



October 16, 2017

BY EMAIL

Honorable Commissioners
100 Howe Avenue, Suite 100-South
California State Lands Commission
Sacramento, CA 95825

Re: Seawater Desalination Project at Huntington Beach: Outfall/Intake Modifications and General Lease – Industrial Use (PRC 1980.1) Amendment (Lease Amendment), EIR No. 794, Final Supplemental Environmental Impact Report

Dear Honorable Commissioners:

On behalf of Poseidon Resources (Surfside) LLC (“Poseidon”), the Applicant for the Seawater Desalination Project at Huntington Beach: Outfall/Intake Modifications and General Lease – Industrial Use (PRC 1980.1) Amendment (“Lease Amendment”), we appreciate California State Lands (“SLC”) staff’s hard work on the Staff Report and Final Supplemental Environmental Impact Report (“2017 Final SEIR”) for the Lease Amendment, and we look forward to SLC’s hearing on the Lease Amendment.

As you know, the SLC is the first agency considering these proposed modifications to the Huntington Beach Desalination Plant Project (“HB Desalination Plant Project”). Pursuant to the Interagency Permit Sequencing Framework Agreement among the SLC, Santa Ana Regional Water Quality Control Board (“Regional Board”), and California Coastal Commission (“CCC”), the SLC agreed to prepare any additional environmental analysis required by the California Environmental Quality Act (“CEQA”) for the proposed modifications. The Regional Board and the CCC will subsequently consider the proposed modifications pursuant to their respective separate statutory programs in 2018. This first step is crucial to the permitting process for our project, and we appreciate the SLC and its staff’s willingness to take the lead.

The HB Desalination Plant Project, as modified by the Lease Amendment, will provide Orange County with a new, much needed, climate-resistant water supply source that complies with the Amendments to the Water Quality Control Plan for Ocean Waters of California Addressing Desalination Facility Intakes, Brine Discharges, and Incorporating Other Non-substantive Changes (“Desalination Amendment”). Despite the documented need for the HB Desalination Plant Project, we anticipate you will be receiving comments from those who are opposed to this important water reliability project on principle. Therefore, this letter provides

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information concerning issues we anticipate may be raised before or during the hearing on the Lease Amendment.

A. The HB Desalination Plant Project Is Needed To Provide Local Water Supply Diversity and Reliability

The HB Desalination Plant Project will fulfill an identified need for a local, reliable source of water for Orange County. Numerous state, regional, and local agencies—including the California Department of Water Resources, Metropolitan Water District of Southern California (“MWD”), Municipal Water District of Orange County (“MWDOC”), Orange County Water District (“OCWD”), and the City of Huntington Beach (“City”)—recognize that desalination is an important tool to bolster regional water supply in the face of a changing climate. Water providers throughout Orange County—including MWDOC, OCWD, and the City—identify the HB Desalination Plant Project’s unique ability to augment local supplies and diversify existing water supply portfolios.

As the 2017 Final SEIR recognizes, “regional water reliability studies and similar correspondence identify Orange County’s need for a diverse set of potable water supply options including the HB Desalination Plant Project.” 2017 Final SEIR at II-19. The HB Desalination Plant Project offers Orange County’s water agencies up to 50 million gallons per day (MGD) or 56,000 acre-feet of water per year to include in their portfolio of available water resources. *See* Letter from OCWD to State Lands Com. regarding Huntington Beach Desalination Plant (Sept. 8, 2017), at 1 (“2017 OCWD Letter”), attached hereto as Exhibit 1; *see also* Findings of Fact for Amendment of Lease PRC 1980.1, at 80 (Oct. 29, 2010) (“2010 Findings”). The HB Desalination Plant Project will “help increase local supplies and reduce Southern California’s reliance on imported water supplies to meet expected future demands.” *See* Letter from MWD to State Lands Com. regarding Support for the Huntington Beach Seawater Desalination Project (Oct. 2, 2017), at 1 (“2017 MWD Letter”), attached hereto as Exhibit 2; *see also* Letter from Cal. Dept. of Water Resources to Cal. Coastal Com. regarding the Huntington Beach Desalination Project (Nov. 6, 2013), attached hereto as Exhibit 3.

1. *The HB Desalination Plant Project Provides a Drought-Proof Water Supply*

Southern California periodically experiences droughts and is coming off one of the “worst droughts in memory.” *See* California Water Action Plan 2016 Update at 1.¹ “The severity of the State’s recent drought . . . underscore[s] the need for continued diversification of Southern California’s water resource portfolio.” 2017 MWD Letter at 1. As recognized since the City of Huntington Beach’s 2010 Final Subsequent Environmental Impact Report for the HB Desalination Plant Project (“2010 FSEIR”), “[d]uring long or extreme droughts, water supplies are reduced, groundwater levels decline and conflicts increase among water users. Business is also adversely affected, jeopardizing the economy, and ecosystems are strained, risking sensitive and endangered plants, animals, and habitats.” 2010 FSEIR at 3-81. Because the Pacific Ocean is not impacted by drought conditions, the HB Desalination Plant Project “would add even more flexibility and reliability in operating California’s water system, and it would provide particular

¹ *See* http://resources.ca.gov/docs/california_water_action_plan/Final_California_Water_Action_Plan.pdf.

drought relief in Orange County.” *Id.* at 3-82. Put differently, the HB Desalination Plant Project “will serve high quality desalinated water through portions of the City[’s] distribution system and assist in drought proofing the City’s water supply.” 2010 Findings at 81.

2. *The HB Desalination Plant Project Ensures Reliability to Handle Water Supply Uncertainties Regarding Water Imports*

Regional water agencies, which historically relied heavily on imported water supplies, are undertaking great “efforts to enhance regional water supply self-reliance by reducing the need to import water from Northern California and the Colorado River.” 2017 OCWD Letter at 2. Increased regulatory activity and environmental water needs in Northern California have reduced the amount of imported water supply that is available to Southern California through the State Water Project (“SWP”). *See* 2010 FSEIR at 3-83. “[R]estrictions on SWP operations imposed by State and federal agencies contribute substantially to the challenges of accurately determining the SWP’s water delivery capability in any given year.” *See* State Water Project, Final Delivery Capability Report 2015, at 5 (July 2015) (“SWP 2015 Report”)². The Delta is the key to the SWP’s ability to deliver water throughout the State, but the Delta faces various challenges to its long-term sustainability, such as climate change, sea level rise, and the protection of endangered and threatened fish species. *See id.* at 1.

Regional water agencies have also announced a need to look locally to close the gap between supplies and demands to reduce reliance on the Delta. *See* MWD, 2015 Integrated Water Resources Plan Update, at XI (“MWD 2015 Update”)³; *see also* 2017 OCWD Letter at 2. As the SLC recognized in 2010, the HB Desalination Plant Project will replace imported supplies transported from Northern California, reducing demands on the existing imported water system. *See* 2010 Findings at 81. “Given the announced cutbacks of water supply and the continuing environmental water demands on the [SWP] in Northern California, the water produced by the Seawater Desalination Project at Huntington Beach will be dedicated by Orange County water agencies to replacing existing water supplies for current Orange County residents and future generations.” *Id.*

Similarly, regional water agencies have recognized the need to reduce reliance on water imported from the Colorado River. *See* 2017 MWD Letter at 1. Since 2010, “a fundamental change has occurred in the availability and use of Colorado River water because California has been required to reduce the amount of Colorado River water it uses.” 2010 FSEIR at 3-83. Studies have also shown that climate change is likely to impact the Colorado River, potentially reducing the runoff of the river anywhere from 5% to 45% by the year 2050. *Id.* (citing Report on Sustainable Water Deliveries from the Colorado River from the General Manager to the MWD Board, dated Aug. 28, 2008).

These uncertainties underscore the need for the HB Desalination Plant Project, which “will create ecosystem and biological resources benefits that may accrue due to decreased pressures on existing water sources.” 2010 Findings at 81. The HB Desalination Plant Project would also result in lower net air emissions than emissions associated with water transport from

² *See* <https://msb.water.ca.gov/documents/86800/144575dd-0be1-4d2d-aeff-8d7a2a7b21e4>.

³ *See* [http://www.mwdh2o.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20\(web\).pdf](http://www.mwdh2o.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20(web).pdf).

Northern California or the Colorado River, due to the Project’s industry-leading Energy Minimization and Greenhouse Gas Reduction Plan.

3. *The HB Desalination Plant Project Is Needed to Accommodate Local Needs*

“As threats to water reliability rise in various areas throughout the State, impetus exists to explore more localized sources with greater reliability, such as desalination.” *See* Cal. Dept. of Water Resources, *California Desalination Planning Handbook*, at 10.⁴ The HB Desalination Plant Project would ensure that local and regional water agencies are not wholly dependent on pipelines and water supplies that could be disrupted by natural disasters, acts of terror or war, or other actions impacting State reservoirs or infrastructure.

For example, imported water sources “are precariously subject to disruption [and] [c]ontinued drought or natural disaster would be catastrophic to [local water agencies] and [their] customers.” *See, e.g.*, Santa Margarita Water District Comment to California Coastal Commission, at 1 (Oct. 18, 2013), attached hereto as Exhibit 4. As stated in the most recent update to the California Water Action Plan, “[r]eductions in water from major watersheds like the Colorado River and the Sacramento-San Joaquin Delta (Delta) watershed – due to hydrologic and declining environmental conditions – have made these water supplies less reliable. . . . The unreliable nature of these supplies threatens local, regional and statewide economies.” *See* California 2016 Water Plan Update at 2.

MWD recognizes that “[s]eawater desalination represents a significant opportunity to diversify the region’s water resource mix with a new, locally-controlled, reliable potable supply.” MWDOC has similarly stated that desalination “could improve water supply and system reliability in Orange County.” *See* MWDOC, 2015 Urban Water Management Plan, at 7-2.⁵

As such, and as stated in the 2017 Final SEIR, various water agencies identify the HB Desalination Plant Project as one of a number of projects that could help meet future projected demands, as well as reduce Orange County’s demand for imported water. *See* 2017 Final SEIR at II-18 to II-19; *see also* Letter from Robert J. Hunter, MWDOC General Manager, to Kurt Berchtold, Santa Ana RWQCB (July 7, 2016) (“2016 MWDOC Letter”), attached hereto as Exhibit 5; Letter from Jeffery M. Thomas, MWDOC Vice President, to Mary K. Shallenberger, Cal. Coastal Com., at 2 (Oct. 14, 2013), attached hereto as Exhibit 6. Additionally, the HB Desalination Plant Project was included as a potential water supply project in MWDOC’s Orange County Water Reliability Study that could assist Orange County in meeting its water needs. *See* 2016 MWDOC Letter, Ex. 3, at 2. The HB Desalination Plant Project would produce “enough water for more than 150,000 Orange County households per year, and “[o]nce

⁴ *See* http://www.water.ca.gov/desalination/docs/Desal_Handbook.pdf.

⁵ *See* http://www.mwdoc.com/Uploads/FINAL%20DRAFT%20MWDOC%20UWMP_May%202016%20v2.pdf.

completed, the facility would provide approximately 8% of Orange County’s total water supply.”⁶

Furthermore, OCWD has identified a local and regional need for the HB Desalination Plant Project’s 56,000 acre-feet of desalinated water per year based on three key factors: (1) limited imported water supplies; (2) declining Santa Ana River flows; and (3) increased demand for water. *See* OCWD, Groundwater Management Plan 2015 Update, at 2-11.⁷ Similarly, “OCWD’s current Long-Term Facilities Plan . . . identifies the [HB Desalination Plant Project] as a priority project and determined the plant capacity of 56,000 AFY as the single largest source of new, local drinking water available to the region.” *See* City of Huntington Beach 2015 Urban Water Management Plan, at 7-3 (June 2016)⁸; *see also* OCWD, Long-Term Facilities Plan 2014 Update, Appx. 1 at 3, & Appx. 2 at 7-10.⁹ Thus, the HB Desalination Plant Project would provide a planned-for supply source to accommodate Orange County’s water needs as shown in the water plans adopted by OCWD. In fact, OCWD has stated that its “interest in seawater desalination and specifically the Project is not a new development and predates most of the recent drought.” *See* 2017 OCWD Letter at 1.

At the local level, as stated in the City’s 2015 Urban Water Management Plan, “[r]esource optimization such as desalination . . . minimize[s] the City’s and region’s reliance on imported water.” City 2015 Urban Water Management Plan at 7-1. For instance, the HB Desalination Plant Project would provide approximately 10% of the City’s water supply needs. *See id.* at 7-3. Put differently, the HB Desalination Plant Project “will provide the City with the direct acquisition of 3 MGD of locally controlled, high quality, drought-proof drinking water,” with “an option to obtain an additional 4 MGD of water during a water supply emergency.” 2010 Findings at 82.

4. *The HB Desalination Plant Project Provides a New Source to Protect Against Seawater Intrusion into the Santa Ana Groundwater Basin*

The most important local water supply in Orange County is the Santa Ana River Groundwater Basin (“Basin”), which OCWD manages. “OCWD does not manage the Basin by trying to keep it full. Rather it has established a goal of maintaining an accumulated overdraft to allow storage space for replenishment when excess water is available during wet years.” 2010 FSEIR at 3-87. In the early 1960s, withdrawals from the Basin were less than 200,000 acre-feet per year; withdrawals have increased to more than 300,000 acre-feet per year in recent times. *Id.* In comparison, the natural recharge of the Basin is small and is directly related to the amount of local precipitation in a given year. *Id.* As such, the Basin is primarily replenished through OCWD’s “artificial recharge” operations.

⁶ *See* MWDOC, Huntington Beach Water Desalination Facility, *available at*: <http://www.mwdoc.com/services/HBdesal>.

⁷ *See* https://www.ocwd.com/media/3622/groundwatermanagementplan2015update_20150624.pdf.

⁸ *See* http://www.huntingtonbeachca.gov/files/users/public_works/urban-water-plan.pdf.

⁹ *See* <https://www.ocwd.com/media/3308/long-term-facilities-plan-2014-update.pdf>.

As part of its artificial recharge operations, OCWD installed injection wells along the coast near the mouth of the Santa Ana River, at a place called Talbert Gap, to pump water into the shallow aquifers. Injecting water into the shallow aquifers produced a groundwater mound that stood higher than sea level, making it feasible to draw water levels down during dry periods when local surface water and imported water sources were in short supply. *Id.* Depressed groundwater levels near the coast, however, could exacerbate the inland advance of saline water into the Basin. *See id.* at 3-95.

OCWD has identified desalinated water from the HB Desalination Plant Project as a way to augment supplies injected into Talbert Seawater Barrier to help prevent seawater intrusion into the groundwater basin. *See* 2017 OCWD Letter at 2 (“[W]ater from the Project could provide flexibility in how the District manages the groundwater basin, specifically the desalinated water could be used to augment supplies we inject into our Talbert Seawater Barrier”). Thus, while OCWD has not committed to any particular path or method for integrating desalinated water, the HB Desalination Plant Project could provide an alternative supply of water that would allow increased Basin production and operational flexibility in managing the Basin.

5. *Water Reliability Studies Do Not Constitute Significant New Information Warranting the Preparation of a Subsequent EIR*

Project opponents may assert that there is new information or a change in circumstances obviating the need for the HB Desalination Plant Project. For instance, opponents of the HB Desalination Plant Project have asserted that recent regional water conservation efforts, water demand forecasts, and water availability render the HB Desalination Plant Project unnecessary.¹⁰ However, water reliability and supply studies cited by Project opponents actually *confirm* the need for the HB Desalination Plant Project, and opponents’ claims are refuted by substantial evidence of project need. *See, e.g.,* 2017 MWD Letter; 2017 OCWD Letter; Letter from City of Huntington Beach to State Lands Com. regarding Support for Huntington Beach Seawater Desalination Project Supplemental EIR & Land Lease Agreement (July 14, 2017).

For instance, MWDOC’s 2016 Orange County Water Reliability Study¹¹ (relied upon by Irvine Ranch Water District in its comments on SLC’s Draft SEIR) in fact underscores the need for the HB Desalination Plant Project. “Without new water supply investments [including the HB Desalination Plant] . . . future water supply reliability will be at substantial risk.” 2016 Orange County Water Reliability Study at 1-2 (emphasis in original); 3-9 (showing the HB Desalination Plant as a cost-effective option for increasing water supply and system reliability). Thus, the HB Desalination Plant Project provides a long-term, local, and reliable source of water in a region that frequently experiences extended droughts.

¹⁰ The 2017 FSEIR addresses other claimed new information or changed circumstances that Project opponents assert warrants a new or subsequent environmental impact report (“EIR”). *See* 2017 FSEIR at II-16 to II-23. Poseidon agrees with SLC staff’s conclusions that these do not constitute significant new information or claimed circumstances warranting the preparation of a subsequent EIR.

¹¹ *See* http://www.mwdoc.com/Uploads/OC%20Study%20Executive%20Report_with%20Appendices_1-4-2017%20FINAL%20Low%20Resolution.pdf.

In addition, this purportedly new information does not require a new EIR. *See* CEQA Guidelines § 15163(a)(3). The water reliability studies do not show that the HB Desalination Plant Project will have new or more severe significant environmental impacts, or that mitigation measures or alternatives previously analyzed were insufficient. Rather, the water reliability studies confirm Orange County’s need for the HB Desalination Plant Project as set forth in the 2010 FSEIR and the 2017 FSEIR. Moreover, the SLC is not required to rely on these reports in determining Project need. *See Center for Biological Diversity v. Dept. of Forestry & Fire Protection*, 232 Cal.App.4th 931, 948 (2014) (“A public agency may choose between differing expert opinions, and may properly rely upon the opinion of its staff in reaching decisions.”).

B. The HB Desalination Plant Has Been Subject To Thorough Environmental Review By Multiple Agencies

Project opponents have asserted throughout this proceeding that the SLC should have prepared a subsequent EIR rather than a supplemental EIR. These claims ignore that the HB Desalination Plant Project has already undergone an extremely robust, decades-long environmental review process that now includes three environmental impact reports, lengthy Water Code section 13142.5(b) analysis by the Regional Board, and an EIR-equivalent document prepared by the CCC, as well as an independent scientific advisory panel analysis of site-specific alternative intake technologies and a statewide evaluation of environmental impacts from desalination plants by the State Water Resources Control Board (“State Board”). In light of this thorough past analysis and the minor nature of the proposed modifications to the HB Desalination Plant Project, Poseidon agrees that the SLC has made the right decision to prepare a supplemental EIR.

1. *The Project Has Been The Topic Of Three Environmental Impact Reports And Numerous Agency Approvals*

The HB Desalination Plant Project first underwent environmental review in 2003, when the City, acting as the lead agency, prepared an EIR analyzing a 50 million gallon per day, co-located desalination facility. In September 2005, the City certified a Recirculated Environmental Impact Report (“REIR”). In 2010, the City conducted a new environmental review and issued the 2010 FSEIR to address changes to the HB Desalination Plant Project and its circumstances subsequent to the REIR. The 2010 FSEIR analyzed the HB Desalination Plant Project as a whole, in over 1,000 pages of detailed review of the HB Desalination Plant Project’s potential environmental effects, feasible alternatives, and mitigation measures.

Next, in 2012 the Regional Board issued findings for Order No. R8-2012-0007, NPDES No. CA8000403, regarding the Project’s National Pollutant Discharge Elimination System (“NPDES”) permit renewal and Water Code section 13142.5(b) determination. The Regional Board conducted yet another whole-Project environmental review. The NPDES findings covered: information about the proposed Project; effluent limitations; receiving water limitations; monitoring and reporting requirements under the NPDES permit; best management practices and pollution prevention; specifications for construction, operations, and maintenance; a compliance determination; and over 100 pages of attachments on the facility location, the flow schematic, federal standards, monitoring, minimum levels, and other requirements.

The SLC previously relied on the 2010 FSEIR in approving the Amendment of Lease No. PRC 1980.1 in October 2010. Specifically, the SLC found that the “City of Huntington Beach, acting as Lead Agency for this Project, has certified a Subsequent Environmental Impact Report for Poseidon Resources’ development of a desalination facility involving the Lease Premises, and that, in doing so, the City of Huntington Beach determined that the co-located and stand-alone operation of the desalination facility will not cause a significant impact to water quality or marine life.”

In addition to the robust Project-specific analysis, the State Board conducted a thorough analysis of the potential environmental impacts of using seawater for desalination along the California coast, including at the HB Desalination Plant Project. This analysis is contained in the Substitute Environmental Document (“SED”) for the Desalination Amendment, which is an environmental impact report-equivalent document. Specifically, the SED analyzed possible intake and outfall options for desalination facilities, and made recommendations for the use of certain technologies. The Desalination Amendment took effect as a new regulation on January 28, 2016.

2. *The SLC Properly Analyzed the Incremental Effects of the Project Modifications*

As allowed under CEQA, the 2017 Final SEIR is focused on the incremental impacts due to the modifications to the HB Desalination Plant proposed by Poseidon within the SLC lease area.

Since the approval of the 2010 FSEIR by the City, in 2016, Poseidon submitted a new application to the SLC to amend General Lease – Industrial Use PRC 1980.1 to incorporate two technology enhancements to the HB Desalination Plant Project as originally approved by the SLC: (1) four 1-millimeter wedgewire screens on the offshore end of the seawater intake pipeline about 1,650 feet offshore; and (2) a multiport duckbill seawater diffuser on the offshore end of the discharge pipeline about 1,500 feet offshore. *See* 2017 Final SEIR at ES-4 to ES-6. These two modifications are designed to enhance marine life protection and reduce the volume of seawater withdrawn from the source water from 152 MGD to 106.7 MGD, and to comply with the requirements of the Desalination Amendment. The modifications to the overall HB Desalination Plant Project in the SLC lease area are described as the “Lease Modification Project” in the 2017 Final SEIR. No other physical changes have been proposed to the HB Desalination Plant Project, including the Project’s delivery and distribution systems.

The SLC—acting in its role as a responsible agency under CEQA—chose to prepare a supplemental EIR under CEQA authority focused on the incremental environmental impacts due to the modifications of the HB Desalination Plant Project within the SLC lease area—i.e., the Lease Modification Plant. In compliance with CEQA, the 2017 Final SEIR analyzes the incremental environmental impacts associated with the Lease Amendment in the SLC lease area and considers them in combination with the effects already identified in the 2010 FSEIR. In addition, the 2017 Final SEIR also considers the combined impacts of the modifications and the onshore facilities of the HB Desalination Plant Project and how the impacts from the land-based portion of the HB Desalination Plant Project, as analyzed in the 2010 FSEIR, may be altered by the modifications proposed by the Lease Amendment.

The SLC's approach complies with CEQA Guidelines section 15163, which provides that a supplemental EIR "need contain only the information necessary to make the previous EIR adequate for the project as revised." A leading CEQA treatise interprets this provision to mean that "an EIR supplement need respond only to the project changes, changes in circumstances, or new information that triggered the need to prepare a further EIR." Stephen Kostka and Michael Zischke, Supplemental EIR, in CEB Onlaw: Practice under the California Environmental Quality Act § 19.5 (2d edition, updated March 2015); *see also Benton v. Bd. of Supervisors*, 226 Cal.App.3d 14767, 1482-83 (1991) (holding that because original project already survived environmental review, county only needed to review the incremental differences between the original project and the modification); *Temecula Band of Luiseno Mission Indians v. Rancho Cal. Water Dist.*, 43 Cal.App.4th 425, 437 (1996) (stating that when an agency is preparing a supplemental EIR, the agency "is specifically authorized to limit its consideration of the later project to effects not considered in connection with the earlier project").

3. *No Subsequent EIR Was Required*

Project opponents have asserted throughout the CEQA process that the SLC should have prepared a new or subsequent EIR. We anticipate that opponents will continue to assert this argument, but they are wrong, as only a supplemental EIR was required.

CEQA provides that a subsequent EIR is not required for a project unless "[n]ew information *of substantial importance*, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:

- (A) The project will have one or more significant effects not discussed in the previous EIR;
- (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
- (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
- (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative."

See CEQA Guidelines § 15162(a)(3) (emphasis added).

Pursuant to CEQA Guidelines section 15163(a), the "lead or responsible agency may choose to prepare a supplement to an EIR rather than a subsequent EIR if: (1) Any of the conditions described in Section 15162 would require the preparation of a subsequent EIR, and (2) Only

minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation.” CEQA Guidelines § 15163(a). The California Court of Appeal has previously analyzed the distinction between a “supplemental” versus a “subsequent” EIR in *City of Irvine v. County of Orange*, 238 Cal.App.4th 526, 539–40 (2015). There, the court explained:

The basic rule is that whenever there is an already approved EIR and a “substantial” change in either the project, the surrounding circumstances, or new information that could not have been discovered when the first EIR was prepared, either a subsequent or a supplemental EIR must be prepared. The only difference is that, as explained in CEQA Guidelines section 15163, if there has been a substantial change, which would otherwise require a subsequent EIR under CEQA Guidelines section 15162, but “[o]nly minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation,” then the lead agency has the discretion (the key phrase is “may choose”) (*id.*, subd. (a)) to prepare a supplemental EIR that “need contain only the information necessary to make the previous EIR adequate for the project as revised.” (CEQA Guidelines, § 15163, subd. (b).)

Id. Pursuant to the clear language in the CEQA Guidelines, the court concluded that “the choice to proceed by way of a supplemental as distinct from a subsequent EIR is a discretionary one” that will be upheld if there is any reasonable basis for the agency’s determination. *Id.* at 539-40.

Here, in light of the robust prior environmental review of the HB Desalination Plant Project, the SLC appropriately exercised its discretion to prepare a supplemental EIR for technological modifications requested in the Lease Amendment.

C. There Are No Changes to the HB Desalination Plant Project Water Distribution System

Project opponents may continue to argue that the Lease Amendment physically changes the HB Desalination Plant Project’s water distribution system. Not so. The Lease Amendment is limited to the installation of a screen and multiport diffuser on the seaward end of the HBGS seawater intake and discharge pipeline, respectively, in order to comply with the requirements of the Desalination Amendment. *See* 2017 Final SEIR at ES-3. The Lease Amendment does *not* change the HB Desalination Plant Project’s water delivery and distribution components. As described in the 2017 Final SEIR, no changes to the HB Desalination Plant Project’s water distribution system have been proposed by Poseidon or by OCWD as part of the Lease Amendment or broader HB Desalination Plant Project.

Project opponents, speculating about future possible OCWD actions, have commented that the SLC should have analyzed potential changes to the water delivery system, even though no changes have been proposed. The SLC was not required to conduct this analysis, because CEQA does not require analysis of speculative impacts. An EIR need not speculate about the effects of contingent future events relating to a project. When future actions that may follow from a project are uncertain, the EIR need not address the environmental consequences that might result. *See Citizens for a Sustainable Treasure Island v. City & County of San Francisco*,

227 Cal.App.4th 1036, 1058 (2014). CEQA also does not require that a reviewing agency wait until speculative events come to fruition in order to complete environmental review. Rather, the SLC must identify which components of a project are known or reasonably foreseeable; if it finds that a particular impact is too speculative for evaluation, the SLC should note its conclusion and terminate discussion of the impact. *See* CEQA Guidelines § 15145.

The 2010 FSEIR “analyzed the distribution of desalinated water, including various options and volumes, into the local and regional potable water system.” 2017 Final SEIR at 1-11. In 2015, OCWD approved a non-binding term sheet with terms and conditions by which OCWD and Poseidon could negotiate contracts for the purchase of desalinated water. *See id.* However, “[a]fter initially proposing to prepare an EIR for a potable water distribution or storage system, the OCWD stated that it would not finalize its water purchase agreement with Poseidon until after the HB Desalination Plant receives all required state approvals.” *Id.* at 1-11 (citing a Letter from Michael R. Marcus, OCWD General Manager, to Kurt Berchtold, Santa Ana RWQCB, dated March 20, 2017). Accordingly, “potential modifications contemplated to distribute desalinated water by local or regional water agencies is speculative at this time and not germane to the Lease Amendment. Future CEQA analysis may be needed to construct an onshore desalinated drinking water distribution system, for example if a proposed system differs from the distribution system previously evaluated in the 2010 FSEIR.” *Id.* at 1-12.

OCWD has been considering a variety of water conveyance and utilization options that OCWD might implement once it purchases the desalinated water from the HB Desalination Plant Project. At this time, OCWD has not reached any conclusions or made any decisions regarding how desalinated could be used by the District and distributed to the local water community, so no specific conveyance and utilization option has been formally selected. After the HB Desalination Plant Project has been permitted, and when OCWD decides upon specific plans and facilities that OCWD could employ to use and distribute the desalinated water, and if OCWD decides that any changes are needed from the distribution already studied in the 2010 SEIR, OCWD will conduct any necessary CEQA review. Thus, the SLC’s decision to prepare a supplemental EIR that focuses on the two technology enhancements to and operational modification of the HB Desalination Plant Project was proper.

D. The SLC Has Not Engaged in Project Splitting

Project opponents have argued that the SLC is chopping up environmental review of the HB Desalination Plant Project by engaging in a limited review of the potential environmental impacts of the Lease Amendment alone. But the SLC has not engaged in improper project splitting. Analysis of the Lease Amendment in the 2017 SEIR does not divide the HB Desalination Plant Project into segments or hide the full extent of its environmental impacts.

As stated in the 2017 Final SEIR, the Lease Amendment analyzed by the SLC focuses on Poseidon’s requested amendment to Lease PRC 1980.1 in response to the Desalination Amendment. *See* 2017 Final SEIR at II-24. Thus, the 2017 Final SEIR “is intended to provide the CSLC with information required to exercise its jurisdictional responsibilities with respect to the Lease [Amendment]” and its scope “is limited to evaluating the changes to the 2010 lease and the incremental effects of those modifications.” *See* 2017 Final SEIR at 1-17. Because the

Lease Amendment involves technological modifications that are “minor additions or changes” to the previously certified HB Desalination Plant Project, the 2010 FSEIR applies to the approval action before the SLC, and the 2017 Final SEIR should be read in conjunction with the 2010 FSEIR. *See id.*

If a proposed action—like the Lease Amendment here—is only a modification of an existing project that has already undergone final CEQA review then an agency may properly limit its subsequent review to the incremental effects of such modification. *See Temecula Band of Luiseno Mission Indians v. Rancho Cal. Water Dist.*, 43 Cal.App.4th 425, 437 (1996) (upholding a water district’s analysis of the incremental effects of a pipeline modification, in lieu of re-analyzing the cumulative effects of the entire groundwater recharge program); *see also Benton v. Board of Supervisors*, 226 Cal.App.3d 1467, 1477 n.10 (1991) (finding that a county properly limited its environmental analysis to the incremental effects of the relocation of a proposed building on a winery, as opposed to re-analyzing the cumulative effects of the entire winery). The SLC properly analyzed the impacts of the technological enhancements as modifications and did not chop up the HB Desalination Plant Project into pieces to diminish environmental effects. The Project’s effects, including those from temporary stand-alone operation, were fully analyzed in the 2010 FSEIR. The current modifications being analyzed by the SLC were subsequently proposed in an effort to comply with later-enacted regulatory requirements; they were not carved off from the HB Desalination Plant Project to be analyzed at a later date.

Furthermore, the 2017 Final SEIR also considers the combined impacts of the modifications and the onshore facilities of the HB Desalination Plant Project and how the impacts from the land-based portion of the Project, as analyzed in the 2010 FSEIR, may be altered by these modifications. The 2010 FSEIR and 2017 SEIR cover the entirety of the HB Desalination Plant Project and the combined impacts of the Project have been analyzed. For example, with respect to air quality, the construction emissions associated with adding the intake screens and diffuser were added to the construction emissions associated with construction of the on-land portion of the HB Desalination Plant Project. *See* 2017 Final SEIR at 4-95. This approach complies with CEQA Guidelines section 15163, which provides that a supplemental EIR “need contain only the information necessary to make the previous EIR adequate for the project as revised.”

E. The SLC Was Not Required To Reevaluate Project Location Or Subsurface Intakes

Despite over a decade of environmental analysis of the HB Desalination Plant Project’s location and intake technology, opponents may continue to allege that the SLC should have conducted a wholesale new analysis of these issues. To the contrary, the SLC was not required to go back and reevaluate alternatives that have already been deemed infeasible. The SLC’s alternatives analysis fully complies with CEQA.

1. The SLC Analyzed a Reasonable Range of Alternatives

The alternatives analyzed in the 2017 Final SEIR represent a reasonable range of potentially feasible alternatives that could reduce one or more significant impacts of the Project

and accomplish most of the basic project objectives. Alternatives that would impede, to some degree, the attainment of the project objectives, or would be more costly, also were considered. As presented in the 2017 Final SEIR, fifteen alternatives were described and were compared with each other and with the HB Desalination Plant Project, as modified by the Lease Amendment: no Project; rotating brush-cleaned, stainless steel wedgewire screens; copper-nickel alloy wedgewire screens; six-port diffuser; intake pipeline extension; two-port diffuser; alternative site; alternative ownership and operation; beach well intake; subsurface infiltration gallery (“SIG”) intake; alternative discharge location; alternative discharge design; reduced facility size; ISTAP Alternative 1 (SIG Trestle); and ISTAP Alternative 2 (SIG Float-In). This more than constitutes a “reasonable range” under CEQA. *See* CEQA Guidelines § 15126.6(a).

2. *The Project Is Located At the Best Available Site*

No alternative site exists that would feasibly meet project objectives and reduce the environmental impacts of the HB Desalination Plant Project. As demonstrated by the information submitted to the SLC in support of Poseidon’s lease amendment application, the proposed site is the most feasible site in Orange County for a 50 MGD desalination plant.

Alternative sites for the HB Desalination Plant Project were considered and evaluated in detail in the 2010 FSEIR. *See* 2010 FSEIR § 6.2. The 2010 FSEIR concluded that the park facilities analyzed within the site investigation were actively utilized for recreation by the local community and no proposals to convert these facilities to alternative uses exist. Several other locations outside of the City have also been considered for this project, including the mouth of San Juan Creek (within the City of Dana Point), San Onofre (within San Diego County), and along the coast of the City of San Clemente. *See id.*, Figure 6-1, Alternative Site Location Map, and Table 6-2, Alternative Site Comparison. As explained in the 2010 FSEIR, these alternatives were not selected for further detailed consideration for a variety of reasons. Additionally, implementation of an “Alternative Site” alternative would not avoid the HB Desalination Plant Project’s significant and unavoidable air quality impacts identified in the 2017 FSEIR. Further, Poseidon has no data to suggest that an alternative site would reduce or eliminate the significant and unavoidable impacts to marine mammals from construction-related pile driving activities.

In support of its application for this Lease Amendment, Poseidon submitted a two-part Alternative Sites Analysis conducted in 2015 by Dudek that analyzed available sites along the entirety of the Orange County coast and concluded that the proposed site was the most feasible for siting a 50 MGD desalination plant. This information can be found in Poseidon’s Lease Amendment Application materials, dated July 15, 2016, Appendix E. In addition, based on Dudek’s assessment, there is no evidence to suggest that an alternative site would have lower larval density as compared to the Lease Amendment site. Therefore, the information now before the SLC indicates that an alternative site would not reduce or eliminate potential impacts to special-status species from diffuser-related entrainment identified in the 2017 Final SEIR.

Furthermore, in the 2012 National Pollutant Discharge Elimination System Permit for the HB Desalination Plant, the Regional Board concluded that the facility “is utilizing the best available site, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life.” *See* Poseidon Resources (Surfside) LLC Huntington Beach Desalination Facility, Order No. R8-2012-0007, NPDES No. CA8000403, at 9. As noted

in Section 1.2.2 of the SLC 2017 FSEIR, “the RWQCB is currently conducting its separate analysis [of alternatives] pursuant to Water Code section 13142.5, subdivision (b), in accordance with the Desalination Amendment.” *See* 2017 Final SEIR at 5-5. “Although Poseidon has not applied for any alternative site, the RWQCB, in coordination with the SWRCB and CCC, is reviewing alternative sites to the 2010 Project as part of its regulatory process.” *Id.* at 1-8; *see also* Figure 1-4. If the Regional Board, pursuant to California Water Code section 13142.5(b), determines that an alternative site would constitute the “best available site,” then the Regional Board can and should, pursuant to CEQA Guidelines section 15091(a)(2), require Poseidon to pursue such alternative site and conduct a separate CEQA analysis as to that site. Such an approach would be appropriate because the Regional Board has the exclusive jurisdiction over Water Code section 13142.5(b) determinations, which requires the regional water boards to determine “the best available site, design, technology, and mitigation measures feasible” for industrial installations using seawater for industrial processing. As discussed on page ES-4 of the 2017 Final SEIR, if the Regional Board identifies a site outside the PRC 1980.1 lease boundaries pursuant to its section 13142.5(b) determination, new or additional CEQA or CEQA-equivalent analysis would be required.

In addition, the CCC has exclusive jurisdiction to determine the Project’s compliance with the Coastal Act. Pursuant to the Coastal Act, prior to issuing a permit the CCC is required to make specific findings and recommendations regarding feasible alternatives. *See* 14 Cal. Code Regs. § 13057(c)(2). If the CCC identifies a site outside the PRC 1980.1 lease boundaries pursuant to its section 13057(c)(2) determination, new or additional CEQA or CEQA-equivalent analysis would be required.

3. *Subsurface Intakes Are Infeasible*

The CCC’s Independent Scientific Technical Advisory Panel (“ISTAP”) process, the most comprehensive, independent evaluation of the feasibility of subsurface seawater intake technologies ever conducted in California, demonstrated the infeasibility of subsurface intakes. The ISTAP analyzed nine different subsurface intake technologies and analyzed different project scales and concluded that subsurface intakes would not be feasible at the proposed site. The ISTAP determined that all but one alternative subsurface intake technologies were technically infeasible due to (a) local hydrologic conditions that would result in adverse impacts to the environment, such as moving contaminants seaward and damaging local wetlands; (b) performance risks; (c) decimating critical freshwater aquifers; (d) sensitivity to sea level rise; (e) poor geochemistry; and (f) constructability issues.

The ISTAP found the SIG to be potentially technically feasible, as stated in the 2017 Final SEIR, the ISTAP Phase 2 Report concluded “[t]he SIG option is not economically viable at the Huntington Beach location within a reasonable time frame, due to high capital costs and only modest reduction in annual operating costs compared to the open ocean intake option.” 2017 Final SEIR at 1-10. The ISTAP calculated the total project capital costs for open ocean intake (which includes 1 millimeter screens) would be between \$852-899 million, while the total capital costs for SIG technologies would be between \$1.94-2.3 billion. Thus, a SIG would cost almost \$1.5 billion more than the proposed HB Desalination Plant Project, increase the unit cost of desalinated water by nearly 80 percent, and may not be financeable. Furthermore, the ISTAP found the SIG would have “severe” environmental and social impacts during the up-to seven

year construction period, as well as long-term environmental impacts including the permanent loss of at least 23 acres of benthic habitat and marine life entrainment due to SIG operation and maintenance.

Additionally, the 2010 FSEIR also concluded that subsurface intakes would be technically infeasible and/or environmentally inferior. This conclusion was confirmed in an August 25, 2015 letter from the City's Attorney to ISTAP. The letter explained that "the certified [2010] FSEIR concluded that a SIG was both infeasible and an environmentally inferior option to the open ocean intake design." *See* Poseidon Resources, Lease Amendment Application, Appendix G1. Furthermore, in the 2012 NPDES Permit for the HB Desalination Plant, the Regional Board concluded that the facility "is utilizing the best available site, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life," also concluding that subsurface intakes would be infeasible. *See* Poseidon Resources (Surfside) LLC Huntington Beach Desalination Facility, Order No. R8-2012-0007, NPDES No. CA8000403, at 9.

F. The Project Incorporates State-of-the-Art Energy Efficiency and Environmental Impact Minimization Features

Poseidon is committed to powering, building, and operating the HB Desalination Plant Project in the most environmentally beneficial way possible, along with bringing significant economic benefits to the region and the State. The HB Desalination Plan will include comprehensive environmental protection and energy reduction measures, including:

- Zero greenhouse gas emissions from the operation of the reverse osmosis process used during desalination.
- Offsetting 100% of the facility's direct emissions from the unavoidable greenhouse gas production of the construction and operation of the HB Desalination Plant Project (i.e., from the transportation of goods and services).
- Solar panels installed on-site to the extent allowed by law.
- Purchase as much green power as allowed by law.
- Participate in any available direct access purchases of green power.
- Offsetting 100% of the indirect greenhouse gas emissions from the purchase of electricity, on a yearly basis, by purchase of Climate Action Reserve-compliant offsets or Renewable Energy Credits.
- Use the most energy efficient reverse osmosis membranes permitted by California regulatory agencies.
- Utilize the latest generation energy recovery devices that will reduce energy use by an estimated 146 million kilowatt-hours per year and therefore eliminate

42,000 metric tons of carbon emissions each year – a saving roughly equivalent to removing 9,000 passenger vehicles from the roads.

- LEED energy and water efficiency designs and procedures.
- Cost reductions associated with future advances in technology that reduces plant energy
- Project mitigation plan safeguarding the survival of the Bolsa Chica Wetlands by maintaining ocean inlet. California has lost 91% of its wetlands, and the 1,500 acre Bolsa Chica is among most important environmental resources managed by the SLC.
- Restoration of the Brownfield site adjacent to a Superfund site.

These measures will result in major reductions in greenhouse gas emissions, energy, and imported water, while providing significant benefits to nearby wetland resources.

G. Seawater Desalination Advances the Public Interest

Poseidon appreciates SLC staff's hard work preparing the Staff Report and findings, which provide the SLC with the information needed to approve the Lease Amendment. In addition to staff's reasoned analysis, we wanted to provide additional information about how the Lease Amendment advances the State's best interests and public trust needs and values.

The conversion of seawater to potable water and the provision of potable water is in the public interest and the State's best interests. In 1965, the California Legislature declared there is a "primary interest in the development of water desalination that could eliminate or supplement water supplies transported over long distances and provide a direct and easily managed water supply."¹² Seawater desalination is identified as water supply resource in the California State Water Plan with the benefit of expanding local water supply, improving overall supply reliability by diversifying resource portfolios and providing emergency supplies during drought periods and after extraordinary events. Seawater desalination is identified in Governor Brown's Water Action Plan as one strategy for providing regional water supply self-reliance.

The Desalination Amendment also supports the use of ocean water as a reliable supplement to traditional water supplies while protecting marine life and water quality. The California Ocean Plan now formally acknowledges seawater desalination as a beneficial use of the Pacific Ocean and the Desalination Amendment provides a uniform, consistent process for permitting of seawater desalination facilities statewide.

In 2010, the City balanced impacts against the perceived need for potable water, finding the need outweighed the potential impacts. Water is a significant societal and economic resource, and the Huntington Beach Desalination Plant will supply billions of gallons of drinking

¹² Cal. Dept. of Water Resources Letter to Cal. Coastal Com. regarding the Huntington Beach Desalination Project (Nov. 6, 2013), attached hereto as Exhibit 3.

water to citizens. As the California Department of Water Resources has recognized, the Huntington Beach Desalination Plant will advance the State's water supply reliability needs. Therefore, the Lease Amendment should be approved as in the public interest and the best interests of the State.

H. The SLC Should Certify the FSEIR, Which Satisfies CEQA's Requirements

Poseidon requests that the SLC certify the 2017 FSEIR as meeting CEQA's requirements. While Poseidon does not believe that any changes need to be made to the 2017 FSEIR, Poseidon would like to offer the following points of clarification regarding the following issues.

1. *Rotating Screens*

Poseidon has previously expressed concerns to SLC staff that rotating screens—identified as the Environmentally Superior Alternative in the 2017 FSEIR—are not commercially available today for open-ocean settings and therefore may be infeasible at the Project site. While Poseidon continues to believe that rotating screens do not offer significant environmental benefits compared to stationary screens, Poseidon is willing to accept the 2017 Final SEIR's conclusions and will endeavor to install active self-cleaning screens at the time of Project construction.

2. *Diffuser Entrainment Mortality*

Poseidon appreciates SLC staff's extremely conservative approach toward estimating diffuser entrainment mortality. However, Poseidon wishes to clarify that SLC staff's approach results in an estimate that reflects a *theoretical* worst-case scenario where 100% of organisms in 100% of the entrained dilution water are presumed to perish. As described in the attached memorandum from TWB Environmental Research and Consulting, Inc. (Exhibit 7), accepted scientific estimates assume that only approximately 23% of entrained water is exposed to potentially damaging turbulence. Organisms outside of the proportion of dilution flow that is not exposed to damaging levels of shear would not be subject to entrainment. Nevertheless, Poseidon is willing to accept the 2017 Final SEIR's requirement that Poseidon provide compensatory mitigation of the area of production foregone (APF) based on the SLC's theoretical worst-case entrainment mortality scenario conditioned upon a final determination of the APF calculation by the Santa Ana Regional Water Quality Control Board, which we anticipate to be much closer to the mortality guidance in the State Water Board's OPA/SED. The use of APF to mitigate for direct and indirect entrainment impacts is further described in the attached Dudek memorandum (Exhibit 8).

Poseidon also appreciates SLC staff's careful responses to comments expressing concerns regarding impacts to larval fishes originating from Marine Protected Areas ("MPA"). As described in the Tenera Environmental report attached as Appendix W to Poseidon's Lease Amendment application and subsequent materials prepared by HDR and Moffat & Nichol and submitted to SLC staff, the likelihood of larvae traveling from MPAs to the HB Desalination Plant Project diffuser location is extremely low (i.e., less than 1%), and less than 0.35% of the larvae originating from Bolsa Chica – the closest MPA to the HB Desalination Plant Project site

– are at risk of entrainment. Therefore, no adverse impacts to MPAs or MPA resources will occur from the operation of the HB Desalination Plant Project.

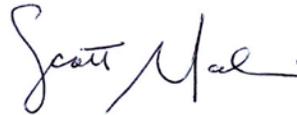
3. *Vibratory Pile Driving*

Poseidon appreciates the clarifications regarding vibratory pile driving impacts in the Final SEIR. As noted, vibratory pile driving is Poseidon’s preferred method of pile driving for construction, and the use of vibratory pile driving would result in less than significant impacts to marine mammals. It is estimated that approximately 10 piles may need to be installed, with each pile installation anticipated to take approximately 15 minutes and no more than 60 minutes. Pile driving, if necessary, is anticipated to be completed within a three-day period. As set forth in MM OWQ/MB-3a, Poseidon must use vibratory pile driving unless site-specific geotechnical studies show that vibratory pile driving cannot be used and impact pile driving is required. Thus, if impact pile driving is utilized at all, it will only be used in very limited circumstances and only after vibratory pile driving is determined infeasible using the procedures set forth by the SLC.

* * *

Poseidon appreciates SLC staff’s careful and continued consideration of the Lease Amendment and looks forward to the SLC’s hearing on the Project.

Sincerely,

A handwritten signature in black ink that reads "Scott Maloni". The signature is written in a cursive style with a large initial "S" and a long horizontal stroke at the end.

Scott Maloni
Vice President
Poseidon Resources (Surfside) LLC

Enclosures

cc: Kelly Huffman, Poseidon Water

EXHIBIT 1

DIRECTORS

PHILIP L. ANTHONY
DENIS R. BILODEAU, P.E.
SHAWN DEWANE
CATHY GREEN
DINA NGUYEN
VICENTE SARMIENTO
STEPHEN R. SHELDON
JAMES VANDERBILT
BRUCE WHITAKER
ROGER C. YOH, P.E.



ORANGE COUNTY WATER DISTRICT
ORANGE COUNTY'S GROUNDWATER AUTHORITY

OFFICERS

President
DENIS R. BILODEAU, P.E.

First Vice President
PHILIP L. ANTHONY

Second Vice President
SHAWN DEWANE

General Manager
MICHAEL R. MARKUS, P.E., D.WRE

September 08, 2017

The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

Subject: *Huntington Beach Desalination Plant*

Dear Chairman Newsom:

I'm writing to urge the State Lands Commission to approve the lease amendment from the proposed Huntington Beach Desalination Project ("Project").

Orange County Water District (OCWD; District) was formed in 1933 by a special act of the California State Legislature to protect Orange County's rights to water in the Santa Ana River, which provides the main source of water for the region's groundwater basin. The District manages the local groundwater basin that provides reliable, high quality groundwater to 19 city and retail water districts that serve 2.4 million customers in north and central Orange County.

The District's 2015 Groundwater Management Plan identifies the proposed Project as providing the District with up to 56,000 acre feet per year (50 MGD) of new supply. The District's interest in seawater desalination and specifically the Project is not a new development and predates the most recent drought. On March 17, 2010, the District signed a Memorandum of Understanding (MOU) with Poseidon Resources for the consideration of the purchase of water from the proposed desalination Project. On July 24, 2013, the District's Board of Directors voted to evaluate the financial feasibility of purchasing the full 56,000 acre feet per year capacity of drinking water that will be produced by Poseidon's proposed Project, and on May 14, 2015 the District's Board of Directors voted to approve a Water Reliability Agreement Term Sheet for the purchase of 50 million gallons per day of drinking water from the proposed project. The Term Sheet was approved by the Board after numerous public meetings and review and amendments to the Term Sheet were proposed by a 30-member Citizens Advisory Committee.

The Term Sheet provides the overall deal points and structure of how OCWD and Poseidon can implement the Project. The Term Sheet will act as a guide towards the development of an actual water purchase agreement. The Term Sheet calls for Poseidon Resources to permit, finance, construct and operate the treatment plant. OCWD will be responsible for purchasing the water and for permitting, financing, constructing and operating the necessary system to distribute the water to the local Orange County water community.

As part of the planning process, the District has been considering a variety of water conveyance and utilization options that OCWD might implement once it purchases the desalinated water from the Project. At this time, OCWD has not reached any conclusions or made any decisions regarding how desalinated could be used by the District and distributed to the local water community, so no specific conveyance and utilization option has been formally selected.

A water purchase agreement between Poseidon and OCWD will not be finalized and considered until after the Project has received all of its required state permitting approvals, including those from the California State Lands Commission, Santa Ana Regional Water Quality Control Board and California Coastal Commission. OCWD continues to monitor the permitting process for these three state agencies. The District is sensitive to the approval conditions that may be placed upon the Project and their potential to increase the cost of the water.

The attached pie charts illustrate the current and potential future projected sources of water supplies to meet demand within the District's service territory. OCWD has a policy and a history of providing reliable high quality water supplies in cost effective and environmentally responsible manners. The Ground Water Replenishment System, soon to be possibly expanded to 134,000 acre-feet per year of water reuse, is a great example of our approach to moving away from climate driven supplies. The Huntington Beach Project's 56,000 acre feet per year capacity could be the next logical step for us to meet our policy goals. The Huntington Beach Desalination Project is the single largest source of new, local drinking water supply available to the region. In addition to offsetting imported water demand, water from the Project could provide flexibility in how the District manages the groundwater basin, specifically the desalinated water could be used to augment supplies we inject into our Talbert Seawater Barrier to help prevent seawater intrusion into the groundwater basin.

It is the District's mission to provide the cities and retail water districts it serves with a reliable, adequate, high-quality water supply at the lowest reasonable cost in an environmentally responsible manner. The Huntington Beach Desalination Project provides the District and Orange County with a unique opportunity to add a large quantity of locally controlled, drought-proof water to our supply portfolio.

The District appreciates your support for the Project and the District's efforts to enhance regional water supply self-reliance by reducing the need to import water from Northern California and the Colorado River.

Sincerely,



Michael R. Markus, P.E., D.WRE, BCEE, F.ASCE
General Manager

Attachments: Presentation



Orange County Water District

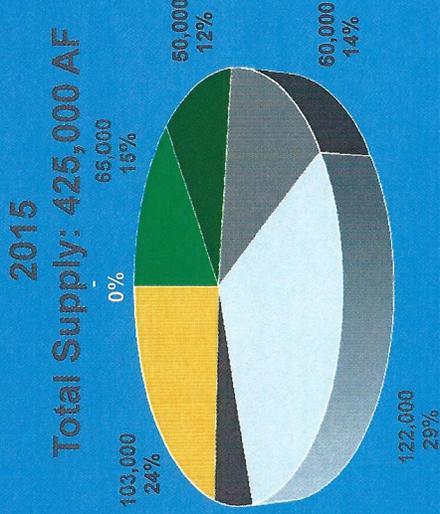
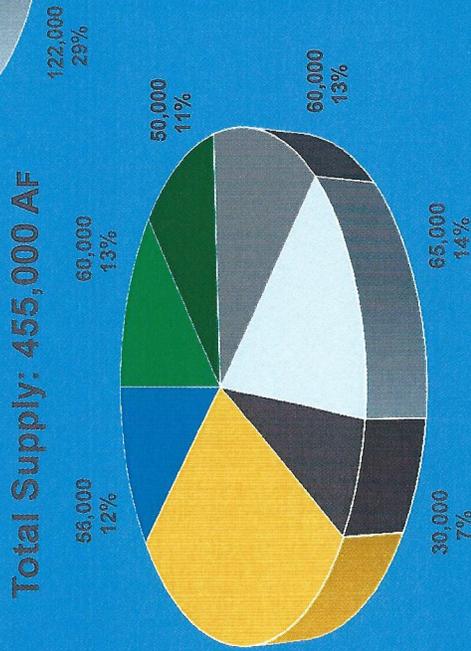
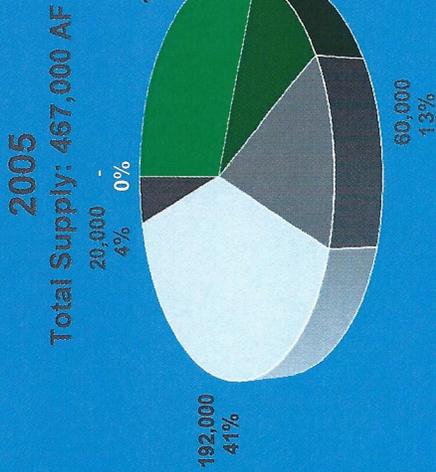
OCWD's mission is to provide a reliable, high quality water supply in a cost-effective and environmentally responsible manner.

OCWD takes the limited water supply found in nature and supplements it to provide water for 2.4 million people in Orange County, California

- Manages the groundwater basin for 19 cities and retail water agencies)
- Leadership in water purification and potable reuse - turning recycled water into drinking water - has been recognized worldwide. The Groundwater Replenishment System (GWRS) is the largest facility of its kind in the world
- Ocean Desalination may be the next step in OCWD's commitment to providing a reliable and sustainable water supply to Orange County



Increasing Orange County's Water Supply Reliability through Supply Diversification with Poseidon Project



- Santa Anna River*
- *OCWD rights to 34,000 AF
- Santa Anna Storm Flows
- Incidental Basin Recharge
- Miscellaneous
- Metropolitan Water District
- HB Desalination
- OCWD GWRS



OCWD Supply Sources – Moving away from climate driven supplies With Poseidon Project

Supply sources	Percentage of supply
2005	
– River Flows and Incidental Recharge	55%
– Imported Water	41%
– Recycled and other	4%
2015	
– River Flows and Incidental Recharge	41%
– Imported Water	29%
– Recycled and other	30%
2023	
– River Flows and Incidental Recharge	37%
– Imported Water	14%
– Recycled and other	37%
– HB Desalination	12%



Historical OCWD Groundwater Basin Overdraft

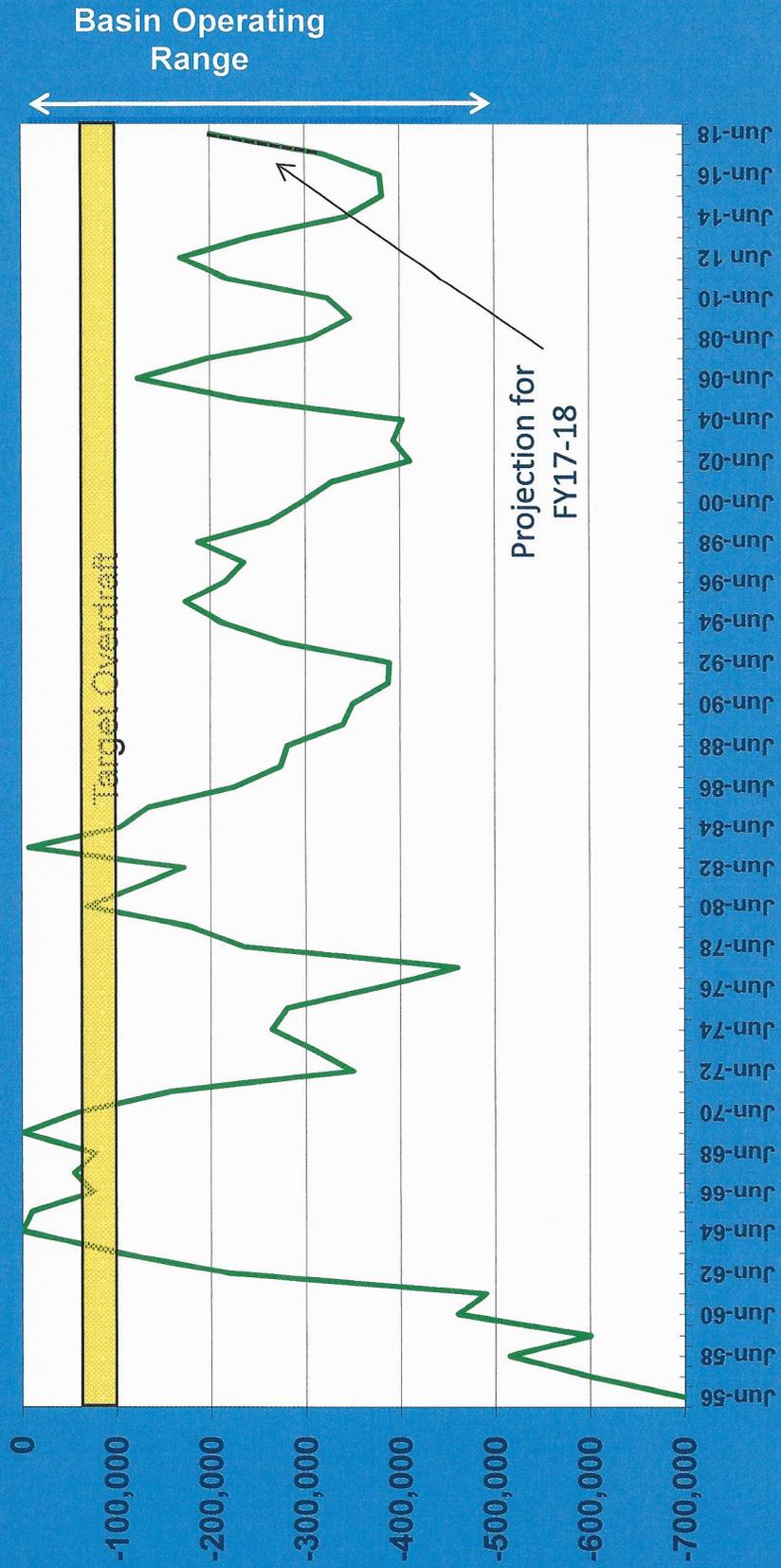


EXHIBIT 2



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Office of the General Manager

October 2, 2017

The Honorable Gavin Newsom
Lieutenant Governor of California
Chair
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Dear Mr. Newsom:

Support for the Huntington Beach Seawater Desalination Project

The purpose of this letter is to express The Metropolitan Water District of Southern California's (Metropolitan) support for the Huntington Beach Seawater Desalination Project. The project will serve retail customers located within the Municipal Water District of Orange County (MWDOC) and the Orange County Water District (OCWD). Both agencies are within Metropolitan's service area.

In partnership with local water agencies such as MWDOC and OCWD, Metropolitan is a statewide leader in implementing water conservation programs and progressive water resources such as wastewater recycling and groundwater recovery. Metropolitan has invested more than \$1.3 billion in conservation programs and local resources, and our member agencies have invested many billions more. Metropolitan's recent accomplishments include funding the replacement of almost 150 million square feet of turf with water-efficient landscapes, nearly tripling the Governor's drought response goal of 50 million square feet for all of California. Likewise, OCWD's environmental stewardship is exemplified by its pioneering Groundwater Replenishment System (GWRS), which treats 100 million gallons of wastewater a day for indirect potable reuse.

Metropolitan promotes the development of local recycling, groundwater recovery and seawater desalination projects with financial incentives through our long-standing Local Resources Program (LRP). The LRP reduces financial barriers to local projects that are more expensive than Metropolitan's imported supplies. Projects receiving LRP incentives, such as the GWRS, have produced over 3.2 million acre-feet of local supplies since Metropolitan initiated the program in 1982. Proponents of the Huntington Beach Seawater Desalination Project have submitted an application for participation in the LRP. The application would be eligible for consideration by Metropolitan's Board after the project is fully permitted and ready to proceed.

The severity of the State's recent drought, the extended dry period on the Colorado River, and the projected long-term impacts of climate change underscore the need for continued diversification of Southern California's water resource portfolio. Metropolitan's long-term Integrated Water Resources Plan (IRP) achieves diversification with an "all of the above" approach. This includes

Lieutenant Governor Newsom

Page 2

October 2, 2017

maintaining Colorado River Aqueduct supplies and restoring the reliability of the State Water Project, while also developing local climate-resilient resources such as seawater desalination. Metropolitan's IRP establishes a regional goal of 2.4 million acre-feet in annual production from local supplies by the year 2040. This is a significant increase above production levels seen in recent years, which is closer to 1.8 million acre-feet. Over the same time horizon, local planning agencies project Metropolitan's service area to grow by more than three million people. New projects such as the Huntington Beach Seawater Desalination Project help increase local supplies and reduce Southern California's reliance on imported water supplies to meet expected future demands.

For these reasons, Metropolitan supports the development of local projects such as the Huntington Beach Seawater Desalination Project to help sustain our region's 19 million people and trillion dollar economy.

Please contact Robert Harding at (213) 217-6582 or via email at bharding@mwadh2o.com if you have any questions.

Very truly yours,



Jeffrey Kightlinger
General Manager

WAT:vsm

Lieutenant Governor Newsom

Page 3

October 2, 2017

cc: Mr. Robert J. Hunter
General Manager
Municipal Water District of Orange County
18700 Ward Street
Fountain Valley, California 92708

Mr. Michael R. Markus, P.E., D.WRE, BCEE, F.ASCE
General Manager
Orange County Water District
18700 Ward Street
Fountain Valley, California 92708

Mr. Scott Maloni
Vice President
Poseidon Water
5780 Fleet Street, Suite 140
Carlsbad, CA 92008

Ms. Jennifer Lucchesi
Executive Officer
100 Howe Avenue, Suite 100-South
California State Lands Commission
Sacramento, CA 95825

EXHIBIT 3

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

**NOV 06 2013**

Ms. Mary K. Shallenberger, Chair
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, California 94105-2219

Huntington Beach Desalination Project

Dear Ms. Shallenberger:

On behalf of the California Department of Water Resources, I am writing to address the proposed Huntington Beach water desalination project, sponsored by Poseidon Water, on the agenda of the November 13, 2013 meeting of the California Coastal Commission. I would like to stress the importance of water desalination to meet the water resources needs of our state.

While some regions through water conservation have been able to serve growing population and economies with little or no increases in water deliveries, the sources of water supply have become more vulnerable to drought and environmental constraints. Because of the stresses on imported water supplies, the California Water Plan updates have been putting increased emphasis on local and regional supplies. Regions must rely upon a portfolio of options to meet supply and reliability needs. The Huntington Beach project can be especially important for the South Coast region.

In 1965, the Legislature declared that there is a primary interest in the development of water desalination that could eliminate or supplement water supplies transported over long distances and provide a direct and easily managed water supply. As stated in the draft California Water Plan Update 2013, the State recognizes that water desalination is an important water supply alternative and, where economically, socially and environmentally appropriate, should be part of a balanced water supply portfolio, which includes other alternatives such as water conservation and water recycling. Within this framework, the approval of Coastal Development Permits for the Huntington Beach project would advance state water supply reliability needs.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark W. Cowin".

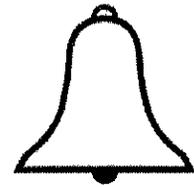
bw Mark W. Cowin
Director

EXHIBIT 4

BOARD OF DIRECTORS

SAUNDRA F. JACOBS BETTY H. OLSON, PH.D.
CHARLES GIBSON JUSTIN McCUSKER
CHARLEY WILSON

DANIEL R. FERONS
GENERAL MANAGER



Santa Margarita Water District

October 18, 2013

RECEIVED

Ms. Mary K. Shallenberger, Chairwoman
California Coastal Commission
45 Fremont Street
San Francisco, CA 94105-2219

OCT 25 2013

CALIFORNIA
COASTAL COMMISSION

Re: Santa Margarita Water District (SMWD) SUPPORTS the HB Desalination Project

Dear Chairwoman Shallenberger:

The Santa Margarita Water District (SMWD) strongly supports development of new water resources in Orange County including the proposed seawater desalination facility in Huntington Beach. SMWD is one of approximately twenty public water agencies and municipalities comprising a working group collaborating with Poseidon Water on the purchase of water from this proposed facility. SMWD currently has a letter of intent (enclosed) to purchase to 5,000 acre-feet of water annually from the facility with an option for an additional 5,000 acre-feet.

With few local water sources in south Orange County, SMWD relies almost entirely on imported water from the Bay-Delta and the Colorado River. Despite success with water recycling and urban return flow reuse – which helps meet irrigation demands – the District still needs to import about 85% of the water needed to serve our customers. We are very aware that both imported water sources are precariously subject to disruption. Continued drought or a natural disaster would be catastrophic to us and our customers. Additionally, water reliability studies done for South Orange County conclude that a shut-down of the County's primary imported water treatment plant (Diemer) would leave our water district in very short supply.

As a public water supplier, SMWD is prudently taking the necessary steps to diversify its supply options, increase water use efficiency and enhance reliability in order to avoid the impacts from a prolonged loss of our primary water supply. The responsible development of desalination projects like Huntington Beach benefits not only Orange County but all of California by reducing the demand that is placed on our current, fragile sources.

The Santa Margarita Water District urges you and your colleagues to act immediately to approve the coastal development permit (CDP) for the Huntington Beach project. Local approvals and permits have long-since been obtained. The CDP is the final permit necessary to allow this project to move forward. Given the reduced water supply conditions across the state and the dismal forecast for more of the same we cannot afford to delay this project any longer.

26111 Antonio Parkway, Rancho Santa Margarita, CA 92688 • Mailing - P.O. Box 7005, Mission Viejo, CA 92690-7005

Web: www.SMWD.com

Customer Service (949) 459-6420 • Administration (949) 459-6507 • Operations (949) 459-6551

Ms. Schallenberger
Page 2

Bringing closure to the Coastal Commission's review of the project will enable SMWD to consider water purchase agreement negotiations with Poseidon for this important and increasingly critical component of the State's water supply network.

Sincerely,



Saundra F. Jacobs
President, Board of Directors
Santa Margarita Water District

Enclosure

Coastal Commission staff has received a copy of this communication

cc: Mr. Steve Kinsey, Vice Chair, California Coastal Commission
Ms. Danya Bocheo, Commissioner, California Coastal Commission
Mr. Brian Brennan, Commissioner, California Coastal Commission
Mr. Greg Cox, Commissioner, California Coastal Commission
Dr. Robert Garcia, Commissioner, California Coastal Commission
Ms. Carole Groom, Commissioner, California Coastal Commission
Ms. Martha McClure, Commissioner, California Coastal Commission
Ms. Wendy Mitchell, Commissioner, California Coastal Commission
Mr. Mark Vargas, Commissioner, California Coastal Commission
Ms. Jana Zimmer, Commissioner, California Coastal Commission
The Hon. Jerry Brown, Governor, State of California
The Hon. Darrell Steinberg, State Senate Pro Tem, State of California
The Hon. John Perez, Speaker of the Assembly, State of California
Ms. Janelle Beland, Undersecretary, Natural Resources Agency
Mr. Charles Lester, Executive Director, California Coastal Commission
Mr. Tom Luster, Environmental Scientist, California Coastal Commission

EXHIBIT 5



Street Address:
18700 Ward Street
Fountain Valley, California 92708

Mailing Address:
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Fountain Valley, CA 92728-0895

(714) 963-3058
Fax: (714) 964-9389
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Wayne S. Osborne
President
Brett R. Barbre
Vice President

Larry D. Dick
Director

Joan C. Finnegan
Director

Susan Hinman
Director

Sat Tamaribuchi
Director

Jeffery M. Thomas
Director

Robert J. Hunter
General Manager

MEMBER AGENCIES

City of Brea
City of Buena Park
East Orange County Water District
El Toro Water District
Emerald Bay Service District
City of Fountain Valley
City of Garden Grove
Golden State Water Co.
City of Huntington Beach
Irvine Ranch Water District
Laguna Beach County Water District
City of La Habra
City of La Palma
Mesa Water District
Moulton Niguel Water District
City of Newport Beach
City of Orange
Orange County Water District
City of San Clemente
City of San Juan Capistrano
Santa Margarita Water District
City of Seal Beach
Serrano Water District
South Coast Water District
Trabuco Canyon Water District
City of Tustin
City of Westminster
Yorba Linda Water District

July 7, 2016

Via e-mail: Kurt.Berchtold@waterboards.ca.gov

Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside, CA 92501

Dear Mr. Berchtold:

I am writing regarding the Santa Ana Regional Water Quality Control Board's ("Regional Board") consideration of the proposed Huntington Beach Desalination Project.

The Municipal Water District of Orange County ("MWDOC") is the County's wholesale water supplier and resource planning agency. MWDOC covers all of Orange County with the exception of Anaheim, Fullerton and Santa Ana, serving imported water to about 2.4 million residents. Our efforts focus on sound planning and appropriate investments in water supply development, water use efficiency, public information, legislative advocacy, water education, and emergency preparedness. We are committed to providing a reliable supply of high quality water for Orange County. Working closely with the Metropolitan Water District of Southern California (MET) and our 28 Member Agencies, MWDOC looks for opportunities to improve Orange County's water resources and reliability.

On May 6, 2015, the State Water Resources Control Board ("State Water Board") adopted Amendments to the Water Quality Control Plan for Ocean Waters of California Addressing Desalination Facility Intakes, Brine Discharges, and Incorporating Other Non-substantive Changes (the "Desalination Amendment"). The Desalination Amendment took effect as new regulation on January 28, 2016.

Chapter III.M.2b.(2) of the Desalination Amendment states, "*Consider whether the identified need for desalinated water is consistent with an applicable adopted urban water management plan prepared in accordance with Water Code section 10631, or if no urban water management plan is available, other water planning documents such as a county general plan or integrated regional water management plan.*"

Mr. Kurt Berchtold
Page 2
July 7, 2016

In May 2016, MWDOC adopted its 2015 Urban Water Management Plan (“UWMP”) Update. The UWMP Update finds that MWDOC’s service area total direct and indirect demands in FY 2014-2015 were 499,120 AF, which was met by approximately 225,000 acre feet (45%) of imported water. Under normal conditions, total direct and indirect water demands are projected to increase to 515,425 AF by the year 2040 with Orange County still relying on imported water for over 200,000 AF per year without the development of NEW supplies (this assumes large investments in water use efficiency continue and that OCWD’s Groundwater Replenishment System is expanded to 130,000 acre-feet per year).

MWDOC’s UWMP Section 7.3 “*Planned Water Supply Projects and Programs*” identifies the proposed 50 MGD Huntington Beach Desalination Project as one of a number of projects that could help meet future projected demands as well as reduce the County’s demand on imported water. The Huntington Beach Desalination Project was also included as one of a number of potential water supply projects in our recent Orange County Water Reliability Study (just now circulating as a draft report). The purpose of the Reliability Study was (1) to evaluate the reliability of imported supplies in the absence of new water investments in Southern California and then (2) to test the improvements made by NEW supply projects that could be implemented. The Reliability Study found that without the California WaterFix and without any NEW supply projects, Orange County would have shortages in 8 of 10 years. Even with completion of the California WaterFix, additional water supply projects by MET, the MET Member Agencies or projects developed within Orange County are needed for Orange County to be fully reliable out to the year 2040.

In this regard, the proposed 50 MGD Huntington Beach Desalination Project appears to comply with Chapter III.M.2b.(2) of the Desalination Amendment.

If you have any questions about MWDOC’s UWMP 2015 Update or our recently completed Reliability Study, please feel free to contact me.

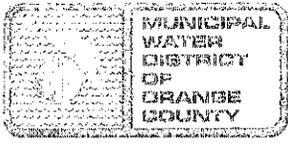
Sincerely,



Robert J. Hunter
General Manager

cc: MWDOC Board
Scott Maloni, Poseidon Water

EXHIBIT 6



RECEIVED
OCT 17 2013
CALIFORNIA
COASTAL COMMISSION

Street Address:
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October 14, 2013

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President

Jeffery M. Thomas
Vice President

Brett R. Barbre
Director

Larry D. Dick
Director

Wayne A. Clark
Director

Susan Hinman
Director

Wayne Osborne
Director

Robert J. Hunter
General Manager

Ms. Mary K. Shallenberger
Chair
California Coastal Commission
45 Fremont Street
San Francisco, CA 94105-2219

Re: Huntington Beach Seawater Desalination Facility – APPROVE PERMIT

****Coastal Commission staff has received a copy of this communication****

Dear Chair Shallenberger:

The Municipal Water District of Orange County (“MWDOC”) supports approval by the California Coastal Commission of the Coastal Development Permit (“CDP”) for the Huntington Beach Seawater Desalination Facility (“Facility”).

MWDOC is the County’s water resources planning agency and the wholesale provider of imported water to twenty-eight retail water suppliers serving more than 2.3 million residents in its 600 square-mile service area. In 2011 MWDOC adopted its 2010 Regional Urban Water Management Plan (“RUWMP”) which is required to meet state mandates for water supply and demand planning. The RUWMP includes a number of important findings relative to the need for further local resource projects, and includes the Facility as one of the projects to help meet future demands. The RUWMP points out that water demand in the MWDOC service area has increased approximately 70 percent since 1970. Over the next 25 years, regional water demand for municipal and industrial use is projected to continue to grow even with the fact that Orange County is on track to be in compliance with SBx7-7’s, per capita urban water use reduction of 20% by 2020. In the absence of further developing new local water supply projects, the Orange County region will need to continue to import approximately 45% of its supply to meet demand in 2035.

It is widely understood that both of Orange County’s imported sources of water – the Sacramento San Joaquin Bay Delta supplying the State Water Project and the Colorado River – are suffering a number of challenges that can potentially jeopardize the ability of those resources to provide a reliable supply of water in the future. Currently, as a result of regulatory restrictions and below average precipitation, the Department of Water Resources is keeping the State Water Project Contractors Table A Allocation at a relatively low 35%; providing significantly less State Project water than the average of 60%. In addition, the Colorado River Basin is mired in a long-term drought, with Lake Mead and Lake Powell currently reporting 47% of the storage capacity and dropping. Based on a recent announcement by U.S. Bureau of Reclamation, conditions are not improving; for the first time releases from Lake Powell to Lake Mead are being reduced as a result of lower than expected Colorado River runoff.

MEMBER AGENCIES

- City of Brea
- City of Buena Park
- East Orange County Water District
- El Toro Water District
- Emerald Bay Service District
- City of Fountain Valley
- City of Garden Grove
- Golden State Water Co.
- City of Huntington Beach
- Irvine Ranch Water District
- Laguna Beach County Water District
- City of La Habra
- City of La Palma
- Mesa Water District
- Moulton Niguel Water District
- City of Newport Beach
- City of Orange
- Orange County Water District
- City of San Clemente
- City of San Juan Capistrano
- Santa Margarita Water District
- City of Seal Beach
- Serrano Water District
- South Coast Water District
- Trabuco Canyon Water District
- City of Tustin
- City of Westminster
- Yorba Linda Water District

We find that the proposed Facility is part of our 2010 RUWMP to reduce our demand of imported water, thereby strengthening our reliability and helping to meet our goal of diversifying our water supply portfolio. Given the growth projected for the Orange County region over the next 25 years and the water demand that has been determined for that growth, should the Facility not be constructed, MWDOC would need to continue to rely on imported water.

To that end, MWDOC's RUWMP identifies seawater desalination as a vital component of its plan to diversify the County's water supply with a new local source. Section 7.4 of MWDOC's 2010 RUWMP states:

To accommodate long-term population and economic growth in Southern California, and to protect against uncertainty and more extreme variability in natural water supply, as well as development and depletion of water resources outside of Southern California, continuing regional and local efforts in water resource management and supply development will be necessary. Application of desalination technology is increasingly being recognized as one important supply component to develop new sustainable water supplies and to bolster water system reliability. Overall supply shortage risks from drought, regulatory constraints on existing supplies and emergency outages can be lessened with a diversified and disaggregated water supply portfolio that incorporates appropriate desalination projects.

RUWMP Section 7.4.2 goes on to state:

Given the increasing challenges associated with the delivery of water through San Francisco Bay/Sacramento-San Joaquin River Delta (Bay-Delta), State Water Project (SWP) supplies will remain as supplemental supplies for Southern California. Thus, any new local supply development that reduces the demand for imported supplies will result in a net reduction in SWP supplies or other supplies from Northern California.

The following projects, if developed, could result in a total net reduction in Metropolitan imported water deliveries to the Orange County.

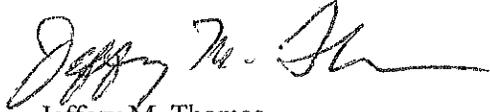
Huntington Beach Seawater Desalination Project – Poseidon Resources (Surfside) LLC (Poseidon), a private company, is developing the Huntington Beach Seawater Desalination Project to be located adjacent to the AES Power Plant in the City of Huntington Beach along Pacific Coast Highway and Newland Street. The proposed project would produce up to 50 MGD (56,000 AFY) of drinking water and will distribute water to coastal and south Orange County to provide approximately 8% of Orange County's water supply needs.

In conclusion, MWDOC believes that the Huntington Beach Desalination Facility complies with Coastal Act requirements and encompasses all the same environmental protections as the Carlsbad desalination project previously approved by the

Ms. Mary K. Shallenberger
California Coastal Commission
Page 3

Commission after a lengthy review. Seawater desalination in general and the Huntington Beach facility in particular, are essential elements of the County's future water supply plans. We respectfully ask the Coastal Commission to approve the Huntington Beach Desalination Facility's CDP without delay.

Sincerely,



Jeffery M. Thomas
Vice President

cc:

MWDOC General Manager Robert J. Hunter
Mr. Steve Kinsey, Vice Chair, California Coastal Commission
Ms. Danya Bochco, Commissioner, California Coastal Commission
Mr. Brian Brennan, Commissioner, California Coastal Commission
Mr. Robert Garcia, Commissioner, California Coastal Commission
Ms. Carole Groom, Commissioner, California Coastal Commission
Ms. Martha McClure, Commissioner, California Coastal Commission
Ms. Wendy Mitchell, Commissioner, California Coastal Commission
Mr. Mark Vargas, Commissioner, California Coastal Commission
Ms. Jana Zimmer, Commissioner, California Coastal Commission
The Hon. Jerry Brown, Governor, State of California
The Hon. Darrell Steinberg, State Senate Pro Tem, State of California
The Hon. John Perez, Speaker of the Assembly, State of California
Ms. Janelle Beland, Natural Resources Agency
Mr. Charles Lester, Executive Director, California Coastal Commission
Mr. Tom Luster, Environmental Scientist, California Coastal Commission
Mr. Scott Maloni, Poseidon Water

EXHIBIT 7



Environmental
Research and
Consulting

October 11, 2017

Scott Maloni
Poseidon Water
17011 Beach Boulevard, Suite 900
Carlsbad, CA 92008

Re: [Technical Memorandum: Clarification of Diffuser-Related Shear Terminology](#)

Dear Scott,

I am pleased to submit this memorandum (memo) which provides clarification of the terminology used in describing the concept of diffuser-related shear mortality. Specifically, this memo responds to the discussion of diffuser-related mortality in the Final Supplemental Environmental Impact Report for the Huntington Beach Desalination Plant. In addition, previous documents that are now part of the administrative record also have differing descriptions for the concept of diffuser-related shear. The objective of this memo, therefore, is to ensure that all involved parties are using the same language and share the same fundamental understanding of how mortality in a diffuser jet is described.

Sincerely,

A handwritten signature in blue ink that reads "Timothy W. Hogan". The signature is written in a cursive, flowing style.

Timothy W. Hogan
TWB Environmental Research and Consulting, Inc.

Descriptions of Lethal Shear from Brine Diffusers

SED Description of Lethal Shear

Diffuser-related shear mortality is described in the Substitute Environmental Documentation (SED) for the State Water Resources Control Board's amendment to the Water Quality Control Plan for the Ocean Waters of California ("Ocean Plan") to address effects associated with the construction and operation of seawater desalination facilities ("Desalination Amendment") as follows: *Some brine discharges may cause shear-related mortality. Shear stress is the measure of friction or force from the discharge on an organism in the path of the discharge. At certain velocities, the shear stress can be lethal to marine life.*

As part of the SED, the State Water Resources Control Board's Expert Review Panel (ERP) analyzed in detail how to estimate the percent of the total entrained flow that is subject to lethal levels of shear (Foster et al. 2013). Their analysis included the following statements.

- Page iii of Appendix 1 to Foster et al. 2013: *23-38% of the entrained water is exposed to potentially damaging turbulence.*
- Page 1 of Appendix 1 to Foster et al. 2013: *the regions of high shear are confined to the rising portions of the jet; the descending portions are lower shear.*
- Page 2 of Appendix 1 to Foster et al. 2013: *The regions of the flow most likely to result in shear-induced impacts on larvae are the rising portion of the jet up to the terminal rise height.*

Figure 1 illustrates where lethal shear is most likely to be present in a diffuser jet.

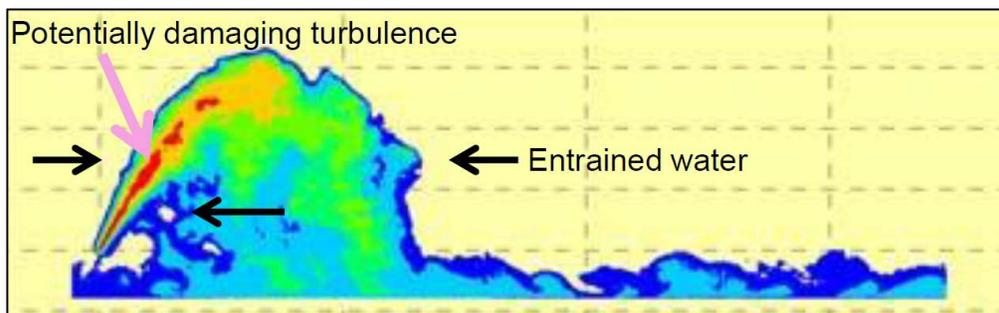


Figure 1. Location of potentially damaging turbulence in a diffuser jet. Image from Phil Roberts' PowerPoint Presentation at the Workshop: Uncommon Dialogue: Marine and Coastal Impacts of Desalination in California (Monterey, CA, Jan 14-15, 2016):
http://waterinthewest.stanford.edu/sites/default/files/related_documents/Philip%20Roberts.pdf

Appendix F1 (Dr. Raimondi) Description of Lethal Shear

Dr. Peter Raimondi, under contract to the California State Lands Commission (SLC), prepared a peer review memo assessing the operational impacts of the Huntington Beach Desalination Plant (HBDP) on marine biological resources. Dr. Raimondi states: *I've made no assumptions about the mortality rate for organisms entrained as part of discharge of water through diffusers and give estimates across a range of values (e.g. APF is calculated for mortality rates ranging from 0 -100%, Figure 1)* (emphasis added).

The reference to mortality rates in Dr. Raimondi's memo implies that there is variation in the mortality/survival of organisms exposed to lethal shear, which is not the case. The guiding assumption is that any organisms exposed to the proportion of the entrained dilution water that has lethal levels of shear will experience 100% mortality. The use of "*mortality rate*" in the underlined text from Appendix F1 would comport better with the descriptions in the SED and Foster et al. (2013) if it read "*proportion of the entrained dilution flow that has lethal levels of shear*".

FSEIR Description of Lethal Shear

Part II of the Final Supplemental Environmental Impact Report (FSEIR) states: *Diffuser entrainment analysis considers a worst-case scenario of 100 percent mortality associated with diffuser shear for CEQA impact determination not the 23 percent mortality relied on in the Draft Supplemental EIR* (emphasis added). This statement implies that the mortality rate varies, which is not the case. Mortality is assumed to be 100% for those organisms contained in the proportion of dilution flow that is exposed to lethal levels of shear.

Part III of the FSEIR states: *the CSLC is using a conservative assumption that larvae in 100 percent of the total entrained volume of diffuser dilution water would be killed by exposure to lethal turbulence* (emphasis added). This statement is correct and is consistent with the descriptions in the SED and Foster et al. (2013).

Conclusion

Ensuring use of consistent language and concepts when discussing diffuser-related mortality is critical to the accurate advancement of this new regulatory concept. In order to foster accurate discussion of this complex topic, I suggest that the descriptive language provided in Part III of the FSEIR be adopted as the proper definition for assessing diffuser-related shear. This language is consistent with the accepted descriptions provided in the SED and the ERP report (Foster et al. 2013). Therefore, various "*mortality rates*" should no longer be referred to. Instead, when discussing diffuser-related mortality, we should continue to refer to the "*proportion of the entrained dilution flow that has lethal levels of shear*" with the



understanding that “*lethal*” implies that mortality is assumed to be 100% in that proportion of flow.

References

Foster, M.S., G.M. Cailliet, J. Callaway, K. Mean Vetter, P. Raimondi, and P.J.W. Roberts. 2013. Desalination Entrainment Impacts and Mitigation. Final report submitted to MarielaPaz Carpio-Obeso, Ocean Standards Unit, State Water Resources Control Board (SWRCB) in fulfillment of SWRCB Contract No. 11-074-270, Work Order SJSURF 11-11-019.

EXHIBIT 8

FINAL SEIR – INFORMATION ON SPECIAL STATUS SPECIES AND AREA OF PRODUCTION FOREGONE

To: Scott Maloni, Poseidon Water
From: Joe Monaco, Dudek
Austin Melcher, Dudek
Subject: Information on Special Status Species and APF
Date: October 16, 2017

The Final Supplemental Environmental Impact Report (Final SEIR) released by California State Lands Commission (Commission) concludes that impacts to special status species would be less than significant as a result of the Lease Modification Project (See Section 4.1, Ocean Water Quality and Marine Biological Resources, OWQ/MB-7: Impact to Special Status Species Populations of Diffuser Operation). Based on currently available information for aquatic and marine special status species known to occur along the Orange County coast,¹ we agree with the Commission that there is a low likelihood of special status species presence near the Lease Modification Project's diffuser. Therefore, the Lease Modification Project would not reduce special status species populations to below self-sustaining levels because:

- Some of the considered special status species are terrestrial or freshwater taxa (which are habitats that do not occur near the proposed diffuser) or do not include life stages susceptible to lethal shearing-force induced entrainment from the proposed diffuser. This does not include the Giant Sea Bass, Black Abalone, Green Abalone, and Tidewater Goby which are considered further below.
- The diffuser is not located in or in proximity to a Marine Protected Area (MPA), Area of Special Biological Significance (ASBS), or other sensitive habitat².

¹ Based on the identification methodology specified in the Final Staff Report Including the Final Substitute Environmental Documentation (SED) for the Amendment to the Water Quality Control Plan for Ocean Waters of California Addressing Desalination Facility Intakes, Brine Discharges, And The Incorporation Of Other Non-Substantive Changes (Desalination Amendment) and listed in Appendix F1 of the FSEIR these species are the green sea turtle (*Chelonia mydas*), western tidalfat tiger beetle (*Cicindela gabbii*), western pond turtle (*Emys marmorata*), Tidewater Goby (*Eucyclogobius newberryi*), mimic tyronia, the Giant Sea Bass (*Stereolepisgigas*), and black abalone (*Haliotis cracherodii*).

² As identified in the SED for the Desalination Amendment.

- Overall the Giant Sea Bass population has been increasing, but due to the absence of Giant Sea Bass habitat near the proposed diffuser and sampling performed near the proposed diffuser location Giant Sea Bass presence is very rare.
- The proposed diffuser is not near (over 17 miles) Black Abalone critical habitat, no Black Abalone were found in recent sampling near the HBGS, and there is an absence of Black Abalone suitable habitat near the proposed diffuser.
- The lack of suitable adult habitat, the short planktonic larval stage, and limited dispersion of green abalone larvae suggest that there is a low likelihood that larvae would be transported to the diffuser site.
- The proposed diffuser resides in a stretch of California coastline where Tidewater Goby is naturally absent, no Tidewater Goby have been recorded during surveys offshore near the diffuser, and the nearest occurrences are in streams and rivers over 15 miles away.

The Final SEIR also would apply mitigation for diffuser entrainment through the use of Empirical Transport Model (ETM) and Area of Production Forgone (APF) calculations (see MM OWQ/MB-7: Develop and Implement A Diffuser-Operation Marine Life Mitigation Plan). The use of APF as a mitigation measure is an accepted practice that would ensure the appropriate area of habitat would be created or restored to compensate for the biological productivity of lost marine life due to entrainment. The Final SEIR further elaborates that APF “considers and compensates for all direct and indirect entrainment impacts to all organisms in the affected source water body” including “species that were not directly measured in sampling and evaluated in modeling, such as special status species.”

The use of APF and its benefit to a community of organisms is further supported by the SED for the Desalination Amendment, which states that “the average APF for a small subset of species (e.g., 15–20 species) is characteristic of the much larger community, even a community comprised of thousands of different types of organisms” (SED, p. 81). The use of APF is supported by the State Water Resource Control Board in the SED for the Desalination Amendment based on the recommendations of an expert panel that found that ETM/APF:

- Has historically been used in California to determine mitigation for entrainment at power plants and is widely accepted in the scientific community,
- Compensates for all entrained species and not just commercially valuable fish taxa,
- Requires less life history data for species compared to other methods (e.g., Adult Equivalent Loss and Fecundity Hindcasting),
- Utilizes representative species that can be used as proxy species for rare, threatened, or endangered species, which may be challenging to acquire adequate data for. The creation or

restoration of habitat benefits all species in the food web regardless of whether or not they were assessed in the ETM/APF model.

Therefore, there is evidence to support the use of APF mitigation to effectively assess and compensate for effects on all forms of marine life resulting from diffuser entrainment. In addition, based on Dudek's independent review and analysis of this same issue, we believe that this approach and conclusions are an accurate analysis of potential environmental impacts on marine life. In this manner, the implementation of APF mitigation would ensure that special status species populations would not fall below self-sustaining levels due to the HBDF diffuser.

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United States Senate

September 28, 2017

The Honorable Gavin Newsom
Chairman
California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, California 95825



Dear Chairman Newsom:

I am writing to you to express my support for the proposed 50 million gallon per day (MGD) Huntington Beach Desalination Project, which Poseidon Resources is seeking to construct and operate in order to provide potable water to meet documented demand within Orange County. As you know, the facility would be located on about 13 acres of the approximately 58-acre site now occupied by the Huntington Beach Generating Station and would also include the construction of a water storage reservoir and water delivery pipeline.

Similar to Poseidon's Carlsbad Desalination Project approved by the State Lands Commission in 2007, the Huntington Beach facility would significantly enhance regional water supply reliability, but require less than half the seawater intake. This project would further diversify Orange County's water supplies, expanding upon the 100 MGD produced by Orange County Water District's Groundwater Replenishment System and reducing demand on climate-dependent imported water. In addition, the project will create more than 3,000 jobs and infuse \$500 million into the economy during its 35-month construction and start-up period, and an additional 400 permanent direct and indirect jobs according to Poseidon Resources.

While the water supply and other benefits of this project are clear, my support is conditioned upon its development in an environmentally safe manner that is consistent with the California Water Code Section 13142.5(b) and State Water Resources Control Board's Desalination Amendment to the Water Quality Control Plan for the Ocean Waters of California. As outlined in the amendment, the proposed plant must "use the best available, site, design, technology, and

mitigation measures feasible to minimize intake and mortality of all forms of marine life.” Since the State Lands Commission first approved the project in 2010, it is my understanding that Poseidon has proposed three modifications to its Huntington Beach Desalination Plant design in order to comply with the Board’s requirements. Specifically, Poseidon proposed:

- adding 1mm wedge wire screens covering the intake pipe to prevent marine life from entering the pipe;
- decreasing the speed of seawater flow through the screens to 0.5 feet/second or less in order to prevent marine life from being impinged against the screen; and,
- adding a multi-port brine diffuser to reduce brine discharge salinity where it is deposited back in to the ocean.

In addition, to mitigate for any unavoidable impacts to fish larva smaller than 1 mm, Poseidon has proposed for the operating life of the desalination facility to maintain the ocean inlet of Bolsa Chica, the 1,500-acre coastal estuary that is the largest saltwater marsh between Monterey Bay and the Tijuana River Estuary.

Given our state’s ongoing water supply challenges, it is important for federal, state and local agencies to work together to pursue an “all of the above” strategy that includes desalination as well as the expansion of surface and groundwater storage, conservation, recycling and water transfers. I hope you and your colleagues will support efforts to diversify California’s water supplies and continue to foster the development of seawater desalination by granting approval to this project.

Thank you for your time and consideration of my views.

Sincerely,

A handwritten signature in blue ink that reads "Dianne Feinstein". The signature is fluid and cursive, with the first name "Dianne" being larger and more prominent than the last name "Feinstein".

Dianne Feinstein
United States Senator

DF:jw/bk

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FAX (916) 319-2172

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Assembly California Legislature



TRAVIS ALLEN
ASSEMBLYMAN, SEVENTY-SECOND DISTRICT

COMMITTEES
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DEVELOPMENT, AND THE ECONOMY
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STATE ADMINISTRATION
BUDGET SUBCOMMITTEE NO. 6 ON
BUDGET PROCESS OVERSIGHT AND
PROGRAM EVALUATION
NATURAL RESOURCES
REVENUE AND TAXATION

July 13, 2017

The Honorable Gavin Newsom
Lieutenant Governor/Chair
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202



RE: Huntington Beach Seawater Desalination Project Supplemental EIR & Land Lease Agreement - SUPPORT

Dear Lieutenant Governor Newsom:

I am writing to request that the State Lands Commission (SLC) certify the Supplemental Environmental Impact Report (SEIR) for the Huntington Beach Seawater Desalination Project and approve the amended land lease agreement with Poseidon Water, when the Commission takes up these items on October 19, 2017.

