

**STATE WATER RESOURCES CONTROL BOARD
BOARD MEETING SESSION – DIVISION OF WATER QUALITY
MAY 6, 2015**

ITEM 7

SUBJECT

CONSIDERATION OF THE PROPOSED AMENDMENT TO THE STATEWIDE WATER QUALITY CONTROL PLAN FOR THE OCEAN WATERS OF CALIFORNIA ADDRESSING DESALINATION FACILITY INTAKES, BRINE DISCHARGES, AND TO INCORPORATE OTHER NON-SUBSTANTIVE CHANGES

DISCUSSION

State Water Resources Control Board (State Water Board) Division of Water Quality is proposing to amend the Statewide Water Quality Control Plan for Ocean Waters (California Ocean Plan) to address desalination facility intakes, brine discharges, and to incorporate other non-substantive changes to the existing California Ocean Plan (collectively referred to as the proposed Desalination Amendment). At present, the California Ocean Plan does not specifically protect the beneficial uses of ocean waters (e.g. mariculture, fish spawning, etc.) from desalination-related activities. In addition, the California Ocean Plan currently lacks implementation provisions that would address the degradation of marine communities that may occur as the result of the construction or operation of a desalination facility. There is also a need to promote interagency collaboration to facilitate and expedite the permitting of desalination facilities.

California Water Code section 13142.5, subdivision (b) (hereafter California Water Code section 13142.5(b)) requires that industrial facilities using seawater for industrial processing use the best available site, design, technology, and mitigation measures feasible to minimize the intake and mortality of marine life. Currently, the Regional Water Quality Control Boards (Regional Water Boards) make California Water Code section 13142.5(b) determinations and permit desalination facilities on a case-by-case basis. These determinations require technical expertise in a variety of subjects in addition to significant resources that may not be available at each Regional Water Board. This can lead to varying decision criteria and different conclusions statewide regarding the most appropriate requirements for desalination facilities.

The proposed Desalination Amendment includes: a section on applicability and general provisions with definitions for new, expanded, and existing facilities; directions to the Regional Water Boards for making California Water Code section 13142.5(b) determinations for conditionally permitted, new, or expanded desalination facilities; a narrative receiving water limitation for salinity; and monitoring and reporting requirements. The non-substantive changes to the California Ocean Plan will update items related to the proposed Desalination Amendment, and make grammatical and editorial changes. The proposed Desalination Amendment also includes provisions that promote interagency collaboration and defines the roles of the State Water Board and Regional Water Boards in regulating desalination facilities. The proposed Desalination Amendment will provide a consistent statewide approach for minimizing intake and mortality of marine life, and protecting water quality and related beneficial uses of ocean waters at and near desalination facilities.

Division of Water Quality staff prepared a Draft Staff Report including Substitute Environmental Documentation (hereafter Staff Report with SED) to accompany the proposed Desalination Amendment. The State Water Board held a public workshop on August 6, 2014 and a public hearing on August 19, 2014 to receive public input and comments on the proposed Desalination Amendment and Staff Report with SED. Revisions were made to the proposed Desalination Amendment and Staff Report with SED according to public comments, peer review comments, and State Water Board direction.

POLICY ISSUE

Should the State Water Board approve the Staff Report with SED and adopt the proposed Desalination Amendment to the Ocean Plan?

FISCAL IMPACT

If the proposed Desalination Amendment is adopted, the State Water Board and Regional Water Boards staff work associated with or resulting from this action will be addressed with existing and future budgeted resources.

REGIONAL BOARD IMPACT

Upon adoption, the proposed Desalination Amendment will provide coastal regional water boards with a framework to be used when issuing permits to desalination facilities. State Water Board staff does not anticipate a significant increase in the regional water boards' workload. If not adopted, the coastal regional boards will continue to permit desalination facilities on a case-by-case basis, which will require significant resources and can result in statewide inconsistencies.

STAFF RECOMMENDATION

Approve the Staff Report with SED and adopt the proposed Desalination Amendment to the Ocean Plan.

