



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
Monterey Bay National Marine Sanctuary  
99 Pacific Street, Bldg 455a  
Monterey, CA 93940

Public Comment  
Desalination Amendments  
Deadline: 8/19/14 by 12:00 noon

August 18, 2014

State Water Resources Control Board  
1001 I Street, 24th Floor  
Sacramento, CA 95814  
ATTN: Jeanine Townsend, Clerk to the Board



SUBJ: Proposed Amendments to the Water Quality Control Plan for Ocean Waters of California to address Desalination Facility Intakes, Brine Discharges, and to Incorporate other Non-substantive Changes.

Dear Ms. Townsend:

Staff at NOAA's Monterey Bay National Marine Sanctuary has reviewed the document titled *Amendment to the Water Quality Control Plan for Ocean Waters of California to address Desalination Facility Intakes, Brine Discharges, and to Incorporate other Non-substantive Changes*. The proposed Desalination Amendment consists of a uniform approach for protecting beneficial uses of ocean waters from degradation due to seawater intake and discharge of brine wastes from desalination facilities. The proposed amendment would protect and maintain the highest reasonable water quality possible for the use and enjoyment of the people of California while supporting the use of ocean water as an alternative source of water supply. There are four primary components:

- 1) Clarify State Water Board's authority over desalination facility intakes and discharges;
- 2) Provide guidance to Regional Water Boards regarding siting, design, technology, and mitigation measures to minimize the mortality of marine life at new and expanded desalination facilities;
- 3) A narrative receiving water limit for salinity to ensure brine discharges meet biological characteristics narrative water quality objective and not cause adverse effects to aquatic life beneficial uses; and
- 4) Monitoring and reporting requirements.

**Section 8** addresses issues considered in the development of the proposed desalination amendment. Our comments are outlined below.

8.1 *What types of facilities should the amendment cover?* We agree with staff in recommending Option 3; the amendment to cover desalination facilities and not all industrial facilities using seawater for cooling, heating or industrial processing.

8.2 *Should the proposed Desalination Amendment include definitions for new, expanded and existing facilities?* We agree with staff in recommending Option 2; add definitions for new, expanded and existing desalination facilities to the amendment to promote consistency among regions and projects.

8.3 *Should the SWRCB identify a preferred method of seawater intake?* We agree with staff in recommending Option 3; establish sub-surface intakes as the preferred technology for seawater intakes but allow surface intakes if sub-surface intakes are shown to be infeasible.

- It is our recommendation to require a 0.5mm screen slot size to minimize intake and mortality of marine life. However, we support some regulatory flexibility if the project proponent can demonstrate the use of additional technology, reduced flow velocity or special environment circumstances that ensure the same amount of protection of marine organisms while using a larger slot size not to exceed 1.0 mm in size.

8.4 *What siting considerations should the amendment address in order to minimize intake and mortality of marine life?* We agree with staff in recommending Option 3; establish statewide requirements, guidelines, and considerations for Regional Board staff to use when evaluating the best site. The criteria identified are in alignment with the *Guidelines for Desalination Plants in the Monterey Bay National Marine Sanctuary*.

8.5 *Should the SWRCB provide direction in the Ocean Plan on mitigating for desalination-related impacts?* We agree with staff in recommending Option 3; updating the Ocean Plan to provide statewide guidance on the appropriate methods for determining the nature and size of a mitigation project to ensure all desalination-related mortality is mitigated for a facility.

8.6 *How should the SWRCB regulate brine discharges?* We agree with staff in recommending Option 5; an owner or operator must evaluate multiple brine disposal methods and then in combination with other project specifics, determine the best option that will minimize mortality of marine life.

8.7 *Should the SWRCB impose a receiving water limit for salinity, and if so, what should it be?* We recommend Option 4 and not the staff recommendation of a hybrid of Options 4 and 6. We prefer Option 4; establish a maximum zone of initial dilution of 100m from the point of discharge (recommendation from the Science Advisory Panel (Roberts et al. 2012)) and a maximum daily concentration not to exceed 2.0 ppt above natural background salinity. This sets a clear point of compliance and does not allow for large areas where salinity is elevated to toxic levels. Option 6, in effect, allows for individual project proponent to repeat the studies commissioned by the SWRCB for their specific facility if they cannot meet the 2.0 ppt criteria. This scenario of also allowing for Option 6 will be difficult to regulate and ensure maximum protection of marine resources.

**Section 12.2** is the analysis of potential adverse environmental effects of some combination of two project alternatives based on results of the questions listed above. We support the staff recommendation of Alternative 2 for the proposed desalination amendment to the California Ocean Plan. It allows for flexibility of individual desalination facilities but will not allow for adverse effects to aquatic life beneficial uses as further described below.

Alternative 2: (proposed Desalination Amendment): allows sub-surface or screened surface water intakes operated at low intake velocities, or intakes using an alternative method to prevent entrainment so long as it satisfies the same protection. Brine discharge would allow dilution through co-mingling, multi-port diffusers, or equivalent technology that provides a comparable level of protection.





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General Comments:

There is a typo on page 68, second paragraph. The sentence is not complete "... AEL and FH do not quantify the loss of organisms from an ecosystem standpoint and how they."

Overall, we feel the document was very well written and a comprehensive analysis of all aspects of desalination as they relate to intake and brine discharge. The SWRCB did a very good job commissioning the necessary studies and incorporating those findings in the justification of staff recommendations. We appreciate that the preferred alternative aligns with the *Guidelines for Desalination Plants in the Monterey Bay National Marine Sanctuary*.

This is a document that sanctuary staff will reference in the future when reviewing and considering desalination facilities within MBNMS. We are grateful for this resource and strongly support the adoption of an amendment to the California Ocean Plan for desalination facilities. Please contact Bridget Hoover of my staff if you have any questions or wish to discuss our comments at (831) 647-4217.

Sincerely,

Paul Michel  
Superintendent  
Monterey Bay National Marine Sanctuary