In the seven years since the SLC certified the project's Environmental Impact Report and approved a land lease with Poseidon Water, technological enhancements have resulted in design modifications that will make the proposed desalination facility more environmentally protective and operationally efficient. The facility would be able to produce 50 million gallons of potable water each day using 30 percent less ocean water, while the addition of special screening on the intake and a brine diffuser on the outfall would offer greater protection for marine life and better control of salinity levels and water quality, respectively.

The Huntington Beach Seawater Desalination Project is supported by the City of Huntington Beach, the Orange County Water District and local retail water districts throughout the county, the Orange County Board of Supervisors, members of the Orange County State and Federal Legislative Delegations, Orange County-based community, business and taxpayer organizations, and countless residents, businesses, and others. The depth and diversity of support for the project is based upon a prevailing belief that Orange County should invest in the development of a new, locally-controlled and drought-proof supply of water, in addition to continuing with its water recycling, groundwater recharge, and conservation efforts, among others.

There is also strong support because the development of the facility would generate millions of dollars per year in property tax revenue, hundreds of thousands of dollars per year in sales taxes, several hundred millions of dollars in construction-related economic activity, the creation of

The Honorable Gavin Newsom

July 13, 2017

Page 2

3,000 construction jobs, and the creation of many direct and indirect full-time jobs once the facility begins operation.

This project offers significant and multiple public benefits to Huntington Beach and all of Orange County and I believe it should continue to be supported by the State Lands Commission through its certification of the SEIR and approval of the amended land lease agreement. There is strong public support in Orange County for the Huntington Beach Seawater Desalination Project. Please join us by voting favorably for this project.

Sincerely,



TRAVIS ALLEN

Assemblyman, 72nd District

cc: Commissioner/State Controller Betty Yee
Commissioner/Finance Director Michael Cohen
Jennifer Lucchesi, Executive Officer, State Lands Commission
Alexandra Borack, Project Manager, State Lands Commission
Governor Jerry Brown
Assembly Speaker Anthony Rendon
Senate President Pro Tem Kevin De Leon
U.S. Representative Dana Rohrabacher
State Senator Patricia Bates
State Senator Tony Mendoza
State Senator John Moorlach
State Senator Josh Newman
State Senator Janet Nguyen
State Assemblyman Bill Brough
State Assemblyman Phillip Chen
State Assemblyman Steven Choi
State Assemblyman Tom Daly
State Assemblyman Matt Harper
State Assemblywoman Sharon Quirk-Silva

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California State Senate

SENATOR
PATRICIA C. BATES
THIRTY-SIXTH SENATE DISTRICT



COMMITTEES
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ENVIRONMENTAL QUALITY
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AND HOUSING
JOINT LEGISLATIVE BUDGET
JOINT LEGISLATIVE COMMITTEE
ON EMERGENCY MANAGEMENT
LEGISLATIVE ETHICS

July 20, 2017

The Honorable Gavin Newsom
California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, California 95825-8202



RE: Support for Huntington Beach Desalination Project Supplemental EIR and Land Lease Approval

Dear Lieutenant Governor Newsom,

As a strong supporter of making Southern California more water independent, I am writing to urge the State Lands Commission to certify at its October 19th meeting the Supplemental Environmental Impact Report (SEIR) and approve the land lease agreement for the proposed Huntington Beach Seawater Desalination Project.

While I understand the need for the Commission to evaluate proposed changes to the project's design since the Environmental Impact Report (EIR) and land lease were approved in 2010, the changes that are the focus of the current SEIR serve to make the project more environmentally protective. The addition of 1 mm wedgewire screening on the new intake pipeline and a brine diffuser on the outfall would be beneficial additions that would help to facilitate a healthy marine ecosystem.

The fact remains that the design, development and operation of the Huntington Beach Seawater Desalination Project would be done with environmental protection and resource conservation at the forefront. This was the case when the State Lands Commission certified the EIR in 2010 and it remains the case as it considers the SEIR and land lease amendment in 2017. No changes have been proposed that would warrant anything but certification of the SEIR and approval of the land lease agreement.

Further, when the Commission certified the project EIR in 2010, it found that use of ocean water and public lands for the purpose of providing a safe, clean drinking water supply complied with the spirit and intent of the Common Law doctrine of the Public Trust.

Water reliability remains critically important to Orange County. The proposed seawater desalination project represents a new, locally developed and managed supply that would benefit the county's three million residents, support its economy and environment, and help maintain its quality of life. The ability to locally produce 50 million gallons per day of potable water will help Orange County remain strong should it ever experience disruptions to its traditional water supplies.

The Honorable Gavin Newsom
July 20, 2017
Page two

I respectfully urge the State Lands Commission to ratify the SEIR and approve the proposed land lease amendment with Poseidon Water.

Sincerely,



PATRICIA C. BATES
Senate Republican Leader
California State Senate, 36th District

cc:

Commissioner/State Controller Betty Yee
Commissioner/Finance Director Michael Cohen
Jennifer Lucchesi, Executive Officer, State Lands Commission
Alexandra Borack, Project Manager, State Lands Commission
Governor Jerry Brown
Assembly Speaker Anthony Rendon
Senate President Pro Tem Kevin De Leon
U.S. Representative Dana Rohrabacher
State Senator Tony Mendoza
State Senator John Moorlach
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State Assemblyman Travis Allen
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State Assemblyman Phillip Chen
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California State Senate



SENATOR
JOHN M. W. MOORLACH
THIRTY-SEVENTH SENATE DISTRICT

COMMITTEES
JUDICIARY
VICE CHAIR
BUDGET & FISCAL REVIEW
GOVERNANCE & FINANCE

June 30, 2017



The Honorable Gavin Newsom
Chair
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

RE: Huntington Beach Seawater Desalination Project Supplemental EIR & Land Lease Agreement - SUPPORT

Dear Chair Newsom,

I am requesting that the State Lands Commission certify the Supplemental Environmental Impact Report (SEIR) for the Huntington Beach Seawater Desalination Project and approve the land lease agreement with Poseidon Water when this item comes before it on August 17, 2017.

The Commission previously certified the project Environmental Impact Report in 2010 along with a land lease agreement. The project design modifications that were studied for the current SEIR, including the 1mm wedgewire screening on the intake and a brine diffuser on the outfall, will provide greater coastal protection and is environmentally superior to what was proposed and then certified by the Commission almost seven years ago.

Orange County has been working for some time toward greater water reliability and sustainability with investments in recycling, groundwater recharge, conservation, storm water capture, and other projects. The addition of seawater desalination to the local water supply portfolio would provide a significant new public benefit that would further enhance local reliability. It would provide 50 million gallons per day of high-quality, drought-proof potable water that would support Orange County's 3.1 million residents and the business, manufacturing, tourism and hospitality sectors, among others, that help generate jobs and revenue that keeps the economy strong.

I support Poseidon Water's efforts to make seawater desalination a component in the overall water portfolio of Orange County's future. I believe it will prove to be a prudent financial investment as we deal with imported water costs, competition for that water, and seismic risks to our state water system that all continue to rise. I encourage the State Lands Commission to certify the SEIR and approve the land lease with Poseidon Water to facilitate this necessary project moving forward.

Sincerely,



John M.W. Moorlach
State Senator, 37th District

cc:

Commissioner/State Controller Betty Yee
Commissioner/Finance Director Michael Cohen
Jennifer Lucchesi, Executive Officer, State Lands Commission
Alexandra Borack, Project Manager, State Lands Commission
Governor Jerry Brown
Assembly Speaker Anthony Rendon
Senate President Pro Tem Kevin De Leon
U.S. Representative Dana Rohrabacher
State Senator Patricia Bates
State Senator Tony Mendoza
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California State Senate

SENATOR
JOSH NEWMAN
TWENTY-NINTH SENATE DISTRICT



COMMITTEES

VETERANS AFFAIRS
CHAIR
BUSINESS, PROFESSIONS &
ECONOMIC DEVELOPMENT
HEALTH
HUMAN SERVICES
INSURANCE, BANKING, AND
FINANCIAL INSTITUTIONS

September 19, 2017

The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202



Dear Lt. Governor Newsom:

I am writing you in reference to the proposed desalination project currently sited for Huntington Beach, and to urge the State Lands Commission to consider the Project's Draft Supplemental Environmental Impact Report, as well as the amended lease agreement when the Commission takes these items up for review.

The lessons learned from the state's recent historic period of sustained drought are clear: California cannot confront climate change without acknowledging the likelihood of perpetual cycles of drought and its ramifications-- on our environment, the economy, public health, public safety, and the lives of all Californians. As the representative of California's 29th Senate District, which includes portions of Los Angeles, Orange, and San Bernardino counties, it's my belief that a balanced and diversified water supply portfolio is essential to enhancing regional water supply self-reliance in the Southern California region.

The most recent draft of the California State Water Plan identifies conservation, wastewater recycling, storm water capture, and ocean and brackish water desalination as necessary and important tools for holistically meeting current and future water demands. These resources and plans need to be developed on a community by community basis to ensure we have safe and reliable drinking water supplies in close proximity to population centers.

The Huntington Beach Desalination Project's potential for 50 million gallons per day of locally controlled, drought-proof drinking water has been identified in the Orange County Water District's Groundwater Management Plan as an important water supply element, capable of serving 400,000 Southern California residents. Such new supply would reduce the current need to import water from Northern California through the environmentally constrained Bay Delta as part of soundly managing Orange County's groundwater basin.

As you know, according to current plans, the Huntington Beach Desalination Project would be 100% carbon-neutral and endeavors to comply with all state environmental regulations through the pioneering of a new ocean water screening technology that is intended to minimize potential impact to fish eggs and marine life. It is vitally important that the environmental impact of any new water technology or program be minimized, and I'm encouraged that those involved with the project have worked hard to address environmental impacts, and are committed to continuing to do so moving forward. Additionally, the facility will be built by local union

labor, ensuring that the hundreds of millions of dollars in private investment for the project will benefit local working families and, in turn, provide a significant economic benefit for the region.

With proper environmental safeguards in place, the proposed Huntington Beach Project would offer a clear public benefit as one of many necessary tools employed to ensure we can meet the demand for water now and in the future. I appreciate your thoughtful consideration and prospective support.

Sincerely,

A handwritten signature in black ink, appearing to read "Josh Newman", with a long horizontal flourish extending to the right.

JOSH NEWMAN
Senator, 29th Senate District

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ASM.CA.GOV/QUIRK-SILVA

Assembly California Legislature



SHARON QUIRK-SILVA

CHAIR: COMMITTEE ON JOBS, ECONOMIC DEVELOPMENT, AND THE ECONOMY
ASSEMBLYMEMBER, SIXTY-FIFTH DISTRICT

COMMITTEES
CHAIR: JOBS, ECONOMIC
DEVELOPMENT, AND THE
ECONOMY
ACCOUNTABILITY AND
ADMINISTRATIVE REVIEW
HEALTH
HIGHER EDUCATION
VETERANS AFFAIRS

October 12, 2017

The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202



Dear Lt. Governor Newsom:

I am writing you to express my support for the proposed desalination project currently sited for Huntington Beach that will provide an additional source of reliable water to the Orange County region. I urge the State Lands Commission to consider the Project's Draft Supplemental Environmental Impact Report, as well as the amended lease agreement when the Commission takes these items up for review.

The state's recent historic drought are clear: California will likely continue to face perpetual cycles of drought and its ramifications on our environment, the economy, public health, public safety, and the lives of all Californians will continue to hinge on our ability to find new ways to mitigate the negative impact that extended droughts can cause.

As the representative of California's 65th Assembly District, I believe we need to have a diversified and balanced water supply portfolio if we are to continue to meet our regional water supply goals in the future.

The most recent draft of the California State Water Plan identifies desalination as one of the important tools that will allow us to meet California's water demands. The ability to develop the desalination project will ensure we have safe and reliable drinking water supplies in close proximity to population centers.

As state and local water conservation and habitat restoration efforts continue, it is important to acknowledge that we will still need to make sure those water supplies are available locally when needed. The Huntington Beach Desalination Project will provide for 50 million gallons per day of locally controlled, drought-proof drinking water capable of serving 400,000 Southern California residents. The new supply would reduce the current need to import water from Northern California through the environmentally constrained Bay Delta as part of soundly managing Orange County's groundwater basin.

Protecting the environment is very important, for this reason, environmental impacts of any new water technology or program need to be minimized. The Huntington Beach Desalination Project will be 100% carbon-neutral and will comply with all state environmental regulations through the pioneering of a new technologies intended to minimize potential impact to marine life.



I am hopeful that the State Lands Commission will see the work that has been previously done to ensure the Huntington Beach Desalination Plan is cost-effective, environmentally sensitive, and that it will also provide safe and reliable water supplies to Orange County. Additionally, the project will create many jobs during its construction that will create a significant economic benefit for the region.

Access to reliable sources of water has always been an important part of life in the Orange County and it will be even more important in the future. With this in mind, I respectfully ask that you consider supporting the Huntington Beach Desalination Pan.

Sincerely,



ASSEMBLYMEMBER SHARON QUIRK-SILVA
California State Assembly, 65th District

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The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

June 5, 2017

RE: SUPPORT for Huntington Beach Desalination Project SEIR Certification and Land Lease Approval

Dear Chairman Newsom,

I am writing you to urge the State Lands Commission to certify the Draft Supplemental Environmental Impact Report and approve the amended lease agreement for the proposed Huntington Beach Desalination Project at its regularly scheduled August 17, 2017 meeting.

It has been almost seven years since the SLC first approved the Huntington Beach Desalination Project and found that use of ocean water and public lands for the purposes of providing a safe, clean drinking water supply complied with the spirit and intent of the Common Law doctrine of the Public Trust. As grateful as we all are for the wet winter we had this year, we know based on California's increasingly arid climate, that these types of wet years will be fewer and further between. Desalination is a growing and necessary part of California's water portfolio. Projects must be done in an environmentally sensitive and economically feasible way.

With the new one millimeter screens, the lower seawater intake volume and the brine diffuser, the project is unquestionably environmentally superior to the project you approved in 2010. The Orange County Taxpayers Association (OCTax) respectfully invites your attention to the project's tax benefits.

The facility will generate millions of dollars per year in property tax, which will support schools, municipal services, special districts, libraries and environmental protections. It will also generate hundreds of thousands of dollars per year in sales and local taxes.

The private developer will spend several hundred million dollars for construction, creating 3,000 taxpaying jobs. Once in operation, it will create dozens of high-paying direct and indirect full-time jobs. Jobs and tax revenue are critical to California's economic growth and vibrancy.

It will be a reliable source of 50 million gallons per day of potable water. It will hedge against economic consequences of drought or other possible disruption to our water supply.

It will be operated for the benefit of the public by the taxpaying private sector. Private investors accept most of the risk and pay the bills.

OCTax first testified in support of this project in 2003. More than a decade later, the project is needed more than ever. Please grant the lease and certify the SEIR to allow it to move forward to its next regulatory step.

For more information on OCTax's position on the Huntington Beach Desalination Project lease see the May 13, 2017 opinion piece published by the *Orange County Register*

Sincerely,



Carolyn Cavecche
President
Orange County Taxpayers Association

Enclosure: **The Value of Water Independence**
Orange County Register, May 13, 2017

DESALINATION

The value of water independence

By Carolyn Cavecche

Twenty years ago, the elected officials who served on the boards of the Orange County Sanitation District and Orange County Water District had a visionary idea to recycle treated wastewater to drinking water standards and percolate that water into our underground aquifer where it could eventually be used again for drinking water.

The project — which would be known as the Groundwater Replenishment System — was not without opposition, much of it surrounding the cost of the project and the water it would produce. I served on the OCSB board at the time in my position as a councilmember in the city of Orange and I took my position of fiscal responsibility seriously. Being fiscally responsible means forecasting not just the value of the project in today's dollars, but the value of building infrastructure for future generations.

Admittedly, when GWRS came online in 2008, the cost of the water it produced was more expensive than the alternative of buying imported water from the Metropolitan Water District of Southern California. However, as imported water continued to increase in cost over the past decade, the GWRS water became less expensive and we now have local reliability at a lower cost.

Today, Orange County is considering the same investment with seawater desalination, and there is a value to building a project that will provide

drought-proof, reliable, high-quality drinking water.

In Carlsbad, Poseidon Water built a 50 million gallon per day seawater desalination plant for \$1 billion in private financing. The Carlsbad Desalination Plant has produced and delivered over 20 billion gallons of drinking water since December 2015 at a cost of approximately \$.007 (just over half-a-penny) per gallon. The public-private partnership project delivery method allowed for the San Diego County Water Authority to develop new, capital-intensive public-serving infrastructure without incurring debt or negatively affecting bond ratings. Successful delivery of the project without significant impact to water rates or debt burden was a factor that led to improvement in the San Diego County Water Authority's credit rating. On the flip side, because the price of desalinated water was determined prior to construction of the plant, public water agency customers have a greater certainty in projecting long-term water rates. In contrast, since 1978, the cost of water imported into Southern California by the Metropolitan Water District of Southern California has escalated annually by average of 6.4 percent.

The San Diego ratepayers only pay for that water if it is produced at the quality and quantity specified in Poseidon's contract with the San Diego County Water Authority. While it is slightly more expensive than imported water today, by 2025 — after 10 years of operation —

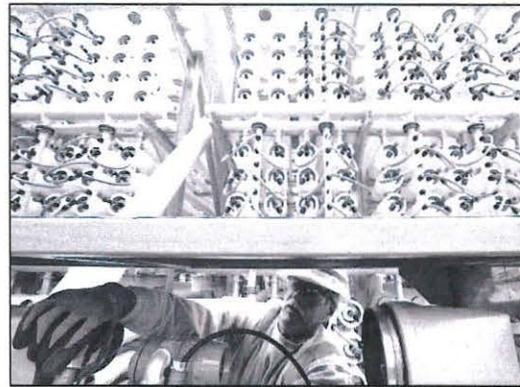


PHOTO: GREGORY BULL — THE ASSOCIATED PRESS

In a Wednesday, March 11, 2015 photo, a worker adjusts equipment among some of the 2000 pressure vessels that are used to convert seawater into fresh water through reverse osmosis in the western hemisphere's largest desalination plant, in Carlsbad, Calif.

that water is expected to be less expensive than treated imported water.

In addition to providing an affordable new local water supply, the project would create more than 300 on-site jobs over its three-year construction process and nearly 10 times that amount in indirect jobs. The project would also provide tens of millions of dollars in tax revenue to the city of Huntington Beach and the county of Orange. At a time when companies are fleeing California, we need to embrace companies willing to invest in quality infrastructure projects that benefit us all.

As the CEO and president

of the Orange County Taxpayers Association, I will be looking closely at the final water purchase agreement between Poseidon Water and the Orange County Water District to ensure the protection of the ratepayers. But — as with GWRS — it is critical to understand the difference between cost and value. And there is a significant value to Orange County becoming more water independent and less susceptible to California's "boom and bust" climate that is prone to long-term droughts.

Carolyn Cavecche is CEO and president of the Orange County Taxpayers Association.

cc:

Commissioner/State Controller Betty Yee
Commissioner / Finance Director Michael Cohen
Ms. Jennifer Lucchesi, Executive Officer, State Lands Commission
Governor Jerry Brown
Assembly Speaker Anthony Rendon
Senate President Pro Tem Kevin De Leon
U.S. Congressional Representative Dana Rohrabacher
State Senator John Moorlach
State Senator Janet Nguyen
State Senator Pat Bates
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State Assemblyman Travis Allen
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State Assemblyman Steven Choi
State Assemblyman Tom Daly
State Assemblyman Bill Brough

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



October 16, 2017

Ms. Jennifer Lucchesi
Executive Officer, California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA, 95825

Dear Ms. Lucchesi:

I am writing regarding the State Lands Commission's upcoming consideration of the Huntington Beach Desalination Project (Project).

California's Water Action Plan was developed to improve water supply reliability and create a more resilient, sustainably managed system that can better withstand inevitable and unforeseen pressures in the coming decades.

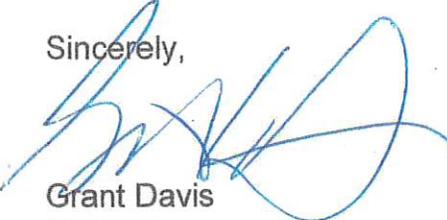
In the future, most new water will come from a combination of sources including conservation, recycling and desalination. Diversified regional water portfolios will relieve pressures on foundational supplies and make communities more resilient against drought, flood and climate change and prepare those communities for continued growth.

When economically and environmentally appropriate, desalination can reduce a region's reliability on imported supplies and better secure a region's water supplies.

Desalination is an important piece of California's overall strategy to meet current and future water supply demands. However, any desalination project needs to be designed in a way to also be protective of marine life and water quality.

The Department of Water Resources respectfully requests the Commission keep in mind the critical role desalination can have in improving water supply reliability and its environmental impacts when considering this Project.

Sincerely,



Grant Davis
Director

cc: (See attached list.)

The Honorable Lt. Governor Gavin Newsom
Chairman, California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA, 95825

California State Controller Betty Yee
300 Capitol Mall, Suite 1850
Sacramento, California 95814

Director Michael Cohen
California Department of Finance
915 L Street, Suite 1000
Sacramento, California 95814



William C. Velásquez Institute

August 12, 2017

The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

RE: SUPPORT for Huntington Beach Desalination Project SEIR Certification and Land Lease Approval

Dear Chairman Newsom,

The 50 million gallons a day (50MGD) of local drought proof water the Huntington Beach (HB) plant would produce has been identified by the Orange County Water District (OCWD) as the single largest source of new local water available to the District. Given climate change (referenced in the DSEIR), Orange County's (OC) dependence on imported water and growing population we believe it is essential that State Lands approve the DSEIR and extend Poseidon's lease at your upcoming October meeting.

Investments in climate change adaptation infrastructure, like the HB desalination plant, are critical for ensuring continuity in OC's quality of life. As a Latino community member/advocate this is especially important for our community which will soon be a majority in California. Latinos enthusiastically support desalination and other social investments like housing and schools because we see them as investments in our futures!

State Lands approval of the DSEIR and Land Lease for the Huntington Beach Desalination Plant would be a significant step in ensuring the quality of life for or community. By approving the Huntington Beach Desalination Plant, you are ensuring that OC Latinos will have reliable water for generations to come.

Sincerely,

Eloise Gomez



MICHAEL GRANT CONSTRUCTION SERVICES, INC.

15581 Product Lane, C16, Huntington Beach, CA 92649

Lic. B634946~PH: 714 891-9443~FAX: 714 891-9436

June 20, 2017

The Honorable Gavin Newsom
Chair
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

RE: SUPPORT for Huntington Beach Seawater Desalination Project Supplemental EIR; Land Lease Agreement

Dear Chair Newsom,

As a longtime Huntington Beach resident and business owner, I want to express my support for the Huntington Beach Seawater Desalination Project and request that the State Lands Commission certify the project's Supplemental Environmental Impact Report (SEIR) and approve the land lease agreement with Poseidon Water at its meeting on August 17, 2017.

The Huntington Beach Seawater Desalination Project is an opportunity for Orange County to reduce its dependence on imported water and diversify its local water supply portfolio, while creating jobs and contributing to economic growth.

Orange County is about 50 percent dependent on water, imported from hundreds of miles away, to meet its current demand. Having an additional, local water supply source would not only reduce that dependence but also offer residents, businesses, and investors greater certainty that Orange County could manage a prolonged disruption in imported water deliveries, an extended statewide drought, or some other water shortage situation. A significant loss of water combined with extreme water rationing would handicap our county economy, threaten local jobs and businesses, compromise quality of life and the environment, and more. The seawater desalination project would provide a reliable, local, drought-proof water source and a buffer for Orange County against losses of imported water.

As the owner of a Huntington Beach based construction firm, I understand how reliable water is critical to a community and its economy, as well as to businesses and investors who decide if, when, and where to build. I also understand that the seawater desalination project would bring opportunity to thousands of skilled men and women in the building and construction trades. The project would create thousands of construction-related jobs to support their livelihoods, over the course of its development, as well as support numerous direct and indirect jobs after the facility goes online. These jobs would generate local revenue, plus the project, itself, would

MICHAEL GRANT CONSTRUCTION SERVICES, INC.

15581 Product Lane, C16, Huntington Beach, CA 92649

Lic. B634946~PH: 714 891-9443~FAX: 714 891-9436

generate hundreds of thousands of dollars per year in sales and local taxes that would support community services and local investment.

Finally, I support the Huntington Beach Seawater Desalination Project because it continues to balance economic and water supply benefits with environmental protection. Having one-millimeter wedgewire screening on the intake pipeline to protect fish and larvae and a brine diffuser on the outfall pipeline to better control salinity levels makes this an environmentally superior project that surpasses protections that the State Lands Commission had deemed appropriate when it certified the project EIR in 2010. Now that the Huntington Beach marine ecosystem will be afforded even greater protection, I believe it makes State Lands Commission certification of the SEIR not only easier but necessary.

I would respectfully ask the Commission to certify the DSEIR and approve the land lease with Poseidon Water.

Sincerely,

Michael Grant

cc:

Commissioner/State Controller Betty Yee
Commissioner / Finance Director Michael Cohen
Ms. Jennifer Lucchesi, Executive Officer, State Lands Commission
Alexandra Borack, Project Manager, State Lands Commission
Governor Jerry Brown
Assembly Speaker Anthony Rendon
Senate President Pro Tem Kevin De Leon
U.S. Representative Dana Rohrabacher
State Senator Patricia Bates
State Senator Tony Mendoza
State Senator John Moorlach
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State Senator Janet Nguyen
State Assemblyman Travis Allen
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State Assemblyman Steven Choi
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State Assemblyman Matt Harper
State Assemblywoman Sharon Quirk-Silva



William C. Velásquez Institute

August 12, 2017

The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

RE: SUPPORT for Huntington Beach Desalination Project SEIR Certification and Land Lease Approval

Dear Chairman Newsom,

The 50 million gallons a day (50MGD) of local drought proof water the Huntington Beach (HB) plant would produce has been identified by the Orange County Water District (OCWD) as the single largest source of new local water available to the District. Given climate change (referenced in the DSEIR), Orange County's (OC) dependence on imported water and growing population we believe it is essential that State Lands approve the DSEIR and extend Poseidon's lease at your upcoming October meeting.

Investments in climate change adaptation infrastructure, like the HB desalination plant, are critical for ensuring continuity in OC's quality of life. As a Latino community member/advocate this is especially important for our community which will soon be a majority in California. Latinos enthusiastically support desalination and other social investments like housing and schools because we see them as investments in our futures!

State Lands approval of the DSEIR and Land Lease for the Huntington Beach Desalination Plant would be a significant step in ensuring the quality of life for our community. By approving the Huntington Beach Desalination Plant, you are ensuring that OC Latinos will have reliable water for generations to come.

Sincerely,

Juliano A. Jarquin, MHA, SPHR, CPC
Founder/President
The Human Element Passage
South Gate, CA 90280
714-345-3451 (Mobile)
Juliano.Jarquin@gmail.com



DIRECTORS

PHILIP L. ANTHONY
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ORANGE COUNTY WATER DISTRICT
ORANGE COUNTY'S GROUNDWATER AUTHORITY

OFFICERS

President
DENIS R. BILODEAU, P.E.

First Vice President
PHILIP L. ANTHONY

Second Vice President
SHAWN DEWANE

General Manager
MICHAEL R. MARKUS, P.E., D.WRE

September 08, 2017

The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202



Subject: *Huntington Beach Desalination Plant*

Dear Chairman Newsom:

I'm writing to urge the State Lands Commission to approve the lease amendment from the proposed Huntington Beach Desalination Project ("Project").

Orange County Water District (OCWD; District) was formed in 1933 by a special act of the California State Legislature to protect Orange County's rights to water in the Santa Ana River, which provides the main source of water for the region's groundwater basin. The District manages the local groundwater basin that provides reliable, high quality groundwater to 19 city and retail water districts that serve 2.4 million customers in north and central Orange County.

The District's 2015 Groundwater Management Plan identifies the proposed Project as providing the District with up to 56,000 acre feet per year (50 MGD) of new supply. The District's interest in seawater desalination and specifically the Project is not a new development and predates the most recent drought. On March 17, 2010, the District signed a Memorandum of Understanding (MOU) with Poseidon Resources for the consideration of the purchase of water from the proposed desalination Project. On July 24, 2013, the District's Board of Directors voted to evaluate the financial feasibility of purchasing the full 56,000 acre feet per year capacity of drinking water that will be produced by Poseidon's proposed Project, and on May 14, 2015 the District's Board of Directors voted to approve a Water Reliability Agreement Term Sheet for the purchase of 50 million gallons per day of drinking water from the proposed project. The Term Sheet was approved by the Board after numerous public meetings and review and amendments to the Term Sheet were proposed by a 30-member Citizens Advisory Committee.

The Term Sheet provides the overall deal points and structure of how OCWD and Poseidon can implement the Project. The Term Sheet will act as a guide towards the development of an actual water purchase agreement. The Term Sheet calls for Poseidon Resources to permit, finance, construct and operate the treatment plant. OCWD will be responsible for purchasing the water and for permitting, financing, constructing and operating the necessary system to distribute the water to the local Orange County water community.

As part of the planning process, the District has been considering a variety of water conveyance and utilization options that OCWD might implement once it purchases the desalinated water from the Project. At this time, OCWD has not reached any conclusions or made any decisions regarding how desalinated could be used by the District and distributed to the local water community, so no specific conveyance and utilization option has been formally selected.

A water purchase agreement between Poseidon and OCWD will not be finalized and considered until after the Project has received all of its required state permitting approvals, including those from the California State Lands Commission, Santa Ana Regional Water Quality Control Board and California Coastal Commission. OCWD continues to monitor the permitting process for these three state agencies. The District is sensitive to the approval conditions that may be placed upon the Project and their potential to increase the cost of the water.

The attached pie charts illustrate the current and potential future projected sources of water supplies to meet demand within the District's service territory. OCWD has a policy and a history of providing reliable high quality water supplies in cost effective and environmentally responsible manners. The Ground Water Replenishment System, soon to be possibly expanded to 134,000 acre-feet per year of water reuse, is a great example of our approach to moving away from climate driven supplies. The Huntington Beach Project's 56,000 acre feet per year capacity could be the next logical step for us to meet our policy goals. The Huntington Beach Desalination Project is the single largest source of new, local drinking water supply available to the region. In addition to offsetting imported water demand, water from the Project could provide flexibility in how the District manages the groundwater basin, specifically the desalinated water could be used to augment supplies we inject into our Talbert Seawater Barrier to help prevent seawater intrusion into the groundwater basin.

It is the District's mission to provide the cities and retail water districts it serves with a reliable, adequate, high-quality water supply at the lowest reasonable cost in an environmentally responsible manner. The Huntington Beach Desalination Project provides the District and Orange County with a unique opportunity to add a large quantity of locally controlled, drought-proof water to our supply portfolio.

The District appreciates your support for the Project and the District's efforts to enhance regional water supply self-reliance by reducing the need to import water from Northern California and the Colorado River.

Sincerely,



Michael R. Markus, P.E., D.WRE, BCEE, F.ASCE
General Manager

Attachments: Presentation



Orange County Water District

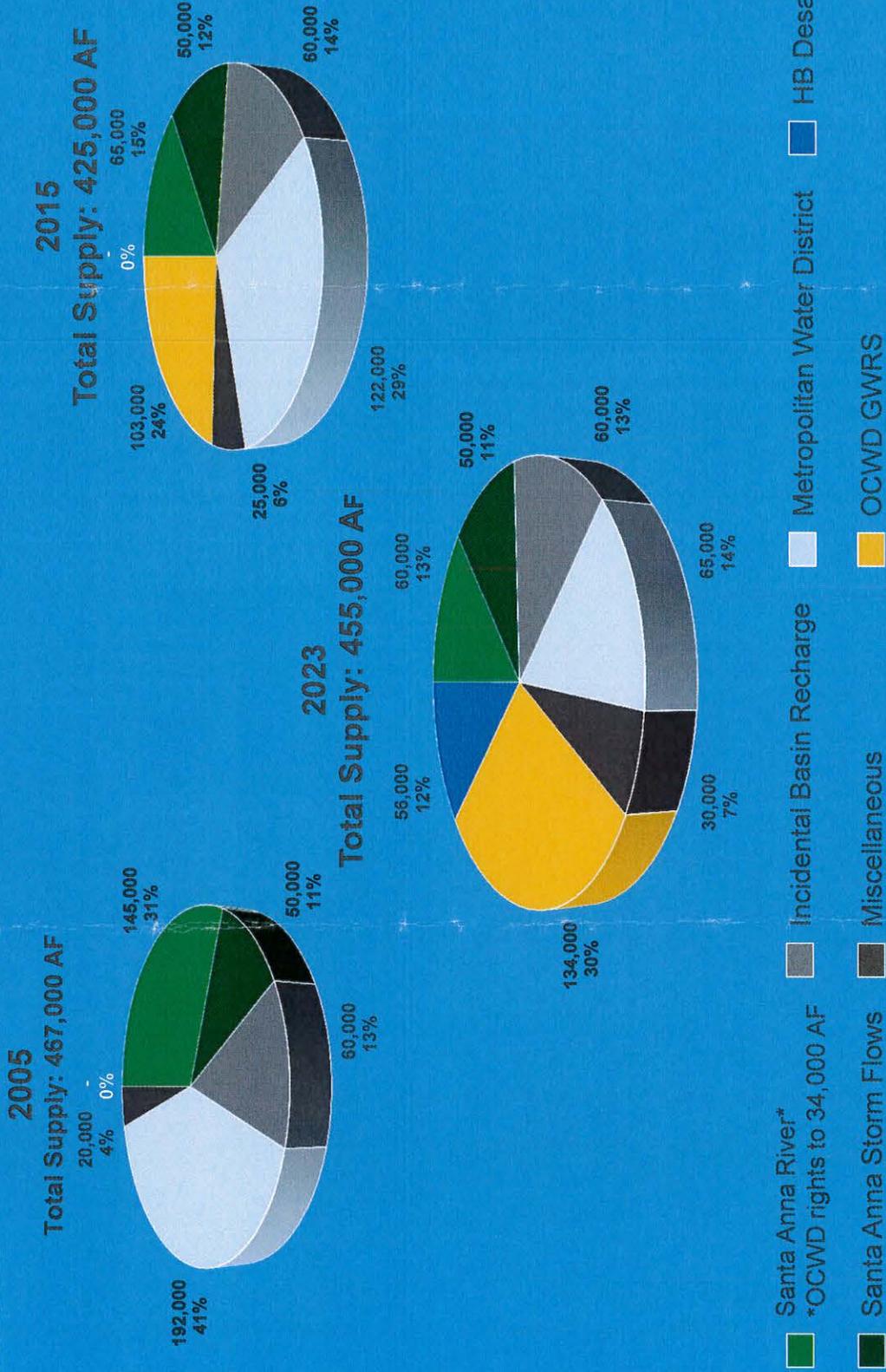
OCWD's mission is to provide a reliable, high quality water supply in a cost-effective and environmentally responsible manner.

OCWD takes the limited water supply found in nature and supplements it to provide water for 2.4 million people in Orange County, California

- Manages the groundwater basin for 19 cities and retail water agencies)
- Leadership in water purification and potable reuse - turning recycled water into drinking water - has been recognized worldwide. The Groundwater Replenishment System (GWRS) is the largest facility of its kind in the world
- Ocean Desalination may be the next step in OCWD's commitment to providing a reliable and sustainable water supply to Orange County



Increasing Orange County's Water Supply Reliability through Supply Diversification With Poseidon Project



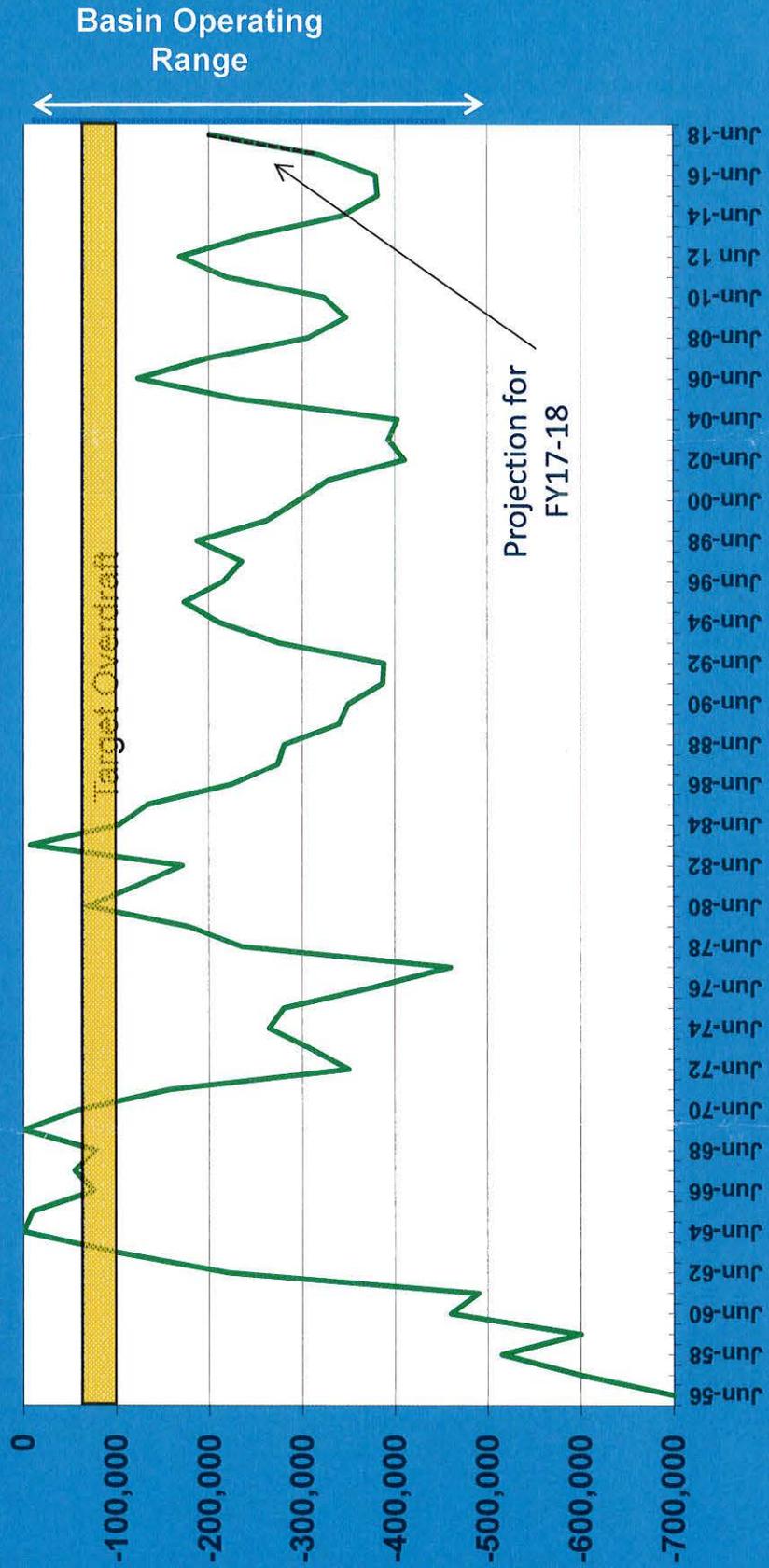


OCWD Supply Sources – Moving away from climate driven supplies With Poseidon Project

Supply sources	Percentage of supply
2005	
– River Flows and Incidental Recharge	55%
– Imported Water	41%
– Recycled and other	4%
2015	
– River Flows and Incidental Recharge	41%
– Imported Water	29%
– Recycled and other	30%
2023	
– River Flows and Incidental Recharge	37%
– Imported Water	14%
– Recycled and other	37%
– HB Desalination	12%



Historical OCWD Groundwater Basin Overdraft



October 10, 2017

The Honorable Lt. Governor Gavin Newsom
Chairman, California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA, 95825

Dear Chairman Newsom:

I am writing you regarding Poseidon Resources (Surfside) LLC's ("Poseidon's") proposed Huntington Beach Desalination Facility ("Facility"). Poseidon's proposed Facility is planned to be located within SCE's service territory and will provide Orange County with 50 million gallons per day of potable water, enough water for 400,000 residents.

In 2013, SCE was asked by the California Coastal Commission to review the projected electricity consumption for the Facility and confirm that there will be a reliable electrical supply to serve the Facility (see enclosed September 27, 2013 letter to the Coastal Commission).

Today, SCE applauds Poseidon's voluntary commitment to offset indirect greenhouse gas emissions from the purchase of electricity from the grid and its willingness to optimize the proposed Facility's electrical load in a way that helps integrate renewable energy resources and reduce its contribution to the peak use of power.

SCE has engaged Poseidon on ways it can be a leader in this manner, including by implementing demand side management through the use of its product water tank storage or other power storage programs. SCE commends Poseidon for being willing to rapidly reduce load to minimal levels during system emergencies, and to explore green power alternatives, either directly with SCE or through other providers in other ways that meet the goals of the parties and state regulators.

We look forward to working with Poseidon within our service territory to build on their past success and to make the proposed Huntington Beach Facility part of the solution to California's water and power needs.

Sincerely,



cc: The Honorable Betty Yee, California State Controller
Ms. Eraina Ortega, California Department of Finance
Mrs. Jennifer Lucchesi, State Lands Commission Executive Director
Mr. Scott Maloni, Vice President Poseidon Water

Enclosure: September 27, 2013 California Coastal Commission letter

September 27, 2013

Mr. Tom Luster
California Coastal Commission
Energy and Ocean Resources Unit
45 Fremont, Suite 2000
San Francisco, CA 94105-2219

RE: POSEIDON RESOURCES HUNTINGTON BEACH DESALINATION PROJECT

Dear Mr. Luster:

We understand, through Poseidon Resources, that questions have been raised with respect to the electricity supply for the proposed desalination facility in Huntington Beach. Southern California Edison (SCE) serves more than 14 million people in 15 counties of Central, Coastal and Southern California and is one of the nation's largest investor-owned electric utilities. Under its franchise from the state, the Company is required to provide electricity to all qualified customers in accordance with rules and tariffs adopted by the California Public Utilities Commission.

SCE has reviewed the projected electricity consumption for the desalination Facility and confirms there will be a reliable electrical supply to serve the Facility, including accounting for the retirement of the San Onofre Nuclear Generation Station. SCE generates electricity from plants it owns and purchases electricity from providers through contracts and from grid providers.

SCE is one of the nation's leaders in renewable energy procurement. In 2012, SCE delivered approximately 15.01 billion kWh of renewable power – or approximately 20 percent of all the electricity we delivered that year. As part of SCE's ongoing compliance with the state's Renewables Portfolio Standard, which requires investor-owned utilities and other electricity providers to achieve 33% renewable energy procurement by 2020, SCE's portfolio-wide greenhouse gas emissions factor will continue to improve.

With respect to concerns that may be raised about the emissions from the portion of electricity supplied to the Facility from fossil fuels (primarily natural gas fired plants), please also be aware that SCE is responsible for complying with the California Air Resources Board greenhouse gas cap and trade reduction program pursuant the Global Warming Solutions Act of 2006 (AB 32). With respect to conventional air emissions from such electricity, all plants from which SCE purchases power or which the Company operates on behalf of its customers, are compliant with air quality permits issued by the responsible air quality regulatory agencies.

Sincerely,



Michael M. Hertel

cc: Scott Maloni, Vice President - Poseidon Resources



The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

RE: SUPPORT for Huntington Beach Desalination Project SEIR Certification and Land Lease Approval

July 19, 2017

Dear Chairman Newsom,
The Orange County Black Chamber of Commerce (OCBCC) is writing in support of the Huntington Beach Desalination Project. We urge the State Lands Commission to approve the Draft Supplemental Environmental Impact Report (SEIR) and extend the land lease necessary for the project to proceed at its upcoming October meeting.

OCBCC's mission is to advocate and promote Black business and economic development within both the public and private sectors. This mission is dependent upon the existence of adequate and sustainable water supplies being available to the African-American community in Orange County. Our membership is very much aware of the pressures the recent drought put on Orange County's water supplies. We therefore support the development of all forms of new local water for the County. It is simply not sustainable to continue to rely on imported water which itself is subject to drought and is being fought over by farmers, cities and environmentalist and, in the case of the Colorado River, states and Mexico.

In so far as climate scientists are predicting future severe droughts it is only reasonable to allow the proposed Huntington Beach desalination plant, a source of drought proof water, to proceed. In so far as the proposed plant has been in the permitting process for the past 17 years it is equally reasonable to expedite State Lands' approval of the SEIR and requested lease extension.

Thank you for your consideration,

Sincerely,

Bobby McDonald
President

cc:

Honorable Betty T. Yee
Honorable Michael Cohen
Jennifer Lucchesi
Alexandra Borack, Project Manager



Los Angeles / Orange Counties Building and Construction Trades Council

Affiliated with the Building & Construction Trades Dept., AFL-CIO

1626 Beverly Boulevard
Los Angeles, CA 90026-5784
Phone (213) 483-4222
(714) 827-6791
Fax (213) 483-4419



RON MILLER
Executive Secretary

June 27, 2017



The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

RE: **SUPPORT** for Huntington Beach Desalination Project SEIR Certification and
Land Lease Approval

Dear Chairman Newsom,

The Los Angeles/Orange Counties Building and Construction Trades Council (BCTC) is writing in support of the proposed Huntington Beach (HB) desalination facility and to urge the extension of State Lands' leasehold for the project. BCTC is in the business of creating good jobs and lifelong careers. We are an umbrella group representing 48 local unions and district councils in 14 Trades. Our membership totals more than 100,000 skilled men and women.

Approximately 3,000 direct, indirect and induced jobs would be created during construction of the project. This includes: roughly 350 jobs on site, 394 jobs through procurement of operation and maintenance goods and services, and 774 jobs in the region's construction sector. Labor income, in the region, would increase by \$240 million during the construction period producing high value jobs.

Being cognizant of State Lands responsibility under the Public Trust Doctrine, BCTC stresses that under the Doctrine trust lands belong to the public and should be used to support beneficial uses which connect the public to water. Drinking water derived from the sea is a beneficial public use. Orange County, a growing jurisdiction, is dependent on imported water. The Orange County Water District (OCWD) has identified the 56,000 acre feet a year (afy) the HB plant would produce as the single biggest source of water available to it, while predicting a substantial shortfall in the foreseeable future. For the more than 3 million residents in drought prone OC, this potential local drought-proof water is not only beneficial, it is indispensable.

As our members would be employed to build the plant we are pleased to see that Section 4.7 verifies that "*project-related construction does not generate or require disposal of hazardous materials, and would not create new hazards to the public or the environment*".

BCTC urges State Lands to expeditiously certify the project and approve Poseidon's land lease.

Sincerely,

A handwritten signature in black ink, appearing to read "Ron Miller". The signature is fluid and cursive, with the first name "Ron" being more prominent than the last name "Miller".

Ron Miller
Executive Secretary

cc: Honorable Betty T. Yee
Honorable Michael Cohen
Jennifer Lucchesi
Alexandra Borack, Project Manager

July 21, 2017

The Honorable Gavin Newsom
Lieutenant Governor, State of California
Chair, California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202



**SUBJECT: SUPPORT - HUNTINGTON BEACH SEAWATER DESALINATION PROJECT
SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT**

Dear Chairman Newsom:

For more than 100 years, the California Chamber of Commerce has worked to make California a better place to do business. We have over 14,000 members, representing one-fourth of the private sector workforce in California. We serve as an advocate and resource for large and small California employers and work within state and federal politics to ensure fair legislation and regulations and a pro-business climate. Our goal is to enhance the California economy and make the state a better place to live, work and do business.

CalChamber supports the proposed Huntington Beach Seawater Desalination Project because it will provide a dependable, drought-proof supply of new water for Orange County that would benefit the public and support the long-term growth and sustainability of its economy. We ask the State Lands Commission to certify the project's Supplemental Environmental Impact Report (SEIR) and approve the amended land lease agreement with Poseidon Water at its October 19 meeting.

Despite record-breaking precipitation and snowpack this past winter, which helped end the drought in California, we continue to deal with a range of challenges that affect the management and conveyance of water throughout our state. Environmental, legal and regulatory constraints are having an increasing effect on how and where water flows in California. These constraints impact people, communities, and economies, especially those that depend heavily on imported water.

Southern California imports a significant amount of water from the Colorado River and from Northern California to meet the needs of its growing economy. Orange County's pursuit of seawater desalination, as a local water supply, will help to reduce its dependence on imported water as well as provide greater certainty for residents, businesses, and potential investors that Orange County's water future is reliable and secure.

The economic benefits and environmental merits of the Huntington Beach Seawater Desalination Project are clear. The project would generate several hundred million dollars in economic activity and approximately 3,000 jobs would be created during construction. Dozens of additional high-paying jobs would be created once the facility is operational. The facility would also operate in an environmentally protective and energy efficient manner. Recent technological advancements which are reflected in the currently proposed design, marine life and water quality would receive even greater protection, the facility's energy recovery system would help to reduce energy consumption, and 30 percent less water would be required to produce the same 50 million gallons of potable water each day.

CalChamber believes the Huntington Beach Seawater Desalination Project will be an environmentally and economically responsible solution for meeting Orange County's future water needs. We continue to offer support for the project and we respectfully request the Commission's certification of the Supplemental EIR and approval of the amended land lease with Poseidon Water.

Sincerely,



Valerie Nera
Policy Advocate

cc: The Honorable Jerry Brown, Governor, State of California
The Honorable Betty Yee, Commissioner/ CA State Controller
Michael Cohen, Commissioner/Director of Finance
Jennifer Lucchesi, Executive Officer, State Lands Commission
Alexandra Borack, Project Manager, State Lands Commission
The Honorable Dana Rohrabacher, U.S. Representative
The Honorable Kevin De León, CA State Senate, President pro Tempore
The Honorable Anthony Rendon, CA , State Assembly Speaker
The Honorable Patricia Bates, CA State Senate
The Honorable Tony Mendoza, CA State Senate
The Honorable John Moorlach, CA State Senate
The Honorable Josh Newman, CA State Senate
The Honorable Janet Nguyen, CA State Senate
The Honorable Travis Allen, CA State Assembly
The Honorable William Brough, CA State Assembly
The Honorable Phillip Chen, CA State Assembly
The Honorable Steven Choi, CA State Assembly
The Honorable Tom Daly, CA State Assembly
The Honorable Matthew Harper, CA State Assembly
The Honorable Sharon Quirk-Silva, CA State Assembly

VN:mm



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Office of the General Manager

October 2, 2017

The Honorable Gavin Newsom
Lieutenant Governor of California
Chair
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Dear Mr. Newsom:

Support for the Huntington Beach Seawater Desalination Project

The purpose of this letter is to express The Metropolitan Water District of Southern California's (Metropolitan) support for the Huntington Beach Seawater Desalination Project. The project will serve retail customers located within the Municipal Water District of Orange County (MWDOC) and the Orange County Water District (OCWD). Both agencies are within Metropolitan's service area.

In partnership with local water agencies such as MWDOC and OCWD, Metropolitan is a statewide leader in implementing water conservation programs and progressive water resources such as wastewater recycling and groundwater recovery. Metropolitan has invested more than \$1.3 billion in conservation programs and local resources, and our member agencies have invested many billions more. Metropolitan's recent accomplishments include funding the replacement of almost 150 million square feet of turf with water-efficient landscapes, nearly tripling the Governor's drought response goal of 50 million square feet for all of California. Likewise, OCWD's environmental stewardship is exemplified by its pioneering Groundwater Replenishment System (GWRS), which treats 100 million gallons of wastewater a day for indirect potable reuse.

Metropolitan promotes the development of local recycling, groundwater recovery and seawater desalination projects with financial incentives through our long-standing Local Resources Program (LRP). The LRP reduces financial barriers to local projects that are more expensive than Metropolitan's imported supplies. Projects receiving LRP incentives, such as the GWRS, have produced over 3.2 million acre-feet of local supplies since Metropolitan initiated the program in 1982. Proponents of the Huntington Beach Seawater Desalination Project have submitted an application for participation in the LRP. The application would be eligible for consideration by Metropolitan's Board after the project is fully permitted and ready to proceed.

The severity of the State's recent drought, the extended dry period on the Colorado River, and the projected long-term impacts of climate change underscore the need for continued diversification of Southern California's water resource portfolio. Metropolitan's long-term Integrated Water Resources Plan (IRP) achieves diversification with an "all of the above" approach. This includes

Lieutenant Governor Newsom

Page 2

October 2, 2017

maintaining Colorado River Aqueduct supplies and restoring the reliability of the State Water Project, while also developing local climate-resilient resources such as seawater desalination. Metropolitan's IRP establishes a regional goal of 2.4 million acre-feet in annual production from local supplies by the year 2040. This is a significant increase above production levels seen in recent years, which is closer to 1.8 million acre-feet. Over the same time horizon, local planning agencies project Metropolitan's service area to grow by more than three million people. New projects such as the Huntington Beach Seawater Desalination Project help increase local supplies and reduce Southern California's reliance on imported water supplies to meet expected future demands.

For these reasons, Metropolitan supports the development of local projects such as the Huntington Beach Seawater Desalination Project to help sustain our region's 19 million people and trillion dollar economy.

Please contact Robert Harding at (213) 217-6582 or via email at bharding@mwdh2o.com if you have any questions.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Jeffrey Kightlinger". The signature is stylized and cursive.

Jeffrey Kightlinger
General Manager

WAT:vsm

Lieutenant Governor Newsom

Page 3

October 2, 2017

cc: Mr. Robert J. Hunter
General Manager
Municipal Water District of Orange County
18700 Ward Street
Fountain Valley, California 92708

Mr. Michael R. Markus, P.E., D.WRE, BCEE, F.ASCE
General Manager
Orange County Water District
18700 Ward Street
Fountain Valley, California 92708

Mr. Scott Maloni
Vice President
Poseidon Water
5780 Fleet Street, Suite 140
Carlsbad, CA 92008

Ms. Jennifer Lucchesi
Executive Officer
100 Howe Avenue, Suite 100-South
California State Lands Commission
Sacramento, CA 95825



William C. Velásquez Institute

August 12, 2017

The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

RE: SUPPORT for Huntington Beach Desalination Project SEIR Certification and Land Lease Approval

Dear Chairman Newsom,

The 50 million gallons a day (50MGD) of local drought proof water the Huntington Beach (HB) plant would produce has been identified by the Orange County Water District (OCWD) as the single largest source of new local water available to the District. Given climate change (referenced in the DSEIR), Orange County's (OC) dependence on imported water and growing population we believe it is essential that State Lands approve the DSEIR and extend Poseidon's lease at your upcoming October meeting.

Investments in climate change adaptation infrastructure, like the HB desalination plant, are critical for ensuring continuity in OC's quality of life. As a Latino community member/advocate this is especially important for our community which will soon be a majority in California. Latinos enthusiastically support desalination and other social investments like housing and schools because we see them as investments in our futures!

State Lands approval of the DSEIR and Land Lease for the Huntington Beach Desalination Plant would be a significant step in ensuring the quality of life for our community. By approving the Huntington Beach Desalination Plant, you are ensuring that OC Latinos will have reliable water for generations to come.

Sincerely,

Louis Salgado

Aguacate Alliance

14123 Dillerdale La Puente, CA

(626) 956-7067

Louis.Salgado64@gmail.com





William C. Velásquez Institute

August 12, 2017

The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

RE: SUPPORT for Huntington Beach Desalination Project SEIR Certification and Land Lease Approval

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Sincerely,

Laura Santos
Laura Santos Trustee
Mt SAIN ANTONIO college
laura.santos3454@gmail.com
(626) 261-9358





William C. Velásquez Institute

August 12, 2017

The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

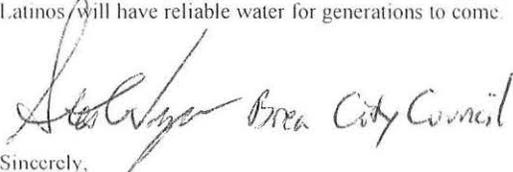
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Steven Vargas
Brea City Council

Sincerely,

Steven Vargas
City of Brea City Council





William C. Velásquez Institute

August 12, 2017

The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

RE: SUPPORT for Huntington Beach Desalination Project SEIR Certification and Land Lease Approval

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Sincerely,

Melissa Perez



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Lunetta, Kim@SLC

From: Lucchesi, Jennifer@SLC
Sent: Thursday, October 12, 2017 1:57 PM
To: Lunetta, Kim@SLC
Subject: FW: A comment from Thomas DeGeorge

From: pumpcreservices@gmail.com [mailto:pumpcreservices@gmail.com]
Sent: Thursday, October 12, 2017 1:44 PM
To: gavin.newsom@ltg.ca.gov; Comments, CEQA@SLC <CEQA.Comments@slc.ca.gov>; betty.yee@sco.ca.gov; michael.cohen@dof.ca.gov; Lucchesi, Jennifer@SLC <Jennifer.Lucchesi@slc.ca.gov>; governor@governor.ca.gov; Assemblymember.Rendon@assembly.ca.gov; Senator.DeLeon@senate.ca.gov; Rick.Dykema@mail.house.gov; Senator.Moorlach@senate.ca.gov; Senator.Nguyen@senate.ca.gov; Senator.Bates@senate.ca.gov; Senator.Newman@senate.ca.gov; Senator.Mendoza@senate.ca.gov; Assemblymember.Allen@assembly.ca.gov; Assemblymember.Harper@assembly.ca.gov; Assemblymember.Chen@assembly.ca.gov; Assemblymember.Quirk-Silva@assembly.ca.gov; Assemblymember.Choi@assembly.ca.gov; Assemblymember.Daly@assembly.ca.gov; Assemblymember.Brough@assembly.ca.gov
Subject: A comment from Thomas DeGeorge

The Honorable Gavin Newsom
Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

RE: Huntington Beach Seawater Desalination Project Supplemental EIR - SUPPORT

Dear Chairman Newsom:

I'm writing to ask you and your colleagues on the State Lands Commission (SLC) to certify the Supplemental Environmental Impact Report (SEIR) and approve the lease amendment for the Huntington Beach Desalination Project.

There have been significant technological improvements made to the project since the SLC originally approved the lease for this project in 2010. One millimeter wedgewire screens have been added and a far slower flow rate ensure that marine life impacts on the intake side are minimal with no fish impacted and only an extremely small number of microscopic fish eggs or larvae that are smaller than the width of a credit card that may be affected.

Similarly, the SEIR concludes that technological improvements on the brine diffuser ensures no significant impact on marine life. Within a few dozen feet of the outfall pipe, seawater returns to ambient salinity levels.

No endangered or threatened species of any kind will be impacted at all by this project.

The public benefit of this project is clear. The Orange County Water District (OCWD) has expressed an interest in adding desalinated water to its water portfolio so that it can protect the groundwater basin from the "boom

and bust” nature of our increasingly dry climate. The project will also reduce Orange County’s dependence on imported water, which is more critical than ever.

Technological advances now allow Poseidon to produce the same 50 million gallons of desalinated drinking water every day while using 30 percent less seawater than was needed when the project came before the SLC seven years ago.

I am grateful to the SLC staff for all of its hard work in preparing this document and looking forward to the approval of this important water reliability project at the SLC hearing this fall.

Sincerely,

Thomas DeGeorge
Costa Mesa

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California Coastal and Marine Program
99 Pacific Street, Suite 200G
Monterey, CA 93940
(831) 333-2045

October 16, 2017

Honorable Gavin Newsom
Lieutenant Governor and Chair
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Cc: Jennifer Lucchesi, Executive Director; Alexandra Borack, Project Manager

Re: Opposition to Certification of Final Supplemental Environmental Impact Report (FSEIR) for the Poseidon Desalination Project in Huntington Beach

Dear Mr. Newsom:

Thank you for the opportunity to submit comments on the Final Supplemental Environmental Impact Report ("FSEIR") for the Poseidon Desalination Project in Huntington Beach "Poseidon Project" or "Project"). The Nature Conservancy ("TNC") has been a leader in promoting nature-based adaptation to climate change throughout the United States and globally. The California Coastal Program of TNC has worked closely with state and local agencies on developing tools for assessing community vulnerability, conserving California's coast in the face of sea level rise, and in identifying and promoting nature-based solutions.

We encourage the Commission to decline to certify the FSEIR. Specifically, a complete CEQA analysis should include the consideration of the substantial body of new information since the original EIR was certified by the City of Huntington Beach in 2010. The FSEIR does not address improvements to our collective understanding of the role of shoreline industrialization to loss of beaches and other coastal habitats in the face of sea level rise. The FSEIR does not address improvements to our understanding of climate change and its manifestation in sea level rise. Finally, the FSEIR does not adequately deal with the feasibility of subsurface intakes, as required by the 2015 Ocean Plan Amendment.

The changing climate that is threatening our coast is also straining water supplies. California has just emerged from a historic drought, and, while this past winter has helped to replenish our reservoirs, we know the future will bring longer hot and dry periods, and more precipitation falling as rain rather than snow. So, even as coastal communities are planning for sea level rise, they must also secure reliable sources of freshwater that meet the growing needs of our people, and address the compounding impacts and uncertainties of climate change – preferably without increasing the greenhouse gas emissions that cause climate change in the first place. Although desalination technology makes it technically feasible to tap into the ocean to create freshwater, desalination comes at a cost - it is expensive, energy intensive, potentially emits greenhouse gases, can have adverse impacts to coastal and marine organisms and habitats, and often places critical infrastructure in coastal flood zones.

In January 2016, as California decisionmakers wrestled with the pros and cons of desalination, TNC collaborated with Stanford's Woods Institute and Water in the West, the Center for Ocean Solutions, and the Monterey Bay Aquarium to convene a group of experts on desalination in an "Uncommon Dialogue." The discussion focused on science, technology, and policy related to coastal and marine impacts and siting considerations for desalination, as well as desalination's role in California's water supply.

The Uncommon Dialogue resulted in a report titled: *Marine and Coastal Impacts of Ocean Desalination in California* (appended here). The report concluded that although desalination may prove critically important to some specific coastal communities, it is unlikely to significantly alter the basic water budget in California due to its high cost, energy demands, impacts to nature, and availability of other water sources. Further, there is a clear call for "Desalination Done Right" – an integrated approach in which industry, regulators and the public are guided by a spatial framework that enables siting of facilities to avoid hazards, avoid or minimize interactions with marine and coastal ecosystems, and use technologies to reduce electric grid burden and greenhouse gas emissions.

This project does not meet these criteria. Local water supply projects and conservation efforts have dramatically reduced the projected water demand for the region, giving the community alternatives at a much lower economic and environmental cost. A 2016 Pacific Institute report concluded that desalination is the most expensive of California's water options; this project represents an economic burden the community would have to bear for decades to come. The Poseidon project is not sited to avoid hazards, and the change in the proposed operating life of the facility from 30 years to 50-60 years is significant in terms of the degree to which the facility is exposed to these hazards. In preparation for the Uncommon Dialogue, TNC evaluated the site's exposure using best available storm surge projections for today and for future conservative sea level rise projections, and found that 79% of the area within a 0.5 mile analytical radius from the site was subject to storm inundation under *current* conditions; 5 feet of sea level rise increases that area to 86% (map appended here).

The Poseidon project – like many of California's desalination proposals – is co-located with a once-through cooling power plant in order to utilize the power plants' existing open seawater intake infrastructure. However, once-through cooling technology is required to be phased out under California law, causing many aging power plants to discontinue operation. Accordingly, co-location would perpetuate intake-related mortality to marine organisms and industrial uses of areas of coast that state policy has *already* determined is undesirable. California should beware of perpetuating uses of our coast that are inconsistent with our growing understanding of the hazards we face – now and in the future – and that bind us to long-term industrial development in areas that could otherwise be restored to benefit both people and nature.

Interest in desalination development is increasing globally. California is an excellent case study because of our large population, high productivity, high water demand, and population centers located on the coast often without sufficient local water to meet demands. Lessons learned in California on how best to balance human water needs while conserving nature by appropriate and strategic siting and permitting could be applied widely as the desire to develop desalination facilities increases globally. But this leadership cuts both ways: if we approve badly-sited facilities that are not compliant with the biodiversity-protection standards that we have set for ourselves, others will certainly follow our example and much will be lost. The Poseidon project will be precedent-setting, and this project is not the standard we want to set.

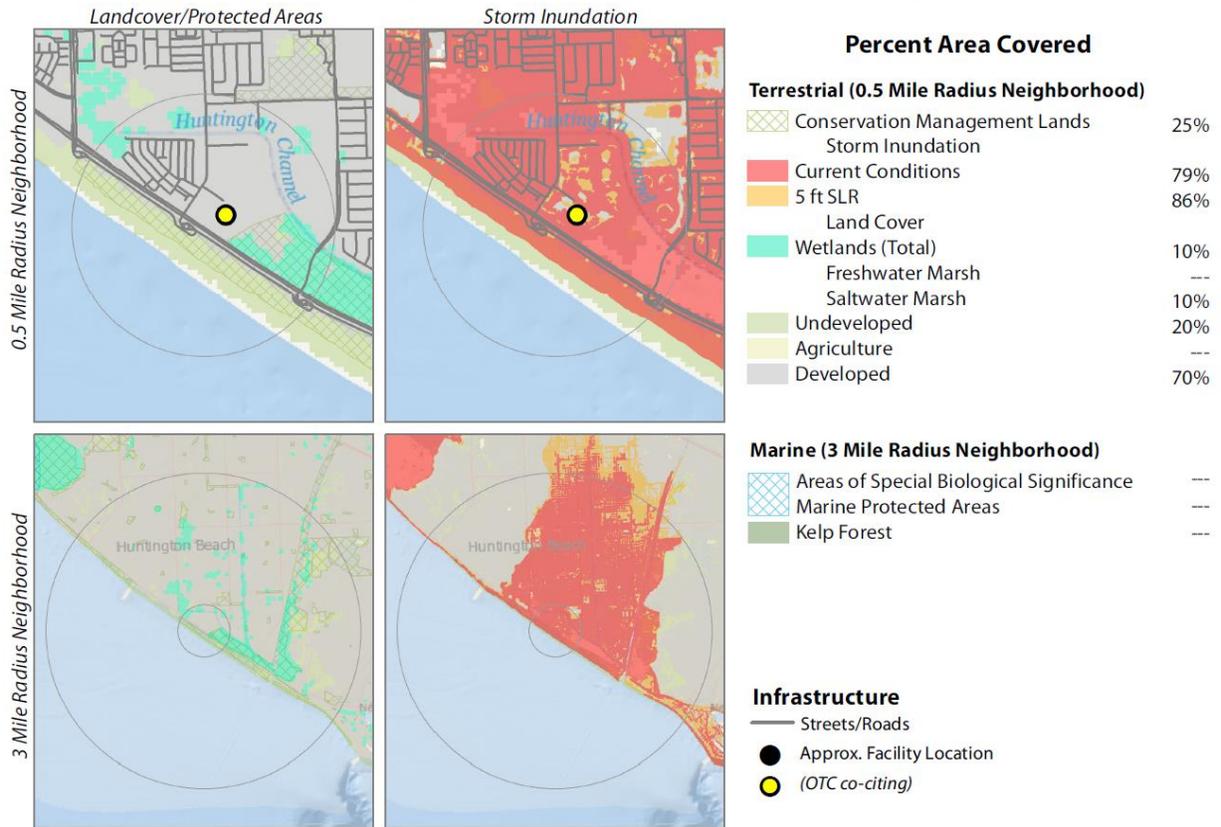
For these reasons, we encourage you to decline to certify the FSEIR. Thank you for the opportunity to provide comments on the FSEIR. Please feel free to contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script, reading "Sarah Newkirk". The signature is written in black ink and is positioned above the printed name and title.

Sarah Newkirk
Coastal Project Director

Huntington Beach (25 - 50 MGD Capacity)





Marine and Coastal Impacts of Ocean Desalination in California

Prepared by Water in the West, Center for Ocean Solutions, Monterey Bay Aquarium, The Nature Conservancy

May 2016



May 2016

This report was prepared by Leon Szeptycki, Eric Hartge, Newsha Ajami, Ashley Erickson, Walter N. Heady, Letise LaFeir, Barbara Meister, Lily Verdone, and Jeffrey R. Koseff

Acknowledgments

The authors would like to thank all those who participated in the dialogue and provided feedback during the development of this report. The Monterey Bay Aquarium graciously donated a meeting location for the event. In addition, the authors would specifically like to thank Athena Serapio for thoroughly organizing logistics and Kristi Boosman, Kristen Weiss, and Paige Welsh for diligently taking notes.

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About Water in the West

Water in the West is a partnership of the faculty, staff and students of the Stanford Woods Institute for the Environment and the Bill Lane Center for the American West. The mission of Water in the West is to design, articulate and advance sustainable water management for the people and environment of the American West. Linking ideas to action, we accomplish our mission by engaging in cutting-edge research, creative problem solving, active collaboration with decision-makers and opinion leaders, effective public communications and hands-on education of students. To learn more, please visit: waterinthewest.stanford.edu.

About Center for Ocean Solutions

The Center for Ocean Solutions works to solve the major problems facing the ocean and prepares leaders to take on these challenges. We value and steward linkages between the ocean, health and climate resulting in thriving marine ecosystems and vibrant coastal communities. The Center for Ocean Solutions is a partnership of Stanford University (through the Stanford Woods Institute for the Environment and Hopkins Marine Station), the Monterey Bay Aquarium, and the Monterey Bay Aquarium Research Institute. To learn more, please visit centerforoceansolutions.org.

About Monterey Bay Aquarium

The mission of the nonprofit Monterey Bay Aquarium is to inspire conservation of the ocean. Today, more than 30 years after opening, the Aquarium is a showcase for the habitats and sea life of one of the world's richest marine regions. More than 35,000 creatures representing over 550 species fill nearly 200 exhibits in all. The Aquarium is not only a window to the wonders of the ocean for 2 million visitors per year, but it is also a leader in ocean conservation and education. To learn more, please visit montereybayaquarium.org.

About The Nature Conservancy

The Nature Conservancy is a global, non-profit organization dedicated to the conservation of the lands and waters upon which all life depends. Our vision is a world where the diversity of life thrives, and people act to conserve nature for its own sake and it's ability to fulfill our needs and enrich our lives. We achieve our mission and vision by working collaboratively to develop field-leading science, demonstrate solutions at place and advocate for policies that enable conservation at scale. To learn more, please visit nature.org.

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INTRODUCTION

Like many areas of the world, California is facing an increasing challenge to maintain a water supply that meets the needs of its growing population and addresses the uncertainties of a changing climate (Brozovic et al., 2007; Cayan et al., 2010; Viviroli et al., 2011; CDWR, 2013; Grantham and Viers, 2014; Diffenbaugh et al., 2015). Currently in its fourth year of drought, California is investigating a variety of alternative sources for water—each of which has its own environmental, economic and social considerations. Ocean desalination, currently a small piece of California's overall water supply, has received rekindled interest as a potential alternative in large part due to a seemingly “drought-proof” supply of seawater on the state's doorstep. However, many desalination proposals have been controversial, and many community leaders, policymakers and advocates have questioned the relative value of ocean desalination as compared to potentially cheaper and more efficient alternatives, such as water conservation. In addition, as with all developed sources of water, the process of desalination could impact the environment. If poorly sited and designed, ocean desalination can have major undesirable impacts on marine ecosystems, nearshore habitats and coastal communities. Moreover, regardless of how well they are designed, all desalination facilities currently consume a great deal of energy and have the potential to increase greenhouse gas emissions.

In January 2016, the Stanford Woods Institute for the Environment, through its Water in the West Program and the Center for Ocean Solutions, collaborated with the Nature Conservancy and the Monterey Bay Aquarium to organize and facilitate an “uncommon dialogue” on the coastal and marine impacts of ocean desalination among leading experts from nongovernmental organizations, private industry, government agencies and academia. The dialogue had two primary objectives: 1) to promote information exchange and open discussion regarding the best available science, technology and policy related to marine and coastal impacts of desalination projects in California and beyond; and 2) to identify key issues and knowledge gaps for future research and policy development with respect to marine and coastal impacts of ocean desalination in California. To accomplish these objectives, the dialogue was split into four sessions: (1) Scope of Desalination and Current Regulatory Framework in California, (2) Seawater Intakes, (3) Brine Disposal, and (4) Facility Siting and Community Impacts. This report synthesizes and summarizes the proceedings and conclusions of that dialogue.

SUMMARIES OF SESSIONS

1) Scope of Desalination and Current Regulatory Framework in California

Issue Statement

California's major population centers are located away from areas of high precipitation levels in the Sierra Nevada Mountains and the coastal northwest (Figure 1A). To address this mismatch in supply and demand, the state has an elaborate (and now considerably stressed) combination of federal, state, and local infrastructure to store water and to convey it from Northern California, the Sierra Nevada and the Colorado River to agricultural users in the Central Valley and to the population centers of Central and Southern California, most of which are found near or along the coast (Figure 1B). The current drought, restrictions on historical sources of freshwater and uncertainty stemming from a changing climate are among the factors driving a search for new sources of water for human use—including ocean desalination for coastal populations.

Figure 1A. Average annual precipitation in California (in inches) between 1961 and 1990.

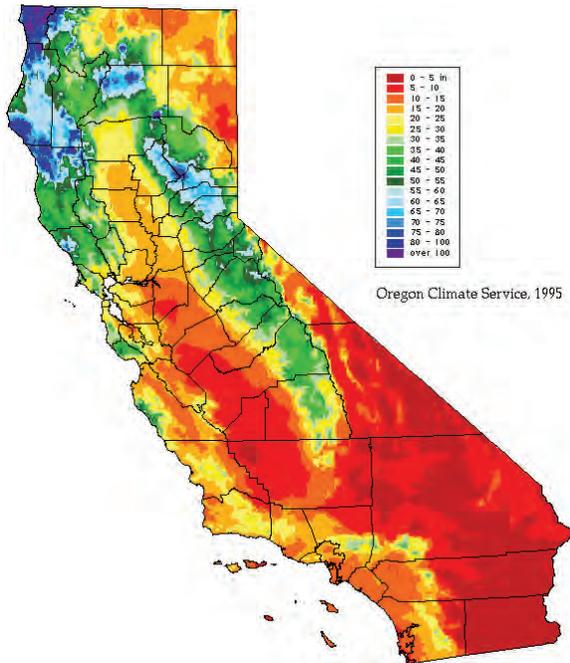
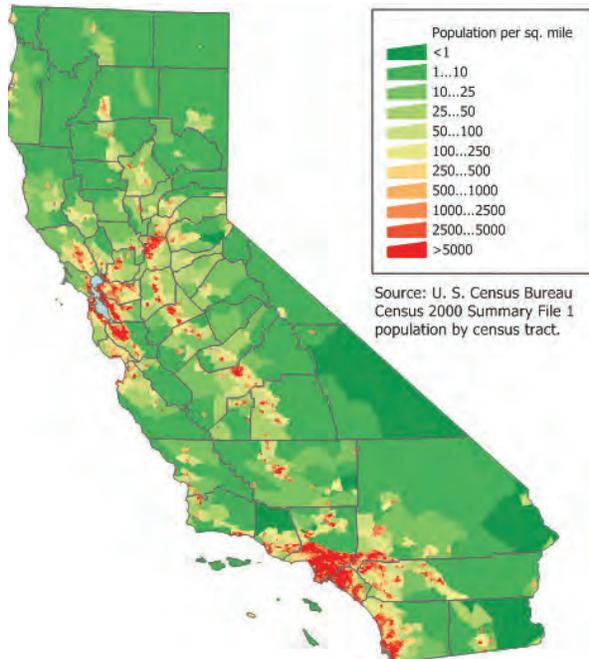


Figure 1B: Population density in California from the 2000 US Census.



As the interest in desalination projects increases, the role of review of the relative costs, benefits and environmental impacts of ocean desalination becomes more important. The State Water Resources Control Board recently developed a new and promising regulatory framework for ocean desalination in the form of an amendment to its Water Quality Control Plan for the Ocean Waters of California (Ocean Plan). The new policy covers siting, design, best technologies for intakes and discharges, and appropriate mitigation measures. However, there are further policy development opportunities. Work can be done on incentivizing the most sustainable categories of desalination (including with respect to facility siting and energy use), further inform permitting with better science and data, and support true demand driven projects.

Findings

- The role of ocean desalination will be minor in the context of California's overall water budget, although it may be very important in some local areas.
- Ocean desalination will not, in the foreseeable future, significantly reduce stress on freshwater resources—particularly freshwater ecosystems. Even the highest total projected production of potable water from ocean desalination in California is so low that it will not meaningfully reduce stress on freshwater systems, such as, for example, exports from the Bay Delta system (Water Plan, 2013). In addition, it is not clear the extent to which planned desalination facilities will provide the regions with supplemental supply and therefore work to reduce or replace existing demands on groundwater and surface water sources.
- It is possible for desalination to reduce stress on other water sources. For example, on the Monterey Peninsula, desalination will serve to replace withdrawals from the Carmel River, reducing stress on that ecosystem. Based on the discussion, this situation is ideal, but also unique. It would be worth evaluating whether other similar opportunities exist in California.
- Communities should compare all costs and benefits (social, environmental and economic) of desalination with the true costs and benefits of other water supply sources. Researchers have an important role to play in developing methodologies to allow for the quantification and comparison of all the costs of various potential sources of water supply, from withdrawal to disposal.

- Characteristics of what could be deemed a “sustainable desalination” facility are becoming more apparent, including projects that (1) are based on community demand in coastal areas; (2) use subsurface intakes that do not adversely affect marine life and do not affect inland water sources; (3) draw energy from renewable sources; (4) use brackish water sources, which require less energy to extract salt and can be disposed of at ocean salinities; and (5) are sized and sited to reduce local community impacts and to allow for the use of subsurface intakes. An important area of future work is assessing the success of the new California desalination policy in incentivizing such projects, and whether additional policies are needed.

2) Seawater Intakes

Issue Statement

The new California desalination policy explicitly favors subsurface intakes. These intakes greatly reduce entrainment impacts but have other potential downsides. Depending on context and perspective, such downsides may include initial construction costs, size limitations, potential impacts on freshwater aquifers, and a larger terrestrial footprint for wells and pumping stations. Subsurface intakes will not work everywhere. Not all facilities will have land available for pumping stations and wells. Larger facilities will likely use screened open-water intakes, for which the California policy requires after-the-fact mitigation for any impacts of entrainment mortality. California, other coastal states and the federal government have decades of experience monitoring and regulating ocean intakes for power plants. In recent years, this data has led to stricter rules for power plant intakes, including a prohibition on once through cooling for new plants. Additional monitoring, research and other work may be needed to assess entrainment impacts and develop more effective mitigation strategies for ocean desalination intakes.

Findings

- California has access to many years of expertise and data related to open ocean water intakes related to power plants. Further study of this data, as well as monitoring of new desalination facilities, is needed to assess and mitigate impacts resulting from desalination if technology other than subsurface is used.
- The primary adverse effect of screened open ocean intakes is mortality of larval fish, fish eggs and other types of plankton. This mortality can be assessed, but prediction of the overall impact from such mortality using traditional models is hindered by the paucity of information on typical survivorship to maturity for most species. As a result, the overall impact of intake mortality on the marine ecosystem cannot always be quantified reliably.
- As a result of this difficulty in quantifying the impact of open water intakes, California policy has relied on the Empirical Transport Model (ETM)/Area of Production Foregone (APF) approach. This approach estimates the habitat needed to compensate for entrainment impacts and requires mitigation of that quantity of habitat.
- This mitigation requirement applies only to open water intakes. The effect of the policy is to favor underground (either under the beach or below the seabed) intakes, which are primarily appropriate for smaller facilities (due to increased land requirements and pumping costs for below ground intakes). Despite this approach, some proposed facilities intend to use open ocean intakes to allow for greater volumes of water.
- Focusing on selecting sites where subsurface intakes would be feasible has the potential to reduce the entrainment impacts of open water intakes.

3) Brine Disposal

Issue Statement

California has much less experience regulating and monitoring coastal impacts from brine disposal than it does for ocean water intakes; however, other areas of the world have been developing and researching technologies relevant to brine disposal for decades. California’s new policy focuses on water quality near the discharge point, and the preferred technologies identified in the

new state desalination policy (either combining a desalination discharge with an existing wastewater treatment facility discharge or using multiport diffusers) should be able to meet the standard in the new regulations. The specific standard is that increases in salinity 100 meters from the discharge point can be no more than 2.0 parts per thousand (ppt). The consensus is that this standard is both achievable and adequate to protect marine life in general. However, there is still concern about whether it is adequate at all locations and whether it protects from all potential site-specific adverse effects of brine disposal. The accumulation of higher salinity water in seabed depressions and mortality in the discharge plume were among site-specific concerns raised at the workshop. While the technology for releasing brine effluent into the water column advances, there is a need to better understand the impacts through research and monitoring. Additionally, the impacts from brine disposal could be alleviated significantly through siting facilities in nonsensitive areas of the California coast.

Findings

- The current best practices for mitigating the effects of brine discharge into the ocean are the use of multiport diffusers or combining a brine discharge with another existing discharge when the combined discharge would have fewer overall effects than two separate discharges. The best science indicates that these approaches, deployed appropriately for each site, can meet requirements of California state policy (limit of a 2.0 ppt increase in salinity outside of 100-meter mixing zone).
- More work is needed to understand the long-term impacts of discharges meeting the above standard on ecosystems at specific sites. For example, larval mortality in the 100-meter mixing zone where elevated salinities are permitted and long-term accumulation of higher salinity water in depressions on the ocean floor are areas that both merit focused monitoring and more study.
- There is a great deal of data related to brine impacts from desalination facilities around the world, including those using technologies contemplated for California. California should assess the existing analyses of these data and conduct any additional work that might provide information relevant to how to deploy and monitor these technologies in the state. The state needs to ensure that monitoring at existing and new facilities in California is appropriately designed to capture potential site-specific impacts.

4) Facility Siting and Community Impacts

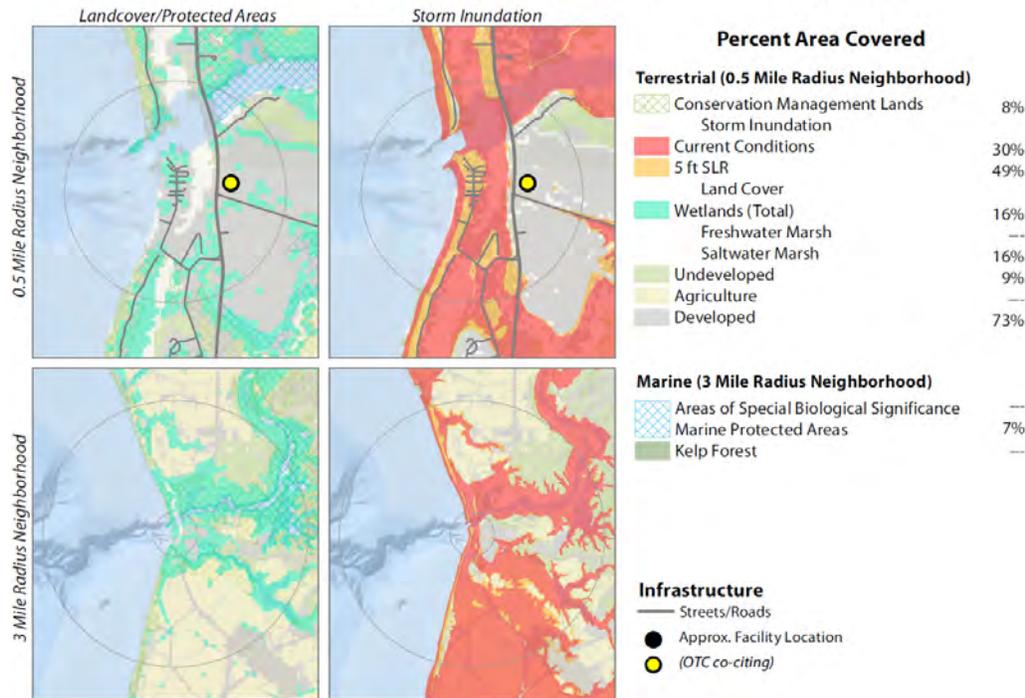
Issue Statement

To date, siting and design specifications for proposed desalination facilities have primarily been based on opportunistic considerations, such as proximity to demand and to existing intake and discharge infrastructure. However, a comprehensive spatial siting framework could help inform decisions that optimize both meeting water demand and reducing environmental impacts. By elucidating high value coastal areas, such as wetland habitats, kelp forests or marine bathymetric features, a geodatabase could identify avoidance areas to prevent ecosystem impacts (Figure 2). A full suite of ecological coastal and marine attributes could be mapped, as well as coastal and marine protection status (for example, Figure 2), to inform an impact avoidance and mitigation strategy that would minimize site-specific concerns related to intakes and discharges. Other key issues, including vulnerability to rising sea levels, demonstrated local need, uncertainty about the reliability of an area's existing water sources, beneficial existing infrastructure and community concerns, could further identify locations more suited to or in need of desalination. For example, a desalination facility may be appropriate where water supply needs cannot be met through other means (for example, efficiency measures or water recycling), particularly if it has been determined that impacts to sensitive ecosystems would be minimal. Ideally, local communities—in collaboration with statewide agencies—can take the lead in identifying their water supply needs and the appropriate means to address them.

Figure 2: Central Coast Regional Water Project (10 – 25 MGD Capacity)

Examples of criteria to be mapped to inform locations where facilities would meet supply needs while minimizing impacts to marine and coastal environments. Zones of influence may vary from local footprint impacts to coastal areas of concern to larger zones of influence when considering marine species entrainment. The full suite of information needed to guide siting decisions is not represented here. Example maps courtesy of the Nature Conservancy and the Center for Integrated Spatial Research.

Desalination co-sited with Moss Landing Power Plant (10-25 MGD Capacity)



Findings

- The Nature Conservancy presented a spatial analysis framework to inform a mitigation hierarchy and potential guide for decision making. The full suite of environmental, political, infrastructure and social attributes to be included in such an analysis framework merits further research and effort. In addition, state agencies and localities need to evaluate potential policy and permitting approaches for integrating such a framework into existing decision making.
- A more thorough spatial analytic approach that integrates evaluation of sensitive ecosystems and human concerns could help minimize impacts to marine and coastal environments. Such an approach could also help reduce the chances of site-specific impacts that are not considered by the generally applicable permitting approach.
- While sometimes cited as a co-benefit, co-location of desalination intakes with existing power plant intakes will likely not be an effective strategy for the long term. Open ocean intakes are no longer allowed for new power plants, and existing power plants with that technology along California's coast will likely be retired or retrofitted in coming years. Co-location opportunities with such facilities are declining, but are also controversial because of perpetuating or compounding existing impacts to the ocean from intakes.
- An integrated spatial analysis of the California coast has the potential to identify locations where desalination facilities would have the lowest impacts to marine and coastal environments; combined with favoring smaller projects that are demand-driven, use subsurface intakes and are powered by renewable power, this integrated approach could potentially guide the siting of sustainable ocean desalination for California.

SUMMARY

Throughout the course of the dialogue, participants raised and clarified a variety of existing scientific and policy-related knowledge gaps. As a collective group, the participants agreed that ocean desalination could potentially contribute to the state's water portfolio; however the extent to which it should and will do so remains uncertain. This uncertainty highlights several clear opportunities to fill knowledge gaps in a way that better informs decision-makers and the general public about the true costs and benefits of desalination in relation to using other sources of water. To highlight these opportunities and begin to chart a course of action, the dialogue concluded with a discussion around potential areas of further focus.

Summary Findings

Through exploration of the session topics and extensive open discussion, a general (but not necessarily unanimous) consensus of the group formed around a few findings:

- While desalination may prove critical for a few coastal communities, it is unlikely to be a major part of California's water supply portfolio due to its high cost of operation, the availability of other sources of water (such as recycled wastewater), its high energy use and the resulting high levels of greenhouse gas emissions, and siting difficulties given the fragility and importance of California's coastal ecosystems.
- Given the relatively small potential footprint of ocean desalination, it is not likely to play a meaningful role in reducing the stress on freshwater ecosystems caused by diversions for water supply.
- Using an integrated spatial approach to identify marine and coastal areas of high ecological and natural value, as well as areas that have local need and existing beneficial infrastructure, could effectively complement California's new desalination policies and help guide sustainable desalination development for California.
- Future work is needed to further define the elements of sustainable desalination projects and develop policies to incentivize adoption of those elements. Elements of sustainable desalination identified at the conference included projects that are smaller; that provide supply to meet a specific, clear local demand; that are located away from sensitive and valuable marine areas; and that are powered by renewable energy sources.
- California's new ocean desalination policy has taken important steps to reduce the environmental effects of both ocean water intakes and brine disposal, yet a need remains for further study in minimizing impacts in a site-specific context and in advancing technologies, particular technologies for surveying and monitoring such site-specific impacts. Better evaluation of data from facilities around the world and better monitoring of facilities built in California were both identified as important avenues for research.
- In making decisions about water supply, water managers may not have access to good information about the true costs of water from different sources, including financial costs, environmental impacts, impacts on the source community (if the water is imported) and potential economic impacts on the state as a whole. A rigorous examination of the full costs, benefits and trade-offs of desalination in the context of the full costs and sustainability of current water supply solutions would improve decisions about desalination and water supply more generally and the public's understanding of the trade-offs involved in those decisions.

IDENTIFIED FUTURE WORK

Inform and Engage the Public: The costs, benefits and limitations of desalination are not well understood by the California public. Misinformation and sweeping generalizations may lead the public to overestimate the potential usefulness of desalination as a drought response tool, to underestimate its true short- and long-term costs, or to fail to recognize when it is truly needed and appropriate. The sponsors of this uncommon dialogue could further public understanding of issues related to desalination in a

variety of ways that would help improve the collective understanding of water supply issues in the state, desalination generally, its costs and benefits and in what contexts it is most appropriate. The sponsors of this uncommon dialogue will work to put on a public conference (potentially at the Monterey Bay Aquarium) that will explore the issues raised in the report for a broader audience.

Provide a Sound Basis for Comparing the Costs and Benefits of Desalination to Other Sources of Water: An underlying problem in water management is the difficulty in assessing the true cost of water, including not only infrastructure, energy and other direct costs, but also environmental costs, impacts on other water users and other externalities. Developing better metrics for analyzing the true cost and sustainability of various water sources is critical to making better water management decisions, including choices about alternative water supply sources such as desalination.

Engage the Research Community: A larger, internationally focused conference on the broader impacts of desalination, hosted by, for example, the Monterey Bay Aquarium or other entities, would broaden the perspective of lessons from other nations as they address similar water supply issues through desalination technologies.

Clarify the Design, Siting, Operation and Water Supply Specifications of Sustainable Desalination: A variety of factors affect the overall environmental impact of desalination – size, energy consumption, the relevant water demand, the facility location, and the intake and discharge factors discussed in this report. Decisions about building and permitting desalination facilities, as well as public understanding, could benefit from a more integrated approach to these issues and a vision for what constitutes sustainable desalination, what was referred to by some conference participants as “desalination done right.” Research areas include evaluating a framework for sustainable desalination, including true water needs, other potential water sources, best methods of water distribution, social and economic implications, greenhouse gas emissions and other factors, and then developing policies or other tools would promote that vision.

Define Attributes for Appropriate Siting: Previous siting for desalination facilities has been opportunistic and driven mainly by short-term economic interests. A spatial planning tool that includes a series of key ecological and community-based planning considerations (for example, coastal development type, value and status of marine ecosystem and proximity to high value areas) could aid water infrastructure planners, regulators and other decision-makers in making smart siting and planning decisions for future ocean desalination projects, and could complement California’s new permitting policy. Developing a consensus around key factors to include in such a tool, and developing the tool itself, is an area ripe for future research and development. For example, the most prevalent impacts to coastal ecosystems from intakes and discharges may be reduced or alleviated by siting facilities in areas that are less environmentally sensitive.

Better Define Processes and Requirements for Public and Private Projects: The conference included discussion of at least two discernible categories of projects: public projects sponsored by water utilities and tailored to current and anticipated local demand, and private projects sponsored by for-profit companies in anticipation of future demand. Analysis of differences between public projects and private projects would provide clarity on the distinct processes and requirements in place for larger projects sponsored by private developers and smaller, more targeted public water supply projects. Although this distinction and its implications were discussed in the dialogue, the problem statement and its relevant considerations were not well defined. Future research could include analysis of the role that different projects might play in California under different policy scenarios, or how different economic drivers and regulatory regimes might affect key aspects of desalination projects and other issues.

Require and Conduct Sufficient Long-Term Monitoring of Impacts: California is unique, and its complex shoreline is diverse in terms of form, function and processes. Comprehensive monitoring should be required and conducted to understand the relatively novel impacts of desalination along California’s complex shore. In particular, long-term monitoring of the point source and cumulative impacts of brine disposal is warranted. Similarly, the long-term implications of subsurface intakes should be monitored, including initial disturbance to place the infrastructure, any disturbance associated with maintenance, and any accumulated long-term impacts associated with the technique.

Advance Technological Research: Advancing knowledge about relationships between intake mortality and ecosystem health would be beneficial. Similarly, innovative technologies for monitoring the effects of brine outflows that include remote sensing and autonomous underwater vehicles would provide more data and a means to decrease impact on coastal ecosystems.

