



August 12, 2014

Mail and E-Mail-commentletters@waterboards.ca.gov

Jeanine Townsend, clerk to the Board  
and Members of the State Water Resources Control Board.

State Water Resources Control Board  
1001 I street, 24th floor  
Sacramento CA 95814

Subject: comment letter-Draft Amendment to the Water Quality Control Plan for  
Ocean Waters of California Addressing Desalination Facility Intakes, Brine  
Discharges, and to Incorporate Other Nonsubstantive Changes Publicly  
Released July 3, 2014 Draft

Dear Board Members;

As a concerned citizen, and a long time resident of the California Coast I greatly appreciate the excellent work that the Board members, staff, and expert panels have done in the preparation of the above referenced Draft Amendment to the California Ocean Plan. Clearly, the issue of locating large scale seawater desalination plants along the California coastline is complex, and deserves the attention and consideration to this issue that the Draft Amendment contains. I would only like to take this opportunity offer a few comments and suggestions to the Draft Amendment for consideration by the Board Members;

Chapter III L.2  
Site Selection

Pg.4 b. states;

**b. (4) Analyze oceanographic, bathymetric, geologic, hydrogeologic, and seafloor topographic conditions, so the siting of a facility, including the intakes and discharges, minimize the intake and mortality of marine life.**

Comment;

For those sites intending to employ an array of subsurface intake pipes, as has been recommended by the Water Board, there is a possibility that a portion of the desalination brine plume field could be recaptured by the intake and recirculated thru the system. This hydrogeologic feedback could lead to a system instability or, as a minimum, a gradual increase in the near shore salinity concentration until stabilizing at some elevated value of saline concentration. This is more likely to occur when the position of the input and output structures are located relatively close together in order to take advantage of existing power plant facilities as is the case in Huntington Beach.

It is suggested that the Board request that the desalination facility applicant submit an oceanographic analysis that addresses this issue in accordance with the requirement of **par.(4)** above.

Pg.4 b. also states;

**b.(5) Analyze the presence of existing infrastructure, and the availability of wastewater to dilute the facility's brine\* discharge.**

Comment.

Existing regulations prevent untreated wastewater (sewage) from being discharged directly into the near shore. Partially treated wastewater (treated to full secondary treatment standards) may still require additional treatment prior to being useful to the desalination facility. It is suggested that the Board request that the desalination facility applicant seek input from the local water agencies, (in Huntington Beach, the OCWD and OCSD), in order to determine if the brine discharge from groundwater recovery and replenishment systems could be piped to the desalination facility and blended with seawater prior to use in the desalination system.

Technology

Pg. 7 states;

**(2) (a) The preferred technology for minimizing intake and mortality of marine life resulting from brine\* disposal is to commingle brine\* with wastewater (e.g., agricultural, sewage, industrial, power plant cooling water, etc.) that would otherwise be discharged to the ocean, unless the wastewater is of suitable quality and quantity to support domestic or irrigation uses.**

Comment;

It is suggested rewording the above paragraph by replacing "wastewater" with "treated wastewater" and "sewage" with "brine from recycled water systems." Also, it is suggested that the Board consider adding words to the effect; "Priority for wastewater treatment systems should be established in order to provide source water for treatment directly to full drinking water standards in order to replenish our depleted fresh water supplies prior to consideration for use in seawater desalination systems."

Pg. 13 3 b. states;

**3 b. The receiving water limitation for salinity\* shall be established as described below:**

**(1) Discharges shall not exceed a daily maximum of 2.0 parts per thousand above natural background salinity\* to be measured as total dissolved solids (mg/L) measured no further than 100 meters (328 ft) horizontally from the discharge. There is no vertical limit to this zone.**

Comment;

It is suggested that the Board consider adding a more stringent far field salinity concentration limit in the vicinity of the desalination facility collection system that insures the brine from the discharge is not captured and recirculated thru the system leading to further degradation of the near shore water quality. The numerical value and specific location of far field salinity monitoring could be determined from task **b. (4)** above.

Also, as stated in the California Water Quality Control Plan dtd. Aug. 19, 2013;

Pg. iv states;

**8. The Ocean Plan is clear that there shall not be degradation of marine communities or other exceedances of water quality objectives due to waste discharges. This is true for all near coastal ocean waters, regardless of whether a Marine Protected Area is present. If sound scientific information becomes available demonstrating that discharges are causing or contributing to the degradation of marine communities, or causing or contributing to the exceedance of narrative or numeric water quality objectives, then new or modified limitations or conditions may be placed in the NPDES permit to provide protections for marine life, both inside and outside of Marine Protected Areas.**

Comment;

According to this Ocean Plan policy statement, coastal desalination plants that are planning to withdraw seawater and discharge brine into near coastal ocean waters, including those currently on the State 303d list of impaired waterbodies, should only be considered only if no other more appropriate sites can be located. Even then, the brine discharged into the impaired water body would have to be blended with an equivalent amount of unimpaired water from another source in order to avoid further degradation of the water quality. The Huntington Beach desalination facility site is currently on the 303d list for pathogens, and PCB's (polychlorinated biphenyls). In addition, discharge of brine from a desalination plant significantly increases the concentration of the background concentration of certain toxins and heavy metals. It is suggested that the Board consider adding language to the Water Quality Control Plan that provides the same level of protection of further water quality degradation to 303d listed impaired water bodies, due to the desalination facility brine discharge, as it does for Marine Protected areas.

Pg. 1 B. PRINCIPLES

1 HARMONY

States;

**b. To the extent there is a conflict between a provision of this plan and a provision of another statewide plan or policy, or a regional water quality control plan (basin plan), the more stringent provision shall apply except where pursuant to chapter III.J of this Plan, the State Water Board has approved an exception to the Plan requirements; and except in chapter III.L, in which the provisions of this plan shall govern.**

Comment;

As worded above. this precludes the possibility of Local Coastal or Regional Water Boards of imposing provisions to Local Coastal and Basin Plans that may be more protective of the regional environment and economy. It is suggested that the Board consider modifying the language above to state in effect;

**" To the extent there is a conflict between a provision of this plan including the provisions of sect. III. L, and a provision of another statewide plan or policy, or a regional water quality control plan (basin plan), both shall apply, and the more stringent provision shall prevail."**

Consideration of my comments and suggestions by the Board members are sincerely appreciated, and I hope that they are helpful. If there are further clarifications needed regarding any of these comments or suggestions, please feel free to contact me.

Sincerely;

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