment processes can often remove complementary classes of compounds and should be configured so as to account for this understanding. While the expert panel concludes that writing uniform DPR criteria is possible by establishing a reliable process train, the panel does not recommend how one might measure reliability or establish regulations that ensure reliability objectives have been achieved.

375 ELEVENTH STREET . OAKLAND . CA 94607-4240 . (510) 287-0101
BOARD OF DIRECTORS JOHN A. COLEMAN . ANDY KATZ . DOUG LINNEY
LESA R. McINTOSH . FRANK MELLON . WILLIAM B. PATTERSON . MARGUERITE YOUNG

Recycled Paper

One consideration is to apply a six sigma approach to DPR that will ensure the DPR process train produces a consistent quality final product that meets the DPR criteria.

2. Address the Interface of DPR and Routine Drinking Water

There was no mention in the Report of what happens at the interface of DPR and "routine" drinking water. With the concern over corrosion by-products, such as lead, how will corrosion issues at the distribution system interface of DPR and routine drinking water be addressed? Based on demand, it is unlikely the interface will be stationary. Given that water from reverse osmosis processes is very aggressive, what corrosion control practices are recommended to ensure that metals and tuberculation that can build up in distribution transmission lines over time are not released when exposing these materials to sudden changes in water quality?

3. Weigh the Importance of Public Health Protection vs. Sustainability/Carbon Footprints

The Report should also include a discussion on sustainability and carbon footprints. The document does not delve into sustainability per se, but these process trains will be energy intensive and while the expert panel report mentions the use of the triple bottom line, the specific subjects of sustainability and carbon footprints need to be opened for discussion. If treatment requirements are needed to address public health protection, the subjects of sustainability and carbon footprints may be used as arguments to reduce necessary, but stringent treatment requirements. In taking a cautious approach to the expert panel's recommendations, the SWRCB is placing public health protection as the highest priority, which we fully support.

4. Include a Public Health Monitoring Program

The panel's research recommendations do not include a public health monitoring program, which should be a component of any DPR project. This would allow public health officials to monitor and document the health of the impacted population from before the start. This will provide data to evaluate public health impacts from a reference baseline (no DPR) moving forward to 100% DPR so retrospective health studies can be avoided (such as in the case of Windhoek). This will have the secondary benefit of boosting public confidence knowing that someone is closely monitoring the health of the population. Singapore had plans to install a similar prospective health study for their indirect potable reuse projects and might provide a model for such a program.

5. Include Water Research Foundation in Working with the SWRCB on DPR

The Report seems to emphasize research conducted by the WateReuse Research Foundation (now merged with the Water Environment Research Foundation). It should be noted that the Water Research Foundation has funded a number of indirect potable reuse (IPR) and DPR projects over the years and has co-funded two ongoing projects with the WateReuse Research Foundation. None of the Water Research Foundation research appears in any of the reference materials, thus the Report leaves out a large body of literature. The Report currently includes a recommendation for the SWRCB to continue to work with the Water Environment & Reuse Foundation on its DPR Research Initiative, advising its project prioritization process and serving on Project Advisory Committees. In order to truly advance DPR, we recommend that the SWRCB be more inclusive in working with other research entities like the Water Research Foundation and universities in developing a research agenda that would benefit the entire state. The Water Research Foundation's research library and literature should be included and considered in the development of DPR regulations.

6. Use Peer Reviewed Findings to Inform the Development of DPR Criteria

Recommendation 1 under 4.2 of the Report puts forth the idea of concurrent research and the development of uniform DPR criteria. Great care should be exercised in carrying out this recommendation to ensure that a distinction is drawn between the use of unpublished versus peer reviewed data. The uniform DPR criteria should properly "weigh" and consider the use of unpublished data sources before using the material in the development of DPR criteria. In reality, the process should be more of a "leapfrog," where the research is conducted, published in a peer reviewed publication or peer reviewed by a blue ribbon panel, then uniform DPR criteria are developed from the research findings or the panel's recommendations.

7. Apply Consistent Health Risk Assessments for DPR and Drinking Water

Under 4.2 of the Report, Recommendation 2, the health risk assessments for contaminants in DPR and drinking water should be consistent. This means that the health risk assessment for a given contaminant, whether DPR or drinking water, should be done by the same organization and contained in a single report, i.e., a separate health risk assessment is not needed for DPR, the health risk assessment should be the same as for drinking water. The maximum contaminant levels (MCLs) and public health goals (PHGs) for drinking water should also apply to DPR. At a minimum, DPR should be held to all the same standards and regulations as drinking water, but treatment requirements for any potable reuse project needs to account for source water quality.

8. Develop Broad Operator Certification Program

Recommendation 11 under 4.3 of the Report indicates that the SWRCB will advise CA/NV AWWA and CWEA in their development of an operator certification program for advanced water treatment, and develop a strategy for implementing such a program at the State Water Board. While we agree that an operator certification program for advanced treatment is needed for DPR, we are concerned that this could result in a much smaller operator recruitment pool. We recommend that the SWRCB advise the development of a program that can encourage all water and wastewater operators to expand their knowledge of advanced treatment processes as emerging technology that will have broad application in the future. Evaluation of current certification with additional education should also be considered.

Thank you for consideration of our comments on the draft Report. These comments are meant to assist the SWRCB in moving forward successfully with the development of DPR that is protective of public health. We look forward to continuing to work with the SWRCB in advancing the DPR initiative through the Water Research Foundation and the Water Environment and Research Foundation.

Sincerely,

Alexander R. Coate
General Manager

ARC:MT:ar

V:\Potable Reuse\Comments - DPR feasibility report\EBMUD comment letter - DPR feasibility report.docx