APPENDIX A: WORKSHOP AGENDA

Uncommon Dialogue: Marine and Coastal Impacts of Desalination in California

January 14-15, 2016

Harborview Conference Room

99 Pacific St., Suite 100A, Monterey, CA

Workshop Description

Dialogue Goals and Objectives:

1. Exchange information and promote an open discussion regarding best available science, technology, and policy on marine and coastal impacts of desalination projects in California and elsewhere.
2. Identify key issues and knowledge gaps for both research and policy development with respect to marine and coastal impacts of desalination in California and elsewhere.

Possible Dialogue Outputs:

1. Report or white paper for the research and NGO communities highlighting key issues and recommendations for further work.
2. One or more policy briefs targeted directly at key decision-makers working on desalination issues in California.
3. Building relationships between the conference sponsors (Stanford, Monterey Bay Aquarium, The Nature Conservancy) and policy-makers and researchers to help move forward on effective work related to marine and coastal impacts of desalination.

Meeting Details:

When: January 14-15, 2016 (1.5 days)

Where: Monterey Bay Aquarium Heritage Harbor Conference Room

Hotel: InterContinental – The Clement Monterey, 750 Cannery Row

Attendees:

The workshop will be attended by a selected group of approximately 35 representatives of NGOs, government agencies, and research institutions focused on marine and coastal environments and water management, primarily in California.

Conference Hosts and Sponsors:

- Stanford University Woods Institute for the Environment: Water in the West and Center for Ocean Solutions
- Monterey Bay Aquarium
- The Nature Conservancy

AGENDA

Thursday, January 14

9:00 – 9:30 **Light Breakfast**

9:30 – 10:00 **Welcome & Introductions**

10:00 – 12:00 **Session I: Potential scope of ocean desalination in California and current regulatory context**

Panel Speakers

Newsha Ajami, Water in the West

Topic: Overview of potential extent of ocean desalination in California, including currently planned or proposed facilities, potential quantities of water, and potential role in California's water supply portfolio.

Tom Luster, California Coastal Commission

Topic: Overview of state policies and regulations with respect to ocean desalination facilities.

Moderated Discussion (Ashley Erickson, Center for Ocean Solutions)

Potential Topics for Discussion:

- Projected water resources outlook for California and the potential role of ocean desalination in the state's water supply portfolio.
- Likely locations of future facilities.
- Role of desalination in the context of other "new" sources of water, including conservation and reclamation.
- Desalination's potential to displace water demand from stressed surface and ground waters.
- How current policies and agency resources will address the challenges of the pace of desalination development in California.

12:00 – 1:00 **Lunch**

1:00 – 2:45 **Session II: Sea water intakes**

Panel Speaker

Peter Raimondi, University of California at Santa Cruz

Topic: Overview of impacts of ocean intakes on the marine environment, mitigation strategies, and implications of the new California policy regarding ocean intakes.

Moderated Discussion (Letise LaFeir, Monterey Bay Aquarium)

Potential Topics for Discussion:

- Comparison of seawater intake approaches.
- Adequacy of existing data, studies, and other information for understanding intake impacts and how best to mitigate them.
- Experience in California with marine impacts of ocean water intakes, including desalination facilities and power plants.
- California policies and regulations, including compensatory mitigation frameworks and assessment of gaps.
- How intake issues, including relevant California policy, affect siting possibilities and decisions.

2:45 – 3:00 **Break**

3:00 – 5:00 **Session III: Siting issues and community impacts**

Panel Speakers

Walter Heady, The Nature Conservancy

Topic: Overview of spatial considerations for desalination development in California including marine and coastal habitats, vulnerability to sea level rise, and other environmental and infrastructure considerations.

Jason Burnett, Mayor, Carmel-by-the-Sea

Topic: Community perspective on desalination approval and siting decisions, including overview of process for proposed desalination facility on the Monterey Peninsula.

Moderated Discussion (Lily Verdone, The Nature Conservancy)

Potential Topics for Discussion:

- Lessons learned from the approval and siting process for desalination plants in California to date.
- The interrelationship between once through cooling power plants and desalination plants, and the potential need to move away from colocation under new California policy regarding intakes.
- Climate impacts of desalination, and impacts of climate change (ocean level rise) on siting decisions.
- The impacts and benefits of desalination facilities for coastal communities.
- The community dynamics related to the need for desalination and the facility approval process.

5:30 – 6:30 **Reception at The InterContinental Hotel – The Clement Monterey**

6:30 – 7:30 **Dinner**

Friday, January 15

8:00 – 9:00 **Breakfast**

9:00 – 10:30 **Session IV: Brine disposal**

Panel Speaker

Phillip Roberts, Georgia Institute of Technology

Topic: Overview of potential marine impacts of brine disposal, state of knowledge about those impacts, and existing technology for brine disposal.

Moderated Discussion (Jeff Koseff, Stanford Woods Institute for the Environment)

Potential Topics for Discussion:

- Adequacy of existing data, studies, and other information for understanding brine impacts and how to best mitigate them.
- Assessment of technologies and methods for mitigation of brine disposal effects.
- How potential impacts may vary in different coastal environments in California.
- California policies and regulations, including assessment of gaps.

10:30 – 10:45 **Break**

10:45 – 12:00 **Session V: Wrap up – Leon Szeptycki, Water in the West**

12:00 – 1:00 **Lunch**

APPENDIX B: PARTICIPANT LIST

Newsha Ajami, Water in the West (Organizing Committee)
Matt Armsby, Resources Legacy Fund
Steven Bay, Southern California Coastal Water Research Project
John Bohn, DeepWater Desal, LLC
Kristi Boosman, Center for Ocean Solutions (Note Taker)
Jason Burnett, Carmel-by-the-Sea, CA
Meg Caldwell, David and Lucile Packard Foundation
Heather Cooley, Pacific Institute
Larry Crowder, Stanford University
Ashley Erickson, Center for Ocean Solutions (Organizing Committee)
Karen Grimmer, Monterey Bay National Marine Sanctuary
Eric Hartge, Center for Oceans Solutions (Organizing Committee)
Walter Heady, The Nature Conservancy (Organizing Committee)
Tim Hogan, Alden Research Laboratory
Charlie Hogg, Stanford University
Susan Jordan, California Coastal Protection Network
Jeffrey Koseff, Stanford Woods Institute for the Environment (Organizing Committee)
Manish Kumar, Penn State University
Letise LaFeir, Monterey Bay Aquarium (Organizing Committee)

Minh Le, Executive Office of the President
Tom Luster, California Coastal Commission
Robert MacLean, California American Water
Sandi Matsumoto, The Nature Conservancy
Barbara Meister, Monterey Bay Aquarium (Organizing Committee)
Molly Melius, Stanford University
Sarah Newkirk, The Nature Conservancy
Joe Phelan, Tenera
Pete Raimondi, University of Santa Cruz
Carol Reeb, Hopkins Marine Station, Stanford University
Philip Roberts, Georgia Institute of Technology
Athena Serapio, Water in the West (Event Coordinator)
Deborah Sivas, Stanford University
Margaret Spring, Monterey Bay Aquarium
Leon Szeptycki, Water in the West (Organizing Committee)
Lily Verdone, The Nature Conservancy (Organizing Committee)
Kristen Weiss, Center for Ocean Solutions (Note Taker)
Paige Welsh, Center for Ocean Solutions (Note Taker)
Vicky Whitney, State Water Resources Control Board
Eric Zigas, Environmental Science Associates

REFERENCES

- Brozovic, N., D.L. Sunding and D. Zilberman. (2007). "Estimating business and residential water supply interruption from catastrophic events." *Water Resources Research* 43(8) 1-14.
- Cayan, D.R., T. Das, D.W. Pierce, T.P. Barnett, M. Tyree, A. Gershunov. (2010). "Future dryness in the southwest US and the hydrology of the early 21st century drought." *Proc. Natl Acad Sci USA* 107(50), 21271-21276.
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For more information visit:

Water in the West

Stanford University
Jerry Yang & Akiko Yamazaki Environment & Energy Building
& Energy Building
473 Via Ortega, MC 4205
Stanford, CA 94305
waterinthewest@stanford.edu
waterinthewest.stanford.edu

Center for Ocean Solutions

Stanford University
Jerry Yang & Akiko Yamazaki Environment & Energy Building
473 Via Ortega, Room 193
Stanford, CA 94305
centerforoceansolutions.org

Monterey Bay Aquarium

866 Cannery Row
Monterey, CA 93940
montereybayaquarium.org

The Nature Conservancy

California Field Office
201 Mission Street, 4th Floor
San Francisco, CA 94105
nature.org



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Lunetta, Kim@SLC

From: armijomca@aol.com
Sent: Saturday, October 14, 2017 12:01 PM
To: CSLC CommissionMeetings
Subject: "Poseidon Desalination Lease Amendment"

Stop the Greedy outsiders from ruining and polluting our Huntington Beach marine life, beaches, and our quality of life with building a toxic desalination plant.

Loving Huntington Beach and quality of beaches, water life and community since 1970!

Lunetta, Kim@SLC

From: Nancy Caruso <nancy@getinspiredinc.org>
Sent: Friday, October 13, 2017 3:12 PM
To: CSLC CommissionMeetings
Subject: Poseidon Action Alert for State Lands Commission

State lands Commission.
100 Howe Ave Suite 100 south
Sacramento CA. 95825

Re: Poseidon Desalination Project

Dear Commissioners:

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. I am a marine biologist whose dedicated my life to protecting and restoring the Kelp Forests of Orange County. I oppose the Project as proposed for these reasons:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally superior options for future water supplies. The use of seawater desalination should only be a "last resort" element of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Thank You,

Capt. Nancy L. Caruso
Marine Biologist/ Founder
Get Inspired
www.GetInspiredinc.org
714-206-5147

From: Glenn Cornell (gcornell6@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Saturday, October 14, 2017 11:20 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Glenn Cornell
2004 Velez Drive
RANCHO PALOS VERDES, CA 90275
gcornell6@gmail.com
(310) 831-3033

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Penny Elia (greenp1@cox.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Saturday, October 14, 2017 9:33 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Penny Elia
30632 Marilyn Dr
Laguna Beach, CA 92651
greenp1@cox.net
(949) 499-4499

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Penny Elia <greenp1@cox.net>
Sent: Monday, October 16, 2017 10:23 AM
To: CSLC CommissionMeetings
Subject: Poseidon Desalination Lease Amendment
Attachments: PastedGraphic-1.tiff

Ocean desalination:

- Kills Marine life.
- Wastes enormous amounts of energy.
- Adds industrialization to the neighborhood.
- Will tear up our streets and cause traffic jams for years of construction.
- Costs a fortune.
- **AND WE DON'T NEED THE WATER!!**

Orange County has many water supply options that are less expensive and better for the environment and our community, including conservation, recycling and stormwater capture.

We don't want it!

The Poseidon project uses outdated and environmentally harmful technology that kills marine life and wastes energy.

Desalination plants can be designed to minimize marine life mortality, water quality degradation, and coastal habitat degradation. The State Water Resource Control Board has developed a policy on proper site, design and technology for ocean desalination proposals. Poseidon's project does not meet any of these recommendations.

But even when designed properly, the impacts from construction and the energy waste from operation make desalination an "option of last resort." We can't support any desalination facility when there are superior alternatives – **AND THERE ARE MANY SUPERIOR ALTERNATIVES!**

Tell the State Lands Commission:

- Don't certify the Poseidon Environmental Impact Report, it is incomplete.
- Poseidon's proposal does not meet state requirements to protect marine life.
- There is no demonstrated need for desalinated water in Huntington Beach.
- It will set back California's efforts to advance climate-smart water policy.
- We don't need the Poseidon water. Better water supply options that protect our coast and ocean should be fully implemented before approving ocean desalination facilities. Orange County hasn't done that yet.

The State Lands Commission (SLC) has a duty to:

Protect the lands and resources entrusted to its care through balanced management, marine protection and pollution prevention, adaptation to climate change, and ensuring public access to these lands and waters for current and future generations.

Lunetta, Kim@SLC

From: Lynn Friedman <haus2ful@gmail.com>
Sent: Sunday, October 15, 2017 1:25 PM
To: CSLC CommissionMeetings
Subject: Poseidon Desalination Lease Amendment

Dear State Lands Commissioners,

Please listen to the residents of Huntington Beach and neighboring cities who are affected by the Poseidon Project. My husband and I wish to be counted in as very opposed to this desalination plant, there are much more cost efficient projects that can be put in place that do not have the environmental negative impact that this Poseidon project will have. Let's start with what is reasonable and proven effective with little or no environmental impact- ie more sewage treatment, introducing more runoff into groundwater etc. We have many tried and true ways of providing more water and this is not one of them. This is so environmentally insensitive it should be the last project ever considered. We do not need this water either.

Vote NO on the Poseidon Project.

NO

Concerned residents of northern coastal Newport Beach, Lynn and Jeff Friedman
3704 Channel Place
Newport Beach, CA 92663

Lunetta, Kim@SLC

From: Angelica Gonzalez (angelica.gonzalez@sierraclub.org) Sent You a Personal Message
<automail@knowwho.com>
Sent: Thursday, October 12, 2017 12:01 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future. I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally superior options for future water supplies. The use of seawater desalination should only be a "last resort" element of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Angelica Gonzalez
2150 Victoria Way
Pomona, CA 91767
angelica.gonzalez@sierraclub.org
(213) 387-4287

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Beckwith, Chris@SLC
Sent: Tuesday, July 25, 2017 11:31 AM
To: CSLC Senior-Staff
Subject: FW: I oppose the desalinization plant in Huntington Beach

FYI - Not sure who would take comments like this.

Chris Beckwith
Chief, Marine Environmental Protection Division California State Lands Commission
200 Oceangate, Suite 900
Long Beach, CA 90802
(562)499-6312 Office
(562)499-6317 Fax
(510)323-3449 Cell

-----Original Message-----

From: Carol Jean Hicks [mailto:cjhicks66@gmail.com]
Sent: Tuesday, July 25, 2017 11:00 AM
To: Beckwith, Chris@SLC <Chris.Beckwith@slc.ca.gov>
Subject: I oppose the desalinization plant in Huntington Beach

Dear Chris, I just wanted to register my husband's and my disapproval of the desalinization plant in Huntington Beach and the large company that is pushing it through. I grew up in Huntington Beach when it was not a very nice place to live but it is now, and I think that it will be very likely to stay that way without an unsightly plant. I do see the need for desalinization, eventually, and hope there will be a way to accommodate such a project but in a more environmentally friendly way.

Sincerely, Carol Hicks Los Angeles California

Lunetta, Kim@SLC

From: Peter Hoyt <peter.d.hoyt@gmail.com>
Sent: Friday, October 13, 2017 11:35 PM
To: CSLC CommissionMeetings
Cc: 'Vijayadharan'
Subject: Poseidon Desalination Lease Amendment

Dear Sirs,

I strongly oppose permitting and building the Poseidon Desalination Plant

- Don't certify the Poseidon Environmental Impact Report, it is incomplete.
- Poseidon's proposal does not meet state requirements to protect marine life.
- There is no demonstrated need for desalinated water in Huntington Beach.
- It will set back California's efforts to advance climate-smart water policy.
- We don't need the Poseidon water. Better water supply options that protect our coast and ocean should be fully implemented before approving ocean desalination facilities. Orange County hasn't done that yet.

Peter

Peter D. Hoyt
949-722-9009 Office & Cell
949-283-1698 Cell
949-722-7756 Fax



Virus-free. www.avast.com

Lunetta, Kim@SLC

From: Deirdre Jacobson (d_jacobson2@u.pacific.edu) Sent You a Personal Message
<automail@knowwho.com>
Sent: Friday, October 13, 2017 10:20 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Deirdre Jacobson
1520 Grand Ave
Piedmont, CA 94611
d_jacobson2@u.pacific.edu
(510) 457-6622

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

From: Alex Kanavalchyk <alex@coastkeeper.org>
Sent: Monday, October 09, 2017 12:13 PM
To: CSLC CommissionMeetings
Subject: We need to stop Poseidon

Dear Commissioners:

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future. I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
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- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally superior options for future water supplies. The use of seawater desalination should only be a "last resort" element of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Thank You,

Alex Kanavalchyk

Lunetta, Kim@SLC

From: Kathy Knight (kathyknight66@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Saturday, October 14, 2017 1:22 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
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- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Kathy Knight
1122 Oak St.
Santa Monica, CA 90405
kathyknight66@gmail.com
(310) 613-1175

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Sharon Koch (slkoch@ix.netcom.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Saturday, October 14, 2017 1:25 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

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- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Sharon Koch
4250 PARK NEWPORT
NEWPORT BEACH, CA 92660
slkoch@ix.netcom.com
(949) 717-7745

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: m kong <hawaiianhawk@yahoo.com>
Sent: Monday, October 16, 2017 9:34 AM
To: CSLC CommissionMeetings
Cc: Banning Ranch Conservancy
Subject: Poseidon Desalinization Lease Proposal

Dear Sirs,

I oppose the Poseidon Desalinization project. This project is not only not wanted it is not needed by Orange County. Our water usage has gone down even with a growing population. It is also outdated technology that requires huge amounts of energy to operate, is environmentally disastrous to marine life and will emit huge amounts of green house gases.

The desalinization plant in San Diego is a prime example of the folly of building these type of plants. Not only did the cost of water go up but the demand for the water went down by the use of conservation and prudent regulation. Why should the rate payers pay more for something they don't need?

By using Las Vegas as our model we would be better able to meet our water needs in the future. Banning all lawns, raising the prices for excessive water use, limiting the hours in which watering can be done and requiring all new construction to be LEED Platinum for water and energy usage; that is the way to ensure water for future generations.

Thank You,

Mel Kong

Lunetta, Kim@SLC

From: Steve Kretzschmar <STEV EKRETZSCHMAR@hotmail.com>
Sent: Monday, October 16, 2017 8:42 AM
To: CSLC Commission Meetings
Subject: Poseidon Desalination Lease Amendment

We do not want a desalination plant in Huntington Beach. It will ruin our beaches, wildlife, and ocean water quality for generations to come. We do not need it.

From: Ira Lee <unix1944@gmail.com>
Sent: Sunday, October 15, 2017 3:40 PM
To: CSLC CommissionMeetings
Subject: Fwd: Poseidon Desalination Lease Amendment

The Poseidon Desalination plant is neither needed nor wanted. Please see the comments below:

1. Orange County Water District engineers determined that an additional source of water such as the Poseidon plant is not needed. Not satisfied the OCWD hired an independent consultant who reached the same conclusion.
2. The desalinated water from the Poseidon plant will cost the residents much more when in fact the plant is not needed.
3. NASA scientists have projected that the Huntington Beach coast line where the proposed Poseidon plant is to be located will be under water due to rising ocean waters in the 2030's (or sooner). The University of California at Irvine concurs with NASA's conclusion. That means this expensive and unnecessary project will have a limited lifetime.
4. It's my understanding that the salt removed from the water taken in will be returned to the ocean. This will increasingly raise the level of salt in the local area which will be detrimental to some of the sea life.
5. The location of the proposed plant is adjacent to a hazardous waste dump and the AES power plant which is going to be demolished and rebuilt. Additionally, the storage tanks in the "Magnolia Tank Farm" are being disassembled so that a small residential community can be built. There is too much change/activity localized in the area .
6. The Poseidon plant will require ripping up streets so that pipes to transport the desalinated water can be installed. Dust, noise and much congestion will result.
7. Once in operation the noise level in adjacent communities will be increased. In general the plant will have a negative impact on the neighboring residential areas.

PLEASE don't certify the Poseidon Environmental Impact Report. It is incomplete Poseidon's proposal does not meet state requirements to protect marine life. There is no demonstrated need for desalinated water in Huntington Beach. It will set back California's efforts to advance climate-smart water policy. We don't need the Poseidon water. Better water supply options that protect our coast and ocean should be fully implemented before approving ocean desalination facilities. Orange County hasn't done that yet.

Lunetta, Kim@SLC

From: Fran Leibowitz <franleibowitz@socal.rr.com>
Sent: Saturday, October 14, 2017 1:42 PM
To: CSLC CommissionMeetings
Subject: Poseidon Desalination Lease Amendment

!!! No Po\$eidon !!!

The State Lands Commission (SLC) has a duty to:

Protect the lands and resources entrusted to its care through balanced management, marine protection and pollution prevention, adaptation to climate change, and ensuring public access to these lands and waters for current and future generations.

PLEASE don't certify the Poseidon Environmental Impact Report. It is incomplete.

- Poseidon's proposal does not meet state requirements to protect marine life.
- There is no demonstrated need for desalinated water in Huntington Beach.
- It will set back California's efforts to advance climate-smart water policy.
- We don't need the Poseidon water. Better water supply options that protect our coast and ocean should be fully implemented before approving ocean desalination facilities. Orange County hasn't done that yet.

We don't want ocean desalination!

The Poseidon project uses outdated and environmentally harmful technology that **kills** marine life and **wastes** energy.

In addition, it:

- Will add dust and who knows what kind of toxicity to our air that could make us sick or even kill us.
- Adds industrialization to the neighborhood.
- Will tear up our streets and cause traffic jams for years of construction.
- Costs a fortune.
- **AND WE DON'T NEED THE WATER!!**

Orange County has many water supply options that are less expensive and better for the environment and our community, including conservation, recycling and storm water capture.

From: Bradley Lowe <btlowe@cox.net>
Sent: Monday, July 24, 2017 7:44 PM
To: CSLC CommissionMeetings
Subject: Submission of written public comment - Oppose Huntington Beach Desal Plant

Please oppose the proposed plant on the following grounds:

1. **The water produced is unnecessary:** Orange County's most recent water plan indicates that Orange County can meet all of its water needs through at least 2040 without investing in a pricey desalination facility.
2. **Desalination does not offset its huge energy use:** ocean desalination uses over 10 times more energy than water recycling, according to an Inland Empire Utilities Agency report. In Carlsbad, Poseidon claimed that the Carlsbad plant would be carbon neutral by offsetting water that would otherwise be imported. But the amount of water we import has not been reduced.
3. **Polluting our coast and poisoning fisheries:** The brine discharge from the plant will degrade water quality and threaten marine life. In less than a year, the Carlsbad desalination plant has had several water quality violations.
4. **The proposed plant uses outdated technology that does not meet current standards:** Last year, California adopted a statewide desalination policy to help minimize harm to the state's coastline and its wildlife, according to the California Environmental Protection Agency. The nearly completed Carlsbad plant was exempted from the new requirement that its seawater intake be placed below the sand rather than exposed to open water — so as water is pulled in, marine life is destroyed. The design of the proposed Huntington Beach plant mirrors the same obsolete technology that has been exempted in Carlsbad.
5. **A billion-dollar desalination plant is not the most cost-effective source of water:** Just this month, the Pacific Institute released a report that confirms desalination is by far the most expensive water supply option available.
6. **Environmental risks:** Orange County plant is proposed to be built on an earthquake fault in a tsunami run-up zone that is subject to encroaching sea-level rise. Poseidon has not adequately studied alternative sites for the plant. Moreover, adding desalinated water would degrade the groundwater aquifer. Mitigation would require the desalinated water to go through a second round of treatment before use, further increasing the cost of the water produced.

Bradley Lowe
San Diego, California 92107

Lunetta, Kim@SLC

From: celeste lowell (18clowell@slvusd.org) Sent You a Personal Message
<automail@knowwho.com>
Sent: Friday, October 13, 2017 9:19 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

celeste lowell
15270 fern ave
Boulder creek, CA 95006
18clowell@slvusd.org
(541) 821-6853

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Mrdi <mrdi2003@yahoo.com>
Sent: Monday, October 16, 2017 5:18 AM
To: CSLC CommissionMeetings

Please do not approve the Poseidon project for Huntington Beach. The impact on the Coastal environment will be tremendously detrimental.

Lunetta, Kim@SLC

From: Brian Peterson (bmoney916@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Wednesday, October 11, 2017 11:41 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future. I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally superior options for future water supplies. The use of seawater desalination should only be a "last resort" element of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Brian Peterson
1764 Mission St
San Francisco, CA 94103
bmoney916@gmail.com
(503) 962-9974

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: MARLENE Shiner <mshiner5@msn.com>
Sent: Saturday, October 14, 2017 2:52 PM
To: CSLC CommissionMeetings
Subject: Proposed Desalinization Plant in Huntington Beach

To Whom It May Concern:

My husband and I are opposed to the desalinization plant in Huntington Beach for many reasons: 1) There should be more dams/reservoirs/aquafirs built to catch water and store when we do have rainy years instead of it going out to sea and being wasted. 2) The out put/input will ruin marine life. We are avid fishermen. 3) The cost is astronomical—why should we residents pay more than we do now with sufficient aquafirs/water tables in OC—especially during rainy years? 4) look at all the problems associated with the Carlsbad Desalinization plant—very costly and not utilizing their plant like they said it would produce.

Please deny this in Huntington Beach!

Marlene & Dan Shiner

Sent from my iPhone

Lunetta, Kim@SLC

From: Dan Silver <dsilverla@me.com>
Sent: Monday, October 16, 2017 9:36 AM
To: CSLC CommissionMeetings
Subject: Poseidon Desalination Lease Amendment

Honorable Commissioners:

Endangered Habitats League opposes the lease amendment. Poseidon violates the public trust in terms of destruction of marine resources. And there is no need for the project. Water conservation is a proven and reliable method which has barely been tapped.

Thank you for considering our views.

Dan Silver

Dan Silver, Executive Director
Endangered Habitats League
8424 Santa Monica Blvd., Suite A 592
Los Angeles, CA 90069-4267

213-804-2750
dsilverla@me.com
www.ehleague.org

Lunetta, Kim@SLC

From: Donald Woods (limmmmits@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Saturday, October 14, 2017 4:32 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Donald Woods
3325 Tilden Ave
Los Angeles, CA 90034
limmmmits@gmail.com
(424) 832-3391

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

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RESIDENTS
FOR RESPONSIBLE
DESALINATION



State Lands Commission.
100 Howe Ave. Suite 100 South
Sacramento, CA 95825

RE: Poseidon-Huntington Beach Desalination Project "Purpose and Need"

Dear State Lands Commissioners,

We have recently become aware that the Municipal Water District of Orange County (MWDOC) and Orange County Water District (OCWD) have submitted letters to the State Lands Commission ("Commission") discussing the Purpose and Need for the proposed Poseidon Huntington Beach desalination project ("project"). We are writing to put those letters in the context of the upcoming decision before the Commission to certify, reject, or revise the Final Supplemental Environmental Impact Report (SEIR). Further, we hope to address some of the misleading statements in the letter submitted on September 8th 2017 by OCWD.

In summary, we strongly disagree that the OCWD letter and referenced documents show an unquestionable need for the project. However, we agree with the implicit message that the documentation of need has changed since 2010. Specifically, more recent and accurate information demonstrates that there is no need for 50 million gallons per day (mgd) of water that the project, as currently proposed, may produce. Accordingly, the Commission's supplemental EIR is inadequate; the Commission instead must prepare a subsequent EIR that accounts for this new and more accurate information.

Context and requirements under CEQA and the California Ocean Plan

A coalition of environmental organizations, including those of us writing this letter, submitted extensive comments to the Commission regarding the inadequacies in the Draft SEIR. Among those inadequacies is the fact that CEQA requires the Commission to prepare a *subsequent* EIR to document and address all of the substantial changes that have occurred since the City of Huntington Beach ("City") approved the existing, now-outdated SEIR in 2010. Included in those changed circumstances is the purported "need" for the facility. This is critical information for CEQA review given that adequately documenting and addressing a project's potential adverse impacts is dependent on having up-to-date analysis of the "Purpose and Need" for the project, as well as alternatives that may be necessary to avoid or minimize significant impacts, while meeting project objectives. In addition, specific and accurate documentation of the need for the water produced by a proposed ocean desalination facility is required to ensure compliance with the California Ocean Plan's provisions regarding ocean desalination ("Ocean Plan").

We strongly disagree with the implication in the OCWD letter that there is now a concrete need for the proposed Poseidon project. Equally important, the letters submitted by OCWD and

MWDOC highlight the need for an updated analysis of the "Purpose and Need" for the project as well as alternatives that would minimize the project's significant impacts. The information provided by both agencies was developed long after the 2010 SEIR was certified, and the Draft SEIR did not allow for public comment on these updated changes to the purpose and need for the project.

Further, Poseidon is requesting an exemption from using the preferred subsurface intake technology as provided in the Ocean Plan. The Ocean Plan includes a presumption that project proponents will use sub-surface intakes in order to minimize the intake and mortality of all forms of marine life, as required by the California Water Code. The Ocean Plan is also clear that project proponents cannot argue that sub-surface intakes are infeasible without analyzing a reasonable range of alternative facility sizes and intake design capacities, which in turn require accurate documentation of the need for the volume of water that a project might produce. Therefore, the issue raised in the letters from OCWD and MWDOC supports expanding the scope of the Draft SEIR to ensure it adequately discusses and analyzes the need for the project's water, and from there, whether any proposed or potential project modifications are consistent with the Ocean Plan.

Lack of need for project water

The Commission's current SEIR unreasonably makes the assumption that the Poseidon desalination facility is needed to produce 50 mgd of desalinated water. It is important to note that this figure originated in the original 2005 EIR certified by the City and was carried over, without careful analysis, into the 2010 SEIR certified by the City. However, this assumption is no longer reasonable, if it ever was. A careful review of recent Urban Water Management Plans (UWMPs) for the OCWD's member agencies show a clear trend in significant reductions in cumulative demand for water in the OCWD service area since 2005, and even since 2010.¹ The most recent UWMPs do not show a certain demand for 50 mgd of desalinated water, as would be necessary (although not sufficient) to justify a project of the project's proposed size and design. In fact, the letter from MWDOC states expressly that: "...neither the UWMP nor the [MWDOC Orange County Water] Reliability Study state that the Poseidon project is specifically necessary to meet Orange County's future water supply needs."

Further, the OCWD letter says the term sheet provides the structure to "implement" the project. That is incorrect. The term sheet is only a summary document that provides minimal information on implementation of the project. The direct language from the term sheet states as follows (emphasis added):

The purpose of this Term Sheet is to set forth the basis for negotiations toward a possible Contract between the Parties. The proposed terms and conditions set forth herein represent the current intention of the Parties, do not bind either Party in any manner, and in particular do not commit the Buyer to purchase Product Water. This Term Sheet is a summary only and is not comprehensive or definitive. The Parties do not intend to be legally bound until definitive agreements related to the Project, including without limitation the Contract, are executed by the Parties, and either Party is free to terminate negotiations at any time following written notice to the other Party without any liability or obligation to the other Party.

¹ See attached "Fryer Report" which was also attached to our comment letter.

No decision to purchase project water or implement the project has been made. On the contrary, the largest retail agency in the OCWD membership, Irvine Ranch Water District, has consistently raised points of opposition to the project on the basis that cheaper and better alternatives are available. And as evidence that there is no certain demand for the water, or any commitment to purchase the water, the OCWD letter clearly states that OCWD has made no conclusions on how to deliver or use the project's water. There is only a vague reference to potentially using the project's water to prevent seawater intrusion.

We also note that the 2015 OCWD Groundwater Management Plan² referenced in the OCWD letter overestimated future water need by 90,000 acre feet per year (AFY) when compared to the more recent 2016 MWDOC Orange County Water Reliability Study³ that used statistical modeling to estimate future water use. As documented in the attached "Fryer Report," as well as in the MWDOC Reliability Study, the previous simplistic demand forecasting repeatedly resulted in overestimates of demand in Orange County UWMPs. OCWD's overly simplistic model has been superseded by the December 2016 MWDOC Reliability Study, which uses more complete analysis and provides for a more accurate demand forecast.

The MWDOC Reliability Study itself predicts an average of 6,400 AFY of need for water from any new source in the OCWD service area by 2040. Also at the July 6, 2016 public workshop on how to distribute Poseidon's water, OCWD staff concluded that 10,000 AFY was a more feasible amount of water for the project.⁵

In light of these recent analyses, the pie charts in the OCWD letter present an incomplete, and inaccurate view of OCWD's anticipated future water supply. They are based on an old demand prediction and do not reflect the cumulative decrease in demand as forecasted in the MWDOC Reliability Study and MWDOC Urban Water Management Plan – as well as every OCWD member agency. In fact 2016 demand was down 24% per the governor's conservation order and so far in 2017 demand remains down 19%. The charts in the OCWD letter also fail to account for the reasonably foreseeable addition of 65,000 AFY that would be delivered to the Orange County Basin by the Carson Indirect Potable Reuse project – completely eliminating the need for the 56,000 AFY proposed by Poseidon as well as an eliminating an additional need for 9,000 AFY of imported water to the Orange County region. Further, the cheaper water from the Carson project would require its own injection and withdrawal wells, arguably compounding the unresolved problem of how to inject the Poseidon water into the basin.

More accurate depiction of Orange County water needs and potential role of new sources

Figures 1 through 3 below are based on the 2016 MWDOC Orange County Water Reliability Study. They show that the water produced by the Poseidon Huntington Beach desalination project, as currently proposed, would be far more than needed is needed to meet area needs. They also show that water supplied by the planned Metropolitan Water District Carson Indirect Potable Reuse Project and other sources eliminate the need for water from the project.

Conclusion

² https://www.ocwd.com/media/3503/groundwatermanagementplan2015update_20150624.pdf

³ http://www.mwdoc.com/Uploads/OC%20Study%20Executive%20Report_with%20Appendices_1-4-2017%20FINAL%20Low%20Resolution.pdf

For all of these reasons we urge the State Lands Commission to reassess the purpose and need for the project in a subsequent EIR that considers the more recent – and more accurate – sources of information cited herein.

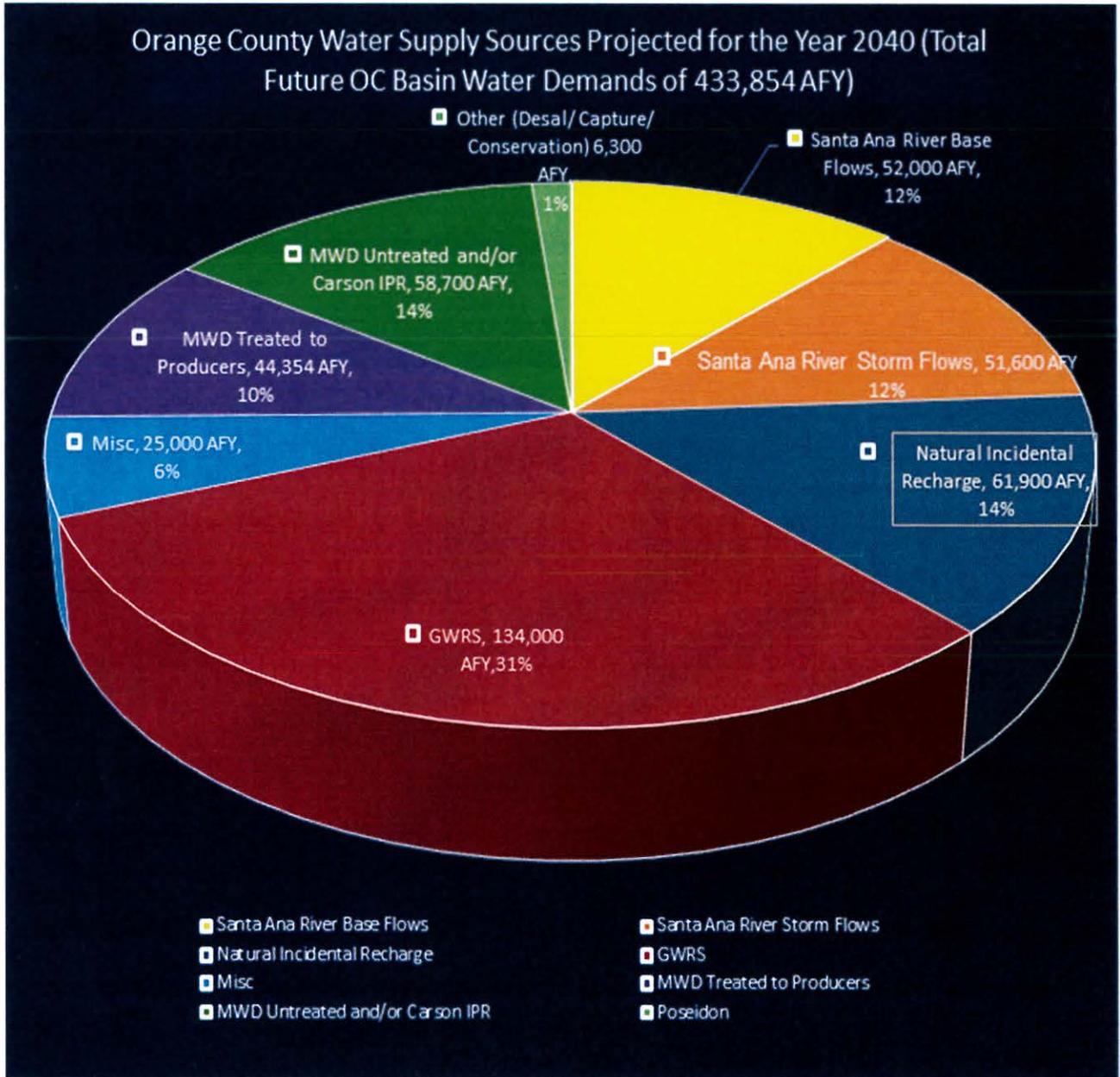


Figure 1. This figure shows average potential 2040 “new” water need that could be filled through investment in conservation, recycling, stormwater capture, or desalination, or a combination thereof. Such investment is needed to provide approximately 1% of OCWD’s anticipated future water supply. This chart is based on the 2016 MWDOC Orange County Water Reliability Study. The 6,300 AFY in the “Other” category is the estimated “average” annual additional need in 2040, and accounts for multiple dry years.

Orange County Water Supply Sources Projected for the Year 2040 Without Desal (Total Future OC Basin Water Demands of 433,854 AFY)

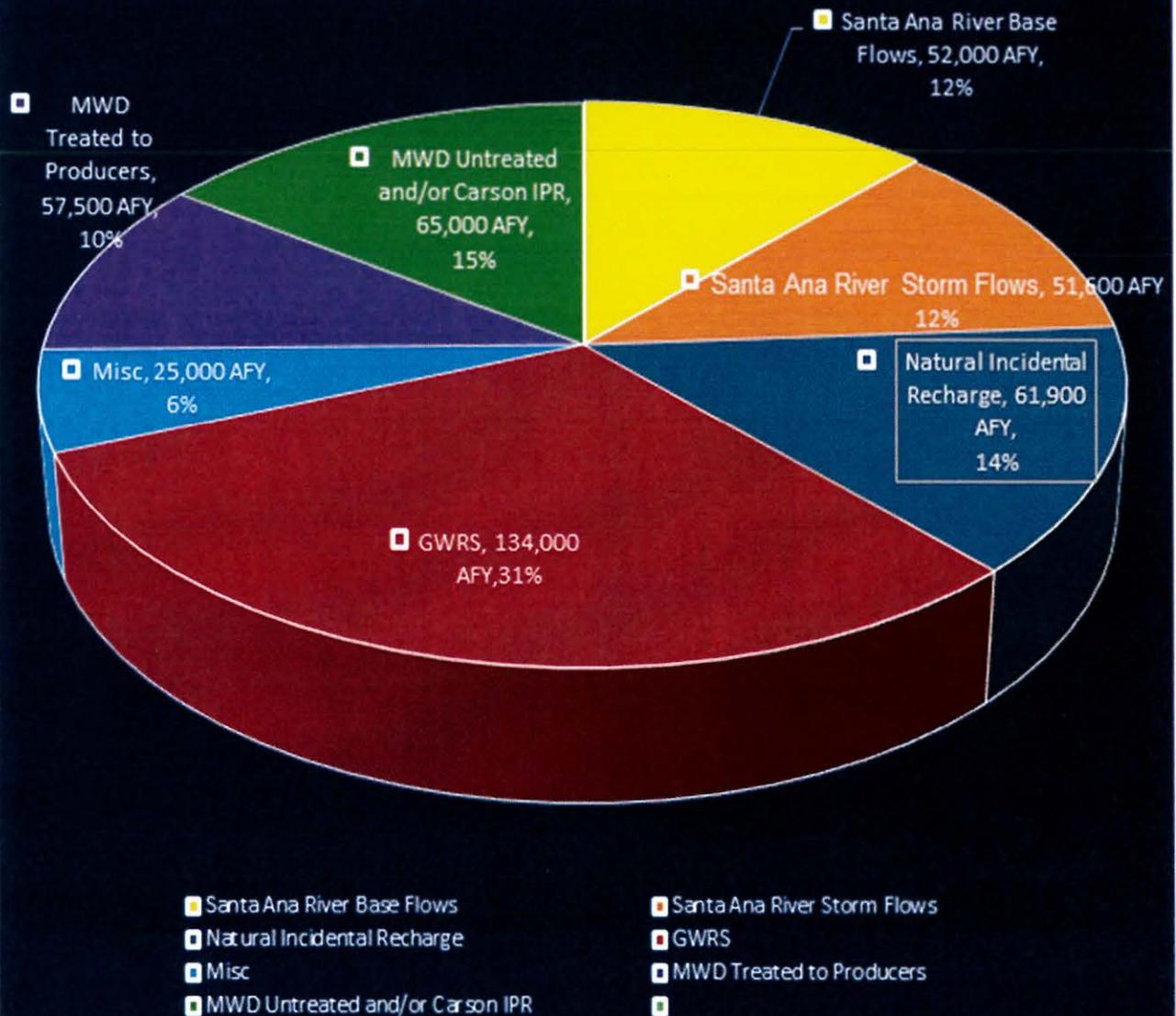


Figure 2. As an example, the planned Carson Recycled Water Project is likely to be sufficient to cover the entire projected increase in “new” water need for 2040.

Poseidon Yield Example for OCWD

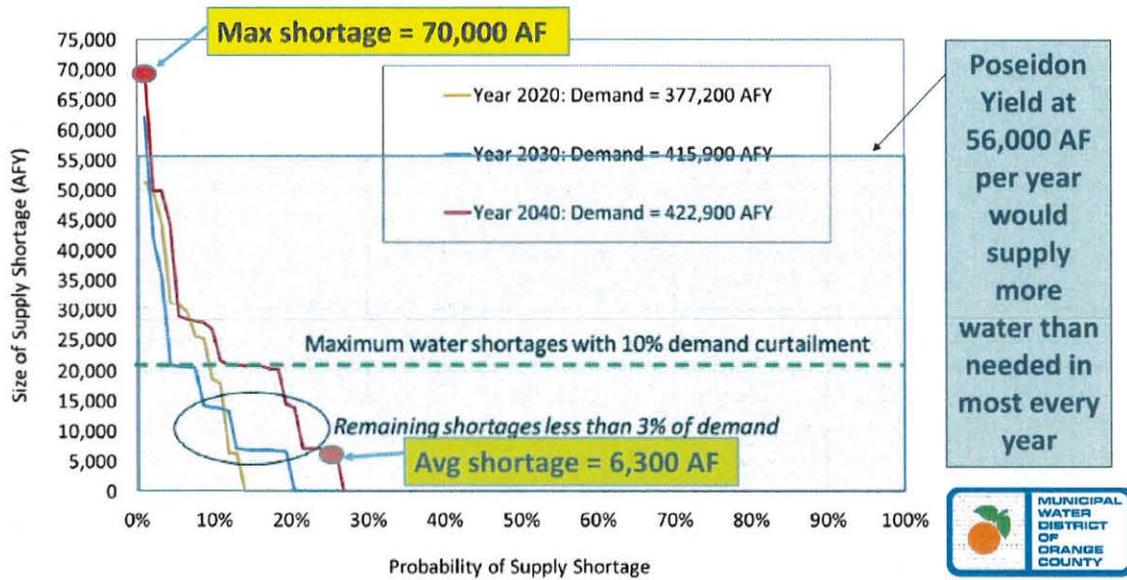


Figure 3. This slide from the February 6, 2017 MWDOC presentation on the Orange County Water Reliability Study shows that “Poseidon yield at 56,000 AFY would supply more water than needed in most every year”



October 13, 2017

The Honorable Gavin Newsom
Chairman, California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA 95825

Re: **Written Comments on Agenda Item 97** – AES Huntington Beach LLC and Poseidon Resources (Surfside) LLC (Co-Lessees): *Certification of the SEIR and Consideration of Lease Amendment*

Dear Chairman Newsom:

The Irvine Ranch Water District (IRWD) is a progressive urban water agency that provides high-quality drinking water, reliable wastewater management, groundbreaking recycled water programs, and environmentally-sound urban runoff treatment to more than 390,000 residents and a daytime population of 530,000 in Central Orange County. As the largest retail water agency in Orange County, the District has a vested interest and is a key stakeholder in the State Lands Commission's decision related to the certification of the Supplemental Environmental Impact Report (SEIR) and proposed lease modification for the proposed Seawater Desalination Project at Huntington Beach (Deal Project).

In July 2017, IRWD's legal counsel, Nossaman, LLP, submitted a comment letter explaining IRWD's concerns with portions of the environmental analysis in the SEIR. Please know that IRWD is not categorically opposed to seawater desalination, but is concerned about the potential environmental impacts of the Desal Project—particularly, those impacts related to changes in the project over the last seven years since it was fully evaluated in the City of Huntington Beach's Final Subsequent Environmental Impact Report, State Clearinghouse No. 2001051092 (2010) (FSEIR).

We offer the following comments to assist the Commission in deciding the matters before it:

- 1) IRWD has an interest in high quality and reliable water supplies for Orange County, but the proposed Desal Project could harm the quality of Orange County's water supplies. This potential environmental impact should be evaluated in a comprehensive environmental review of the project.**

Water from the Desal Project would replace better quality supplies that are currently being used by IRWD. This could result in significant environmental impacts and impair IRWD's ability to deliver high-quality water to its customers. New information on water quality impacts to IRWD's water supplies is now available. These impacts were not evaluated in the FSEIR or the SEIR. A comprehensive environmental review of these impacts should be conducted, taking into consideration a range of distribution options for the water produced from the project.

- 2) Current concepts for distributing water from the Desal Project show that it would result in the replacement of existing low-cost and reliable water supplies, and result in the discharge of more stormwater to the ocean that could otherwise have been recharged to the groundwater basin.**

The FSEIR evaluated distribution options for the Desal Project water that would have displaced low-cost and reliable imported supplies. The options for distributing the project water have changed since the

FSEIR was certified. The most current and publicly disclosed concepts for the distribution of the water by the Orange County Water District (OCWD) show that the desalinated seawater would replace other existing low-cost and reliable water supplies. This replacement of existing supplies would result in hundreds of thousands of acre-feet of free stormwater that could have been recharged to the aquifer being sent to the ocean over the life of the Desal Project. This should be considered in a comprehensive environmental review of the project prior to the lease amendment being approved.

3) As proposed, the Desal Project is a solution in search of a problem.

No water agency has committed to purchase and distribute the continuous water supply from the Desal Project because existing supplies and lower-cost alternatives are available in Orange County. Investments in existing water supply reliability projects, such as water banking projects, brackish groundwater desalination projects and recycled water systems are providing and will continue to provide reliable water supplies at a fraction of the cost of the proposed project.

4) Common sense alternatives to the Desal Project have not been considered or evaluated in the SEIR.

Projects, such as OCWD's final expansion of its Groundwater Replenishment System, are already proceeding and will continue to improve water supply reliability in Orange County. Additionally, other lower-cost regional and local supply projects have already been identified that would ensure water supply reliability in Orange County. Improvements in water supply reliability could also occur through improved management of existing supplies and optimizing the use of storage in the Orange County Groundwater Basin. These projects and management strategies should be evaluated in a comprehensive environmental review of the Desal Project to ensure that the project is being compared against an appropriate and reasonable set of alternatives.

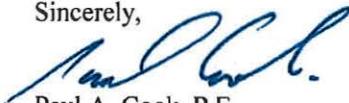
IRWD's Request of the Commission:

Based on the concerns described above and the detailed comments provided by IRWD's legal counsel, the District requests that:

"The State Lands Commission defer consideration of the lease amendment until after a comprehensive environmental review of the changed project has been completed that includes a full evaluation of alternatives, an evaluation of current and foreseeable distribution options, and considers all newly available information."

Conducting such a review would give the Commission the appropriate information it needs to consider the lease amendment. Thank you in advance for taking our comments into consideration. Please do not hesitate to contact me at (949) 453-5590 if we can be of assistance to you or your staff, or if you would like more information about our concerns.

Sincerely,



Paul A. Cook, P.E.
General Manager

cc: Jennifer Lucchesi, Executive Director, State Lands Commission

Christopher W. Garrett
Direct Dial: +1.858.523.5458
christopher.garrett@lw.com

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LATHAM & WATKINS LLP



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Milan	

File No. 036182-0021

August 23, 2017

VIA EMAIL AND U.S. MAIL

Jennifer Lucchesi
Executive Officer
California State Lands Commission
100 Howe Ave, Suite 100-South
Sacramento, California 95825-8202

Cy Oggins
Environmental Planning and Management Division Chief
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, California 95825-8202

Re: California Coastkeeper Alliance Letter re: Huntington Beach Desalination Project

Dear Ms. Lucchesi and Mr. Oggins:

On behalf of Poseidon Resources (Surfside) LLC ("Poseidon"), we submit the following letter to respond to comments about the State Lands Commission's ("SLC") use of a supplemental environmental impact report ("SEIR") to analyze proposed technical modifications to the Huntington Beach Desalination Plant Project ("Project"). We appreciate your hard work on the SEIR and thank you for reviewing public comments over this comment period.

Certain comments suggest that the SLC should have taken over as lead agency for the Project. However, the California Environmental Quality Act ("CEQA") permits the SLC to prepare an SEIR as a responsible agency. As described in our December 26, 2016 comment letter to the SLC regarding the SLC's review of the amended lease for the Project, the Project has already undergone an extensive environmental review by several agencies. (*See* Letter from Christopher W. Garrett, Lathan & Watkins LLP, to Jennifer Lucchesi and Cy Oggins, State Lands Commission, dated December 26, 2016 [attached hereto as Exhibit 1].) The SLC is the next agency required to issue a discretionary approval for the Project, and has done so in compliance with CEQA Guidelines sections 15162-15164 through the SEIR, appropriately limiting its review to analyze the incremental impacts associated with the Project's technological enhancements. This process is not out of the ordinary and falls squarely under CEQA.

LATHAM & WATKINS^{LLP}

Other comments suggest that SLC erred by preparing a “supplemental” EIR and not a “subsequent” EIR. Again, as described in our previous letter, CEQA and California case law only require a supplemental EIR in this situation, where only limited modifications are proposed to an already-analyzed Project. (Ex. 1 at pp. 5–7.)

Lastly, some commenters assert that the Santa Ana Regional Water Quality Control Board (“Regional Board”) and the Orange County Water District (“OCWD”) will be conducting future CEQA analysis of the Project. This claim ignores the clear statements in the SEIR confirming that any further CEQA analysis by these agencies is entirely speculative.

The SEIR explains that the Regional Board is currently conducting a California Water Code section 13142.5, subdivision (b) analysis for the Project, and confirms that no new CEQA analysis will be required if the Project remains at its current site. (SEIR at p. 1-8.) Likewise, the SEIR cites a letter from OCWD confirming that OCWD has not yet decided how it will use water from the Project, as “[d]ecisions by the Regional Board and the other permitting agencies may result in new or different information that could increase the cost of the desalinated water and/or modify OCWD’s plans for using and distributing the water.” (SEIR at p. 1-12.) Thus, it is entirely speculative to say that the Regional Board or OCWD will conduct future CEQA analysis, as neither agency has definitively determined its next steps. At this time, the only CEQA analysis that is required for the Project is the analysis that the SLC is conducting in the SEIR.

Based on our review, nothing in the public comments on the SEIR calls into question the SLC’s decision to prepare a SEIR for the Project. As discussed above and in our December 26, 2016 letter, it is entirely appropriate for the SLC to act as the responsible agency under CEQA and prepare a supplemental EIR rather than a subsequent EIR for the Project’s technological enhancements. Further, it is speculative at this juncture to claim that the Regional Board or OCWD will require future CEQA analysis for the Project.

Sincerely,

Christopher Garrett

Christopher W. Garrett
of LATHAM & WATKINS LLP

cc: Mark Meier, Chief Counsel, State Lands Commission
Kathryn Colson, Staff Counsel, State Lands Commission
Scott Maloni, Poseidon Resources

Commissioners

Eric Sklar, President
Saint Helena

Jacque Hostler-Carmesin, Vice President
McKinleyville

Anthony C. Williams, Member
Huntington Beach

Russell E. Burns, Member
Napa

Peter S. Silva, Member
El Cajon

STATE OF CALIFORNIA
Edmund G. Brown Jr., Governor

Valerie Termini, Executive Director
1416 Ninth Street, Room 1320
Sacramento, CA 95814
(916) 653-4899
www.fgc.ca.gov

Fish and Game Commission



*Wildlife Heritage and Conservation
Since 1870*

August 17, 2017

Honorable Gavin Newsom
Lieutenant Governor and Chair
California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA 95825

Via email to CSLC.CommissionMeetings@slc.ca.gov

Re: Comments on Poseidon Resources' proposed seawater desalination project at Huntington Beach (Poseidon Project)

Dear Lieutenant Governor Newsom:

I am writing on behalf of the California Fish and Game Commission (FGC) to offer comments for consideration on proposed desalination projects in general, and the proposed Poseidon Project in Huntington Beach specifically. FGC provided comments to the California Coastal Commission on its consideration of the proposed Poseidon Project in February 2017¹, and appreciates the opportunity to convey similar comments to you now.

With ongoing concerns about long-term water availability for California and less snow pack as the climate warms, seawater desalination is proposed as one solution to the water needs of California communities. FGC understands the need to explore new and alternative measures to meet resource demands in a sustainable manner, and recognizes that seawater desalination has the potential to be a valuable tool in California's water supply portfolio. FGC also recognizes that climate variability is an issue facing all resource management agencies, and that balancing the needs of human populations in the face of uncertain resource availability can be a difficult task.

At the same time, current seawater desalination technology also has the potential for significant detrimental impacts to California's marine ecosystems. The mission of FGC is to ensure the long-term sustainability of fish and wildlife in California. Thus, FGC would like to emphasize that seawater desalination projects must be carefully considered and analyzed by all permitting agencies, and ultimately designed in a way to avoid or minimize

¹http://www.waterboards.ca.gov/santaana/water_issues/programs/Wastewater/Poseidon/Letter_CFG_2017_02_01.pdf

adverse effects to living marine resources and habitats in the marine environment to the greatest extent possible.

Of particular relevance, in an effort to preserve marine ecosystem functions, buffer against uncertainty, and complement species-specific management, FGC adopted the nation's first coast-wide network of marine protected areas (MPAs). In place since 2012, California's globally-significant MPA network was created to help ensure that the natural diversity, marine ecosystem functions, and marine natural heritage of the state were protected while also helping to improve recreational, educational and study opportunities.² FGC, along with the California Department of Fish and Wildlife and numerous other agencies and non-governmental organizations, has invested significant time and resources to ensure that MPAs are managed in a manner consistent with legislative guidance, FGC and stakeholder intent, and ensuring that the system of MPAs functions as a robust network.

I understand that there are at least nine active proposals for seawater desalination plants along the California coast that would join the ten existing plants³, some in close proximity to MPAs. FGC seeks to strengthen the shared commitment of our partner coastal management agencies to help maximize MPA network functionality by considering actions that subject the MPA network to limited human disturbance. FGC valued the opportunity to work with the California State Lands Commission (SLC) and its staff during the MPA planning process and would like to acknowledge SLC's continued leadership in upholding standards for marine protection, specifically its role as a key member of the MPA Statewide Leadership Team convened by the California Ocean Protection Council. In particular, SLC committed in the leadership team's adopted work plan⁴ to update SLC's strategic plan to reflect commitments regarding MPAs, to assess pending agency regulations for potential impacts to MPAs, and to both consider data regarding, and identify opportunities for, mitigation and impact avoidance strategies in current regulatory/policy requirements pertinent to MPAs.

FGC reiterates its support of efforts to reduce impacts to marine resources by evaluating potential project impacts to individual MPAs, the MPA network as a whole, and site-specific marine resources during permitting and decision-making processes. As such, we urge SLC to require that proposals for seawater desalination facilities avoid or minimize impacts to MPAs and all marine resources through best available siting, design, and technology.

Minimizing impacts through thoughtful design is consistent with the State Water Resources Control Board's recently-adopted Ocean Plan Amendment, which requires desalination plants to use the best available site, design, technology and mitigation measures feasible to minimize intake and mortality of marine life *and identifies subsurface*

² Marine Life Protection Act, Fish and Game Code § 2853(b)

³ <http://pacinst.org/publication/key-issues-in-seawater-desalination-proposed-facilities/>

⁴ Marine Protected Area (MPA) Statewide Leadership Team Work Plan FY 15/16 – 17/18, Key Action Items 1.4, 2.4, and 4.3. Available at www.opc.ca.gov/programs-summary/marine-protected-areas/partnerships/

*intakes as the preferred technology.*⁵ Additionally, the board's policy contains requirements for protecting MPAs, including a prohibition on harmful intake and discharge structures *within* MPAs and a directive to site discharge and surface intakes at sufficient distances to minimize water quality and marine life impacts to protected areas.

Impacts to marine life from seawater desalination clearly can be avoided through current technology such as subsurface intakes, which pull ocean water through wells and/or galleries beneath the seafloor rather than through an open pipe in the water column. Subsurface technology eliminates impacts to marine life from being impinged on an intake screen or entrained in the source water from a screened open ocean intake, impacts that can result in significant injury and death of marine species. Despite this, the policy within the Ocean Plan Amendment also provides flexibility for alternative intake and disposal methods, with greater impacts to marine life, if it can be demonstrated that preferred technologies are infeasible. It is our understanding that an earlier feasibility evaluation, performed by an Independent Scientific Technical Advisory Panel jointly convened by the California Coastal Commission and Poseidon Water, found the nine sub-surface technologies it evaluated to be technically or economically infeasible; however, we also have been informed that the Santa Ana Regional Water Quality Control Board is currently seeking additional information to help determine if subsurface intakes are feasible at the proposed Huntington Beach site, or alternative sites. FGC encourages further consideration of subsurface intakes for the Poseidon project proposal consistent with the Ocean Plan Amendment. However, FGC questions the appropriateness or necessity of siting a 50 million gallon a day desalination plant off Huntington Beach given the availability of alternative sources of water to augment Orange County's water supply portfolio at a much lower economic and environmental cost.

At a minimum, FGC urges SLC to make avoiding potential impacts to MPA effectiveness a priority and to consider additional science on best management measures for seawater intake and discharge. While new desalination projects with open ocean intakes will not be permitted within MPAs, facilities with open ocean intakes *near* MPAs can have a direct impact on marine resources; incidental take and the reduction of critical larval connectivity between MPAs occurs as marine life is pulled into a plant and removed from the ecosystem, including organisms originating from the MPAs that are necessary to support California's marine life. Impacts from open ocean intake have the potential to undermine the ability of MPAs to function as a network, weakening the science-based framework on which they were created and potentially their ability to generate expected long-term benefits.

While in a July 2017 letter to FGC⁶ Poseidon stated that 91% of larvae estimated to be entrained by the proposed project are from fish that are not associated with the kelp and rocky reef habitat inside the southern California coastal MPA reserve network, FGC would

⁵ State Water Resources Control Board, Final Staff Report and Final Desalination Amendment, including the Final Substitute Environmental Documentation. Adopted on May 6, 2015. Available at: www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2015/rs2015_0033_sr_apx.pdf

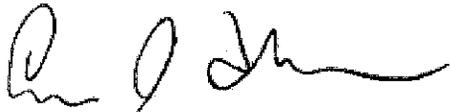
⁶ Fish and Game Commission meeting materials for June 21-22, 2017 meeting, Agenda Item No. 34, available at nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=145898&inline

like to emphasize that kelp and rocky reef habitat are only two of the many habitat types California's MPAs are designed to protect. The network is designed to provide protection to *all* marine habitat types and their associated marine life, as mandated by the Marine Life Protection Act. Further, while Poseidon concludes that there is little or no likelihood that the project's potential entrainment could negatively affect any MPA or any network of MPAs, and that marine life effects due to entrainment are anticipated to be insignificant based on the 2010 California Environmental Quality Act (CEQA) review relied upon by SLC, the 2010 CEQA review was completed before MPAs were designated as a network within the Southern California Bight. FGC requests that at a minimum the supplemental CEQA review, or preferably a new CEQA review based on current baseline and information, fully evaluate how the proposed open ocean intake as modified would adversely impact productivity and connectivity of the affected MPA system.

With a tidelands lease for desalination facilities poised for your consideration, it is critical to uphold protections for California's MPA network, and to preserve the state's significant investment in the resilience of our ocean. Seawater desalination can be a tool in our water supply portfolio, particularly when other less economically- and environmentally-costly options are exhausted, but it must be carefully analyzed and designed in a way to avoid or minimize adverse effects to the greatest extent possible. Siting desalination facilities, intakes, and discharges away from MPAs (and other sensitive habitats and species), and requiring the use of subsurface intakes, will help ensure California's ocean ecosystems are sustained in the long-term.

Based on the aforementioned concerns regarding the proposed Poseidon Project and any future seawater desalination projects along the California coastline, we urge you (1) to apply sound scientific information to inform decisions surrounding siting, precautionary design, and technology for intake valves and discharge sites; (2) to seriously evaluate if or how the community need justifies the impacts associated with the proposed project relative to other options or sitings; and (3) to structure an adaptive process for any approved project to include periodic project review for careful consideration of new scientific information and technologies that may reduce impacts, and how to integrate them into the existing project.

Sincerely,



Eric Sklar
President

cc: Members, California Fish and Game Commission
Honorable Betty T. Yee, California State Controller and member, California State Lands Commission
Michael Cohen, Director of the California Department of Finance and member, California State Lands Commission
Dayna Bochco, Chair, California Coastal Commission
Jennifer Lucchesi, Executive Officer, California State Lands Commission

Lieutenant Governor Newsom
August 17, 2017
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Jack Ainsworth, Executive Director, California Coastal Commission
Felicia Marcus, Chair, State Water Resources Control Board
David Noren, Chair, North Coast Regional Water Quality Control Board
Dr. Terry Young, Chair, San Francisco Bay Regional Water Quality Control Board
Dr. Jean Pierre Wolff, Chair, Central Coast Regional Water Quality Control Board
Irma Munoz, Chair, Los Angeles Regional Water Quality Control Board
William Ruh, Chair, Santa Ana Regional Water Quality Control Board
Henry Abarbanel, Chair, San Diego Regional Water Quality Control Board

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Lunetta, Kim@SLC

From: CSLC CommissionMeetings
To: Richard Armendariz
Subject: RE: RE: SLC Hearing Huntington Beach, Ca. October 19th, 2017

From: Richard Armendariz [mailto:hbrichlinda@yahoo.com]
Sent: Friday, October 13, 2017 3:47 PM
To: CSLC CommissionMeetings <CSLC.CommissionMeetings@slc.ca.gov>
Subject: Re: RE: SLC Hearing Huntington Beach, Ca. October 19th, 2017

Thank you for the information. Please forward the following to the commissioners as well.:

Honorable Commissioners:

You will notice that at the hearing on the 19th of October that the majority of Poseidon supporters occupying the seats will be construction workers wearing their hard hats and orange or yellow vests . You may wish to inquire as to whether these construction workers are being paid for the time they spend at the hearing. and if so who is paying them.. If Poseidon is primarily interested in establishing a legitimate desalination plant why do they feel the need to resort to subterfuge to convince the commission that unions support their cause.

Subject: SLC Hearing Huntington Beach, Ca. October 19th, 2017

Honorable Commissioners, I am sending this request in the interest of Transparency in Government.

Please request that all persons speaking at the Huntington Beach Hearing scheduled for October 19th at the city council chambers, voluntarily reveal whether they have received any funds in any form including campaign contributions, salary, free rent, charitable contributions from Poseidon, and or are an active lobbyist for the Poseidon Corporation or any subsidiary thereof.,

Thank you for your continued service to the State of California.

Richard C. Armendariz

Ret. State of California, Administrative Law Judge



Contact: Garry Brown, [\(714\) 850-1965](tel:(714)850-1965)

**ENVIRONMENTAL LEADERS CALL ON FORMER SENATOR BOXER TO DIVULGE LOBBYING
PAYMENTS FOR WORK ON POSEIDON DESALINATION PLANT OPPOSED
BY LOCAL TAXPAYER & COASTAL GROUPS**
*Orange County Coastkeeper Launches "The Poseidon Misadventure" Campaign to Highlight
Special Interest Lobbying Efforts to Win Approval of Controversial Project*

ORANGE COUNTY – Local environmental leaders today called on former Senator Barbara Boxer to disclose the payments she has been receiving to lobby on behalf of the Poseidon desalination plant in Huntington Beach.

Payments to Boxer have not been included on reports filed with the Fair Political Practices Committee nor California Secretary of State by Poseidon nor Mercury Public Affairs, the lobbying firm that signed up Boxer to work on the project with state regulatory officials. Boxer also refused to disclose the amount of the payments she is receiving to the [Los Angeles Times](#) when interviewed in May for her work promoting the plant. According to the newspaper, the company has spent \$1.6 million since 2000 in lobbying efforts.

Boxer's lobbying for the proposed Huntington Beach project comes just months after she left the United States Senate. Federal lobbying rules prohibited Senators from lobbying colleagues for two years after they leave office. Yet Boxer was tapped by Poseidon to lobby for the project among state regulators that need to give it final approval.

"We are saddened and disappointed that Senator Boxer would trade the trust Californians had in her for many years in the United States for this taxpayer boondoggle that will have massive negative environmental effects," said Garry Brown, Founder & President of the Orange County Coastkeeper, which has long opposed the project. "This is exactly the revolving door practice that, as our Senator, Barbara Boxer railed against. It shows how desperate the proponents of this project are, and it's time for the payments they are making to her be revealed."

Brown announced that his organization today is launching an aggressive new effort to combat the project. Called "The Poseidon Misadventure," a new website features a documented list of the millions of dollars of lobbying payments, contributions, and other details of the effort to sell the plant to state and federal regulators. The site address is:
<http://www.poseidonmisadventure.com/>.

The Poseidon project was named as one of the Trump Administration's top priorities on a list leaked earlier this year, according to the *Daily Pilot*. The project needs approvals from the State Lands Commission, Coastal Commission and the regional Water Quality Control Board before operating.

###

TAXPAYER BOONDOGGLE PRODUCTIONS PRESENTS THIS SPECIAL INTEREST BLOCKBUSTER



THE POSEIDON MISADVENTURE



DONALD TRUMP
THE ANTI-ENVIRONMENT
PRESIDENT
who's put the plant
at the top of his
infrastructure
priority list.



BARBARA BOXER
EX-U.S. SENATOR
who's traded the public
trust for an undisclosed
lobbying payment
weeks after leaving
office & received nearly
\$57K in campaign
contributions from
lobbyists.



CARLOS RIVA
POSEIDON RESOURCES CEO
whose company has
spent more than \$1.4
million in CA lobbying
for the plant since
2001 and contributed
\$361,000 to statewide
committees and
candidates since 1999.



BRUCE FLATT
BROOKFIELD ASSET
MGT. CEO
His \$250 billion
company has spent
more than \$380,000
lobbying the federal
government since
acquiring Poseidon
in 2015.



SUSAN McCABE
LOBBYIST
Specializing in
lobbying the California
Coastal Commission,
reports payments of
\$260,000 and holding
fundraisers for elected
officials who've
endorsed the plant.



MARK LIMBAUGH
LOBBYIST
Former U.S. Dept. of
Interior official now
D.C. lobbyist for the
Poseidon-paid Ferguson
Group, which receives
tens of thousands to
lobby federal officials.



TRAVIS ALLEN
ASSEMBLYMEMBER
GOP gubernatorial
hopeful has received
\$13,000 in campaign
contributions from
Poseidon and opposed
disclosure of Coastal
Commission lobbying.

WITH AN ALL-STAR CAST...

OF LOBBYISTS & PUBLIC OFFICIALS IN A DARING NEFARIOUS ATTEMPT TO DESTROY CALIFORNIA'S COAST AND OCEAN WILDLIFE WITH AN UNEEDED EXPENSIVE DESALINATION PLANT—FEATURING OUTDATED TECHNOLOGY

PANNED BY THE CRITICS

"Comical and crazy" — Paul Cook, Irvine Ranch Water District Manager ~ Voice of San Diego, 6/5/17

"The ocean isn't a great big garbage can... Investing in desalination is not a good way to address a drought"
Henry J. Vaux, Jr, UC Berkeley Water Economist ~ LA Times, 4/24/15

"It's going to pollute our water, kill our marine life and cost a fortune, and we don't need it."
Ray Hiemstra, Orange County Coastkeeper ~ LA Times, 5/19/17

www.poseidonmisadventure.com

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Lunetta, Kim@SLC

From: Pamela Adams (pacats@cox.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 8:08 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Pamela Adams
1493 Morningside Dr
Laguna Beach, CA 92651
pacats@cox.net
(949) 494-6560

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Sandra Alsina (svalsina@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 11:15 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Sandra Alsina
1114 Valley Circle
Costa Mesa, CA 92627
svalsina@gmail.com
(949) 283-5185

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Farzad Aziminia (pharzad.aziminia@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:54 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Farzad Aziminia
526 whispering trail
irvine, CA 92602
pharzad.aziminia@gmail.com
(949) 344-1302

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: sandra baker (sandraabaker@sbcglobal.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 7:58 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

sandra baker
2207 mc cormack lane
placentia, CA 92870
sandraabaker@sbcglobal.net
(714) 528-3766

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Sally Barron (sb2099@mac.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:46 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Sally Barron
1085 Eastman Way
Laguna Beach, CA 92651
sb2099@mac.com
(949) 497-2343

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Alain Bourgault (abourgault@fullerton.edu) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 1:55 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Alain Bourgault
213 17th Street Unit A
Huntington Beach, CA 92648
abourgault@fullerton.edu
(714) 504-8599

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Lynda Cahn (llcahn@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 3:34 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon.Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Lynda Cahn
2200 Port Lerwick
Newport Beach, CA 92660
llcahn@gmail.com
(949) 760-8025

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Alan Carlton (carltonal@yahoo.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 8:00 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Alan Carlton
408 Sunset Rd.
Alameda , CA 94501
carltonal@yahoo.com
(510) 759-5387

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Sonya Chan (sonyacschan@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 5:42 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Sonya Chan
1429 prospect Ave unit B
Placentia, CA 92870
sonyacschan@gmail.com
(714) 510-0501

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Tara Coker <tara@jore.com>
Sent: Monday, October 16, 2017 10:26 AM
To: CSLC CommissionMeetings
Subject: Poseidon Desalination Lease Amendment

I do not want a desalination plant in Huntington Beach.

Thank you!

Tara Coker
Star Real Estate
19440 Goldenwest
Huntington Beach
Mobile 714.617.0250
Fax 714.500.3333
www.taracoker.net
Realtor/DRE # 01899056
RJH Holdings, LLC
tara@jore.com

Lunetta, Kim@SLC

From: Stacy Cornelius (stacycornelius@yahoo.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:21 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
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- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
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Sincerely,

Stacy Cornelius
270 Cliff Dr Apt 9
Laguna Beach, CA 92651
stacycornelius@yahoo.com
(949) 813-5959

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Mary Jane Dorr (mj-dorr@cox.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:07 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Mary Jane Dorr
28226 Cloverbrook
Mission Viejo, CA 92692
mj-dorr@cox.net
(949) 458-6143

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Clarissa Douglass (wordsmithoncall@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 4:05 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

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Sincerely,

Clarissa Douglass
222 Del Mar Ave
Costa Mesa, CA 92627
wordsmithoncall@gmail.com
(949) 515-9363

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Albert Eurs II (areurs@twc.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 5:07 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

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- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

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Sincerely,

Albert Eurs II
10456 Hampshire Court
Cypress, CA 90630
areurs@twc.com
(714) 527-4626

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Valli Febbraro <vkfebbraro@yahoo.com>
Sent: Monday, October 16, 2017 1:44 PM
To: CSLC CommissionMeetings
Subject: Poseidon Desalination Lease Amendment

As a concerned Resident of Southeast Huntington Beach I am asking that you **DO NOT CERTIFY** the Poseidon Environmental Impact Report as it is incomplete.

- It does not meet State Requirement to protect marine life.
- There is on need for desalinated water in Huntington Beach. We don't need the Poseidon water.
- Better water supply options that protect our coast and ocean should be fully implemented before ocean desalination is approved.
- Poseidon's project does not meet The State Water Resource Control Board's policy on proper site, design and technology for OCEAN desalination proposals. Poseidon's project does not meet any of the recommendations to minimize marine life mortality, water quality degradation and coastal habitat degradation.

Poseidon's proposed site is located on an active earthquake fault, flood and tsunami zone. This plant will require a considerable amount of energy and will increase greenhouse gasses. Desalination water is the most expensive water and comes along with a 50 year loan. This neighborhood will be torn up for years with a tremendous impact on our environment.

The Poseidon Project will compound the impacts from several adjoining demolition and development projects that were not planned when Poseidon first applied for this project. Those are the

Ascon remediation, the new proposed mixed used development on Magnolia and the tear down and reconstruction of the new Power Plant using new technology. Please consider the cumulative impacts this will have on this small neighborhood. Right now, trucks have been running constantly back and forth up Magnolia bringing in tons of dirt to the site. Although street sweepers are running up and down Magnolia, it does not stop the dust that the prevailing wind drives into our neighborhoods. We are also experiencing more coyotes running through our neighborhoods as a result of their habitats are being upset.

I am sure there will be many PAID spokespeople for Poseidon at the upcoming meeting on October 19th. There will also be many Huntington Beach residents that are concerned with the environment and making sure that the TRUTH about Desalination Plant is told! Many residents will be taking time off from their jobs to attend this meeting. We want to keep our Oceans, wildlife and community safe . Please help us do that and review the facts closely. Please don't be fooled by incomplete charts and grafts supplied by Poseidon.

Thank you for your time and consideration.

Sincerely,

Valli K. Febbraro

Lunetta, Kim@SLC

From: Gary Feemster (gfeemster@socal.rr.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 3:44 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
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- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Gary Feemster
5151 Sisson Dr
Huntington Beach, CA 92649
gfeemster@socal.rr.com
(714) 846-7002

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Arthur Feinstein (arthurfeinstein@earthlink.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 7:56 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Arthur Feinstein
590 Texas St
San Francisco, CA 94107
arthurfeinstein@earthlink.net
(415) 680-0643

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Steve Fruchter (stevetylerf@yahoo.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:58 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Steve Fruchter
9462 Joyzelle Dr
Garden Grove, CA 92841
stevetylerf@yahoo.com
(714) 530-9375

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: John Fuhrer (jpfuhrer@roadrunner.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 9:37 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

John Fuhrer
211 Tustin Avenue
Newport Beach, CA 92663
jpfuhrer@roadrunner.com
(949) 274-1799

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Peter Gavin (pcgavin@cox.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 4:17 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Peter Gavin
23562 Lipari
Laguna Hills, CA 92653
pcgavin@cox.net
(949) 586-0041

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Amber Gill (agillzooslittles@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:11 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Amber Gill
1009 arrows dr
Fullerton , CA 92835
agillzooslittles@gmail.com
(714) 290-6666

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Ashlee Goite (ashleegoite@yahoo.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 3:33 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Ashlee Goite
408 Clay Ave Apt 2
Huntington Beach, CA 92648
ashleegoite@yahoo.com
(714) 651-4956

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Elliot Gordon (elliottg1@cox.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 3:38 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Elliot Gordon
65 East Yale Loop
Irvine, CA 92604
elliottg1@cox.net
(949) 857-4887

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Sally Haberlin (shaber9759@aol.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:41 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Sally Haberlin
28411 Rancho De Linda
Laguna Niguel, CA 92677
shaber9759@aol.com
(949) 425-9561

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: kelly hatfield (kelly.m.hatfield4@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:42 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

kelly hatfield
313 20th Street
huntington beach, CA 92648
kelly.m.hatfield4@gmail.com
(949) 274-2665

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Faith Herschler (fherschler@sbcglobal.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 4:53 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Faith Herschler
10347 West Briar Oaks Drive
Stanton, CA 90680
fherschler@sbcglobal.net
(713) 821-4068

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Gene Hiegel (ghiegel@fullerton.edu) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:14 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Gene Hiegel
1410 Harmony Lane
Fullerton, CA 92831
ghiegel@fullerton.edu
(714) 871-7951

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Karole Holland (karoleh@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:42 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Karole Holland
11472 Anegada Street
Cypress, CA 90630
karoleh@gmail.com
(714) 934-0215

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Claudia Horvath (pet.vet@verizon.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:05 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

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- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

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Sincerely,

Claudia Horvath
629 Bayside Dr.
Seal Beach, CA 90740
pet.vet@verizon.net
(562) 594-0129

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Penelope Hubbard (penhub@earthlink.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 3:42 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Penelope Hubbard
1312 Golden Rain Road 67C
Seal Beach, CA 90740
penhub@earthlink.net
(562) 430-6768

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: J P (julianhawaii@yahoo.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:07 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

J P
POB 1668
HUNTINGTON BEACH, CA 92647
julianhawaii@yahoo.com
(714) 372-2629

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: robert keenan (robertlkeenan@gmail.com). Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 3:37 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

robert keenan
23392 bolivar
mission viejo, CA 92691
robertlkeenan@gmail.com
(714) 777-7777

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Kenneth Kuskey (kkuskey@yahoo.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 4:34 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
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Sincerely,

Kenneth Kuskey
32111 Via Viente
San Juan Capistrano, CA 92675
kkuskey@yahoo.com
(703) 476-5741

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Susan LeFever (slefever98@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:14 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Susan LeFever
3816 E Larkstone Dr
Orange, CA 92869
slefever98@gmail.com
(714) 618-2475

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Adrienne Low (adrienne6372@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:02 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Adrienne Low
6372 Reubens Dr
Huntington Beach, CA 92647
adrienne6372@gmail.com
(714) 856-1987

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Leslie MacNair (leslie.macnair@att.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 10:48 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

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Sincerely,

Leslie MacNair
24902 Luton st
Laguna hills, CA 92653
leslie.macnair@att.net
(949) 441-9963

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Karen Malley (bonic@hotmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 3:31 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Karen Malley
1609 S. Gary St.
Anaheim, CA 92804
bonic@hotmail.com
(714) 991-8323

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Anthony Marino (anthony.marino@amecfw.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:57 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Anthony Marino
10640 Camino Real
Fountain Valley, CA 92708
anthony.marino@amecfw.com
(714) 469-7242

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Chris Mathieu (chrismathu@cox.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:51 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Chris Mathieu
19 Hawaii
Aliso Viejo, CA 92656
chrismathu@cox.net
(949) 607-7658

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Doris Mattingly (dmattingly@socal.rr.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 7:39 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Doris Mattingly
9611 Netherway Drive
Huntington Beach, CA 92646
dmattingly@socal.rr.com
(714) 963-2827

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: John Mayo (jmayosurf@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:14 PM
To: CSLC Commission Meetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

John Mayo
9592 Innsbruck Drive
Huntington Beach, CA 92646
jmayosurf@gmail.com
(714) 323-8039

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Roberta McCarty (rjmccarty@earthlink.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 4:25 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Roberta McCarty
5468 B Paseo del Lago
Laguna Woods, CA 92637
rjmccarty@earthlink.net
(949) 382-1826

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Roy McCord (rmccord@socal.rr.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 9:59 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Roy McCord
22122 wood island lane
HUNTINGTON BEACH, CA 92646
rmccord@socal.rr.com
(714) 852-9179

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Barbara McElheny (lee.mcelheny@wfp.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:51 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Barbara McElheny
227 Sonoma Aisle
Irvine, CA 92618
lee.mcelheny@wfp.com
(202) 253-2817

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Carl and Mary Melin (mbmelin@aol.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 1:53 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Carl and Mary Melin
6113 San Rodolfo Way
Buena Park, CA 90620
mbmelin@aol.com
(714) 527-1741

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Marcella Melton (mamelton1@aol.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 9:28 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Marcella Melton
25502 Rue Terrace
Laguna Niguel, CA 92677
mamelton1@aol.com
(946) 838-6280

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: David Miller (electricdave18@cox.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 2:50 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

David Miller
10 Acacia Tree Lane
Irvine, CA 92612
electricdave18@cox.net
(949) 733-8478

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Kellie Miller (kamiller@precisionboard.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 3:30 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Kellie Miller
2951B So Fairview St.
Santa Ana, CA 92704
kamiller@precisionboard.com
(714) 865-6696

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Regina Moore (katireganmoore@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 10:49 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

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Sincerely,

Regina Moore
21051 Kausch Cir
Huntington Beach, CA 92646
katireganmoore@gmail.com
(714) 374-6544

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Christopher Murphy (ctaijro@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:11 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Christopher Murphy
6282 Shields Drive
Huntington Beach, CA 92647
ctaijro@gmail.com
(714) 743-1608

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Patrick Osullivan <patrick.osullivan@gmx.com>
Sent: Tuesday, October 17, 2017 3:58 AM
To: CSLC CommissionMeetings
Subject: "Poseidon Desalination Lease Amendment"

Dear California State Lands Commission,

Please do not allow the environmentally damaging, irresponsible and unnecessary Poseidon Project in Huntington Beach to go forward. Thank you for considering my input.

Sincerely,

Patrick O'Sullivan
PO Box 7294
Huntington Beach, CA 92615

Cell: 714.240.8084

Lunetta, Kim@SLC

From: Lisa Paynemiller (puffbird@earthlink.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 9:37 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Lisa Paynemiller
21 Potomac
Irvine, CA 92620
puffbird@earthlink.net
(949) 733-0632

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Stephanie Pacheco (stephaniepac@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 3:23 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Stephanie Pacheco
18264 Santa Belinda
Fountain valley, CA 92708
stephaniepac@gmail.com
(714) 501-1181

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Jon Porter, MD (fossilsrfr@aol.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 6:16 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Jon Porter, MD
2761 Gertrude Dr.
Rossmoor, CA 90720
fossilsrfr@aol.com
(562) 594-9152

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Gerard Proc <gravitytrain1@roadrunner.com>
Sent: Monday, October 16, 2017 2:56 PM
To: CSLC CommissionMeetings
Subject: Poseidon Desalination Lease Amendment

Dear Commissioners,

Please do not certify the Poseidon EIR, it is incomplete. There are too many unanswered questions as to the safety of our precious marine life along with numerous other negative environmental issues. Please no rush to judgment without thoroughly investigating other and all advanced, smart, and superior water supply options. Thank you

Regards,
Greard Proccacino
Newport Beach, CA

Lunetta, Kim@SLC

From: gordon reed (gordonreed20@att.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 3:36 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

gordon reed
101 scholz plaza 223
newport beach, CA 92663
gordonreed20@att.net
(714) 270-3069

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Jennifer Robins (jjrobins@dslextreme.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 4:31 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Jennifer Robins
15212 Nottingham Ln
Huntington Beach, CA 92647
jjrobins@dslextreme.com
(714) 894-8381

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Barbara Sentovich (mbsent@msn.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 5:27 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Barbara Sentovich
11642 Wallingsford Rd.
Los Alamitos, CA 90720
mbsent@msn.com
(562) 430-8209

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Randle Sink (rcsink_98@yahoo.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:35 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

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Sincerely,

Randle Sink
16835 Algonquin St., #206
Huntington Beach, CA 92649
rcsink_98@yahoo.com
(657) 464-0991

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Greg Smith (gregorymac.smith@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 9:49 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

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Sincerely,

Greg Smith
9442 Leilani drive
Huntington Beach, CA 92646
gregorymac.smith@gmail.com
(714) 475-4186

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Douglas Snyder (abeachfan@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 7:08 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

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Sincerely,

Douglas Snyder
1570 Via Capri
Laguna Beach , CA 92651
abeachfan@gmail.com
(949) 494-7576

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: alice speakman (amspeakman@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 1:53 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

alice speakman
8932 biscayne
huntington bch, CA 92646
amspeakman@gmail.com
(714) 960-8553

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Jim Stewart (jim@earthdayla.org) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 7:46 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Jim Stewart
1720 Chestnut Ave #17
Long Beach, CA 90813
jim@earthdayla.org
(213) 820-4345

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: KERRY Stiles, Sr. (kds_sr@att.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 4:34 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

KERRY Stiles, Sr.
921-B AVENIDA MAJORCA
LAGUNA WOODS, CA 92637
kds_sr@att.net
(949) 454-8658

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Gideon Strich (gideonstrich@yahoo.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 5:51 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Gideon Strich
13762 Fairmont Way
Tustin, CA 92780
gideonstrich@yahoo.com
(949) 285-4621

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Lynn Via (lvia@dsrg.com) Sent You a Personal Message <automail@knowwho.com>
Sent: Monday, October 16, 2017 2:06 PM
To: CSLC Commission Meetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Lynn Via
18241 Montana Circle
Villa Park, CA 92861
lvia@dsrg.com
(714) 997-1337

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Chris Vitamante (cvitamante@verizon.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:15 PM
To: CSLC-CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Chris Vitamante
7371 Coho Dr
Huntington Beach, CA 92648
cvitamante@verizon.net
(714) 960-4248

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Carrie Weeks (cweeks@bluewavemicro.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 2:04 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

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Sincerely,

Carrie Weeks
28009 Camino del Rio
San Juan Capistrano, CA 92675
cweeks@bluewavemicro.com
(949) 661-8116

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Julia Weyand (weyandja@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 1:47 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Julia Weyand
38 Silveroak
Irvine, CA 92620
weyandja@gmail.com
(949) 246-1730

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: David Yturralde (no.noise@hushmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Monday, October 16, 2017 8:00 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

David Yturralde
1511 Avenida De Nogales
San Clemente, CA 92672
no.noise@hushmail.com
(949) 276-2842

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

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J. LUIS CÒRREA

46TH DISTRICT, CALIFORNIA

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(202) 225-2965

SANTA ANA DISTRICT OFFICE
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SANTA ANA, CA 92706
(714) 621-0102



Congress of the United States
House of Representatives
Washington, DC 20515

COMMITTEE ON HOMELAND SECURITY

RANKING MEMBER, SUBCOMMITTEE ON OVERSIGHT
AND MANAGEMENT EFFICIENCY

SUBCOMMITTEE ON BORDER AND MARITIME SECURITY

COMMITTEE ON VETERANS' AFFAIRS

SUBCOMMITTEE ON ECONOMIC OPPORTUNITIES

SUBCOMMITTEE ON HEALTH

October 17, 2017

The Honorable Lieutenant governor Gavin Newsom
The Honorable State Controller Betty Yee
State Finance Director Michael Cohen
California State Lands Commission

100 Howe Avenue., Suite 100 south
Sacramento, CA 95825-8202

Re: Support for the Huntington Beach Seawater Desalination Project

Dear Commissioners:

I write to urge you to support your staff recommendation to approve the lease amendment and certify the Environmental Impact Report related to the Huntington Beach Seawater Desalination Project. As you know, this project would provide a new drinking water supply for Orange County and enough water for nearly 400,000 residents.

Not only would the project provide 50 million gallons of drinking water per day, but it also would create about 3,000 good-paying jobs during the 36-month construction process. Good-paying jobs and access to reliable, high-quality water are extremely important to my constituents.

Orange County has been a leader in diversifying its water supply in an environmentally and economically responsible way. The Groundwater Replenishment System has allowed Orange County to reduce its dependence on imported water. We need to develop responsible infrastructure like desalination to attend to Orange Counties' water needs, today and tomorrow.

Poseidon Water has committed to using the best available technology to build the most environmentally sensitive, large-scale desalination plant in the world.

Thank you for your consideration, and I urge your strong support on this important issue.

Sincerely,

A handwritten signature in black ink that reads "J. Luis Correa". The signature is fluid and cursive, with a long horizontal stroke at the end.

J. Luis Correa
Member of Congress

CORREA.HOUSE.GOV

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October 17, 2017

Via Electronic Mail:
CSLC.CommissionMeetings@slc.ca.gov

Gavin Newsom, Lieutenant Governor
Betty T. Yee, State Controller
Michael Cohen, Finance Director
California State Lands Commission
100 Howe Ave., Suite 100-South
Sacramento, California 95825

Environmental Law Clinic

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www.law.stanford.edu

Deborah A. Sivas
Tel 650 723-0325
dsivas@stanford.edu

Poseidon Application for Lease Amendment (PRC 1980.1)
Proposed Seawater Desalination Project in Huntington Beach

Dear Chairman Newsom and Commissioners Yee and Cohen:

We write in connection with the staff report posted late last week for the Commission's October 19, 2017 hearing on the above-referenced matter. On behalf of several non-governmental organizations, we previously provided written comments to the Commission regarding the legal requirements of the California Environmental Quality Act ("CEQA") and the deficiencies in the draft Supplemental Environmental Impact Report ("SEIR") prepared for Poseidon's proposed seawater desalination project at the existing Huntington Beach Generating Station. Because the final SEIR has not adequately addressed the serious concerns raised in our letters of July 26, 2017 and October 6, 2016, we urge you to give close consideration to those comments, copies of which are attached.

In addition, however, the staff report and the text of the proposed lease amendments, released to the public for the first time last week, raise troubling new legal issues that we address in these further comments. Contrary to suggestions in the staff report, the proposed lease amendments do not constitute "minor changes" to the existing contract rights. Staff Report at 11. Under the terms of the existing lease, Poseidon must obtain, maintain, and comply with all necessary government permits and other entitlements and must complete construction of the Project by October 29, 2018. Staff Report, Exh. G, at 7-8 (Section 2, paragraph 21 and Section 4, paragraph 11(d)(4)). Poseidon has failed to satisfy these lease conditions during the past seven years, and there is virtually no possibility that it will complete construction of any project within the final, eighth year of its conditional contract right. Accordingly, absent affirmative discretionary action by the Commission, Poseidon's existing lease rights will effectively expire on October 30, 2018, and the significant adverse impacts of the proposed project on tidelands resources will never occur. By extending the date for completing construction until August 7, 2026, as staff now proposes in the lease amendments before you, the Commission will allow an adverse use of the tidelands resources that would not otherwise occur. Below, we explain why the record before you at this time is currently insufficient to support a lease amendment decision that is consistent with the Commission's ongoing public trust obligations.

I. As State Trustee, the Commission Has an Unalterable Legal Duty to Protect Public Tidelands and Public Trust Resources to the Greatest Extent Feasible, and that Duty Has Not Yet Been Satisfied for this Matter.

As you are well aware, the Commission is the state trustee for our public tidelands and, in that role, has a solemn and inalienable legal duty to protect public trust resources on these lands. The public trust doctrine mandates that all state agencies preserve public trust resources for the common use of the people. Martin v. Waddell, 41 U.S. (16 Pet.) 367, 410 (1842). In California, the public trust doctrine protects fish, birds, wildlife, tidelands, navigable waters, and the preservation of these resources for their ecological, aesthetic, and recreational value. See Marks v. Whitney, 6 Cal. 3d 251, 258-60 (1971); Ctr. for Biological Diversity, Inc. v. FPL Group, Inc., 166 Cal. App. 4th 1349, 1363-64 (2008). The coastal waters of California belong to the public trust. Boone v. Kingsbury, 206 Cal. 148, 194 (1928).

While the Commission may lease public tidelands for private use, any such use must (1) further public purposes and (2) create no substantial effect on the resources. State Water Res. Control Bd. Cases, 136 Cal. App. 4th 674, 778 (2006) (“Thus, in determining whether it is feasible to protect public trust values like fish and wildlife in a particular instance, the Board must determine whether protection of those values, or what level of protection, is consistent with the public interest.”). The California Supreme Court has provided the framework for balancing public interest and resource preservation: “The state has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible.” Nat’l Audubon Soc’y v. Superior Court, 33 Cal. 3d 419, 446 (1983). In other words, a public trust resource may only be exploited if the public’s need for that resource outweighs the attendant harm.

In order to satisfy its public trust obligations, the Commission must conduct a robust and meaningful evaluation of both the public need for the activity and its impacts on trust resources before authorizing any use of the tidelands. This public trust obligation is independent of the Commission’s separate legal obligations under CEQA, although a comprehensive analysis could potentially satisfy both requirements. San Francisco Baykeeper, Inc. v. State Lands Comm’n, 242 Cal. App. 4th 202 (2015) (holding that complying with CEQA does not satisfy the public trust doctrine if the analysis of effects on public trust resources is in some way deficient).

Unfortunately, the brief discussion of public trust impacts contained in the staff report reflects a fundamental misunderstanding of this legal obligation. That discussion is premised on the notion that “Poseidon’s rights under Lease No. PRC 1980.1 have vested” and, therefore, that the staff analysis of public trust impacts should be limited to the effects of the “two physical modifications” to the proposed project that would be authorized by the lease amendment, which staff characterizes as “minor changes.” Staff Report at 15. As noted above, this basic premise is erroneous. In addition to authorizing physical

modifications of the project, the **lease amendment quietly extends the date for completion of construction by eight years**, thereby providing Poseidon with a significant expansion of its existing contract rights. If the Commission does not grant the lease amendment, the project simply will not go forward because all governmental authorizations and completion of construction cannot, as a practical matter, be achieved before expiration of the contractual deadline. Accordingly, the Commission's affirmative decision to grant an eight-year extension to complete construction would create a significant **new** lease right that will cause impacts to public trust resources which would not otherwise occur. Neither the staff report nor the SEIR have properly evaluated the public trust impacts proximately caused by this eight-year extension.¹

Compounding this serious factual error, the staff report also inexplicably ignores the Commission's clear "duty of continuing supervision over the taking and use of" public tidelands and associated marine resources. Nat'l Audubon Soc'y, 33 Cal. 3d at 447. In National Audubon, the Los Angeles Department of Water and Power ("DWP") argued that the State Water Board was not authorized to redirect water to environmental needs because DWP had a "vested right" in an old Board-issued water permit. The Court rejected DWP's argument, holding that "the state as sovereign retains continuing supervisory control over its navigable waters and the lands beneath them," describing this "fundamental" public trust principle as one that applies "to rights in tidelands" and "prevents any party from acquiring a vested right to appropriate water in a manner harmful to the interests protected by the public trust." Id. at 445. As the Court explained: "Once the state has approved an appropriation, the public trust imposes a duty of continuing supervision over the taking and use of the appropriated water. In exercising its sovereign power to allocate water resources in the public interest, the state is not confined by past allocation decisions which may be incorrect in light of current knowledge or inconsistent with current needs." Id. at 447.