<p>State Water Board action on this item will assist the Water Boards in reaching Goals 1, 3, 4, 5, 6, and 7 of the Strategic Plan Update: 2008-2012 to: support beneficial uses; increase sustainable local water supplies; address water quality protection, and the relationship between water supply and water quality; enhance consistency across the Water Boards to ensure our processes are effective, efficient and predictable; and to ensure that the Water Boards have access to information and expertise to reduce processing time and costs associated with implementing and enforcing regulations.</p>
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STATE WATER RESOURCES CONTROL BOARD RESOLUTION 2015-

AMENDMENT TO THE STATEWIDE WATER QUALITY CONTROL PLAN FOR THE OCEAN WATERS OF CALIFORNIA ADDRESSING DESALINATION FACILITY INTAKES, BRINE DISCHARGES, AND TO INCORPORATE OTHER NONSUBSTANTIVE CHANGES

WHEREAS:

1. The State Water Resources Control Board (State Water Board) adopted the California Ocean Plan (Ocean Plan) in 1972 and revised it in 1978, 1983, 1988, 1990, 1997, 2001, 2005, 2009, and 2012.
2. California Water Code section 13142.5, subdivision (b) (hereafter Water Code section 13142.5(b)), adopted as part of the California Coastal Act of 1976, requires that any “new or expanded coastal power plant or other industrial installation using seawater for cooling, heating or industrial processing” must utilize “the best available site, design, technology and mitigation measures feasible . . . to minimize the intake and mortality of all forms of marine life.”
3. The operation and construction of desalination facilities can lead to marine life mortality and harm to aquatic life beneficial uses. The withdrawal of seawater for the purpose of desalination can result in the impingement and entrainment of marine life. If improperly discharged by desalination facilities, brine may accumulate on the sea floor, adversely affecting bottom-dwelling marine organisms.
4. The Water Boards currently regulate brine discharges from desalination facilities through Waste Discharge Requirements (WDR) and National Pollution Discharge Elimination System (NPDES) permits. In addition, the Water Code section 13142.5(b) requirements applying to seawater intakes have been implemented by regional water quality control boards through provisions included in WDRs and NPDES permits on a case-by-case basis. Currently, the Ocean Plan does not include provisions to protect aquatic life from impacts associated with seawater intakes at locations that are not State Water Quality Protection Areas. Additionally, the Ocean Plan lacks an objective or receiving water limitation for elevated salinity levels in ocean waters.
5. On March 15, 2011, the State Water Board adopted the Ocean Plan Triennial Review Work Plan (2011-2013) by [Resolution 2011-0013](#) and directed State Water Board staff to review high priority issues identified in the work plan, including desalination facilities and their associated brine disposal, and to make recommendations for any necessary changes to the Ocean Plan.
6. To address desalination facility seawater intakes, the State Water Board proposes an amendment to the Ocean Plan, interpreting and applying Water Code section 13142.5(b) in establishing a consistent statewide analytic framework for the best available site, design, technology, and mitigation measures feasible in order to minimize intake and mortality of all forms of marine life. The Desalination Amendment will also establish a receiving water limitation for brine discharges from desalination facilities, with the purpose of protecting beneficial uses. The State Water Board encourages owners and operators of desalination facilities to design and operate facilities sustainably whenever possible.

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7. The State Water Board commissioned expert review panels and scientific studies to provide information to support the development of the proposed Desalination Amendment.
 - a. The State Water Board contracted with the Southern California Coastal Water Research Project to commission an expert review panel on the impacts and effects of brine discharges. On July 5, 2011, a public meeting was held in Sacramento to solicit input regarding panel members and key desalination issues. The panel released a draft report and solicited input from the public during a public meeting on December 8-9, 2011. The panel submitted the final report with their findings and recommendations to the State Water Board in February 2012.
 - b. The State Water Board contracted with Moss Landing Marine Laboratory to commission an expert review panel on minimizing and mitigating intake impacts from power plants and desalination facilities. During a public meeting on March 1, 2012, the panel presented their recommendations, and the public asked questions and provided comments on the panel's draft report. The panel submitted the final report with their findings and recommendations on March 14, 2012.
 - c. The State Water Board commissioned a salinity toxicity study through the Marine Pollution Studies Laboratory at Granite Canyon. The study determined the tolerance of seven Ocean Plan test species to various concentrations of hyper-saline brine. The study's results were described in the final report that was submitted in July 2012.
 - d. The State Water Board contracted with Moss Landing Marine Laboratory to reconvene the expert review panel to address potential effects of discharge diffusers on marine life and to provide an explanation of the mitigation "fee" approach for entrainment impacts caused by surface intakes at desalination facilities. These were issues raised at the January 30, 2013 stakeholder meeting at Moss Landing Marine Laboratory. The panel submitted the final report with their findings and recommendations on October 9, 2013.
8. The State Water Board held a number of stakeholder meetings and public workshops in 2011 through 2013, to provide an overview of key amendment issues and to receive feedback on development of the proposed Desalination Amendment. Staff also convened an interagency working group comprised of staff members from affected regional water boards and state and federal agencies involved with regulating and permitting desalination facilities in California. The interagency working group met seven times between 2012 and 2015 to review and comment on the proposed Desalination Amendment.
9. State Water Board staff held public scoping meetings, pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code section 21000 et. seq.), on June 26, 2007 in San Francisco and on March 30, 2012 in Sacramento.

