



May 18, 2018

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Sent via email to: [DDWrecycledwater@waterboards.ca.gov](mailto:DDWrecycledwater@waterboards.ca.gov)

Dear Mr. Barnard:

On behalf of the WaterReuse California, California Association of Sanitation Agencies and California Coastkeeper Alliance, we thank you for the opportunity to provide comments on "A Proposed Framework for Regulating Direct Potable Reuse in California" (Framework). As the sponsors and supporters of AB 574 (Quirk-2017) we also appreciate that the Framework has been released in a timely manner, meeting the statutory deadline included in this legislation.

Below are our comments and suggested changes to the Framework:

### **Types of Potable Reuse**

A well-defined potable reuse framework in the form of a graphic or matrix will help both technical and non-technical stakeholders comprehend the regulatory pathway for potable reuse. We recommend Section 2, which describes potable reuse, be revised to broadly define the four different types of potable reuse from Groundwater Recharge, Reservoir Augmentation, Raw Water Augmentation, to Treated Drinking Water Augmentation. A graphic or matrix that identified key minimum requirements for each of the four types of potable reuse (e.g., environmental barrier, retention time, use of WTP, etc.) including but not limited to levels of treatment and pathogen reduction with sufficient examples would be very helpful. After clearly distinguishing the minimum requirements for the different types of potable reuse, the DPR Scenarios in Section 3 should focus first on laying out criteria elements applicable for raw water augmentation. California (Division of Drinking Water) should continue its incremental approach to the development of statewide criteria for potable reuse regulations, completing the Raw Water Augmentation regulations and learning from this form of potable reuse before moving on to the development of criteria for Treated Drinking Water Augmentation

## **Risk Management Approach**

In general, we are comfortable with the risk management approach that is currently used by the DDW to control the threat from pathogens in potable reuse projects and reflected in the Framework. This approach, involving log removal values (LRV) necessary to meet the health objective for each reference pathogen, has proven to be an effective method in protecting public health. While DDW may alter the LRV requirements to provide an additional margin of safety to balance the diminishment or lack of environmental buffer in raw water augmentation or treated drinking water augmentation, it should continue to employ verified LRVs as a primary method to ensure public health protection. Additionally, in the development of a risk management approach for raw water augmentation regulations, we urge DDW to consider and assess all the elements in the regulations and their cumulative public health benefits, to ensure that the cumulative effect of all of the elements does not result in LRVs that are either underprotective or overprotective.

Additionally, the risk management approach section (P. 19) states that specific compliance treatment trains could be authorized in the criteria and/or a probabilistic analysis of treatment train performance (PATTP) could be included in the criteria for the approval of treatment trains on a case-by-case basis. We support the inclusion in the criteria of a list of authorized compliant treatment trains, based on historical studies and operational data from existing facilities. Inclusion of such a list would allow agencies that chose to use a preauthorized treatment train to have certainty from the early stages of project development that the train would be acceptable and that additional LRV studies would not be required. We also support the inclusion in the criteria of case-by-case approval of treatment trains using the PATTP approach. For agencies choosing to pursue this route, allowing case-by-case approvals will encourage development of innovative technologies and monitoring approaches that can ensure a safe water supply in the most cost-effective manner possible.

Finally, there is a statement on P. 18 that log reduction provided by surface water treatment plants (SWTPs) will not be allowed to be used to meet the basic required LRVs. SWTPs have been proven to provide robust and reliable treatment barriers. While we acknowledge that the Water Board may not choose to accept LRVs as derived using surface water treatment LRV validation procedures, the Raw Water Augmentation regulations should provide a pathway to obtain LRV credits.

## **Raw Water Augmentation Definition**

One of our primary concerns in the Framework is the statement on P. 8 stating that DDW only intends to develop regulations for raw water augmentation in cases where, “The recycled water is mixed with raw water in the conveyance to a drinking water treatment plant such that the blend provides a meaningful public health benefit.” [Emphasis added.]

It is unclear why DDW is proposing to limit raw water augmentation in this manner. Assembly Bill 574 introduced a statutory definition for raw water augmentation that did not include this restriction. Note that one of critical distinctions between raw water augmentation and treated drinking water augmentation is that for raw water

augmentation the conveyance system provides the primary public health function of allowing for additional response time in an emergency. A conveyance system can be uncoupled from a drinking water facility and prevent off spec water from being delivered to customers. While the water in the conveyance system may provide some dilution to the advanced treated water, blending is not its primary function. Additionally, it is not clear that the addition of blend water could provide a “meaningful public health benefit” because recycled water receiving full advanced treatment is typically cleaner than alternative water supplies such as surface water. As an example, an independent advisory committee for the Orange County Water District GWRs reviewed a report on advanced treated water as compared to Santa Ana River water and imported water, and concluded that, “...the health risk associated with the quality of recharge water expected under the ‘Proposed Action’ (GWR System) will be less than or equal to that associated...” with the existing water supplies.”