¹ Staff's contention that it need only evaluate the proposed physical modifications to the project – and not the eight-year extension of Poseidon's existing contract right – is incorrect not only under the public trust doctrine, but also as a matter of CEQA law. The staff report references two cases which correctly hold that once an EIR is certified and either unchallenged or unsuccessfully challenged, the environmental review in that document constitutes the baseline against which the need for updated CEQA review is measured in the event of a project modification. Both of those cases turned on the question of whether proposed project modifications after completion of the prior CEQA review were sufficiently significant to trigger additional environmental review under section 15162 of the CEQA Guidelines. See Benton v. Bd. of Supervisors, 226 Cal. App. 3d 1467 (1991) (holding that substantial evidence supported agency's decision not to prepare supplemental EIR); Temecula Band of Luiseno Mission Indians v. Rancho California Water Dist., 43 Cal. App. 4th 425 (1996) (same). Contrary to staff's statements in response to prior public comments, our clients do not seek to have the Commission revisit the 2010 EIR. Rather, the CEQA question before the Commission is whether project changes, changed circumstances, and/or new information requires a subsequent EIR under 14 Cal. Code Regs. Section 15162.

II. The Evidence in the Record at this Time Requires a More Thorough and Comprehensive Public Trust Analysis of Need, Alternatives, and Impacts Associated with the Proposed Lease Amendment Before the Commission Proceeds with a Decision to Approve the Amendment.

The Commission's continuing supervisory duty applies with special force here, where the Commission is considering a substantial extension of Poseidon's existing lease rights – one that will effectively revive a project that cannot be timely completed under the existing lease. As discussed in our earlier comments and in the extensive separate comments and analyses previously submitted by our clients, there is a significant question at this time about the actual public need for a regional desalination facility designed to withdraw over 100 million gallons per day of marine water. During the seven years since the Commission amended the tidelands lease to authorize Poseidon's proposed desalination project, water supply circumstances have drastically changed. Conservation efforts and local water supply projects have dramatically reduced the region's projected need for new water sources. Whatever assumptions the Commission made seven years ago in assessing public trust impacts, therefore, are no longer accurate. Before making a new discretionary decision that will directly affect tidelands resources, the Commission must fully evaluate the current need for the project.

Moreover, recent amendments to the California Ocean Plan favor more environmentally-friendly methods to be used in desalination facilities, such as subsurface seawater intake, and explicitly require an evaluation of project need. The Santa Ana Regional Water Quality Control Board has yet to complete the "need" analysis required by the revised Ocean Plan, and Commission staff has not filled this gap. Without a fully informed understanding of the public need for Poseidon's proposed destruction of trust resources and an adequate exploration of alternative ways to meet any existing need (conservation, recycling and reuse, subsurface wells, smaller facility, etc.), the Commission is not able at this time to fulfill its legal obligations under the public trust doctrine to balance public needs against adverse public trust impacts and fully protect trust resources to the greatest extent feasible.

Likewise, the Commission cannot adequately balance public trust uses because staff has not properly evaluated the impacts to marine resources. Since the Commission granted Poseidon certain limited lease rights in 2010, California has established a critical new network of marine protected areas, including areas that may be affected by Poseidon's proposed intake and discharge activities on public tidelands. In its response to comments on the SEIR and in the staff report, staff erroneously concluded that the lease amendment will actually reduce public trust resource impacts on marine protected areas because the proposed physical changes to the facility will decrease water intake rates. Here again, staff's discussion ignores the reality – that the proposed lease amendment will effectively revive a dead project by extending the contract completion date. Without the lease amendment, the project will not go forward and, therefore, will have zero impacts on trust resources. Thus, to comply with its public trust obligations, the Commission must evaluate the differential between the existing lease (no public trust impacts) and the proposed

amended lease (impacts from the intake of over 100 million gallons a day of marine water and discharge of brine wastes). Staff's suggestion that adding some additional compensation requirements for wetlands mitigation will ameliorate any public trust concerns is not supported by any evidence or analysis.

In short, before approving a significant lease modification that will allow the use of our public tidelands in a way that will take and destroy billions of living marine resources and continue for many decades, the Commission must "consider the effect of such diversions upon interests protected by the public trust, and attempt, so far as feasible, to avoid or minimize any harm to those interests." Nat'l Audubon Soc'y, 33 Cal. 3d at 426. It can only satisfy this continuing supervisory duty by fully understanding and fully evaluating the existing public need for the proposed water diversion, the harm to public trust resources from such diversion, and the options for avoiding or minimizing that harm. The record before the Commission on each of these issues is woefully incomplete at this time and certainly insufficient to support a legally proper analysis and decision. Until the proper review and analysis is performed, the Commission cannot approve of the lease modifications consistent with its obligations as the state trustee for public tidelands. **We urge you, therefore, not to approve the lease amendment unless and until a full public trust and CEQA analysis is completed.**

Sincerely yours,



Deborah A. Sivas

July 26, 2017

Environmental Law Clinic

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Via Electronic Mail:
CEQA.comments@slc.ca.gov

Alexandra Borack, Project Manager
100 Howe Avenue, Suite 100-South
California State Lands Commission
Sacramento, California 95825

**Seawater Desalination Project at Huntington Beach:
Outfall/Intake Modifications and General Lease — Industrial Use
(PRC 1980.1) Amendment (Lease Modification Project)**

Dear Ms. Borack:

Thank you for the opportunity to comment on the Draft Supplemental Environmental Impact Report (“DSEIR”) for Poseidon’s proposed seawater desalination project at the existing Huntington Beach Generating Station (“Project”). Please accept these comments as a supplement to the longer comment letter submitted by California Coastkeeper Alliance, Orange County Coastkeeper, Residents for Responsible Desalination, and California Coastal Protection Network.

Before the formal California Environmental Quality Act (“CEQA”) update process for this Project commenced, we expressed concerns, by way of letter dated October 6, 2016, about the truncated nature and scope of the State Lands Commission’s (“Commission”) proposed environmental review. Unfortunately, these concerns have not been addressed in the DSEIR. Accordingly, we attach our October 2016 correspondence and incorporate it by reference herein to ensure that it is fully part of the administrative record as the Commission evaluates whether to approve amendments to the Project lease. The comments below will not duplicate our earlier legal analysis, but rather highlight and reiterate our serious concerns about the legal infirmity of the DSEIR.

First, in proposing to approve a discretionary lease modification nearly seven years after the Project was approved (but never commenced), the Commission, as a matter of law, necessarily assumes CEQA “lead agency” status for the Project, whether or not it wants to do so. As the original lead agency for the Project, the City of Huntington Beach was charged with preparing and certifying an adequate EIR. At that time, the Commission acted in the limited role of a “responsible agency,” based on the City-certified 2010 EIR, when it made the ancillary decision in October 2010 to execute the requisite trust lands lease. But because the City no longer has jurisdiction or discretionary authority over the Project, any agency that proposes to undertake a new discretionary decision for the same Project steps into the shoes of the original lead agency when, as is clearly the case here, the Project or its circumstances are so changed as to require a subsequent EIR. 14 Cal. Code Regs. § 15052(a). The Commission’s proposed lease modification is such a discretionary decision and thus triggers substitute lead agency obligations.

Under CEQA, there simply is no question that a subsequent EIR is required in this case. The Project has changed significantly since its approval in 2010, as have the circumstances surrounding it. In response to new state law requirements under the Water Code and the California Ocean Plan, the Project proponent has proposed substantial revisions to the Project itself, beyond those changes that necessitate a lease amendment. For instance, the Project proponent now proposes a potable water delivery method that is entirely different from anything considered in the 2010 EIR. Because new delivery options under consideration by the Project proponent and the Orange County Water District would involve significant impacts that were never considered in the original CEQA analysis, this fact alone necessitates a subsequent EIR. 14 Cal. Code Regs. § 15162.

Likewise, intervening events over the last seven years since the CEQA review was completed and the Project approved have dramatically altered the circumstances surrounding the Project and resulted in highly-relevant new information not previously considered by any agency. For instance, local water supply projects and conservation efforts have led to new, substantially reduced water demand forecasting in Orange County. This new information raises serious threshold questions about the need for the Project – or at the very least, for a regional desalination facility of this size. Recent amendments to the California Ocean Plan regarding desalination facilities also expressly require an evaluation of project need. The scope of need, in turn, affects the range of reasonable alternatives that must be considered under CEQA. The range of reasonable alternatives considered is especially relevant and important here because the proposed Project could adversely impact the integrity of California's new network of marine protected areas, which became effective in 2012, after completion of the 2010 SEIR. As the first agency to review the proposed Project and make a new discretionary decision in the shadow of these significant changes, the Commission must fully evaluate the implications and impacts of this new information in its CEQA document, even if other agencies like the Coastal Commission or Regional Water Quality Control Board also have jurisdiction over the Project. See *Banning Ranch Conservancy v. City of Newport Beach*, 2 Cal. 5th 918 (2017).

Second and related, the DSEIR, as currently structured, improperly segments the impacts analysis, in an apparent attempt to avoid evaluating potentially significant changes and new information not previously considered. The Project at issue here is the proposed regional desalination facility, which would (1) extract seawater along with the living public trust marine resources contained in that seawater, (2) process the seawater into potable fresh water and deliver it through a water distribution system, and (3) discharge brine wastes to the ocean. The Commission's lease allows certain activities and the placement of certain equipment on public trust lands for the sole purpose of facilitating the development and operation of this single, integrated desalination facility. Because there is no other purpose or independent utility for the lease – or the lease modification now under consideration – the Commission must, as a matter of law, evaluate the proposed lease modification (as it did the original lease in 2010) as part of the whole Project, not a separate, different, or smaller project.

This is not a case where the Commission's action is a first modest step in a sequence of speculative actions leading to a potential future project. The desalination facility has correctly been defined as a single CEQA "project" for years, in a single EIR, and the activities that will take place on trust lands under the Commission's jurisdiction are an integral part of that Project. The Commission's new attempt to slice off the lease modification from the rest of the Project and consider only that slice, in order to avoid considering the broader impacts of significant Project changes and new information, is the kind of quintessential "piecemealing" or "segmentation" that the courts have long forbidden. See *Bozung v. Local Agency Formation Com.*, 13 Cal. 3d 263, 283-84 (1975) (explaining CEQA's mandate that "environmental considerations do not become submerged by chopping a large project into many little ones – each with a minimal potential impact on the environment – which cumulatively may have disastrous consequences"); *Laurel Heights Improvement Assn. v. Regents of Univ. of California*, 47 Cal. 3d 376, 396 (1989) (holding that EIR must cover all reasonably foreseeable impacts from completion of the project, even if the precise details of that completion have not yet been formally decided). If Commission staff believes that a portion of the Project – e.g., the water delivery system – is too speculative or indeterminate to evaluate at this time, the proper remedy is to wait for additional details from the Project proponent, not to illegally segment the impacts analysis and approve a piece of the Project.

The Commission's misinterpretation of its CEQA obligations in this matter will have profound implications. Under the Commission's approach, each subsequent agency would prepare its own separate partial CEQA update for the Project, meaning that the public will be faced with several different, and potentially incompatible, updated EIRs. This is precisely what the Legislature intended to avoid by requiring that a single lead agency undertake environmental review and that other agencies making subsequent decisions utilize the lead agency's analysis in their processes. This fundamental concept of a single CEQA document applies with equal force to subsequent environmental review performed by a substitute lead agency when a project or its circumstances have changed or when new information of substantial importance comes to light. Having several different agencies draft updated partial EIRs for a single, integrated project deprives the public of an ability to comprehensively understand project impacts and reasonable alternatives or mitigation. It is for this reason that segmenting subsequent CEQA review is not only unlawful, but poor public policy.

Indeed, as the DSEIR itself acknowledges, other agencies undertaking updated CEQA review for the changed Project – including at least the California Coastal Commission, the Regional Water Quality Control Board, and the Orange County Water District – will and by law must rely upon the Commission's DSEIR. Thus, the Commission's erroneous legal determinations about the limited scope of the updated environmental review will serve as the CEQA baseline for all other agencies. If concerned citizens do not challenge this incorrect baseline document now, they may be precluded from doing so when other agencies engage in ancillary CEQA proceedings. For this reason, unless the Commission prepares and recirculates a more robust and thorough subsequent EIR that considers the Project as a whole and the impacts of Project changes,

Alexandra Borack, Project Manager
July 26, 2017

Page 4

changed circumstances, and new information, concerned citizens like our clients will have no choice but to seek immediate judicial review of the Commission's CEQA compliance.

We appreciate your further attention to this important matter.

Sincerely yours,

A handwritten signature in cursive script that reads "Deborah A. Sivas". The signature is written in black ink and is positioned above the printed name.

Deborah A. Sivas

October 6, 2016

Environmental Law Clinic

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Deborah A. Sivas
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Via U.S. and Electronic Mail

Jennifer Lucchesi, Executive Officer
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, California 95825-8202
Email: Jennifer.Lucchesi@slc.ca.gov

**Application for Amendment to Lease No. PRC 1980.1
from Poseidon Resources (Surfside) LLC**

Dear Ms. Lucchesi:

We write on behalf of California Coastkeeper Alliance, Residents for Responsible Desalination, and California Coastal Protection Network in connection with the State Lands Commission ("SLC") process for evaluating Poseidon Surfside's application to amend tidelands Lease No. PRC 1980.1 in order to accommodate its proposed Huntington Beach Desalination Project ("Project"). Since 2010, when the City of Huntington Beach approved permits for the facility, Poseidon has significantly altered key facets of the Project. These changes necessitate additional environmental review under the California Environmental Quality Act ("CEQA"). SLC cannot lawfully proceed with consideration of the requested lease amendment until that additional review is completed. Because there are no further discretionary approvals of the Project by the City, we understand that SLC will be stepping into the role of "lead agency" for the requisite additional CEQA review and preparing an updated Environmental Impact Report ("EIR") for public review and certification. In that role, we urge SLC to fully evaluate all potential impacts associated with proposed changes to the Project.

More specifically, and as discussed below, a substitute lead agency must evaluate all impacts from the Project as a whole in any supplemental or subsequent EIR. That is, the task of additional environmental review cannot be segmented between different agencies; the new lead agency, like the prior one, must prepare and circulate a single updated EIR that can then be relied upon by other responsible agencies taking subsequent discretionary actions. There is no legal authority that would allow SLC to slice off a piece of the Project for additional CEQA review while ignoring other substantial changes to the Project or deferring consideration of those changes to another agency. Accordingly, we urge SLC to follow this simple CEQA principle in moving forward on Poseidon's requested lease amendment.

History of Project

In 2005, the City of Huntington Beach, acting as the designated CEQA "lead agency" for the Project, certified an EIR that evaluated the proposed desalination plant as a

“co-located” facility at the existing power plant. In 2010, the City certified a Subsequent Environmental Impact Report (“SEIR”) for a “stand-alone” project that would continue drawing cooling water through the power plant’s open ocean intake system after the power plant stopped using this system. Since then, Poseidon has proposed substantial changes to the Project that were not evaluated in the EIR or SEIR. In particular, Poseidon now proposes to:

- (1) continue using the existing intake structure for “temporary stand alone” use despite new scientific information and changes in the law;
- (2) change substantially the offshore seawater intake by dismantling the existing velocity cap to add one millimeter wedgewire screens and associated structures, once the power plant discontinues withdrawing seawater;
- (3) change substantially the existing seawater discharge pipe with a concentrated seawater diffuser; and
- (4) change substantially the pipeline to carry desalinated water away from the site for injection into the groundwater aquifer and/or other means of delivering the product water to member agencies of the Orange County Water District.

None of these significant changes have been evaluated in any existing EIR or SEIR. Further, since certification of the 2010 SEIR, there are significant changes in the surrounding area that will contribute to cumulative impacts from the Project, including, but not limited to, cumulative air quality impacts already identified by SLC.

Although the City has no further discretionary approvals to grant for the Project, several other agencies do. In addition to the tidelands lease amendment from SLC, Poseidon also is seeking a coastal development permit from the Coastal Commission and a National Pollutant Discharge Elimination System (“NPDES”) permit and Waste Discharge Requirements from the Regional Water Quality Control Board, among other approvals. Each of these agencies will, and as a matter of law must, rely on the additional CEQA review that SLC completes to address the proposed changes to the Project.

Legal Responsibilities

Since more than one public agency may have discretionary approval authority for a project, CEQA includes rules for determining each agency’s obligations. The agency with “principal responsibility” for carrying out or approving a project serves as the CEQA “lead agency” for purposes of complying with the statutory requirements. Cal. Pub. Res. Code § 21067. CEQA requires the lead agency must conduct a thorough review of the project in question, even though additional review might later be undertaken by other agencies with jurisdiction over specific resources, and must provide a comprehensive analysis on which other agencies may rely. Save San Francisco Bay Assn. v. San Francisco Bay Conservation etc. Com., 10 Cal. App. 4th 908, 921 (1992).

By contrast, a CEQA “responsible agency” is “a public agency, other than the lead agency, which has responsibility for carrying out or approving a project,” *id.* § 21069, and a CEQA “trustee agency” is a state agency that has jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California. *Id.* § 21070. A responsible agency generally consults with the lead agency about the CEQA process, provides comments on the draft EIR, and complies with CEQA by considering the final EIR certified by the lead agency and by reaching its own conclusion on whether and how to approve the project. 14 C.C.R. § 15096(a)-(b). Normally, the local land use authority functions as the lead agency, while specialized state agencies (e.g., State Lands Commission, Regional Water Quality Control Board, Caltrans, etc.) act as responsible or trustee agencies.

Once a lead agency is selected, that agency shoulders the burden of complying with CEQA in all respects. In particular, “the lead agency is responsible for considering the effects of all activities involved in a project and, if required by CEQA, preparing the draft and final EIR’s and certifying the final EIR for a project.” *Riverwatch v. Olivenhain Mun. Water Dist.*, 170 Cal. App. 4th 1186, 1201 (2009) (emphasis added). In contrast, “[r]esponsible agencies generally rely on the information in the CEQA document prepared by the lead agency [e.g., an EIR] and ordinarily are not allowed to prepare a separate EIR or negative declaration.” *Id.* In other words, “while the lead agency is responsible for considering all environmental impacts of the project before approving it, a responsible agency has a more specific charge: to consider only those aspects of a project that are subject to the responsible agency’s jurisdiction.” *Id.* 1201, 1206 (emphasis added).

Here, the City of Huntington Beach initially assumed lead agency status for the Project, preparing and certifying both the original EIR and the SEIR in connection with its issuance of a coastal development permit and a conditional use permit. For the reasons discussed above, substantial changes to the Project not evaluated in those prior documents necessitate additional CEQA review. It does not appear, however, that there are any additional discretionary approvals pending before the City. Under such circumstances, the CEQA Guidelines provide as follows:

Where a responsible agency is called on to grant an approval for a project subject to CEQA for which another public agency was the appropriate lead agency, the responsible agency shall assume the role of the lead agency when any of the following conditions occur:

- ...
- (2) The lead agency prepared environmental documents for the project, but the following conditions occur:
 - (A) A subsequent EIR is required pursuant to Section 15162,
 - (B) The lead agency has granted a final approval for the project, and
 - (C) The statute of limitations for challenging the lead agency's action under CEQA has expired.

14 C.C.R. § 15052(a). The assumption of the lead agency role falls to the next agency to issue a discretionary approval, which in this case appears to be SLC.¹

Given the substantial changes in the proposed Project since the SEIR was certified, there simply is no question that a subsequent EIR must be prepared to inform the SLC's discretionary decision on any lease amendment. All EIRs, including subsequent EIRs, must evaluate the "whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." 14 C.C.R. § 15378. "From this principle, 'it is clear that the requirements of CEQA 'cannot be avoided by chopping up proposed projects into bite-sized pieces' which, when taken individually, may have no significant adverse effect on the environment." Ass'n for a Cleaner Env't v. Yosemite Cmty. Coll. Dist., 116 Cal. App. 4th 629, 638 (2004) (project to close shooting range included cleanup and dismantling); see also Christward Ministry v. Superior Court, 184 Cal. App. 3d 180, 195-96 (1986) (city impermissibly chopped up single project into three separate projects, which was "exactly the type of piecemeal environmental review prohibited by CEQA"); Citizens Ass'n for Sensible Dev. of Bishop Area v. County of Inyo, 172 Cal. App. 3d 151, 165 (1985) (project improperly segmented into two projects for CEQA purposes).

To comply with CEQA, therefore, SLC must prepare a subsequent EIR for the whole project that covers impacts from all substantial changes to the Project, including changes to aspects of the Project that do not involve the tidelands lease, because all other responsible agencies must rely on the subsequent CEQA document for any additional discretionary approvals. In particular, as noted above, we understand that the substantial changes to the Project include a pipeline to carry desalinated water away from the site for injection into the groundwater aquifer. Because these new aspects – the pipeline and the groundwater injection – are necessary steps in Poseidon's objective to produce and sell desalinated water, they unquestionably are part of the same project for CEQA purposes. Tuolumne Cty. Citizens for Responsible Growth, Inc. v. City of Sonora, 155 Cal. App. 4th 1214, 1226 (2007) ("The relationship between the particular act and the remainder of the project is sufficiently close [to constitute a single project under CEQA] when the proposed physical act is among the "various steps which taken together obtain an objective."). As such, SLC must evaluate them in its updated EIR. Rural Landowners Assn. v. City Council, 143 Cal. App. 3d 1013, 1025 (1983) (where responsible agency stepped into the shoes to prepare a subsequent or supplemental EIR, all parts of project, including new parts, had to be evaluated).

¹ Although there has been some suggestion that the Orange County Water District should assume lead agency status, that course of action makes no sense. The Water District will presumably be the last agency to take a discretionary action – purchase of the water from the Project – after Poseidon obtains all necessary government approvals and permits. Thus, one of the state permitting agencies must complete and certify a subsequent EIR long before the Water District makes a final discretionary decision.

In carrying out its updated environmental review, therefore, SLC must evaluate any and all aspects of the revised Project that were not previously considered in the EIR or SEIR, including substantial new cumulative impacts in the vicinity of the Project. CEQA requires environmental review of indirect and cumulative impacts, as well as direct impacts. Indirect impacts are "secondary effects" that are the reasonably foreseeable result of a project even though they "are later in time or farther removed in distance." 14 C.C.R. § 15358(a)(2); Bakersfield Citizens for Local Control v. City of Bakersfield, 124 Cal. App. 4th 1184, 1205 (2004). A cumulative impact "is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." 14 C.C.R. §15130. "One of the most important environmental lessons evident from past experience is that environmental damage often occurs incrementally from a variety of small sources." Kings County Farm Bureau v. City of Hanford, 221 Cal. App. 3d 692 (1990). Thus, without "meaningful cumulative analysis" and control, "piecemeal development would inevitably cause havoc in virtually every aspect of the urban environment." San Franciscans for Reasonable Growth v. City and County of San Francisco, 151 Cal. App. 3d 61 (1984).

In short, the law is clear that when SLC steps into the City of Huntington Beach's shoes, it must play the full role of a lead agency and consider all reasonably foreseeable direct, indirect and cumulative impacts from the Project, including from those aspects of the Project that may fall under the approval jurisdiction of another responsible agency. This result makes sense from a policy perspective, as well. Just as CEQA requires a single initial lead agency for each project and a single EIR upon which all other responsible agencies may rely, the same rules apply to a subsequent or supplemental EIR. The agency that steps into the lead agency shoes must prepare a single document that evaluates impacts from the whole project. Deferring evaluation of some project impacts simply because another responsible agency has later approval authority would deprive the public and decisionmakers of the ability to comprehensively understand the project's full environmental impacts, in violation of CEQA. A decision to proceed on the lease amendment application with only a partially updated EIR would render SLC's actions vulnerable to a viable legal challenge.

CONCLUSION

For the reasons discussed above, we strongly encourage SLC to take full responsibility for preparation, circulation, and certification of the required subsequent EIR for this Project. A partial, segmented SEIR simply cannot withstand judicial scrutiny. Moreover, SLC cannot lawfully move forward with approving a lease amendment until all necessary CEQA is completed; the law simply does not allow approval of the lease amendment contingent on some later environmental analysis by a different agency. There is thus no practical benefit – to any agency or party – from preparing a partial SEIR.

Jennifer Lucchesi, Executive Officer
California State Lands Commission
October 6, 2016

Page 6

Thank you for your attention to this important matter. We and our clients look forward to reviewing a draft SEIR that covers all proposed changes in the Project and to fully participating in the CEQA public process.

Sincerely yours,

A handwritten signature in cursive script that reads "Deborah A. Sivas". The signature is written in black ink and is positioned above the printed name.

Deborah A. Sivas

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October 18, 2017

Alexandra Borack, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Sent via electronic mail to: CEQA.comments@slc.ca.gov

RE: Poseidon Supplemental EIR Comments

Dear Ms. Borack,

On behalf of the California Coastkeeper Alliance, we appreciate the opportunity to provide comments on the California State Lands Commission (SLC) Poseidon Supplemental EIR (SEIR). We appreciate the difficult position the SLC is in. The Memorandum of Agreement (MOA) between SLC, the Water Boards, and the Coastal Commission is flawed - SLC should not be the first agency to review the Poseidon project. The State Water Board's new Desalination Ocean Plan Amendment drives the entire permitting process. All parties, including Poseidon and the opponents of the project would benefit from the Water Board being the first agency to review the project. Regardless, it seems as though SLC is going to be the first agency to make a discretionary decision on the Poseidon - Huntington Beach Project. This puts SLC into the shoes as the lead CEQA agency. And regardless of whether it is fair or not, CEQA demands that SLC perform a comprehensive CEQA analysis of the significant changes to the project, to the significant changes to the circumstances, and to new information of substantial importance since 2010.

The currently proposed Final Supplemental EIR and draft Lease are illegal. We respectfully request the Commission to take no action on the EIR. Deny the lease with the explanation that it's premature and that a new lease will be considered after the Regional Board adopts its permit for the Project. The MOA is not binding¹ - take action to allow the Regional Water Board to be the first agency to analyze the project. If the Commission is unwilling to take this action, we ask in the alternative to direct the SLC to go back and do a subsequent EIR for recirculation that analyzes the substantial changes to the project, circumstances, and new information since 2010.

1. Poseidon does not have a vested right to use the pipelines for seawater desalination, the Commission only granted a conditional and expressly limited contract right to Poseidon in 2010.

Throughout the response to comments the SLC states that "Poseidon has a vested right to use the pipelines for seawater desalination until August 7, 2026." As a threshold matter as it relates to the CEQA analysis, we must be clear that we are not asking the SLC to go back and review the Project in its entirety. Our comments only argue that CEQA demands SLC perform a comprehensive CEQA analysis of the significant changes to the project, to the significant changes to the circumstances, and to new information of substantial importance since 2010.

Poseidon does not have a vested right to use the pipelines for seawater desalination. First, the lease requires that Poseidon must (1) obtain, maintain, and comply with all necessary government permits and other entitlements for the proposed desalination project, (2) comply with all existing and subsequently enacted

¹ State Lands Commission et al., Interagency Permit Sequencing Framework Agreement (October 3, 2016): Nothing in this Framework Agreement is intended to constrain the ability of any public agency or body to exercise its lawful discretion to approve, deny, or impose conditions on the Poseidon Project.

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rules, regulations, statutes, and ordinances, and (3) provide the Commission with copies of all required governmental permits and authorizations. Failure to comply with these lease terms constitutes an immediate default in or breach of the lease.

Second, and of vital importance to today's proceeding, the lease provides that "Poseidon Resources shall complete construction of the desalination facility within eight years of the authorization of this amendment" – or by October 29, 2018. That is, while the pre-existing AES lease continues through 2026, Poseidon's right to complete construction of a desalination facility effectively expires in 2018.

Thus, the Commission granted a conditional and expressly limited contract right to Poseidon in 2010, one which contemplated that Poseidon would obtain necessary approvals from other agencies, such as the Coastal Commission and the Regional Water Board, and within 8 years construct a facility that, as described in the City of Huntington Beach's original EIR, would connect directly into the potable water distribution system of the Orange County Water District.

Seven years later, none of these conditions have been satisfied. Poseidon has not obtained final coastal development permits from the Coastal Commission. Poseidon has not obtained an NDPES permit or Waste Discharge Requirements from the Regional Water Board. And Poseidon no longer intends to connect the proposed facility directly to the water distribution system. Indeed, as we stand here today, Poseidon has not disclosed to the public what it intends to do with the very expensive water it would produce at the proposed facility.

2. The City of Huntington Beach is not the lead agency – the State Lands Commission is the lead agency.

The SLC's Response to Comments primary argument against doing a Subsequent EIR rests on the premise that the City of Huntington Beach remains the Lead Agency² and the SLC remains only a responsible agency. This is inaccurate. In the Response to Comments, the SLC's primary argument is found on Page II – 14:

Here, the Commission decided to proceed under CEQA's subsequent review provisions as an option explicitly authorized under CEQA Guidelines section 15096, subdivision (e)(3), and prepare a supplemental EIR under section 15163 where it determined a full subsequent EIR under section 15162 was not required.

First, CEQA Guidelines section 15096 – for which SLC relies upon – is for Responsible Agencies. Relying upon Section 15096 for Responsible Agencies is inappropriate. The SLC is now the lead agency. CEQA Guidelines section 15052(a) states:

Where a responsible agency is called on to grant an approval for a project subject to CEQA for which another public agency was the appropriate lead agency, the responsible agency shall assume the role of the lead agency when any of the following conditions occur:

(2) The lead agency prepared environmental documents for the project, but the following conditions occur:

(A) A subsequent EIR is required pursuant to Section 15162,

(B) The lead agency has granted a final approval for the project, and

² State Lands Commission, Response to Comments, Page I-10, Footnote 4: "As CEQA lead agency for the HB Desalination Plant (2010 Project), the City of Huntington Beach has the principal responsibility for taking action on the overall HB Desalination Plant and it conducted an environmental review of the facility in the 2010 FSEIR. The Commission has responsibility for taking action on the offshore portion of the HB Desalination Plant within its jurisdiction."

(C) The statute of limitations for challenging the lead agency's action under CEQA has expired.

The current situation satisfies all three requirements, and SLC must step into shoes of the lead agency. First, all parties agree the SLC must prepare additional CEQA analysis. And as acknowledged by everyone as explained below, the law requires that a subsequent EIR be prepared. Second, there is nothing in the administrative record that concludes the City has any additional discretionary approvals pending—the City granted its final approval for the project. Third, the statute of limitations for challenging the City of Huntington Beach CEQA approval has expired. Since the SLC is the next agency with continuing discretionary approval of the changed project, the SLC must take on the role of lead agency.

3. Everyone acknowledges that substantial changes to the Project require a Subsequent EIR.

The conclusion that SLC has no choice but to do a Supplemental EIR is inaccurate. In fact, everyone acknowledges that a Subsequent EIR is necessary. Again, in the Response to Comments, Page II-14, SLC relies

Here, the Commission decided to proceed under CEQA's subsequent review provisions as an option explicitly authorized under CEQA Guidelines section 15096, subdivision (e)(3), and prepare a supplemental EIR under section 15163 where it determined a full subsequent EIR under section 15162 was not required. [Emphasis added]

CEQA Guidelines section 15096, subdivision (e)(3) is explicitly the pathway for a Responsible Agency to conduct a “Subsequent EIR”:

If a Responsible Agency believes that the final EIR or Negative Declaration prepared by the Lead Agency is not adequate for use by the Responsible Agency, the Responsible Agency must either:

- (1) Take the issue to court within 30 days after the Lead Agency files a Notice of Determination;*
- (2) Be deemed to have waived any objection to the adequacy of the EIR or Negative Declaration;*
- (3) Prepare a subsequent EIR if permissible under Section 15162; or*
- (4) Assume the Lead Agency role as provided in Section 15052(a)(3).*

In the SLC's own words, on Page II-14 of the Response to Comments, they decided to take pathway (e)(3) – to “prepare a subsequent EIR”. We realize the SLC goes on to attempt to justify a supplemental EIR under Section 15163 – which we will address below. But the acknowledgement that SLC chose to take the Subsequent EIR pathway is important for two reasons. First, it helps demonstrate that SLC is the Lead Agency under CEQA Guidelines section 15096 by proving a Subsequent EIR is required. Second, it demonstrates that the SLC was not forced into a Supplemental EIR – they illegally chose to do a Supplemental EIR despite the lack of evidence in the record to do so.

4. A Supplemental EIR is illegal because minor additions are changes are not sufficient to make the previous EIR adequately apply to the project in the changed situation.

The SLC cannot rely upon conducting a supplemental EIR to make the previous EIR adequate. In the Response to Comments, Page II – 21, SLC states:

As discussed in master response MR-2, Lease Modification Project Scope, the Commission determined that only minor additions or changes to the 2010 FSEIR are necessary to make the previous EIR adequately apply to the project in the changed circumstances. The Lease Modification Project does not involve major revisions to the HB Desalination Plant Project that would require major revision to the 2010 FSEIR.

First, the narrow "Lease Modification Project" is not sufficient to make the previous EIR adequately apply to the project. SLC relies, in its Response to Comments, on Section 15163(a)(2) that states a responsible agency may choose to prepare a supplement to an EIR if:

Only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation.

As we have previously stated, there are numerous substantial changes to the project, substantial changes to the circumstances, and information of substantial importance that need to be analyzed to make the previous EIR adequately apply to the project in the changed situation.

Substantial Changes to the Project

- ✓ *Change substantially the offshore seawater intake by dismantling the existing velocity cap to add one millimeter wedgewire screens and associated structures;*
- ✓ *Change substantially the existing seawater discharge pipe with a concentrated seawater diffuser; and*
- ✓ *Change substantially the pipeline to carry potable product water away from the site for injection into the groundwater aquifer and/or other means of delivering the product water to member agencies of the Orange County Water District.*

Substantial Changes to the Circumstances

- ✓ *The State Water Board adopted the Desalination Ocean Plan Amendment in 2015.*
- ✓ *California completed a network of marine protected areas in 2012.*
- ✓ *Numerous significant cumulative impacts from the Project, including the Huntington Beach Energy Project, ASCON toxic landfill remediation, and the proposal to demolish and develop the adjacent Tank Farm property.*

New Information of Substantial Importance

- ✓ *The OCWD's Groundwater Replenishment System (GWRS) became operational, originally producing 70 MGD of highly purified water. In 2015, the project was expanded to produce 100 MGD. Ultimate capacity is projected at 130 MGD*
- ✓ *New water demand projections revealed in February 2016 by MWDOC showed significantly reduced water demand than previously reported – a difference of about 90,000 acre feet less than predicted in 2010.*
- ✓ *In February 2017 MWDOC staff presented their Water Reliability Study that discussed the future need for water by OCWD and concluded the average future shortage through 2040 would be only 6,300 AFY and that the "Poseidon Yield at 56,000 AF per year would supply more water than needed in most every year".*
- ✓ *See Attachment One. New Slant Well Study suggests that, not only would slant wells not have an adverse impact on the groundwater basin, slant wells may actually improve protection from seawater intrusion.³*
- ✓ *The 2015 Substitute Environmental Document for the OPA outlines important findings by the State Water Board's Expert Panel. Studies found that a 1 mm screened intake will result in a zero reduction of entrainment for small and younger species.*

These substantial changes to the project, substantial changes to the circumstances, and new information of substantial importance cannot be adequately addressed through only minor additions are changes to make the previous EIR whole. Thus, a Supplemental EIR is illegal in these circumstances.

³ See Attachment One.
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Secondly, the SLC cannot narrowly define the “project” to justify a supplemental EIR. A CEQA project is required to have independent utility. The narrow “Lease Modification Project” does not have independent utility. An intake and discharge has no utility if the desalination facility is not included. The intake and discharge has no utility if the distribution system is not included. All three components – the intake and discharge, the desalination facility, and the distribution system are all one project in order to accomplish independent utility.

Just as in *Tuolumne County Citizens*, there is no independent utility if you piecemeal the project. That is, the modifications cannot be a separate project because they have no “independent utility”, nor does the project have any utility without the intake and discharge. Further, clearly the modification of the intake and discharge conduits are, as the court noted, “a step toward achieving the project objectives” to supply fresh water to the region. The “Lease Modification Project”, in and of itself, will not:

- *Provide a long-term, local and reliable source of water not subject to the variations of drought or regulatory constraints;*
- *Reduce local dependence on imported water and strengthen regional self-reliance; nor,*
- *Contribute desalinated water to satisfy regional water supply planning goals.*

The narrow “Lease Modification Project” does not have the independent utility to stand on its own as a separate project. In order to determine whether a supplemental EIR is appropriate, the SLC must evaluate all of the substantial changes to the project, substantial changes to the circumstances, and new information of substantial importance in order to determine whether minor additions would make the previous EIR adequate.

5. The SLC cannot excuse itself from a full CEQA analysis simply because it does not have the regulatory oversight.

In response to our comment that the SLC is illegally piecemealing this project, the SLC responded on page II-14 in the Response to Comments that:

It is appropriate for the Commission to focus its review on the modifications within Commission’s jurisdiction because CEQA does not require an agency to review issues over which it has no discretionary authority.

This statement is wrong. The SLC imprecisely points to case law that is not on-point. The case law that SLC relies upon is for responsible agencies – not lead agencies. We agree that responsible agencies are not required to review issues over which it has no discretionary authority. However, as we have demonstrated, the SLC is the lead agency for this Project. There is nothing in the record that demonstrates the City of Huntington Beach is still the lead agency.

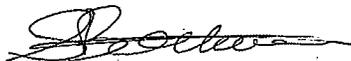
The correct case law to rely upon is the recent California Supreme Court decision of *Banning Ranch Conservancy v. City of Newport Beach et al.* The SLC cannot contend it does not need to review issues over which it has no discretionary authority. In *Banning Ranch*, the City argued it had “no authority to designate ESHA on Banning Ranch because only the Coastal Commission can do that.” However, the Court stated that a lead agency is not required to make a “legal” ESHA determination in an EIR. Rather, it must discuss potential ESHA and their ramifications for mitigation measures and alternatives when there is credible evidence that ESHA might be present on a project site. Similarly here, SLC is not required to make a legal determination as to what the best site and best technology is for minimizing marine life mortality. But, it is required to discuss mitigation measures and alternatives as they relate to marine life impacts due to ongoing desalination activities.

SLC is the lead agency. SLC has determined that a Subsequent EIR is appropriate. The narrow "Lease Modification Project" is not sufficient to make the previous EIR adequately apply to the project in the changed situation. The "Lease Modification Project" does not have independent utility. And the SLC cannot piecemeal the Project with the excuse that they do not have the discretionary authority. The Final Supplemental EIR is illegal.

The proposed Lease Amendment is also illegal. We incorporate by reference the Stanford Law School's Mills Legal Clinic letter dated October 17, 2017.

The currently proposed Final Supplemental EIR and draft Lease are illegal. We respectfully request the Commission to take no action on the EIR. Deny the lease with the explanation that it's premature and that a new lease will be considered after the Regional Board adopts its permit for the Project. The MOA is not binding – take action to allow the Regional Water Board to be the first agency to analyze the project. If the Commission is unwilling to take this action, we ask in the alternative to direct the SLC to go back and do a subsequent EIR for recirculation that analyzes the substantial changes to the project, circumstances, and new information since 2010.

Sincerely,



Sean Bothwell
Policy Director, California Coastkeeper Alliance

Attachment One

Huntington Beach Seawater Desalination Facility Groundwater Model Evaluation

HYDROFOCUS^{UNZ}

Solutions for Land and Water Resources

September 23, 2016

Mr. Ray Heimstra
Orange County Coastkeeper
Costa Mesa, CA

Mr. Joe Geever
Residents for Responsible Desalination
Long Beach, CA

Subject: Huntington Beach Seawater Desalination Facility Groundwater Model
 Evaluation

Dear Mr. Heimstra and Mr. Geever,

Please find enclosed the subject report prepared by HydroFocus. We critically reviewed and analyzed the results from the groundwater-flow model developed by Geosyntec Consultants to help in the evaluation of impacts and feasibility of subsurface intakes for the proposed Huntington Beach Seawater Desalination Facility. We reviewed the model structure, verified model inputs and outputs, assessed groundwater flow patterns, and evaluated the sensitivity of model outputs to model inputs. We ascertained the source of groundwater flowing to the proposed slant wells and groundwater travel times.

Our sensitivity analysis to assess the effects of varying different model inputs on model results revealed that the model outputs were most affected by changes in the aquifer properties of the Talbert Aquifer and the overlying aquitard. Varying these properties produced large changes in model-estimated groundwater-level declines and inland flow to the production wells. These results indicate that more data is needed for these inputs to improve model certainty.

Several additional steps can be taken to improve the model and increase confidence in evaluating impacts of the project. We recommend: (1) aquifer tests to determine properties of the Talbert Aquifer, the overlying sediments, and the wetland sediments; (2) an assessment of the effects of the lateral model boundaries, (3) correction of inconsistencies in model construction, (4) calibration/verification using water level data, and (5) subsidence modeling to preliminarily evaluate the subsidence potential due to slant well pumping. The improved model can then be used to more effectively simulate potential impacts and project feasibility.

Operation of the slant wells will affect the extent of seawater intrusion in the Talbert Aquifer; pumping will likely increase the gradient from inland areas toward the project wells which will enhance the movement of inland freshwater toward the coast and move the seawater/freshwater interface closer to the coastline.

Thank you for the opportunity to work on this project and be of service. Please contact us if you have any further questions.

Sincerely,



David Leighton
Senior Hydrologist



Steven Deverel, Ph.D., P.G.
Principal Hydrologist





Huntington Beach Seawater Desalination Facility Groundwater Model Evaluation

HydroFocus, Inc., Davis, CA
September 23, 2016

Executive Summary

HydroFocus critically reviewed and analyzed outputs from the groundwater-flow model developed to evaluate the impacts and feasibility of subsurface intakes for the proposed Huntington Beach Seawater Desalination Facility in a coastal lowland area known as the Talbert Gap. The Talbert Gap is part of the Coastal Plain of Orange County Groundwater Basin and the primary water-bearing zone in the Talbert Gap is the Talbert Aquifer. The Orange County Water District operates the Talbert Seawater Intrusion Barrier at the northern edge of the Talbert Gap and a series of coastal marsh and wetland areas exist along the coast in the project area.

Geosyntec Consultants developed a groundwater-flow model to simulate the effects of pumping 127 million gallons per day (MGD) of groundwater from 40 slant wells located along the coast and screened in the Talbert Aquifer. HydroFocus reviewed model structure, ran the model to verify output and assess groundwater flow patterns, and evaluated model sensitivity. We used particle tracking to determine the source of groundwater flowing to the slant wells and evaluate groundwater travel times for various scenarios. We verified that the model geometry, boundary conditions, and aquifer properties generally agreed with information reported by Geosyntec Consultants with some exceptions. The cell dimensions were slightly different than reported and the ocean in model Layer 1 was not represented as constant head in all areas as was reported.

We conducted a model sensitivity analysis to assess the effects of varying model inputs on model results. Specifically, we evaluated the effect on simulated flow to the slant wells from inland groundwater and the wetlands and the average water-level decline due to varying model inputs for aquifer transmission properties (i.e. hydraulic conductivity), pumping rates, well location and length, and water levels at the seawater intrusion barrier. The model was most sensitive to changes in the aquifer properties of the Talbert Aquifer and the overlying sediments. Varying these properties produced large changes in model-estimated groundwater-level drawdowns and inland flow to the slant wells. These results indicate that more data is needed for these inputs to improve model certainty.

Pumping at lower rates than originally simulated will reduce impacts on the groundwater system. Operation of the slant wells will affect the extent of seawater intrusion in the Talbert Aquifer; pumping will likely increase the gradient from inland areas toward the project wells which will enhance the movement of inland freshwater toward the coast and move the seawater/freshwater interface closer to the coastline. This increase in seaward gradient along with capture of seawater by the slant wells will have the effect of reducing the inland migration of seawater.

We identified model limitations and uncertainty that affect the ability of the model to accurately predict impacts of project pumping. The model was not calibrated or verified using observed water level data. There is very limited information on the water transmitting and storage properties of the aquifers and aquitards in the Talbert Gap on which to base model inputs. Groundwater flow paths suggest that model results may be affected by the lateral boundaries of the model domain. The constant water levels specified for the seawater intrusion barrier assumes that the quantity of injection water will be available to maintain the water levels at the barrier regardless of the impact of the slant well pumping. Variable head cells representing parts of the ocean may result in an inaccurate estimation of the contribution of the ocean to the slant wells.

Several additional steps can be taken to improve the model and increase confidence in evaluating impacts of the project. We recommend (1) aquifer tests to determine properties of the Talbert Aquifer, the overlying sediments, and the wetland sediments; (2) an assessment of the effects of the lateral model boundaries, (3) correction of inconsistencies in model construction, (4) calibration/verification using water level data, and (5) incorporation of the US Geological Survey MODFLOW Subsidence Package to preliminarily evaluate the subsidence potential due to slant well pumping. The improved model can then be used to more effectively simulate potential impacts and project feasibility.



Huntington Beach Seawater Desalination Facility Groundwater Model Evaluation

HydroFocus, Inc., Davis, CA
September 23, 2016

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Introduction and Background

Geosyntec Consultants (Geosyntec) on behalf of Poseidon Resources (Poseidon) evaluated the feasibility of subsurface intake for the proposed Huntington Beach Seawater Desalination Facility (Desal Facility). Poseidon proposes to locate the Desal Facility site in a coastal lowland area known as the Talbert Gap.

Brief description of hydrogeology

The Talbert Gap is part of the Coastal Plain of Orange County Groundwater Basin identified by the California Department of Water Resources (CDWR).¹ The Talbert Gap is an erosional channel filled with permeable alluvium between Huntington Beach mesa to the northwest and the Newport mesa to the southeast. The primary water-bearing zone in the Talbert Gap is the Talbert Aquifer. The Talbert Aquifer extends offshore and, therefore, allows exchange of groundwater with the ocean. The Talbert Aquifer is overlain by fine-grained sediments and underlain by a zone of fine-grained sediments and deeper aquifers.

The connection of the Talbert Aquifer with the ocean has allowed seawater to intrude into the aquifer as a result of inland pumping. The Orange County Water District (OCWD) operates the Talbert Seawater Intrusion Barrier at the northern edge of the Talbert Gap.² The barrier is comprised of 36 wells that inject water into the aquifers to control seawater intrusion and replenish the basin.

A series of coastal marsh and wetland areas exist along the coast in the study area. These wetland areas are hydraulically connected to the open ocean³. However, the hydraulic conductivity of the bed sediments in these wetland areas likely differ significantly from the hydraulic conductivity values in shallow sediments in the surrounding area⁴.

Groundwater modeling

Geosyntec⁵ developed a groundwater-flow model to simulate the effects of pumping groundwater from multiple slant wells along the coast. The model simulates a pumping rate of 127 million gallons per day (MGD) from 40 slant wells screened in the Talbert Aquifer. The model was designed to evaluate the effects on the Talbert Injection Barrier to the northeast and the effects on coastal marsh and wetlands adjacent to the coast.

¹ California Department of Water Resources, California's Groundwater, Bulletin 118 – Update 2003. www.water.ca.gov/groundwater/bulletin118/update_2003.cfm

² Orange County Water District Groundwater Management Plan, 2015 Update.

³ Detwiler, Russel, 2015, Review of groundwater flow modeling developed by Geosyntec to simulate pumping from slant wells beneath the beach in Huntington Beach

⁴ *ibid*

⁵ Geosyntec Consultants, 2013, Feasibility Assessment of Shoreline Subsurface Collectors Huntington Beach Seawater Desalination Project Huntington Beach, California.

Thrup, Gordon, 2015, Revision and Sensitivity Analyses of Slant Well SSI Model, Geosyntec Consultants Technical Memorandum to Scott McCreary.

HydroFocus obtained the Geosyntec model versions 6, 7 and 8. The model was developed using the U.S. Geological Survey MODFLOW 2000 code⁶. Model version 6 incorporates several recommended changes from previous versions of the model. This version includes the addition of constant head cells⁷ to represent a portion of coastal marsh and wetland areas, and the model grid was refined to provide a larger portion of the coast with finer grid spacing. Model version 6 was used to conduct several sensitivity runs to test the effects of varying aquifer properties and slant well pumping rates. Model versions 7 and 8 are similar to version 6 with the exception of the location of the slant wells.

The model consists of 10 layers; Layer 1 represents the ocean only, layers 2-4 represent fine-grained sediments⁸ above the Talbert Aquifer, layers 5-8 represent the Talbert Aquifer, layer 9 represents the fine-grained sediments below the Talbert Aquifer, and Layer 10 represents the deep aquifers. The Talbert Aquifer is represented using four layers to allow the pumping wells to be simulated with a slanted configuration increasing in depth as the wells extend away from the coast toward the ocean. Pumping from the slant wells occurs in layers 5-8.

HydroFocus critically reviewed the model used in the Well Investigation Team Report, performed model runs using varying model input values and assessed the sensitivity of model outputs to variations in model inputs. Our overall objectives were to:

1. Critically review the Geosyntec models;
2. Assess the sensitivity of the model outputs to varying values of model inputs;
3. Assess the effects of the proposed project;
4. Provide recommendations for further data collection, modeling, and assessment of project impacts.

Approach

We reviewed model structure and ran the model to verify output and assess groundwater flow patterns. Model runs with varying input parameters were analyzed to assess the sensitivity of model outputs and thus provide guidance for further data collection and input parameter assessment. The results of these runs, literature review, and the use of particle tracking were used to assess the possible effects of the project. Based on the results of our analyses, we have provided recommendations for data collection and additional modeling, and assessed potential project impacts.

Methods

Model review

The Geosyntec models were provided in the format used by the Visual MODFLOW⁹ graphical user interface (GUI). These files included the MODFLOW input and output files. We used the MODFLOW

⁶ Harbaugh, Arlen W., et al., 2000, MODFLOW-2000, The U.S. Geological Survey Modular Ground-Water Model-Users Guide to Modularization Concepts and The Ground-Water Flow Process.

⁷ In constant head model cells, the hydraulic head is specified in advance by the user and remains constant throughout all time steps of the simulation.

⁸ Fine-grained sediments typically consist of clays and silts. Coarse-grained sediments typically consist of sands and gravels.

⁹ Visual Modflow is a product to Waterloo Hydrologic

input files to run the model to verify that the model produces the same results as those provided by Geosyntec. The Geosyntec models used a propriety solver that is part of the Visual MODFLOW GUI. We ran the model using the USGS MODFLOW 2000 code and the Preconditioned Conjugate-Gradient (PCG) solver. We also imported the model into the Groundwater Vistas¹⁰ GUI to facilitate running the model, visualizing the results, and extracting model output.

We imported model input values including the IBOUND values, layer elevations, and aquifer properties into Geographic Information System (GIS) layers to facilitate mapping and model verification. We evaluated the model geometry, aquifer properties, and stresses (recharge and pumping) and compared the modeled values to the values reported by Geosyntec.

Sensitivity runs

We tabulated model--calculated groundwater flow to the slant wells from the inland barrier and from the wetlands for each of the sensitivity runs with varying inputs (sensitivity runs) (see Appendix A). We also extracted the water level declines simulated in the Talbert Aquifer (Layers 5-8) and calculated the maximum and mean decline in these layers. For most model runs, the largest water level decline occurred in Layer 8. Therefore, we used the average water level decline for Layer 8 for our analysis of the sensitivity runs. Model inputs and results for all runs are shown in Appendix A. We plotted the flow and water level decline values against the changes in model inputs to graphically display the results of the sensitivity analysis.

Groundwater flow paths

We used particle tracking to determine the source of groundwater flowing to the slant wells and evaluate groundwater travel times for various scenarios. We placed eight particles in each cell having a slant well. We used backward particle tracking with a porosity¹¹ of 20% to generate the pathlines and calculate travel times. We used the US Geological Survey computer program MODPATH¹² to simulate particle tracking. MODPATH is a particle-tracking post-processing model that computes three-dimensional flow paths using output from groundwater-flow simulations based on MODFLOW.

Results

Model review

Geometry

Geosyntec reported that the model cell dimensions range from 60x60 to 500x500 ft. We found that the grid cell dimensions range from 52 to 869 ft. along the columns (X direction) and from 56 to 672 ft. along the columns (Y direction). It is unlikely that these inconsistencies significantly affect model results. Table 1 lists the minimum, maximum, and mean thicknesses for the active cells in each layer and the thickness values reported by Geosyntec.

¹⁰ Copyright Environmental Simulations, Inc.

¹¹ Porosity is the fraction of void space in a given volume of aquifer material.

¹² Pollock, D.W., 2012, User guide for MODPATH version 6—A particle-tracking model for MODFLOW: U.S. Geological Survey Techniques and Methods, book 6, chap. A41, 58 p. <http://pubs.usgs.gov/tm/6a41/>

Table 1: Model layer thickness.

Layer	Actual Layer Thickness (ft)			Reported Thickness (ft)	Represents
	Min	Max	Mean		
1	10	132	55	--	Ocean
2	18	58	33	--	Fine-grained Sediments
3	8	51	22	--	
4	3	21	9	--	
5	19	24	22	100	Talbert Aquifer
6	20	25	23		
7	20	25	23		
8	22	27	25		
9	11	49	21	15	Fine-grained Sediments
10	34	149	63	50	Deep Aquifers

Constant Head Cells

Geosyntec reported that a constant head of 0.57 ft. was specified for all cells in the offshore portion of Layer 1. We found two significant areas of Layer 1 offshore along the coast that are represented as variable head cells. In these areas of variable head cells, the simulated head may vary as a result of the slant well pumping, which is not an appropriate way to simulate the ocean which should be simulated using specified constant head cells.

The Talbert Injection Barrier is represented by constant head cells along the northeast boundary of the model. The head in these cells varies from about 6-10 ft. There is some inconsistency in the spatial distribution of constant head cells between layers, but it likely does not significantly affect model results. Some of the marsh and wetland areas are represented by constant head cells with the head specified as 0.57 ft. The reasons for the specified distribution of these constant head cells are not reported by Geosyntec and are not clear to us.

Aquifer Properties

Table 2 shows the reported hydraulic conductivities¹³ for each layer of the model. In all layers, the vertical hydraulic conductivity was reported to be 1/10th of the horizontal hydraulic conductivity. The horizontal hydraulic conductivity values specified in the model agreed with the reported values in both magnitude and spatial distribution. The vertical hydraulic conductivity was represented in the model by vertical conductance between layers. Vertical conductance is calculated using the vertical hydraulic conductivity and thickness of adjacent layers. We calculated the vertical hydraulic conductivity from the vertical conductance values specified in the model and the calculated vertical hydraulic conductivity values agreed with the reported values.

¹³ Hydraulic conductivity is a measure of the ability of the aquifer material to transmit water and depends on the size and arrangement of the pores and fractures in the aquifer material. Horizontal hydraulic conductivity represents the transmission of water in the horizontal direction and vertical hydraulic conductivity represents transmission in the vertical direction. Vertical hydraulic conductivity is often less than horizontal hydraulic conductivity due to the nature in which aquifer materials are typically deposited in layers. See Heath, Ralph C., 1983, Basic Ground-Water Hydrology, U.S. Geological Survey Water-Supply Paper 2220, 86 pp.

Table 2. Hydraulic Conductivity values specified in the model.

Layer	Horizontal Hydraulic Conductivity (ft/d)	Vertical Hydraulic Conductivity (ft/d)	Represents
1	1000	100	Ocean
2	1/10	0.1/1	Fine-grained Sediments
3	10	1	
4	10	1	
5	10/300/325	1/30/32.5	Talbert Aquifer
6	10/300/325	1/30/32.5	
7	10/300/325	1/30/32.5	
8	10/300/325	1/30/32.5	
9	10	1	Fine-grained Sediments
10	300	30	Deep Aquifers

Pumping and Recharge

The MODFLOW well file was checked and verified to simulate a pumping rate of 127 MGD (2,200 gallons per minute, GPM, per well) from the layers representing the Talbert Aquifer (Layers 5-8) representing the slant well. Recharge¹⁴ was verified to be 1 inch per year as reported by Geosyntec.

Sensitivity of Model Outputs to Model Inputs

In the following sections, we report the assessed effects on model outputs of varying modeling inputs for hydraulic conductivity, well screen length, pumping rate, barrier water level and slant well location. The change in model output in relation to model input provides a measure of model parameter sensitivity. Increased sensitivity of model inputs, i.e. large changes in output relative to changes in model inputs, provides direction for collection of additional data to better quantify the parameters.

Effects of Varying Model Hydraulic Conductivity Values

Figures 1 through 3 illustrate the relative effects of changes in model hydraulic conductivity on model outputs for flow to the slant wells from inland groundwater and the wetlands and average water-level decline in Layer 8. The red point on the graphs represents model version 6 and the blue points represent sensitivity model runs in which hydraulic conductivity values for different layers were varied. Horizontal and vertical hydraulic conductivity were varied by the same proportion for each run.

¹⁴ Recharge is the percolation of water through the soil to the water table.

Hydraulic Conductivity – Talbert Aquifer

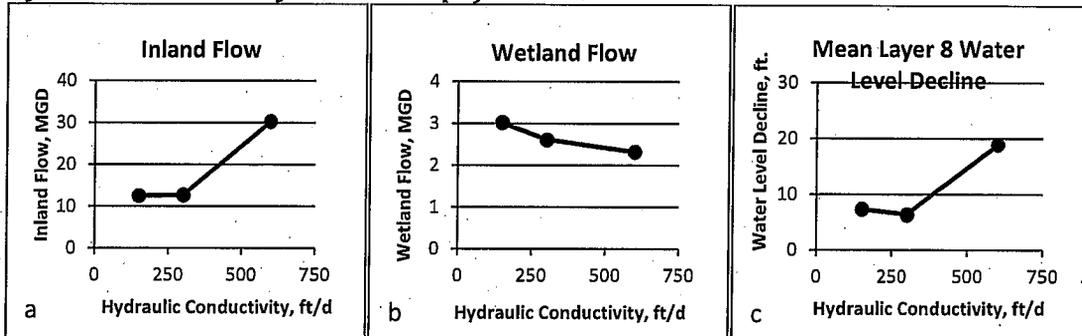


Figure 1. Effects of changes to the Talbert Aquifer hydraulic conductivity on inland flow (a), wetland flow (b), and mean Layer 8 water level decline (c).

Model results are more sensitive to increases in the hydraulic conductivity of the Talbert Aquifer than to decreases. Specifically, a 100% increase in the horizontal and vertical hydraulic conductivity (these parameters were varied together) of the Talbert Aquifer resulted in significant increases in flow from the inland boundary (140%) (Figure 1a) and Layer 8 water level decline (200%) (Figure 1c). Decreasing the horizontal and vertical hydraulic conductivity by 50% had a minimal effect on inland flow and water level decline (-2% and 14%, respectively) (Figures 1a and 1c). Increasing and decreasing the hydraulic conductivity of the Talbert aquifer resulted in minimal changes to the wetland flow (-12 to 15%) (Figure 1b).

Hydraulic Conductivity – Overlying Layers

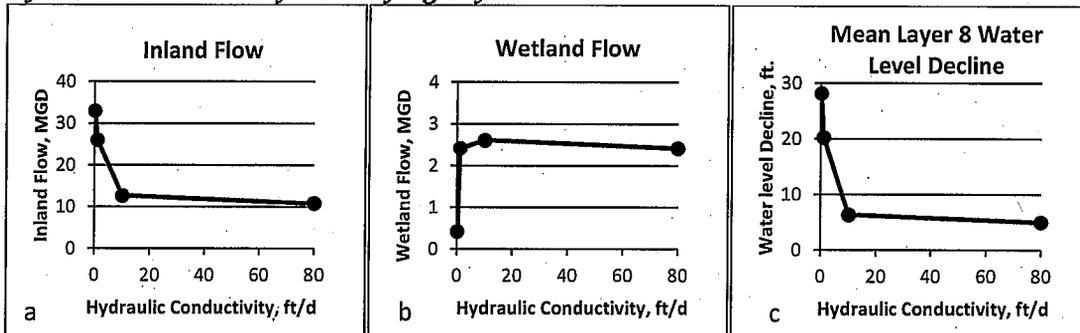


Figure 2. Effects of changes to the hydraulic conductivity in the layers overlying the Talbert Aquifer on inland flow (a), wetland flow (b), and mean Layer 8 water level decline (c).

The horizontal and vertical hydraulic conductivity in the model layers overlying the Talbert Aquifer was decreased and increased. Inland flow changed as much as 160% (Figure 2a) and wetland flow changed as much as -85% (Figure 2b) due to decreasing the hydraulic conductivity from 10 ft/d to 0.2 ft/d. Layer 8 water level decline was most sensitive to decreasing the hydraulic conductivity of the overlying layers (220% to 340% change in water level declines) (Figure 2c). Inland flow was also most sensitive to decreasing the hydraulic conductivity. Changes to inland and wetland flow and Layer 8 water level decline were relatively insensitive to increasing hydraulic conductivity.

The results shown in Figures 3 through 5 were for model runs in which the specified pumping rate was 100 MGD. A 50% decrease in the hydraulic conductivity of the layers underlying the Talbert Aquifer

resulted in relatively small changes of -24%, 14%, and 20% change in inland flow, wetland flow, and Layer 8 water level decline, respectively (Figures 3a, 3b, and 3c).

Hydraulic Conductivity – Underlying Layers

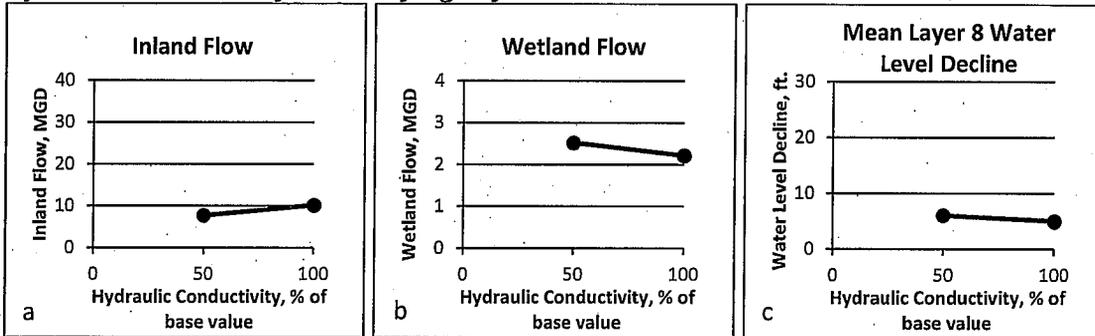


Figure 3. Effects of changes to the hydraulic conductivity in the layers underlying the Talbert Aquifer on inland flow (a), wetland flow (b), and mean Layer 8 water level decline (c).

Effects of Varying Model Screen Length

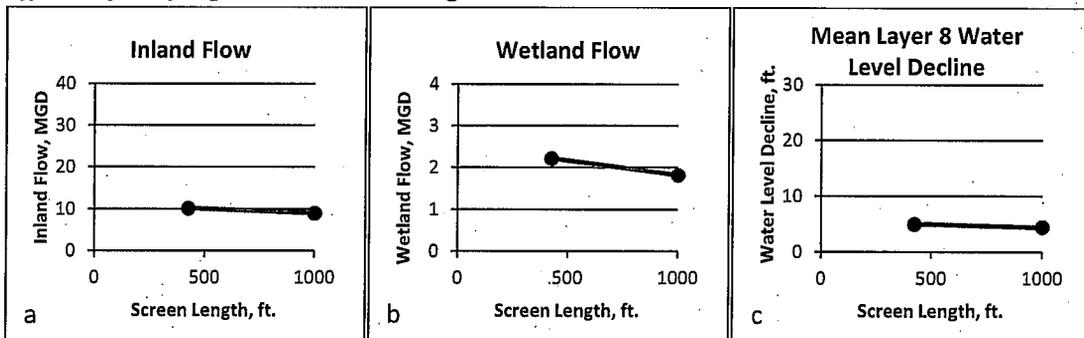


Figure 4. Effects of slant well screen length on inland flow (a), wetland flow (b), and mean Layer 8 water level decline (c).

The slant well screen was lengthened and extended farther offshore than the 425-ft well screens used in the base run. These runs were conducted using a pumping rate of 100 MGD. A 135% increase in the well screen length resulted in relatively small changes of -12%, -18%, and -12% changes in inland flow, wetland flow, and Layer 8 water level decline, respectively (Figures 5a, 5b, and 5c).

Effects of Varying Model Barrier Head Elevation

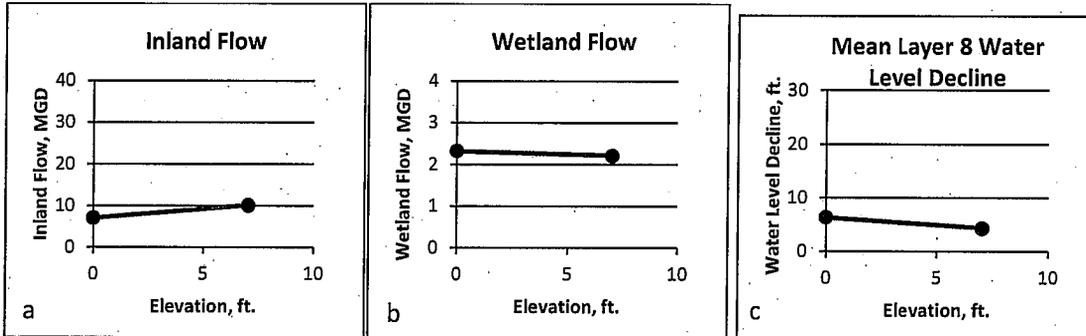


Figure 5. Effects of barrier head elevation on inland flow (a), wetland flow (b), and mean Layer 8 water level decline (c).

The water levels specified in the constant head cells representing the seawater intrusion barrier were reduced from the base value (about 7 ft. in Layers 2-8, 10 ft. in Layers 9-10) to 0 ft. in all layers. Because slant well pumping would likely reduce sea water intrusion, lower water levels at the Talbert Gap seawater intrusion barrier will likely result in an effective barrier. These runs were made using a pumping rate of 100 MGD. The change in the barrier water level resulted in a -31%, 5%, and 29% change in inland flow, wetland flow, and Layer 8 water level decline, respectively (Figures 5a, 5b, and 5c).

Effects of Varying Model Slant Well Pumping Rate

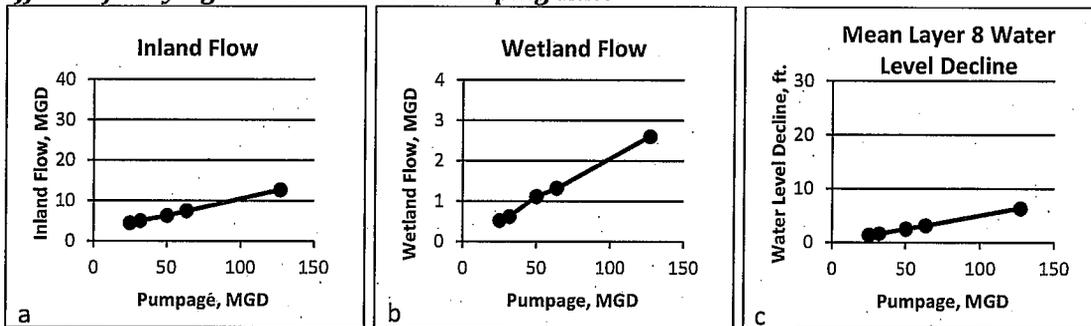


Figure 6. Effects of changes to the slant well pumping rates on inland flow (a), wetland flow (b), and mean Layer 8 water level decline (c).

Inland and wetland flow and Layer 8 water level decline are linearly related to the slant well pumping rate. Decreases in the slant well pumping rate result in corresponding decreases in inland and wetland flow and water level decline. The relative impact of reduced pumping is greater on the wetland flow (Figure 6b) and Layer 8 water level decline (Figure 6c) (up to -81% change) than on inland flow (Figure 6a) (up to -67% change).

Effects of Varying Model Slant Well Location

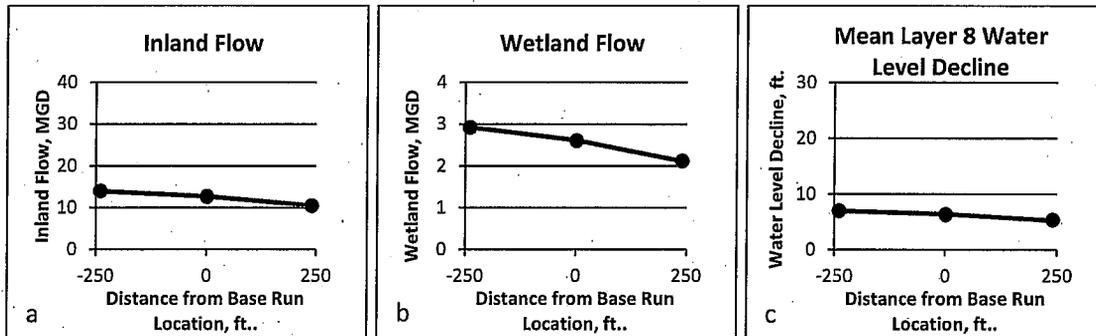


Figure 7. Effects of slant well location on inland flow (a), wetland flow (b), and mean Layer 8 water level decline (c).

The location of the slant wells were moved both farther inland and farther seaward relative to the location used in the base run. The run with the well location farther inland is shown as a negative distance and the run with the well location farther seaward is shown as a positive distance from the base run location, respectively (Figures 7a, 7b, and 7c). Moving the wells farther inland resulted in relatively small changes of 10%, 12%, and 10% change in inland flow, wetland flow, and Layer 8 water level decline, respectively. Moving the wells farther seaward resulted in relatively small changes of -18%, -19%, and -17% in inland flow, wetland flow, and Layer 8 water level decline, respectively.

Groundwater flow path analysis

Figure 8 shows the groundwater flow paths to the slant wells (Geosyntec model 6, 127 MGD slant-well pumping rate). Eighty-seven percent of the groundwater flow pathlines originate in the ocean and 13 percent originate inland. This is similar to the percentage of flow to the slant wells from the ocean and from inland (wetlands and intrusion barrier). Average travel time for the groundwater flow pathlines that originate near the intrusion barrier is about 20 years. Using a pumping rate of 63.5 MGD (one-half the base rate of 127 gpm) increased the Talbert Aquifer travel time from the barrier to the slant wells to about 37 years. Using the base pumping rate of 127 MGD and setting the barrier constant heads to 0.0 ft. results in an average travel time in the Talbert Aquifer of 24 years.

Many of the pathlines in Figure 8 extend from the slant wells to the northwest and southeast toward the lateral boundaries of the model and turn sharply toward the ocean or the constant head cells representing the barrier. This sharp turn in some pathlines suggest that the simulated groundwater flow paths are being affected by the lateral extent of the model, primarily in Layers 9 and 10.

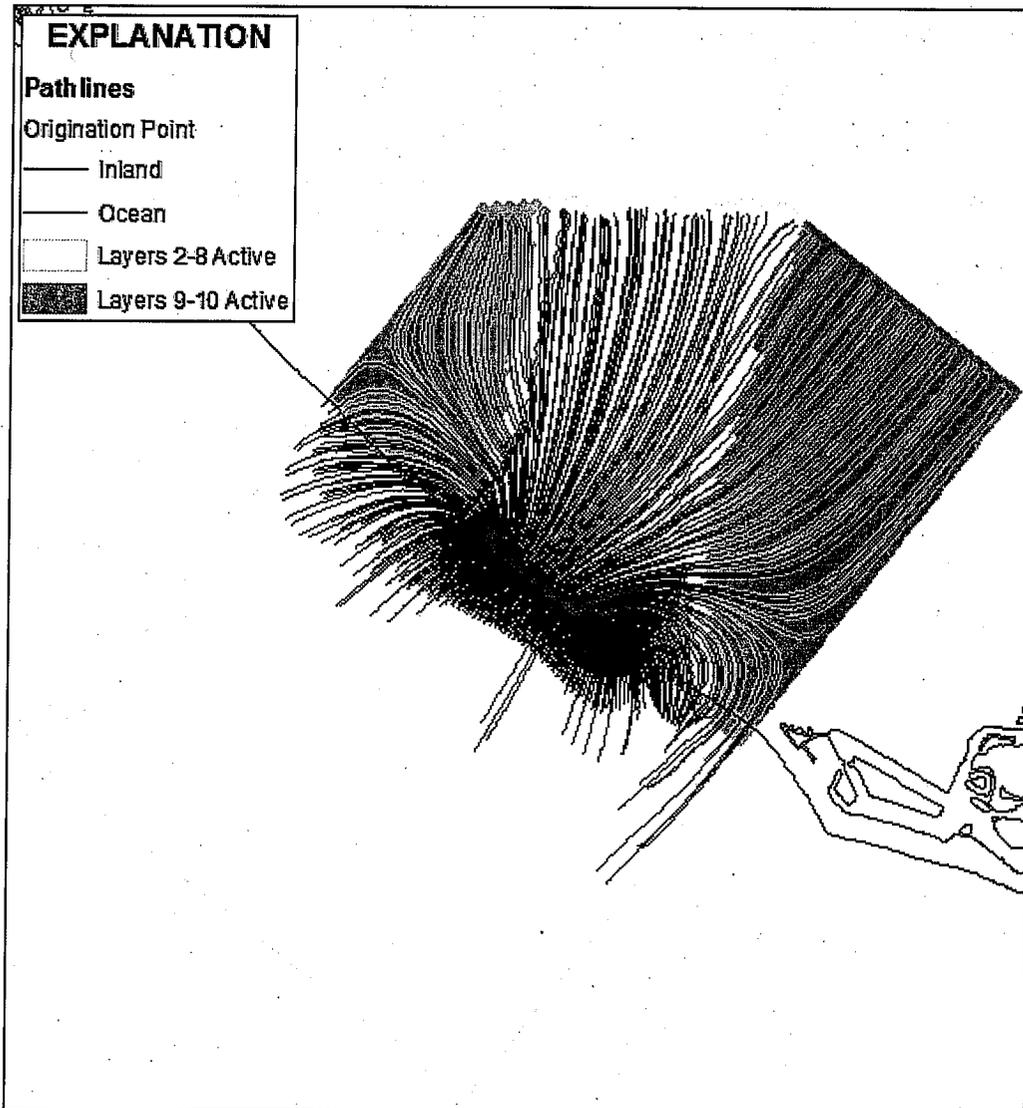


Figure 8. Groundwater flow paths to the slant wells.

Discussion

Model Limitations and Uncertainty

A groundwater-flow model is an approximation of the actual aquifer system. The model relies on estimates of aquifer properties and stress, which are uncertain. Our evaluation has identified several limitations and uncertainty in the model.

- The simulated water levels were not compared to observed water level data to evaluate the effectiveness of the model in representing the groundwater-flow system. The OCWD uses a network of observation wells to monitor groundwater levels and water quality in the Talbert Gap. If data from these wells are available, these data should be used to assess the

effectiveness of the model and reduce uncertainty in how well the model represents the aquifer system.

- There is limited information on the aquifer properties in the model area. Geosyntec summarized results of previous investigations near the project location.¹⁵ These investigations include limited aquifer tests that provide information on aquifer properties. The aquifer properties used in the model were taken from a regional model and no calibration of the local-scale model was performed. Sensitivity analysis shows that the model is most sensitive to the aquifer properties in the Talbert Aquifer and the overlying aquitard. Additional aquifer tests in the Talbert Gap area will provide better estimates of aquifer properties.
- Representing the seawater intrusion barrier using constant head cells assumes that the quantity of injection water will be available to maintain the water levels at the barrier regardless of the impact of the slant well pumping. Representing the barrier using injection wells and average injection rates may better represent the effects of slant well pumping on groundwater flow in the Talbert Aquifer.
- Parts of the ocean represented by Layer 1 are not designated as constant head cells as reported but are designated as variable-head cells. Some of these variable-head cells become dry in the simulation. These dry cells cannot provide water to the slant wells and, therefore, may result in an inaccurate estimation of the contribution of the ocean to the slant wells.
- Groundwater flow paths suggest that the model results may be affected by the lateral extent of the model domain.

Addressing these issues will reduce uncertainty and improve the effectiveness of the model in representing the aquifer system and simulating the impacts of the project. This will increase confidence that the model can be used to effectively evaluate project impacts.

Sensitivity of Model Outputs to Model Inputs and Implications for Project Impacts

Model results are most sensitive to variations in model hydraulic conductivity values for the Talbert Aquifer and the overlying aquitard. Specifically, the magnitude of groundwater level declines can be substantially affected by relatively small changes in hydraulic conductivity. An issue of concern is the potential for groundwater level decline from the slant well pumping to cause subsidence along the coast. Subsidence could impact the Pacific Coast Highway, the project facilities, or other structures in the area. The Talbert Aquifer is overlain by relatively fine-grained sediments both offshore and onshore near the coast.¹⁶ Compaction of fine-grained sediments such as clays due to groundwater withdrawals is a primary cause of subsidence. The California Department of Water Resources (CDWR) identified the Coastal Plain of Orange County groundwater basin, including the project area, as having a high estimated potential for future land subsidence¹⁷. The OCWD reported that historical subsidence has occurred in coastal locations due to land management practices and oil extraction.¹⁸ However, permanent subsidence due to groundwater withdrawals has not been documented since the OCWD

¹⁵ Geosyntec Consultants, 2013, Feasibility Assessment of Shoreline Subsurface Collectors, Huntington Beach Seawater Desalination Project, Huntington Beach, California, September 2013.

¹⁶ Geosyntec Consultants, 2013, Feasibility Assessment of Shoreline Subsurface Collectors, Huntington Beach Seawater Desalination Project, Huntington Beach, California, September 2013.

¹⁷ CDWR, 2014, Summary of Recent, Historical, and Estimated Potential for Future Land Subsidence in California.

¹⁸ Orange County Water District, 2015, Orange County Water District, Groundwater Management Plan, 2015 Update, June 17, 2015.

began recharge operations in the basin in the late 1950s. The OCWD reported that seasonal temporary fluctuations in land surface are observed that are correlated with groundwater level changes.

Pumping Rate Effects on Barrier Flow to the Slant Wells

Model runs using varying pumping rates may potentially be used to select the optimum pumping rate to minimize the proportion of pumping originating as inland flow. The volume of water originating as inland flow is directly proportional to the pumping rate (Figure 9a). However, the percent of the pumping volume that originates as flow from the inland barrier is not directly proportional (Figure 9b). As the pumping increases, the percentage of the pumping that originates as inland flow decreases. At pumping rates of 63.5 MGD and above, the percentage of pumping that originates as inland flow does not change significantly and is about 10%.

The sensitivity results show that the specified aquifer properties and other model inputs affect the calculated percent of the simulated slant well pumping that originates as inland flow. For example, using a pumping rate of 127 MGD, doubling the hydraulic conductivity of the Talbert Aquifer increased the percent of pumping that originates as inland flow from 10% to 24%. Likewise, decreasing the hydraulic conductivity of the material overlying the Talbert aquifer up to 98% increased the percent of pumping that originates as inland flow from 10% to 26%. Using a pumping rate of 100 MGD, increasing the hydraulic conductivity of the material overlying the Talbert Aquifer or decreasing the hydraulic conductivity of the material underlying the Talbert Aquifer decreased the percent of pumping that originates as inland flow from 10% to 9% and 8%, respectively. Combing several changes to model input (increasing slant well length, increasing the hydraulic conductivity of the overlying material, decreasing the hydraulic conductivity of the underlying material, and lowering the water level maintained at the barrier) resulted in 4% percent of the slant-well pumping originating from inland flow.

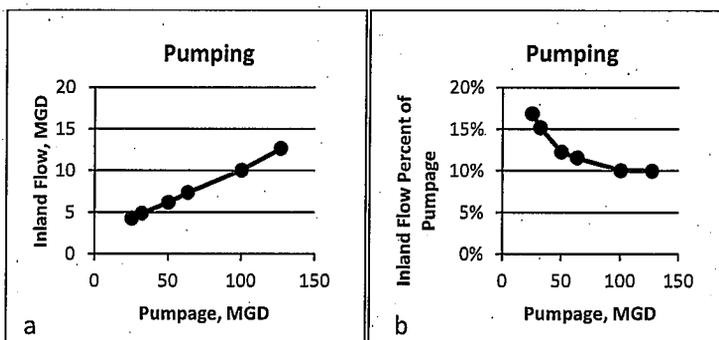


Figure 9. Relation of pumping rate and inland flow.

Particle Tracking and Groundwater Travel Times

Seawater/Freshwater Interface

Our analysis indicates that the large majority of the water flowing to the slant wells will come from the ocean. Figure 8 indicates that operation of the slant wells will affect the extent of seawater intrusion in the Talbert Aquifer. The OCWD monitors groundwater levels and quality in the Talbert Gap to assess the effectiveness of the seawater intrusion barrier.¹⁹ The OCWD monitoring well OCWD-M26 is

¹⁹ Ibid.

strategically located and screened in the Talbert Aquifer and deeper aquifers for evaluating barrier injection requirements versus seawater intrusion potential. The OCWD has a goal of maintaining the water level in the vicinity of this well at 3 feet above mean sea level to keep brackish water from moving inland in the Talbert Aquifer and migrating downward to deeper aquifers tapped by inland production wells.

Water level declines induced by the slant well pumping may extend inland to the location of this well and, therefore, affect the ability of the OCWD to maintain the desired water levels at this well. Conversely, project pumping from the slant wells will likely increase the gradient from inland areas toward the project wells. This increase in seaward gradient will enhance the movement of inland freshwater toward the coast and will likely move the seawater/freshwater interface to the west, closer to the coastline. This increase in seaward gradient along with capture of seawater by the slant wells will have the effect of reducing the inland migration of seawater and may allow the OCWD to maintain a lower water level in the well while still obtaining the objective of reducing seawater intrusion. Lowering of the head in the barrier wells will likely also result in decreased inland flow to the slant wells (Figure 5).

Summary and Recommendations

Our model review indicates that minor modifications will improve model functioning. Specifically, model calibration and validation using local groundwater and aquifer test data will likely provide insight about project performance and effects. Model boundary conditions and inconsistencies may affect model performance and merit re-examination and evaluation.

Model results indicate that the project will affect ground water levels and gradients in the Talbert Gap. Water level declines will be greatest in the vicinity of the project wells. Model simulations indicate that most of the water extracted from the project wells comes from the ocean, but some originates inland (about 10%) and some originates in the coastal wetlands (about 2%). Project pumping will likely impact the operation of the seawater intrusion barrier by increasing hydraulic gradients towards the ocean and reducing the impact of seawater intrusion into the inland portion of the Talbert Aquifer.

The model is most sensitive to the aquifer properties in the Talbert Aquifer and in the overlying aquitard. Sensitivity tests show that changes in these aquifer properties result in significant changes to the estimated contributions from inland flow and the coastal wetlands. Therefore additional data collection and aquifer tests will improve the estimates and uncertainty in the aquifer properties and improve the confidence in the model results. Calibration of the model using water level data would also improve the effectiveness of the model.

Specific recommendations follow.

- Conduct aquifer tests or pilot well pumping to determine hydraulic conductivity values in the Talbert Aquifer and overlying sediments.
- Hydraulic conductivity values of wetland sediments should also be determined.
- Assess effects of lateral model boundary conditions on model results and modify as needed.
- Inconsistencies in model construction (cell size, variable head cells in the ocean, etc.) should be resolved to eliminate any concern that these issues may affect model results.
- Incorporate MODFLOW Subsidence Package to preliminarily evaluate the subsidence potential due to slant well pumping.

- Use revised model to more effectively simulate potential impacts and project feasibility.
- Additional questions that could be answered with an improved model include the following.
 - How will long term pumping likely affect land-surface elevations?
 - How will the project likely affect the presence of intruded seawater and the functioning of the barrier injection wells?
 - What will be the likely withdrawal of inland water by pumping wells? How will this change over time?

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**RESIDENTS
FOR RESPONSIBLE
DESALINATION**



October 12, 2017

State Lands Commission.
100 Howe Ave. Suite 100 South
Sacramento, CA 95825

RE: Poseidon-Huntington Beach Desalination Project "Purpose and Need"

Dear State Lands Commissioners,

We have recently become aware that the Municipal Water District of Orange County (MWDOC) and Orange County Water District (OCWD) have submitted letters to the State Lands Commission ("Commission") discussing the Purpose and Need for the proposed Poseidon Huntington Beach desalination project ("project"). We are writing to put those letters in the context of the upcoming decision before the Commission to certify, reject, or revise the Final Supplemental Environmental Impact Report (SEIR). Further, we hope to address some of the misleading statements in the letter submitted on September 8th 2017 by OCWD.

In summary, we strongly disagree that the OCWD letter and referenced documents show an unquestionable need for the project. However, we agree with the implicit message that the documentation of need has changed since 2010. Specifically, more recent and accurate information demonstrates that there is no need for 50 million gallons per day (mgd) of water that the project, as currently proposed, may produce. Accordingly, the Commission's supplemental EIR is inadequate; the Commission instead must prepare a subsequent EIR that accounts for this new and more accurate information.

Context and requirements under CEQA and the California Ocean Plan

A coalition of environmental organizations, including those of us writing this letter, submitted extensive comments to the Commission regarding the inadequacies in the Draft SEIR. Among those inadequacies is the fact that CEQA requires the Commission to prepare a *subsequent* EIR to document and address all of the substantial changes that have occurred since the City of Huntington Beach ("City") approved the existing, now-outdated SEIR in 2010. Included in those changed circumstances is the purported "need" for the facility. This is critical information for CEQA review given that adequately documenting and addressing a project's potential adverse impacts is dependent on having up-to-date analysis of the "Purpose and Need" for the project, as well as alternatives that may be necessary to avoid or minimize significant impacts, while meeting project objectives. In addition, specific and accurate documentation of the need for the water produced by a proposed ocean desalination facility is required to ensure compliance with the California Ocean Plan's provisions regarding ocean desalination ("Ocean Plan").

We strongly disagree with the implication in the OCWD letter that there is now a concrete need for the proposed Poseidon project. Equally important, the letters submitted by OCWD and

MWDOC highlight the need for an updated analysis of the "Purpose and Need" for the project as well as alternatives that would minimize the project's significant impacts. The information provided by both agencies was developed long after the 2010 SEIR was certified, and the Draft SEIR did not allow for public comment on these updated changes to the purpose and need for the project.

Further, Poseidon is requesting an exemption from using the preferred subsurface intake technology as provided in the Ocean Plan. The Ocean Plan includes a presumption that project proponents will use sub-surface intakes in order to minimize the intake and mortality of all forms of marine life, as required by the California Water Code. The Ocean Plan is also clear that project proponents cannot argue that sub-surface intakes are infeasible without analyzing a reasonable range of alternative facility sizes and intake design capacities, which in turn require accurate documentation of the need for the volume of water that a project might produce. Therefore, the issue raised in the letters from OCWD and MWDOC supports expanding the scope of the Draft SEIR to ensure it adequately discusses and analyzes the need for the project's water, and from there, whether any proposed or potential project modifications are consistent with the Ocean Plan.

Lack of need for project water

The Commission's current SEIR unreasonably makes the assumption that the Poseidon desalination facility is needed to produce 50 mgd of desalinated water. It is important to note that this figure originated in the original 2005 EIR certified by the City and was carried over, without careful analysis, into the 2010 SEIR certified by the City. However, this assumption is no longer reasonable, if it ever was. A careful review of recent Urban Water Management Plans (UWMPs) for the OCWD's member agencies show a clear trend in significant reductions in cumulative demand for water in the OCWD service area since 2005, and even since 2010.¹ The most recent UWMPs do not show a certain demand for 50 mgd of desalinated water, as would be necessary (although not sufficient) to justify a project of the project's proposed size and design. In fact, the letter from MWDOC states expressly that: "...neither the UWMP nor the [MWDOC Orange County Water] Reliability Study state that the Poseidon project is specifically necessary to meet Orange County's future water supply needs."

Further, the OCWD letter says the term sheet provides the structure to "implement" the project. That is incorrect. The term sheet is only a summary document that provides minimal information on implementation of the project. The direct language from the term sheet states as follows (emphasis added):

The purpose of this Term Sheet is to set forth the basis for negotiations toward a possible Contract between the Parties. The proposed terms and conditions set forth herein represent the current intention of the Parties, do not bind either Party in any manner, and in particular do not commit the Buyer to purchase Product Water. This Term Sheet is a summary only and is not comprehensive or definitive. The Parties do not intend to be legally bound until definitive agreements related to the Project, including without limitation the Contract, are executed by the Parties, and either Party is free to terminate negotiations at any time following written notice to the other Party without any liability or obligation to the other Party.

¹ See attached "Fryer Report" which was also attached to our comment letter.

No decision to purchase project water or implement the project has been made. On the contrary, the largest retail agency in the OCWD membership, Irvine Ranch Water District, has consistently raised points of opposition to the project on the basis that cheaper and better alternatives are available. And as evidence that there is no certain demand for the water, or any commitment to purchase the water, the OCWD letter clearly states that OCWD has made no conclusions on how to deliver or use the project's water. There is only a vague reference to potentially using the project's water to prevent seawater intrusion.

We also note that the 2015 OCWD Groundwater Management Plan² referenced in the OCWD letter overestimated future water need by 90,000 acre feet per year (AFY) when compared to the more recent 2016 MWDOC Orange County Water Reliability Study³ that used statistical modeling to estimate future water use. As documented in the attached "Fryer Report," as well as in the MWDOC Reliability Study, the previous simplistic demand forecasting repeatedly resulted in overestimates of demand in Orange County UWMPs. OCWD's overly simplistic model has been superseded by the December 2016 MWDOC Reliability Study, which uses more complete analysis and provides for a more accurate demand forecast.

The MWDOC Reliability Study itself predicts an average of 6,400 AFY of need for water from any new source in the OCWD service area by 2040. Also at the July 6, 2016 public workshop on how to distribute Poseidon's water, OCWD staff concluded that 10,000 AFY was a more feasible amount of water for the project.⁵

In light of these recent analyses, the pie charts in the OCWD letter present an incomplete, and inaccurate view of OCWD's anticipated future water supply. They are based on an old demand prediction and do not reflect the cumulative decrease in demand as forecasted in the MWDOC Reliability Study and MWDOC Urban Water Management Plan – as well as every OCWD member agency. In fact 2016 demand was down 24% per the governor's conservation order and so far in 2017 demand remains down 19%. The charts in the OCWD letter also fail to account for the reasonably foreseeable addition of 65,000 AFY that would be delivered to the Orange County Basin by the Carson Indirect Potable Reuse project – completely eliminating the need for the 56,000 AFY proposed by Poseidon as well as an eliminating an additional need for 9,000 AFY of imported water to the Orange County region. Further, the cheaper water from the Carson project would require its own injection and withdrawal wells, arguably compounding the unresolved problem of how to inject the Poseidon water into the basin.

More accurate depiction of Orange County water needs and potential role of new sources

Figures 1 through 3 below are based on the 2016 MWDOC Orange County Water Reliability Study. They show that the water produced by the Poseidon Huntington Beach desalination project, as currently proposed, would be far more than needed is needed to meet area needs. They also show that water supplied by the planned Metropolitan Water District Carson Indirect Potable Reuse Project and other sources eliminate the need for water from the project.

Conclusion

² https://www.ocwd.com/media/3503/groundwatermanagementplan2015update_20150624.pdf

³ http://www.mwdoc.com/Uploads/OC%20Study%20Executive%20Report_with%20Appendices_1-4-2017%20FINAL%20Low%20Resolution.pdf

For all of these reasons we urge the State Lands Commission to reassess the purpose and need for the project in a subsequent EIR that considers the more recent – and more accurate – sources of information cited herein.