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10. The adoption or amendment of a water quality control plan is a regulatory program that has been certified by the State's Secretary for Natural Resources as exempt from the CEQA requirements to prepare an Environmental Impact Report (EIR) or Negative Declaration. (Cal. Code of Regs., tit. 14, sec. 15251, subd. (g)). Accordingly, the State Water Board has prepared Substitute Environmental Documentation (SED) in lieu of an EIR or Negative Declaration.
11. The State Water Board circulated the draft Desalination Amendment and supporting draft Staff Report, including the draft SED dated July 3, 2014, for public comment on July 3, 2014. The deadline for submission of written comments was 12:00 noon on August 19, 2014.
12. The State Water Board held a public workshop on August 6, 2014 in Sacramento to provide information and to answer questions from the public on the proposed Desalination Amendment and the draft Staff Report, including the draft SED.
13. On August 19, 2014, the State Water Board conducted a public hearing to receive comments from public agencies and members of the public on the proposed Desalination Amendment and draft Staff Report, including the draft SED.
14. In developing, considering, and adopting the proposed Desalination Amendment, the State Water Board complied with procedural requirements contained in the State Water Board's regulations for implementing the CEQA (23 Cal. Code Regs. § 3720-3780).
15. Twenty eight written public comment letters were timely submitted, and the State Water Board provided written responses to those comments as well as to public comments received during the workshop and public hearing.
16. Based on the oral and written comments, the State Water Board revised the proposed Desalination Amendment and draft Staff Report, including the draft SED. On March 26, 2015, the State Water Board distributed and posted the proposed final Desalination Amendment and proposed final Staff Report, including the proposed final SED. The deadline for submission of written comments on changes to the proposed Desalination Amendment and changes to the proposed final Staff Report, including the proposed final SED, was April 9, 2015.
17. On March 20, 2015, the State Water Board provided notice to the public that the State Water Board would consider adoption of the proposed final Desalination Amendment and approval of the proposed final Staff Report, including the proposed final SED, at its regularly scheduled meeting on May 6, 2015.
18. Written public comments on the revised Desalination Amendment and revised Staff Report, including the revised SED, were timely submitted, and the State Water Board provided written responses to those comments on April 24, 2015.
19. The proposed Desalination Amendment and final Staff Report, including the final SED, satisfy the substantive requirements contained in the State Water Board's regulations for implementing the CEQA (23 Cal. Code Regs. §3777 and 14 Cal Code of Regs. §15250, 15251(g) and 15252).

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- a. The final Staff Report, including the final SED, contains a description of the project, a completed environmental checklist, and an environmental analysis of any impacts associated with the project; it identifies reasonably foreseeable methods of compliance and analyzes potentially significant adverse environmental impacts associated with methods of compliance and mitigation, where applicable.
 - b. The final SED consists of the draft Staff Report, including appendices, the proposed final Staff Report, and written comments and responses to comments on the draft Staff Report and the proposed Desalination Amendment.
20. The final Staff Report, including the final SED identifies a number of alternatives to adoption of the proposed Desalination Amendment, which included a no project alternative and various other alternative provisions governing requirements for seawater intakes and brine discharges. The State Water Board finds that these alternatives would not meet all of the project objectives identified for the Desalination Amendment, would unnecessarily restrict locations where desalination facilities may be built, would result in unacceptable levels of intake and mortality of marine life, or may not otherwise be adequately protective of marine life.
21. In accordance with California Code of Regulations, title 23, section 3777, subdivision (b)(4), the State Water Board in the final Staff Report, including the final SED has evaluated the potential environmental impacts of reasonably foreseeable methods of compliance with the proposed Desalination Amendment. In addition, the State Water Board has evaluated potential environmental impacts associated with the overall construction and operation of desalination facilities in general. Although many of the potentially significant impacts from desalination facilities in general would likely occur in the absence of adoption of the Desalination Amendment, they are evaluated in the final Staff Report, including the final SED, for the purposes of disclosure and to fully inform decision-making. The potentially significant impacts from desalination facilities in general are uncertain and site-specific in nature, and are more appropriately addressed in a project-specific CEQA analysis.
22. The State Water Board has identified potentially significant indirect impacts to aesthetics resulting from reasonably foreseeable methods of compliance with the proposed Desalination Amendment. These impacts include visual impacts to scenic vistas from construction activities related to installation of intake and outfall structures, as well as permanent infrastructure needed to move source water to the plant and to transfer waste from the facility to the outfall. The State Water Board has identified potential mitigation measures available for these methods of compliance that may reduce or eliminate those aesthetic impacts. These measures include limitations on the time of year when construction occurs and ensuring that infrastructure is installed underground or outside areas where public and recreational uses occur. However, for any specific site, it is unknown what specific mitigation measures are available or the extent to which such measures are capable of reducing impacts to a level that is less than significant, nor are these measures within the authority of the State Water Board. Pursuant to title 14, California Code of Regulations section 15091, subdivision (a)(2), the State Water Board finds that such changes or alterations are within the responsibility and jurisdiction of another public agency and are not within the authority of the State Water Board. Such changes would be adopted by other public agencies or can and should be adopted by such other agencies. Therefore, such impacts to aesthetics may be significant and unavoidable.

