

May 18, 2018

Sent via Electronic Mail: DDWrecycledwater@waterboards.ca.gov

Sherly Rosilela, P.E.
Division of Drinking Water, Recycled Water Unit
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-100

Subject: Comment letter – A Proposed Framework for Regulating Direct Potable Reuse in California

Dear Ms. Rosilela:

The City of San Diego (San Diego) appreciates the opportunity to comment on *A Proposed Framework for Regulating Direct Potable Reuse in California* (Framework). The State Water Resources Control Board is to be commended for preparing this framework document. Its contents are clear and fundamentally sound.

The Pure Water San Diego Program, our Advanced Water Treatment Demonstration Facility, and the Pure Water team, including our Independent Advisory Panel and consultants, have been the underpinning for the State Water Board's recently adopted regulations for indirect potable reuse through reservoir augmentation. Pure Water San Diego has also been foundational to the work of the State Water Board and its Expert Panel on direct potable reuse (DPR), including its report *Investigations on the Feasibility of Developing Uniform Water Recycling Criteria for Direct Potable Reuse* (December 2016). San Diego looks forward to continued collaboration with the State Water Board in developing regulations for DPR.

The statutory target date for the State Water Board to adopt uniform water recycling criteria for DPR through raw water augmentation is December 31, 2023. San Diego strongly encourages the State Water Board to complete the raw water augmentation regulations by this date.

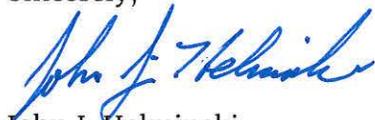
Section 5.1.1 of the Framework discusses the regulatory pathogen control approach using enteric viruses, *Giardia*, and *Cryptosporidium* as reference pathogens that must be monitored and controlled. The Framework states "Additional and/or alternative pathogens are likely to be considered for DPR" (emphasis added). Adding other reference pathogens to regulate DPR would require a substantial body of scientific and technical work, including identifying the pathogen, establishing its occurrence in wastewater and its pathogenicity, developing practical laboratory methods for monitoring the presence and abundance of the pathogen, determining the log removal values necessary to meet the public health objective, and validating the log removal values across various treatment processes. It seems unlikely all of

this can be accomplished by 2023. Furthermore, there is no conclusive evidence that relying on enteric viruses, *Giardia*, and *Cryptosporidium* as reference pathogens is inadequate. Therefore, we recommend that the proposed regulations should rely on those three pathogens, and should not include other pathogen removal requirements. If future studies demonstrate a need, then other reference pathogens could be considered for follow-on regulations.

In Section 5.2.4.7 it is stated that, “On-line monitoring should include critical control points, alarm set points, and automatic shutdown” (emphasis added). While set points are often provided for automatic shutdown for individual treatment units under conditions that might damage the units, we recommend that the State Water Board not identify water quality set points that would automatically shut down unit processes, divert purified water flows, or shut down the purified water facility. Such automatic shutdown approaches are not provided in drinking water treatment facilities, unless those facilities do not have continuous on-site operation. Continued maintenance of on-line monitoring equipment is always a focus, but even under the best of circumstances monitoring equipment can provide inaccurate readings. Having well-trained operators address any alarm situation to fully understand the reason for any water quality excursion, whether real or as the result of a monitoring failure, is critical to ensure that appropriate procedures are implemented to protect both public health and the integrity of the treatment facility. We encourage the State Water Board to continue to rely on well-trained operators and not default to automatic shutdowns based upon water quality monitoring devices.

Thank you for the State Water Board’s efforts to prepare the Framework.

Sincerely,

A handwritten signature in blue ink, appearing to read "John J. Helminski".

John J. Helminski,
Assistant Director, Public Utilities Department, City of San Diego

JP/lbp