We therefore respectfully request that the Water Board revise the second bullet, p.8, of the Framework to read:

“The recycled water is mixed with raw water in the conveyance to a drinking water treatment plant. ~~such the blend provides a meaningful public health benefit.~~”

### **Permitting Direct Potable Reuse Projects**

The Framework discusses permitting options for direct potable reuse projects. Given that DDW has the authority to regulate drinking water we believe it should permit all potable reuse projects. If there is a need to permit a waste discharge associated with the potable reuse project, such as brine discharge, this should be permitted by the Regional Boards under a Waste Discharge Permit. There may be potable reuse scenarios where no discharge to a water body occurs and in those instances, only one DDW permit should be needed. P. 30 of the Framework states that DPR projects only using constructed conveyance will continue to be evaluated by the Regional Boards for water quality impacts. It is not clear why this would be needed or what water quality impacts would be expected from a conveyance-only DPR project. We request that the Water Board either remove the environmental buffer evaluation for DPR projects that do not discharge to a waterway; or provide further details and examples of DPR projects only using constructed conveyances that DDW is concerned might still have an impact on environmental water quality.

### **Source Control for Direct Potable Reuse Projects**

The DPR Expert Panel recommendations and the Framework reference the need for more stringent source control requirements for DPR projects. The Framework on P. 22 additionally states that, “An enhanced industrial source control program for DPR would include enforcement requirements to address failure to control permitted discharges.” We note that most POTWs dischargers are already subject to federal requirements for source control (as promulgated in 40CFR Part 403) and/or state requirements (CCR Title 23 Section 2233), and are already subject to enforcement if they fail to adequately control permitted discharges. We would like to work with DDW to explore what additional enforcement tools and program, if any, are needed to enhance source control for DPR projects.

### **Public Outreach for Direct Potable Reuse Projects**

We concur that a public education program is an important component of a recycled water project, and is particularly important for DPR projects. However, we are concerned about the recommendation on P. 22 that, "The public... should be informed that its household disposal of products and pharmaceuticals can potentially end up in their drinking water." Due to the high level of treatment provided for DPR projects, it is unlikely that household products and pharmaceuticals will pass through the treatment process. Stating that these materials could pass through the system will potentially result in unwarranted fears about the quality of the water that is produced, and lead to project opposition. While it is desirable to have residents reduce the amount of toxic products that are disposed into the sewer system, educational efforts to accomplish this are best linked to other motivational factors.

### **Complying with the State's Antidegradation Policy**

On P. 30 of the Framework it states that, "Recycled Water discharged to a reservoir or groundwater basin that is used as a source of drinking water must not degrade the water quality of the reservoir or groundwater basin." While degradation is typically not expected from DPR projects for most constituents, this statement is not consistent with the state's Antidegradation Policy, which allows some degradation under certain circumstances. The Antidegradation Policy states that degradation can occur if it has been demonstrated that any change in water quality "will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies."

### **DPR Inspection and Supervision Program**

P. 32 of the Framework discusses the possibility of an inspection and audit program for DPR projects and possibly having inspections and audits at all stages of the projects -- from design to ongoing operations. While we appreciate the need for proper operation of projects, we believe that requiring a DDW or independent inspection or audit at each of the many steps in a project, including construction, is unnecessary and counterproductive. It would likely significantly slow the development of projects and saddle the state with a huge administrative burden. It could also add costs to projects, as construction contracts may be delayed while awaiting regulatory staff to become available to provide the necessary oversight. The current practice is for DDW to perform a detailed review on the engineering report for a project prior to permitting, and for Regional Boards to ensure on-going compliance after startup. If additional certainty is desired to ensure that all measures proposed in the engineering report have been incorporated prior to startup, the regulations could incorporate a required inspection by DDW and/or the Regional Board prior to startup.

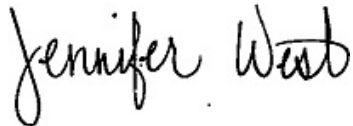
We are also concerned about what an audit program for treatment plant operations might include. Understanding that the interest is in avoiding human error, the primary approaches to avoid failure due to human error would be to ensure that the operating agency has an up to date operating plan, the operating agency has the technical, managerial and financial capacity to manage and operate an advanced treatment facility and the operators of the facilities are properly trained and certified. Routine audits or inspections by State Water Board staff in the normal course of regulatory oversight would also be appropriate.

## Conclusion

In the last five years California has made great progress towards developing a permitting program for all types of potable reuse projects. Developing statewide regulations for raw water augmentation and treated drinking water augmentation projects represent the next step in the development of a significant new water supply for the state. We urge you to revise the Framework to reflect the changes above, as we believe these changes will better support the much needed expansion of recycled water usage throughout the state. We appreciate that the Framework is appropriately a work in progress and will change and be updated as new information becomes available. To allow appropriate stakeholder input we recommend that revisions and changes now and throughout the regulatory development process be made available to the public and discussed in workshops as DDW has done to date.

Please do not hesitate to contact us if you have questions regarding our recommendations.

Sincerely,



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