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23. The State Water Board has identified potentially significant indirect impacts to air quality resulting from reasonably foreseeable methods of compliance with the proposed Desalination Amendment. These impacts include short-term air emissions associated with the construction activities related to installation of intake and outfall structures. Air quality-related impacts include short-term air emissions that may conflict with or obstruct implementation of an applicable air quality plan or may otherwise violate applicable air quality standards. The State Water Board has identified potential mitigation measures available for these methods of compliance that may reduce or eliminate those air quality impacts. These measures include use of low-emission equipment and practices, and use of appropriate management practices during surface disturbance activities. However, because the State Water Board does not have authority to require these measures, there is uncertainty in the degree of mitigation implemented to reduce potentially significant impacts. Pursuant to title 14, California Code of Regulations section 15091, subdivision (a)(2), the State Water Board finds that such changes or alterations are within the responsibility and jurisdiction of another public agency and are not within the authority of the State Water Board. Such changes would be adopted by such other agencies or can and should be adopted by such other agencies. Therefore, such impacts to air quality may be significant and unavoidable.

24. The State Water Board has identified potentially significant indirect impacts to biological resources resulting from reasonably foreseeable methods of compliance with the proposed Desalination Amendment. These impacts from construction activities include: impacts related to the installation of intake and outfall structures, including potential loss or modification of sensitive habitat, conversion of riparian or wetland habitat supporting a variety of resident and migratory species, disturbance or interference with fish migration patterns, adverse impacts to migratory bird nesting and feeding habitat, and disturbance of marine and onshore habitat through generation of noise and vibration. The State Water Board has identified potential mitigation measures available for these methods of compliance that may reduce or eliminate those impacts. These measures include: construction surveys, relocation of impacted species, consultation with appropriate agencies identify seasonal work windows, avoidance technology and required monitoring, and obtaining appropriate permits. However, for any specific site, it is unknown what specific mitigation measures are available or the extent to which such measures are capable of reducing impacts to a level that is less than significant, nor are these measures within the authority of the State Water Board. Pursuant to title 14, California Code of Regulations section 15091, subdivision (a)(2), the State Water Board finds that such changes or alterations are within the responsibility and jurisdiction of another public agency and are not within the authority of the State Water Board. Such changes would be adopted by such other agencies or can and should be adopted by such other agencies. Therefore, such impacts to biological resources may be significant and unavoidable.

25. The State Water Board has identified potentially significant indirect impacts from greenhouse gas emissions resulting from reasonably foreseeable methods of compliance with the proposed Desalination Amendment. These impacts resulting from construction activities related to installation of intake and outfall structures include exhaust emissions from equipment that may exceed local thresholds of significance. The State Water Board has identified potential mitigation measures available for these methods of compliance that may reduce or eliminate those impacts. These measures include use of low-emission equipment and practices and use of appropriate management practices. However, because the State Water Board does not have authority to require these measures, there is uncertainty in the degree of mitigation implemented to reduce potentially significant impacts.

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Pursuant to title 14, California Code of Regulations section 15091, subdivision (a)(2), the State Water Board finds that such changes or alterations are within the responsibility and jurisdiction of another public agency and are not within the authority of the State Water Board. Such changes would be adopted by such other agencies or can and should be adopted by such other agencies. Therefore, such impacts from greenhouse gas emissions may be significant and unavoidable.