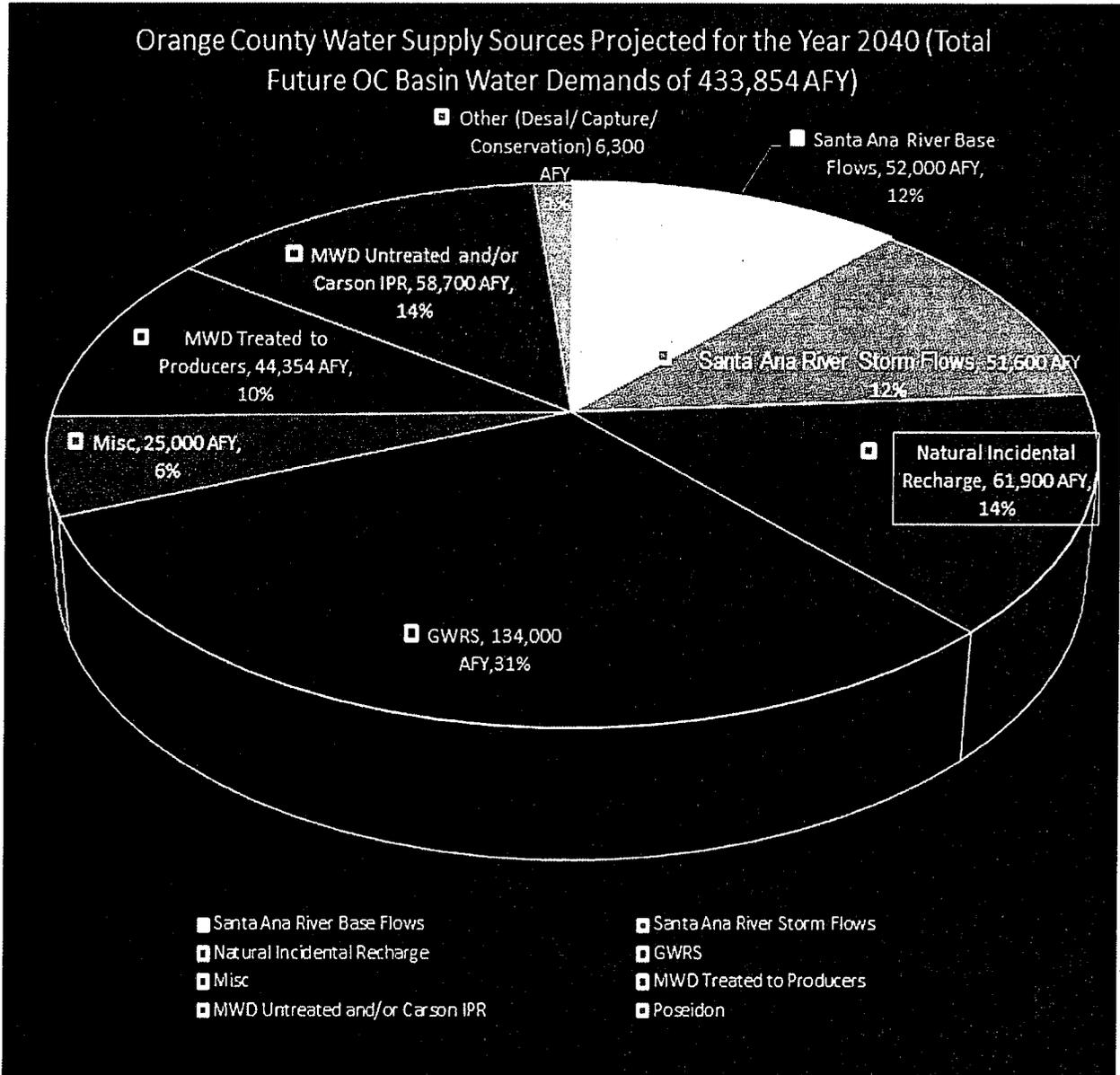


Figure 1. This figure shows average potential 2040 “new” water need that could be filled through investment in conservation, recycling, stormwater capture, or desalination, or a combination thereof. Such investment is needed to provide approximately 1% of OCWD’s anticipated future water supply. This chart is based on the 2016 MWDOC Orange County Water Reliability Study. The 6,300 AFY in the “Other” category is the estimated “average” annual additional need in 2040, and accounts for multiple dry years.

Orange County Water Supply Sources Projected for the Year 2040 Without Desal (Total Future OC Basin Water Demands of 433,854 AFY)

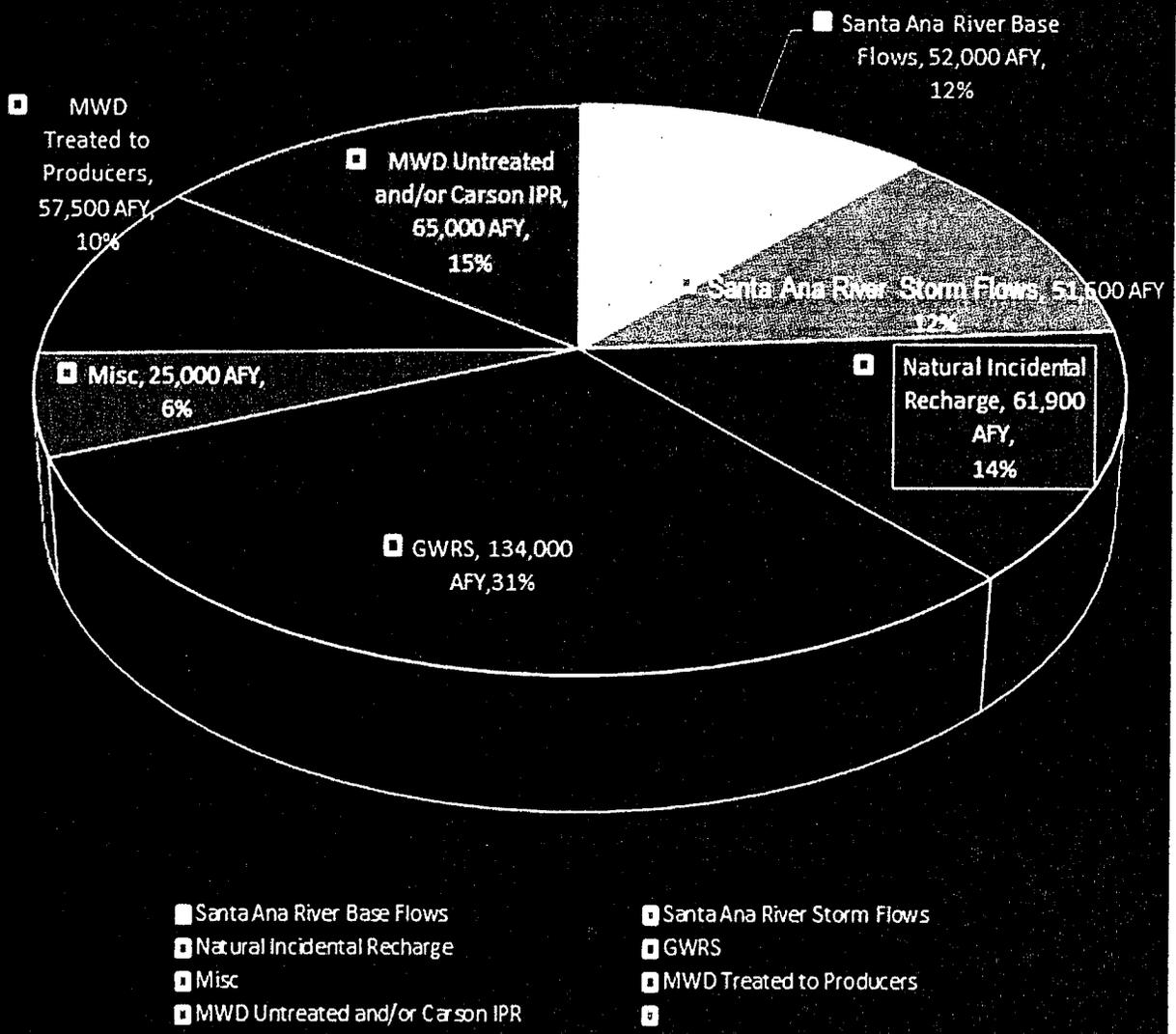


Figure 2. As an example, the planned Carson Recycled Water Project is likely to be sufficient to cover the entire projected increase in "new" water need for 2040.

Poseidon Yield Example for OCWD

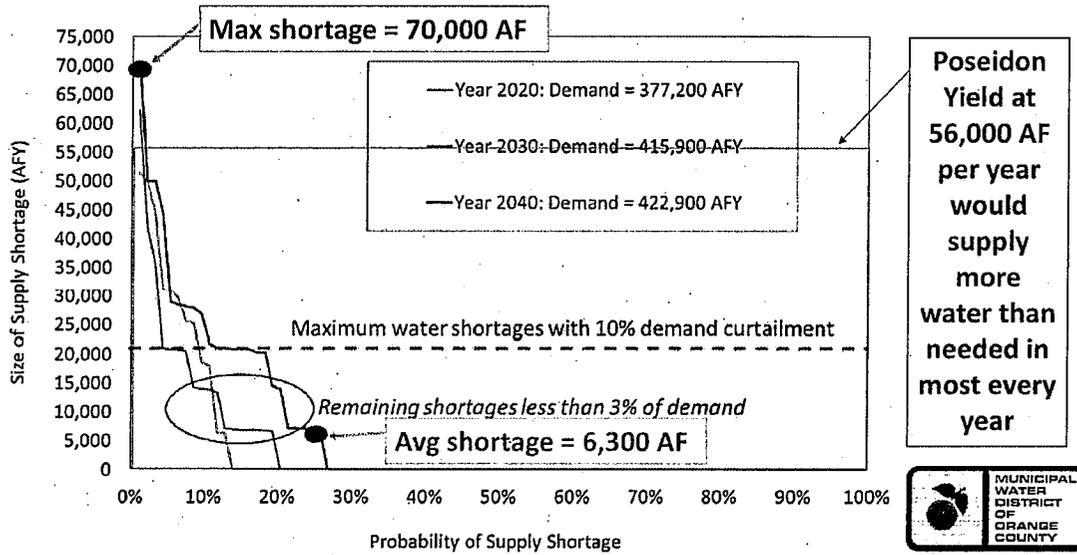


Figure 3. This slide from the February 6, 2017 MWDOC presentation on the Orange County Water Reliability Study shows that "Poseidon yield at 56,000 AFY would supply more water than needed in most every year"

A Review of
Water Demand Forecasts
for the
Orange County Water District

By James Fryer, Environmental Scientist

July, 2016

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About the Author

James Fryer is an environmental scientist who provides environmental and water resource management expertise, research, and analysis to a variety of governmental and non-governmental clients focused on conservation, sustainable watershed, and water resource management projects. He has over 27 years of experience working on freshwater, estuarine, and marine conservation policies, programs, and projects. He has produced numerous papers and reports on water management policies, practices, and economics, and conducted sophisticated GIS analyses of watershed and water management issues, and helped establish and conducted research and monitoring on marine protected areas. He has a M.S. in Environmental Management from the University of San Francisco, where his thesis project developed an Integrated Floodplain Management model for the San Francisco Bay-Delta watershed.

Acronyms and Abbreviations

AF	Acre-feet, 325,851 gallons or enough water to cover an acre of land to a depth of one foot
AFY	Acre-feet per year
GPCD	Gallons per capita per day
IRWD	Irvine Ranch Water District
LTFP	The Orange Country Water District's Long-Term Financial Plan 2015 Update
MET	Metropolitan Water District of Southern California
MWD	Metropolitan Water District of Southern California
MWDOC	Municipal Water District of Orange County
OCWD	Orange County Water District
Reliability Study	The Orange County Reliability Study being conducted by the Municipal Water District of Orange County
UWMP	Urban Water Management Plan

Purpose of the Review

This analysis and report was developed to assess the demand forecasts used by the Orange County Water District as the rationale for new water supply projects.

Summary of Findings & Conclusions

The Orange County Water District uses outdated water demand forecasts for the year 2035 that are 91,846 acre-feet per year, or 17.5%, higher than the more recent water demand forecasts for its service area retailers. In its Long-Term Financial Plan 2014 Update and Groundwater Management Plan 2015 Update, the Orange County Water District (OCWD) uses water demand forecasts derived from its retailers' 2010 Urban Water Management Plans (UWMPs). In the more recent 2016 demand forecasts in the Orange County Reliability Study, used for the updated 2015 UWMPs for the retailers, collectively the water demand forecasts are reduced 17.5% compared earlier forecasts used in the Long-Term Financial Plan 2014 Update.

The previous Urban Water Management Plans consistently overestimated future demand. Starting in the year 2000, for each cycle of the 5-year UWMPs, based on declining actual demand trends the retailers repeatedly reduced demand forecasts for subsequent years compared to previous forecasts.

The Orange County Reliability Study used by the retailers water for their new water demand forecasts, uses multiple instances of conservative assumptions that, as with past UWMPs, can be expected to overestimate future demand. The Reliability Study forecasts are the basis of the Municipal Water District of Orange County and OCWD retailers' 2015 UWMP forecasts. Some fundamental assumptions in the water demand model are inconsistent with historic and recent water use patterns. The assumptions that may lead to overestimates of future demand, and discussed in more detail in this report, include:

- Population forecasts
- Demand during multiple drought year events
- Demand rebound after drought
- Drought vs. recession water use patterns
- Infill development
- Price elasticity of demand
- Future conservation innovation

The Long-Term Financial Plan 2014 Update does not account for an additional 65,000 acre-feet per year of high quality treated wastewater that is expected to become available within the next 5 to 10 years. The new source of treated wastewater would be equal or better than the quality of water that is currently used to replenish groundwater basins and would not be subject to shortages during drought. About 65,000 acre-feet per years is expected to become available for groundwater recharge into the Orange County Water District basin.

Water users have repeatedly demonstrated the willingness and ability to substantially curtail water use during serious, multi-year drought events. Many of the early year UWMPs acknowledged that water users would curtail use during serious drought years. But by the 2005 UWMPs, water use was generally assumed to increase 6% to 9% during single and multiple drought years. Since water shortages during drought drives the need for new supplies, underestimating the ability and willingness of water users to curtail demand during

serious drought years can lead to unnecessary and expensive new supply projects and financial difficulty for water suppliers.

The retailers' 2015 Urban Water Management Plan demand forecasts, as with the earlier plans, do not account for ongoing conservation innovation. Ongoing conservation innovation, unforeseen at the time of past demand forecasts, is now a well-established pattern that has contributed to actual demand remaining well below forecasted levels. Ongoing innovations in conservation devices and practices can be expected to continue reducing urban per capita water demand during the demand forecast period.

The retailers' 2015 Urban Water Management Plans indicate that most of the service areas are at or near build-out. Since there is relatively little undeveloped space in the OCWD service area, most future development will be in-fill development. This can be expected to lower average per-capita water use and will be an important dynamic that should be addressed in water demand projections.

Water providers with service areas at or near buildout that substantially overestimate future demand risk inefficient use of limited financial resources on unnecessary capital projects, revenue stability problems, and ratepayer backlash. Historically, water demand forecasts used multiple conservative assumptions in an effort to reduce the risk of uncertainties, particularly for rapid growing service areas. However, the situation is different for service areas not experiencing rapid growth, and at or near buildout. Overestimating future demand for service areas at or near build-out creates long-term risks that should be carefully considered.

Methodology

This assessment was done using two fundamental approaches: 1) a review of the accuracy of past UWMP forecasts for future demand for UWMPs from 1995 through 2015, and 2) a review of the demand forecasts in the Municipal Water District of Orange County's "Orange County Supply Reliability Study" (hereinafter Reliability Study) currently in underway during 2016. This includes consideration of assumptions and demand forecasting methodology in the Reliability Study and 2015 UWMPs that affect the accuracy of demand forecasts when compared to past and present day trends. This report is not a comprehensive review of all aspects of the Reliability Study, UWMPs and related demand forecasts. It is more focused on the accuracy of past forecasts and areas where refinements may improve the accuracy of the latest demand forecasts.

The project team collected and reviewed all the UWMPs from 1995 through 2015 that were available for the 19 OCWD retailers. We extracted the present and forecasted population, present and forecasted demand (including losses and direct recycled water use when delineated in the UWMPs), reviewed service area development trends and the supply reliability planning during drought years. We then developed tables and graphs which show the actual and forecasted population and demand trends. Tables and graphs combining the retailers into three groups by similar size are provided in the main body of this report. Tables and graphs for all the individual retailers (except for two, Golden State and Serrano which did not have an adequate number of UWMPs available) are included in Appendix A.

The project team also collected and reviewed numerous relevant documents including, but not limited to:

- The Orange County Water District's Long-Term Financial Plan 2014 Update
- The Orange County Water District's Groundwater Basin Management Plan 2015 Update
- Technical memos and presentations for the Orange County Reliability Study

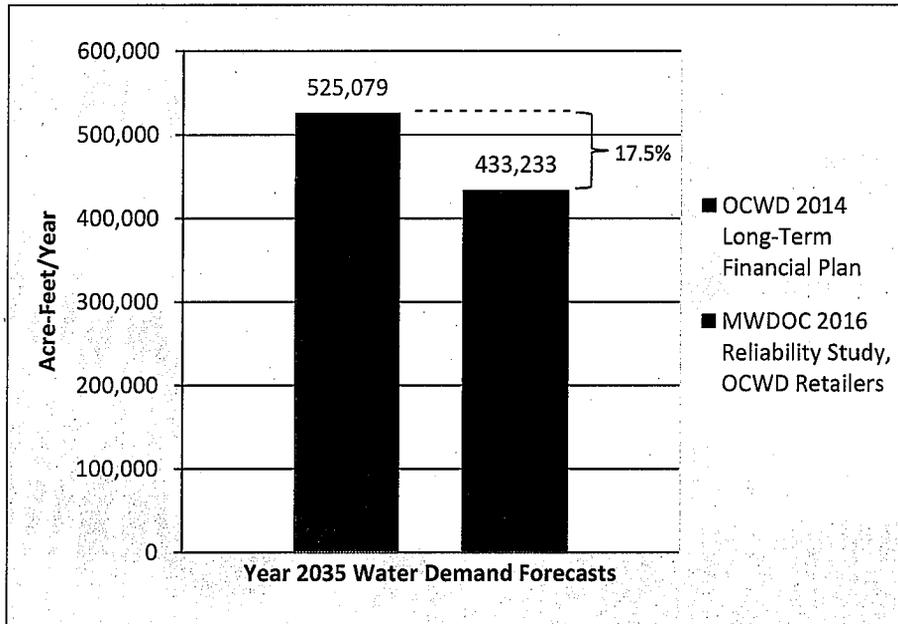
Water recycling documents describing the proposed new 65,000 AFY supply of treated wastewater to the OCWD groundwater basin for indirect potable reuse

Review of Long-Term Financial Plan 2014 Update

The Long-Term Financial Plan (LTFP) was updated by the Orange County Water District in 2014. The LTFP states the water demand forecasts are based primarily on past Urban Water Management Plan (UWMP) forecasts for each retailer.¹ The 2014 updated LTFP plan indicates “One of the key factors influencing water demand is population growth” and indicates population is expected to increase from 2.38 million to 2.54 million, or 6.7% by the year 2035.² The plan also notes “Another factor affecting demands is growth of the District’s service area through annexations.”³ The 2014 LTFP identifies a year 2035 water demand of 525,079 AFY, including 8,000 AFY for non-agency use.⁴

As shown in the following section reviewing the 1995 through 2015 UWMPs, and for reasons discussed later in this report, UWMP demand forecasts had a consistent pattern of overestimating future demand. With a new round of 2015 UWMPs being readied for release in 2016, and the effects of the recent Great California Drought on water demand, the LTFP is based on obsolete demand forecasts. Both the 2014 Long-Term Financial Plan and OCWD’s more recent 2015 Groundwater Basin Management Plan rely on demand forecasts that are substantially higher than the updated demand forecasts for the OCWD retailers in the Municipal Water District of Orange County’s Orange County Reliability Study. The LTFP forecasts a year 2035 water demand of 525,079 AFY. This compares to the more recent Orange County Reliability Study forecast of 433,233 AFY for the OCWD retailers in the year 2035.⁵ These water demand forecasts are compared in Figure 1 below.

Figure 1
Comparison of Year 2035 Demand Forecasts for OCWD Basin



The more recent water demand forecast represents a reduction of 91,846 afy, or 17.5%, in water demand in the year 2035.

Additional Recycled Water for Groundwater Recharge

Another important consideration is that the 2014 LTFP does not account for a new project expected to increase the availability of indirect potable reuse of highly treated wastewater for OCWD retailers. The Metropolitan Water District of Southern California (MWD) in partnership with the Sanitation Districts of Los Angeles County is developing a new regional indirect potable reuse program that is expected to make available up to 168,000 acre-feet per year of new recycled water for recharging the Orange County and Los Angeles groundwater basins. The presently available planning documents and OCWD staff indicate that at least 65,000 acre-feet per year of new indirect potable reuse water is expected to become available to the OCWD within 5 to 10 years.⁶

Publicly released information by the partnership indicates "Under a partnership with the Sanitation Districts of Los Angeles County, Metropolitan would build a new purification plant and distribution lines to groundwater basins in Los Angeles and Orange counties."

"The first operational phase will produce about 67,000 acre-feet of recycled water per year and the construction of about 30 miles of distribution lines to replenish groundwater basins in Los Angeles and Orange counties. Additional operational phases could produce up to 168,000 acre-feet per year of purified water for groundwater replenishment."⁷

A MWD board packet item notes "This program would purify secondary effluent from Sanitation Districts' Joint Water Pollution Control Plant (JWPCP) using advanced treatment technologies to produce water, which is near distilled quality and would be equal or better than the quality of water that is currently used to replenish groundwater basins in the Southern California region."⁸

The MWD has approved moving forward with the pilot project for this supply, and indirect potable reuse projects are a proven technology already utilized for the OCWD groundwater basin. Technical Memo #4 for the Orange County Reliability Study identifies this project as "Very Achievable" and "Highly Reliable" in its rankings of new supply project options.⁹ This would provide a substantial new high quality water supply for recharging the Orange County Water District groundwater basin. Along with what can reasonably be expected to be lower than forecasted demand, based on the historic water demand forecasting pattern and multiple conservative assumptions in the Reliability Study, this would provide considerable supply reliability improvement for the OCWD retailers beyond what is forecasted in the 2014 LTFP.

Review and Analysis of Retailer Urban Water Management Plans

California's Urban Water Management Planning Act requires water retailers with annual water use over 3,000 acre-feet or more than 3,000 customers to prepare and update an Urban Water Management Plan (UWMP) every 5 years. The UWMPs are required to include a description of the service area, a description of supply sources, present and future demand and population forecasts, and an analysis of supply reliability during single and multiple drought years.

UWMPs that were available for each Orange County Water District retailer for each 5-year cycle from 1995 through 2015 were collected and reviewed. Table 1 below, indicates the UWMPs that were available.

Table 1
Urban Water Management Plans Obtained

Water Retailer	LTFP 2035		1995	2000	2005	2010	2015
	Demand (AFY)	Group					
IRWD	88,008	1	Yes	Yes	Yes	Yes	Yes
Anaheim	77,700	1	NA	Yes	Yes	Yes	Yes
Santa Ana	50,400	1	NA	Yes	Yes	Yes	Yes
Orange	34,713	2	Yes	Yes	Yes	Yes	Yes
Huntington Beach	34,657	2	Yes	Yes	Yes	Yes	Yes
Fullerton	32,792	2	Yes	Yes	Yes	Yes	Yes
Golden State Water Co.	32,774	2	NA	NA	NA	Yes	NA
Garden Grove	30,907	2	1996	Yes	Yes	Yes	Yes
Yorba Linda WD	27,784	2	Yes	Yes	Yes	Yes	Yes
Buena Park	19,900	3	NA	Yes	Yes	Yes	Yes
Mesa	19,700	3	Yes	Yes	Yes	Yes	Yes
Newport Beach	18,474	3	Yes	Yes	Yes	Yes	yes
Tustin	15,194	3	Yes	Yes	Yes	Yes	Yes
Westminster	12,337	3	Yes	Yes	Yes	Yes	Yes
Fountain Valley	10,165	3	Yes	Yes	Yes	Yes	Yes
Seal Beach	4,880	4	NA	2002	Yes	Yes	Yes
Serrano WD	2,852	4	NA	NA	NA	Yes	Wholesale
La Palma	2,742	4	Yes	NA	Yes	Yes	Yes
East OCWD	1,100	4	NA	NA	Yes	Yes	Yes

Of particular interest for this analysis were the present and forecasted populations and demand figures. We also noted annexes and expansions of the service area and the drought year supply reliability planning.

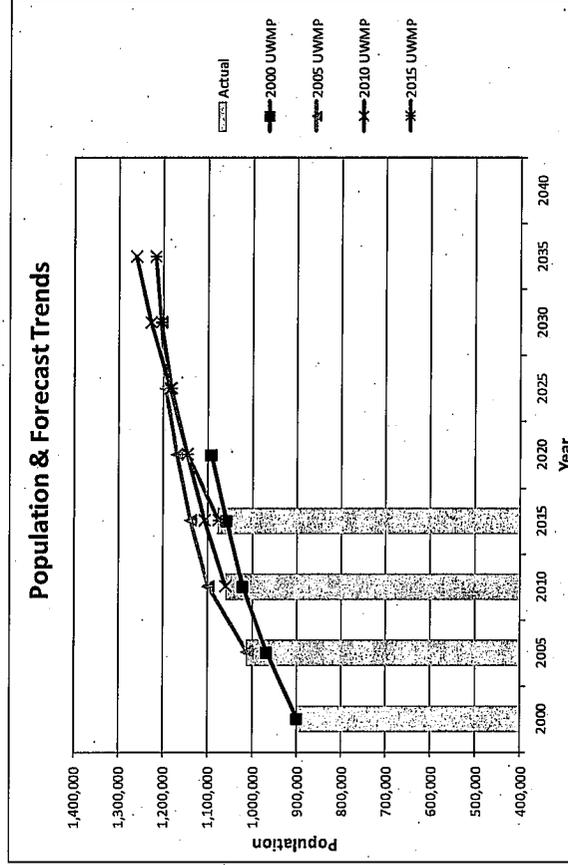
Review of the UWMPs found that past projections consistently overestimated future demand. The UWMPs indicate actual total demand has generally been decreasing in the more recent 5-year cycles. Nonetheless, the forecasts for demand moving forward from each UWMP starting year continues to increase, but from a lower starting point for each 5-year cycle.

Appendix A contains tables with present and forecasted population and total water demand (including losses and direct recycled) for each of the retailers that had adequate data available. Included are graphs with the population and demand trends and tables providing the percentages of predicted compared to actual population and demand, along with the percent change compared to the 2015 UWMP forecasts. The following pages contain the UWMP data and trends aggregated into similar water use Groups 1 through 3, as in Table 1 above. Since Group 4 had very limited years of UWMPs available and is a small portion of the cumulative water use, tables and graphs of the data for Group 4 retailers are only provided individually in Appendix A.

Table 2

Group 1 - Irvine Ranch, Anaheim and Santa Ana

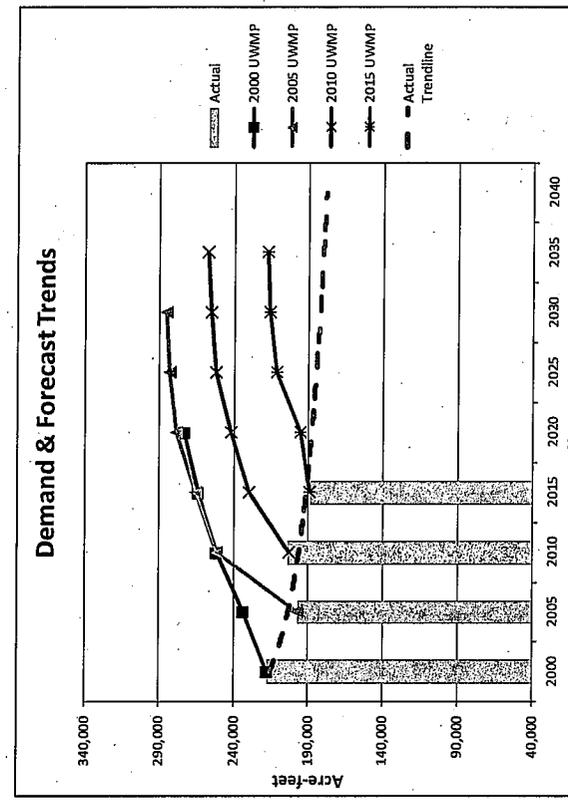
Population										
Actual and Forecasted										
Year	2000	2005	2010	2015	2020	2025	2030	2035	2040	
Actual	899,785	1,013,557	1,060,933	1,076,904						
2000 UWMP	899,785	969,599	1,022,088	1,058,128	1,091,139					
2005 UWMP		1,013,557	1,099,876	1,139,315	1,169,527	1,194,639	1,205,541			
2010 UWMP			1,060,933	1,106,422	1,145,066	1,185,035	1,227,140	1,262,173		
2015 UWMP				1,076,904	1,144,894	1,180,979	1,203,439	1,218,559		



Subsequent Actual Population	Change in 2015 Forecasts Compared to Previous UWMPs	
	2000 UWMP	2005 UWMP
2000 UWMP	95.7%	4.9%
2005 UWMP	103.7%	-2.1%
2010 UWMP	102.7%	0.0%
		-1.1%
		-0.3%
		-1.9%
		-3.5%

The Irvine Ranch Water District, the largest in population and water use (see Appendix A), experienced annexes and consolidations that were not part of previous forecasts nearly every 5-year cycle of UWMPs. This skewed the population and demand forecasts. But even so, the total demand trendline is down for subsequent year UWMPs. Also Irvine Ranch converted a large portion of its demand to direct recycled use. Therefore, potable water demand for Irvine Ranch and the combine group 1 retailers declined further than the total demand figures used in these tables and graphs.

Demand										
Actual and Forecasted (AF)										
Year	2000	2005	2010	2015	2020	2025	2030	2035	2040	
Actual	217,972	197,113	203,567	189,393						
2000 UWMP	217,972	234,209	251,865	264,093	273,383					
2005 UWMP		197,705	251,530	265,690	278,453	283,478	285,380			
2010 UWMP			203,567	230,499	242,206	252,728	255,908	257,772		
2015 UWMP				189,393	195,338	212,131	216,330	218,147		



Subsequent Actual Demand	Change in 2015 Demand Forecasts Compared to Previous UWMPs	
	2000 UWMP	2005 UWMP
2000 UWMP	118.5%	123.7%
2005 UWMP	123.6%	140.3%
2010 UWMP	121.7%	121.7%
		-28.5%
		-29.8%
		-19.4%
		-16.1%
		-15.4%

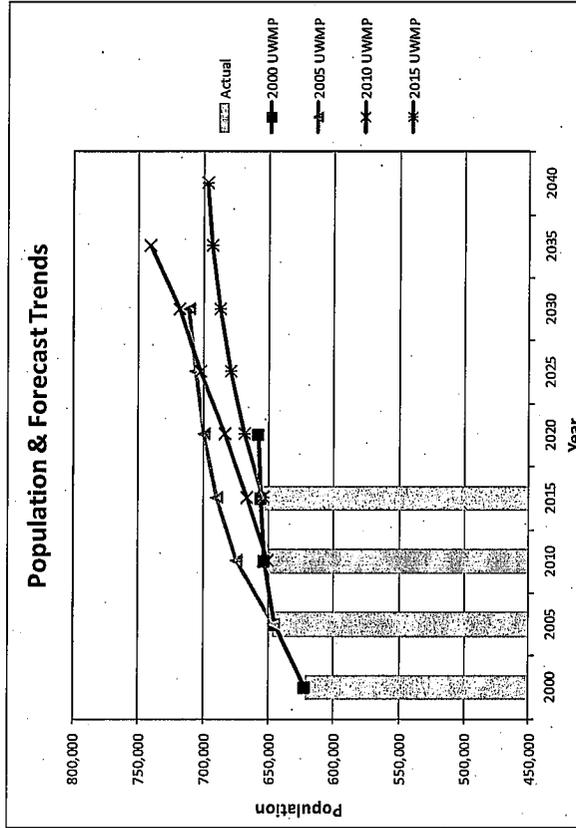
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Table 3

Group 2 - Fullerton, Garden Grove, Huntington Beach, Orange, and Yorba Linda

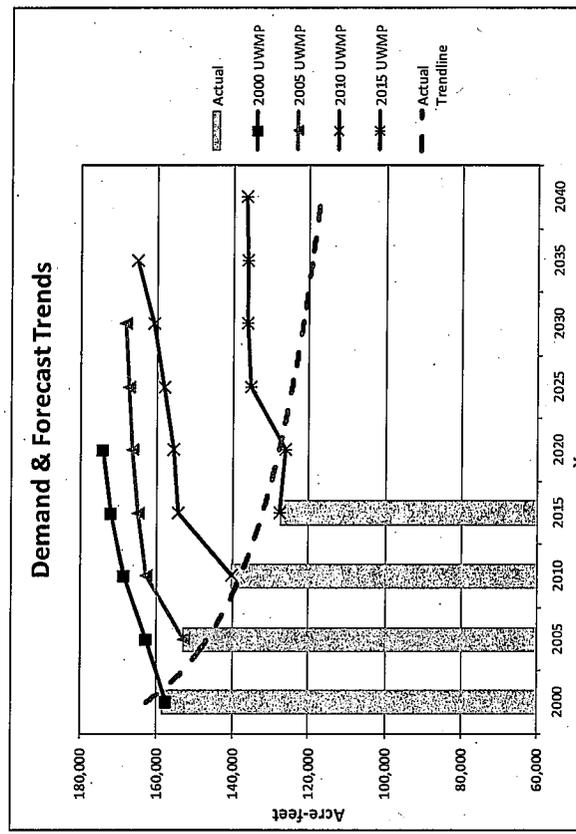
Population											
Actual and Forecasted											
Year	2000	2005	2010	2015	2020	2025	2030	2035	2040		
Actual	620,683	646,695	650,776	654,892							
2000 UWMP	622,303	646,041	653,607	656,709	658,334						
2005 UWMP		646,695	675,100	690,558	700,462	706,512	711,713				
2010 UWMP			650,776	667,454	684,172	702,594	719,199	741,065			
2015 UWMP				654,892	668,563	679,225	687,834	693,726	697,854		

Yorba Linda population and forecast not included in 2000 UWMP, so excluded from population table



Predicted Compared to		Change in 2015 Forecasts	
Subsequent Actual Population		Compared to Previous UWMPs	
2000 UWMP	99.9%	100.4%	100.3%
2005 UWMP		103.7%	105.4%
2010 UWMP			101.9%
			1.6%
			-4.6%
			-3.9%
			-3.3%
			-4.4%
			-6.4%

Demand											
Actual and Forecasted (AF)											
Year	2000	2005	2010	2015	2020	2025	2030	2035	2040		
Actual	158,645	153,030	140,487	127,708							
2000 UWMP	157,658	162,896	168,736	171,927	174,277						
2005 UWMP		153,030	162,943	165,075	166,556	167,575	168,499				
2010 UWMP			140,487	154,437	155,613	158,308	160,876	165,418			
2015 UWMP				127,708	126,313	135,571	136,300	136,289	136,694		



Predicted Compared to		Change in 2015 Demand Forecasts	
Subsequent Actual Demand		Compared to Previous UWMPs	
2000 UWMP	106.4%	120.1%	134.6%
2005 UWMP		116.0%	129.3%
2010 UWMP			120.9%
			-27.5%
			-24.2%
			-19.1%
			-18.8%
			-14.4%
			-15.3%
			-17.6%

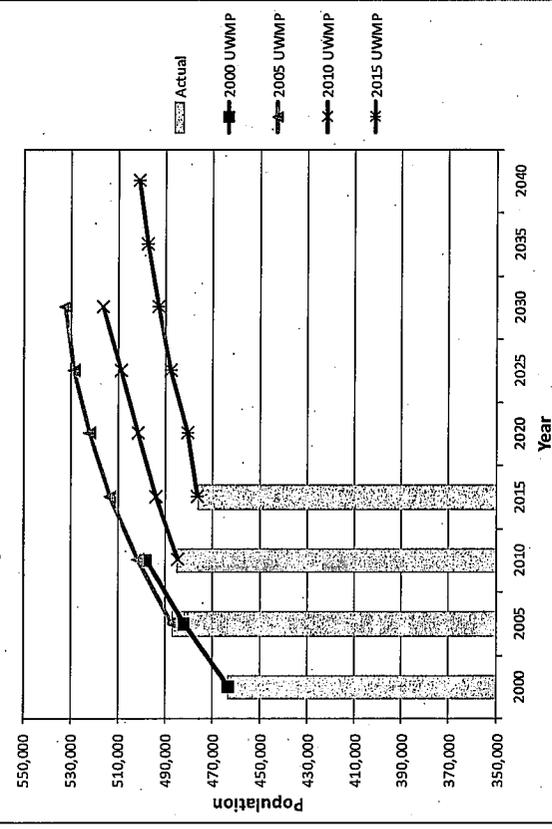
Table 4

Group 3 - Buena Park, Fountain Valley, Mesa, Newport Beach, Tustin and Westminster

Population

Actual and Forecasted		2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	463,456	487,200	484,958	476,379					
	2000 UWMP	463,456	482,425	498,195						
	2005 UWMP	487,200	501,711	513,314	522,159	528,909	532,585			
	2010 UWMP		484,958	493,837	501,664	508,788	516,728			
	2015 UWMP		476,379	480,897	488,009	493,167	497,851	501,287		

Population & Forecast Trends

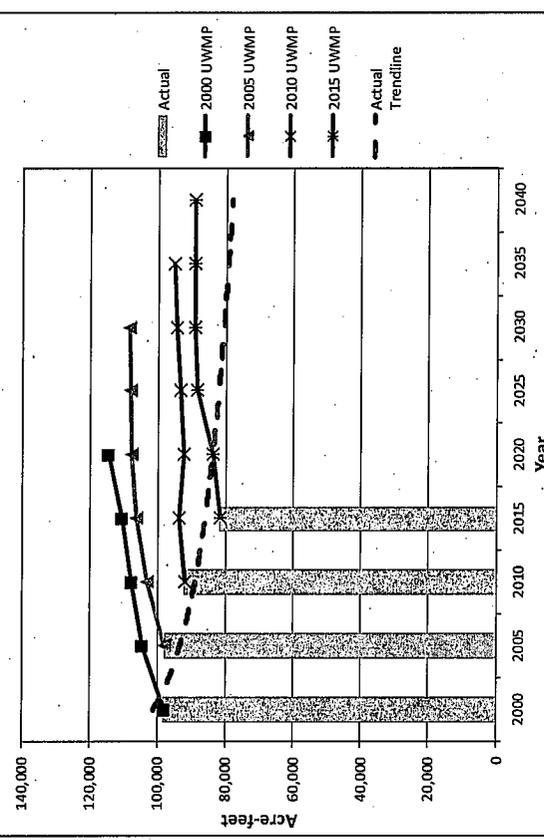


Subsequent Actual Population	Change in 2015 Forecasts Compared to Previous UWMPs			
	2000 UWMP	2005 UWMP	2010 UWMP	2015 UWMP
99.0%	102.7%	107.8%	103.7%	
				-7.9%
				-4.1%
				-7.7%
				-4.1%
				-7.4%
				-4.6%

Demand

Actual and Forecasted (AF)		2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	98,145	97,956	92,018	81,755					
	2000 UWMP	98,145	104,707	107,631	110,486	114,520				
	2005 UWMP		97,956	102,956	106,384	107,617	108,135	108,504		
	2010 UWMP			92,018	93,675	92,426	93,368	94,425	95,297	
	2015 UWMP			81,755	83,730	88,605	88,114	89,162	89,312	

Demand & Forecast Trends



Subsequent Actual Demand	Change in 2015 Demand Forecasts Compared to Previous UWMPs			
	2000 UWMP	2005 UWMP	2010 UWMP	2015 UWMP
106.9%	117.0%	135.1%	114.6%	
				-26.9%
				-22.2%
				-18.1%
				-5.1%
				-17.9%
				-5.6%
				-6.4%

Past UWMPs often overestimated future populations. But even when future populations were higher than forecast, demand was substantially lower than forecast. Underestimates of populations were sometimes due to subsequent annexes or consolidations, particularly for Group 1 which includes Irvine Ranch Water District and its frequent annexes and service area expansions.

Some of the UWMPs noted 2005 was a particularly wet year and indicated this suppressed demand. Many 2010 and 2015 UWMPs noted that recent drought years suppressed recent demand. That may be so, but the demand forecasts tended to decline substantially for each subsequent 5-year cycle of UWMPs indicating the wet and drought years do not fully explain the trends.

Most retailers in the Orange County Water District service area indicated they are at or near buildout (see Appendix A for buildout status of individual OCWD retailers). For these retailers, infill development will generally result in reduced average per capita demand, and possibly reduced overall demand since interior water use fixtures are becoming much more efficient and less outdoor area will be available for irrigated landscaping.

Review of Orange County Reliability Study

The Municipal Water District of Orange County (MWDOC) is a regional water wholesaler that provides water to retailers in the Orange County Water District (OCWD) service area, along with additional retailers outside the OCWD boundaries. MWDOC is presently conducting an Orange County Reliability Study (hereinafter Reliability Study) "to comprehensively evaluate current and future water supply and system reliability for all of Orange County."¹⁰ The Reliability Study includes a water demand forecast model that separately delineates the Orange Basin water retailers. The OCWD retailers indicate they are using the water demand forecasts from this model in their 2015 UWMPs.

Since past UWMPs consistently overestimated future water demands, the Reliability Study demand forecasting methodology and assumptions were reviewed. The Reliability Study was not yet final, so this review was based on detailed technical memos and presentation materials provided by MWDOC.

The Reliability Study developed a statistical demand forecasting model with a number of inputs and assumptions. The model is described in Technical Memorandum #1 which states "The explanatory variables for this statistical model included population, temperature, precipitation, unemployment rate, presence of mandatory drought restrictions on water use, and a cumulative measure of passive and active conservation."¹¹

The Reliability Study defines "passive conservation" as conservation which "results from codes and ordinances, such as plumbing codes or model landscape water efficient ordinances. This type of conservation requires no financial incentives and grows over time based on new housing stock and remodeling of existing homes."¹²

"Active conservation" is defined as conservation "which requires incentives for participation. The SoCal WaterSmart grant that is administered by MET, through its member agencies, provides financial incentives for approved active water conservation programs such as high efficiency toilets and clothes washer retrofits."¹³

Technical Memorandum #1 for the Reliability Study indicates the passive conservation forecasts are based solely on code requirements for high efficiency toilets and high efficiency clothes washers, and the new California Model Water Efficient Landscape Ordinance that becomes effective in 2016.¹⁴ These are well-proven conservation measures, but many more exist and are known to be effective and in use by consumers, particularly during drought years.¹⁵

While the technical methods for the demand model in the Reliability Study may be more sophisticated than water demand forecasts in many past UMWPs, any model is only as good as its algorithms, inputs and assumptions. To be manageable, or due to limitations in data or budget constraints, models tend to be simplifications of real world dynamics. Trends in real world water demand dynamics over several decades may be considerably more complex than what is represented with the 6 or 7 explanatory variables used in the Reliability Study water demand model. So it is important to understand the limitations of the model and likely sources of error. Some of the inputs and assumptions appear subject to the same problems and errors as past water demand forecasts, which resulted in overestimating future water demand. Key inputs and assumptions that may introduce errors and overstate future demand are reviewed below.

Population Forecasts

The past UWMPs often overestimated future populations. Some underestimates are due to cases of unforeseen annexes or expansions. But even for the cases where populations exceed forecasts (see Appendix A), and when unforeseen service area annexes and expansions occurred, water demand forecasts consistently exceeded actual demand in future years. Clearly more factors than erroneous population forecasts are driving the overestimates of future demand.

Demand During Multiple Drought Year Events

There are problems and inconsistencies in how the Reliability Study is addressing water conservation dynamics during serious, multi-year droughts. The statistical demand model described in Technical Memorandum #1 attributes only a -6% impact from “drought conservation” during “mandatory drought restrictions” which are generally only enacted during serious, multi-year droughts.¹⁶ Soon thereafter the report states that California instituted a “statewide call for mandatory water use restrictions in April 2015, with a target reduction of 25 percent. Water customers across the state responded to this mandate, with most water agencies seeing water demands reduced by 15 to 30 percent during the summer of 2015.”¹⁷ Table 5 below provides the 2015 drought year conservation during mandatory restrictions reported by the OCWD retailers to the California State Water Resources Control Board.

**Table 5
2015 Drought Response¹⁸**

Retailer	Drought	Drought
	Conservation Target	Conservation Achieved June - Dec 2015
Anaheim	20.0%	22.5%
Buena Park	20.0%	22.9%
East OCWD	36.0%	36.5%
Fountain Valley	20.0%	22.9%
Fullerton	28.0%	21.7%
Garden Grove	20.0%	21.2%
Golden State Water Co.	16.0%	22.4%
Huntington Beach	20.0%	23.1%
IRWD	16.0%	17.5%
La Palma	20.0%	23.9%
Mesa	20.0%	18.5%
Newport Beach	28.0%	20.2%
Orange	28.0%	28.0%
Santa Ana	12.0%	17.5%
Seal Beach	8.0%	17.4%
Serrano WD	36.0%	39.4%
Tustin	28.0%	27.6%
Westminster	20.0%	18.8%
Yorba Linda WD	36.0%	37.8%
Average %	22.7%	24.2%

The Reliability Study water demand model described in Technical Memorandum #1 also assumes "demands during dry years would be 6 to 9 percent greater."¹⁹ The OCWD retailers use this assumption in their 2015 UWMP supply reliability planning. Assuming water demand will increase in single dry years may be accurate since single dry years are frequent in California and do not necessarily signify a serious drought situation. However, abundant real world evidence, including Table 5 above and Figures 2, 3 and 4 below, demonstrate that water users in California and the OCWD service area can and will substantially curtail water use during serious multiple year drought events. In fact, due to widespread drought messaging some service areas, including Irvine Ranch Water District during the in 2007 through 2010 drought years, and the Marin Municipal Water District in 2015, experienced substantial demand reductions during drought years even when no local water supply shortage existed.²⁰

The drought conservation reported by OCWD retailers in Table 5 makes clear that the drought assumptions in the Reliability Study need refinement to better reflect real world events. Water use may increase during single dry year occurrences, and may also increase in multiple dry year events that are not so dry and severe that serious water shortages occur. However, it is clear that in serious multi-year drought water demand may decrease 20% or more.

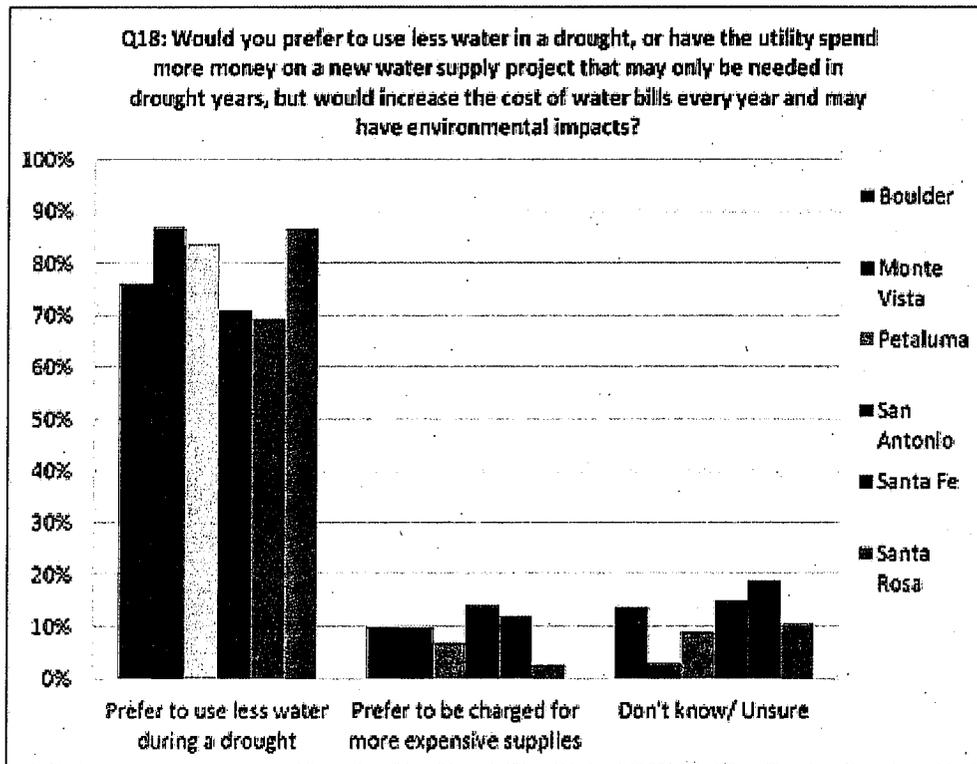
These assumptions regarding water use patterns during serious drought years have an important effect on the calculations that determine need for new water supply. Another key input is the yield of the water supply system. The typical definition of "Net Safe Yield" for a water supply system is the quantity of water from the various supply sources during "drought of record" conditions (the worst drought) experienced by the utility's water supply sources. In response to climate uncertainty, some California utilities have started adding hypothetical additional drought years to their actual Drought of Record conditions to determine supply reliability, which reduces the theoretical yield.

The Net Safe Yield is then compared to total water demand to determine the need for new supply. If total water demand is assumed to increase 6% to 9% during drought years, this requires 6% to 9% more Net Safe Yield water supply during Drought of Record conditions to achieve 100% supply reliability. However, if water users actually curtail demand 25% during drought of record (or theoretical worse) conditions, instead of needing to supply 6% to 9% more than normal year demand, the utility would need 25% less than normal year demand. This results in a 31% to 34% difference in needed supply for drought of record conditions. Less severe droughts may occur on a less frequent basis, and require less, if any, water use curtailment.

Of course, a valid question exists as to whether water users would prefer to pay for full water supply reliability, even for drought years, or whether they would prefer to conserve water during droughts. The recent report "An Assessment of Demand Elasticity during Drought"²¹ (hereinafter Demand during Drought Report) explored this question in phone surveys for water retailers in the Western states that had experienced serious drought. As shown in Figure 2 below, respondents expressed a very strong preference to conserve water during drought compared to paying for costly new water supplies that would only be needed for drought years. It should be noted that respondents for this question had experienced recent drought and this question occurred near the end of a lengthy survey in which respondents were asked a series of very specific questions about 17 water conserving steps they took in a past drought and which specific steps they would consider doing in a future drought. Therefore, the specific steps necessary to conserve additional water were not a vague notion for respondents at this point of the survey.

Furthermore, the same detailed phone surveys of drought affected areas in California and other Western states found that not only do water users curtail water use during serious drought events, and prefer that compared to paying for new water supply only needed for drought years, but they adopt water saving technologies at a more rapid rate during serious drought events, which essentially accelerates “passive” conservation and can be expected to persist after the drought subsides.²²

Figure 2
2012 Phone Survey: Conservation vs New Supply during Drought



In Technical Memorandum #4 for the Reliability Study, some of the model runs recognize that a 10% demand curtailment during severe drought is possible and a viable policy alternative.²³ This is an improvement over drought year assumptions in Technical Memorandum #1. However, the 2015 UWMPs for the individual retailers still indicate that demand will increase between 6% and 9% during multi-year droughts which is inconsistent with actual events.

As previously noted, drought year water use assumptions have an important effect on the calculations that determine need for new water supply. Each service area needs to carefully consider the acceptable frequency and depth of water shortages from drought, or the OCWD retailers may decide the most appropriate drought policy for the region as a group. But 100% supply reliability may be economically inefficient use of capital and unnecessary since water users have repeatedly demonstrated that they will curtail demand during serious drought years. In some documented cases in California and the OCWD service areas (noted in the subsequent section of this report), consumers curtailed water use during serious drought years even when a local water shortage did not occur.

Demand Rebound after Drought

Technical Memorandum #1 for the Reliability Study discusses three types of water conservation, passive and active as previously noted, and a third type from drought:

“The third type is extraordinary conservation that results from mandatory restrictions on water use during extreme droughts. This type of conservation is mainly behavioral, in that water customers change how and when they use water in response to the mandatory restrictions. In droughts past, this type of extraordinary conservation has completely dissipated once water use restrictions were lifted—in other words curtailed water demands fully “bounced back” (returned) to pre-curtailment use levels (higher demand levels, within a relatively short period of time (1-2 years).”²⁴

However, no source is cited to corroborate the assumption of fully “bounced back” demand within “1-2 years.” In its water demand forecasts, the Reliability Study assumes that after the recent “Great California Drought” demand will rebound 85% in 5 years, and 90% in 10 years.

After the 1976-77 drought in California, many water retailers experienced a fairly rapid rebound to pre drought per capita demand levels. This was because relatively few new conservation technologies were available to be installed during the drought. Instead water users focused on behavioral modifications, and temporary measures such as placing bricks in toilet tanks and reducing landscape irrigation.

Another 6-year drought occurred in California from 1987 to 1992. During this drought, numerous new water savings technologies became available and water savings were based on a combination of new hard-wired efficiency devices and behavioral modifications. Additional drought years occurred during 2007 through 2009, and again in 2014 and 2015. Figures 3 and 4 examine per-capita water use rebound after drought for a couple of California service areas.

Figure 3
Irvine Ranch Water District Drought Rebound

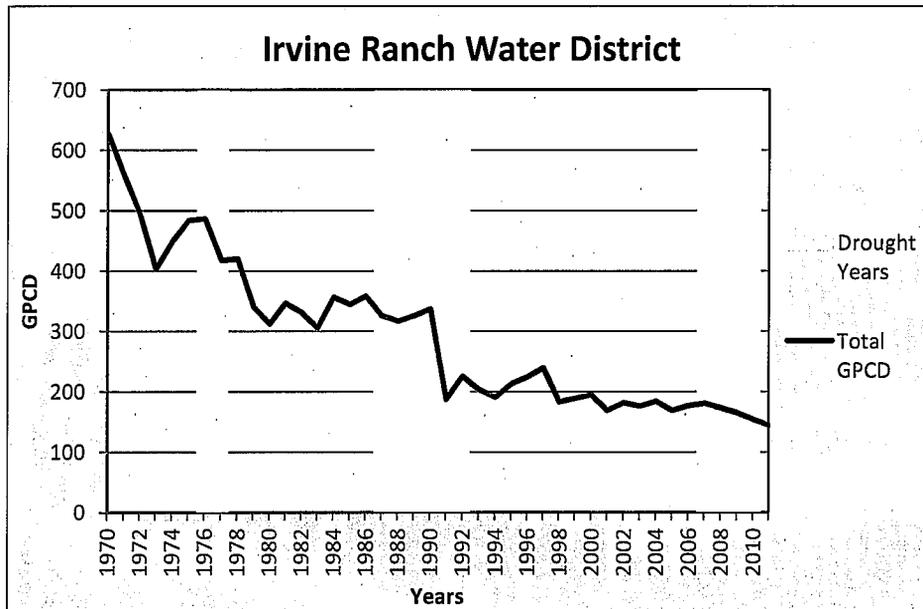
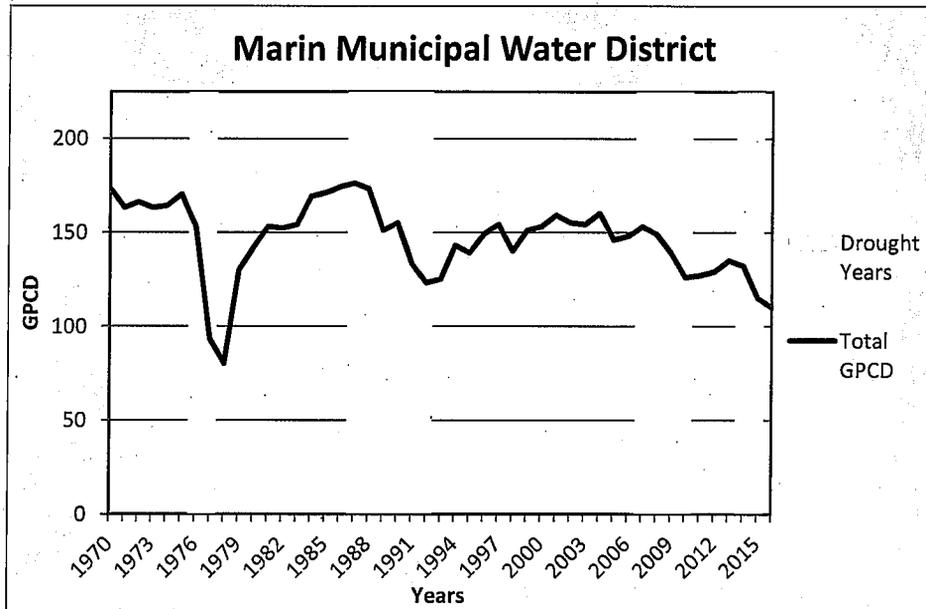


Figure 4
Marin Municipal Water District Drought Rebound



The Marin Municipal Water District data are particularly useful for examining drought rebound since Marin’s local watershed and reservoirs only contain a 2- to 3-year carryforward supply, thus the service area is sensitive to drought. Marin’s reservoir system is also very efficient at refilling with even a single wet year. So drought years may be of more immediate concern, but also end faster compared with many of California’s urban water supply sources.²⁵

Both Irvine Ranch and Marin experienced an obvious decline in per capita use during the 1976-77 drought. A relatively wet series of years followed, and over the next 10 years, per-capita water use rebounded to pre-drought levels for Marin, while Irvine Ranch per-capita water use remained at a much lower level (this may have in large part been due to declining agricultural water use in the service area at that time²⁶).

When another series of drought years occurred between 1987 through 1992, both Irvine Ranch and Marin experienced a sharp decline in per-capita water use. When a series of wet years followed, per-capita water use for Irvine Ranch again remained below pre-drought levels, apparently due to a new rate structure instituted during the drought years and ongoing active and passive conservation in the service area.²⁷ During the 15-year wet year interval after 1992, Marin’s per capita water use slowly rebounded, but remained well below the pre-drought peak in the mid-1980s.

California experienced another series of dry years between 2007 and 2010, which resulted in widespread concern over water shortages from drought, coinciding with an economic recession (addressed in the next section of this report). Again, both Irvine Ranch and Marin experienced a marked reduction in per-capita water use. Per-capita water use for Irvine Ranch again remained low for the years data were available after this drought, but a noticeable rebound occurs for Marin. With the widely publicized Great California Drought years of 2014 and 2015, Marin’s per-capita water use again exhibits a marked decline, even though relatively little rebound had occurred since the previous series of drought years.

The phone surveys in the report “An Assessment of Demand Elasticity during Drought” documented widespread adoption of more efficient water use practices and technologies during recent drought events, essentially accelerating the rate of passive implementation of long-term conservation measures identified in the Reliability Study demand model.²⁸ Along with the trends in Figures 3 and 4, this suggests that as new conservation technologies and practices – many not considered in the Reliability Study’s calculations for passive or active conservation -- are adopted by water users, the Reliability Study’s assumption of a 90% rebound is likely to overestimate actual rebound. Additionally, if another series of drought years occurs during the assumed 10-year rebound period, it may significantly reverse the predicted rebound. Given the stretched water supply situation in California and competition for it, even a series of modestly dry years may drive increased adoption of new conservation innovations diminishing rebound after drought.

With a greater range of new conservation devices, technologies and practices available during the recent Great California Drought and widespread concern regarding climate change, if anything, water users can be expected to more strongly adopt and retain water saving devices and practices compared to past drought events. This would result in more persistent water savings from drought years, or less rebound than assumed in the Reliability Study. Though not likely, it is possible that a very long period of wet years will occur during which drought concerns become a distant memory, or a new generation of residents move in and grow up without having experienced a drought. In that unlikely event, increased rebound from growing careless water use would also provide the potential for more demand curtailment during future serious drought years.

Presently, there do not appear to be any thorough studies focused specifically on demand rebound after drought, particularly for recent drought events. But the information available suggests the Reliability Study’s assumption of 90% rebound after the recent Great California Drought is likely to significantly contribute to overestimating future demand.

Drought vs. Economic Recession Water Use Patterns

The Reliability Study assumes a demand impact of -13% due to recession, and -6% due to drought.²⁹ However, recent events in California, the drought response figures in Table 5, and the previously referenced Demand during Drought Report which contains an analysis of water use during the recent simultaneous drought and recession, suggests these assumptions are in error.

Questioning the long held view that urban water use closely correlates with economic trends is sure to trigger a Semmelweis Reflex from some water managers and analysts.³⁰ But economic conditions have evolved considerably in recent decades. Process water use for manufacturing and industrial purposes is becoming much less common and on-site recycled water use by remaining large industrial facilities much more common. Much non-residential water use is now for light commercial sites such as office parks, retail stores and restaurants. During economic downturns, much of the water use from these sectors may load shift back to residential sites since local residents may spend relatively more time at home compared to time working, shopping, eating out and other forms of entertainment away from the home. This load shifting will result in less overall impact on water demand during recession compared to the past era of widespread heavy industry and manufacturing.

The disconnect between economic trends and per capita water use has become so striking that in August, 2015 an Op-Ed by prominent water author Charles Fishman appeared in the New York Times. The piece noted that it had been an exceptionally dry 4-year period in California, but that California’s economy had grown 27% faster than the nation, and faster every year of the drought.³¹

The relative influence of drought vs. recession in recent years was investigated in the report “An Assessment of Demand Elasticity during Drought” when both occurred simultaneously during the 2007-2010 drought. Some relevant excerpts from the report follow.

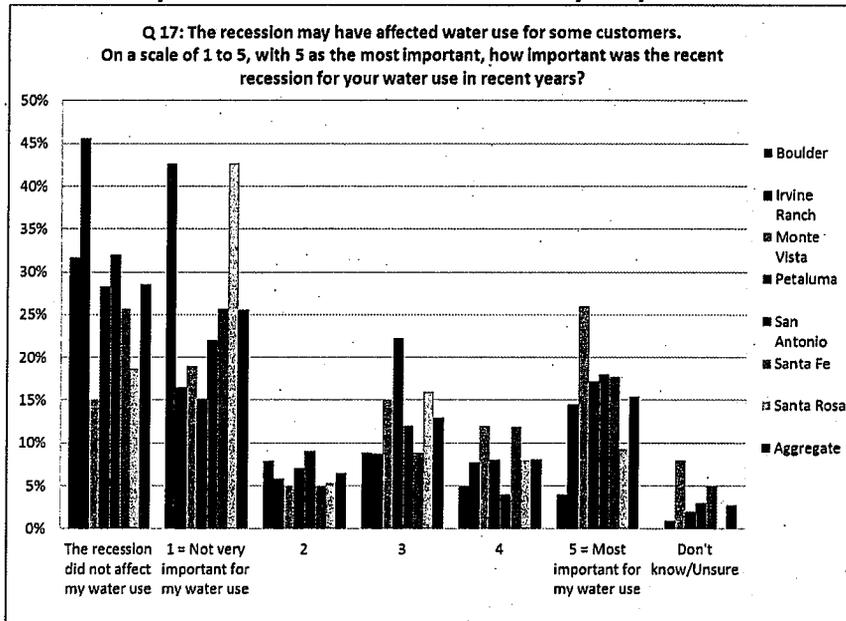
To better understand economic conditions for the seven case studies, and how economic trends may have influenced water use, we collected data on economic trends and compared them to use patterns for each of the seven case studies. The economic indicators included:

- Annual unemployment rate
- Annual per-capita income
- Annual home value index
- Median household income
- Median home value
- Percent of population below poverty line

For many of the case studies, in the 1980s there was a period when per-capita water use and economic indicator trends roughly coincided. However, starting in the early 1990s for many case studies, and by the late 1990s for nearly all of them, per-capita water use began a distinctive and persistent downward trend, with only relatively small perturbations during times of recession. As often as not, water use declined in periods of economic expansion and declining unemployment, and particularly during the economic expansion in the 1990s.³²

We found the economic indicators correlated poorly with the per-capita water use trends. In the last two decades in particular, there was no substantial and sustained correlation between economic vitality and per-capita water use trends. Water use trends appear to correlate much more closely with the ongoing implementation of water conservation programs, including the influence of state and national plumbing codes, the rising cost of water bills, and the influence of drought conditions. This conclusion is consistent with the responses in the phone surveys as noted in Figure 5 below. Most participants indicated that the recession did not affect or was not very important to their water use. Some of the participants who indicated the recession was important to water use may have been impacted in ways that increased use, such as more people living or spending time in the household.

Figure 5
Impact of Recession in Phone Survey Responses³³



There are many reasons that overall water use for a service area may not sharply decline during a recession when more than the usual number of businesses and water meters are inactive. It is likely that a considerable amount of “load shifting” occurs. Water not used at one site is used somewhere else. Some possible examples include:

- Many more people may be unemployed and spending more time at home rather than in the work place or shopping malls. These unemployed people may be flushing toilets at home more often rather than at work or at the malls.
- Many people may be eating out less frequently, but preparing food and washing dishes more frequently at home. Depending on dishwashing methods, home dishwashing may be less water efficient than in a restaurant.
- There may be more than the normal level of unoccupied dwelling units in a service area, but people may be living more densely in other single-family and multi-family dwelling units (populations did not appear to decline for our case study service areas during the recent recession). Many unoccupied residences and business sites appear to continue watering the landscape with an automatic irrigation system to save landscaping and make the site more attractive to rent or sell. In the case of unoccupied sites that are automatically irrigated, the irrigation management may be less efficient than if the site was occupied.³⁴

With regard to the long-term and persistent decline in per capita water use experienced by all the case studies in the study, the report noted “declining per-capita water use did not appear to impose a constraint on economic vitality during periods of economic expansion.”³⁵ This further indicates a growing disconnect between economic trends and overall per capita water use.

Figure 6 below, from the Demand during Drought Study, provides a comparison on aggregate per capita water use trends equally weighted for the seven case studies (four were in California) with economic trends based on real per-capita income.³⁶

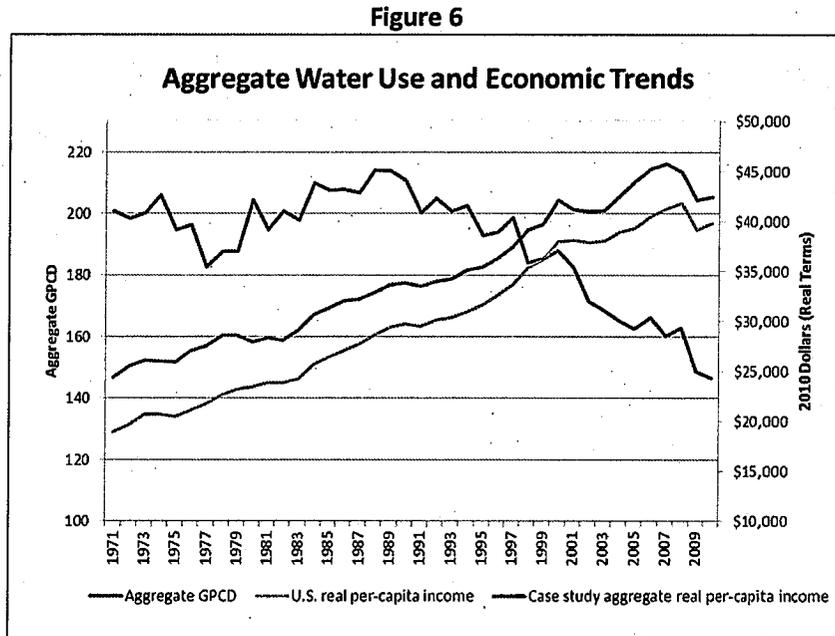


Figure 5 in the Reliability Study Technical Memorandum #1 provides a verification curve of the statistical water use model along with actual water demand.³⁷ The model appears to predict lower than actual per capita water use for the OCWD basin retailers during the recession years in the early 1990s and early 2000s. The predicted and actual curves appear to match more closely during the late 2000s when the Great Recession and a series of drought years also known to have reduced demand occurred simultaneously. This suggests the impact of recession is over estimated and drought underestimated in the model’s assumptions.

Infill Development

As noted in their 2015 Urban Water Management Plans, most Orange County Water District retailers are at or near build-out condition in their service areas (see Appendix A). Future development will consist mostly of infill and higher density development of existing developed areas. This will displace landscape water use, which historically has contained a large percentage of high-water-use plantings and inefficient irrigation systems and practices. The higher density in-fill development pattern is noted in MWDOC’s 2015 UWMP; “housing, in particular within the cities, is becoming denser with new multi-storied residential units.”³⁸

The Demand during Drought Report states “As water utility service areas approach or reach build-out, the trend in declining per-capita water use has important implications for water supply planning.”³⁹ Per capita water use for residents in multi-unit housing stock has historically been lower than in single-family housing. Higher density residential housing stock generally equates to lower per capita demand.

According to Technical Memorandum #1 for the Reliability Study, the “unit use” water use factors used in the model are based on fiscal-year 2013-14 figures provided by the retailers.⁴⁰ It is not clear that the trend identified in the UWMPs to higher density, lower per-capita water use housing stock is adequately accounted for in demand forecasts.

Price Elasticity of Demand

Technical Memorandum #1 for the Reliability Study states:

Price elasticity of water demand reflects the impact that changes in retail cost of water has on water use. Theory states that if price goes up, customers respond by reducing water use. A price elasticity value of -0.2 implies that if the real price of water increases by 10%, water use would decrease by 2%. Price elasticity is estimated by detailed econometric water demand models, where price can be isolated from all other explanatory variables. Many times price is correlated with other variables making it difficult to estimate a significant statistical value. In addition, there is a potential for double counting reduction in water demand if estimates of future conservation from active programs are included in a demand forecast because customers who respond to price take advantage of utility-provided incentives for conservation. MET's 2015 IRP considers the impact of price elasticity in their future water demand scenarios, but does not include future active conservation in its demand forecast. The OC Study included future estimates of water conservation from active conservation, and thus did not include a price elasticity variable in its statistical modeling of water demand. Including both price elasticity and active conservation would have resulted in "double counting" of the future water savings.

While there may be a potential for double counting some active conservation program savings for people motivated by price increases, to entirely disregard the price elasticity of demand is almost certain to under count its effects. Participants in active conservation programs may also be motivated to modify behavior to conserve water in addition to the water savings from the active conservation retrofits. These can both occur simultaneously and result in separate water savings. In addition, many water users may be motivated to conserve based solely on price, without any participation in the active conservation programs. These price only motivated conservers will be lost from the accounting.

The Demand during Drought Study found real marginal prices increased substantially during the last 10 to 20 years.⁴¹ Technical Memorandum #4 for the Reliability Study states "the cost of water will continue to increase over time, and at higher rates than the cost of inflation to deal with these reliability issues."⁴² If water prices continue rising in real terms, as water industry analysts predict, this problem will be magnified, particularly for utilities developing more expensive new supply sources. The demand model in the Reliability Study would be better served by reasonable assumptions to address double counting concerns, rather than categorically ignoring a known important water use influence on all of a service area's customers.

Future conservation innovation

"Everything than can be invented has been invented"

Quote often erroneously attributed to Charles Holland Duell, commissioner of the United States Patent and Trademark Office in 1898 to 1901 (the quote can be sourced to an 1899 edition of Punch Magazine)⁴³

In fact, in 1902 Duell is known to have said:

"In my opinion, all previous advances in the various lines of invention will appear totally insignificant when compared with those which the present century will witness. I almost wish that I might live my life over again to see the wonders which are at the threshold."⁴⁴

Conservation assumptions in demand forecasts tend to underestimate future conservation for a number of reasons. As previously noted, Technical Memorandum #1 for the Reliability Study includes a limited range of presently available conservation measures in its passive conservation projections. Nonetheless, water users employ a broader range of conservation measures, particularly during drought years, which are not considered in the demand forecasts. But even for demand forecasts with the most thorough analysis of conservation measures, it is important to recognize that only present day conservation measures have been included. However, as abundantly clear in recent decades, conservation technologies are rapidly developing. Given well-established trends, future conservation innovations can safely be expected to increase future conservation beyond present day forecasts.

Many examples exist, but the evolution of toilet efficiency is particularly illustrative. During California's 1976-77 drought, the cutting-edge technology was to place a brick (maybe sealed in a plastic bag for the most technologically advanced) in the tank of a 5 to 7 gallon per flush toilet to reduce flushing volume. This soon gave way in the 1980s to 3.5 gallon per flush toilets, and considerable skepticism from plumbing interests. In the early 1990s, 1.6 gallon per flush toilets became available. Conservation skeptics suggested they would never work properly and create havoc with wastewater plumbing. Numerous studies were launched to investigate the dangers of using this new generation of toilets, and prove they could not possibly be practical for widespread use and represent future toilet technology. Water analysts in the 1990s were often hesitant to consider the water savings from 1.6 gallon toilets reliable enough to include in demand forecasts. In a sense they were right, but only because a new, more efficient generation soon superseded the 1.6 gallon toilets.

By the late 2000s, more efficient toilets using 1.28 gallons-per-flush became the new efficiency standard, replacing the 1.6 gallon toilets. Now, the 2015 MWDOC Reliability Study assumes all new and remodeled households will use 1 gallon-per-flush toilets, replacing even those old, inefficient 1.6 gallon toilets. Toilets using 0.8 gallon per flush toilet are now widely available. As populations increase, and more people flush more toilets, seemingly small improvements in toilet efficiency have important cumulative effect on demand. Many other water using technologies such as clothes washers and dishwashers are also advancing in efficiency.

Of course, the demand forecasts from the 1990s and 2000s never contemplated these efficiency innovations that regularly occurred within the planning horizons of the forecasts. For many widely recognized reasons including population increases, over allocated river systems, rising cost of water and concern about climate change, much interest exists in advancing innovative efficient water use technologies. In fact, the Metropolitan Water District of Southern California has for many years provided grants designed specifically to help drive innovation in conservation technologies and practices.

There can be little doubt that conservation innovation has been an important influence in reducing water use below earlier demand forecasts, and all signs suggest that will continue to be the case for the foreseeable future and the planning horizon for the Reliability Study. We may not be able to predict exactly what new innovations will emerge, but we now have a long enough track record of new technologies and efficiencies reducing demand below previous forecasts that water demand modelers can begin to recognize and quantify this variable and develop model runs that incorporate it in a range of alternative demand scenarios.

Risk in Overestimating Future Demand

Water demand forecasters traditionally use conservative estimates for many forecasting assumptions. This is generally done to reduce the risk from uncertainty in the forecasts and to reduce the risk of underestimating water supplies for a growing service area. However, as multiple instances and layers of conservative estimates are incorporated into demand forecasts, the forecasts diverge from real world trends and can lead water agencies to pursue unnecessary or overly costly supplies. Much of water utility costs may be fixed, but the fixed costs become hard-wired from previous capital expenditures in new supplies and facilities.

For service areas undergoing rapid growth and expansions, increased demand may eventually justify overestimated demand forecasts. However, for service areas at or near built-out conditions, as is the case for OCWD retailers, over estimating future demand and pursuing unneeded or overly costly new supplies can place the water utility at considerable financial risk and vulnerable to ratepayer backlash.

Financial risk can result from poor investment strategies and financial instability when water demand is less than forecasted. As water use declines below forecasted levels, revenues needed to pay for capital costs and debt service decline. Further raising rates to generate additional revenue can further suppress demand and create a downward financial spiral for the utility. Likewise, large capital investments for water supply only needed for infrequent serious drought years places additional financial burden on the utility, and financial risk when water users substantially reduce water use during serious drought events, as occurs in California. Political risk can increase as a consequence of ratepayer revolts triggered by rate increases and dissatisfaction regarding past supply investments by utility decision-makers. Risk may also occur when water utilities with a history of overestimating demand are justifiably greeted with skepticism by agencies responsible for permitting new supply projects and facilities, and public interest groups and ratepayers whose approval may be necessary for new projects to move forward.

Many service areas at or near build-out, as is the case for Orange County Water District retailers, may have now reached a point where multiple instances and layers of conservative assumptions for demand forecasts leading to inflated future demand estimates no longer provides the intended risk reduction. Utilities with service areas at or new build-out would be wise to much more carefully scrutinize water demand forecasts and the assumptions on which they are based in order to more closely represent real world events and trends.

Appendix A: Analysis of Individual Retailer Urban Water Management Plans

The below table indicates which UWMPs, from 1995 through 2015 were available for each OCWD retailer, which were used in the analysis of UWMP future populations and demand.

Water Retailer	LTFP 2035		1995	2000	2005	2010	2015
	Demand (AFY)	Group					
IRWD	88,008	1	Yes	Yes	Yes	Yes	Yes
Anaheim	77,700	1	NA	Yes	Yes	Yes	Yes
Santa Ana	50,400	1	NA	Yes	Yes	Yes	Yes
Orange	34,713	2	Yes	Yes	Yes	Yes	Yes
Huntington Beach	34,657	2	Yes	Yes	Yes	Yes	Yes
Fullerton	32,792	2	Yes	Yes	Yes	Yes	Yes
Golden State Water Co.	32,774	2	NA	NA	NA	Yes	NA
Garden Grove	30,907	2	1996	Yes	Yes	Yes	Yes
Yorba Linda WD	27,784	2	Yes	Yes	Yes	Yes	Yes
Buena Park	19,900	3	NA	Yes	Yes	Yes	Yes
Mesa	19,700	3	Yes	Yes	Yes	Yes	Yes
Newport Beach	18,474	3	Yes	Yes	Yes	Yes	Yes
Tustin	15,194	3	Yes	Yes	Yes	Yes	Yes
Westminster	12,337	3	Yes	Yes	Yes	Yes	Yes
Fountain Valley	10,165	3	Yes	Yes	Yes	Yes	Yes
Seal Beach	4,880	4	NA	2002	Yes	Yes	Yes
Serrano WD	2,852	4	NA	NA	NA	Yes	Wholesale
La Palma	2,742	4	Yes	NA	Yes	Yes	Yes
East OCWD	1,100	4	NA	NA	Yes	Yes	Yes

For some of the UWMPs, and particularly the earlier years, population or demand figures were missing. These data gaps are apparent in the individual retailer tables below.

When a subsequent year UWMP had updated demand or population figures for the previous starting year, for example the 2000 UWMP had updated 1995 demand figures, the updated figures were assumed to be more accurate and used. Since the horizontal and vertical scales used in graphs to provide a clearer representation of trends can introduce some distortion, tables providing percent changes are provided below the graphs for each retailer.

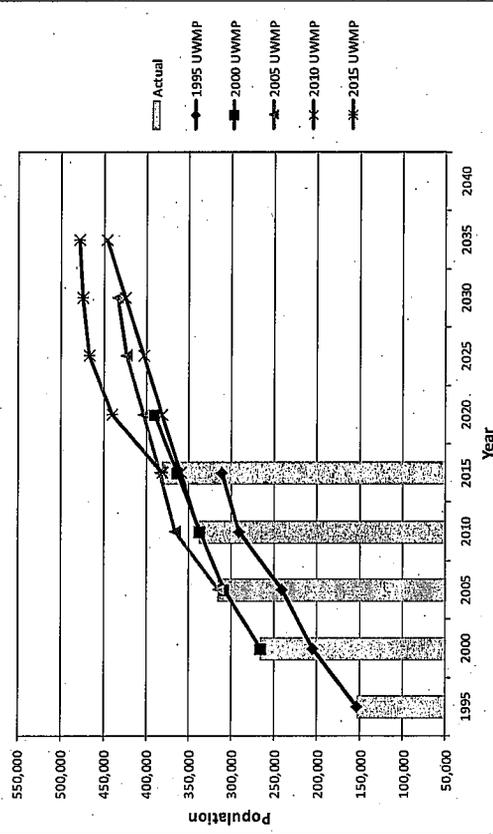
UWMP data for each retailer follows (with the exceptions of Golden State and Serrano due to lack of an adequate number of UWMPs) in the order noted in the above table, which is descending water use.

Irvine Ranch

Population

Actual and Forecasted		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Actual		154,000	256,000	316,000	337,876	381,463					
1995 UWMP		154,000	205,784	240,757	290,839	312,000					
2000 UWMP		266,000	308,653	337,569	364,018	390,467					
2005 UWMP		316,000	366,192		384,502	403,727	423,914	434,511			
2010 UWMP			337,876		359,627	381,379	403,130	424,882	446,633		
2015 UWMP					381,463	440,981	467,483	475,346	479,783		

Population & Forecast Trends

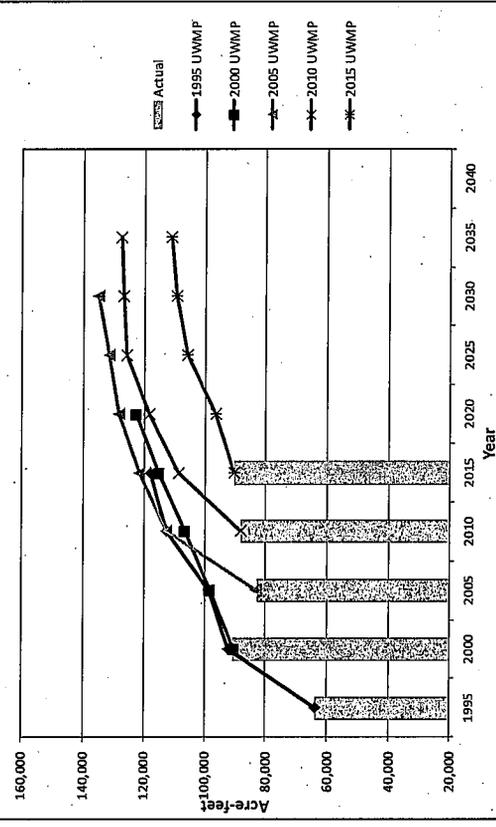


Predicted Compared to Subsequent Actual Population		Change in 2015 Forecasts Compared to Previous UWMPs	
1995 UWMP	77.4%	86.1%	81.8%
2000 UWMP	97.7%	99.9%	95.4%
2005 UWMP	108.4%	100.8%	9.4%
2010 UWMP		94.3%	11.9%
2015 UWMP			7.4%

Demand

Actual and Forecasted (AF)		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Actual		63,992	90,660	82,916	88,347	90,403					
1995 UWMP		63,992	92,176	98,578	112,716	118,014					
2000 UWMP			90,660	98,339	106,785	115,133	122,833				
2005 UWMP				83,508	112,710	121,620	128,563	131,708	135,130		
2010 UWMP					88,347	108,626	118,512	126,009	126,968	127,908	
2015 UWMP						90,403	96,445	109,431	111,277		

Demand & Forecast Trends



Predicted Compared to Subsequent Actual Demand		Change in 2015 Demand Forecasts Compared to Previous UWMPs	
1995 UWMP	101.7%	118.0%	130.5%
2000 UWMP	117.8%	120.9%	127.4%
2005 UWMP		127.6%	134.5%
2010 UWMP		120.2%	-13.8%
2015 UWMP			-13.0%

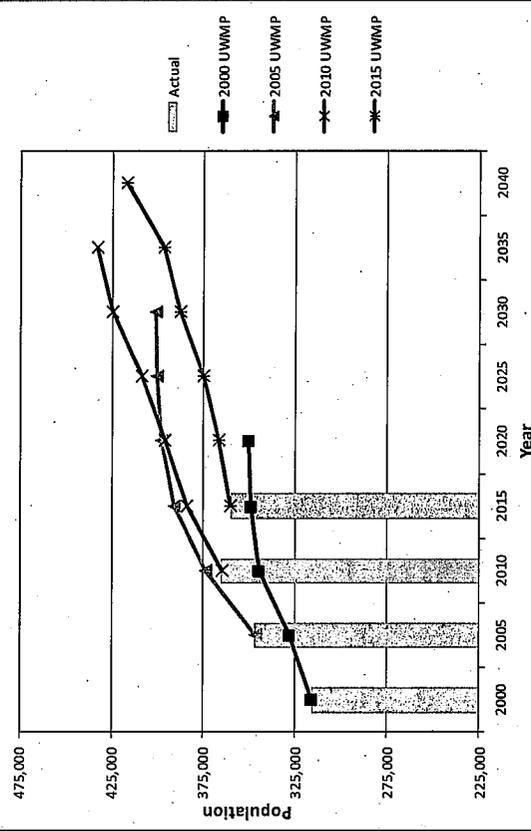
The Irvine Ranch service area experienced annexes and expansions nearly every 5-year cycle of UWMP updates which were generally not accounted for in earlier population and demand forecasts. The 2000 UWMP included both IRWD and the Los Alisos which were being merged. The 2000 UWMP figures represent the combined service areas. Recycled water use is included in demand and represents about 1/3 of total use, therefore potable water use is much lower.

Anaheim

Population

Actual and Forecasted		2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	316,100	346,932	364,921	360,142	349,700	350,500			
	2000 UWMP	316,100	328,300	345,100	349,700	350,500				
	2005 UWMP		346,932	373,852	390,764	397,774	400,529	400,900		
	2010 UWMP			364,921	383,768	395,769	409,096	424,558	432,949	
	2015 UWMP				360,142	366,938	374,836	387,739	396,721	417,456

Population & Forecast Trends



Predicted Compared to		Change in 2015 Population Forecasts Compared to Previous						
Subsequent Actual Population		2005	2010	2015	2020	2025	2030	2035
Year	2005	94.6%	94.6%	97.1%	4.7%	-7.8%	-3.3%	-8.4%
	2000 UWMP		102.4%	108.5%	-7.3%	-8.4%	-8.7%	-8.4%
	2005 UWMP			106.6%				
	2010 UWMP							

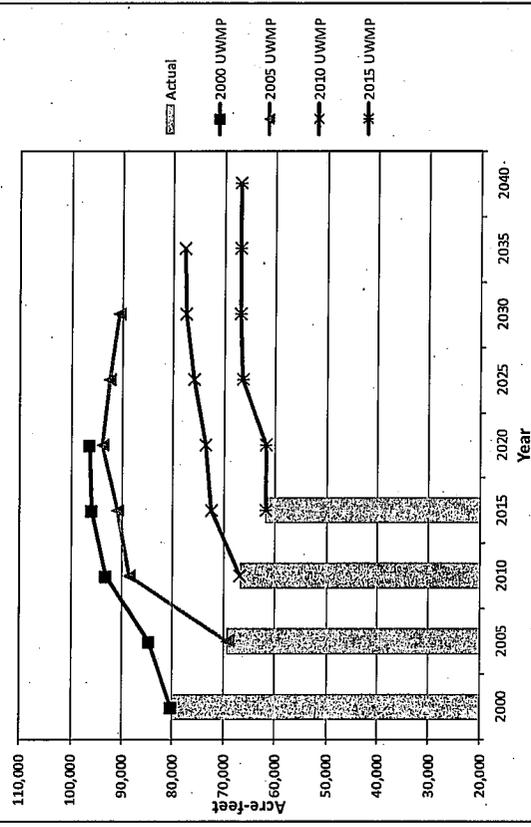
A 1995 UWMP was not available for Anaheim.

Demand

Actual and Forecasted (AF)

Actual and Forecasted (AF)		2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	80,200	69,277	66,829	61,982					
	2000 UWMP	80,200	84,700	93,300	96,000	96,400				
	2005 UWMP		69,277	88,630	90,890	93,920	92,490	90,710		
	2010 UWMP			66,829	72,400	73,600	75,900	77,500	77,700	
	2015 UWMP				61,982	61,895	66,453	66,910	66,892	66,988

Demand & Forecast Trends

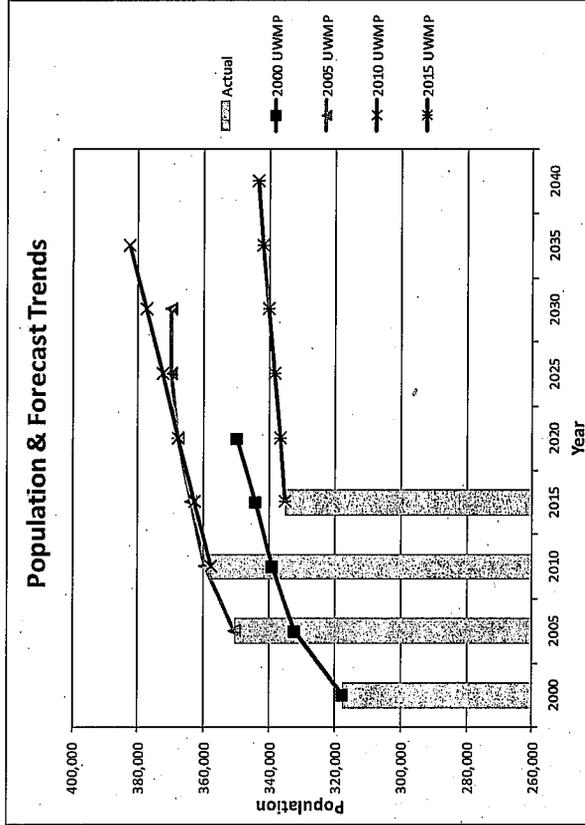


Predicted Compared to		Change in 2015 Demand Forecasts Compared to Previous UWMPs						
Subsequent Actual Demand		2005	2010	2015	2020	2025	2030	2035
Year	2005	122.3%	139.6%	154.9%	-35.8%	-28.2%	-26.2%	-13.9%
	2000 UWMP		132.6%	146.6%	-15.9%	-12.4%	-13.7%	-13.9%
	2005 UWMP			116.8%				
	2010 UWMP							

The 2015 UWMP indicates "the City is almost completely built-out" and "housing is becoming denser and new residential units are multi-storied." (p 2-2)

**Population
Actual and Forecasted.**

Year	2000	2005	2010	2015	2020	2025	2030	2035	2040
Actual	317,685	350,625	358,136	335,299					
2000 UWMP	317,685	332,586	339,419	344,410	350,172				
2005 UWMP		350,625	359,832	364,049	368,026	370,196	370,130		
2010 UWMP			358,136	363,027	367,918	372,809	377,700	382,591	
2015 UWMP				335,299	336,975	338,660	340,354	342,055	343,766

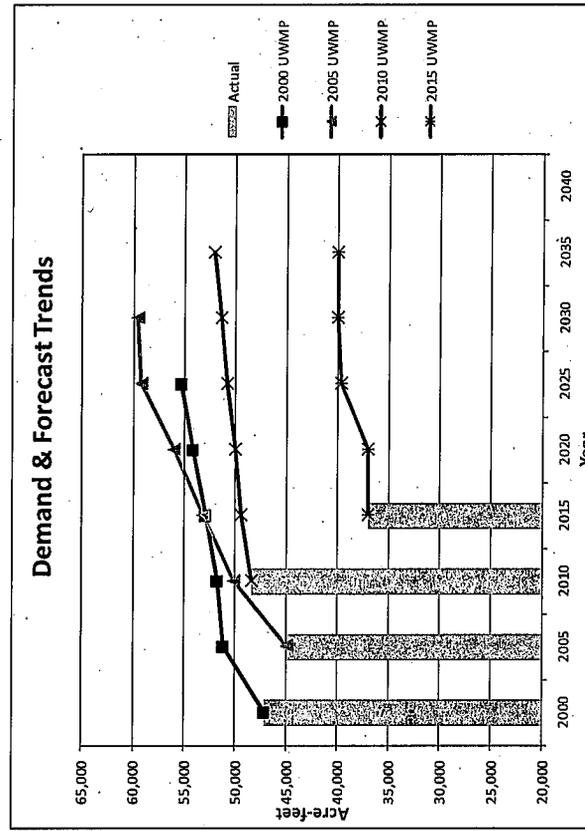


Year	Predicted Compared to Subsequent Actual Population					Change in 2015 Forecasts Compared to Previous UWMPs				
	2005	2010	2015	2020	2030	2035				
2000 UWMP	94.9%	94.8%	102.7%	-3.8%						
2005 UWMP		100.5%	108.6%	-8.4%	-8.5%	-8.0%				
2010 UWMP			108.3%	-8.4%	-9.2%	-9.5%				
2015 UWMP						-10.6%				

A 1995 UWMP was not available.

