



December 11, 2015

The Honorable Robert Hertzberg
California State Senate
State Capitol, Room 4038
Sacramento, CA 95814

Dear Senator Robert Hertzberg:

On behalf of WaterReuse California (WRCA) I want to thank you for your leadership on water recycling and, through your introduction of SB 163, for initiating a policy discussion about increased use of recycled water through the treatment and reuse of wastewater that would otherwise be discharged to the ocean. WRCA wants to work with you on increasing recycling, but does not believe a state mandated ban on ocean discharge can be implemented in the foreseeable future.

The WRCA mission statement is to maximize the beneficial use of all types of recycled water and - consistent with statewide recycling goals - we view the wastewater discharged to the ocean as a source of potential new recycled water. Many of our member agencies along the coast already capture much of the potential discharge and are working on many fronts towards redirecting ocean discharge for potable reuse, environmental benefits such as transitional wetlands and other projects.

However, we urge you to consider the substantial regulatory, financial and feasibility factors that we believe pose barriers to compliance with a ban on ocean discharge. Detailed below is the history and status of issues related to the regulatory environment, project funding and public acceptance barriers and we would ask that you consider:

- The regulatory uncertainty of potable reuse must be fully resolved through the adoption of statewide regulations for both surface water augmentation and direct potable reuse (DPR) before some agencies can utilize such systems to capture and reuse ocean discharge.
- In other areas where potable reuse is neither feasible nor planned, the infeasibility of constructing sufficient storage to capture the volume of water released by California's large storms is a clear barrier to implementation. It would be both impractical and hugely expensive to have that much coastal storage.

- In many areas of the state, the only alternative to discharge or storage would be irrigation, and irrigating in the winter when the ground is saturated means all the recycled water runs-off, which is prohibited by regional boards.
- Non-potable, “purple pipe” projects, while providing key benefits in different communities in California, cannot efficiently and economically be expanded to accommodate the volume of water contemplated in SB 163.
- Billions of dollars in state and local funding would be needed for new advanced water treatment plants, expansions of existing plants and tremendous storage capacity to achieve a blanket requirement that ocean discharge be eliminated.

Additionally, we note that some agencies intend to use discharge into the ocean (and bays) for critical environmental purposes – such as transitional wetlands – and that the value of such uses should not be lost in any forthcoming discussions regarding your legislation.

Potable Reuse Regulatory Progress Since 2010

Since the passage of SB 918 (Pavley) in 2010, the first bill on potable reuse in California, a great deal of progress has been made in making potable reuse a major component of California’s water supply. This includes:

- Statewide groundwater Indirect Potable Reuse (IPR) regulations were adopted by the Drinking Water Division (DDW) of the State Water Resources Control Board (SWRCB) in 2014. As a result we have seen approximately 20 additional groundwater IPR projects initiated, which when approved, built and funded will provide drinking water for 1.6 million Californians.
- DDW is working on the development of surface water augmentation regulations to allow local water supply reservoirs to be augmented with advanced treated water. Many planned projects, each with its unique local circumstances are under consideration.
- DDW is preparing a report to the Legislature due in December 2016 on the feasibility of developing statewide regulations for Direct Potable Reuse (DPR). While we expect the report to be submitted on time, DDW is not expected to immediately adopt statewide DPR regulations. The permitting of these projects is initially expected to happen on a case-by-case basis and then be followed by the adoption of DPR regulations.
- The WaterReuse Research Foundation (WRRF) initiated 26 independent DPR-related research projects totaling over \$11.5 million to evaluate and demonstrate the feasibility of DPR opportunities. This independent research is being provided to the Expert Panel advising DDW on its DPR report to the Legislature.

While this progress is exceptional, we still do not have a clear pathway for approval of DPR projects, which we believe would be necessary to significantly reduce ocean discharges in those coastal communities without readily accessible groundwater basins or a surface water reservoir of sufficient capacity.

Funding for Potable Reuse Projects

In order to implement SB 163, funding in the billions would be needed from state and local sources. Every project is different, but in general groundwater IPR or surface water augmentation projects using the three-step purification process (microfiltration, reverse osmosis and UV light with advanced oxidation) range in cost from \$820 AF to \$2,000 an AF. The higher estimate would include the conveyance of the water to the groundwater basins or surface water reservoirs and the construction of a brine disposal system. The lower estimate assumes the brine would be discharged through an existing ocean outfall (*Opportunities and Economics of Direct Potable Reuse, Raucher and Tchobanoglous, 2014*). While we don't know what the DPR regulations will require; additional, expensive treatment may be mandated.

In addition, development of potable reuse projects will require a cooperative effort between water suppliers and ocean dischargers. The most likely projects would result in delivery of recycled water to the nearest local water supplier, but only if there is a need for the project and it is cost-effective. Customers are experiencing rate increase fatigue, particularly low income customers that have a limit to what they can afford. Therefore, public agencies are driven to provide the most cost-effective water supplies and environmental solutions.

Public Acceptance of Potable Reuse Water

One of the primary missions of WRCA is to promote potable reuse in California. While we have made a great deal of progress since 2010, some communities do not even have non-potable recycled programs and generally are less willing to consider potable reuse as a water supply option.

WRCA, the Water Reuse Research Foundation and some individual member agencies have done extensive polling on potable reuse and DPR in particular. In general, without knowing any additional information about DPR, these types of projects initially poll in the 40% support range. Once the public is made aware of the extensive treatment process support rises to around 58%. IPR projects, with their "environmental buffer," generally poll more favorably.

While we are waiting for the surface water augmentation regulations to become public, early drafts indicate that these regulations may allow projects only in larger reservoirs and other smaller reservoir projects might be considered DPR for purposes of the regulations. With the public generally less comfortable with DPR projects, this is a major concern for our state's potable reuse future. WRCA is actively working with DDW on this issue.

Summary

WRCA agrees with the objectives behind your bill and thinks the time is right to maximize the use of wastewater that is currently discharged to the ocean for use as

recycled water. To that end, WRCA is working on the regulatory, research and public opinion front to address the existing barriers to potable reuse and DPR in California, noting that even indirect potable reuse projects in California has taken extensive, ongoing public outreach to overcome what the media often calls the “yuck factor” and “toilet to tap.”

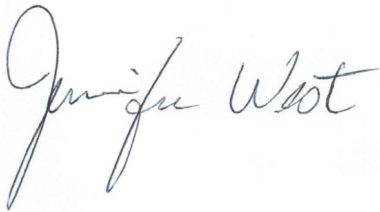
While generally speaking, Southern California is much further ahead of the rest of the state in terms of public acceptance of potable reuse, but it is not immune to these issues. Through its “no discharge” mandate, SB 163 in effect forces an inappropriate “one size fits all” potable reuse solution on all coastal communities in California.

Further, we do not believe SB 163 as written can be implemented without the full completion of the potable reuse regulations, a massive infusion of state and local monies and much more support throughout all parts of California for potable reuse projects.

We encourage you and your staff to avail yourselves of the opportunity to visit agencies along the coast to learn of the different circumstances they face as they seek to maximize recycled water use and minimize discharge. We would be happy to facilitate such opportunities for your office as the SB 163-related conversations continue.

Please do not hesitate to contact me at (916) 669-8401 or (916) 496-1470 if you have questions regarding information contained in this letter or need more information about potable and non-potable reuse projects in California.

Sincerely,

A handwritten signature in cursive script that reads "Jennifer West". The signature is written in dark ink on a light-colored background.

Jennifer West
Managing Director