26. The State Water Board has identified potentially significant impacts to hydrology and water quality resulting from reasonably foreseeable methods of compliance with the proposed Desalination Amendment. These impacts include the potential for operation of subsurface wells to cause or exacerbate saltwater intrusion into freshwater aquifers or alter groundwater flow to freshwater aquifers and wells. Pursuant to express terms of the Desalination Amendment, the feasibility determination for subsurface intakes will entail analysis of issues that include hydrogeology and impacts to freshwater aquifers. As a result, a proposed facility that with apparent potential to result in such impacts is unlikely to be approved. However, due to the site-specific nature of this determination, the potential for such impacts is uncertain and is appropriately addressed more extensively in a project-specific CEQA analysis. Regardless, the State Water Board has identified potential mitigation measures available for these methods of compliance that may reduce or eliminate those impacts in the event that these impacts nonetheless occur. These measures include reducing pumping rate or potentially relocating wells. However, because the State Water Board does not have authority to require these measures, there is uncertainty in the degree of mitigation implemented to reduce potentially significant impacts. Pursuant to title 14, California Code of Regulations section 15091, subdivision (a)(2), the State Water Board finds that such changes or alterations are within the responsibility and jurisdiction of another public agency and are not within the authority of the State Water Board. Such changes would be adopted by such other agencies or can and should be adopted or undertaken by such other agencies. Therefore, such impacts to hydrology and water quality may be significant and unavoidable.
27. The State Water Board has duly considered the final Staff Report, including the final SED, which identifies potentially significant and unavoidable impacts resulting from adoption and implementation of the Desalination Amendment. Consistent with Public Resources Code section 21081, subdivision (b), specific overriding economic, legal, social, technological or other benefits outweigh the potentially unavoidable adverse environmental impacts. The State Water Board makes this statement of overriding considerations concerning the Desalination Amendment to explain why the benefits override and outweigh any potentially unavoidable impacts. These benefits include ensuring continued availability of an important alternative source of potable water while providing consistency to regional water boards in permitting desalination facilities. Desalination may provide a reliable alternative source of water as a supplement to more traditional supplies to reduce uncertainty in times of drought. The Desalination Amendment provides a statewide, coordinated and consistent approach to consideration of new or expanded desalination facilities while protecting beneficial uses and minimizing intake and mortality of all forms of marine life. The State Water Board finds that potentially significant, unavoidable environmental impacts that may directly or indirectly result from adoption of the Desalination Amendment are acceptable in light of the benefits set forth above, and that each of the benefits constitute an overriding benefit warranting approval of the Desalination Amendment, independent of the other benefits, despite each and every potentially unavoidable impact.

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28. Pursuant to Health and Safety Code section 57004, the proposed Desalination Amendment and draft Staff Report, including the draft SED, were subject to external scientific peer review through an interagency agreement with the University of California. Peer review was solicited on June 18, 2014 and was completed on September 17, 2014. State Water Board staff revised the proposed Desalination Amendment and draft Staff Report, including the draft SED, in response to comments provided by the peer reviewers or provided written responses that explained the basis for not incorporating other proposed changes.
29. The Desalination Amendment to the Ocean Plan does not become effective until approved by the Office of Administrative Law (OAL) and the State Water Board has paid the applicable fee established by the Department of Fish and Wildlife for an environmental document adopted pursuant to a certified regulatory program as required by the CEQA, section 21089(b).

THEREFORE BE IT RESOLVED THAT THE STATE WATER BOARD:

1. Adopts the [Desalination Amendment](#) to the Ocean Plan.
2. Approves the [final Staff Report](#), including the final SED.
3. Directs State Water Board staff to explore a Memorandum of Agreement with the California Coastal Commission, California Department of Fish and Wildlife, and the State Lands Commission to promote interagency collaboration for siting, design, mitigation, and permitting of desalination facilities.
4. Authorizes the Executive Director or designee to submit the Desalination Amendment to OAL for review and approval.
5. Directs the Executive Director or designee to make minor, non-substantive modifications to the language of the Desalination Amendment, if during the OAL approval process, OAL determines that such changes are needed for clarity or consistency, and to inform the State Water Board of any such changes.
6. Directs State Water Board staff, upon approval by OAL, to file a Notice of Decision with the Secretary for Natural Resources and transmit payment of the applicable fee as may be required to the Department of Fish and Wildlife pursuant to Fish and Game Code section 711.4.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on May 6, 2015.

Jeanine Townsend
Clerk to the Board