**Demand
Actual and Forecasted (AF)**

Year	2000	2005	2010	2015	2020	2025	2030	2035	2040
Actual	47,112	44,920	48,391	37,008					
2000 UWMP	47,112	51,170	51,780	52,960	54,150	55,370			
2005 UWMP		44,920	50,190	53,180	55,970	59,280	59,540		
2010 UWMP			48,391	49,473	50,094	50,819	51,440	52,164	
2015 UWMP				37,008	36,998	39,717	39,989	39,978	



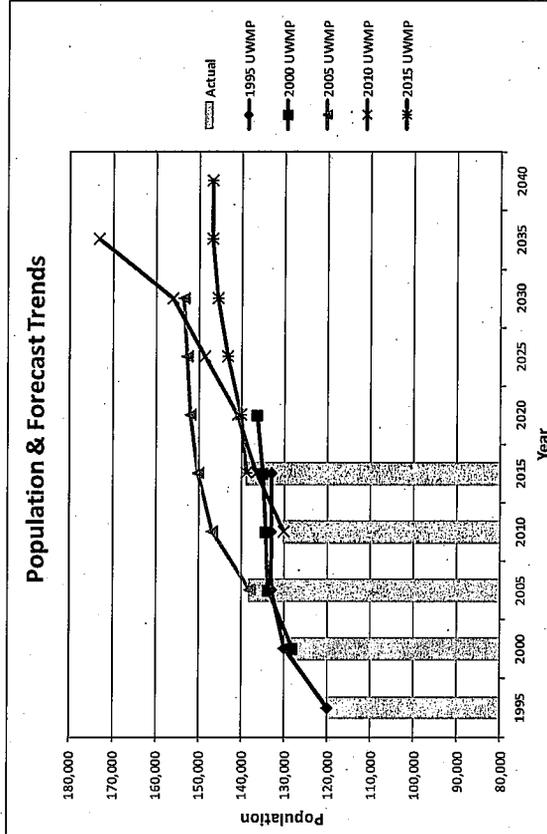
Year	Predicted Compared to Subsequent Actual Demand					Change in 2015 Demand Forecasts Compared to Previous UWMPs				
	2005	2010	2015	2020	2030	2035				
2000 UWMP	113.9%	107.0%	143.1%	-31.7%						
2005 UWMP		103.7%	143.7%	-33.9%	-33.0%	-32.8%				
2010 UWMP			133.7%	-26.1%	-21.8%	-22.3%				
2015 UWMP						-23.4%				

The 2015 UWMP states, "the City is almost completely built-out" and "vacant land within the City is very limited while existing housing is becoming denser and new residential units are multi-storied." (p 2-2)

Orange

Population

Actual and Forecasted		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Actual		120,000	128,309	138,289	130,325	138,987					
1995 UWMP		120,000	130,000	133,000	133,000	133,000					
2000 UWMP		128,309	133,793	134,474	135,230	136,346					
2005 UWMP		138,289	146,950	150,152	151,910	152,792	153,576				
2010 UWMP			130,325	136,703	141,094	148,709	156,125	173,212			
2015 UWMP				138,987	140,203	143,429	145,735	146,916	146,795		

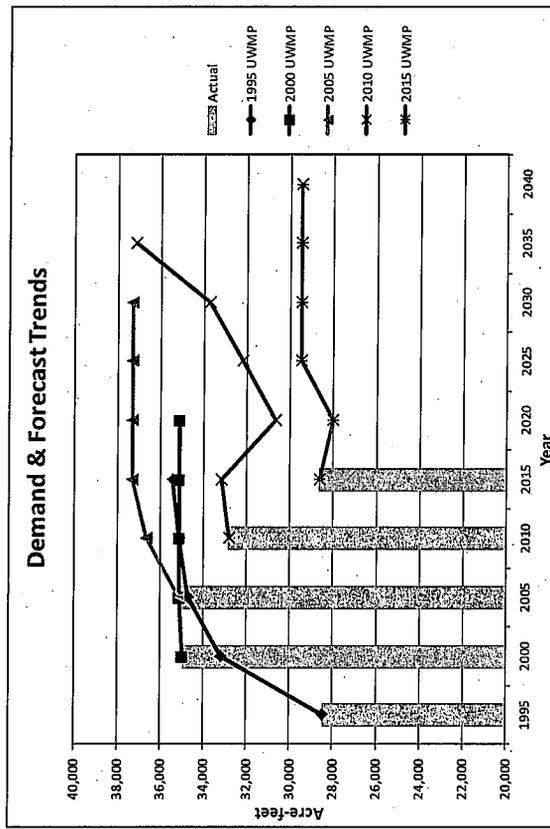


Predicted Compared to		Change in 2015 Forecasts	
Subsequent Actual Population		Compared to Previous UWMPs	
1995 UWMP	101.3%	NA	2.8%
2000 UWMP	96.7%	102.1%	-7.7%
2005 UWMP	112.8%	97.3%	-6.1%
2010 UWMP	98.4%	108.0%	-3.6%
2015 UWMP		98.4%	-6.7%
			-15.2%

The 2015 UWMP states "The City is almost completely built-out, (note: the City continues to see limited development on the very east side with the Santiago Hills II tract development of approximately 1,180 new homes, but this development lies outside of the City of Orange water service area and is in IRWD's service area)" (p 2-2)

Demand

Actual and Forecasted (AF)		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Actual		28,464	34,978	35,156	32,854	28,643					
1995 UWMP		28,464	33,200	34,710	35,160	35,460					
2000 UWMP		34,978	34,978	35,156	35,156	35,156					
2005 UWMP			35,156	36,663	37,319	37,319	37,319	37,319	37,319	37,319	37,319
2010 UWMP				33,201	30,681	32,236	32,236	32,236	32,236	32,236	32,236
2015 UWMP				28,643	28,000	29,500	29,500	29,500	29,500	29,500	29,500

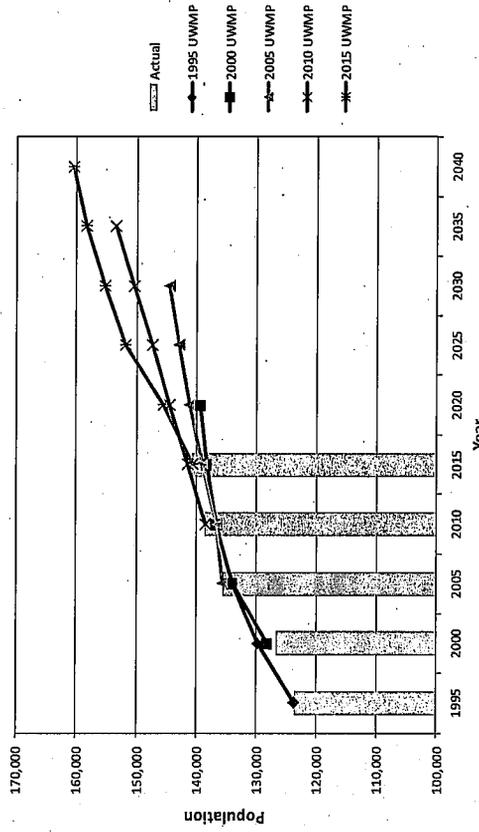


Predicted Compared to		Change in 2015 Demand Forecasts	
Subsequent Actual Demand		Compared to Previous UWMPs	
1995 UWMP	94.9%	107.0%	-20.4%
2000 UWMP	100.0%	122.7%	-25.0%
2005 UWMP	111.6%	130.3%	-8.7%
2010 UWMP	115.9%	115.9%	-12.6%
2015 UWMP		115.9%	-20.6%

Population

Actual and Forecasted		2005	2010	2015	2020	2025	2030	2035	2040
Year	1995	2000	2005	2010	2015	2020	2025	2030	2040
Actual	123,692	126,635	135,672	138,600	140,827				
1995 UWMP	123,692	129,804	134,175	136,845	138,442				
2000 UWMP		128,255	134,175	136,845	138,442	139,556			
2005 UWMP			135,672	136,800	139,200	141,200	143,000	144,700	
2010 UWMP				141,603	144,605	147,608	150,610	153,613	
2015 UWMP				140,827	145,791	152,026	155,464	158,421	160,545

Population & Forecast Trends

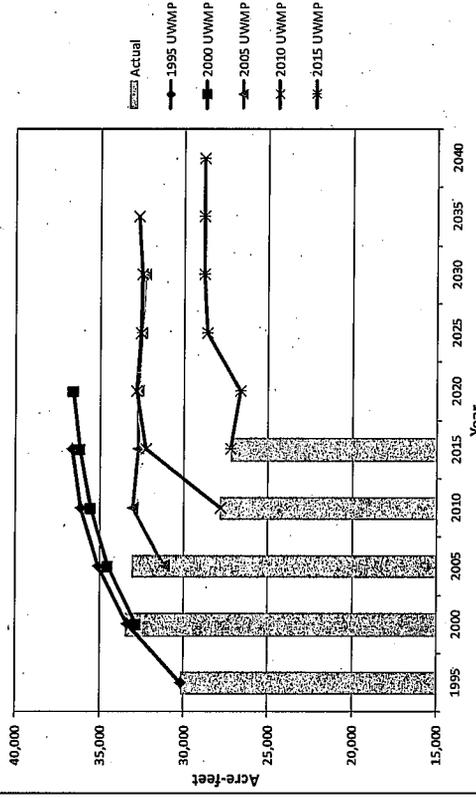


Predicted Compared to Subsequent Actual Population		Change in 2015 Forecasts Compared to Previous UWMPs	
1995 UWMP	101.2%	98.7%	98.3%
2000 UWMP	98.9%	98.7%	98.3%
2005 UWMP	98.7%	98.8%	98.8%
2010 UWMP		100.6%	100.6%
			4.5%
			3.3%
			6.3%
			7.4%
			3.2%
			3.1%

Demand

Actual and Forecasted (AF)		2005	2010	2015	2020	2025	2030	2035	2040
Year	1995	2000	2005	2010	2015	2020	2025	2030	2040
Actual	30,195	33,530	33,136	27,860	27,244				
1995 UWMP	30,195	33,442	35,169	36,176	36,675				
2000 UWMP		32,913	34,538	35,608	36,210	36,595			
2005 UWMP			31,249	33,100	32,800	32,600	32,400		
2010 UWMP				27,860	32,305	32,881	32,658	32,602	32,792
2015 UWMP				27,244	26,699	28,661	28,858	28,850	28,891

Demand & Forecast Trends



Predicted Compared to Subsequent Actual Demand		Change in 2015 Demand Forecasts Compared to Previous UWMPs	
1995 UWMP	101.6%	112.5%	129.8%
2000 UWMP	110.5%	127.8%	132.9%
2005 UWMP		118.8%	120.4%
2010 UWMP		118.8%	118.6%
			-27.0%
			-18.6%
			-12.1%
			-12.2%
			-11.5%
			-12.0%

Actual demand for the year 2000 is from the 2005 UWMP. Actual demand for the year 2005 is from the 2010 UWMP.

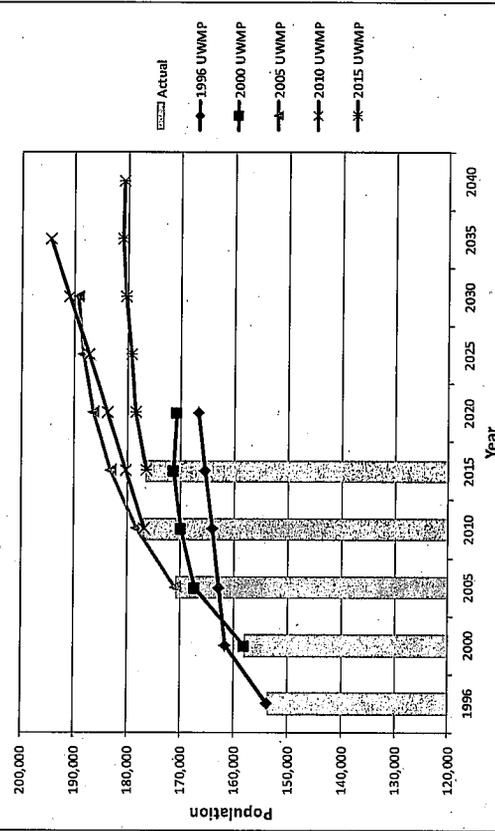
The 2015 UWMP describes the service area as "a predominately residential single and multi-family community" and "multi-family housing units are expected to increase at a faster rate than the single-family housing units. In the older areas of the City, multi-family and mixed use units are increasingly replacing older single-family dwellings." (p 2-2)

Garden Grove

Population

Actual and Forecasted		1996	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	153,800	158,100	171,042	177,020	176,649					
	1996 UWMP	153,800	161,635	162,914	164,193	165,471	166,750				
	2000 UWMP	158,100	167,339	170,107	171,479	170,851					
	2005 UWMP	171,042	178,457	183,249	186,593	188,446	189,445				
	2010 UWMP	177,020	180,526	184,032	187,538	191,044	194,550				
	2015 UWMP	176,649	178,729	179,440	180,428	181,002	180,825				

Population & Forecast Trends

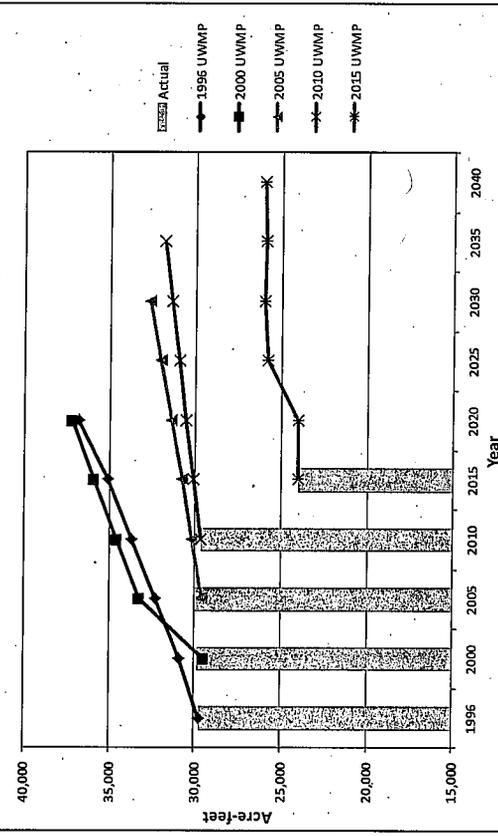


Predicted Compared to Subsequent Actual Population		Change in 2015 Forecasts Compared to Previous UWMPs	
1995 UWMP	102.2%	NA	93.7%
2000 UWMP	97.8%	4.6%	97.1%
2005 UWMP	100.8%	-4.2%	103.7%
2010 UWMP	102.2%	-2.9%	102.2%
		-4.3%	-5.6%
		-4.8%	-7.0%

Demand

Actual and Forecasted (AF)		1996	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	29,748	29,857	30,027	29,698	24,049					
	1996 UWMP	29,748	30,888	32,312	33,737	35,162	36,856				
	2000 UWMP	29,487	29,487	33,312	34,637	35,961	37,286				
	2005 UWMP	29,620	30,210	30,814	31,431	32,060	32,700				
	2010 UWMP	29,698	30,164	30,631	30,986	31,453	31,909				
	2015 UWMP	24,049	24,078	25,847	26,017	26,055					

Demand & Forecast Trends



Predicted Compared to Subsequent Actual Demand		Change in 2015 Demand Forecasts Compared to Previous UWMPs	
1995 UWMP	104.8%	109.1%	146.2%
2000 UWMP	112.5%	116.6%	149.5%
2005 UWMP	101.7%	128.1%	128.1%
2010 UWMP	125.4%	125.4%	125.4%
		-21.4%	-16.6%
		-23.4%	-19.4%
		-35.4%	-18.5%

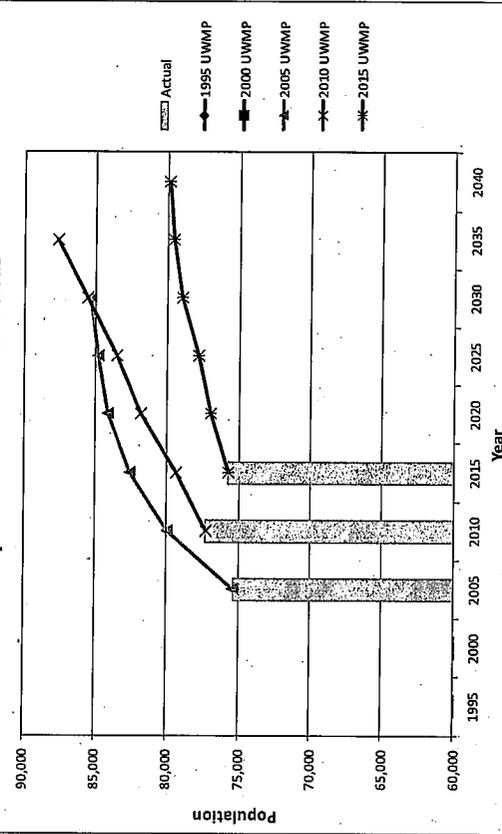
The 2015 UWMP indicates the service area is "a predominately single and multi-family residential community" and states "the City is almost completely built-out" and "housing is becoming denser and new residential units are multi-storied" (p. 2-2)

Yorba Linda

Population

Actual and Forecasted		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	NA	NA	75,445	77,320	75,773					
	1995 UWMP	NA	NA								
	2000 UWMP			75,445	80,007	82,584	84,155	84,860	85,355		
	2005 UWMP				77,320	79,391	81,862	83,533	85,604		
	2010 UWMP					75,773	76,998	77,840	78,961	79,640	79,926
	2015 UWMP										

Population & Forecast Trends



Predicted Compared to Subsequent Actual Population		Change in 2015 Forecasts Compared to Previous UWMPs	
1995 UWMP	NA	NA	NA
2000 UWMP	NA	0.0%	0.0%
2005 UWMP	103.5%	-8.5%	-7.5%
2010 UWMP	104.8%	-5.9%	-6.8%
2015 UWMP			-9.2%

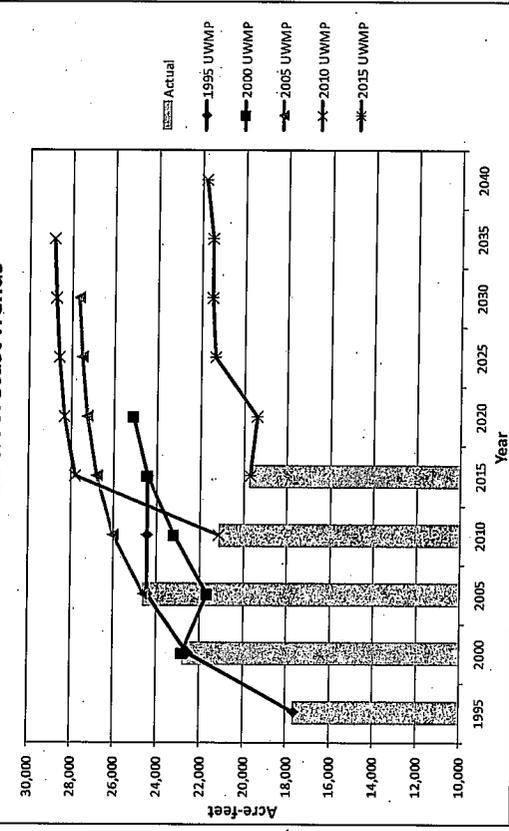
Yorba Linda's 1995 and 2000 UWMPs did not contain population figures.

The 2015 UWMP indicates Yorba Linda is "a predominately single and multi-family residential community" and "the District is almost completely built-out." (p. 2-2)

Demand

Actual and Forecasted (AF)		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	17,673	22,820	24,631	21,196	19,776					
	1995 UWMP	17,673	22,590	24,480	24,480	24,480					
	2000 UWMP		22,820	21,690	23,260	24,500	25,140				
	2005 UWMP			24,631	26,039	27,310	27,537	27,680			
	2010 UWMP				21,196	27,879	28,384	28,605	28,751	28,895	
	2015 UWMP					19,776	19,446	21,410	21,558	21,570	21,852

Demand & Forecast Trends

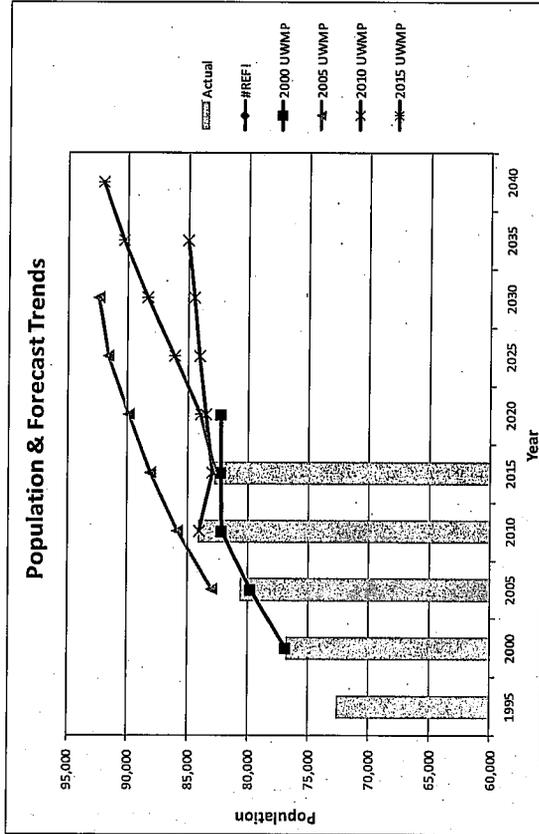


Predicted Compared to Subsequent Actual Demand		Change in 2015 Demand Forecasts Compared to Previous UWMPs	
1995 UWMP	99.0%	115.5%	123.8%
2000 UWMP	88.1%	109.7%	123.9%
2005 UWMP	122.8%	-22.3%	-22.1%
2010 UWMP	141.0%	-31.5%	-25.2%
2015 UWMP			-25.4%

Buena Park

Population

Actual and Forecasted		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	72,610	76,869	80,670	84,141	82,791	82,315	81,697	82,481	85,100	92,110
	2000 UWMP	76,869	79,859	82,213	82,365	82,315	82,315	81,697	82,481	85,100	92,110
	2005 UWMP	76,869	79,859	82,213	82,365	82,315	82,315	81,697	82,481	85,100	92,110
	2010 UWMP	76,869	79,859	82,213	82,365	82,315	82,315	81,697	82,481	85,100	92,110
	2015 UWMP	76,869	79,859	82,213	82,365	82,315	82,315	81,697	82,481	85,100	92,110



Predicted Compared to Subsequent Actual Population		Change in 2015 Forecasts Compared to Previous UWMPs	
2000 UWMP	96.1%	2.1%	2.1%
2005 UWMP	102.1%	-6.6%	-4.4%
2010 UWMP	100.4%	0.5%	4.5%
2015 UWMP	100.4%	0.5%	6.3%

A 1995 UWMP was not available for Buena Park.

The 2015 UWMP describes the Buena Park service area as "a predominately single and multi-family residential community" and stated "housing is becoming denser and new residential units are multi-storied" and "the City is almost completely built-out" (p 2-2)

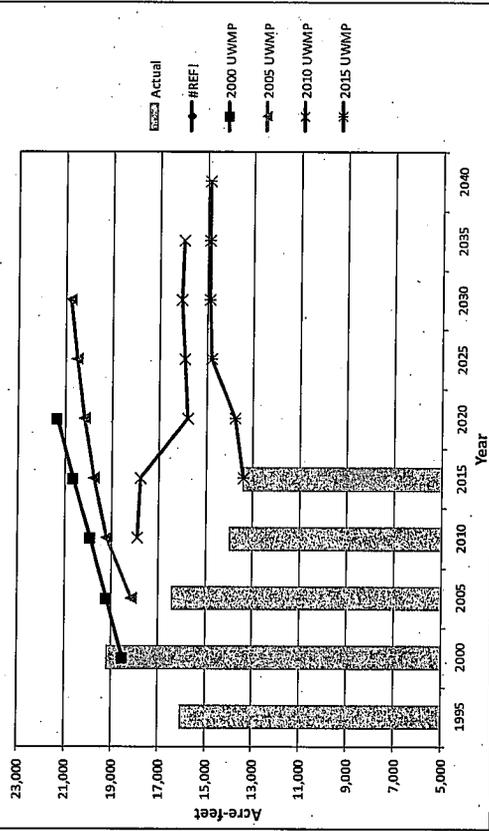
Demand

Actual and Forecasted (AF)

Year	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Actual	16,050	19,212	16,415	14,019	13,430					
2000 UWMP	18,550	19,245	19,940	20,685	21,330					
2005 UWMP	18,165	19,233	19,760	20,200	20,530	20,798				
2010 UWMP	17,958	17,800	15,820	15,970	16,079	15,984				
2015 UWMP	13,430	13,770	14,782	14,883	14,879	14,900				

Buena Park's 2010 UWMP has projections with and without conservation, used figures with conservation

Demand & Forecast Trends

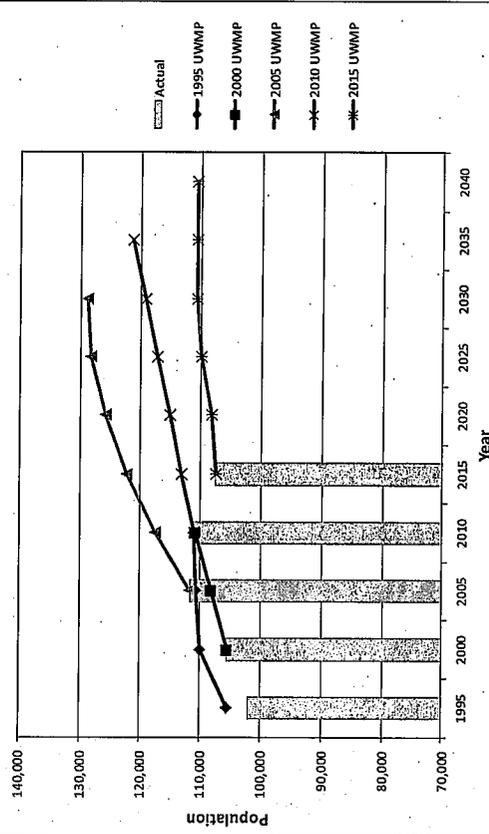


Predicted Compared to Subsequent Actual Demand		Change in 2015 Demand Forecasts Compared to Previous UWMPs	
2000 UWMP	105.9%	-35.4%	-35.4%
2005 UWMP	107.1%	-31.8%	-28.4%
2010 UWMP	132.5%	-13.0%	-7.4%
2015 UWMP	132.5%	-13.0%	-6.9%

Population

Actual and Forecasted		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	102,095	105,608	111,737	111,166	107,588					
	1995 UWMP	105,600	110,100	110,700	111,100						
	2000 UWMP	105,608	108,300	110,994							
	2005 UWMP	111,737	117,492	122,301	125,952	128,483	129,098				
	2010 UWMP	111,166	113,218	115,270	117,322	119,374	121,426				
	2015 UWMP	107,588	108,186	109,971	110,805	110,774	110,675				

Population & Forecast Trends

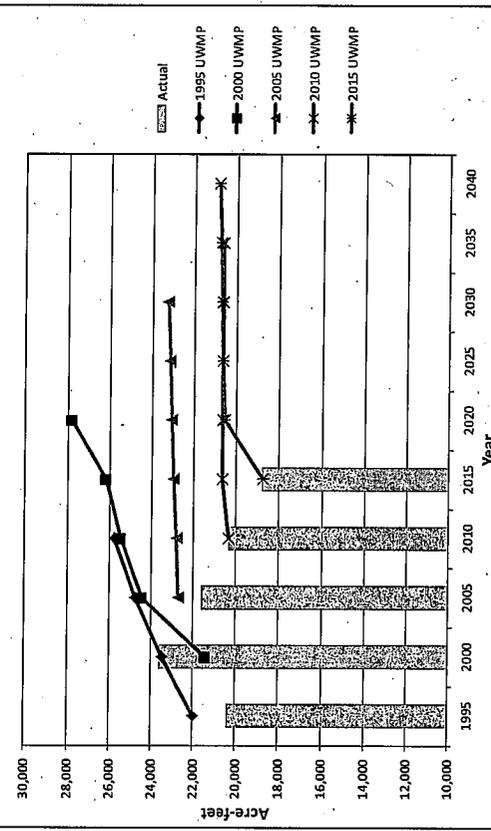


Predicted Compared to Subsequent Actual Population		Change in 2015 Forecasts Compared to Previous UWMPs	
1995 UWMP	104.3%	NA	99.9%
2000 UWMP	96.9%	96.9%	99.8%
2005 UWMP	105.7%	105.7%	113.7%
2010 UWMP	105.2%	105.2%	105.2%
			-14.1%
			-6.1%
			-14.4%
			-7.2%
			-8.8%

Demand

Actual and Forecasted (AF)		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	20,406	23,610	21,620	20,370	18,802					
	1995 UWMP	22,000	23,500	24,800	25,800						
	2000 UWMP	21,478	24,471	25,489	26,213	27,851					
	2005 UWMP	22,724	22,862	22,966	23,081	23,195	23,297				
	2010 UWMP	20,370	20,685	20,685	20,685	20,685	20,685	20,685	20,685	20,685	20,685
	2015 UWMP	18,802	20,610	20,610	20,610	20,610	20,610	20,610	20,610	20,610	20,610

Demand & Forecast Trends



Predicted Compared to Subsequent Actual Demand		Change in 2015 Demand Forecasts Compared to Previous UWMPs	
1995 UWMP	109.4%	109.1%	126.7%
2000 UWMP	107.7%	125.1%	139.4%
2005 UWMP	112.2%	122.1%	122.1%
2010 UWMP	110.0%	110.0%	110.0%
			-26.0%
			-10.7%
			-10.9%
			-11.0%
			-0.4%
			0.0%
			0.3%
			0.6%

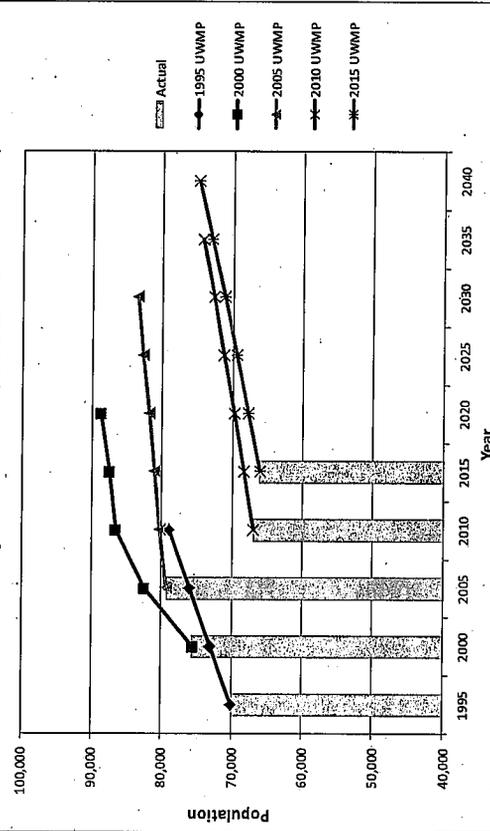
The 2015 UWMP indicate Mesa's service area is a "predominately residential single and multifamily community" (p. 2-2)

Newport Beach

Population

		Actual and Forecasted									
		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	70,098	75,600	79,320	81,052	81,863	82,681	83,508			
	1995 UWMP	70,098	75,600	79,320	81,052	81,863	82,681	83,508			
	2000 UWMP	70,098	75,600	82,409	86,579	88,676					
	2005 UWMP		79,320	80,250	81,052	81,863	82,681	83,508			
	2010 UWMP			67,030	68,478	69,926	71,375	72,823	74,271		
	2015 UWMP			66,219	67,874	69,571	71,311	73,093	74,921		

Population & Forecast Trends

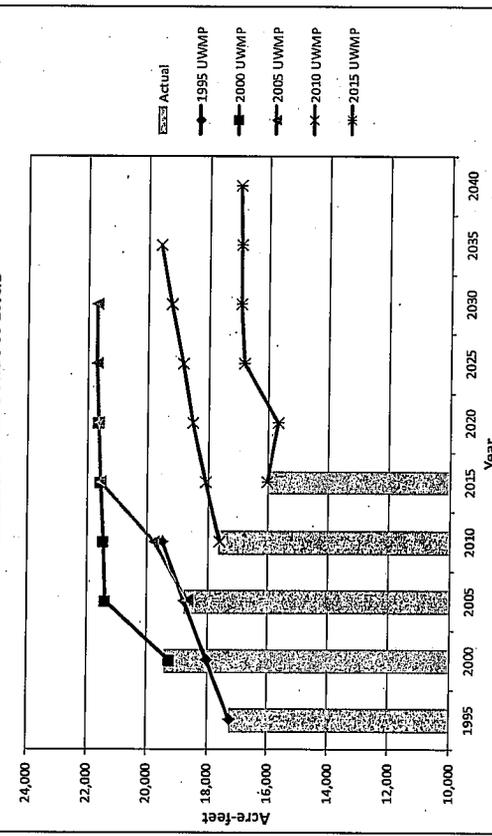


Predicted Compared to Subsequent Actual Population		Change in 2015 Forecasts Compared to Previous UWMPs	
1995 UWMP	96.6%	NA	117.7%
2000 UWMP	103.9%	-23.5%	129.2%
2005 UWMP	119.7%	-17.1%	122.4%
2010 UWMP	103.4%	-2.9%	103.4%
2015 UWMP		-1.6%	

Demand

		Actual and Forecasted (AF)									
		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	17,254	19,402	18,756	17,635	16,033					
	1995 UWMP	17,254	18,004	18,754	19,504						
	2000 UWMP		19,235	21,400	21,475	21,550	21,625				
	2005 UWMP			18,648	19,791	21,555	21,640	21,716			
	2010 UWMP				17,635	18,101	18,504	18,859	19,223	19,582	
	2015 UWMP				16,033	15,685	16,838	16,953	16,944	16,973	

Demand & Forecast Trends



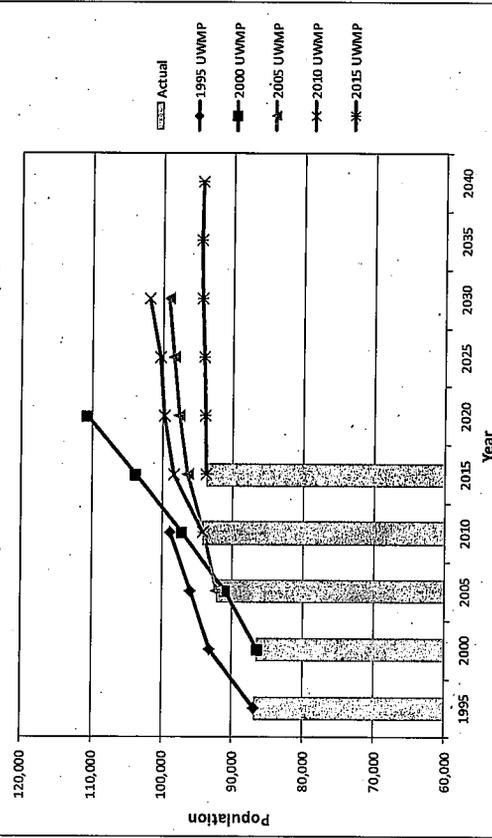
Predicted Compared to Subsequent Actual Demand		Change in 2015 Demand Forecasts Compared to Previous UWMPs	
1995 UWMP	93.6%	100.6%	0.0%
2000 UWMP	114.8%	121.8%	134.4%
2005 UWMP	112.2%	134.4%	-27.5%
2010 UWMP	112.9%	112.9%	-27.5%
2015 UWMP		-15.2%	-10.7%
		-11.8%	-13.5%

The 2015 UWMP states Newport Beach is a "predominately residential single and multi-family community located" and "housing is becoming denser and new residential units are multi-storied. Additional growth within the City will be limited development areas at their ultimate build-out density. There is one large proposed development of the 401-acre Newport Banning Ranch that would bring residential and commercial units into the City's Coastal Zone in a previously undeveloped area. The project has been revised several times since 2010 but has not received approval at this time." (p 2-2)

Population

Actual and Forecasted		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	86,889	86,495	92,270	94,294	93,785					
	1995 UWMP	86,889	93,212	96,062	98,912						
	2000 UWMP	86,495	91,117	97,244	103,782	110,775					
	2005 UWMP		92,270	94,226	96,409	97,717	98,458	99,291			
	2010 UWMP			94,294	98,384	99,793	100,496	102,018			
	2015 UWMP				93,785	94,009	94,118	94,398	94,624	94,531	

Population & Forecast Trends

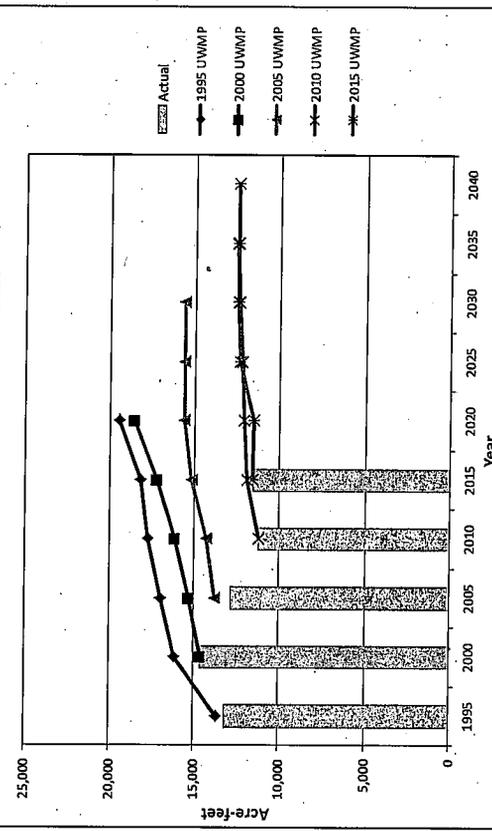


Predicted Compared to Subsequent Actual Population		Change in 2015 Forecasts Compared to Previous UWMPs	
1995 UWMP	107.8%	NA	0.0%
2000 UWMP	98.8%	103.1%	-15.1%
2005 UWMP	99.9%	102.8%	-3.8%
2010 UWMP	104.9%	104.9%	-5.8%
			-4.4%
			-7.5%
			-4.5%

Demand

Actual and Forecasted (AF)		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	13,176	14,668	12,882	11,271	11,622					
	1995 UWMP	13,679	16,200	17,000	17,800	18,250	19,500				
	2000 UWMP		14,668	15,343	16,203	17,280	18,613				
	2005 UWMP			13,810	14,290	15,223	15,666	15,664	15,663		
	2010 UWMP				11,271	11,976	12,126	12,278	12,443	12,589	
	2015 UWMP					11,622	11,577	12,427	12,512	12,509	12,527

Demand & Forecast Trends



Predicted Compared to Subsequent Actual Demand		Change in 2015 Demand Forecasts Compared to Previous UWMPs	
1995 UWMP	110.4%	123.1%	157.0%
2000 UWMP	111.1%	143.8%	148.7%
2005 UWMP	126.8%	126.8%	131.0%
2010 UWMP	103.0%	103.0%	103.0%
			-37.8%
			-26.1%
			-20.7%
			1.2%
			0.6%
			-0.6%

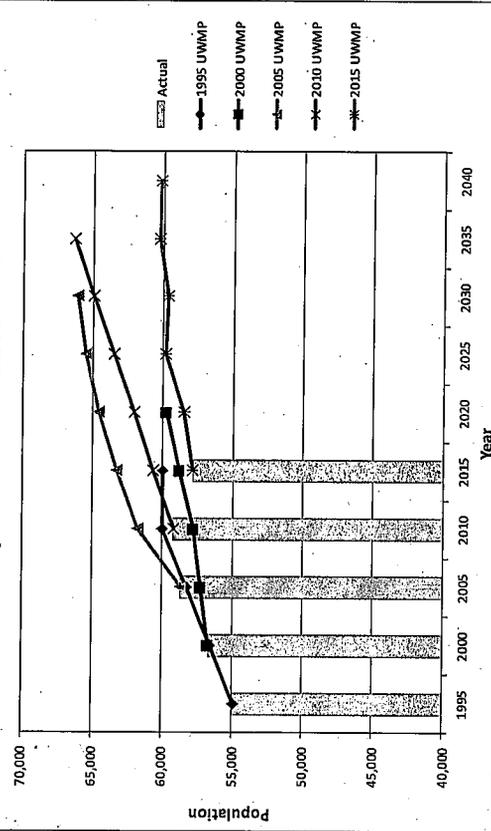
The 2015 UWMP describes the Westminster service area as "a predominately single and multi-family residential community" and states "the City is almost completely built-out" and "housing is becoming denser and new residential units are multi-storied." (p 2-2)"

Fountain Valley

Population

		Actual and Forecasted									
Year		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Actual		54,932	56,753	58,692	59,227	57,908					
1995 UWMP		54,932	56,577	58,272	60,017	60,017					
2000 UWMP			56,753	57,269	57,811	58,836	59,735				
2005 UWMP				58,692	61,758	63,318	64,567	65,490	66,107		
2010 UWMP					59,227	60,658	62,088	63,519	64,949	66,380	
2015 UWMP						57,908	58,569	59,802	59,678	60,272	60,210

Population & Forecast Trends

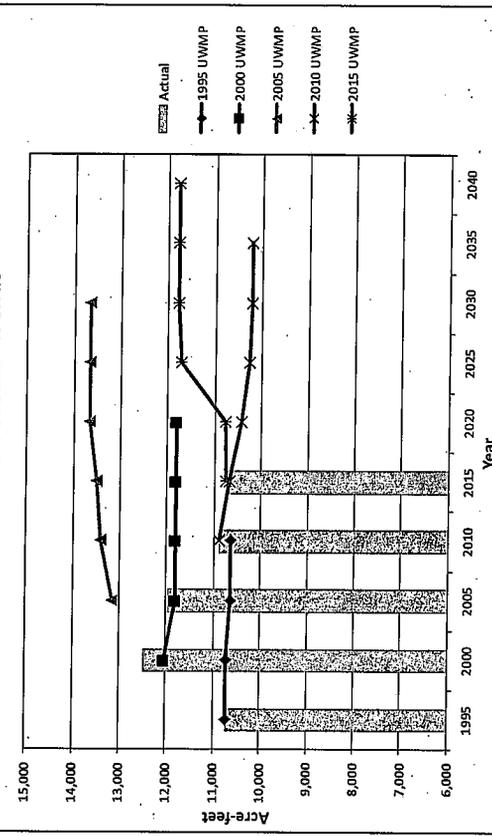


		Predicted Compared to Subsequent Actual Population		Change in 2015 Forecasts Compared to Previous UWMPs	
1995 UWMP	99.7%	NA	101.3%	103.6%	-2.0%
2000 UWMP	97.6%	97.6%	101.6%	101.6%	-9.3%
2005 UWMP	104.3%	104.3%	109.3%	109.3%	-5.7%
2010 UWMP	104.7%	104.7%	104.7%	104.7%	-8.1%
2015 UWMP					-9.2%

Demand

		Actual and Forecasted (AF)									
Year		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Actual		10,730	12,485	11,962	10,900	10,755					
1995 UWMP		10,730	10,750	10,650	10,650						
2000 UWMP			12,048	11,819	11,819	11,819	11,819				
2005 UWMP				13,160	13,410	13,510	13,660	13,660			
2010 UWMP					10,900	10,695	10,440	10,240	10,240	10,240	
2015 UWMP						10,755	10,778	11,741	11,800	11,800	11,800

Demand & Forecast Trends



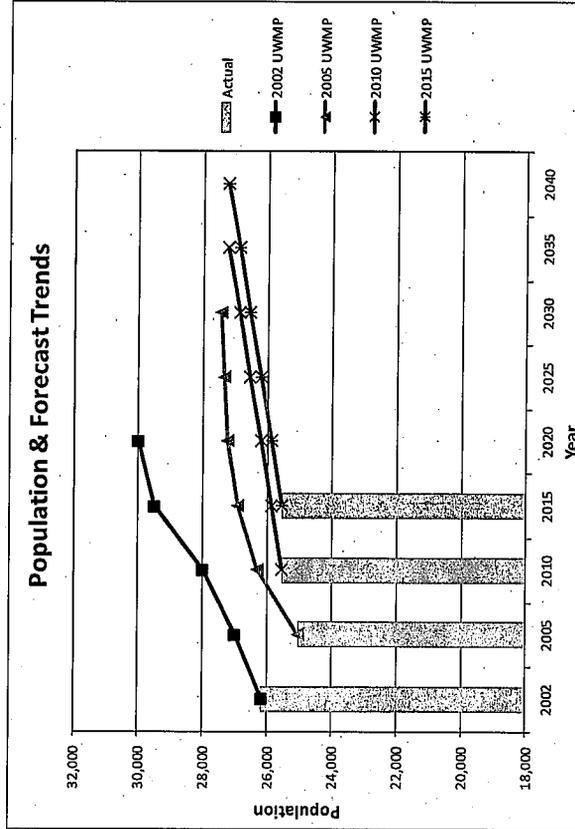
		Predicted Compared to Subsequent Actual Demand		Change in 2015 Demand Forecasts Compared to Previous UWMPs	
1995 UWMP	89.2%	80.9%	97.7%	0.0%	-8.8%
2000 UWMP	88.8%	108.4%	109.9%	109.9%	-21.1%
2005 UWMP	123.0%	123.0%	125.6%	125.6%	3.2%
2010 UWMP	99.4%	99.4%	99.4%	99.4%	14.2%
2015 UWMP					15.3%

The 2015 UWMP describes the service area as "a predominately single and multi-family residential community" and states "the City is almost completely built-out" and "housing is becoming denser and new residential units are multi-storied" (p 2-2)

Seal Beach

Population

Actual and Forecasted		2002	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	26,200	25,058	25,561	25,561	30,000				
	2002 UWMP	26,200	27,000	28,000	29,500	30,000				
	2005 UWMP		25,058	26,335	26,922	27,245	27,350	27,471		
	2010 UWMP			25,561	25,895	26,223	26,570	26,906	27,242	
	2015 UWMP				25,561	25,897	26,223	26,570	26,906	27,242



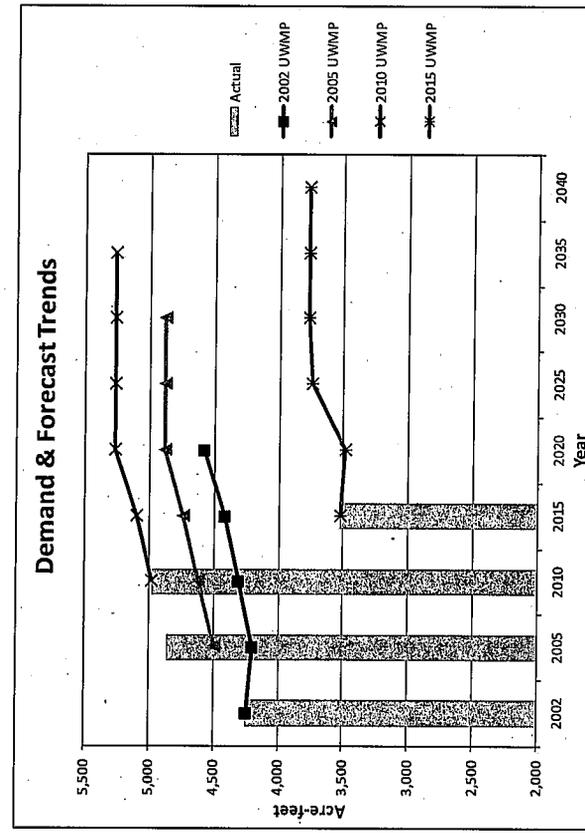
Predicted Compared to		Change in 2015 Forecasts	
Subsequent Actual Population		Compared to Previous UWMPs	
2000 UWMP	107.8%	109.5%	-13.7%
2005 UWMP	103.0%	105.3%	-4.9%
2010 UWMP	101.3%	101.3%	-1.2%
			-1.2%

A 1995 UWMP was not available for Seal Beach. The 2015 UWMP indicate Seal Beach is a "predominately single and multi-family residential community" and states, "The City is almost completely built-out" and "housing is becoming denser and new residential units are multi-storied. A single new development within the City is moving forward on the last available piece of ocean front property. On September 9, 2015 the California Coastal Commission (CCC) approved the Ocean Place development for 28 single family residences and four overnight accommodations." (p 2-2)

Demand

Actual and Forecasted (AF)		2002	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	4,249	4,860	4,979	3,521					
	2002 UWMP	4,249	4,200	4,310	4,420	4,580				
	2005 UWMP		4,500	4,622	4,737	4,880	4,880			
	2010 UWMP			4,979	5,098	5,270	5,270	5,270	5,270	
	2015 UWMP				3,521	3,488	3,744	3,770	3,769	3,774

For 2005 and 2015 UWMPs losses not indicated, unknown if included in figures above

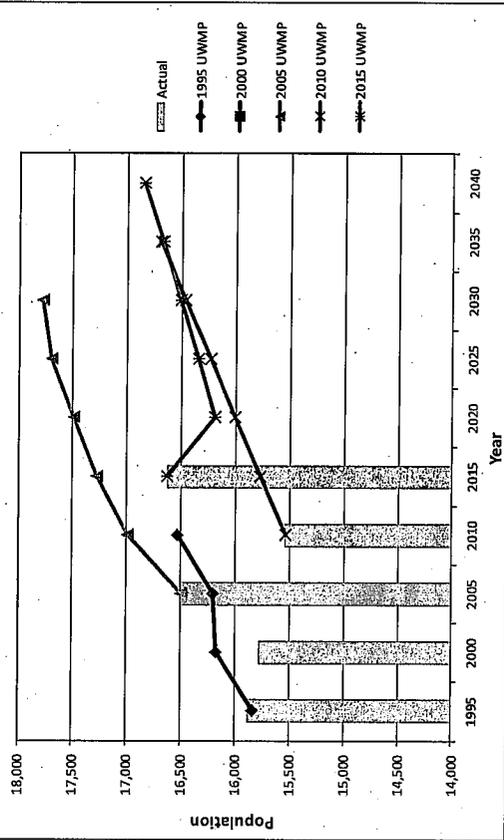


Predicted Compared to		Change in 2015 Demand Forecasts	
Subsequent Actual Demand		Compared to Previous UWMPs	
2000 UWMP	93.3%	86.6%	-23.8%
2005 UWMP	92.8%	92.8%	-28.5%
2010 UWMP	144.8%	144.8%	-33.8%
			-28.5%
			-28.5%

Population

Actual and Forecasted		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	15,885	15,778	16,499	15,544	16,630					
	1995 UWMP	15,840	16,177	16,207	16,535						
	2000 UWMP			16,499	16,998	17,279	17,496	17,701	17,785		
	2005 UWMP			15,544	15,775	16,006	16,237	16,468	16,699		
	2010 UWMP			16,630	16,190	16,352	16,516	16,681	16,848		

Population & Forecast Trends



Predicted Compared to Subsequent Actual Population		Change in 2015 Forecasts Compared to Previous UWMPs	
1995 UWMP	NA	106.4%	
2000 UWMP	NA		-7.5%
2005 UWMP	109.4%	103.9%	-7.1%
2010 UWMP	94.9%	94.9%	0.3%
			-0.1%

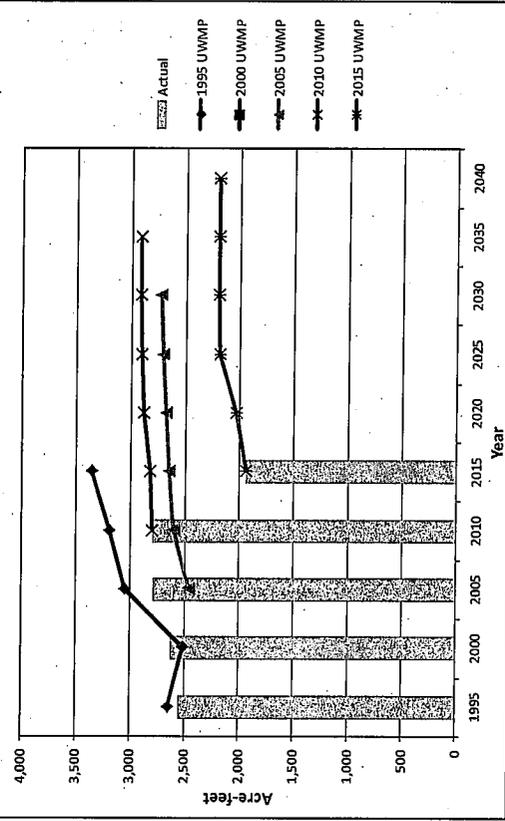
A 2000 UWMP was not available. Actual population and demand figures for 1995 and 2000 are from the 2005 UWMP.

The 2015 UWMP describes the service area as "predominately single and multi-family residential community" and "the City is almost completely built-out." (p 2-2)

Demand

Actual and Forecasted (AF)		1995	2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	2,557	2,627	2,792	2,803	1,940					
	1995 UWMP	2,645	2,518	3,044	3,196	3,356					
	2000 UWMP			2,468	2,607	2,650	2,684	2,715	2,728		
	2005 UWMP			2,803	2,821	2,884	2,903	2,917	2,917		
	2010 UWMP			1,940	2,036	2,201	2,200	2,200	2,204		

Demand & Forecast Trends

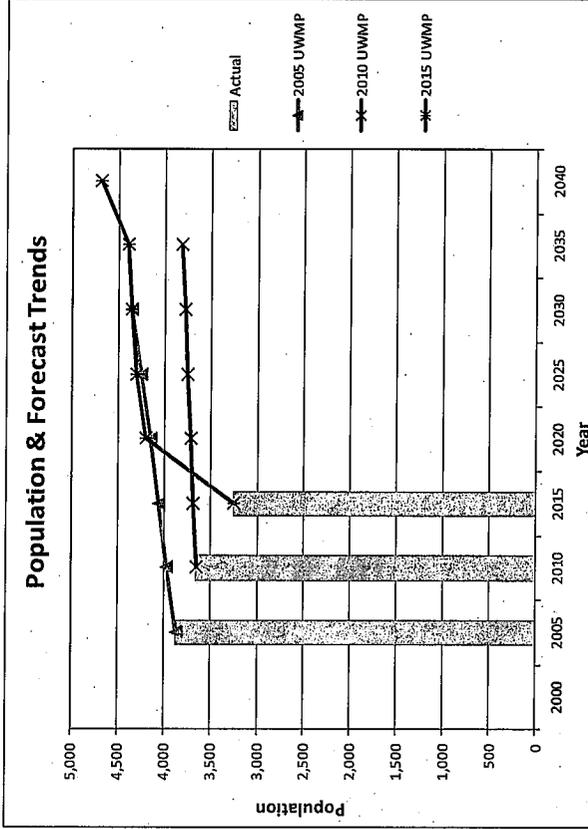


Predicted Compared to Subsequent Actual Demand		Change in 2015 Demand Forecasts Compared to Previous UWMPs	
1995 UWMP	123.3%	114.0%	173.0%
2000 UWMP	NA		
2005 UWMP	99.0%	136.6%	-24.1%
2010 UWMP	145.4%	145.4%	-29.4%
			-24.5%
			-24.6%

East OCWD

Population

Actual and Forecasted		2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	3,872	3,872	3,970	4,060	4,150	4,250	4,350	4,350	4,350
	2005 UWMP		3,872	3,970	4,060	4,150	4,250	4,350	4,350	4,350
	2010 UWMP		3,872	3,970	4,060	4,150	4,250	4,350	4,350	4,350
	2015 UWMP		3,872	3,970	4,060	4,150	4,250	4,350	4,350	4,350



Predicted Compared to		Change in 2015 Forecasts Compared to Previous UWMPs	
Subsequent Actual Population		2005 UWMP	2010 UWMP
2005 UWMP	108.6%	124.7%	1.2%
2010 UWMP	113.2%	14.6%	12.9%
		15.0%	0.0%
		15.3%	15.3%

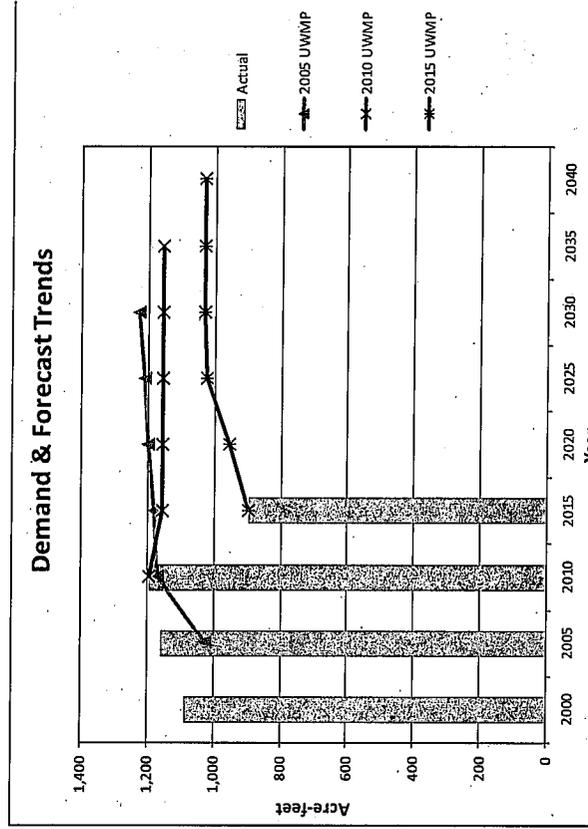
UWMPs for 1995 and 2000 were not available.

The year 2000 actual demand is from the 2005 UWMP.

The 2015 UWMP indicates, "the District's Retail Zone can best be described as a predominately single and multi-family residential" and "the District is almost built-out with few remaining vacant lots community" (p 2-2, 2-3)

Demand

Actual and Forecasted (AF)		2000	2005	2010	2015	2020	2025	2030	2035	2040
Year	Actual	1,087	1,160	1,196	897					
	2005 UWMP		1,026	1,170	1,180	1,200	1,210	1,230	1,230	1,230
	2010 UWMP		1,026	1,170	1,180	1,155	1,155	1,155	1,155	1,155
	2015 UWMP		1,026	1,170	897	955	1,025	1,032	1,032	1,032



Predicted Compared to		Change in 2015 Demand Forecasts Compared to Previous UWMPs	
Subsequent Actual Demand		2005 UWMP	2010 UWMP
2005 UWMP	97.8%	131.5%	-20.4%
2010 UWMP	128.8%	-11.3%	-17.3%
		-10.6%	-10.6%
		-16.1%	-16.1%

Endnotes

- ¹ Orange County Water District. "Long-Term Financial Plan 2014 Update." p 2-2.
- ² *Ibid.* p 2-2.
- ³ *Ibid.* p 2-2.
- ⁴ *Ibid.* p 2-3.
- ⁵ Municipal Water District of Orange County. Orange County Reliability Study "Final Technical Memorandum #1, by CDM Smith." Table 7, p. 14. John Kennedy, OCWD Executive Director of Engineering and Water Resources, confirmed the comparison of demand forecasts is using the same retailer boundaries, including the 70%/30% boundary split for the Irvine Ranch Water District, in a phone communication with Joe Geever, July 26, 2016.
- ⁶ Metropolitan Water District of Southern California. "Potential regional Recycled Water Program." Water Planning & Stewardship Committee, Item 9-1. September 21, 2015. Slide 16.
- ⁷ John Kennedy, OCWD Executive Director of Engineering and Water Resources, in a personal phone communication with Joe Geever confirmed the 65,000 AFY of new indirect potable recycled water expected to become available to OCWD. July 26, 2016.
- ⁸ Metropolitan Water District of Southern California and Sanitation Districts of Los Angeles County. "Regional Recycled Water Supply Program"
- ⁹ Metropolitan Water District of Southern California. Board of Directors, Water Planning and Stewardship Committee, Item 8-3. November 11, 2015. p. 1.
- ¹⁰ MWDOC. Reliability Study "Draft Technical Memorandum #4, by CDM Smith." Table 3. June 27, 2016. p. 9.
- ¹¹ Reliability Study, Technical Memo #1. p. 1.
- ¹² *Ibid.* p. 5.
- ¹³ *Ibid.* p. 7.
- ¹⁴ *Ibid.* p. 7.
- ¹⁵ *Ibid.* p. 9, 10, 11.
- ¹⁶ Fryer, James. "An Assessment of Demand Elasticity during Drought." 2013, revised 2016. See phone survey question responses in Section V, and in particular Question 7 starting on page V-11, and Question 15 starting on page V-27.
- ¹⁷ Reliability Study, Technical Memo #1. p. 6.
- ¹⁸ *Ibid.* p. 7.
- ¹⁹ California State Water Resources Control Board. "suppliercompliance_020216"
http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.shtml#monthly_archive
- ²⁰ Reliability Study, Technical Memo #1. p. 9.
- ²¹ Fryer, James. "An Assessment of Demand Elasticity during Drought." 2013, revised 2016. p. III-14, F-6.
- ²² *Ibid.*
- ²³ *Ibid.* See phone survey question responses in Section V, and in particular Question 7 starting on page V-11, and Question 15 starting on page V-27.
- ²⁴ Reliability Study, Technical Memo #4, p. 17 and 31.
- ²⁵ Reliability Study, Technical Memo #1., p. 7.
- ²⁶ Fryer, James. "Demand Elasticity During a Drought - How Long-Term Conservation Programs Can Offset Demand Hardening During Droughts, and How to Integrate This into Supply Reliability Planning." Conserv99 Proceedings. 1999. p. 2 and 3.
- ²⁷ "An Assessment of Demand Elasticity during Drought" p. A-9.
- ²⁸ "An Assessment of Demand Elasticity during Drought" p. III-13.
- ²⁹ "An Assessment of Demand Elasticity during Drought" See phone survey question responses in Section V, and in particular Question 7 starting on page V-11, and Question 15 starting on page V-27.

²⁹ Reliability Study, Technical Memo #1, Figure 6, p. 7.

³⁰ The Semmelweis Reflex is a metaphor for the reflex-like tendency of rejecting new information or evidence without serious consideration because it contradicts with preconceived beliefs and prevailing norms or paradigms at the time. The metaphor refers to the professional experiences of Dr. Ignaz Semmelweis (1818 – 1865) who developed empirical evidence that childbirth patients handled by doctors that carefully washed their hands in a chlorine solution between patients and after an autopsy experienced a dramatically reduced rate of infectious disease. At the cost of many lives, Dr. Semmelweis' evidence was widely rejected by doctors at the time because germ theory was not understood until several decades later so no exact mechanism could be described, other theories of disease prevailed, and many doctors were offended and scoffed at the idea that a gentleman's hands could communicate disease.

See:

https://en.wikipedia.org/wiki/Semmelweis_reflex

https://en.wikipedia.org/wiki/Ignaz_Semmelweis

³¹ Fishman, Charles. "How California is Winning the Drought." The New York Times, August 14, 2015.

³² "An Assessment of Demand Elasticity during Drought" p. IV-4.

³³ *Ibid.* p. IV-6.

³⁴ *Ibid.* p. VI-8, VI-9.

³⁵ *Ibid.* p. VI-9.

³⁶ *Ibid.* p. VI-5.

³⁷ Reliability Study, Technical Memo #1, p. 6.

³⁸ Municipal Water District of Southern California. "2015 Urban Water Management Plan." p. 2-3.

³⁹ "An Assessment of Demand Elasticity during Drought" p. VI-9.

⁴⁰ Reliability Study, Technical Memo #1, p. 4, 5.

⁴¹ "An Assessment of Demand Elasticity during Drought." See Section VIII, "Trends in the Marginal Price of Water," starting on page VIII-1.

⁴² Reliability Study, Technical Memo #4, p. 30.

⁴³ Crouch, Dennis. Law Professor at the University of Missouri School of Law. Co-director of the Center for Intellectual Property and Entrepreneurship. "Tracing the

Quote: Everything that can be Invented has been Invented." January 6, 2011 Dennis Crouch

<http://patentlyo.com/patent/2011/01/tracing-the-quote-everything-that-can-be-invented-has-been-invented.html>

⁴⁴ "The Friend" Volume 76, 1902, as quoted in Wikipedia, https://en.wikipedia.org/wiki/Charles_Holland_Duell

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Lunetta, Kim@SLC

From: Lucchesi, Jennifer@SLC
Sent: Tuesday, October 17, 2017 9:02 PM
To: Lunetta, Kim@SLC
Subject: Fwd: A comment from David Buccilli

Sent from my iPhone

Begin forwarded message:

From: "dabucci@umich.edu" <dabucci@umich.edu>
Date: October 17, 2017 at 9:00:28 PM PDT
To: <gavin.newsom@ltg.ca.gov>, <CEQA.comments@slc.ca.gov>, <betty.yee@sco.ca.gov>, <michael.cohen@dof.ca.gov>, <Jennifer.Lucchesi@slc.ca.gov>, <governor@governor.ca.gov>, <Assemblymember.Rendon@assembly.ca.gov>, <Senator.DeLeon@senate.ca.gov>, <Rick.Dykema@mail.house.gov>, <Senator.Moorlach@senate.ca.gov>, <Senator.Nguyen@senate.ca.gov>, <Senator.Bates@senate.ca.gov>, <Senator.Newman@senate.ca.gov>, <Senator.Mendoza@senate.ca.gov>, <Assemblymember.Allen@assembly.ca.gov>, <Assemblymember.Harper@assembly.ca.gov>, <Assemblymember.Chen@assembly.ca.gov>, <Assemblymember.Quirk-Silva@assembly.ca.gov>, <Assemblymember.Choi@assembly.ca.gov>, <Assemblymember.Daly@assembly.ca.gov>, <Assemblymember.Brough@assembly.ca.gov>
Subject: A comment from David Buccilli
Reply-To: <dabucci@umich.edu>

The Honorable Gavin Newsom
Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento, CA 95825-8202

RE: Huntington Beach Seawater Desalination Project Supplemental EIR - SUPPORT

Dear Chairman Newsom:

I'm writing to ask you and your colleagues on the State Lands Commission (SLC) to certify the Supplemental Environmental Impact Report (SEIR) and approve the lease amendment for the Huntington Beach Desalination Project.

There have been significant technological improvements made to the project since the SLC originally approved the lease for this project in 2010. One millimeter wedgewire screens have been added and a far slower flow rate ensure that marine life impacts on the intake side are minimal with no fish impacted and only an extremely small number of microscopic fish eggs or larvae that are smaller than the width of a credit card that may be affected.

Similarly, the SEIR concludes that technological improvements on the brine diffuser ensures no significant impact on marine life. Within a few dozen feet of the outfall pipe, seawater returns to ambient salinity levels.

No endangered or threatened species of any kind will be impacted at all by this project.

The public benefit of this project is clear. The Orange County Water District (OCWD) has expressed an interest in adding desalinated water to its water portfolio so that it can protect the groundwater basin from the "boom and bust" nature of our increasingly dry climate. The project will also reduce Orange County's dependence on imported water, which is more critical than ever.

Technological advances now allow Poseidon to produce the same 50 million gallons of desalinated drinking water every day while using 30 percent less seawater than was needed when the project came before the SLC seven years ago.

I am grateful to the SLC staff for all of its hard work in preparing this document and looking forward to the approval of this important water reliability project at the SLC hearing this fall.

Sincerely,

David Buccilli
Irvine, CA

Lunetta, Kim@SLC

From: George Courser (gcourser@hotmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 8:11 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

George Courser
3214 San Helena
Oceanside, CA 92056
gcourser@hotmail.com
(858) 231-0156

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Alan Stringer (bigalstringer@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 8:13 AM
To: CSLC Commission Meetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Alan Stringer
16072 Gold Circle
Huntington Beach, CA 92647
bigalstringer@gmail.com
(760) 670-5635

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: George Watland (george.watland@sierraclub.org) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 9:03 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

George Watland
5534 Encino Ave #108
Encino, CA 91316
george.watland@sierraclub.org
(818) 912-0076

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: D.G. Berlie (dgberlie@groupeberlie.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 9:07 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

D.G. Berlie
21302 Bulkhead Circle
Huntington Beach, CA 92646
dgberlie@groupeberlie.com
(949) 300-5595

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Mary Roberts (maryrobertsstm@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 10:58 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Mary Roberts
17102 Los Modelos
Fountain Valley, CA 92708
maryrobertsstm@gmail.com
(714) 606-8325

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Suzanne Franssen (lindosa@yahoo.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 11:04 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Suzanne Franssen
30545 Via Lindosa
Laguna Niguel, CA 92677
lindosa@yahoo.com
(949) 279-0644

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Tina Shull (kshull@uci.edu) Sent You a Personal Message <automail@knowwho.com>
Sent: Tuesday, October 17, 2017 11:21 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Tina Shull
2589 Santa Ana Ave.
Costa Mesa, CA 92627
kshull@uci.edu
(310) 210-8451

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Libby Frolichman <libbyvince@socal.rr.com>
Sent: Tuesday, October 17, 2017 11:31 AM
To: CSLC CommissionMeetings
Subject: Poseidon Desalination Lease Amendment

I live at Newland and Garfield. I strongly oppose the Poseidon project. It will increase the price of my water, damage the ocean and create a years long nuisance during construction.

Please disregard the corporate influence and think of the environment as you make your decision.

Sincerely,
Libby Frolichman

Lunetta, Kim@SLC

From: Jeffrey Thrash (thrash7@cox.net) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 11:44 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Jeffrey Thrash
16 Tanglewood
Aliso Viejo, CA 92656
thrash7@cox.net
(949) 302-0427

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Doug Schneider (doug.schneider@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 12:16 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

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- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Doug Schneider
6422 Gloria Drive
Huntington Beach, CA 92647
doug.schneider@gmail.com
(310) 717-5883

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Walt Stringfellow (walt620@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 12:26 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

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- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Walt Stringfellow
248 Avenida Vista Del Oceano
San Clemente , CA 92672
walt620@gmail.com
(949) 584-7090

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Claire Broome (cvbroome@gmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 12:35 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Claire Broome
26 Northgate Ave
Berkeley, CA 94708
cvbroome@gmail.com
(510) 248-9999

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Marsh, Christian <cmarsh@DowneyBrand.com>
Sent: Tuesday, October 17, 2017 3:20 PM
To: CSLC CommissionMeetings
Subject: Out of Office: October 19, 2017 State Lands Commission Meeting - Regular item 97 (Revised)

Thank you for your message. I am traveling for business through Friday, October 20. During this time I will have only periodic access to email and voicemail. If you need to reach someone immediately, please contact my assistant Emilie Medalle-Alcantara or my colleagues Arielle Harris or Kathryn Oehlschlager at (415) 848-4800.

Best regards,

Christian Marsh

Lunetta, Kim@SLC

From: Bob Drury <turvydrop@charter.net>
Sent: Tuesday, October 17, 2017 5:32 PM
To: CSLC CommissionMeetings
Subject: Poseidon Desalination Lease Amendment

Dear Commissioners,

I urge you to reject this project. Quality of life in the Southern California coastal region is already degrading because infrastructures are overburdened and open land disappearing. The profit goals of investors and the interests of union workers hungry for jobs (that won't last) must be balanced against having communities that will continue to be pleasant to live in. Making more water available - expensive water at that - is like putting Miracle Grow on the problem.

There is still plenty of room for entrepreneurial activity - but it should be in the area of smart projects that emphasize quality over quantity and sustainability over mindless expansion. Future generations will thank you for your courage, foresight and vision.

Sincerely,

Bob Drury
4436 E. 5th St.
Long Beach, CA. 90814

Lunetta, Kim@SLC

From: Ann C. Tweedy <anntweedy@me.com>
Sent: Tuesday, October 17, 2017 5:44 PM
To: CSLC CommissionMeetings
Subject: "Poseidon Desalination Lease Amendment"

Dear Commissioners:

Please vote NO on the draft environmental impact report. The draft EIR is not adequate; therefore, it needs to be rejected.

Living in a neighborhood near the proposed construction site, we currently are experiencing negative effects from the power plant being rebuilt and especially the work being done at OC Sanitation Plant #2. In addition, there is the development on Magnolia near Banning as well as the Ascon remediation project. All these add to ongoing traffic issues and noise and air pollution.

This is NOT THE TIME for POSEIDON.

Thank you for your time and consideration of these concerns.

Yours truly,
Ann Tweedy

Lunetta, Kim@SLC

From: Eileen Smith (ejsmith@socal.rr.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 6:10 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

Eileen Smith
15871 Oriole Ln
Huntington Beach, CA 92649
ejsmith@socal.rr.com
(714) 397-1808

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Melvin Herlin (melherlin@aol.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Tuesday, October 17, 2017 7:36 PM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

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Sincerely,

Melvin Herlin
247 Chandon
Laguna Niguel, CA 92677
melherlin@aol.com
(949) 249-6667

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: Marilyn Perona (wellnessplus2000@yahoo.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Wednesday, October 18, 2017 12:01 AM
To: CSLC.CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

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Sincerely,

Marilyn Perona
5372 Punta Alta
Laguna Woods, CA 92637
wellnessplus2000@yahoo.com
(949) 855-4695

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: kathy shapiro (cycleourist@hotmail.com) Sent You a Personal Message
<automail@knowwho.com>
Sent: Wednesday, October 18, 2017 12:24 AM
To: CSLC CommissionMeetings
Subject: I Oppose the Poseidon Huntington Beach Desalination Project!

Dear California State Lands Commission,

I am writing in opposition to the Poseidon Huntington Beach seawater desalination project. Your decision on certifying the Environmental Impact Report for the project is important as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future.

I oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Unnecessarily kill marine life and pollute the ocean;
- (2) Set back California's efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and Colorado River.
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.

A 2016 Water Reliability Study by the Municipal Water District of Orange County shows that the project is unnecessary and that there are other more cost effective and environmentally friendly options for securing future water supplies. The use of seawater desalination should only be a last resort option of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies.

Sincerely,

kathy shapiro
21196 serra vis
lake forest, CA 92630
cycleourist@hotmail.com
(714) 345-7654

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.

Lunetta, Kim@SLC

From: KIRK NASON <kirk_nason@hotmail.com>
Sent: Wednesday, October 18, 2017 8:18 AM
To: CSLC CommissionMeetings
Subject: Stop the Poseidon farce

I am writing as a concerned citizen around the environmental damage that a Desal Plant in HB would cause!

We don't need and citizens don't want the Poseidon Desal project in Huntington Beach. The cost to citizens and environment are to high. We have a state of the art water reclamation plant with water at the fraction of the cost.

The impact to our beloved beach and wildlife is to high and the current ocean inlet infrastructure can't support the project.

Please block this project !

Regards,

Kirk J. Nason & Mary L. Nason

714 321-7298

Excuse brevity & typos

California State Lands Commission #SayNoToPoseidon



**“The state hasn’t rushed to build coastal desalters for several reasons:
They gobble energy, harm the marine environment and produce some of the
most expensive drinking water available.”**

–Reporter Bettina Boxall, Los Angeles Times

Vote on desalination plant off Huntington Beach is delayed

Protesters against the proposed Poseidon desalination plant held a public hearing Wednesday. (Scott Smeltzer / HB Independent Journalist)

By **Bettina Boxall**

NOVEMBER 14, 2013, 9:48 AM

California coastal communities are protesting a desalination plant that would suck in 150 million gallons of seawater a day.



"I don't believe this project is right," said Commissioner [Name]. "It will kill a lot of sea life."



Others on the panel noted that the company had provided staff with only a few of the requested studies

Desal is a bad deal

OC has better options to meet our water needs.

#SayNotoPoseidon



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“Members of my community cannot afford the increases in their water bill that would be passed on to ratepayers from costly projects like the Poseidon desalination plant.”

—Oscar Rodriguez and Victor Valladares of Oakview ComUNIDAD

VOICE *of* OC

INVESTIGATIVE NEWS AGENCY

“While Poseidon is trying to play off drought fears, the latest Urban Water Management Plan shows that Orange County has all the water it needs for now and the next 25 years.”

—Organizer Adriana Maestes

1. OPPOSITION TO POSEIDON HUNTINGTON BEACH AS PROPOSED

Pages 6-9

Restatement of Principles for Seawater Desalination in California and Opposition to Poseidon Huntington Beach

Pages 10-15

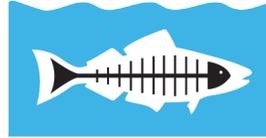
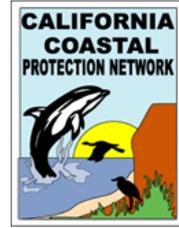
Substantive Appendix

Pages 16-17

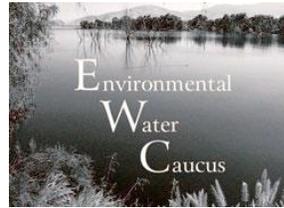
Environmental Justice Concerns Regarding Poseidon Huntington Beach Desalination Plant



RESIDENTS FOR RESPONSIBLE DESALINATION



Heal the Bay



Inland Empire WATERKEEPER.



July 26, 2017

The Honorable Edmund G. Brown
Governor, State of California
c/o State Capitol, Suite 1173
Sacramento, CA 95814

Felicia Marcus, Chair
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Dayna Bochco, Chair
California Coastal Commission
45 Fremont Street #2000
San Francisco, CA 94105

Gavin Newsom, Chair
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

William Ruh, Chair
California Regional Water Quality Control
Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, California 92501-334

RE: Brookfield/Poseidon Huntington Beach Desalination Project – OPPOSE

Dear Governor Brown and Honorable Chairpersons:

We write in opposition to the Brookfield/Poseidon Huntington Beach seawater desalination facility as currently proposed (Project). Our organizations and our hundreds of thousands of members are dedicated to advancing freshwater sustainability, consumer protection, environmental justice, and coastal and marine conservation in California. Upcoming decisions regarding the Project are of precedential importance as California considers how to make its water supply more safe, resilient, equitable, and cost-effective into our collective long-term future. We oppose the Project as proposed because it is not consistent with these goals, and instead would:

- (1) Impose significant and unnecessary costs on Orange County water districts and ratepayers;
- (2) Set back California’s efforts to advance climate-smart water policy;
- (3) Fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta; and
- (4) Fail to comply with California law and regulations that govern seawater desalination facilities.¹

We should be clear that we remain open to the use of seawater desalination as a “last resort” element of a well-planned local or regional water supply portfolio that prioritizes investment in multi-benefit, cost-effective, climate-smart supplies. As recently explained

¹ We provide information in support of these arguments in the attached appendix.

by Stanford’s Water in the West Program, sustainable seawater desalination projects are those that “are smaller; that provide supply to meet a specific, clear local demand; that are located away from sensitive and valuable marine areas; and that are powered by renewable energy sources.”² For example, the proposed Monterey Peninsula Water Supply Project,³ which includes a modestly-sized desalination facility as part of a portfolio of investments, follows many of the recommendations our organizations have put forth, such as prioritizing lower-impact water resources, seeking to “right-size” the facility, and using subsurface intakes in order to comply with the State Water Board’s Ocean Plan Desalination Amendment.

By contrast, large-scale seawater desalination facilities in California will have significant economic, energy, and opportunity costs that rarely justify their benefits. It would be far too easy for an expensive and inefficient large-scale facility to become a stranded asset – or, worse, an inescapable long-term liability – for local water districts and communities at the expense of more affordable, resilient, and environmentally sound alternatives.

We also reiterate our support for a rigorous regulatory process that ensures seawater desalination facilities are sited, scaled, and designed to meet demonstrated needs and to incorporate “best available” technologies that avoid or minimize adverse impacts on California’s productive coastal and marine ecosystems. At minimum, proposed facilities must comply with the State Water Resources Control Board’s 2015 regulations governing seawater desalination facilities and brine disposal (“Desalination Policy”). They should also use innovative designs and technologies, such as the use of renewable energy to power 100% of their operations; variable production schedules that allow facilities to take advantage of less expensive electricity rates at certain times of day; and sub-surface intakes to minimize marine life impacts, in contrast to open ocean intakes, the use of which is contrary to long-standing California policy and barred from use in other contexts.

In this case, after reviewing permit application materials and other documents associated with the proposed Project, as well as claims made by the Project’s agents and lobbyists, we believe the Project is not compatible with the common-sense approaches, policies, and regulations that California has established to guide its water investments and, more specifically, to guide the introduction of seawater desalination into the state’s water supply portfolio.

For these reasons, we urge you to deny the Project as proposed pursuant to your respective authorities. California should be showing the United States and the world how it will champion innovative water solutions, rather than enabling the Project’s proponent to lock Californians into long-term dependence on a project that is more costly than the alternatives and based on the use of outdated, harmful, and unsustainable technology.

Sincerely,

² Leon Szeptycki, et al., *Marine and Coastal Impacts of Ocean Desalination in California* (Water in the West, Center for Ocean Solutions, Monterey Bay Aquarium, The Nature Conservancy, May 2016), available at <http://stanford.io/2axdXE7>.

³ See Monterey Peninsula Water Supply Project, <https://www.watersupplyproject.org/>.

Letter to Governor Brown, et al.

Re: Brookfield/Poseidon Huntington Beach Desalination Project – OPPOSE

Sean Bothwell
Policy Director
California Coastkeeper Alliance

Garry Brown
Executive Director
Orange County Coastkeeper
Inland Empire Waterkeeper

Susan Jordan
Executive Director
California Coastal Protection Network

Merle Moshiri
President
Residents for Responsible Desalination

Damon Nagami
Director, Southern California Ecosystems Project
Natural Resources Defense Council

Steven Johnson
Water Resources Policy Analyst
Heal the Bay

Kyle Jones
Policy Advocate
Sierra Club

Staley Prom
Legal Associate
Surfrider Foundation

Marce Gutiérrez-Graudiņš
Founder / Director
AZUL

Olga Reynolds
Founder
Orange County Earth Stewards

Marco Gonzalez
Executive Director
Coastal Environmental Rights Foundation

Elizabeth Dougherty PhD
Director
Wholly H2O

Conner Everts, Executive Director & Facilitator
Executive Director & Facilitator
Environmental Water Caucus
Desal Response Group
Southern California Watershed Alliance

Oscar Rodriguez
Victor Valladares
Directors
Oak View ComUNIDAD

Dan Silver
Executive Director
Endangered Habitats League

Dan Jacobson
State Director
Environment California

Adam Scow
California Director
Food & Water Watch

Leslie Tamminen
Ocean Program Director
Seventh Generation Advisors

Yenni Diaz
Project Director
Orange County Environmental Justice

Kira Redmond
Executive Director
Santa Barbara Channelkeeper

Claire Robinson
Managing Director
Amigos de los Rios - Emerald Necklace

Colin Bailey
Executive Director & Managing Attorney
The Environmental Justice Coalition for Water

APPENDIX

The Brookfield/Poseidon Huntington Beach Project (“Project”) would impose significant and unnecessary costs on Orange County water districts and ratepayers.

A recent analysis from the Pacific Institute found that when the full costs of construction and lifetime operation are calculated, seawater desalination is the most expensive “alternative” water supply option available, as compared to indirect potable reuse, direct reuse, brackish groundwater desalination, and stormwater capture, while conservation and efficiency can generate significant *savings*.¹

In the case of the Brookfield/Poseidon Huntington Beach project, construction costs of the facility alone have been estimated at \$1 billion; additional anticipated costs include up to \$100 million to build and manage a new pipeline system to convey the water to customers; maintenance and repair costs resulting from siting the project in an area that is vulnerable to sea level rise, storm surge, tsunamis, and earthquakes; and the cost of re-treating any desalinated water that must be stored in groundwater aquifers. The Project will also be vulnerable to fluctuating energy costs in light of its dependence on high levels of electricity consumption.

Moreover, the proposed water purchase agreement between Brookfield/Poseidon and its potential customer, Orange County Water District (OCWD), guarantees that ***water produced by the Huntington Beach desalination project will not be cost competitive with imported water for at least the first 40 years of the project’s operation.*** Under the 2015 term sheet approved by OCWD, the “base price” of the Project’s water “will be tied to the treated full service rate cost of imported water provided by the Metropolitan Water District of Southern California (MWD).” Additional guaranteed costs include “readiness to serve” and capacity charges required by MWD, *plus* a premium to cover the facility’s operating costs and an “agreed upon rate of return” for Brookfield/Poseidon.² The premium will raise the cost of water generated by the Project as high as 20 percent above the combined cost of imported water and the MWD charges. The Project’s water can only achieve cost parity with imported water after the Project has been operating for 40 years, and even then, only if Brookfield / Poseidon is capturing its guaranteed rate of return.

Orange County does not need Brookfield/Poseidon’s water, and to the extent it does need additional local water supplies, it has better alternatives. Orange County’s existing water supply is anticipated to be sufficient to cover its anticipated needs through 2040, even in a multiple-year dry period. The Metropolitan Water District of Orange County (MWDOC), which, in coordination with OCWD, sells water at retail to local water districts throughout Orange County, recently published an urban water management plan showing that the water agencies in

¹ Heather Cooley and Rapichan Phurisamban, The Cost of Alternative Water Supply and Efficiency Options in California (Pacific Institute, 2016), *available at* <http://bit.ly/2dMKDcT>.

² Orange County Water Dist., Ocean Desalination Exploration Term Sheet Explained <http://bit.ly/2r5NQaK>.

MWDOC’s service area have successfully used conservation to limit growth in water use, keeping retail water use relatively flat even as the County’s population has increased.³

Future growth in water demand in MWDOC’s service area will also be limited. By 2040, under normal conditions MWDOC expects total retail water demand in its service area to increase by only 3.27 percent, even as population grows by 10 percent.⁴ In both normal years and single dry years, MWDOC’s available water supply “will meet projected demand due to diversified supply and conservation measures.”⁵ Even in a multiple-year drought, “MWDOC is capable of meeting all retail agency demands with significant reserves held by [MWD] from 2020 through 2040 with a demand increase of 6 percent.”⁶ In a recent presentation to the MWDOC Board of Directors, MWDOC staff calculated only a 30 percent likelihood that available supplies may not meet demand in 2040; even then, they explained, a 10,700 acre-foot (AF) project would be sufficient to fill the anticipated gap. Staff also concluded that the Brookfield/Poseidon project “would supply more water than needed in most every year.”⁷

As it works to reduce its reliance on imported water over time, Orange County has cheaper and more sustainable alternatives to the Project. MWDOC’s Urban Water Management Plan describes many such options, including water recycling, stormwater capture, enhanced storage, and brackish groundwater desalination, as well as smaller seawater desalination projects. Collectively these projects could provide far more “new” water than the anticipated 56,000 AFY that the Brookfield/Poseidon project would produce. Specific examples⁸ include:

Metropolitan Indirect Potable Reuse Project (Carson City)	65,000 AFY
Santa Ana River Conservation & Conjunctive Use Program	60,000 AFY
Expansion of water recycling throughout Orange County	53,520 AFY
Groundwater Replenishment System expansion	30,000 AFY
Doheny Desalination Project (using subsurface intakes)	16,800 AFY
West Orange County Enhanced Pumping Project	10,000 AFY
Total potential production of alternatives shown here	235,320 AFY

³ Municipal Water District of Orange County, 2015 Urban Water Management Plan 2-1 (April 2016 Draft), *available at* <http://bit.ly/2pb6C2M>).

⁴ Id. at 2-2 and 2-5.

⁵ Id. at 3-47 and 3-48.

⁶ Id. at 3-49.

⁷ Municipal Water District of Orange County, OC Water Reliability Study Overview (February 6, 2017), *available at* <http://bit.ly/2qSR1py>.

⁸ Id. at 6-3 and 7-2.

The Brookfield/Poseidon Project would set back California’s efforts to advance climate-smart water policy

State policies and climate change strategies such as the Governor’s Executive Order B-20-15 on Climate Change, the 2017 AB 32 Scoping Plan Update, *Safeguarding California*, and *Making Water Conservation a California Way of Life* aim to make California’s water supply and conveyance system less energy intensive, reduce its direct and indirect GHG emissions, and make it more resilient to climate impacts. These policies require “full life-cycle cost accounting,”⁹ and prioritize greater use of water conservation, efficiency, recycling, stormwater capture, and sustainable groundwater management.¹⁰ Similarly, the State Water Resources Control Board’s recent climate change resolution acknowledges the need to modify permits and other regulatory requirements to reduce the vulnerability of water infrastructure to flooding, storm surge, and sea level rise.¹¹

By contrast, seawater desalination is the most energy-intensive water supply option available and, in the absence of an electricity supply that is based on renewable energy sources, will generate significant direct and indirect GHG emissions.¹² The Brookfield/Poseidon Project is no exception. It will create significant new, unplanned energy demand in a region that is already electrically constrained.¹³ It will be fueled primarily by fossil fuels, generating more than 10,000 metric tons of GHGs in the course of its construction and nearly 70,000 metric tons of GHGs *each year* over anticipated lifetime.¹⁴ The Project is also vulnerable to flooding and inundation from sea level rise and storms within its anticipated lifetime.¹⁵

The best way to reduce GHG emissions is to avoid them in the first place, and the best way to avoid vulnerability to sea level rise is to develop new sources that are not in the ocean’s way. As noted above, Orange County has identified a range of less energy- and GHG-intensive options to

⁹ Executive Order B-30-15, Section 6 (April 29, 2015), *available at* <http://bit.ly/1KmlVsj>, (“State agencies shall take climate change into account in their planning and investment decisions, and employ full life-cycle cost accounting to evaluate and compare infrastructure investments and alternatives.”)

¹⁰ California Air Resources Board, 2017 Climate Change Scoping Plan Update (Jan. 20, 2017), *available at* <http://bit.ly/2lQuFzb>; California Natural Resources Agency, *Safeguarding California Plan: 2017 Update (Draft, May 2017)*, *available at* <http://bit.ly/1MgQd16>; California Department of Water Resources, et al., *Making Water Conservation a California Way of Life: Implementing Executive Order B-37-16 (April 2017)*, *available at* <http://bit.ly/2oYfGZl>.

¹¹ State Water Resources Control Board, Resolution No. 2017-0012, *Comprehensive Response to Climate Change (March 7, 2017)*, *available at* <http://bit.ly/2r9nWqj>.

¹² H. Cooley and M. Heberger, *Key Issues for Seawater Desalination in California: Energy and Greenhouse Gas Emissions (Pacific Institute, May 2013)*, *available at* <http://bit.ly/2r9lUGF>.

¹³ See Natural Resources Defense Council, *Proceed with Caution II: California’s Droughts and Desalination in Context (March 2016)*, *available at* <http://on.nrdc.org/2qofMHX>.

¹⁴ Poseidon Resources, *Huntington Beach Desalination Plant, Energy Minimization and Greenhouse Gas Reduction Plan (Nov. 6, 2017)*, *available at* <http://bit.ly/2r91NZg>.

¹⁵ California Coastal Commission, *Poseidon Water Staff Report, Appeal No. A-5-HNB-10-225*, pg. 75 (October 25, 2013); *available at* <http://bit.ly/2rQZoiK>. The Poseidon site and facility would be subject to flooding and tsunami runup, both of which would be exacerbated by expected higher sea levels during the life of the project.

secure new water. Orange County officials and California leaders should be encouraging those climate-smart alternatives to this Project.

The Brookfield/Poseidon Project would fail to alleviate reliance upon, or impacts to, freshwater ecosystems, including the Bay-Delta

Many of us have worked for decades to advance the long-term health and stewardship of the Bay-Delta as a critically important ecosystem and water supply. Many have also worked to improve local supplies in Southern California, as we know is necessary to make Southern California more self-reliant. However, seawater desalination is not a viable solution to this problem. As explained in a recent report from Stanford’s Water in the West program:

Ocean desalination will not, in the foreseeable future, significantly reduce stress on freshwater resources—particularly freshwater ecosystems. Even the highest total projected production of potable water from ocean desalination in California is so low that it will not meaningfully reduce stress on freshwater systems, such as, for example, exports from the Bay Delta system.... In addition, it is not clear the extent to which planned desalination facilities will provide the regions with supplemental supply and therefore work to reduce or replace existing demands on groundwater and surface water sources.¹⁶

Brookfield/Poseidon has not been able to identify any agreement or mechanism by which construction of its project would guarantee that water remains in the Bay-Delta or other surface water sources. Indeed, legal and practical barriers preclude any possibility that construction of this Project, or indeed any desalination facility in Southern California, would significantly reduce withdrawals from the Bay-Delta. The existing water supply contract between MWD and the State Water Project, which underlies exports to Orange County via MWD and MWDOC, prevents new local supplies in Southern California from limiting MWD’s ability to import or use its full State Water Project entitlement.¹⁷

The Brookfield/Poseidon project fails to comply with California law and regulations governing seawater desalination facilities

Since 1976, California law and policy have strongly discouraged the use of “open ocean” water intakes for industrial facilities because they entrain and kill organisms that are integral parts of California’s productive marine and coastal ecosystems.¹⁸ Under state law and the U.S. Clean Water Act, such intakes are no longer permissible for coastal power plants, which must use alternative cooling technologies to minimize their impacts or else (in the case of existing

¹⁶ Leon Szeptycki, et al., *Marine and Coastal Impacts of Ocean Desalination in California* (Water in the West, Center for Ocean Solutions, Monterey Bay Aquarium, The Nature Conservancy, May 2016), available at <http://stanford.io/2axdXE7>.

¹⁷ San Diego County Water Authority, SEAWATER DESALINATION PROGRAM AGREEMENT AMONG THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, THE SAN DIEGO COUNTY WATER AUTHORITY, et al., SDP Agreement No. 70025, Section 13: Metropolitan’s Imported Water Entitlements (Nov. 24, 2009).

¹⁸ California Water Code § 31342.5(b); California Public Resources Code §§ 30230-31.

facilities) achieve comparable harm reduction through other means.¹⁹ This clear emphasis on protecting California’s ecology and natural heritage is continued under the State Water Resources Control Board’s 2015 regulations governing seawater desalination facilities and brine disposal (“Desalination Policy”),²⁰ which are intended to minimize the “significant intake and mortality” of marine life, and the associated “loss of biological productivity,” that is caused by the potential use of open ocean intakes at seawater desalination facilities.

The Desalination Policy establishes subsurface water intakes as the preferred technology for avoiding such harms. It requires the use of site selection, facility design (including but not limited to facility size), and control technologies to minimize environmental harms and, where such measures are demonstrably infeasible, requires mitigation to compensate fully for all unavoidable harms.²¹

The Brookfield/Poseidon project would fail to comply with the Desalination Policy, and fail to be consistent with California’s long-standing priorities, if assessed for compliance today. The Project’s current flaws include:

- Failure to identify a need for desalinated water that is sufficient to justify Brookfield/Poseidon’s proposed choice of facility site, design (including size), and control technologies. (See discussion of needs and alternatives, above.)
- Failure to complete an environmental impact report (EIR) of the Project and related activities and actions, including the likely uses of Project water and the potential impacts of those uses on the environment; alternative means and routes of transmitting Project water to anticipated customers; potential impacts to marine protected areas (MPAs); and any anticipated updates or changes to the Project’s site, design, and control technologies that would be required to secure a tidelands lease from the State Lands Commission and bring the project fully into compliance with all applicable state laws and policies.
- Continued use of the Huntington Beach Generating Station’s antiquated open-ocean intakes past the end of 2019, thereby perpetuating harms that will no longer be caused by the generating station itself – and indeed would no longer be lawful for the station itself to cause under California’s Once-Through Cooling (OTC) Policy.²²

¹⁹ See State Water Resources Control Board, Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling, as amended April 7, 2015 (“OTC Policy”), available at <http://bit.ly/2qkJr6D>; *id.*, OTC Policy, Final Substitute Environmental Document (May 4, 2010), available at <http://bit.ly/2qoCeAq>.

²⁰ State Water Resources Control Board, Resolution No. 2015-0033, 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 (“Desalination Policy”), May 6, 2015, available at <http://bit.ly/2pOC6cm>.

²¹ California Water Code § 13142.5(b); Desalination Policy, Part III.M.2.e (“Mitigation for the purposes of this section is the replacement of all forms of marine life or habitat that is lost due to the construction and operation of a desalination facility after minimizing intake and mortality of all forms of marine life through best available site, design, and technology.”)

²² OTC Policy § 3(E) (Huntington Beach Generation Station compliance deadline of December 31, 2020).

- Use of 1 mm screens to attempt to reduce marine life mortality, despite Water Code requirements that new or expanded industrial facilities must “minimize” marine life mortality, as well as conclusions by the State Water Board and its Expert Review Panel on Desalination Plant Entrainment Impacts and Mitigation that ***a 1 mm screen would reduce marine life mortality by, at most, one percent.*** Indeed the State Water Board found that “fine meshed screens ... still allow all small phytoplankton and zooplankton, and the majority of eggs, and fish and invertebrate larvae to pass through” the screens and be entrained.²³ (By contrast, alternatives to full “Track 1” compliance with the OTC Policy must reduce mortality by 90 percent as compared to full compliance.²⁴)
- Failure to demonstrate that alternative facility sites, including sites that would support the use of subsurface intakes, would not be feasible.
- Failure to demonstrate that alternative facility designs, including a combination of smaller facility sizes and alternative intake designs, including subsurface intakes, would not be feasible. The State Water Board has determined that “a design capacity in excess of the need for desalinated water ... shall not be used by itself to declare subsurface intakes as not feasible.”²⁵
- Failure to demonstrate, using a full life-cycle cost analysis, that the Project as proposed – as compared to the potential use of alternative sites, sizes, and designs for which subsurface intakes would be feasible – would be the only economically viable option for meeting the demonstrated need for the facility’s water.²⁶
- Failure to demonstrate that the Project will not adversely impact nearby state marine protected areas (MPAs) or the ecological connectivity between those MPAs.²⁷

Because of these serious outstanding shortcomings, it is imperative that California’s public trust and regulatory agencies undertake stringent analysis of the Brookfield/Poseidon project. If the Project cannot be brought into compliance, it must not be authorized to proceed.

²³ State Water Resources Control Board, Final Staff Report Including Substitute Environmental Documentation for Amendment to California Ocean Plan Addressing Desalination Facility Intakes, Brine Discharges, and Incorporation of other Non-Substantive Changes 51, 56, 98 (2015) (“Desalination Policy SED”), available at <http://bit.ly/2pN3qZ9>.

²⁴ OTC Policy § 2 (A)2).

²⁵ Desalination Policy § M(2)(d)(1)(a).

²⁶ Desalination Policy § M(2)(d)(1)(a)(i); Executive Order B-30-15, Section 6.

²⁷ See Public Resources Code §§ 36710 (stating that it is unlawful to “injure, damage, take, or possess” any living marine resource within a state marine reserve, and unlawful to “injure, damage, take, or possess” any living marine resource in a state marine conservation area for commercial or recreational purposes); Fish & Game Code § 2862 (requiring the Department of Fish and Wildlife to evaluate “proposed projects with potential adverse impacts to marine life and habitat in MPAs” and to “recommend measures to avoid or fully mitigate any impacts that are inconsistent with the goals and guidelines of [the Marine Life Protection Act] or the objectives of the MPA.”).

The Honorable Edmund G. Brown
Governor, State of California
c/o State Capitol, Suite 1173
Sacramento, CA 95814

Felicia Marcus, Chair
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Dayna Bochco, Chair
California Coastal Commission
45 Fremont Street #2000
San Francisco, CA 94105

Gavin Newsom, Chair
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

William Ruh, Chair
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, California 92501-334

July 24th, 2017

RE: OPPOSITION - Poseidon / Huntington Beach Desalination Project

Dear Governor Brown and Honorable Chairpersons:

We are writing in strong opposition to the billion-dollar desalination plant proposed for Huntington Beach. Poseidon, the company behind this proposal, wants to profit by privatizing a public resource. They have tried to prey on drought fears to build support among the communities least well served by current infrastructure, but we know that Orange County has better options for meeting its long-term water needs. Desalination is a bad deal for ratepayers, and its high cost and outsized energy use will hit low income communities and communities of color hardest.

Access to clean, safe, reliable and affordable water is a basic human right, and one affirmed by California state law. We appreciate that state and local officials take this mandate seriously. We applaud the progress that has been made to date in water conservation, efficiency, and recycling. All the facts indicate that we simply don't need desalination. [Orange County's most recent water plan](#), published April 2016, projects a healthy surplus through 2030. From May 2015 to May 2016, Orange County saved three times more water than the Poseidon desalination plant would produce. And, [according to the experts at Pacific Institute](#), additional water conservation and efficiency improvements could reduce water use by more than a third. Knowing all this, Poseidon wants to lock Orange County residents into a 50-year take or pay contract with no escape hatch.

Orange County's state-of-the-art water recycling facility produces 100 million gallons of fresh, clean water per day, twice the capacity of Poseidon's proposed plant. [It cost just \\$142 million](#) to expand its capacity by 30 million gallons per day in 2015, compared with the billion-dollar price tag of Poseidon's plant. Orange County still discharges about 100 million gallons of water into the ocean every day, so we are far from maxing out our potential for water reuse.

Many of our constituents are already suffering from poor air quality and climate impacts like heat islands, so we are particularly concerned about the high energy cost of desalination. It is by far the [most energy intensive](#) option, using about three times as much energy as recycling. All of that energy has to come from somewhere, and powering this huge plant will undermine much of the climate progress California has made, fueling more drought in the long term. Furthermore, the proposed location is vulnerable [to floods from rising seas](#), as well as earthquakes and tsunamis.

We are calling on you to deny the permit for this costly boondoggle. Orange County Water District should focus on water efficiency, recycling and stormwater projects that can meet future water needs without compromising the health or economic well-being of our people.

Sincerely,

Victor Valladares
Co-Founder
Oakview ComUNIDAD
Huntington Beach, CA

Oscar Rodriguez
Co-Founder
Oakview ComUNIDAD
Huntington Beach, CA

José Trinidad Castañeda III
Parks and Recreation Commissioner
Fullerton, CA

Olga Zapata-Reynolds
Founder
Orange County Earth Stewards

Marce Gutiérrez-Graudiņš
Founder / Director
Azul

Irma R. Muñoz
President & Founder
Mujeres de la Tierra

Colin Bailey
Executive Director and Managing Attorney
The Environmental Justice Coalition for Water

Hector Huevo
President
Alliance of River Communities

“The price tag is the biggest problem. The Carlsbad plant cost \$1 billion to build, with about \$50 million in yearly operating costs. When treating wastewater or catching more storm runoff can keep supplies at acceptable levels, there’s no need to pay so much for desalination.”

—Thomas Elias

“Poseidon’s desalination plant is the most expensive, most energy-intensive, most environmentally harmful option on the market. Orange County has several other water supply technologies available that produce more water per ratepayer-dollar while using less energy and creating more jobs.”

—Garry Brown, Orange County Coastkeeper



ORANGE COUNTY REGISTER

“The Latino community is sensitive to cost, and a project that will raise water costs in the immediate term is not something that a community who is impacted by price hikes needs. We are quite good at conserving and know how to stretch resources. If we aren’t even maximizing our efforts with water capture and preserving the ground water that we do have, why should we rush to support the expensive Poseidon project?”

—Adriana Maestes

“I do feel that Poseidon is getting desperate here... They don’t have a demonstrated need and they know it. It’s starting to look like a very expensive boondoggle.”

—Susan Jordan, California Coastal Protection Network.

2. CALIFORNIA'S NEW DESALINATION POLICY

Pages 20-21

California Coastkeeper Alliance
Seawater Desalination Policy Brief



Humboldt BAYKEEPER
 Klamath RIVERKEEPER
 Russian RIVERKEEPER
 San Francisco BAYKEEPER
 Monterey COASTKEEPER
 San Luis Obispo COASTKEEPER
 Santa Barbara CHANNELKEEPER
 Ventura COASTKEEPER
 Los Angeles WATERKEEPER
 Orange County COASTKEEPER
 Inland Empire WATERKEEPER
 San Diego COASTKEEPER

BRIEFER

CALIFORNIA OCEAN PLAN AMENDMENT ON DESALINATION

Coverage & Definitions

- **Effective Date.** The Desalination Ocean Plan Amendment (OPA) was adopted by the State Water Board on May 6th, 2015. The OPA will become effective once the Office of Administrative Law approves the final version, which is expected in the fall of 2015.
- **Exemptions.** The Intake Section of the OPA does not apply to federally operated facilities. The State Water Board may exempt a project from the OPA if it is operating as a critical short term water supply due to a state of emergency.
- **Existing Facilities.** Facilities that have been issued an NPDES permit and have obtained all building permits and other governmental approvals necessary to commence construction, and have commenced construction of the facility beyond site grading prior to OPA adoption. “Existing facilities” are not required to comply with the OPA Intake Section requirements, but are required to meet the Discharge and Salinity requirements.
- **Expanded Facilities.** Projects that either (1) increase the amount of seawater intake; or (2) change the design or operation of the facility. Any facility co-located with an OTC facility is an expanded facility required to comply with the OPA after the OTC reduces its water intake. Any new or expanded facility has to comply with the full OPA.
- **13142.5(b) Analysis.** A Regional Water Board shall first analyze individually the best available site, design, technology, and mitigation measures for minimizing intake and mortality of all forms of marine life. The Board will then consider all factors collectively to determine the best combination to minimize marine life mortality.

Best Available Technology

- **Subsurface Feasibility.** Subsurface intakes are required unless a Regional Water Board determines their use is infeasible after a comparative analysis of:
 - (1) Geotechnical data, hydrology, benthic topography, oceanographic conditions;
 - (2) The presence of sensitive habitats or species;
 - (3) Energy use for the entire facility;
 - (4) Engineering constraints; and
 - (5) Project life cycle costs.
- **Project Life Cycle Costs** shall be evaluated by considering the total cost of planning, design, land acquisition, construction, operations, maintenance, and maintenance of the lifetime of the facility.
- **Economic Infeasibility.** Subsurface intakes are not deemed “economically infeasible” if they are merely more expensive than open ocean intakes. The project proponent must demonstrate that subsurface intakes are economically infeasible because additional costs or lost profitability would render the facility not economically viable.
- **Open-Ocean Intakes.** If subsurface intakes are infeasible, projects will be required to install a 1mm slot screen on open ocean intakes. The velocity of an open-ocean intake cannot exceed .5 feet per second. Project proponents may use an alternative intake method, only after demonstrating an equivalent reduction in marine life mortality as compared to a 1mm screen.

Best Available Site

- **Alternatives Sites** - The Regional Water Board is required to evaluate a reasonable range of nearby sites that would likely support subsurface intakes.
- **Sensitive Habitats.** The Best Available Site must avoid impacts to sensitive habitats and sensitive species.

- **Marine Protected Areas.** A facility’s intake and discharge structures shall not be in an MPA or SWQPA, but subsurface slant wells are allowed. Intake and discharge structures should be sited the maximum distance from MPAs and SWQPAs.

Best Available Design

- **Best Available Design** includes intake capacity. This means a Regional Water Board must consider a smaller size facility than the one proposed by the project proponent if that smaller size would minimize marine life mortality.
- **Consideration of Need.** Regional Boards must consider whether the identified need for desalinated water is consistent with applicable county general plans, integrated regional water management plans, or urban water management plans. A design capacity in excess of the need for desalinated water cannot not be used by itself to declare subsurface intakes infeasible.
- **Subsurface Infeasibility.** If the Regional Board determines that subsurface intakes are not feasible for a certain design capacity, it shall determine whether subsurface intakes are feasible for a range of alternative design capacities.

Best Available Mitigation

- **Best Available Mitigation.** After completing a 12 month entrainment study, a project proponent may either mitigate for marine life mortality by either: (1) completing a mitigation project, or (2) paying a mitigation fee through a fee-based mitigation program. Currently, the second option is not available for project proponents as the state does not have a fee-based mitigation program for impacts to ocean resources.
- **Area Production Foregone (APF)** is the methodology used to determine lost ecological productivity due to entrainment by a desalination facility. The State Water Board requires APF to be calculated using a 95th Percentile Confidence Level to ensure that all forms of marine life are accounted for and to ensure proper replacement value is identified. The owner or operator must also mitigate for discharge- and construction-related mortality.
- **Mitigation Project.** Mitigation projects shall be accomplished through the expansion, restoration, or creation of: kelp beds, estuaries, coastal wetlands, natural reefs, MPAs, or other projects approved by the regional water boards that will fully mitigate for intake and mortality associated with the facility. “In kind” mitigation is preferred, although “out of kind” mitigation is permissible for impacts to open water or soft bottom species. When appropriate, the Regional Water Boards may increase the required size of any mitigation project using a ratio that accounts for factors such as the difficulty of restoring or establishing the desired level of productivity.
- **Mitigation Fee.** If the Regional Board determines that an agency has established an appropriate fee-based mitigation program, it may authorize payment of an in-lieu fee, provided the fee “will result in the creation and ongoing implementation” of a qualifying project. The fee amount must be based on the actual cost of a project. Mitigation projects that increase or enhance the viability of marine life in MPAs “are preferred, if feasible.”

Brine Discharge

- **Preferred Brine Technology.** The preferred method for disposing of brine is to comingle it with treated wastewater. The project proponent must demonstrate that comingling will meet the receiving water limitation for salinity.
- **Diffusers** are the next best method for discharging brine when treated wastewater is not available. Other technologies can be substituted for diffusers only if the project proponent can demonstrate a comparable minimization of marine life mortality as comingling wastewater (or diffusers if wastewater is unavailable).
- **Receiving Water Limitation for Salinity.** Dischargers shall not exceed a daily maximum 2.0 parts per thousand above natural background salinity no further than 100 meters from the discharge point (referred to as a ZID). The Carlsbad Desalination Project in San Diego has a larger 200 meter zone of initial dilution.
- **Water Recycling Conflict.** Comingling brine with treated wastewater is no longer the preferred technology if that water is needed for water recycling.
- **Flow Augmentation** is illegal for all facilities using an open-ocean intake except for the Carlsbad facility.

For more information, contact Sean Bothwell, sbothwell@cacoastkeeper.org.

“The trend in water costs over the last couple of decades indicates that the [affordability] problem is bound to get worse. That’s partially because of bad choices. ‘One big-picture solution is not to invest in overly expensive water sources such as desalination, which far outstrips the cost of water recovered via conservation and recycling,’ the Pacific Institute’s Feinstein says. ‘Having to pay for a huge desalination plant that isn’t necessary will really burden low-income residents.’”

—Reporter Michael Hiltzik

“It’s going to pollute our water, kill our marine life and cost a fortune, and we don’t need it.”

—Ray Hiemstra, Orange County Coastkeeper

“You can surmise a business is running into trouble when they start lining up political firepower. Consider Poseidon Water, which has been trying for nearly 20 years to win approval for a \$1-billion desalination plant on the Huntington Beach coastline.”

—Reporter Michael Hiltzik

Los Angeles Times

“The public must become better informed about what is going on with this project. It will affect us all, especially in the pocketbook. We should not allow ourselves to be flim-flammed by special interests that do not represent the best interests of the public. Southern California residents were fooled by Poseidon’s Carlsbad desalination facility. I hope we won’t be fooled again.”

—Tim Geddes

“People here have risen to the challenge of our recent drought...Our sanitary district captures fresh water each day and returns that water to the aquifers. This is done at a fraction of the cost and pollution of desalinating ocean water.

During the recent rains, we captured more than 4,000 gallons of water in our rain barrels at our home. Think of what could be done if we were to spend that billion dollars on a system that would collect the water that nature gives us and return that water to our aquifers.”

—John F. Scott

3. CEQA ISSUES

Comments to State Lands Commission RE: Poseidon SEIR

Pages 23-73:

California Coastkeeper Alliance, NRDC, Surfrider, Heal the Bay, California Coastal Protection Network, Orange County Coastkeeper, Residents for Responsible Desalination and Sierra Club Los Angeles Chapter

Pages 74-81:

Stanford University – Mills Environmental Law Clinic

Pages 82-93:

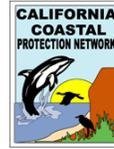
Surfrider Foundation

Pages 94-128:

Irvine Ranch Water District

July 27, 2017

Alexandra Borack, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825



Sent via electronic mail to: CEQA.comments@slc.ca.gov

RE: Poseidon Supplemental EIR Comments



Dear Ms. Borack,

On behalf of the undersigned organizations, we appreciate the opportunity to provide comments on the California State Lands Commission (SLC) Poseidon Supplemental EIR (SEIR). We urge the SLC to take full responsibility as the California Environmental Quality Act (CEQA) lead agency for the legally required Subsequent EIR for the revised Poseidon Project (Project). A partial, segmented SEIR cannot withstand judicial scrutiny.

The Draft SEIR is fundamentally flawed and must be re-written and re-circulated as a Subsequent EIR.

The analysis in the Draft SEIR rests on the incorrect premise that the SLC can “continue their role as a responsible agency” and simply define a new “Lease Modification Project” narrowly limited to the changes since the 2010 SEIR that are relevant to the discretionary authority of the SLC. This underlying premise is based on a fundamental misunderstanding of CEQA and the facts as they exist today.

The City of Huntington Beach (City) was the original lead agency for the Project and prepared a Final SEIR in September 2010, which the SLC relied upon in issuing its lease for the project in October 2010. Had the SLC determined in October 2010 that the City’s Final SEIR did not adequately address impacts related to the proposed lease, the SLC could, at that time, have prepared a narrow supplemental CEQA document to address only those limited additional impacts. Once the SLC exercised its discretionary authority to grant the lease based on the City’s certified Final SEIR, the SLC’s role as a mere responsible agency was concluded. Any agency that now proposes to make a new discretionary decision (including a SLC lease amendment) for the revised Project must assume lead agency status for the entire project and prepare an appropriately updated CEQA document. The SLC’s attempt to avoid review of the full Project based on its prior status as a responsible agency is plainly unlawful and inconsistent with CEQA.

The issue before the SLC today is whether substantial changes to “the project” described in the City’s 2010 SEIR require a Subsequent EIR.¹ As the comments below illustrate, substantial evidence demonstrates that changes to the project and its circumstances implicate new significant environmental impacts and require major updates and revisions to analyses contained in the 2010 Final SEIR.² Accordingly, the SLC must substantially revise and recirculate the current Draft SEIR, including a thorough review of alternatives that would meet the basic objectives of the entire proposed seawater desalination facility, with consideration of a “superior alternative” that would minimize the significant impacts of the entire project and a “No Project” alternative that would mean the entire project would not be built.

A substitute lead agency must evaluate all impacts from the Project as a whole in any supplemental or

¹ See *Bowman v. City of Petaluma*, 185 Cal. App. 3d 1065 (1986).

² 14 C.C.R. § 15126.

subsequent EIR. That is, the task of additional environmental review cannot be segmented between different agencies—the new lead agency, like the prior one, must prepare and circulate a single updated EIR that can then be relied upon by other responsible agencies taking subsequent discretionary actions. Under the current circumstances, there is no legal authority that would allow the SLC to slice off a piece of the Project for additional CEQA review while ignoring other substantial changes to the Project or deferring consideration of those changes to another agency.

As currently proposed, the draft SEIR is unlawful because the State Lands Commission cannot:

- (A) Adopt a Supplemental EIR – only a Subsequent EIR will be legally sufficient in this case;
- (B) Continue to limit its role as a Responsible Agency when it must, by law, assume the role of Lead Agency;
- (C) Consider the Lease Modification a separate “Project” when it is an integral part of a larger project to build and operate a seawater desalination facility;
- (D) Piecemeal the SEIR or defer consideration of substantial changes to another agency;
- (E) Avoid undertaking a proper cumulative impacts analysis by unlawful piecemealing;
- (F) Ignore the Desalination Ocean Plan Amendment and its existing policy alternatives;
- (G) Ignore potential marine resource impacts – including impacts to California’s marine protected areas – in its analysis.

A. THE STATE LANDS COMMISSION IS LEGALLY RESPONSIBLE FOR THE PREPARATION OF A SUBSEQUENT EIR.

When an EIR has been certified, but the project has not yet commenced, CEQA imposes continuing obligations on public agencies. In particular, CEQA *requires* a Subsequent EIR, not a narrow Supplemental EIR, where there are changes to a project, changes to circumstances under which it will be taken, and/or new information available, such that new or more severe significant impacts, including reasonably foreseeable cumulative impacts, will result.³ All of these factors are present with respect to the proposed Poseidon desalination facility; accordingly, a subsequent EIR is required.

The Draft SEIR is inadequate in that it has failed to fully document all the changes in the project and circumstances that result in significant new impacts or significantly increased severity of the direct and indirect impacts identified in the 2010 SEIR. For example, in 2014 the California Coastal Commission prepared a Staff Report for Poseidon’s application for a Coastal Development Permit (CDP) and response to appeals of the separate CDP issued by the City after the 2010 SEIR was certified and after the SLC adopted the 2010 lease amendment.⁴ This evidence shows that, as early as 3 years ago, the project and circumstances affecting the analyses in the 2010 SEIR had changed. The SLC has also identified new substantially changed circumstances in the Draft SEIR since the Coastal Commission staff report in 2013. For example, the cumulative impacts of simultaneous development projects near the site of the proposed Project.⁵ Further, the SLC’s Draft SEIR identifies changes in the project itself, including modifications to the intake and discharge alternatives necessitated by the adoption of the OPA⁶ - the nation’s first statewide regulations for ocean desalination. The regulations, commonly referred to as the Desalination Policy, create a set of rules that facilities must follow to minimize marine life mortality during the intake of seawater. The Policy also sets rules for how facilities will dilute brine discharges to prevent toxicity build-up.

³ 14 C.C.R. § 15162.

⁴ See Attachment A: CCC Staff Report.

⁵ See eg. Draft SEIR Table 3-1 at page 3-9; See also Attachment C(1), C(2) & C(3).

⁶ However, the SLC’s proposed modifications identified in the SEIR are not in compliance with the OPA requirements.

There are proposed changes to the project, changes in circumstances, and new information, which all give rise to numerous and significant new and more severe significant impacts. Accordingly, we urge the SLC to follow basic CEQA requirements in moving forward on Poseidon’s requested lease amendment, and prepare a Subsequent EIR fully addressing these concerns.

1. CEQA Guidelines Dictate that the State Lands Commission Cannot Adopt a Narrow Supplemental EIR.

The SLC cannot choose to prepare a supplemental EIR—only a subsequent EIR is appropriate. CEQA Guideline §15163 states that the “Lead or Responsible Agency may choose to prepare a supplement to an EIR rather than a subsequent EIR if:

- (1) Any of the conditions described in Section 15162 would require the preparation of a subsequent EIR; and
- (2) Only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation.”⁷

The SLC can only forego the preparation of a Subsequent EIR when the evidence demonstrates that only minor changes are needed to the previous EIR given all the changed circumstances to the entire project. Here, the evidence shows that project alterations and changed circumstances are substantial, not minor. These changes rise to the level of requiring a Subsequent EIR:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
 - (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.⁸

⁷ Section 21083, Public Resources Code; Reference: Section 21165, Public Resources Code.

⁸ Section 21083, Public Resources Code; Reference: Section 21166, Public Resources Code; *Bowman v. City of Petaluma* (1986) 185 Cal.App.3d 1065; *Benton v. Board of Supervisors* (1991) 226 Cal.App.3d 1467; and *Fort Mojave Indian Tribe v. California Department of Health Services et al.* (1995) 38 Cal.App.4th 1574.

Since 2010, when the City approved permits for the facility and the SLC approved a lease modification, Poseidon has significantly altered key facets of the Project, and other substantial circumstances have changed. These changes necessitate additional environmental review under CEQA. The SLC cannot lawfully proceed with consideration of the most recent requested lease amendment until that additional review is completed.

The SLC has not and cannot satisfy its burden to warrant a Supplemental EIR. Significant changes have not been evaluated for the Project, thus only minor additions or changes would not be sufficient to make the 2010 EIR adequately apply to the Project as a whole in its changed situation. Since major additions and changes need to be made to the 2010 EIR, the SLC's only option is to complete a Subsequent EIR.

2. *Significant changes have not been evaluated for the Project.*

In 2005, the City certified an EIR that evaluated the Project as a "co-located" facility at the existing power plant. In 2010, the City certified a Subsequent Environmental Impact Report (SEIR) for a "stand-alone" project that would continue drawing cooling water through the power plant's open ocean intake system after the power plant stopped using this system once the new regulations on "once through cooling" were enforced. Since then, numerous changed circumstances have occurred, including the adoption of an Amendment to the California Ocean Plan that regulates seawater desalination.

i. The project has substantial changes which will require major revisions of the previous 2010 Subsequent EIR.

Poseidon has proposed several substantial changes to the Project that were not evaluated in the 2010 SEIR. In particular, Poseidon now proposes to:

- (1) Continue using the existing intake structure for "temporary stand alone" use despite new scientific information and changes in the law;
- (2) Change substantially the offshore seawater intake by dismantling the existing velocity cap to add one millimeter wedgewire screens and associated structures, once the power plant discontinues withdrawing seawater;
- (3) Change substantially the existing seawater discharge pipe with a concentrated seawater diffuser; and
- (4) Change substantially the pipeline to carry potable product water away from the site for injection into the groundwater aquifer and/or other means of delivering the product water to member agencies of the Orange County Water District.

None of these significant changes to the project have been evaluated in any existing EIR or SEIR. Each of these changes are substantial and require the SLC to make major revisions to the 2010 Subsequent EIR. Therefore, the SLC is required to prepare a Subsequent EIR – not a Supplemental.

ii. Substantial changes have occurred with respect to the circumstances under which the project is undertaken which will require major revisions of the previous 2010 Subsequent EIR.

Since the 2010 certification of the Subsequent EIR numerous substantial changes have occurred with respect to the circumstances of the Project. First, the State Water Board adopted the Desalination Ocean Plan Amendment in 2015. Second, California completed a network of marine protected areas in 2012. These require full considerations of new project design, site, technology, and mitigation, as well as the potential significant impacts to individual marine protected areas – including the impacts to the connectivity between marine protected areas.

Further, since certification of the 2010 SEIR, there are numerous significant changed circumstances in the surrounding area that will contribute to cumulative impacts from the Project, including the new schedules for developing the Huntington Beach Energy Project, ASCON toxic landfill remediation, the proposal to demolish and develop the adjacent Tank Farm property, and the OCWD's plan to develop alternative distribution systems from the proposed treatment plant property. These substantially changed circumstances will create new cumulatively significant adverse impacts and/or substantially change the impacts analyzed in the 2010 SEIR, including, but not limited to, cumulative air quality impacts already identified by the SLC in this Draft SEIR.

- iii. New information of substantial importance pertains to the project, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous 2010 Subsequent EIR.

New information of substantial importance has come to light since 2010 that could mitigate or offer alternatives that would reduce the project's impacts. Most importantly, the assessed need for the project provides new information of substantial importance.

Much has changed with water management in Orange County, many of those changes making its water supply more reliable than it was in 1999 when Poseidon first proposed this idea. However, Poseidon's proposal to include 50 million gallons a day (MGD) into the water supply has not changed since 1999.

Since then, in January 2008, the Orange County Water District's (OCWD) Groundwater Replenishment System (GWRS) became operational, originally producing 70 MGD of highly purified water. In 2015, the project was expanded to produce 100 MGD. Ultimate capacity for the GWRS is projected at 130 MGD after infrastructure is built to increase wastewater flows from Orange County Sanitation District (OCSD) to the GWRS.

Orange County residents and businesses have also made significant improvements to conserving water that was being wasted in 1999. Despite our economy and population continuing to grow, we are using cumulatively less water now than we did in 1999. And most importantly, new water demand projections revealed in February 2016 by Municipal Water District of Orange County showed significantly reduced water demand than previously reported – a difference of about 90,000 acre feet less than predicted in 2010. New reporting estimates that demand by 2040 will be closer to 435,000 acre-feet as opposed to 525,000 acre-feet per year recently estimated by OCWD.

It is important to note that there is opposition from some of the largest water agencies within OCWD's service area to the idea of being forced to buy desalinated water. The cities of Anaheim and Fullerton have both informed OCWD in writing that they are only interested in buying desalinated water on an "as needed" basis, not as part of a take or pay contract. The Irvine Ranch Water District (IRWD) has sent twelve letters to OCWD detailing their concerns of the impacts of desalinated water on their operations, the lack of need for, and the high the cost of desalinated water.

In February of 2017 MWDOC staff gave a presentation of their final Water Reliability Study that explicitly discussed the future need for water by OCWD and concluded that the average future shortage through 2040 would be only 6,300 AFY and that the "Poseidon Yield at 56,000 AF per year would supply more water than needed in most every year". The presentation also documented that the average future shortage through 2040 for all of Orange County is projected to be only 10,700 AFY, still far below the proposed 56,000 AFY planned for the Poseidon Huntington Beach project.

Moreover, new information has come to light since 2010 regarding the feasibility of subsurface intakes.

After the ISTAP Panel was concluded, Poseidon's consultants, Geosyntec Consultants, produced a study of the feasibility of slant wells at this site. The attached Slant Well Study finds that, in reviewing the study submitted by Poseidon:

We conducted a model sensitivity analysis to assess the effects of varying model inputs on model results. Specifically, we evaluated the effect on simulated flow to the slant wells from inland groundwater and the wetlands and the average water-level decline due to varying model inputs for aquifer transmission properties (i.e. hydraulic conductivity), pumping rates, well location and length, and water levels at the seawater intrusion barrier. The model was most sensitive to changes in the aquifer properties of the Talbert Aquifer and the overlying sediments. Varying these properties produced large changes in model-estimated groundwater-level drawdowns and inland flow to the slant wells. These results indicate that more data is needed for these inputs to improve model certainty.

Pumping at lower rates than originally simulated will reduce impacts on the groundwater system. Operation of the slant wells will affect the extent of seawater intrusion in the Talbert Aquifer; pumping will likely increase the gradient from inland areas toward the project wells, which will enhance the movement of inland freshwater toward the coast and move the seawater/freshwater interface closer to the coastline. *This increase in seaward gradient along with capture of seawater by the slant wells will have the effect of reducing the inland migration of seawater.*⁹

In brief, the Slant Well Study suggests that, not only would slant wells not have an adverse impact on the groundwater basin, slant wells may actually improve protection from seawater intrusion. The study goes on to suggest more studies before drawing conclusions that slant wells are infeasible. Slant wells at this site may be technically feasible and may actually improve the efficiency of the seawater intrusion barrier.¹⁰ This is important new information that has come to light since 2010 regarding the feasibility of subsurface intakes.

Finally, new information of substantial importance has come about from the 2015 Substitute Environmental Document (SED) for the OPA.¹¹ Of particular note, is the SED outlines important findings by the State Water Board's Expert Panel.¹² Studies have found that a 1 mm screened intake will result in a zero reduction of entrainment for small and younger species. The State Water Board's Expert Panel has concluded that the net benefit of a 1 mm screened is only one percent. And the State Water Board has decided that a 1 mm screened intake will only result in a 1 percent reduction of entrainment – resulting in a 99 percent mortality rate.¹³

Given the substantial changes in the proposed Project, and substantial changes to closely related projects, since the 2010 Subsequent EIR was certified, there simply is no question that a subsequent EIR must be

⁹ Attachment G: Slant Well Report at page 2 (emphasis added).

¹⁰ See Attachment G: Slant Well Report.

¹¹ See State Water Resources Control Board, Final Staff Report Including the Final Substitute Environmental Documentation: Amendment to the Water Quality Control Plan For Ocean Waters of California Addressing DESALINATION FACILITY INTAKES, BRINE DISCHARGES, AND THE INCORPORATION OF OTHER NON-SUBSTANTIVE CHANGES (Adopted May 6, 2015); available at http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2015/rs2015_0033_sr_apx.pdf.

¹² See Foster et al., Expert Report III Review and Responses to Questions Concerning APF and Mitigation Fees; available at http://www.waterboards.ca.gov/water_issues/programs/ocean/desalination/docs/erp_final.pdf; See Foster et al., Expert Panel II: Mitigation and Fees for the Intake of Seawater by Desalination and Power Plants; available at http://www.waterboards.ca.gov/water_issues/programs/ocean/desalination/docs/erp_intake052512.pdf.

¹³ *Id.*

prepared to inform the SLC’s discretionary decision on any lease amendment, as well as all the following responsible and trustee agencies’ decisions. All EIRs, including subsequent EIRs, must evaluate the “whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.”¹⁴ “From this principle, ‘it is clear that the requirements of CEQA ‘cannot be avoided by chopping up proposed projects into bite-sized pieces’ which, when taken individually, may have no significant adverse effect on the environment.”¹⁵

A Subsequent EIR is necessary to evaluate these new significant changes.

B. THE STATE LANDS COMMISSION CANNOT DESCRIBE ITSELF AS A CONTINUING RESPONSIBLE AGENCY—THE COMMISSION IS THE LEAD AGENCY.

The State Lands Commission is the lead agency. In 2010, the City assumed lead agency status for the Project, preparing and certifying both the original EIR and the 2010 Subsequent EIR in connection with its issuance of a coastal development permit and a conditional use permit. That 2010 SEIR was also to be used by “responsible agencies” in their discretionary approvals – which the SLC already did in approving the amended lease now being considered for additional amendments.¹⁶ As discussed, substantial changes to the Project not evaluated in those prior documents necessitate additional CEQA review. It does not appear, however, that there are any additional discretionary approvals pending before the City. Therefore, the SLC has stepped into the shoes of the lead agency.

1. The State Lands Commission has stepped into the shoes of the lead agency.

The SLC states that the “California State Lands Commission, in its continuing role as a responsible agency under the California Environmental Quality Act has prepared this Supplemental Environmental Impact Report...”¹⁷ The SLC has improperly characterized its “continuing role”; it is now the lead agency according to CEQA Guidelines.

Based on CEQA Guidelines, the SLC cannot characterize itself as a continuing responsible agency. CEQA Guidelines mandate that the SLC is the lead agency. CEQA Guideline §15050 states that where “a project is to be carried out or approved by more than one public agency, one public agency shall be responsible for preparing an EIR or Negative Declaration for the project. This agency shall be called the Lead Agency.”¹⁸ In 2010, numerous state and local agencies were required to provide approval for the project, but it was deemed that the City was the lead agency.

In 2016, it was determined that significant changes to the Project have occurred where further CEQA would be required. The SLC, the former Responsible Agency, was called upon to grant approval of new amendments to the Project’s lease that are necessitated by changed circumstances since the SLC approved

¹⁴ 14 C.C.R. § 15378.

¹⁵ Ass’n for a Cleaner Env’t v. Yosemite Cmty. Coll. Dist., 116 Cal. App. 4th 629, 638 (2004) (project to close shooting range included cleanup and dismantling); see also Christward Ministry v. Superior Court, 184 Cal. App. 3d 180, 195–96 (1986) (city impermissibly chopped up single project into three separate projects, which was “exactly the type of piecemeal environmental review prohibited by CEQA”); Citizens Ass’n for Sensible Dev. of Bishop Area v. County of Inyo, 172 Cal. App. 3d 151, 165 (1985) (project improperly segmented into two projects for CEQA purposes).

¹⁶ When SLC approved the amended lease in 2010, after considering the 2010 SEIR, its “continuing role as a responsible agency” came to an end.

¹⁷ SEIR 1-1.

¹⁸ Section 21083, Public Resources Code; Reference: Sections 21080.1, 21165, and 21167.2, Public Resources Code.

a lease amendment based on the 2010 SEIR. In the cover letter from Poseidon to the SLC for the Application to Amend the Lease, Poseidon discussed options for ensuring CEQA compliance, including:

Alternatively, the SLC may choose to act as the *Lead Agency* under CEQA and apply CEQA Guidelines Sections 15162-15164 in determining whether a Subsequent EIR, Supplemental EIR, or EIR Addendum would be appropriate.¹⁹

Poseidon informed the SLC of the mandate to act as a “Lead Agency” in communications leading up to the decision to take on this SEIR, and this is the option the SLC chose to take.

Specifically, the CEQA Guidelines mandate:

Where a responsible agency is called on to grant an approval for a project subject to CEQA for which another public agency was the appropriate lead agency, the responsible agency shall assume the role of the lead agency when any of the following conditions occur:

...

(2) The lead agency prepared environmental documents for the project, but the following conditions occur:

- (A) A subsequent EIR is required pursuant to Section 15162,
- (B) The lead agency has granted a final approval for the project, and
- (C) The statute of limitations for challenging the lead agency's action under CEQA has expired.²⁰

The current situation satisfies all three requirements, and the SLC must step into shoes of the lead agency. First, all parties agree the SLC must prepare additional CEQA analysis. And as we argue above, the law requires that a subsequent EIR be prepared. Second, the City does not have any additional discretionary approvals pending and has granted final approval for the project.²¹ Third, the statute of limitations for challenging the City of Huntington Beach CEQA approval has expired.²² Since the SLC is the next agency with continuing discretionary approval of the changed project, the SLC must take on the role of lead agency.

If there are no further discretionary approvals of the Project by the City the SLC is stepping into the role of “lead agency” for the requisite additional CEQA review and preparing an updated EIR for public review and certification. In that role, the SLC must fully evaluate all potential impacts associated with proposed changes to the Project. Despite the claims made in the draft SEIR, the SLC is not acting in a “continuing role as a responsible agency” – that role ended when the SLC adopted the October 2010 lease amendment after the City certified the 2010 SEIR in September.

CEQA requires public agencies to undertake an environmental review of proposed projects that require their discretionary approval.²³ And when “subsequent environmental documents are required,” a

¹⁹ See Attachment H: Poseidon Application Cover Letter to SLC at 5 (emphasis added).

²⁰ 14 C.C.R. § 15052(a) (emphasis added).

²¹ 14 C.C.R. § 15052(c) (“Once a project has been approved, the lead agency's role in project approval is completed, unless further discretionary approval on that project is required. Information appearing after an approval does not require reopening of that approval. If after the project is approved, any of the conditions described in subdivision (a) occurs, a subsequent EIR or negative declaration shall only be prepared by the public agency which grants the next discretionary approval for the project.”).

²² Pub. Resources Code § 21167.

²³ Pub. Resources Code, § 21080, subd.(a).

responsible agency “called upon to approve a project,” like the SLC, “may be required to step into the shoes of the lead agency.”²⁴

As a substitute lead agency, the SLC must evaluate all impacts from the Project as a whole in any supplemental or subsequent EIR. So when the SLC steps into the City’s shoes, it must play the full role of a lead agency and consider all reasonably foreseeable direct, indirect and cumulative impacts from the Project, including from those aspects of the Project that may fall under the approval jurisdiction of another responsible agency. A decision to proceed on the lease amendment application with only a partially updated EIR would render the SLC’s actions vulnerable to a viable legal challenge.

2. *The State Lands Commission, Regional Water Board, Coastal Commission, and OCWD Cannot Prepare Sequential CEQA Documents for the Same Project.*

The SLC cannot continue being a responsible agency solely because other agencies have future discretionary approval. Since more than one public agency may have discretionary approval authority for a project, CEQA includes rules for determining each agency’s obligations. The agency with “principal responsibility” for carrying out or approving a project serves as the CEQA “lead agency” for purposes of complying with the statutory requirements.²⁵

CEQA demands the SLC integrate all CEQA review. CEQA sets out a fundamental policy requiring local agencies to “integrate the requirements of this division with planning and environmental review procedures otherwise required by law or by local practice so that all those procedures, to the maximum feasible extent, run concurrently, rather than consecutively.”²⁶ The CEQA guidelines similarly specify that “[t]o the extent possible, the EIR process should be combined with the existing planning, review, and project approval process used by each public agency.”²⁷ To the fullest extent possible, the lead agency should integrate CEQA review with these related environmental review and consultation requirements.”²⁸ Toward that end, agencies are encouraged to “[c]onsult with state and local responsible agencies before and during preparation of an environmental impact report so that the document will meet the needs of all the agencies which will use it.”²⁹ The purpose of an environmental impact report is to “provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project.”³⁰

CEQA requires that the lead agency conduct a thorough review of the project in question, even though additional review might later be undertaken by other agencies with jurisdiction over specific resources, and must provide a comprehensive analysis on which other agencies may rely.³¹ Once a lead agency is selected, that agency shoulders the burden of complying with CEQA in all respects. In particular, “the lead agency is responsible for considering the effects of all activities involved in a project and, if required by CEQA, preparing the draft and final EIR’s and certifying the final EIR for a project.”³² In contrast,

²⁴ *City of Sacramento v. State Water Res. Control Bd.*, 2 Cal. App. 4th 960, 970 (1992). See also *Comm. for a Progressive Gilroy v. State Water Res. Control Bd.*, 192 Cal. App. 3d 847, 863 n.7 (1987) (“[I]n the event a subsequent or supplementary EIR were required it would be the duty of the cities, as the “lead agency” to prepare it.”).

²⁵ Cal. Pub. Res. Code § 21067.

²⁶ § 21003, subd. (a).

²⁷ Guidelines, § 15080.

²⁸ Guidelines, § 15124, subd. (d)(1)(C), italics added; see also Guidelines, § 15006, subd. (i).

²⁹ Guidelines, § 15006, subd. (g) (emphasis added).

³⁰ § 21061; see § 21002.1, subd. (a).

³¹ *Save San Francisco Bay Assn. v. San Francisco Bay Conservation etc. Com.*, 10 Cal. App. 4th 908, 921 (1992).

³² *Riverwatch v. Olivenhain Mun. Water Dist.*, 170 Cal. App. 4th 1186, 1201 (2009) (emphasis added).

“[r]esponsible agencies generally rely on the information in the CEQA document prepared by the lead agency [e.g., an EIR] and ordinarily are not allowed to prepare a separate EIR or negative declaration.”³³ In other words, “while the lead agency is responsible for considering all environmental impacts of the project before approving it, a responsible agency has a more specific charge: to consider only those aspects of a project that are subject to the responsible agency’s jurisdiction.”³⁴

In the Draft SEIR, the SLC seems to be setting up a scheme where each former “responsible agency” continues to be acting in their respective “continuing role as a responsible agency” to prepare separate CEQA documents. For example, the Draft SEIR states:

At such time as the RWQCB completes its Water Code section 13142.5, subdivision (b) determination, if the RWQCB identifies a site outside the PRC 1980.1 lease boundaries, new CEQA or CEQA functional equivalent analysis would need to be conducted pursuant to such action.³⁵

However, CEQA Guidelines, Section 15162 states:

(b) Except as provided in subdivision (c), the decision-making body of each Responsible Agency shall consider the Lead Agency’s EIR or Negative Declaration prior to acting upon or approving the project. Each Responsible Agency shall certify that its decision-making body reviewed and considered the information contained in the EIR or Negative Declaration on the project.

(c) The determination of the Lead Agency of whether to prepare an EIR or a Negative Declaration shall be final and conclusive for all persons, including Responsible Agencies, unless:

- (1) The decision is successfully challenged as provided in Section 21167 of the Public Resources Code,
- (2) Circumstances or conditions changed as provided in Section 15162, or
- (3) A Responsible Agency becomes a Lead Agency under Section 15052.

Like the SLC, the Regional Water Quality Control Board has no “continuing role” as a “responsible agency” – they will be acting as a “responsible agency” in the preparation of a new Subsequent EIR. The Santa Ana Regional Water Quality Control Board considered the 2010 SIER certified by the City and in 2012 issued an amended NPDES permit based on that 2010 SEIR.³⁶ Much like the SLC, the RWQCB’s “continuing role as a responsible agency” ceased when that amended permit was approved. In this case, just as in 2012, the Regional Board will be acting as a “responsible agency” relying on the SEIR the SLC is preparing now.

Further, the language in the SEIR is quoted from the “Sequencing Agreement” proposed by Poseidon and agreed to by the SLC, RWQCB and CCC.

³³ *Id.*

³⁴ *Id.* 1201, 1206 (emphasis added).

³⁵ Draft SEIR at 1-8.

³⁶ See Attachment D, 2012 NPDES/WDR at page 10 of 33: In compliance with the California Environmental Quality Act, a Subsequent Environmental Impact Report (SEIR) for the Facility was certified by the City of Huntington Beach on September 7, 2010, and the City adopted a CEQA Statement of Findings of Facts with a Statement of Overriding Considerations and Mitigation Monitoring and Reporting Program. Also on September 7, 2010, the City of Huntington Beach amended Conditional Use Permit No. 02-04 and on September 20, 2010, the City of Huntington Beach approved Coastal Development Permit No. 10-014 for the Facility.

As documented in the Fact Sheet (Attachment F), the Regional Water Board has reviewed the final SEIR....

The RWQCB will make available for public review its tentative order amending and/or renewing the 2012 NPDES Permit and tentative Water Code section 13142.5, subdivision (b) compliance determination within 90 days of: (a) a RWQCB determination that complete applications have been submitted for the NPDES Permit and the compliance determination; (b) a final approval by the CSLC on Poseidon's application to modify PRC 1980.1; and (c) approval and/or *certification of any and all CEQA documents* and related environmental information and analysis necessary for the RWQCB to act as a CEQA responsible agency in connection with Poseidon's Project.”^{37 38}

It is clear in the “Sequencing Agreement”, signed by Poseidon and the 3 agencies that the RWQCB is relying on the lead agency to prepare “any and all CEQA documents... [necessary] for them to act as a responsible agency.” Clearly the agreement, signed by Poseidon and the SLC, does not suggest the RWQCB is relying on the 2010 SEIR, nor are they required to prepare additional CEQA documents as a responsible agency for project approval. As described in the Cover Letter from Poseidon for the Application to Amend the Lease³⁹, the RWQCB is a “responsible agency” in the preparation of this Draft SEIR being prepared by the SLC as the “lead agency” and should participate in the drafting of this SEIR to ensure it is adequate for their use approving the relevant permits.

This interpretation of the Sequencing Agreement would also be consistent with the CEQA Guidelines: “The term ‘project’ refers to the activity which is being approved and which may be subject to several discretionary approvals by governmental agencies. *The term ‘project’ does not mean each separate governmental approval.*”⁴⁰

The SLC is the lead agency and needs to take responsibility for preparing a single Subsequent EIR. The SLC has stepped into the City's shoes. It must play the full role of a lead agency and consider all reasonably foreseeable direct, indirect and cumulative impacts from the Project. This includes impacts from those aspects of the Project that may fall under the approval jurisdiction of another responsible agency. Anything less cannot withstand a legal challenge.

C. THE STATE LANDS COMMISSION PIECEMEALS THE PROJECT BY ILLEGALLY DEFINING THE LEASE MODIFICATION AS A SEPARATE PROJECT.

When the SLC steps into the City's shoes, it must play the full role of a lead agency and consider all reasonably foreseeable direct, indirect and cumulative impacts from the Project, including from those aspects of the Project that may fall under the approval jurisdiction of another responsible agency. This result also makes sense from a policy perspective. Just as CEQA requires a single initial lead agency for each project and a single EIR upon which all other responsible agencies may rely, the same rules apply to a subsequent or supplemental EIR. The agency that steps into the lead agency role must prepare a single document that evaluates impacts from the whole project. Here, by defining an integral part of the whole project as a separate “Lease Modification Project”, when that separate project in and of itself would have no independent utility, the SLC is engaged in illegal “piecemealing” of the project and its foreseeable

³⁷ Draft SEIR at 1-11 (emphasis added). Regardless of what is said in the MOA, it is important to note that the Sequencing Agreement does not waive the SLC's responsibilities under CEQA.

³⁸ It appears in the Draft SEIR that the RWQCB is expected to act in “its continuing role as a responsible agency” from when the 2010 SEIR was approved. However, the Sequencing Agreement language must be read to mean that the RWQCB would be acting as a responsible agency as the SLC prepares this Draft SEIR.

³⁹ See Attachment H: Poseidon Application Cover Letter to SLC at 5 (emphasis added).

⁴⁰ CEQA Guidelines S 15378 (c) (emphasis added).

adverse impacts. Moreover, the “Lease Modification Project”, by itself, is incapable of meeting the objectives stated for the project in the Draft SEIR – a symptom of a “piecemeal” analysis.

Deferring evaluation of some project impacts simply because another responsible agency has later approval authority would deprive the public and decision makers of the ability to comprehensively understand the project’s full environmental impacts—in violation of CEQA. A decision to proceed on the lease amendment application with only a partially updated EIR would render the SLC’s actions vulnerable to a viable legal challenge.

1. *A Project Must Have Independent Utility.*

The SLC cannot define a project that does not have independent utility. The SLC defines the Project as a “Lease Modification Project” rather than the proposed Poseidon desalination project. Then the SLC asserts that other parts of the project that have substantially changed since 2010 are “not germane” to the so-called “Lease Modification Project.”

The case of *Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora et al.*⁴¹ is instructive as to why the SLC’s “Project” is illegally defined and constitutes piecemealing. The SLC’s reasons for segmenting the Huntington Beach desalination facility are eerily similar to the arguments made by the Respondents in *Tuolumne County Citizens*. The Respondents unsuccessfully claimed that (1) the City properly evaluated the whole of the home improvement center project and (2) substantial evidence showed that the road realignment project was a long-standing, separate City project. Respondents argued that the City’s determination to segment the projects does not mean environmental review of the road realignment project has been avoided because that project is undergoing a separate CEQA review.

In rejecting that argument and deciding that both activities were the same “project”, the court first looked at the CEQA definition of “project”. CEQA broadly defines a “project” as “an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.”⁴² The statutory definition is augmented by the Guidelines, which define a “project” as “*the whole of an action*, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment”⁴³ “The term ‘project’ refers to the activity which is being approved and which may be subject to several discretionary approvals by governmental agencies. The term ‘project’ does not mean each separate governmental approval.”⁴⁴ The same reasoning would apply here to the SLC’s SEIR. The SLC cannot argue that its Lease Modification is a separate project and that each separate governmental approval is also a separate project. The project is the whole of the action – the entire Poseidon facility.

Tuolumne County Citizens also relied upon precedent from the California Supreme Court. The California Supreme Court has considered how to interpret the word “project” and has concluded that CEQA is “to be interpreted in such manner as to afford the fullest possible protection to the environment within the

⁴¹ *Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora et al.*, Court of Appeal, Fifth District, California (October 02, 2007).

⁴² Pub. Resources Code, § 21065.

⁴³ Guidelines, § 15378, subd. (a), italics added; see *Remy et al., Guide to the Cal. Environmental Quality Act* (CEQA) (10th ed. 1999) 75-77 (Remy) [“whole of an action” requirement].

⁴⁴ Guidelines, § 15378, subd. (c).

reasonable scope of the statutory language.”⁴⁵ This broad interpretation ensures that “the requirements of CEQA ‘cannot be avoided by chopping up proposed projects into bitesize pieces’ which, when taken individually, may have no significant adverse effect on the environment....”⁴⁶ The same conclusion can be drawn here. By chopping the Poseidon project into bitesize pieces (the Lease Modification, the alternatives before the Regional Water Board, and the water distribution system), the SLC is illegally piecemealing the project so that no significant adverse effect on the environment will be identified.

Tuolumne County Citizens then applied general CEQA principles to determine whether the center and road were one project. The court examined how closely related the acts are to the overall objective of the project. The relationship between the particular act and the remainder of the project is sufficiently close when the proposed physical act is among the “various steps which taken together obtain an objective.”⁴⁷ The commencement of business operations at the site is conditioned upon the completion of the realignment of the road. As a result, the road realignment is a step towards the project’s objective. In other words, the road and the center need to be taken together to achieve their objective – taken separately there is no independent utility.

Just as in *Tuolumne County Citizens*, there is no independent utility if you piecemeal the project. The Draft SEIR clearly fails to properly characterize the modifications to the intake and discharge structures as a “part of the project.” That is, the modifications cannot be a separate project because they have no “independent utility”, nor does the project have any utility without the intake and discharge. Further, clearly the modification of the intake and discharge conduits are, as the court noted, “a step toward achieving the project objectives” to supply fresh water to the region.

The flawed effort to create a fictional separate project is part and parcel of the logic that results in a “piecemealed” analysis of the project and objectives defined in the 2010 SEIR. The Draft SEIR must be rewritten and recirculated for public comment with a comprehensive analysis of all the changes to the entire project since certification of the 2010 SEIR.

2. *The SLC must evaluate the changes related to Purpose and Need for the project and the implications those changes have for the range of alternatives considered.*

CEQA has discreet rules for describing the Purpose and Need for a project. Under CEQA an EIR must include a statement of objectives sought by the proposed project. The statement of objectives should include the underlying purpose of the project.⁴⁸ As a legal matter, CEQA Guideline 15124 (b) explains that a clearly written statement of objectives, that includes the project purpose, aids in development of a reasonable range of alternatives, as well as any statement of overriding considerations.

The Draft SEIR states the “project objectives” as:

These objectives are:

- Use proven technology to affordably provide a long-term, local and reliable source of water not subject to the variations of drought or regulatory constraints;
- Reduce local dependence on imported water and strengthen regional self-reliance; and
- Contribute desalinated water to satisfy regional water supply planning goals.

⁴⁵ *Friends of Mammoth v. Board of Supervisors* (1972) 8 Cal.3d 247, 259, 8. Disapproved of on other grounds in *Kowis v. Howard* (1992) 3 Cal.4th 888, 896-897.

⁴⁶ *Lake County Energy Council v. County of Lake* (1977) 70 Cal.App.3d 851, 854.

⁴⁷ Robie et al., Cal. Civil Practice–Environmental Litigation (2007) § 8.7.

⁴⁸ CEQA Guideline 15124 (b).

Poseidon's objectives also include obtaining:

- RWQCB determination of consistency, in consultation with the SWRCB, with Water Code section 13142.5, subdivision (b), as implemented through the Ocean Plan (hereinafter referred to as the Desalination Amendment) and issuance of a National Pollutant Discharge Elimination System (NPDES) permit; and CCC approval under the California Coastal Act (Pub. Resources Code, § 30000 35 et seq.).⁴⁹

First, obtaining permits from the RWQCB and CCC is not a basic “project objective” to be considered in an EIR. It may be the project proponents’ objective, but that seems like an obvious and irrelevant fact to include. As far as a CEQA analysis is concerned, issuing permits is the discretionary authority of responsible agencies, and the SEIR is an analysis of adverse environmental impacts that must be considered by those agencies before exercising their authority. Obtaining those permits is a prerequisite to construction and operation – but it is not the purpose of the project or a “project objective.”

Second, and more importantly, the Purpose and Need for the project have dramatically changed since the 2010 SEIR was certified.⁵⁰ The regional water supply agency recently completed an updated Urban Water Management Plan (UWMP) based on a comprehensive regional Reliability Study. Those recent studies and reports document that regional demand has been decreasing previous to and since 2010, and new supplies have already become available since 2010. Further, the studies employ a more sophisticated model for predicting future demand than what was used in the previous UWMPs.

The Purpose and Need for the proposed seawater desalination facility has substantially changed since 2010 and meeting the objectives of “regional self-reliance” through water “not subject to drought and regulatory constraints” have in large part already been met through an expanded Groundwater Replenishment System, enhanced per capita conservation, and other local and reliable efforts. These enhancements to local reliability will be even more advanced when the Los Angeles County, in partnership with Metropolitan Water District, develops a new Indirect Potable Reuse facility in Carson, and transfers approximately 65,000 acre feet a year of potable water to recharge the Orange County groundwater basin – another post-2010 reasonably foreseeable source of local and reliable water to meet the stated objectives.

The Draft SEIR must be rewritten and re-circulated with a new Purpose and Need section. As explained in Section F, these fundamental changes in water reliability have an impact on the CEQA analysis of environmental impacts and alternatives to minimize those impacts. Further, changes in demand for the product water from the proposed project impact the required analysis of compliance with the recently adopted Ocean Plan amendment regulating seawater intakes for desalination.

Finally, the project objectives cited from the 2010 SEIR illustrate that the so-called “Lease Modification Project” is not a project. Treating the Lease Modification as a separate project is defying the long-held rules against “piecemealing” the analysis to disguise the cumulative impacts. Further, the narrow analysis of the fictional “Lease Modification Project” illegally restrains alternatives that would meet the basic objectives while minimizing the environmental impacts.

The Lease Modification alone will not independently achieve the stated objectives. As stated above, the fictional “Lease Modification Project” described in the Draft SEIR has no independent utility. Therefore, the so-called “Lease Modification Project” cannot, without the other components of a complete project, fulfill the basic objectives to supply water to the region. The “Lease Modification Project”, in and of itself, will not:

⁴⁹ Draft SEIR at 2-1.

⁵⁰ See Attachment F: OCWD Demand Analysis.

- Provide a long-term, local and reliable source of water not subject to the variations of drought or regulatory constraints;
- Reduce local dependence on imported water and strengthen regional self-reliance; nor,
- Contribute desalinated water to satisfy regional water supply planning goals.”

The Draft SEIR is fatally flawed and must be wholly revised to comply with CEQA. The “project” described in the Draft SEIR must be capable of achieving the basic project objectives or it is not a relevant “project” that has independent utility.

D. THE STATE LANDS COMMISSION CANNOT ILLEGALLY PIECEMEAL THE PROJECT BY DEFERRING CONSIDERATION OF SUBSTANTIAL PROJECT CHANGES TO ANOTHER AGENCY.

A substitute lead agency must evaluate all impacts from the Project as a whole in any supplemental or subsequent EIR. That is, the task of additional environmental review cannot be segmented between different agencies—the new lead agency, like the prior one, must prepare and circulate a single updated EIR that can then be relied upon by other responsible agencies taking subsequent discretionary actions. As the CEQA Guidelines expressly state: the term “project” refers to the activity which is being approved and which may be subject to several discretionary approvals by governmental agencies. The term “project” does not mean each separate governmental approval.⁵¹

Under the current circumstances, there is no legal authority that would allow the SLC to slice off a piece of the Project for additional CEQA review while ignoring other substantial changes to the Project or deferring consideration of those changes to another agency. The circumstances here are much like the circumstances the SLC faced in 2010 when they approved a lease amendment – with one critical exception—according to this Draft SEIR, the City no longer has discretionary authority and the SLC is the next agency with discretionary authority and must fill the shoes of a lead agency.

1. Piecemealing the project will not adequately inform the public or decision-makers.

The SLC is legally responsible for informing the public and decision-makers as to the environmental impacts of the project. However, the approach taken by the SLC is in direct conflict with the recent California Supreme Court decision *Banning Ranch Conservancy v. City of Newport Beach et al.*⁵² The Court held that the City ignored its obligation to integrate CEQA review with the requirements of the Coastal Act, and gave little consideration to the Coastal Commission’s needs. The issue in *Banning Ranch* was whether the Banning Ranch EIR was required to identify potential Environmentally Sensitive Habitat Areas (ESHAs) and analyze the impacts of the project on those areas.⁵³ Similar to the current situation with the Agency Sequencing MOU, in *Banning Ranch*, Consent Orders were agreed upon that a “a separate analysis will be undertaken by the Coastal Commission in connection with any future Coastal Development Permit application or proceeding before the Coastal Commission involving these properties.”⁵⁴ Similar to the SLC in this instance, the “City disavowed any obligation to further consider” issues to be decided by the Coastal Commission.⁵⁵ The City claimed it had “fulfilled its obligation under CEQA to analyze the significant impacts of a project on the physical environment.”⁵⁶ It maintained that findings on issues before the Commission were “within the discretion of the Coastal Commission” and that while the Draft EIR must

⁵¹ CEQA Guidelines §15378 (c).

⁵² *Banning Ranch Conservancy v. City of Newport Beach et al.*, Supreme Court of California (March 30, 2017).

⁵³ *Id.* at 18.

⁵⁴ *Id.* at 13.

⁵⁵ *Id.*

⁵⁶ *Id.*

identify a project's impact on the environment, "it is not required to make a finding pursuant to the Coastal Act."⁵⁷ That would be within the discretion and authority of the Coastal Commission when this Project comes before them."⁵⁸ The Court disagreed, and held that the:

City did not make a good faith attempt to analyze project alternatives and mitigation measures in light of applicable Coastal Act requirements. It *openly declared that it was omitting any consideration of potential ESHA from the EIR, and deferring that analysis to a subsequent permitting process*. The City's approach, if generally adopted, would permit lead agencies to perform truncated and siloed environmental review, leaving it to other responsible agencies to address related concerns *seriatim*.⁵⁹

The Court's conclusion is on point to the current situation before the SLC. Similar to the Consent Orders in *Banning Ranch*, here, the Draft SEIR implies the Agency Sequencing MOU requires that separate analysis will be undertaken by additional resource agencies at a later date. Moreover, the SLC has openly declared that it is omitting consideration of alternative intake and discharge sites and technologies, and any impacts associated with the Project's distribution system. The SLC's excuse is that subsequent permitting will address analysis of impacts and alternatives. Just as in *Banning Ranch*, the SLC's approach would provide for a truncated and siloed environmental review, leaving it to other responsible agencies to address related concerns *seriatim*.

The SLC cannot rely upon the Regional Water Board to analyze alternative sites and technologies. In *Banning Ranch*, the City argued that Coastal Commission issues would be "fully considered during the permitting phase of the project." However, such a delay is inconsistent with CEQA's policy of integrated review.⁶⁰ The City's argument was also undermined by *Citizens for Quality Growth v. City of Mt. Shasta*⁶¹, where the EIR did not discuss a mitigation measure proposed by the United States Army Corps of Engineers.⁶² The City justified the omission by claiming the corps would act to protect wetlands during the permit process. The court was not persuaded: "Each public agency is required to comply with CEQA and meet its responsibilities, including evaluating mitigation measures and project alternatives."⁶³

The SLC cannot contend it does not need to analyze alternative intake and discharge sites and technologies on the basis that it does not have the authority to mandate a particular site or technology. In *Banning Ranch*, the City argued it had "no authority to designate ESHA on Banning Ranch because only the Coastal Commission can do that."⁶⁴ However, the Court stated that a lead agency is not required to make a "legal" ESHA determination in an EIR.⁶⁵ Rather, it must discuss potential ESHA and their ramifications for mitigation measures and alternatives when there is credible evidence that ESHA might be present on a project site.⁶⁶ Similarly here, SLC is not required to make a legal determination as to what the best site and best technology is for minimizing marine life mortality. But, it is required to discuss mitigation measures and alternatives as they relate to marine life impacts due to ongoing desalination activities.

The Guidelines specifically call for consideration of related regulatory regimes, like the Coastal Act and

⁵⁷ *Id.*

⁵⁸ *Id.* at 14.

⁵⁹ *Id.* at 26 (emphasis added).

⁶⁰ *Id.* at 23; § 21003, subd. (a).

⁶¹ *Citizens for Quality Growth v. City of Mt. Shasta* (1988) 198 Cal.App.3d 433.

⁶² *Banning Ranch* at 23.

⁶³ *Id.* at 23-24; See Guidelines, § 15020; *Citizens for Quality Growth*, at p. 442, fn. 8.

⁶⁴ *Id.* at 21.

⁶⁵ *Id.*

⁶⁶ *Id.*

the Porter-Cologne Act, when discussing project alternatives.⁶⁷ An EIR must “describe a range of reasonable alternatives to the project,” or to its location, that would “feasibly attain” most of its basic objectives but “avoid or substantially lessen” its significant effects.⁶⁸ Among the factors relevant to the feasibility analysis are “other plans or regulatory limitations, [and] jurisdictional boundaries (projects with a regionally significant impact should consider the regional context).”⁶⁹ The Guidelines anticipate that the lead agency will consider other plans and regulatory limitations—the SLC cannot justify ignoring significant impacts and alternatives just because another agency has regulatory authority over those issues.

CEQA procedures “are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.”⁷⁰ The Guidelines state that an EIR should identify “[a]reas of controversy known to the lead agency including issues raised by [other] agencies.”⁷¹ “Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts.”⁷² “[M]ajor environmental issues raised when the lead agency’s position is at variance with recommendations and objections raised in the comments must be addressed in detail.”⁷³

The SLC cannot avoid analysis of the Project’s alternative sites and technologies simply because the Regional Water Board has the legal duty to consider those alternatives as part of its enforcement of the Ocean Plan amendment. The SLC is legally required to consider and enforce mitigation measures and alternatives associated with the Project as part of the issuance of permits.

Further, the SLC cannot evade analyzing foreseeable changes to the Project’s distribution system⁷⁴ simply because it’s purportedly speculative. In *Banning Ranch*, the City claimed that “identification of potential ESHA would be merely speculative.”⁷⁵ The Court disagreed. “The fact that precision may not be possible . . . does not mean that no analysis is required.”⁷⁶ “Drafting an EIR . . . involves some degree of forecasting. While foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.”⁷⁷ The SLC cannot disregard foreseeable changes to the Project’s distribution system merely because precise details are not available. The SLC has more than enough information to forecast the possible distribution scenarios and to analyze those scenarios for future permitting agencies.

The SEIR does not provide the public nor the responsible agencies relying on this CEQA analysis the appropriate amount of information to make informed regulatory decisions. In order to serve the important purpose of providing other agencies and the public with an informed discussion of impacts, mitigation measures, and alternatives, an EIR must lay out any competing views put forward by the lead agency and other interested agencies.⁷⁸ As the California Supreme Court makes clear, the preparation and circulation

⁶⁷ *Id* at 19.

⁶⁸ Guidelines, § 15126.6, subd. (a).

⁶⁹ *Id.*, subd. (f)(1).

⁷⁰ *Id* at 20; § 21002; see Guidelines, §§ 15126.4, 15126.6.

⁷¹ *Id*; Guidelines, § 15123, subd. (b)(2).

⁷² *Id*; Guidelines, § 15151.

⁷³ *Id* at 25; Guidelines, § 15088, subd. (c).

⁷⁴ See Attachment B: OCWD Alternative Distribution Systems.

⁷⁵ *Id* at 22.

⁷⁶ *Id.*

⁷⁷ *Id*; Guidelines, § 15144; *Laurel Heights I*, *supra*, 47 Cal.3d at p. 399.

⁷⁸ *Id* at 25-26. See § 21061; *Laurel Heights I*, *supra*, 47 Cal.3d at p. 391.

of an EIR is more than a set of technical hurdles for agencies and developers to overcome.⁷⁹ The “EIR’s function is to ensure that government officials who decide to build or approve a project do so with a full understanding of the environmental consequences and, equally important, that the public is assured those consequences have been taken into account.”⁸⁰

Banning Ranch is analogous to the current situation before the SLC. The SLC’s approach would provide for a truncated and siloed environmental review, leaving it to other responsible agencies to address related concerns seriatim. The Draft SEIR must be rewritten and re-circulated for public comment prior to being certified.

2. *The SLC cannot ignore activities that are an integral part of another activity—they are all within the scope of the same CEQA Project.*

The SLC is purposefully ignoring other activities – like the water distribution system – to illegally piecemeal the project. Courts have considered separate activities as one CEQA project and required them to be reviewed together where, for example, the second activity is a reasonably foreseeable consequence of the first activity.⁸¹ The distribution system for the desalinated product water is a reasonably foreseeable consequence – as it’s the critical component to deliver the product of the desalination project – and thus is plainly an integral part of the water-sourcing project. In fact, as noted above, the project cannot meet the objectives listed in this Draft SEIR without a product water delivery system. As such, Poseidon’s delivery system, carried out in partnership with the OCWD, is required to be reviewed together by the SLC in a Subsequent EIR with all other aspects of the project.

To comply with CEQA, the SLC must prepare a Subsequent EIR for the whole project that covers impacts from all substantial changes to the Project and circumstances as described in the 2010 SEIR, including changes to aspects of the Project that do not involve the tidelands lease, because all other responsible agencies must rely on the subsequent CEQA document for any additional discretionary approvals. In particular, as noted above, we understand that the substantial changes to the Project include a pipeline to carry desalinated water away from the site for injection into the groundwater aquifer.⁸² Because these new aspects – the pipeline and the groundwater injection – are necessary steps in Poseidon’s objective to produce and sell desalinated water, they unquestionably are part of the same project for CEQA purposes.⁸³ As such, the SLC must evaluate them in its updated SEIR.⁸⁴

Poseidon not undertaking the distribution system does not mean the distribution system is not part of the project. The courts have found that being the party undertaking both matters only “increases the likelihood that the matters are related”⁸⁵ – but it does not bar the review of both matters. Instead, the SLC

⁷⁹ *Id* at 26.

⁸⁰ *Id*; *Laurel Heights I, supra*, 47 Cal.3d at pp. 391-392; *Vineyard, supra*, 40 Cal.4th at p. 449; see *Concerned Citizens, supra*, 42 Cal.3d at pp. 935-936.

⁸¹ *Bozung v. Local Agency Formation Com.* (1975) 13 Cal.3d 263 [118 Cal. Rptr. 249, 529 P.2d 1017]); or both activities are integral parts of the same project (*No Oil, Inc. v. City of Los Angeles* (1987) 196 Cal. App. 3d 223 [242 Cal. Rptr. 37])(*Sierra Club v. Westside Irrigation District et al.* (2005) 128 Cal. App. 4th 690.

⁸² See Attachment B: OCWD Alternative Delivery Systems.

⁸³ *Tuolumne Cty. Citizens for Responsible Growth, Inc. v. City of Sonora*, 155 Cal. App. 4th 1214, 1226 (2007) (“The relationship between the particular act and the remainder of the project is sufficiently close [to constitute a single project under CEQA] when the proposed physical act is among the “various steps which taken together obtain an objective.”).

⁸⁴ *Rural Landowners Assn. v. City Council*, 143 Cal. App. 3d 1013, 1025 (1983) (where responsible agency stepped into the shoes to prepare a subsequent or supplemental EIR, all parts of project, including new parts, had to be evaluated).

⁸⁵ *Tuolumne County Citizens for Responsible Growth* at 13.

should look to the Guidelines, which establish that the need for separate approvals does not sever all of the connections between the two acts.⁸⁶ The acts remained connected, notwithstanding the separate approvals, because the distribution system is a condition that must be completed before desalination operations can commence.⁸⁷

Furthermore, “Courts have considered separate activities as one CEQA project and required them to be reviewed together where ... both activities are integral parts of the same project.⁸⁸ Thus, when one activity is an integral part of another activity, the combined activities are within the scope of the same CEQA project. This case is similar to *Plan for Arcadia, Inc. v. City Council of Arcadia* (1974) 42 Cal.App.3d 712 (*Plan for Arcadia*), where the court found that the construction of (i) a shopping center, (ii) a parking lot, and (iii) improvements to an adjacent street were all part of a single CEQA project.

The Huntington Beach proposal is similar to *Respondents in Tuolumne County Citizens for Responsible Growth and Arcadia, Inc.* The approval of the water distribution system is conditioned upon completion of the desalination facility. Consequently, there is a strong connection between the distribution system and the completion of the desalination facility. It follows that in order for a court to be consistent with the case law from *Respondents in Tuolumne County Citizens for Responsible Growth and Arcadia, Inc.*, that a court would conclude that the desalination facility and the distribution system are part of a single CEQA project.

And construction of the distribution system will clearly add to the severity of impacts of subject areas reviewed in the Draft SEIR, including Air Quality and GHG. The Draft SEIR estimates Air Quality impacts and GHG emissions that need revisions to the 2010 analysis, but fails to include the additional impacts from some of the alternative distribution systems that would require significant new construction activities. Further, the construction of the distribution system will add to the severity of impacts to subject areas not reviewed in the Draft SEIR, including Traffic, Terrestrial Biological Resources, Noise and others not reviewed in the Draft SEIR. For example, the routes of the new alternative distribution systems have never been analyzed for these impacts beyond the alternatives reviewed in the 2010 SEIR, and those routes considered in 2010 are clearly not the only alternatives under consideration today.

The Draft SEIR must be rewritten and re-circulated to define the distribution system alternatives as reasonably foreseeable changes to the project, and include a thorough analysis of the alternatives with a description of the superior alternative. This analysis cannot be left to the OCWD as that would result in the issuance of permits by the Regional Water Quality Control Board and Coastal Commission prior to the public and decision-makers being informed of the potential adverse impacts of the project as a whole (or even a separate closely related project creating cumulative impacts) – undermining the fundamental intent of CEQA.

3. *The Project’s Distribution System is Not Speculative and Needs to be analyzed by the State Lands Commission to Prevent Illegal Piecemealing.*

The SLC is purposefully ignoring the project’s distribution system and thus illegally piecemealing. The SLC admits in the DSEIR that potential changes may occur to the product water delivery system but then fails to analyze them. Contrary to the DSIER’s unsubstantiated conclusion that these changes are “speculative”, evidence shows that since the 2010 SEIR was certified, the Orange County Water District (OCWD) has agreed to modify the project by assuming responsibility for developing the product water

⁸⁶ See Guidelines, § 15378, subd. (c) [Separate governmental approvals do not create separate projects].

⁸⁷ See reasoning *Tuolumne County Citizens for Responsible Growth* at 14.

⁸⁸ *No Oil, Inc. v. City of Los Angeles* (1987) 196 Cal.App.3d 223.)” (*Sierra Club v. West Side Irrigation Dist.* (2005) 128 Cal.App.4th 690, 698 (*West Side Irrigation*)).

delivery system – starting at the edge of the treatment plant property. OCWD has reviewed numerous new alternative delivery system options not considered in the 2010 SEIR and has narrowed the alternatives to several that have never been evaluated. These new alternatives are clearly “reasonably foreseeable” and very significant changes to the project that were not evaluated in 2010.⁸⁹ The Draft SEIR fails to consider and analyze the cumulative impacts from these changes (eg, Air Quality and GHG emissions from construction and operation of the delivery system, water quality degradation, etc). Much like the offshore components of the modified intake and discharge, the delivery system, in and of itself, has no independent utility and must be analyzed as a part of the project as a whole.

The Draft SEIR states:

Based on this information, *potential modifications contemplated to distribute desalinated water by local or regional water agencies is speculative at this time and not germane* to the Lease Modification Project. Future CEQA analysis may be needed to construct an onshore desalinated drinking water distribution system, for example if a proposed system differs from the distribution system previously evaluated in the 2010 FSEIR.⁹⁰

The Huntington Beach desalination project’s proposed delivery system is not “speculative” and it certainly is “germane” to the project objectives⁹¹ to supply water to the region. Consequently, the alternatives for a delivery system, not known in 2010, must be included in the SLC’s CEQA analysis. CEQA Guidelines define a “project” to mean “the whole of an action.” It is improper for an agency to divide a project into separate parts to avoid CEQA review.⁹² Poseidon, in partnership with the Orange County Water District (OCWD), has changed the reasonably foreseeable range of feasible delivery systems from what was proposed in 2010.⁹³ The 2010 proposal was to put the water into new and existing pipes and deliver it to customers. And Poseidon was going to build the necessary infrastructure. Now OCWD is expected to build the needed infrastructure. Moreover, the water delivery plan now includes putting some, and perhaps all, of the product water into the groundwater basin. Those changes since the 2010 SEIR was certified require analysis of impacts from construction and operation of the distribution system, as well as analysis of potential impacts to the groundwater basin which is regulated by the Regional Water Quality Control Board.

The OCWD engaged in a thorough review of alternative distribution systems after agreeing with Poseidon to construct the system as part of the Term Sheet for a future contract to purchase the water. That review process began with numerous alternatives, and through the process of analyzing the feasibility of each, finally resulted in only several considered “feasible”. While the OCWD has not identified the final choice of a new delivery system, the options left after their relatively thorough evaluation are clearly new alternatives to the several considered in the 2010 Subsequent EIR.

The Project’s potential new water delivery system raises new concerns. Where will the delivery pipes be

⁸⁹ See Attachment B: OCWD Alternative Delivery Systems.

⁹⁰ Draft SEIR at page 1-12.

⁹¹ Draft SEIR at page 2-1: ...this Supplemental EIR incorporates these objectives within the context of Poseidon’s application to amend PRC 1980.1. These objectives are:

- Use proven technology to affordably provide a long-term, local and reliable source of water not subject to the variations of drought or regulatory constraints;
 - Reduce local dependence on imported water and strengthen regional self-reliance; and
- Contribute desalinated water to satisfy regional water supply planning goals.

⁹² Guidelines, § 15378, (a); [California Farm Bureau Federation v. California Wildlife Conservation Bd.](#), 143 Cal.App.4th 173 (2006).

⁹³ See Attachment B; also see

e.g., http://www.ocwd.com/media/2462/01b0revisedposeidontermsheetcleanversion_20150514.pdf.

built and what adverse impacts to the community and the environment will come from that construction? What are the cumulative impacts of the entire project (including the distribution alternatives) given changes to closely related projects since the 2010 SEIR was certified? And how will the water be put into the basin, and what adverse impacts will come from that additional desalinated water being mixed with groundwater?

The Draft SEIR cannot conclude alternative distribution systems from those reviewed in the 2010 SEIR are “speculative.” The Orange County Water District has conducted a review of alternative distribution systems, and by the process of elimination has whittled the alternatives to a few that the agency considered feasible.⁹⁴ Much like the two alternative distribution systems reviewed in the 2010 SEIR, it is not necessary for the lead agency to identify which of the alternatives will be ultimately chosen, but it is required to include all the alternatives. While the OCWD has yet to finalize that alternative review and select their preferred alternative, it is clear that those additional alternatives to what were reviewed in the 2010 SEIR are now “reasonably foreseeable” and must be included in the updated alternatives analyses.

4. If the Lease Modification is a separate project, then it still needs to be considered for cumulative impacts.

As noted throughout these comments, the modification to the intake and discharge should be properly identified as a part of the whole project, including but not limited to the changed circumstances nearby the proposed treatment plant site (see Attachment C), the foreseeable new alternative distribution options (see Attachment B), as well as numerous changed circumstances documented in the Coastal Commission Staff Report from 2014 (see Attachment A) and elsewhere.

Alternatively, as noted above, the Draft SEIR might be amended to describe the modifications to the intake and discharge as part of several “Multiple and Phased Projects.” But while we wholly disagree with that characterization, the CEQA Guidelines §15165 would still require the several projects to be considered as a whole. For the numerous reasons stated elsewhere in these comments, we strongly disagree that the fictional “Lease Modification Project” is a separate project from the whole Poseidon proposal. Nonetheless, even if it were a separate project, the Draft SEIR would still need to review the “cumulative impacts” from all project modifications, and all the changed circumstances since the 2010 SEIR was certified and State Lands acted by issuing a lease amendment a month afterwards.

CEQA defines “cumulative impacts” as the change in the environment resulting “from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”⁹⁵ Simply because the project specific impacts were insignificant does not mean that the cumulative impacts will be insignificant, nor that the Project impacts will not make a considerable contribution to cumulative impacts.

In this case, the Draft SEIR appears to argue that most of the impacts from the fictional “Lease Modification Project” are less than significant – some after mitigation. But the Draft SEIR is void of any analysis of the significant cumulative impacts from several reasonably foreseeable projects that have substantially changed since being considered in the 2010 SEIR. Ironically, some, but not all, of the “past, present and reasonably foreseeable future projects” are identified in the Draft SEIR.⁹⁶ For example, the Draft SEIR lists the Huntington Beach Energy Project, ASCON toxic landfill remediation, and the newly proposed “Magnolia Tank Farm” multi-use development proposal. And while the Draft SEIR argues

⁹⁴ See Attachment B.

⁹⁵ CEQA Guideline 15355, subd. (b).

⁹⁶ Draft SEIR, Table 3-1 at page 3-9.

potential changes to the distribution system are “speculative”, the distribution system is now under consideration by the Orange County Water District and is clearly a reasonably foreseeable change to the project, or a “reasonably foreseeable future project” under the CEQA definition.

We only offer these comments to highlight that, even if the “Lease Modification Project” was a separate project, the Draft SEIR would need to be dramatically expanded to meet the CEQA requirements to identify and analyze the cumulative impacts from “past, present and reasonably foreseeable future projects.”

More importantly, carrying the Draft SEIR logic of “sequential CEQA documents” to its unavoidable conclusion means that there will be several CEQA documents: one by the SLC, a separate one from the RWQCB, a separate one by the Coastal Commission, and possibly another by the Orange County Water District. The trustee agencies will be left having to comment on repeated documents and left with no single document from which to find the information of total project impacts and cumulative impacts from other closely related projects to guide their decision. The public will be left in the same situation, meaning the process completely undermines the CEQA intent to inform the public before these agencies act. It is unclear when this series of CEQA documents would ever be reconciled so that the public and reviewing agencies can ever find a “cumulative impacts” analysis, mitigation measures (if needed) and conclusions. In fact, if it is the responsibility of the last agency in the sequence to prepare a through cumulative impact analysis – that might be OCWD, and they do not intend to do that until after all the other agencies have acted.

And without that cumulative impact analysis -- which would apparently be the duty of an undefined agency to cull from the several CEQA documents and combine the several pieces of cumulative impacts and paste them together -- the process will be a “case book” illustration of a “piecemeal” approach. Each respective CEQA document from the responsible agencies will be part of the “chopping up a proposed project into bite-sized pieces” which, when taken individually, may have no significant adverse effect on the environment.”⁹⁷

The Draft SEIR is a clear violation of the long-held CEQA standards to avoid “piecemealed” analyses. We reiterate that the “Lease Modification Project” is not a separate project with “independent utility” so it must be analyzed as a part of the whole seawater desalination proposal.

E. THE STATE LANDS COMMISSION FAILS TO ADEQUATELY DOCUMENT SUBSTANTIALLY CHANGED CUMULATIVE IMPACTS.

The SLC is responsible for identifying and evaluating the cumulative impacts for the entire Poseidon desalination facility. Substantial changes in the project, and substantial changes to relevant circumstances, result in significant new impacts and/or a significant increase in the severity of the impacts identified in the 2010 SEIR. Yet the Draft SEIR completely ignores and fails to analyze substantial changes in relevant topic areas – for example: Geological Hazards, Biological Resources (terrestrial), Traffic & Parking, etc. Since these changed circumstances are totally dismissed, the Draft SEIR excludes important cumulative impacts. For example, but not an exhaustive list, the Draft SEIR fails to document and analyze the cumulative Air Quality and GHG emissions during simultaneous construction of the changes to both the

⁹⁷ Ass’n for a Cleaner Env’t v. Yosemite Cmty. Coll. Dist., 116 Cal. App. 4th 629, 638 (2004) (project to close shooting range included cleanup and dismantling); see also Christward Ministry v. Superior Court, 184 Cal. App. 3d 180, 195–96 (1986) (city impermissibly chopped up single project into three separate projects, which was “exactly the type of piecemeal environmental review prohibited by CEQA”); Citizens Ass’n for Sensible Dev. of Bishop Area v. County of Inyo, 172 Cal. App. 3d 151, 165 (1985) (project improperly segmented into two projects for CEQA purposes).

offshore components [the so-called “Lease Modification Project”] and the onshore components of the project and surrounding onshore developments, and how those emissions will be compounded by new changes to traffic and parking. The Draft SEIR fails to identify significant changes or analyze the foreseeable changes to the entire project and closely related projects, and the cumulative impacts to the proposed project as a whole.

1. *The SLC’s illegally narrowing of the project to the Lease Modification results in an inadequate cumulative analysis.*

Banning Ranch mandates this Draft SEIR must adequately inform the public and decision-makers of the significant impacts from the project that are relevant to Coastal Act policies and the future decision by the Coastal Commission both in the ruling on pending appeals and on the issuance of a “retained jurisdiction” coastal development permit.

The SLC must evaluate any and all aspects of the revised Project that were not previously considered in the 2010 SEIR, including the proposed changes to the offshore intake and discharge technologies of the project and alternative technologies and sites as required in the Ocean Plan amendment. Further, changes to the project described in the 2010 SEIR must also include reasonably foreseeable changes to the distribution system as documented in studies conducted by OCWD. These substantial changes to the project itself must be analyzed for the significant “direct impacts” of the project, as well as alternatives to minimize those adverse impacts.

Equally, if not more importantly, the Draft SEIR must document and analyze substantial new “indirect” cumulative impacts in the vicinity of the Project. Indirect impacts are “secondary effects” that are the reasonably foreseeable result of another project even though they “are later in time or farther removed in distance.”⁹⁸

A cumulative impact “is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”⁹⁹ “One of the most important environmental lessons evident from past experience is that environmental damage often occurs incrementally from a variety of small sources.”¹⁰⁰ Thus, without “meaningful cumulative analysis” and control, “piecemeal development would inevitably cause havoc in virtually every aspect of the urban environment.”¹⁰¹

According to the draft SEIR:

The information provided in this Supplemental EIR, if certified, will assist the CSLC in making its decision to approve or deny the Lease Modification Project. Each additional responsible agency is responsible for considering the effects of those activities that it is required by law to carry out or approve (Pub. Resources Code, § 21002.1, subd. (d)). Section 3.8 of the 2010 FSEIR presented a list of agency approvals, including those to be issued by agencies acting as responsible agencies under CEQA. Most of those agency actions are related to construction and operation of the HB Desalination Plant.¹⁰²

⁹⁸ 14 C.C.R. § 15358(a)(2); *Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal. App. 4th 1184, 1205 (2004).

⁹⁹ 14 C.C.R. § 15130.

¹⁰⁰ *Kings County Farm Bureau v. City of Hanford*, 221 Cal. App. 3d 692 (1990).

¹⁰¹ *San Franciscans for Reasonable Growth v. City and County of San Francisco*, 151 Cal. App. 3d 61 (1984).

¹⁰² Draft SEIR at 1-21 (*emphasis added*).

The Draft SEIR also argues that, based on that narrow purpose “...the following subject issues would not be impacted by the Lease Modification Project, and are therefore eliminated from consideration in this Supplemental EIR:

- Agricultural and Forestry Resources;
- Biological Resources (Terrestrial);
- Hydrology, Drainage, and Stormwater Runoff;
- Geology and Soils;
- Land Use and Planning;
- Mineral Resources;
- Population and Housing;
- Public Services;
- Transportation/Traffic (onshore); and
- Utilities and Service Systems.

But this narrow review, and reliance on responsible agencies to produce separate CEQA documents for their separate permitting authority, violates basic premises of CEQA. The term “project” refers to the activity which is being approved and which may be subject to several discretionary approvals by governmental agencies. The term “project” does not mean each separate governmental approval.¹⁰³ And the Draft SEIR also violates the recent Supreme Court decision in *Banning Ranch* that clearly states this SEIR must take into account Coastal Act policies and the impacts a project may have on those policies.

2. *The Coastal Commission’s 2013 Staff Report identifies important issues to be considered in the State Land Commission’s SEIR.*

In 2013, Poseidon applied for a retained jurisdiction permit from the Coastal Commission, and after nearly ten years of requesting postponements, finally agreed to a hearing on appeals filed by the public and Coastal Commissioners. In preparation for the hearing, Coastal Commission staff prepared a report and recommendations for action by the Commission.¹⁰⁴ However, at the hearing, Poseidon withdrew the application and once again requested a postponement of the appeal hearing. Nonetheless, the Staff Report serves to identify the types of information required in the Draft SEIR to meet the purpose of informing the public and decision-makers in regards to Coastal Act policy. The subject areas in the CCC Staff report include:

- Marine Life and Water Quality;
- Wetlands and Environmentally Sensitive Habitat Areas;
- Flood, Tsunami, and Sea Level Rise Hazards;
- Geological Hazards;
- Climate Change;
- Public Access and Recreation; and
- Land Use – Site Designation and Allowable Uses.¹⁰⁵

These subject areas are only the Coastal Commission’s identified changes from 2010 to 2013. There have been substantial changes to the project and cumulative projects since the Coastal Commission prepared the 2013 Staff Report.

¹⁰³ CEQA Guidelines §15378 (c).

¹⁰⁴ See Attachment A: CCC Staff Report (2013).

¹⁰⁵ *Id* at pg. 4.

Further, Appendix A of this Draft SEIR lists numerous Coastal Act policies relevant to the changed circumstances since the 2010 SEIR was certified. Nonetheless, the Draft SEIR is void of any analysis of the cumulative impacts nor the relevance to the Coastal Act policies enumerated in Appendix A. It is inadequate to simply cite relevant Coastal Act policies in an appendix to the Draft SEIR, yet fail to mention and analyze those policies in the text of the CEQA document.

Additionally, OCWD is now planning several different distribution systems that may alter impacts around the treatment plant site and the Draft SEIR neither considers the impacts as a part of the project, as it should, or as exacerbating cumulative impacts from separate but closely related projects.

The proposed Poseidon desalination facility project alone will have impacts on the environment and community and surrounding environment for years, and those impacts will be dramatically more severe given the numerous reasonably foreseeable past, future and concurrent projects adjacent to the Poseidon site that have changed since certification of the 2010 SEIR. Yet, while the Draft SEIR mentions these projects that are all closely related in time and space, the Draft SEIR fails to adequately document, analyze and mitigate the significant cumulative impacts.

The Draft SEIR states:

Direct and cumulative impacts associated with HB Desalination Plant construction and operation were analyzed in 2010 in a Final Subsequent Environmental Impact Report (2010 FSEIR) certified by the city of Huntington Beach (City). However, offshore construction activities were not part of the 2010 Project subsequently approved by the City and California State Lands Commission (CSLC).

The Draft SEIR errs in assuming the analysis in the 2010 FSEIR is adequate to inform the public and decision-makers of the significant impacts from changed circumstances since the 2010 SEIR was certified. The addition of noise, air emissions, and other impacts from the offshore construction alone must be more clearly considered in the context of changed cumulative impacts.

3. *The State Lands Commission needs to evaluate the cumulative impacts of new proposals that were not considered in the 2010 SEIR.*

Construction and operation of the Poseidon factory will create numerous adverse impacts on the environment and surrounding community, including: traffic, parking, noise, dust, nighttime lighting, air pollution, and much more. These impacts will compound (“cumulative impacts”) those of concurrent or consecutive projects closely related to the project in both space and time. For example, on sites directly adjacent to the proposed site for the desalination facility, and either immediately prior to, concurrent with, or consecutive to, development of the Poseidon project:

- AES is proposing to demolish the existing generators and build a “replacement” power plant;
- DTSC is planning a massive remediation effort to remove contaminated soil from the Ascon toxic landfill, and;
- A new developer is demolishing an old Oil Tank Farm and developing the site for a massive new multi-use residential-commercial development.

Some of these projects are new proposals and were not considered in the 2010 SEIR, for example the “Magnolia Tank Farm” project. Others, like the AES demolition and re-power project and the Ascon

toxic landfill remediation, were known at the time of the 2010 SEIR but have substantially changed in the meantime. And finally, the Draft SEIR includes the proposed changes to the product water delivery system in the list of closely related projects – when it should be considered a change to the project itself.

i. AES Re-Power Project (HBEC).

The AES re-power project, or Huntington Beach Energy Center (HBEC) project, was analyzed for adverse impacts as part of the California Energy Commission (CEC) license certification process in 2014 and a similar process to review an amended application to CEC in 2015.¹⁰⁶

The 2010 Poseidon Project FSEIR did not thoroughly consider the cumulative impacts of the proposed AES re-power project. And the CEC analysis of the AES re-power project did not include cumulative impacts from the changes proposed to the Poseidon Project under consideration in this Draft SEIR.

Further, it is now certain that the AES re-power project will create numerous impacts from construction and/or operation that will last until 2025¹⁰⁷, overlapping in proximate time and place with the changed Poseidon project and other closely related projects. Clearly the HBEC project construction and operation will create numerous impacts (eg, Air Quality degradation, GHG emissions, Noise, Traffic, Biological *terrestrial*, Sea Level Rise, Stormwater Runoff, and more)¹⁰⁸, similar to the Poseidon project and other closely related projects. And those foreseeable impacts will last for approximately 9 years and occur concurrently with and consecutive to the construction and operation of the Poseidon project.

Without a thorough analysis in this Draft SEIR, the public and decision-makers will be unable to fully understand the severity of the cumulative impacts from simultaneous and/or consecutive demolition and construction projects in close proximity to the Poseidon project as a whole, and/or the modifications to the proposed Poseidon project.

ii. Ascon Remediation.

Since certification of the 2010 SEIR, the Department of Toxic Substances Control (DTSC) has made substantial changes to what was known about the “final remedy” for cleaning up the Ascon toxic landfill.¹⁰⁹

A summary description of the proposed project explains:

As discussed above, Alternative 4 in the RAP is the Project being evaluated in this EIR. The remediation activities proposed as part of the Project include development of a protective cap to cover the contaminated materials after select waste deposits are removed. To enable the construction of the cap, the contaminated materials at the Site would need to be graded to reconsolidate waste from the Site perimeter to the Site interior and to create appropriate slopes for storm water runoff and collection from the cap. The remediation activities include excavation and off-site disposal of up to 30,000 cubic yards of Site contaminated materials, in addition to the removal of the Pit F waste (approximately 2,250 cubic yards), to allow for cap installation.¹¹⁰

¹⁰⁶ See Attachment C(1): AES-HBEC PMPD.

¹⁰⁷ *Id* at page 2-9.

¹⁰⁸ *Id* at Sections IV, V, and VI.

¹⁰⁹ See Attachment C2: Ascon EIR (2015); See Projects Document at: <http://www.dtsc.ca.gov/SiteCleanup/Projects/Ascon.cfm>.

¹¹⁰ See Attachment C2: Ascon EIR at page 1-4.

Alternative 4 would remove up to 32,250 cubic yards of contaminated materials from the Site. A total of approximately 206,000 cubic yards of suitable soils would need to be imported to construct the cap and backfill the non-capped areas.¹¹¹

As described in that EIR, "...the construction schedule for the preferred alternative is estimated at approximately 11 months."¹¹²

The project construction and operation will create numerous impacts (eg, Air Quality degradation, GHG emissions, Noise, Traffic, Biological *terrestrial*, Sea Level Rise, Stormwater Runoff, and more), similar to the Poseidon project and other closely related projects. And those foreseeable impacts will last for approximately 11 months and occur either soon before, concurrently with, or consecutive to the construction and operation of the Poseidon project.

Without a thorough analysis in this Draft SEIR, the public and decision-makers will be unable to fully understand the severity of the cumulative impacts from simultaneous and/or consecutive demolition and construction projects in close proximity to the Poseidon project as a whole, and/or the modifications to the proposed Poseidon project.

iii. Magnolia Tank Farm.

The 2010 Poseidon Project FSEIR was certified by the City prior to the recent announcement to demolish the existing Oil Tank Farm and develop the property for a mixed-use project.¹¹³

Further, it is reasonably foreseeable that the proposed "Magnolia Tank Farm" project will create numerous impacts from construction and/or operation (eg, Air Quality degradation, GHG emissions, Noise, Traffic, Biological *terrestrial*, Sea Level Rise, Stormwater Runoff, and more), similar to the Poseidon project and other closely related projects, that will last for approximately ten years¹¹⁴, overlapping in proximate time and place. It also seems reasonably foreseeable that these cumulative projects would exacerbate the impacts from the inclusion of the offshore modifications to the intake and discharge structures alone – but most certainly the development would compound the severity of the Poseidon project impacts from the nearby cumulative projects.

Without a thorough analysis in this Draft SEIR, the public and decision-makers will be unable to fully understand the severity of the cumulative impacts from simultaneous and/or consecutive demolition and construction projects in close proximity to the Poseidon project as a whole, and/or the modifications to the proposed Poseidon project.

4. *The SLC is required to analyze the cumulative impacts of the foreseeable Orange County Water District Distribution System.*

The Draft SEIR errs by placing the Potable Water Distribution System in the "List of Cumulative Projects."¹¹⁵ As stated above, the potable water distribution system foreseen by Orange County Water District is part of the Poseidon project as a whole: it has no independent utility, nor does the desalination

¹¹¹ *Id* at page 1-5.

¹¹² *Id.*

¹¹³ *See* Attachment C(3).

¹¹⁴ *Id* at page 4: "It is expected that construction of the project would be initiated in 2020. The project would be phased based on market demands, but it is expected that development would be completed within 10 years."

¹¹⁵ Draft SEIR at page 3-5 and 3-7.

facility and its offshore intake and discharge have any independent utility without the distribution system. It is apparent that none of these parts of the project can meet the Needs and Purpose and stated “objectives” without the other parts – assuming there is any need for the project at all given substantial changes in water demand since 2010¹¹⁶.

Since the 2010 SEIR was certified by the City, the Orange County Water District has gone through a process of re-defining potential distribution systems for the proposed Poseidon project.¹¹⁷ The process was based on numerous potential alternatives that have been narrowed down to a few.

The Draft SEIR states:

In March 2017, the Orange County Water District 29 (OCWD) staff placed on hold any plans “to begin an extensive environmental analysis related to use of the desalinated water in OCWD’s operations and facilities, along with distributing the water to other agencies, prior to the approval of the permits for the HB Desalination Plant.” (Letter from Michael R. Markus, OCWD General Manager, to Kurt Berchtold, Santa Ana RWQCB, March 20, 2017 [OCWD 2017]; see discussion in Section 1.2.5, City of Huntington Beach and Orange County Water District). Therefore, any potential future development or modification of the distribution pipeline system analyzed in the 2010 FSEIR is speculative at this time, and not considered as a cumulative project in this cumulative impact analysis.¹¹⁸

However, it is not necessary for OCWD to do an “extensive environmental analysis” in order for the recent addition of more likely alternatives to be “reasonably foreseeable” and included in this Draft SEIR. In fact, the 2010 SEIR included more than one alternative without identifying which would be the ultimate choice, yet each was considered by the City to be “reasonably foreseeable.” And so is the case here -- despite OCWD not finalizing a selection of the alternative that will be ultimately used, they have identified several choices that are “reasonably foreseeable.”

By excluding an analysis of the new reasonably foreseeable potable water distribution alternatives, the Draft SEIR fails to adequately inform the public and decision-makers of the adverse impacts of the project.

For example, construction impacts will differ with the change of the distribution systems’ routes, and consequently air quality degradation and GHG emissions from construction equipment will be significantly different if the potable water is distributed to destinations farther inland than the plans analyzed in the 2010 SEIR.

Finally, it stands to reason that relying on a series of CEQA documents from the several agencies who had a role as a “responsible agency” in 2010 will result in the total avoidance of documenting the indirect cumulative impacts in this Subsequent EIR. If the SLC only prepares a CEQA document for changes to the offshore components, the RWQCB only prepares a CEQA document for changes needed to comply with the new Ocean Plan amendment, the Coastal Commission only prepares a CEQA document for changes in the coastal zone, and then OCWD prepares a separate CEQA document after the responsible agencies have issued permits – when and how would a cumulative impacts analysis from all these segmented parts ever occur? For just one example: each of these pieces of the required analysis will have some impacts on noise and air quality degradation that effects coastal wetlands and wildlife directly adjacent to the treatment plant – but under the “sequential CEQA documents” scheme in the Draft SEIR,

¹¹⁶ See Attachment F: OCWD Water Demand Analysis.

¹¹⁷ See Attachment B: OCWD Alternative Distribution System.

¹¹⁸ Draft SEIR at page 3-7 (*emphasis added*).

none of the agencies will be responsible for doing a cumulative impact analysis of these subject issues. Further, this Draft SEIR fails to inform decisions by the RWQCB and Coastal Commission as mandated in the *Banning Ranch* decision.

There are new reasonably foreseeable changes to the project, new projects, and changed circumstances that were not known in 2010. Clearly the cumulative impacts have substantially changed, and consequently the Draft SEIR needs to analyze all the changes and the relevance of the cumulative impacts to future enforcement of the Coastal Act.

5. *The SLC is required to consider Coastal Act Policies when analyzing cumulative impacts for the project.*

As noted above, the Draft SEIR must include a discussion of Coastal Act policies and foreseeable impacts from changes to the project and cumulative projects that are relevant to Coastal Commission enforcement of those policies.¹¹⁹ And many of the relevant Coastal Act policies have already been identified. In 2013, based on the 2010 SEIR and acting in its continuing role as a responsible agency, the California Coastal Commission staff drafted a Staff Report (CCC Staff Report) for consideration by the Commission before deciding several appeals of the City-issued CDP as well as an application for a “retained jurisdiction” CDP.¹²⁰ At the hearing in early 2014, Poseidon withdrew the application and requested a postponement of the appeal hearing. Nonetheless, the Staff Report identifies several subject areas in the 2010 SEIR that were relevant for their permitting considerations and remain relevant now.

As the lead agency, the State Lands Commission is responsible for consulting with the Coastal Commission in their role as a responsible agency to ensure the Draft SEIR adequately informs the public and the Coastal Commission regarding Coastal Act policies. Below is a sample of policies discussed in the 2013 CCC Staff Report that are equally relevant to this Draft SEIR. This is not an exhaustive list.

iv. Marine Resources and Water Quality.

In regards to the project impacts on marine resources, the CCC Staff Report stated that in “implementing the Coastal Act and LCP and selecting feasible and less environmentally damaging alternatives, the Commission is guided by the mitigation sequencing identified in CEQA, which requires feasible mitigation measures be considered in the following order:

- Those that would entirely avoid the impact;
- Those that would minimize impacts by limiting the proposed action;
- Those that would rectify the impact by repairing or restoring the affected environment;
- Those that would reduce or eliminate the impact over time through preservation and maintenance; and,
- Those that compensate for the impact by replacing or providing substitute resources or environments.”¹²¹

The CCC Staff Report then applied that CEQA mitigation sequencing specifically to seawater intakes:

For seawater intakes, meeting the first step of the mitigation sequence – avoiding the impact – is most often done by using any of several subsurface intake designs and selecting a site where subsurface intakes can feasibly be built and operated to provide the amount of seawater or brackish water needed, as is being done at several locations along the California

¹¹⁹ See discussion of “*Banning Ranch*” decision in Section D above.

¹²⁰ See Attachment A: CCC Staff Report.

¹²¹ See Attachment A: CCC Staff Report at 38.

coast (see examples below). Where these designs are infeasible, meeting the second step – limiting the impacts – can be accomplished in a number of ways, including siting the intake at a location with lower concentrations of entrainable organisms, drawing less water into the intake, and/or placing any of several types of screens over the intake to reduce entrainment. When these methods are infeasible or do not fully mitigate for entrainment, compensatory mitigation is required to make up for the loss of marine life and productivity resulting from entrainment and impingement. All seawater desalination facilities being proposed along the California coast, except Poseidon’s, are proposing to use either subsurface intakes or screened intakes or proposing to site their intakes at locations that would reduce the number of entrained organisms.¹²²

The CCC Staff Report considered alternative intake technologies and sites that could minimize and/or mitigate the adverse impacts to marine life.¹²³ Similarly, the CCC Staff Report considered alternative discharge technologies and sites that could minimize and mitigate adverse impacts to water quality and marine habitat.¹²⁴

However, this Draft SEIR fails to follow the CEQA “order” of analyzing alternatives, and consequently fails to fully inform the Coastal Commission. The Draft SEIR fails to analyze subsurface intakes at the proposed site or alternative sites; fails to analyze alternative sites for the proposed screened intake; and fails to analyze drawing less water into the intake despite significant reductions in demand¹²⁵ for the product water since 2010. Consequently, the Draft SEIR must be re-written and re-circulated to ensure it adequately informs the public and the Coastal Commission and Regional Water Quality Control Board of substantial changes to the project and associated impacts that are relevant to Coastal Act policies.

The CCC Staff Report also analyzed potential water quality degradation. The foreseeable adverse cumulative impacts to water quality, both onshore and offshore, are much broader than the narrow analysis of constituents in the brine discharge include in the Draft SEIR. For example:

The project could cause adverse water quality effects due to disturbance and release of known and currently unknown hazardous and toxic materials at the project site and along parts of its pipeline route. The project site and portions of some proposed pipeline routes are known to be contaminated and require remediation. With relatively high groundwater tables at the site and along much of the pipeline routes, and the potential that water released during construction may be contaminated, several mitigation measures are needed to ensure consistency with LCP Policy C 6.1.1. The Findings below address the project site and pipeline route separately.¹²⁶

The CCC Staff Report then went on to describe contaminants likely occurring on the proposed treatment plant site, and risks of water quality degradation from remediation and development of the site.¹²⁷ The Staff Report notes:

The SEIR notes that one of the project objectives is to ‘remediate the subject site of on-site contaminants resulting from approximately 35 years of use as a fuel oil storage facility in order to protect the health and safety of those in the surrounding community.’ Because the

¹²² *Id.*

¹²³ *Id.*

¹²⁴ *Id.* at 52.

¹²⁵ See Attachment F: OCWD Demand Analysis.

¹²⁶ Attachment A: CCC Staff Report at 55.

¹²⁷ *Id.*

contaminants at the site have not yet been fully characterized, several site aspects normally studied, measured, identified, and implemented prior to redevelopment will need to be addressed through special conditions, as described below.¹²⁸

The CCC Staff Report also included similar analyses for development of the distribution system.¹²⁹ The CCC Staff Report noted:

Both Poseidon and the project SEIR asserted that project construction would not intercept groundwater adjacent to the [Ascon] Landfill and that the project would therefore not affect Landfill-related cleanup activities. However, as shown in several landfill cleanup documents, the proposed trench is within the range of groundwater depths along that route and within the range of elevated contaminants associated with the landfill. DTSC has identified contaminants requiring remediation along much of the north side of the Landfill, including a 30-foot wide strip along Hamilton Avenue for which cleanup and remediation measures have not yet been identified.¹³⁰

The CCC Staff Report went on to discuss mitigation measures in the 2010 SEIR as well as additional recommended steps to ensure against water quality degradation.¹³¹ But since the 2010 SEIR was certified, and more recently since the CCC Staff Report in 2013 was drafted, there have been substantial changes to the Ascon Landfill remediation plan, the AES power station demolition and re-power project, as well as addition of a new “cumulative project” to remediate the adjacent Magnolia Tank Farm and construct a large multi-use development. All of these substantial changes will significantly change the impacts on water quality.

The 2013 CCC Staff Report concluded:

The development, as proposed, would result in significant adverse marine life and water quality effects. However, as conditioned, the Commission finds the project is in conformity with relevant policies of the LCP and the Coastal Act.¹³²

Given the changes to the Poseidon project and changes to the closely related projects, the basis for the conditions proposed in the CCC Staff Report have substantially changed since the 2010 SEIR was certified, and have also changed since the Coastal Commission Staff Report was finalized in 2013. To fully inform the next Coastal Commission staff report, and future decisions by the Coastal Commission, this Draft SEIR must include documentation and analysis of all the changes since the 2010 SEIR was certified.

v. Wetlands and Environmentally Sensitive Habitat Areas (ESHA).

The CCC Staff Report relied on the 2010 SEIR in considering “direct” impacts to wetlands and ESHA:

The City determined in its SEIR that there were no wetlands within the project footprint. However, from the information provided by the City and Poseidon, Commission staff has determined that there were approximately 3.5 acres of wetlands within the project site and there are an additional approximately 0.5 acres on the east side of the project site, as defined

¹²⁸ *Id.* at 56.

¹²⁹ *Id.* at 57.

¹³⁰ *Id.* at 58.

¹³¹ *Id.*

¹³² *Id.*

in the Coastal Act and the Commission's regulations.¹³³

The disputed wetlands delineation in the 2010 SEIR was never resolved to the Coastal Commission staff's satisfaction. The 2013 CCC Staff Report notes:

Shortly after the City's September 2010 certification of the SEIR and issuance of its CDP, the Commission determined at its November 2010 Substantial Issue hearing that additional on-site evaluation was needed to make a conclusive wetland determination. Commission staff requested another site visit to evaluate site conditions and the potential presence of wetlands; however Poseidon did not grant permission until July 2012, when Dr. Engel again visited the site and found that the areas she had previously identified as exhibiting wetland indicators had recently been disked and all vegetation removed. The grading and vegetation removal was apparently conducted by the power plant owner and is the subject of a separate enforcement action by Commission staff.¹³⁴

The subject area of wetlands and other environmentally sensitive habitat areas (ESHA) in the 2010 SEIR was determined to be inadequate for the Coastal Commission's consideration and resolution of the appeals of the City-issued CDP. Therefore, this Draft SEIR must be amended to include the unresolved controversy of wetlands on the site, as well as inclusion of information and changed circumstances since the 2010 SEIR was certified.

The first "indirect" ESHA impacts issue raised in the CCC Staff Report is the impact of "dewatering" the site. According to the CCC Staff Report:

The SEIR stated that dewatering during construction is highly unlikely to affect nearby ESHA/wetland areas because the radius of influence of the dewatering intake wells is expected to stay within the project site.¹³⁵

But after some discussion, the CCC Staff Report concluded that:

[Site hydrology] characteristics suggest that dewatering during construction could involve significantly higher volumes and affect a larger area than anticipated in the SEIR.¹³⁶

This Draft SEIR fails to document those controversies from the 2010 SEIR. But more importantly, this Draft SEIR fails to document and analyze changes since the 2010 SEIR that would change the severity of cumulative impacts from demolition and construction of the AES site, the Ascon site, and the newly proposed "Magnolia Tank Farm" development – all major projects adjacent to the proposed Poseidon project that would have impacts on the adjacent wetlands. Given the extensive soil excavation anticipated in each of the several adjacent properties and projects, the cumulative impacts require a changed dewatering analysis since the 2010 SEIR was certified.

Second, the CCC Staff Report documents and discusses indirect adverse impacts to wetlands and ESHA from noise generated during demolition and construction.

Poseidon's currently proposed project configuration includes construction and project components immediately adjacent to nearby ESHA/wetland areas, with parts of several

¹³³ Attachment A: CCC Staff Report at 61.

¹³⁴ *Id* at pg. 62.

¹³⁵ *Id* at pg. 68.

¹³⁶ *Id*.

buildings and parking areas within 100 feet of those ESHA/wetland areas.¹³⁷

After citing numerous noise levels that adversely impact wildlife in the adjacent wetlands, the Staff Report notes:

The City's CDP included a condition requiring Poseidon to conduct a noise study during the project design stage to ensure that noise levels at the nearest residential property line are no more than 5 dBA greater than existing nighttime ambient noise levels at that property. However, neither the SEIR nor the CDP addressed the effects of expected noise and vibration levels at the much closer ESHA/wetland complex, including habitat within and adjacent to the project site used by the endangered Belding's Savannah Sparrow, California Least Tern, and Light-footed Clapper Rail. These sound levels are considered harmful to avian species and could result in "take" of special status species that use these ESHA/wetland areas.

Several bird species, including the Light-footed Clapper Rail, are particularly sensitive to vibration, and the CDFW specifically prohibits pile driving during their nesting season due to its relatively high levels of both noise and vibration.¹³⁸

This Draft SEIR analyzes the impact of noise from construction of the offshore intake and discharge modifications on a nearby residential mobile home park, but not on the adjacent wetlands. The Draft SEIR states:

The largest of the nearby onshore projects are the Magnolia Tank Farm Redevelopment Project and the HBGS Demolition and Replacement Project, which are separated from beach parking lots and beachfront and offshore areas by the Pacific Coast Highway (State Route [SR] 1). Thus onshore construction noise impacts would not readily combine with impacts from offshore construction associated with the Lease Modification Project.¹³⁹

But the Draft SEIR also states:

As quantified in the discussion of Impact NOI-1 above, construction noise levels from the Lease Modification Project would range up to 57 dBA Leq. If intake and discharge construction were to overlap, the resulting combined noise levels at these residences would range up to 60 dBA Leq.¹⁴⁰

Ironically, these separate statements fail to inform the public and decision-makers that the "residences" affected by the combined offshore construction are also "separated from the offshore construction noises by the beach parking lot." Therefore, contrary to the Draft SEIR conclusion that noise from onshore development "would not readily combine with impacts from offshore development", those cumulative noise sources will clearly impact the residential property.

Further, the residential property noted in the Draft SEIR is not the only sensitive receptor within range of cumulative impacts from the offshore project and concurrent and/or consecutive noise impacts from nearby onshore demolition and construction.¹⁴¹ The Draft SEIR fails to document the nearby rare coastal

¹³⁷ *Id* at 69.

¹³⁸ *Id*.

¹³⁹ Draft SEIR at 4-144.

¹⁴⁰ *Id* at 4-143.

¹⁴¹ *See eg.* Attachment A: CCC Staff Report (2013) beginning at page 69.

wetlands' habitats and wildlife that would be adversely impacted by the cumulative noise. For example, the CEC documented noise impacts from demolition and re-development of the power plant on wetlands wildlife, but did not include the proposed new Poseidon project's offshore construction in their analysis. Further, neither the CEC review of the HBEC nor the draft Coastal Commission staff report considered the cumulative impacts of demolition and construction from the "Ascon Final Remedy" or the "Magnolia Tank Farm" development.

The 2013 CCC Staff Report noted:

The Energy Commission's review specifically notes that cumulative sound from Poseidon's project and from the power plant project could create a significant adverse noise impact at monitoring locations several hundred feet farther away than these nearby wetland areas.¹⁴²

And it is inadequate to assume that, because the offshore construction noise is a short-term impact it would not be "cumulatively considerable."

The CCC Staff Report found:

The SEIR states that construction-related noise and vibration is expected to be short-term; however, the expected 24-month construction period would occur during at least two, and possibly three, breeding and nesting cycles of the nearby special status bird species in the adjacent habitat. The breeding and nesting season runs from about March 1 to September 15 for most birds and from January 1 to August 31 for raptors. Disturbance of these or other species using or nesting in the adjacent habitat may constitute illegal "take" under the Endangered Species Act.¹⁴³

Similarly, this Draft SEIR finds the impacts from construction of the offshore modifications to the Poseidon project would be short-term – but uses that fact to conclude the impacts are and consequently less than insignificant:

Since construction noise would be temporary, would only occur offshore during daylight hours, would implement noise reduction measures such as mufflers on construction equipment, and would cease upon completion of the Lease Modification Project, potential impacts of offshore construction noise would be less than significant.¹⁴⁴

As is true when any project is analyzed in a piecemeal fashion, each "piece" may seem insignificant unless it is considered cumulatively. So in the present case, if the short-term noise from the offshore construction is part of a sequence of events in the several adjacent developments (including AES, Ascon, Magnolia Tank Farm, Poseidon treatment plant and OCWD potable water delivery system) with short-term excessive noise, the significance would be either much greater short-term noise levels from the concurrent projects and/or much greater duration of excessive noise from consecutive projects.

Therefore, this Draft SEIR fails to document how this new source of noise from the construction of the offshore components changes the severity of noise from the other cumulative projects that are closely related in time and location.

¹⁴² *Id* at 70.

¹⁴³ *Id* at 71.

¹⁴⁴ Draft SEIR at 4-142.

vi. Sea Level Rise.

According to the CCC Staff Report:

The site and desalination facility would be subject to flooding and tsunami runup, both of which would be exacerbated by expected higher sea levels during the life of the project. The City of Huntington Beach has been singled out as being particularly susceptible to sea level rise. A 2013 study determined that up to 5,000 homes in the City, including many that are close to Poseidon's project site, are at risk due to sea level rise by 2020.¹⁴⁵

Further, the CCC Staff Report based the sea level rise analysis on the assumption:

Poseidon has requested that the Commission consider only a 30- to 35-year operating life – until approximately 2050 – and has expressed a willingness to accept a permit based only on that period of operations, even though Poseidon has options to renew its leases and water purchase agreements for an additional 30 years, which could extend the facility's operating life to about 2080.¹⁴⁶

However, because the Draft SEIR seems to assume a project life of 9-years, when the lease expires, it is not clear whether the Draft SEIR assumes impacts until 2026, or a 35-year life expectancy (as in the CCC Staff Report), or a 50-year life expectancy (as recently requested by Poseidon).

Secondly, the scant analysis of sea level rise in the Draft SEIR states:

Industrial buildings in the planning area are at high risk of impacts from sea-level rise due to their high sensitivity and low adaptive capacity. Local subsidence, coupled with sea-level rise, will contribute to higher total water levels.

But simply making a broad statement about sea level rise threats without analyzing the impacts to the project, and the relevance to Coastal Act policies, is inadequate.

The Draft SEIR also analyzes other climate change impacts, and concludes:

Not enough is known about the potential climate change-driven changes to seafloor sediment at the Lease Modification Project site to draw conclusions about effects on the proposed intake screens and diffuser that Poseidon proposes to install on the risers (towers) of the existing Huntington Beach Generating Station (HBGS) subsea pipelines.

Again, the narrow scope of the Draft SEIR, and the illegal fabrication of a separate "Lease Modification Project", has limited the analysis of sea level rise to only the offshore components of the project. That is an example of "piecemealing."

Further, the Draft SEIR fails to consider alternative intake technologies, like slant wells, which are relevant considerations when assessing the impacts of sea level rise. For example, it is well known that sea level rise will exacerbate seawater intrusion into the freshwater portion of the aquifer – undermining the project objective to provide a more reliable regional water supply. It is also known that defending against seawater intrusion can be accomplished by either injecting freshwater into the inland side of the seawater transition zone, or by pumping seawater from the ocean side of the seawater transition zone with

¹⁴⁵ Attachment A: CCC Staff Report at 76.

¹⁴⁶ *Id.*

subsurface slant wells.¹⁴⁷ But because the Draft SEIR fails to look at alternatives to a screened surface intake, these adverse impacts of sea level rise are ignored, as is the analysis of alternatives to minimize the impacts.

Moreover, the SLC has failed to assess new information related to sea level rise and the project's proposed site. A recent report concluded that Huntington Beach is among the coastal communities that are particularly vulnerable to sea level rise.¹⁴⁸ According to the study, the City could see more than a 10 percent of its land chronically flooded by 2100, and under high sea level rise scenarios, the City would see about a quarter of its territory subject to chronic flooding.¹⁴⁹ These new assessments have not been analyzed in any CEQA cumulative impacts analysis.

In conclusion, the publication of more accurate sea level rise predictions since the 2010 SEIR was certified, and since the 2013 CCC Staff Report was prepared, are changed circumstances to both the land-based parts of the project as well as the offshore components. Yet, because the Draft SEIR illegally precludes analysis of changed circumstances surrounding the onshore components of the project, and precludes analysis of alternative intake technologies like slant wells for the offshore part of the project, none of the relevant analyses of sea level rise impacts are included. Therefore, it is impossible for the public or future decision-makers to fully understand the effects of sea level rise on the proposed project site, and consequently the numerous Coastal Act policies relevant to sea level rise.

vii. GHG Emissions and Other Air Quality Impacts.

The CCC Staff Report summarizes:

The construction and operation of major water, energy, telecommunication, and transportation projects can significantly increase emissions of greenhouse gases (GHG) and therefore climate change through global warming, which in turn can cause significant adverse impacts to coastal resources of California. The Coastal Act has a number of provisions that provide authority to take steps to reduce climate change and to adapt to the effects of global warming. These include the Coastal Act's public access and recreation policies (Sections 30220 and 30211), marine resource and water quality policies (Sections 30230 and 30231), the environmentally sensitive habitat area protection policy (Section 30240), and the coastal hazards policy (Section 30253(1) and (2)). Further, Section 30253(4) in part requires development to minimize energy consumption.¹⁵⁰

After a great deal of analysis of energy demand from operation of a seawater desalination facility compared to alternative potable water supplies, the CCC Staff Report concludes:

The development, as proposed, would result in significant adverse effects due to its indirect greenhouse gas emissions. However, as conditioned, the Commission finds the project is in conformity with relevant policies of the LCP and Coastal Act.¹⁵¹

Since the 2013 CCC Staff Report, the other closely related cumulative projects have changed the

¹⁴⁷ Attachment G: Slant Well Report.

¹⁴⁸ Union of Concerned Scientists, *When Rising Seas Hit Home: Hard Choices Ahead for Hundreds of US Coastal Communities* (July 2017); available at <http://www.ucsusa.org/sites/default/files/attach/2017/07/when-rising-seas-hit-home-full-report.pdf>.

¹⁴⁹ *Id.*

¹⁵⁰ Attachment A: CCC Staff Report at 105.

¹⁵¹ *Id.* at 112.

circumstances and analyses of GHG emissions and other air quality degradation, yet no cumulative impact analysis has been conducted. For example, the California Energy Commission's Presiding Member Preliminary Decision (PMPD) considered GHG emissions from construction of the Huntington Beach Energy Center proposal and found:

The 2014 Decision concluded that GHG emissions from demolition and construction would be temporary and intermittent, and not continue during the life of the project. The 2014 Decision did not adopt any specific conditions of certification to mitigate short-term demolition and construction impacts. However, Condition of Certification **AQ-SC5** would require implementation of best practices to reduce any GHG emissions from demolition and construction equipment. Therefore, the 2014 Decision concluded that GHG emissions from demolition and construction activities resulted in a "less than significant" impact.¹⁵²

And:

Despite having higher GHG emissions than the 2014 Project, we find that demolition and construction of the Amended Project will not have a substantial adverse impact on GHG emissions. This conclusion arises from the short-term intermittent nature of the emissions. In addition, the control measures used to address criteria pollutant emissions such as limiting idling times and requiring new equipment that may be compatible with low-carbon fuels (e.g., bio-diesel and ethanol) will reduce GHG emissions from construction vehicles and equipment.¹⁵³

But the HBEC PMPD did not consider nor analyze the cumulative impacts of additional GHG emissions from the proposed Poseidon project amendments. Nor does this Draft SEIR adequately identify and analyze the cumulative impacts of the HBEC demolition and construction in combination with the proposed Poseidon project amendments. And none of the other closely related projects -- Ascon remediation, Magnolia Tank Farm development and OCWD desalination delivery system -- are considered for cumulative impacts from GHG emissions and other cumulative air quality impacts.

For just two examples of undocumented other cumulative air quality impacts, the HBEC PMPD included:¹⁵⁴

In October 2014, the Energy Commission approved the Huntington Beach Energy Project (2014 Project). In the 2014 Decision, we reviewed the project's potential impacts on air quality, noting that demolition, construction, commissioning, and operation activities occurred concurrently throughout the construction time period so that there may be some overlap in potential air quality impacts.

We found that particulate matter emissions from construction would cause a significant impact because they would cause new exceedances or contribute to existing violations of PM10 and PM2.5 ambient air quality standards.

The DEIR for Ascon noted numerous concerns for cumulative impacts, including for example:

With respect to short-term emissions, implementation of the RAP is predicted to result in a cumulatively considerable net increase of a criteria pollutant for which the region is

¹⁵² See Attachment C1: HBEC PMPD at 4.1-1.

¹⁵³ *Id* at page 4.1-5.

¹⁵⁴ See eg. Attachment C1: HBEC PMPD at 4.2-4.

nonattainment under applicable federal and state AAQS (including releasing emissions which exceed quantitative thresholds for ozone precursors). Even with all feasible emissions control measures, impacts would be significant and unavoidable.¹⁵⁵

It is reasonably foreseeable that demolition and construction of the Magnolia Tank Farm project will contribute PM_{2.5}, PM₁₀, ozone precursors and numerous other cumulatively significant air quality degradation to the adjacent community and ESHA.

Clearly there have been substantial changes to closely related projects since the 2010 SEIR was certified and subsequent to the 2013 CCC Staff Report. And it is equally clear the cumulative impacts will be significant and relevant to the Coastal Commission's analysis of the project and the proposed changes to the project.

The Draft SEIR is wholly inadequate to inform the public and decision-makers about the significant impacts from GHG emissions and other air quality degradation. The Draft SEIR must be re-written and re-circulated for public comment.

F. THE STATE LAND COMMISSION MISREPRESENTS THE DESALINATION OCEAN PLAN AMENDMENT AND THE ALTERNATIVES FOR MEETING THE PROJECT OBJECTIVES.

The SLC has failed to properly evaluate the State Water Board's Desalination Ocean Plan Amendment (OPA), and thus has omitted critical alternatives that could mitigate significant impacts of the project. The CEQA guidelines specify that "[t]o the extent possible, the EIR process should be combined with the existing planning, review, and project approval process used by each public agency."¹⁵⁶ To the fullest extent possible, the lead agency should integrate CEQA review with these related environmental review and consultation requirements.¹⁵⁷ Toward that end, agencies are encouraged to "[c]onsult[] with state and local responsible agencies before and during preparation of an environmental impact report so that the document *will meet the needs of all the agencies which will use it.*"¹⁵⁸ The purpose of an environmental impact report is to "provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project."¹⁵⁹

As described above in Section B (3) of these comments, this Draft SEIR cannot defer this CEQA mandate for the several responsible agencies to prepare separate CEQA documents. Further, as described above in Section D (1) of these comments, the Draft SEIR must adequately cite and analyze the relevant laws and policies to be enforced by responsible and trustee agencies. Finally, as noted above, the narrow scope of the Draft SEIR, and the creation of a separate "Lease Modification Project", fails to describe a "project" that will meet the stated objectives and/or preferred alternatives that would meet the project objectives. The SLC effectively does what CEQA expressly prohibits – the DSEIR creates a "project" for each separate agency approval.¹⁶⁰

But the citation and analysis of the OPA goes beyond just inadequate. By failing to adequately describe and analyze the preferred alternatives for intakes and discharges, and instead only citing exceptions to those rules, the Draft SEIR discussion actually misleads the public to believe the fictional "Lease

¹⁵⁵ See eg. Attachment C2: Ascon DEIR at page 4.2-41; See also Ascon FEIR.

¹⁵⁶ Guidelines, § 15080.

¹⁵⁷ Guidelines, § 15124, subd. (d)(1)(C), italics added; see also Guidelines, § 15006, subd. (i).

¹⁵⁸ Guidelines, § 15006, subd. (g). (*emphasis added*).

¹⁵⁹ § 21061; see § 21002.1, subd. (a). (*emphasis added*).

¹⁶⁰ Guidelines §15378 (c).

Modification Project” is compliant with the new regulations. Ironically, the Draft SEIR creates a project that cannot meet the stated objectives in the Draft SEIR.

Fully informing the public is a fundamental element in both the letter and intent of CEQA. The Draft SEIR’s inadequate and misleading discussion of the OPA is just one more discreet example why the Draft SEIR cannot be allowed to piecemeal the analysis by fabricating a “continuing role as a responsible agency” and a fictional “Lease Modification Project.”

1. The State Water Board’s Desalination Amendment must be fully considered in the SEIR.

Just like the Once-Through Cooling Policy was fully considered in the 2010 Subsequent EIR, the SLC must fully consider the State Water Board’s new Desalination OPA. It is important to note that the 2010 Subsequent EIR was the result of changed circumstances caused by the State regulating seawater intakes for cooling water. The City rightly decided the “Once-Through Cooling Policy” required a full Subsequent EIR for changes to the previously proposed co-located facility. Here, the adoption of the OPA is equally, if not a more significant changed circumstance. Yet, even given more reason to complete a thorough Subsequent EIR now, contrary to the City’s reasoning in 2010, State Lands has determined a narrowly focused Supplemental review is adequate. The inadequate analysis of the OPA highlights the foundational flaw in the Draft SEIR. The adoption of the OPA is the reason for Poseidon requesting the lease modification. The SLC is the “next agency with discretionary authority, the lease modification application requires a Subsequent EIR to analyze changes to the “project” analyzed in the 2010 Subsequent EIR certified by the City, and acted on by the City and the SLC. But the Draft SEIR does not adequately describe and analyze the Ocean Plan amendment, and does not apply those changed circumstances to the project approved in the 2010 Subsequent EIR.

The Draft SEIR states: “Since 2010, a relevant update has been the SWRCB’s adoption of the Desalination Amendment, which addresses effects of the construction and operation of seawater desalination facilities.”¹⁶¹ But the Draft SEIR goes on to narrowly select and cite portions of the OPA, failing to adequately inform the public and the future decisions of responsible agencies.

The State Lands Commission needs to consider the State Water Board OPA in its entirety – not only the parts Poseidon wishes the SLC to consider. The State Water Board’s OPA was adopted in 2015 and sets forth standards for minimizing marine life mortality and ensuring brine discharges do not exceed salinity water quality standards. According to Poseidon, the modifications to the Project are designed to enhance marine life protection and comply with requirements of the State Water Board’s OPA. But the draft SEIR fails to fully inform the public that, in fact, the “Modified Lease Project” falls far short of the protections in the OPA.

And while the RWQCB may well know the rules and fully enforce the OPA, that knowledge by a responsible agency does not relieve the SLC’s duty to include the discussion in this Draft SEIR – as decided in *Banning Ranch*.¹⁶²

The draft SEIR then goes on to describe how Poseidon intends to comply with the OPA.

2. The State Lands Commission must analyze the seawater intake preferred alternatives.

The Draft SEIR narrowly states that the modifications Poseidon is seeking in the lease amendment are not the policy preferences in the OPA:

¹⁶¹ Draft SEIR at 4-15.

¹⁶² See Section D(1) above.

The Santa Ana Regional Water Quality Control Board (RWQCB), in coordination with the SWRCB, is responsible for determining the HB Desalination Plant's compliance with Water Code section 13142.5, subdivision (b) per the Desalination Amendment, which (if the RWQCB determines that subsurface intakes are infeasible) includes the following requirements to protect marine life associated with desalination project surface intake and discharge...

Then, without including the Ocean Plan amendment mandatory consideration of the feasibility of subsurface intakes, the Draft SEIR states:

Prior to the permanent stand-alone conditions, Poseidon would retrofit the existing seawater intake pipeline with the offshore 1 mm wedgewire screen manifold that, according to Poseidon, would achieve a through-screen velocity of 0.5 feet/second or less, in accordance with requirements of California Ocean Plan Section III.M.2.d(1)(c).

The Draft SEIR fails to inform the public and decision-makers that the expressed preference in the OPA is to utilize sub-surface intakes when feasible. The Draft SEIR states:

Appendix A summarizes relevant state and federal regulations, including new regulations since the City and CSLC adopted findings related to their 2010 Project approvals, including the SWRCB (2015b) adoption of the Desalination Amendment to the California Ocean Plan (Ocean Plan).¹⁶³

However, Appendix A does not include reference to, or a summary of, the OPA in the section on "Biological Resources."

And because the narrow focus of this Draft SEIR has precluded discussion of any alternative intake technologies or sites to minimize adverse impacts, the public is left unaware of the Ocean Plan "rule" preferring sub-surface intakes, and is instead left thinking screens on the existing pipe (the exception to the rule) comply with the law.

The OPA dictates the preferred alternative of subsurface intakes as the best available technology for minimizing marine life mortality. The SLC cannot simply ignore this core component of the OPA and only consider Poseidon's preferred substandard of a screened intake. To fully inform the public and assist the Regional Board's deliberations, the SEIR needs to include a thorough and adequate analysis of subsurface intakes.

The Draft SEIR implies that subsurface intakes including slant wells were considered by the ISTAP panel and found infeasible based on:

The alternatives eliminated in ISTAP Phase 1 were based primarily on the specific hydrogeology of the Huntington Beach area and the configuration of the groundwater basin near the coast.¹⁶⁴

The alternatives eliminated in ISTAP Phase 1 were based primarily on the specific hydrogeology of the Huntington Beach area and the configuration of the groundwater basin near the coast.

¹⁶³ Draft SEIR at 4-25.

¹⁶⁴ Draft SEIR, Table 5-3 at 5-9.

That is an inaccurate characterization of the ISTAP report. The ISTAP panel discontinued looking into subsurface wells based on a comment letter submitted by Orange County Water District expressed their opposition to any technology option that would draw down freshwater from the aquifer. The OPA is clear that drawdown of freshwater is not an unconditional finding of infeasibility.¹⁶⁵ Further, there was no OCWD's concern about freshwater drawdown was not supported by any scientific evidence concluding that slant wells were technically infeasible before the ISTAP Phase One was concluded – and wells were not considered in Phase Two. In fact, slant wells at this site may be technically feasible and may actually improve the efficiency of the seawater intrusion barrier.¹⁶⁶

After the ISTAP Panel was concluded, Poseidon's consultants, Geosyntec Consultants, produced a study of the feasibility of slant wells at this site. In brief, the attached Slant Well Study suggests that, not only would slant wells not have an adverse impact on the groundwater basin, slant wells may actually improve protection from seawater intrusion. The study goes on to suggest more studies before drawing conclusions that slant wells are infeasible.

Further, the feasibility of preferred intakes, like slant wells and other subsurface intakes, is often a function of how much water will be withdrawn through the intake structure.¹⁶⁷ That in turn, is a function of how much product water is absolutely needed, as laid out in the OPA.¹⁶⁸ Therefore, the project "Purpose" and "Alternatives" sections of the SEIR are not just required for CEQA analyses of the Project as a whole, including alternatives of a smaller sized treatment facility to simultaneously meet the changed demand since 2010, but changes to the 2010 SEIR are necessary to adequately describe the OPA process for analyzing the feasibility of subsurface intakes -- they are both CEQA and OPA requirements for analyzing preferred alternatives to the proposed "screened intake."

The SLC should not limit its analysis to the co-located site that was self-selected by Poseidon. The OPA requires an analysis of alternative sites.¹⁶⁹ Since the 2010 SEIR was certified, changed circumstances include finalization of the license issued by the California Energy Commission ensuring the cooling water intake will be abandoned by AES in 2020. Therefore, Poseidon's co-location with the power plant is not necessarily the best site anymore. Further, the project must be analyzed for preferred alternative sites, despite the Draft SEIR unsubstantiated claim that Poseidon has a "vested right" to use the AES site. We do not agree that Poseidon actually maintains a "vested right" in the amended lease issued in 2010. But more importantly, the Draft SEIR does not explain how that "vested right" has any relevance to the OPA and/or CEQA mandates to review alternative sites.

The SEIR needs to thoroughly analyze alternative sites that may be more feasible for subsurface intakes. Given that the SLC is the lead agency, and should undertake this subsequent environmental review with respect to the entire project, and all relevant permits, the assertion that analysis of other locations is encompassed in the "no project" alternative is legally inadequate. Further, the SEIR must review whether alternative sites would minimize all the cumulative impacts from developing the desalination plant at the AES site – compounding the adverse impacts from multiple demolition and development projects in close proximity both in time and location.

¹⁶⁵ See State Water Resources Control Board, Water Quality Control Plan: Ocean Waters of California; Section M, 2.d.(1).a.i. at 39-40; available at http://www.waterboards.ca.gov/water_issues/programs/ocean/docs/cop2015.pdf.

¹⁶⁶ Attachment G: Slant Well Report.

¹⁶⁷ *Id.*

¹⁶⁸ See State Water Resources Control Board, Water Quality Control Plan: Ocean Waters of California; available at http://www.waterboards.ca.gov/water_issues/programs/ocean/docs/cop2015.pdf.

¹⁶⁹ See State Water Resources Control Board, Water Quality Control Plan: Ocean Waters of California; Section M, 2.b. at 37-38; available at http://www.waterboards.ca.gov/water_issues/programs/ocean/docs/cop2015.pdf.

3. *The State Lands Commission needs to analyze the change for the need of the project as part of its Alternatives analysis.*

Much has changed with water management in Orange County, many of those changes making its water supply more reliable than it was in 1999 when Poseidon first proposed this idea. However, Poseidon's proposal to include 50 million gallons a day (MGD) into the water supply has not changed since 1999.

Since then, in January 2008, the Orange County Water District's (OCWD) Groundwater Replenishment System (GWRS) became operational, originally producing 70 MGD of highly purified water. In 2015, the project was expanded to produce 100 MGD. Ultimate capacity for the GWRS is projected at 130 MGD after infrastructure is built to increase wastewater flows from Orange County Sanitation District (OCSD) to the GWRS.

Orange County residents and businesses have also made significant improvements to conserving water that was being wasted in 1999. Despite our economy and population continuing to grow, we are using cumulatively less water now than we did in 1999. And most importantly, new water demand projections revealed in February 2016 by Municipal Water District of Orange County showed significantly reduced water demand than previously reported – a difference of about 90,000 acre feet less than predicted in 2010. New reporting estimates that demand by 2040 will be closer to 435,000 acre-feet as opposed to 525,000 acre-feet per year recently estimated by OCWD. These are critical new facts that need to be considered in the SEIR "purpose" and "alternatives" section for the Project. Further, these demand predictions are a critical part of the RWQCB's decision whether Poseidon will be allowed an exception to the OPA preferred intake technology – subsurface intakes.¹⁷⁰

Moreover, Los Angeles County is now building a GWRS project similar to the OCWD's GWRS project. The planned Los Angeles Indirect Potable Reuse/Ground Water Replenishment System project will provide both indirect and direct benefits by adding 67,000 acre feet of water to the regional supply per year during the project's first operational phase. The proposed first phase includes 30 miles of distribution lines to replenish both Los Angeles County and Orange County groundwater basins. Approximately 168,000 acre-feet per year will be produced to replenish groundwater systems in additional operational phases – resulting in reduced regional reliance on imported water and greater "local reliability" compared to 2010.

G. THE STATE LANDS COMMISSION'S MARINE RESOURCE IMPACTS ANALYSIS IS LEGALLY FLAWED.

The Draft SEIR defines a fictional "Lease Modification Project", and then analyzes both the construction and "operation" of that narrow project description. However, it is inconceivable, and not explained in the Draft SEIR, how the screens and diffusers "operate" without a direct connection to the desalination treatment facility – including the onshore vaults and pumps that move water in through the screens and out through the diffusers. If the SLC insists that the "Lease Modification Project" is the only project under review, and that narrow project has no connection to changed circumstances at the treatment plant site and delivery system, then there is no need for the Draft SEIR to review the operational impacts from the modifications – the screens and diffusers do not "operate" without all the other components of the entire project.

Nonetheless, the analysis of the impacts on marine resources is inadequate. The Draft SEIR must be re-written and re-circulated for purposes of comments by the public and the Department of Fish and Wildlife as a "trustee agency."

¹⁷⁰ See State Water Resources Control Board, Water Quality Control Plan: Ocean Waters of California; Section M.2.d. at 39-40; available at http://www.waterboards.ca.gov/water_issues/programs/ocean/docs/cop2015.pdf.

1. *The State Lands Commission failed to adequately evaluate the Project's impacts on federally endangered and threatened marine species.*

The SLC cannot ignore significant impacts to federally endangered and threatened marine species. The SLC contradicts itself in the Draft SEIR analysis of threatened and endangered species. The Draft SEIR states that “sea floor and littoral water habitats occurring near the HBGS discharge site are not home to any threatened or endangered marine species.”¹⁷¹ However, only two pages later, the SEIR states that sea turtles that “occur in Southern California and *may occur in the Lease Modification Project area* include the green sea turtle (*Chelonia mydas*) and olive ridley sea turtle (*Lepidochelys olivacea*), which are listed as federally threatened species, and the loggerhead sea turtle (*Caretta caretta*) and leatherback sea turtle (*Dermochelys coriacea*), which are listed as federally endangered species.”¹⁷² If threatened and endangered species may occur in the Project area, then the SLC is legally obligated to analyze impacts on those listed species.

The Endangered Species Act (ESA) affords broad protections to threatened and endangered species. The ESA is “the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.”¹⁷³ Its fundamental purposes are “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved [and] to provide a program for the conservation of such endangered species and threatened species”¹⁷⁴

To achieve these objectives, the ESA directs the USFWS to determine which species of plants and animals are “threatened” and “endangered” and place them on the list of species afforded protection under the ESA.¹⁷⁵ An “endangered” species is one “in danger of extinction throughout all or a significant portion of its range,” and a “threatened” species is “likely to become endangered in the near future throughout all or a significant portion of its range.”¹⁷⁶ Once a species is listed, the ESA provides a variety of procedural and substantive protections to ensure not only the species’ continued survival, but also its ultimate recovery. The Supreme Court has noted that “Congress has spoken in the plainest words, making it clear that endangered species are to be accorded the highest priorities.”¹⁷⁷

Section 9 of the ESA prohibits any “person” from “taking” or causing take of any member of an endangered species.¹⁷⁸ This take prohibition also applies to threatened species such as the western snowy plover.¹⁷⁹ The term “take” is defined broadly, need not be lethal, and includes to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect” or cause another to do so.¹⁸⁰ The U.S. FWS has further defined “harass” to include “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, including breeding, feeding, or sheltering.”¹⁸¹ In addition, “harm” is defined to “include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.”¹⁸²

¹⁷¹ Draft SEIR at 4-21

¹⁷² Draft SEIR at 4-23.

¹⁷³ *Tennessee Valley Auth. v. Hill* (“Hill”), 437 U.S. 153, 180 (1978).

¹⁷⁴ 16 U.S.C. § 1531(b).

¹⁷⁵ 16 U.S.C. § 1533.

¹⁷⁶ *Id.* at §§ 1532(6), (20).

¹⁷⁷ *Hill*, 437 U.S. at 194.

¹⁷⁸ 16 U.S.C. § 1538(a).

¹⁷⁹ *Id.* at § 1533(d); 50 C.F.R. § 17.31.

¹⁸⁰ 16 U.S.C. § 1532(19).

¹⁸¹ 50 C.F.R. § 17.3.

¹⁸² *Id.*

The ESA’s legislative history supports “the broadest possible” reading of the prohibition against take.¹⁸³ “Take” includes direct as well as indirect harm and need not be purposeful.¹⁸⁴ Present or future harms qualify as take: “an imminent threat of harm . . . falls easily within the broad scope of Congress’ definition of ‘take.’”¹⁸⁵

The ESA authorizes private enforcement of the take prohibition through a broad citizen suit provision. “[A]ny person may commence a civil suit on his own behalf to enjoin any person, including . . . any . . . governmental instrumentality or agency . . . who is alleged to be in violation of any provision of [the ESA]”¹⁸⁶ Citizens may seek to enjoin both present activities that constitute an ongoing take and future activities that are reasonably likely to result in a take.¹⁸⁷ Courts have held that “the language and legislative history of the ESA, as well as applicable case law, support our holding today that a showing of a future injury to an endangered or threatened species is actionable under the ESA [citizen suit provisions].”¹⁸⁸ Upon a showing of “imminent threat of injury to wildlife,” the injury requirement of the Secretary’s definition of “take” and “harm” would be satisfied.¹⁸⁹ The ESA’s citizen suit provision also provides for the award of costs of litigation, including reasonable attorney and expert witness’ fees.¹⁹⁰

Under section 10 of the ESA, a non-federal entity such as a developer can avoid potential liability for taking a threatened species by obtaining an incidental take permit.¹⁹¹ In exchange for permission to “take” a listed species pursuant to an ITP, the permit applicant must commit to implement a plan that “conserv[es]” – *i.e.*, facilitates the recovery of – the species.¹⁹² This plan is called a Habitat Conservation Plan and it must delineate “the impact which will likely result from such taking” and the “steps the applicant will take to minimize and mitigate such impacts”¹⁹³

2. *The State Lands Commission failed to analyze significant impacts to Marine Protected Areas.*

The need to safeguard the long-term health of our marine environment was recognized by the California Legislature in 1999 with the passage of the Marine Life Protection Act (MLPA). This law aims to protect California’s marine natural resources through the establishment and ongoing stewardship of a statewide network of marine protected areas (MPAs) using sound science. California’s MPAs are intended to protect the diversity and abundance of marine life, the habitats they depend on, and the integrity of marine ecosystems, including by ensuring the movement of marine organisms, or “connectivity,” between MPAs.¹⁹⁴ The Southern California MPAs went into effect on January 1, 2012 from Point Conception

¹⁸³ *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687, 704-05 (1995).

¹⁸⁴ *Id.* at 704; *see also Nat’l Wildlife Fed’n v. Burlington N. R.R.*, 23 F.3d 1508, 1512 (9th Cir. 1994).

¹⁸⁵ *Forest Conservation Council v. Rosboro Lumber Co.*, 50 F.3d 784, 785 (9th Cir. 1995).

¹⁸⁶ 16 U.S.C. § 1540(g).

¹⁸⁷ *Nat’l Wildlife*, 23 F.3d at 1511.

¹⁸⁸ *Forest Conservation Council v. Rosboro Lumber Company*, 50 F.3d 781, 783 (9th Cir. 1995); 50 F.3d at 783.

¹⁸⁹ *Id.*; *see also Animal Welfare Institute v. Beech Ridge Energy*, 675 F.Supp 2d 540 (D. Md. 2009) (enjoining construction of wind turbines until an ITP is obtained by developer to protect Indiana Bat).

¹⁹⁰ 16 U.S.C. § 1540(g)(4).

¹⁹¹ 16 U.S.C. § 1539(a)(1)(B).

¹⁹² *Id.* at §§ 1539(a)(1)(B), (a)(2)(A); *see also Sierra Club v. U.S. Fish & Wildlife Serv.*, 245 F.3d 434, 441-42 (5th Cir. 2001) (“[c]onservation’ is a much broader concept than mere survival” because the “ESA’s definition of ‘conservation’ speaks to the recovery of a threatened or endangered species” (emphasis added)).

¹⁹³ 16 U.S.C. § 1539(a)(2)(A).

¹⁹⁴ *See Fish and Wildlife Code sections 2851, 2853; see also Gaines, Steven D., et al., Designing marine reserve networks for both conservation and fisheries management*, 107(43) *Proceedings of the National Academy of Sciences* 18286 (Oct. 26, 2010) (describing the purposes and intended functions of MPAs and MPA networks).

(Santa Barbara County) to the California-Mexico border, including the Channel Islands.¹⁹⁵ Several of the region's MPAs, including a marine reserve and multiple "no-take" state marine conservation areas, are within 25 miles of the proposed project site. The SLC has legally committed to avoiding and mitigating any significant impacts that the project may have on these MPAs, consistent with its statutory and common law public trust authorities, pursuant to a memorandum of understanding on implementation of the state's MPA network (MPA MOU).^{196 197}

The Southern California MPAs were established after the adoption of the Poseidon project's 2010 SEIR, and accordingly their presence constitutes changed circumstances, with associated unreviewed environmental impacts, that must be described and analyzed in a subsequent EIR. More specifically, in recognition of the statutory and regulatory purposes and goals of the MPAs, as well as its commitments under the MPA MOU, the SLC should assess the Project's impacts on the species, habitats, and ecosystems that are located within the nearby MPAs; on the MPAs' ability to function as a network; and on the MPAs' ability to provide long-term ecological and other benefits for California's marine ecosystems.¹⁹⁸ However, the SLC performs no impacts analysis whatsoever of the proposed Project on nearby MPAs. Instead, the SLC only states that the "nearest MPA is the Bolsa Chica State Marine Conservation Area, which is approximately 4.3 miles northwest, along the coast."¹⁹⁹ Stating the proximity of the Project to the nearest MPA is nowhere near a legally sufficient analysis of the project's impacts on California's MPA network.^{200 201} The Draft SEIR fails to consider whether the project might draw its source water from nearby MPAs, and, if so, what impact this might have.

To understand, avoid, and fully mitigate any potential project impacts to Southern California MPAs, the SLC must, as part of its required CEQA review, consult with the California Department of Fish and Wildlife (DFW) which is the CEQA trustee agency with jurisdiction over living marine resources, and with express and special responsibility to protect nearby MPAs from the adverse impacts of the project. The MLPA directs DFW, when reviewing the project, to "highlight [potential] impacts [to MPAs] in its analysis and comments related to the project and shall recommend measures to avoid or fully mitigate any impacts that are inconsistent with the goals and guidelines of this chapter or the objectives of the MPA."²⁰² The DSEIR shows no evidence that the SLC has consulted with DFW or that the SLC itself has taken any subsequent steps to avoid, minimize, and mitigate the project's impacts to nearby MPAs.

¹⁹⁵ Guide to the Southern California Marine Protected Areas, pg. 2 (March 2016); available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=43293&inline=true>.

¹⁹⁶ See Memorandum of Understanding for Implementation of the California Marine Life Protection Act, Paragraphs 3.8 and 4.3 (July 15, 2015) (signed by SLC's Executive Officer on Feb. 25, 2015), available at http://www.opc.ca.gov/webmaster/media_library/2016/08/151104-FINAL-MPA-implementation-MOU_scannedsigns.pdf.

¹⁹⁷ Section 2860(b) of the MLPA states that "the taking of a marine species in a marine life reserve is prohibited for any purpose, including recreational and commercial fishing."

¹⁹⁸ See generally California Department of Fish and Wildlife, 2016 Master Plan for Marine Protected Areas, Appendix F: South Coast MPAs (2016), pages F-4 through F6 (describing regional MPA goals including ensuring species and habitat protection and ensuring ecological connectivity).

¹⁹⁹ Draft SEIR at 4-23.

²⁰⁰ The CCC identified the project's potential impacts on MPA network connectivity and functioning as an issue of particular concern in its review of the project in 2013. It stated that "Integral to [MPA] network function is the idea that MPAs would act as a series of "stepping stones," allowing organisms originating in one MPA to drift with the currents and settle in the next protected area." See Attachment A: California Coastal Commission Staff Report Filed: 6/6/13 for Hearing Date: 11/13/13 for Appeal No.: A-5-HNB-10-225, Application No.: E-06-007, Applicant: Poseidon Water; quoted in the Tenera report.

²⁰¹ See Attachment A: California Coastal Commission Staff Report Filed: 6/6/13 for Hearing Date: 11/13/13 for Appeal No.: A-5-HNB-10-225, Application No.: E-06-007, Applicant: Poseidon Water; quoted in the Tenera report.

²⁰² Fish and Wildlife Code section 2862.

In addition, the SLC should consult with the California Fish and Wildlife Commission (FGC), which has authority to regulate the taking of marine species in MPAs²⁰³, to ensure the Draft SEIR addresses any concerns that FGC has raised and any guidance that it has provided. In a February 1, 2017 FGC letter to the Coastal Commission, the FGC urges that, “due to the potential impacts to marine resources, open ocean intakes be avoided.” The FGC goes on to state that “facilities with open ocean intakes near MPAs can have direct impact on marine resources through incidental take and the reduction of critical larval connectivity between MPAs as marine life is pulled into the plant and removed from the ecosystem.” The SLC must incorporate the FGC’s findings, particularly FGC’s statement that impacts from “open ocean intake have the potential to undermine the ability of our MPAs to function as a network, weakening the science-based framework on which they were created and potentially their ability to generate expected long-term benefits.”

The SLC needs to complete an analysis of the Project’s impacts on the Southern California MPA network that was created after certification of the 2010 SEIR. The SLC should consult with DFW and FGC, and incorporate DFW’s finding and recommendations as well as FGC’s February 1st, 2017 letter²⁰⁴ into the record.

3. *The State Lands Commission needs to reconsider significant impacts to water quality and marine resources due to changed circumstances and new information.*

Poseidon’s Carlsbad facility has been cited by the State Water Resources Control Board and the San Diego Regional Water Quality Control Board for multiple permit violations, including water quality exceedances. Since December 2015, Poseidon has had water quality violations including two spills - one of which reached the ocean - and ongoing monitoring failures. In April 2016, the San Diego Water Board sent a notice of violation for toxicity exceeding their effluent limitations (as evidenced by the fertility of sea urchin eggs not reaching the same level as the control group) in the discharge water prior to it being mixed with the power plant wastewater. Thirteen violations were issued between September 2015 and June 2016, and eight of these were for Chronic Toxicity. The toxicity has continued every month to present.²⁰⁵ Poseidon is supposed to identify what is causing the toxicity and control it. They’ve sent one progress report to date, in July 2016, but have not yet identified the source and no penalties have been imposed.

These spills and the water quality impacts will not be resolved by the inclusion of screens, yet pose substantial threats to ocean water quality in the same area.

This history, from the first major desalination facility permitted in California, especially given the same project proponent, illustrates the foreseeable increased risk for violations, and is cause for increased concern about more serious negative impacts on surrounding water quality, marine environment, and species. Stricter monitoring, mitigation, and cease and desist provisions are necessary in light of this increased risk.

Further, because the Draft SEIR is illegally narrow and only considers water quality degradation from the installation of diffusers and screens, there is no cumulative impacts analysis of potential spills from the construction and operation of the Poseidon treatment plant, nor polluted runoff and spills from development of the closely related adjacent projects. This is particularly offensive given that the “Ascon Final Remedy”, demolition of the Huntington Beach Generating Station and demolition of the Magnolia

²⁰³ Fish and Wildlife Code section 2860.

²⁰⁴ Attachment E: Letter from CA Fish & Game Commission to CA Coastal Commission; *See also* Letter from Professor Warner to CA Coastal Commission.

²⁰⁵ *See* State Water Resources Control Board. ESMR At-A-Glance Report. <http://bit.ly/2i6S0P6>.

Tank Farm all require removal and disposal highly contaminated soils and other hazardous materials.

4. *The State Lands Commission needs to analyze the significant impacts the Project will have on fisheries.*

The Draft SEIR includes an impact assessment by Dr. Raimondi, in which it is explained:

Regarding whether there would be a “substantial adverse effect” on any special-status species, there is insufficient information to address the question of effects on special status species. This is largely a feature of the modeling approach, which works well for species for which there is sufficient data (meaning observations of that species) to make robust estimates of proportional mortality. Two features render species of special interest (typically) unfit for evaluation: larvae of species of special interest are almost by definition rare (e.g. giant sea bass) and are sometimes smaller than mesh size used for sampling (e.g. some stages of black abalone). This means that the absence of such species from either the formal evaluation process (i.e. the ETM/APF modeling) or from the list of species sampled in the field studies (as in the Huntington Beach evaluation) should not be taken to indicate that such species will not be entrained or that there will be no impact to these species resulting from entrainment.²⁰⁶

In brief, this expert statement indicates there is no support for the Draft SEIR conclusion of no impact to special status species.

The Draft SEIR Appendix F1 states:

The CEQA analysis must conclude whether the levels of entrainment defined above would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service or cause any affected populations to fall below self-sustaining levels. *Entrainment numbers are unlikely to be informative with respect to this question. Much more important are the results of ETM/APF calculations. However, even these numbers require context.* The key consideration is whether the determination is based on the results from the particular study (e.g., Pm values based on Huntington Beach) or from a cumulative impact assessment where there is an assessment of the impact of loss due to a new project added to the loss based on existing projects. This cumulative estimate could then be placed in the context of the population status of the target species. For example a proportional mortality (Pm) of 0.02 for species in a given source water body may be unimportant or very important based on: (1) the cumulative Pm from the proposed and current projects and (2) the status of the species (e.g. is it in decline, stable or growing). *In my opinion, the information sufficient to address cumulative impacts quantitatively was not provided.*²⁰⁷

Clearly, given this expert opinion, any findings in the Draft SEIR of no significant cumulative impacts from marine life mortality are unsupported. And importantly, “cumulative impacts” or “cumulative projects” would primarily include commercial and recreational fisheries, and the status of the affected species populations. Further, settled CEQA law prohibits use of a “ratio theory” to determine if impacts are cumulatively considerable. In the seminal *Kings County*²⁰⁸ case, the court found:

²⁰⁶ Draft SEIR Appendix F1: Raimondi Report at 8

²⁰⁷ Draft SEIR Appendix F1: Raimondi Report at 8.

²⁰⁸ *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d, 692, 270 Cal.Rptr. 650.

Acknowledging that cumulative ozone impacts of valley-wide energy development projects were potentially significant, the EIR preparers nevertheless found that the project would not have a significant cumulative impact because it would contribute less than one percent of area emissions for all criteria pollutants in the valley.²⁰⁹

Much like this case, the EIR theorized that because the “ratio” between the project’s contribution to the impact was relatively small, it was insignificant. The court went on to find the EIR “improperly focused upon the individual project’s relative effects and omitted facts relevant to an analysis of the collective effect this and other sources will have upon air quality.”²¹⁰ And the court concluded this approach “avoids analyzing the severity of the problem and allows the approval of projects which, when taken in isolation, appear insignificant, but when viewed together, appear startling.”²¹¹

Similar to the *Kings County* example, in this case, Dr Raimondi is correct to state:

...a proportional mortality (Pm) of 0.02 for species in a given source water body may be unimportant or *very important* based on: (1) the cumulative Pm from the proposed and current projects and (2) the status of the species (e.g. is it in decline, stable or growing).

We agree with Dr. Raimondi’s conclusion that in this case “the information sufficient to address cumulative impacts quantitatively was not provided.”²¹²

It is critical for the Department of Fish and Wildlife to compare the entrainment and impingement data to their list of “overfished species” and other relevant population assessments before the Draft SEIR can make an informed conclusion on the “significance” of cumulative impacts from multiple sources marine life mortality, as well as the status of the numerous species’ populations. If the marine life species populations are already significantly impacted, any additional impact must be considered cumulatively significant.

Further, the Draft SEIR should not assume the addition of screens on an open ocean intake minimizes mortality from impingement. While it may seem rhetorical, it is likely some of the assumed reduction in entrainment only adds to the non-screened impingement mortality. The Raimondi Report states: “With the addition of proposed wedgewire screens, and the estimated intake velocity, impingement loss will for all practical purposes be avoided.”²¹³ However, the report then states: “If the maximum body axis for all of the three planes exceeds the screen size then the organism will not be able to get through the screen.”²¹⁴ Without some further explanation, it is inconsistent to say that an organism that comes into contact with the screen surface, but is too large to enter through the screen slot size, is not “impinged” on the screen.

Marine life populations and marine ecosystems are poorly understood in the science community. Even important commercially valuable species often have limited data on survival strategies, life histories and even population assessments. From a policy perspective, this paucity of scientific certainty argues for a “precautionary approach” to decisions affecting marine ecosystems. And that approach can only be fully understood by the public and decision-makers when the Draft SEIR is re-written and re-circulated with a more thorough analysis of what is known in the scientific community, as well as what is not known. Given subsurface intakes at the proposed site, or alternative sites, are likely feasible²¹⁵, CEQA mandates

²⁰⁹ *Id.*

²¹⁰ *Id.*

²¹¹ *Id.*

²¹² *Id.*

²¹³ *Draft SEIR Appendix F1: Raimondi Report at 3.*

²¹⁴ *Id.*

²¹⁵ *See Attachment G: Slant Well Report.*

identification of this type of subsurface intake as the "Superior Alternative" for minimizing marine life mortality.

A full and thorough discussion of marine resource impacts would also allow the SLC to evaluate all available scientific information as it conducts its separate and independent evaluation under the public trust doctrine. That doctrine imposes an affirmative duty on the SLC to protect public trust marine resources and to consider and avoid or minimize impacts to them, whenever feasible, before approving any use of public trust lands. See, e.g., *San Francisco Baykeeper v. Cal. State Lands Commission*, 243 Cal. App. 4th 202 (2015). In satisfying its public trust obligations, the SLC will thus need to fully understand marine resource impacts and the feasibility of alternatives that avoid or minimize them. The CEQA analysis should, ideally, provide the necessary information and analysis to fulfill this additional legal duty.

For the reasons discussed above, we strongly advise the SLC to take full responsibility for preparation, circulation, and certification of the required subsequent EIR for this Project. A partial, segmented SEIR simply cannot withstand judicial scrutiny. Moreover, the SLC cannot lawfully move forward with approving a lease amendment until all necessary CEQA review is completed; the law simply does not allow approval of the lease amendment contingent on some later environmental analysis by a different agency. There is thus no practical benefit – to any agency or party – from preparing a partial SEIR.

Sincerely,

Sean Bothwell
Policy Director
California Coastkeeper Alliance

Garry Brown
Executive Director
Orange County Coastkeeper

Susan Jordan
Executive Director
California Coastal Protection Network

Merle Moshiri
President
Residents for Responsible Desalination

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Director, Southern California Ecosystems Project
Natural Resources Defense Council

Steven Johnson
Water Resources Policy Analyst
Heal the Bay

Staley Prom
Legal Associate
Surfrider Foundation

Charming Evelyn
Chair – Water Committee
Sierra Club Angeles Chapter

ATTACHMENTS

- A. **(CCC Staff Report):** “California Coastal Commission Staff Report Filed: 6/6/13 for Hearing Date: 11/13/13 for Appeal No.: A-5-HNB-10-225, Application No.: E-06-007, Applicant: Poseidon Water”.
- B. **(OCWD Alternative Delivery System):** 6 documents, B(a) through B(f), illustrating progressive reports analyzing alternative distribution systems – including one on potential basin water quality from desal water injection.
- C. New Cumulative Projects/Adjacent Developments
 - 1. **(AES HBEC): HUNTINGTON BEACH ENERGY PROJECT AMENDMENT: Presiding Member’s Proposed Decision.**
 - 2. **(Ascon Final Remedy):** FEIR “Remedial Action Plan for Ascon Landfill Site”.
 - 3. **(Magnolia Tank Farm):** Magnolia Tank Farm Specific Plan Project Description – Environmental Assessment.
- D. **(2012 NPDES/WDR):** Renewal of Waste Discharge Requirements for Poseidon Resources(Surfside) L.L.C., Huntington Beach Desalination Facility, Order No. RB-2012-0007, NPDES No. CA8000403, Orange County.
- E. **(Letter from CA Fish & Game Commission to CA Coastal Commission):**
 - 1. Letter from CA FGC to Coastal Commission.
 - 2. Letter from Dr. Warner to Coastal Commission.
- F. **(OCWD Demand Analysis):** “A Review of Water Demand Forecasts for the Orange County Water District” (Fryer, 2016).
- G. **(Slant Well Report):** “Huntington Beach Seawater Desalination Facility Groundwater Model Evaluation” (HydroFocus, 2016).
- H. **(Poseidon Application Cover Letter to SLC):** “Application for Amendment - Amendment of PRC 1980.1 Right of Way Lease for the Huntington Beach Seawater Desalination Project”.

July 26, 2017

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**Seawater Desalination Project at Huntington Beach:
Outfall/Intake Modifications and General Lease — Industrial Use
(PRC 1980.1) Amendment (Lease Modification Project)**

Dear Ms. Borack:

Thank you for the opportunity to comment on the Draft Supplemental Environmental Impact Report (“DSEIR”) for Poseidon’s proposed seawater desalination project at the existing Huntington Beach Generating Station (“Project”). Please accept these comments as a supplement to the longer comment letter submitted by California Coastkeeper Alliance, Orange County Coastkeeper, Residents for Responsible Desalination, and California Coastal Protection Network.

Before the formal California Environmental Quality Act (“CEQA”) update process for this Project commenced, we expressed concerns, by way of letter dated October 6, 2016, about the truncated nature and scope of the State Lands Commission’s (“Commission”) proposed environmental review. Unfortunately, these concerns have not been addressed in the DSEIR. Accordingly, we attach our October 2016 correspondence and incorporate it by reference herein to ensure that it is fully part of the administrative record as the Commission evaluates whether to approve amendments to the Project lease. The comments below will not duplicate our earlier legal analysis, but rather highlight and reiterate our serious concerns about the legal infirmity of the DSEIR.

First, in proposing to approve a discretionary lease modification nearly seven years after the Project was approved (but never commenced), the Commission, as a matter of law, necessarily assumes CEQA “lead agency” status for the Project, whether or not it wants to do so. As the original lead agency for the Project, the City of Huntington Beach was charged with preparing and certifying an adequate EIR. At that time, the Commission acted in the limited role of a “responsible agency,” based on the City-certified 2010 EIR, when it made the ancillary decision in October 2010 to execute the requisite trust lands lease. But because the City no longer has jurisdiction or discretionary authority over the Project, any agency that proposes to undertake a new discretionary decision for the same Project steps into the shoes of the original lead agency when, as is clearly the case here, the Project or its circumstances are so changed as to require a subsequent EIR. 14 Cal. Code Regs. § 15052(a). The Commission’s proposed lease modification is such a discretionary decision and thus triggers substitute lead agency obligations.

Under CEQA, there simply is no question that a subsequent EIR is required in this case. The Project has changed significantly since its approval in 2010, as have the circumstances surrounding it. In response to new state law requirements under the Water Code and the California Ocean Plan, the Project proponent has proposed substantial revisions to the Project itself, beyond those changes that necessitate a lease amendment. For instance, the Project proponent now proposes a potable water delivery method that is entirely different from anything considered in the 2010 EIR. Because new delivery options under consideration by the Project proponent and the Orange County Water District would involve significant impacts that were never considered in the original CEQA analysis, this fact alone necessitates a subsequent EIR. 14 Cal. Code Regs. § 15162.

Likewise, intervening events over the last seven years since the CEQA review was completed and the Project approved have dramatically altered the circumstances surrounding the Project and resulted in highly-relevant new information not previously considered by any agency. For instance, local water supply projects and conservation efforts have led to new, substantially reduced water demand forecasting in Orange County. This new information raises serious threshold questions about the need for the Project – or at the very least, for a regional desalination facility of this size. Recent amendments to the California Ocean Plan regarding desalination facilities also expressly require an evaluation of project need. The scope of need, in turn, affects the range of reasonable alternatives that must be considered under CEQA. The range of reasonable alternatives considered is especially relevant and important here because the proposed Project could adversely impact the integrity of California's new network of marine protected areas, which became effective in 2012, after completion of the 2010 SEIR. As the first agency to review the proposed Project and make a new discretionary decision in the shadow of these significant changes, the Commission must fully evaluate the implications and impacts of this new information in its CEQA document, even if other agencies like the Coastal Commission or Regional Water Quality Control Board also have jurisdiction over the Project. See *Banning Ranch Conservancy v. City of Newport Beach*, 2 Cal. 5th 918 (2017).

Second and related, the DSEIR, as currently structured, improperly segments the impacts analysis, in an apparent attempt to avoid evaluating potentially significant changes and new information not previously considered. The Project at issue here is the proposed regional desalination facility, which would (1) extract seawater along with the living public trust marine resources contained in that seawater, (2) process the seawater into potable fresh water and deliver it through a water distribution system, and (3) discharge brine wastes to the ocean. The Commission's lease allows certain activities and the placement of certain equipment on public trust lands for the sole purpose of facilitating the development and operation of this single, integrated desalination facility. Because there is no other purpose or independent utility for the lease – or the lease modification now under consideration – the Commission must, as a matter of law, evaluate the proposed lease modification (as it did the original lease in 2010) as part of the whole Project, not a separate, different, or smaller project.

This is not a case where the Commission's action is a first modest step in a sequence of speculative actions leading to a potential future project. The desalination facility has correctly been defined as a single CEQA "project" for years, in a single EIR, and the activities that will take place on trust lands under the Commission's jurisdiction are an integral part of that Project. The Commission's new attempt to slice off the lease modification from the rest of the Project and consider only that slice, in order to avoid considering the broader impacts of significant Project changes and new information, is the kind of quintessential "piecemealing" or "segmentation" that the courts have long forbidden. See *Bozung v. Local Agency Formation Com.*, 13 Cal. 3d 263, 283-84 (1975) (explaining CEQA's mandate that "environmental considerations do not become submerged by chopping a large project into many little ones – each with a minimal potential impact on the environment – which cumulatively may have disastrous consequences"); *Laurel Heights Improvement Assn. v. Regents of Univ. of California*, 47 Cal. 3d 376, 396 (1989) (holding that EIR must cover all reasonably foreseeable impacts from completion of the project, even if the precise details of that completion have not yet been formally decided). If Commission staff believes that a portion of the Project – e.g., the water delivery system – is too speculative or indeterminate to evaluate at this time, the proper remedy is to wait for additional details from the Project proponent, not to illegally segment the impacts analysis and approve a piece of the Project.

The Commission's misinterpretation of its CEQA obligations in this matter will have profound implications. Under the Commission's approach, each subsequent agency would prepare its own separate partial CEQA update for the Project, meaning that the public will be faced with several different, and potentially incompatible, updated EIRs. This is precisely what the Legislature intended to avoid by requiring that a single lead agency undertake environmental review and that other agencies making subsequent decisions utilize the lead agency's analysis in their processes. This fundamental concept of a single CEQA document applies with equal force to subsequent environmental review performed by a substitute lead agency when a project or its circumstances have changed or when new information of substantial importance comes to light. Having several different agencies draft updated partial EIRs for a single, integrated project deprives the public of an ability to comprehensively understand project impacts and reasonable alternatives or mitigation. It is for this reason that segmenting subsequent CEQA review is not only unlawful, but poor public policy.

Indeed, as the DSEIR itself acknowledges, other agencies undertaking updated CEQA review for the changed Project – including at least the California Coastal Commission, the Regional Water Quality Control Board, and the Orange County Water District – will and by law must rely upon the Commission's DSEIR. Thus, the Commission's erroneous legal determinations about the limited scope of the updated environmental review will serve as the CEQA baseline for all other agencies. If concerned citizens do not challenge this incorrect baseline document now, they may be precluded from doing so when other agencies engage in ancillary CEQA proceedings. For this reason, unless the Commission prepares and recirculates a more robust and thorough subsequent EIR that considers the Project as a whole and the impacts of Project changes, changed circumstances, and new information, concerned citizens like our clients will have no choice but to seek immediate judicial review of the Commission's CEQA compliance.

We appreciate your further attention to this important matter.

Sincerely yours,



Deborah A. Sivas

October 6, 2016

Via U.S. and Electronic Mail

Jennifer Lucchesi, Executive Officer
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, California 95825-8202
Email: Jennifer.Lucchesi@slc.ca.gov

**Application for Amendment to Lease No. PRC 1980.1
from Poseidon Resources (Surfside) LLC**

Dear Ms. Lucchesi:

We write on behalf of California Coastkeeper Alliance, Residents for Responsible Desalination, and California Coastal Protection Network in connection with the State Lands Commission (“SLC”) process for evaluating Poseidon Surfside’s application to amend tidelands Lease No. PRC 1980.1 in order to accommodate its proposed Huntington Beach Desalination Project (“Project”). Since 2010, when the City of Huntington Beach approved permits for the facility, Poseidon has significantly altered key facets of the Project. These changes necessitate additional environmental review under the California Environmental Quality Act (“CEQA”). SLC cannot lawfully proceed with consideration of the requested lease amendment until that additional review is completed. Because there are no further discretionary approvals of the Project by the City, we understand that SLC will be stepping into the role of “lead agency” for the requisite additional CEQA review and preparing an updated Environmental Impact Report (“EIR”) for public review and certification. In that role, we urge SLC to fully evaluate all potential impacts associated with proposed changes to the Project.

More specifically, and as discussed below, a substitute lead agency must evaluate all impacts from the Project as a whole in any supplemental or subsequent EIR. That is, the task of additional environmental review cannot be segmented between different agencies; the new lead agency, like the prior one, must prepare and circulate a single updated EIR that can then be relied upon by other responsible agencies taking subsequent discretionary actions. There is no legal authority that would allow SLC to slice off a piece of the Project for additional CEQA review while ignoring other substantial changes to the Project or deferring consideration of those changes to another agency. Accordingly, we urge SLC to follow this simple CEQA principle in moving forward on Poseidon’s requested lease amendment.

History of Project

In 2005, the City of Huntington Beach, acting as the designated CEQA “lead agency” for the Project, certified an EIR that evaluated the proposed desalination plant as a

“co-located” facility at the existing power plant. In 2010, the City certified a Subsequent Environmental Impact Report (“SEIR”) for a “stand-alone” project that would continue drawing cooling water through the power plant’s open ocean intake system after the power plant stopped using this system. Since then, Poseidon has proposed substantial changes to the Project that were not evaluated in the EIR or SEIR. In particular, Poseidon now proposes to:

- (1) continue using the existing intake structure for “temporary stand alone” use despite new scientific information and changes in the law;
- (2) change substantially the offshore seawater intake by dismantling the existing velocity cap to add one millimeter wedgewire screens and associated structures, once the power plant discontinues withdrawing seawater;
- (3) change substantially the existing seawater discharge pipe with a concentrated seawater diffuser; and
- (4) change substantially the pipeline to carry desalinated water away from the site for injection into the groundwater aquifer and/or other means of delivering the product water to member agencies of the Orange County Water District.

None of these significant changes have been evaluated in any existing EIR or SEIR. Further, since certification of the 2010 SEIR, there are significant changes in the surrounding area that will contribute to cumulative impacts from the Project, including, but not limited to, cumulative air quality impacts already identified by SLC.

Although the City has no further discretionary approvals to grant for the Project, several other agencies do. In addition to the tidelands lease amendment from SLC, Poseidon also is seeking a coastal development permit from the Coastal Commission and a National Pollutant Discharge Elimination System (“NPDES”) permit and Waste Discharge Requirements from the Regional Water Quality Control Board, among other approvals. Each of these agencies will, and as a matter of law must, rely on the additional CEQA review that SLC completes to address the proposed changes to the Project.

Legal Responsibilities

Since more than one public agency may have discretionary approval authority for a project, CEQA includes rules for determining each agency’s obligations. The agency with “principal responsibility” for carrying out or approving a project serves as the CEQA “lead agency” for purposes of complying with the statutory requirements. Cal. Pub. Res. Code § 21067. CEQA requires the lead agency must conduct a thorough review of the project in question, even though additional review might later be undertaken by other agencies with jurisdiction over specific resources, and must provide a comprehensive analysis on which other agencies may rely. Save San Francisco Bay Assn. v. San Francisco Bay Conservation etc. Com., 10 Cal. App. 4th 908, 921 (1992).

By contrast, a CEQA “responsible agency” is “a public agency, other than the lead agency, which has responsibility for carrying out or approving a project,” id. § 21069, and a CEQA “trustee agency” is a state agency that has jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California. Id. § 21070. A responsible agency generally consults with the lead agency about the CEQA process, provides comments on the draft EIR, and complies with CEQA by considering the final EIR certified by the lead agency and by reaching its own conclusion on whether and how to approve the project. 14 C.C.R. § 15096(a)-(b). Normally, the local land use authority functions as the lead agency, while specialized state agencies (e.g., State Lands Commission, Regional Water Quality Control Board, Caltrans, etc.) act as responsible or trustee agencies.

Once a lead agency is selected, that agency shoulders the burden of complying with CEQA in all respects. In particular, “the lead agency is responsible for considering the effects of all activities involved in a project and, if required by CEQA, preparing the draft and final EIR’s and certifying the final EIR for a project.” Riverwatch v. Olivenhain Mun. Water Dist., 170 Cal. App. 4th 1186, 1201 (2009) (emphasis added). In contrast, “[r]esponsible agencies generally rely on the information in the CEQA document prepared by the lead agency [e.g., an EIR] and ordinarily are not allowed to prepare a separate EIR or negative declaration.” Id. In other words, “while the lead agency is responsible for considering all environmental impacts of the project before approving it, a responsible agency has a more specific charge: to consider only those aspects of a project that are subject to the responsible agency’s jurisdiction.” Id. 1201, 1206 (emphasis added).

Here, the City of Huntington Beach initially assumed lead agency status for the Project, preparing and certifying both the original EIR and the SEIR in connection with its issuance of a coastal development permit and a conditional use permit. For the reasons discussed above, substantial changes to the Project not evaluated in those prior documents necessitate additional CEQA review. It does not appear, however, that there are any additional discretionary approvals pending before the City. Under such circumstances, the CEQA Guidelines provide as follows:

Where a responsible agency is called on to grant an approval for a project subject to CEQA for which another public agency was the appropriate lead agency, the responsible agency shall assume the role of the lead agency when any of the following conditions occur:

...

(2) The lead agency prepared environmental documents for the project, but the following conditions occur:

- (A) A subsequent EIR is required pursuant to Section 15162,
- (B) The lead agency has granted a final approval for the project, and
- (C) The statute of limitations for challenging the lead agency's action under CEQA has expired.

14 C.C.R. § 15052(a). The assumption of the lead agency role falls to the next agency to issue a discretionary approval, which in this case appears to be SLC.¹

Given the substantial changes in the proposed Project since the SEIR was certified, there simply is no question that a subsequent EIR must be prepared to inform the SLC's discretionary decision on any lease amendment. All EIRs, including subsequent EIRs, must evaluate the "whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." 14 C.C.R. § 15378. "From this principle, 'it is clear that the requirements of CEQA 'cannot be avoided by chopping up proposed projects into bite-sized pieces' which, when taken individually, may have no significant adverse effect on the environment." Ass'n for a Cleaner Env't v. Yosemite Cmty. Coll. Dist., 116 Cal. App. 4th 629, 638 (2004) (project to close shooting range included cleanup and dismantling); see also Christward Ministry v. Superior Court, 184 Cal. App. 3d 180, 195–96 (1986) (city impermissible chopped up single project into three separate projects, which was "exactly the type of piecemeal environmental review prohibited by CEQA"); Citizens Ass'n for Sensible Dev. of Bishop Area v. County of Inyo, 172 Cal. App. 3d 151, 165 (1985) (project improperly segmented into two projects for CEQA purposes).

To comply with CEQA, therefore, SLC must prepare a subsequent EIR for the whole project that covers impacts from all substantial changes to the Project, including changes to aspects of the Project that do not involve the tidelands lease, because all other responsible agencies must rely on the subsequent CEQA document for any additional discretionary approvals. In particular, as noted above, we understand that the substantial changes to the Project include a pipeline to carry desalinated water away from the site for injection into the groundwater aquifer. Because these new aspects – the pipeline and the groundwater injection – are necessary steps in Poseidon's objective to produce and sell desalinated water, they unquestionably are part of the same project for CEQA purposes. Tuolumne Cty. Citizens for Responsible Growth, Inc. v. City of Sonora, 155 Cal. App. 4th 1214, 1226 (2007) ("The relationship between the particular act and the remainder of the project is sufficiently close [to constitute a single project under CEQA] when the proposed physical act is among the "various steps which taken together obtain an objective."). As such, SLC must evaluate them in its updated EIR. Rural Landowners Assn. v. City Council, 143 Cal. App. 3d 1013, 1025 (1983) (where responsible agency stepped into the shoes to prepare a subsequent or supplemental EIR, all parts of project, including new parts, had to be evaluated).

¹ Although there has been some suggestion that the Orange County Water District should assume lead agency status, that course of action makes no sense. The Water District will presumably be the last agency to take a discretionary action – purchase of the water from the Project – after Poseidon obtains all necessary government approvals and permits. Thus, one of the state permitting agencies must complete and certify a subsequent EIR long before the Water District makes a final discretionary decision.

In carrying out its updated environmental review, therefore, SLC must evaluate any and all aspects of the revised Project that were not previously considered in the EIR or SEIR, including substantial new cumulative impacts in the vicinity of the Project. CEQA requires environmental review of indirect and cumulative impacts, as well as direct impacts. Indirect impacts are “secondary effects” that are the reasonably foreseeable result of a project even though they “are later in time or farther removed in distance.” 14 C.C.R. § 15358(a)(2); Bakersfield Citizens for Local Control v. City of Bakersfield, 124 Cal. App. 4th 1184, 1205 (2004). A cumulative impact “is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.” 14 C.C.R. §15130. “One of the most important environmental lessons evident from past experience is that environmental damage often occurs incrementally from a variety of small sources.” Kings County Farm Bureau v. City of Hanford, 221 Cal. App. 3d 692 (1990). Thus, without “meaningful cumulative analysis” and control, “piecemeal development would inevitably cause havoc in virtually every aspect of the urban environment.” San Franciscans for Reasonable Growth v. City and County of San Francisco, 151 Cal. App. 3d 61 (1984).

In short, the law is clear that when SLC steps into the City of Huntington Beach’s shoes, it must play the full role of a lead agency and consider all reasonably foreseeable direct, indirect and cumulative impacts from the Project, including from those aspects of the Project that may fall under the approval jurisdiction of another responsible agency. This result makes sense from a policy perspective, as well. Just as CEQA requires a single initial lead agency for each project and a single EIR upon which all other responsible agencies may rely, the same rules apply to a subsequent or supplemental EIR. The agency that steps into the lead agency shoes must prepare a single document that evaluates impacts from the whole project. Deferring evaluation of some project impacts simply because another responsible agency has later approval authority would deprive the public and decisionmakers of the ability to comprehensively understand the project’s full environmental impacts, in violation of CEQA. A decision to proceed on the lease amendment application with only a partially updated EIR would render SLC’s actions vulnerable to a viable legal challenge.

CONCLUSION

For the reasons discussed above, we strongly encourage SLC to take full responsibility for preparation, circulation, and certification of the required subsequent EIR for this Project. A partial, segmented SEIR simply cannot withstand judicial scrutiny. Moreover, SLC cannot lawfully move forward with approving a lease amendment until all necessary CEQA is completed; the law simply does not allow approval of the lease amendment contingent on some later environmental analysis by a different agency. There is thus no practical benefit – to any agency or party – from preparing a partial SEIR.

Thank you for your attention to this important matter. We and our clients look forward to reviewing a draft SEIR that covers all proposed changes in the Project and to fully participating in the CEQA public process.

Sincerely yours,



Deborah A. Sivas



July 27, 2017

Alexandra Borack, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Sent via electronic mail to: CEQA.comments@slc.ca.gov

Re: Poseidon Supplemental EIR Comments.

Dear Ms. Borack,

The Surfrider Foundation on behalf of our Huntington Beach Chapter hereby respectfully submits these comments on the State Lands Commission's "Draft Supplemental Environmental Impact Report for the Seawater Desalination Project At Huntington Beach: Outfall/Intake Modifications & General Lease – Industrial Use (PRC 1980.1) Amendment (Lease Modification Project)." The Surfrider Foundation is a non-profit 501(c)(3) organization that is dedicated to the protection and enjoyment of our ocean, waves, and beaches through a powerful activist network.

The Surfrider Foundation is disappointed that the State Lands Commission's Draft Supplemental EIR ("SEIR") does not include or address the critical issues raised in our oral and written scoping comments with respect to the proposed Poseidon desalination plant. The SEIR falls short of many key requirements of the California Environmental Quality Act ("CEQA"), California Public Resources Code Section 21000 *et seq.*, and the CEQA Guidelines, California Code of Regulations, title 14, Section 15000 *et seq.* The State Lands Commission must resolve the SEIR's multiple deficiencies before they may legally grant the requested lease modification approval, and before the California Coastal Commission or Regional Water Quality Control Board may issue any required approvals for the Project. Surfrider therefore respectfully urges the Commission to remedy the following defects in the SEIR's analysis.

- 1. The State Lands Commission is Required to Prepare a *Subsequent* EIR for the *Entire* Proposed Desalination Project, Analyzing all Changes and Impacts of the Entire Project.**

As the Surfrider Foundation previously asserted during the scoping period, the State Lands Commission is required to prepare a Subsequent EIR. Pursuant to the CEQA Guidelines, a Subsequent EIR is required where there are (1) proposed changes to a project, (2) changes

to circumstances under which it will be undertaken, or (3) new information, such that new significant environmental effects or a substantial increase in the severity of previously identified significant effects will result. (14 Cal. Code Regs. § 15162.) As raised in our scoping comments, there are significant changes to the Project, changes to existing circumstances, and new information that will result in new or more severe impacts, triggering the requirement for a Subsequent EIR.

This includes but is not limited to the proposed changes to the seawater intake system, discharge pipe, and product water distribution component; changes to relevant law including the new Ocean Plan Desalination Amendment; and new information regarding the purpose and need for the project and its product water, and new information regarding adverse impacts from the similar Carlsbad facility.

These changes are described in more detail below and will result in significant impacts to marine resources and the community due to construction and operation, as well as impacts to groundwater and water resources, which have not previously been analyzed.

Accordingly, a Subsequent EIR must be prepared, and it must be prepared by the public agency that grants the next discretionary approval for the project. (CEQA Guidelines, § 15162(c).) No other responsible agency can grant an approval for the project until the subsequent EIR is certified. (*Id.*) Accordingly, as the first agency to grant a discretionary approval according to the Interagency Permit Sequencing Agreement, the State Lands Commission is required to prepare the Subsequent EIR. The Regional Water Board and Coastal Commission cannot grant any approvals for the project until the Subsequent EIR has been certified.

Furthermore, the regulations require that the State Lands Commission assume the role of lead agency for purposes of preparing the subsequent EIR. (14 Cal. Code Regs. § 15052.) A subsequent EIR is required; the prior lead agency, the City of Huntington Beach, has granted a final approval for the project; and the statute of limitations for challenging Huntington Beach's action has expired. (*Id.*) The State Lands Commission's assertion that it is merely acting as a responsible agency is flawed and legally inaccurate.

Therefore, Surfrider Foundation asks that the State Lands Commission adequately address all proposed changes, changed circumstances, and new information relevant to the *entire* proposed desalination Project, in a Subsequent EIR.

2. The State Lands Commission Cannot Define the Project too Narrowly, and Engage in Illegal Piecemealing under CEQA.

The Draft SEIR defines the project too narrowly. The project is not a lease amendment, but the entire desalination Project, and environmental review must accordingly look at the *whole* project. The CEQA Guidelines define a "project" to mean "the whole of an action." (CEQA Guidelines, § 15378, (a).) It is illegal for an agency to divide a project into separate parts to avoid holistic CEQA review. (*California Farm Bureau Federation v. California Wildlife Conservation Bd.*, 143 Cal.App.4th 173 (2006).)

Courts have considered separate activities as one CEQA project and required them to be reviewed together where, for example, the second activity is a reasonably foreseeable consequence of the first activity (*Bozung v. Local Agency Formation Com.* (1975) 13 Cal.3d 263 [118 Cal. Rptr. 249, 529 P.2d 1017]); or both activities are integral parts of the same project (*No Oil, Inc. v. City of Los Angeles* (1987) 196 Cal. App. 3d 223 [242 Cal. Rptr. 37])(*Sierra Club v. Westside Irrigation District et al.* (2005) 128 Cal. App. 4th 690).

As raised during scoping comments, changes to the product water distribution system component are but one critical issue that must be addressed in this document. The distribution system for the desalinated product water is more than a reasonably foreseeable consequence – it is *the* critical component in order to deliver the product of the desalination Project – and thus is plainly an integral part of the Project.

In 2010, Poseidon planned to build the necessary infrastructure, and put the product water in new and existing pipes to deliver to customers. Now, Poseidon and the Orange County Water District plan for the District to build the delivery infrastructure and put at least some of the water into the groundwater system.¹ This raises a multitude of concerns regarding significant impacts to the community, from construction impacts to concerns for the community’s groundwater and water resources. All potential changes to the Project’s delivery system must be analyzed in a Subsequent EIR together with all other aspects of the project.

The document cannot disregard this obligation, as it does in section 3.2.4, claiming that the Orange County Water District has placed the environmental review on hold. The distribution component is not “speculative at this time,” as the document claims. Without means for distribution, there is no project. Therefore, the CEQA reviews cannot be segmented.

3. The State Lands Commission Must Consider Cumulative Impacts of the Project, Including Potential Greenhouse Gas Emissions Impacts

Furthermore, this document cannot narrowly define the project and skirt the requirement for analyzing cumulative impacts, including but not limited to cumulative impacts from the distribution component and greenhouse gas emissions.

Under CEQA, an EIR must consider all significant effects on the environment from the project, including any irreversible effects; any cumulative effects from the project; and any feasible mitigation measures to mitigate or avoid those effects. (Cal. Pub. Res. Code § 21100; 14 Cal. Code Regs. § 15130.) As the regulations provide, “[t]he following elements are necessary to an adequate discussion of significant cumulative impacts:

(1) Either:

¹ See

https://www.ocwd.com/media/2462/01b0revisedposeidontermsheetcleanversion_20150

(A) A list of past, present, and probable future projects producing related or cumulative impacts, *including, if necessary, those projects outside the control of the agency*, or
(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.” (*emphasis added*)

Additionally, pursuant to CEQA, lead agencies must analyze the greenhouse gas emissions of proposed projects and reach a conclusion regarding the significance of those emissions. (CEQA Guidelines, § 15064.4.) When a project’s greenhouse gas emissions may be significant, lead agencies must consider a *range of potential mitigation measures to reduce those emissions*. (CEQA Guidelines, § 15126.4.) Related to greenhouse gas emissions, CEQA mandates analysis of a proposed project’s potential energy use, sources of energy supply, and ways to reduce demand, which all have implications on the Project’s overall greenhouse gas emissions. (CEQA Guidelines, Appendix F.)

While there is some discussion of greenhouse gas emissions in the SEIR, and reference to applicable state laws and agency thresholds, the SEIR’s discussion of Project impacts is limited to greenhouse gas emissions associated with the construction, installation, and maintenance of wedgewire screens to the intake, and an outfall multiport diffuser. However, there is no discussion about greenhouse gas emissions related to construction or operation of the distribution system component; neither is there a discussion of any cumulative impacts analysis of this desalination Project, or other projects in the region, or other energy-intensive potential desalination projects in the state.

Moreover, there are concerns with the framework of the SEIR’s greenhouse gas analysis. In the 2010 SEIR, Huntington Beach simultaneously considered the greenhouse gas emissions of the project and the “design features” – such as greenhouse gas offsets and credits, and on-site solar power generation – in determining whether the project’s greenhouse gas emissions constitute a significant impact requiring mitigation. (*See*, SEIR (May 2010), p. 4.12-31, “With incorporation of these project design features, the Project would have a net zero increase in GHG emissions. Therefore, the Project would have emissions below SCAQMDs 10,000 MTCO₂E/yr threshold, and the Project impacts would be less than significant.”)

However, CEQA requires that an EIR separately identify and analyze the significance of impacts *before proposing mitigation measures*. (*Lotus et al. v. Dept. of Transportation et al.*, 223 Cal.App. 4th 645 (2014).) In *Lotus v. DOT*, the court of appeal recognized that Caltrans had incorporated proposed mitigation measures into its description of the project and then concluded that any potential impacts from the project would be less than significant. (*Id.*, at 655.) But “[s]imply stating that there will be no significant impacts because the project

incorporates “special construction techniques” is not adequate or permissible.” (*Id.*, at 657.) As the court acknowledged, “[t]he failure of the EIR to separately identify and analyze the significance of the impacts to the root zones of old growth redwood trees before proposing mitigation measures is not merely a harmless procedural failing. ... this shortcutting of CEQA requirements subverts the purposes of CEQA by omitting material necessary to informed decision making and informed public participating. It precludes both identification of potential environmental consequences arising from the project and also *thoughtful analysis of the sufficiency of measures to mitigate those consequences.*” (*Id.*, at 658 (emphasis added).)

This is particularly important, as CEQA clearly requires that for each significant effect, the EIR must identify specific mitigation measures; and *where several potential mitigation measures are available, each should be discussed separately, and the reasons for choosing one over the other should be stated.* (*Lotus v. DOT*, citing *Sacramento Old City Assn. v. City Council* (1991) 229 Cal.App.3d 1011, 1027.)

Here, as with the 2010 SEIR, the SEIR simultaneously considers the greenhouse gas emissions generated by the Project as well as mitigation proposed by Poseidon in making its significance determination. This approach precludes considering all potential mitigation measures, as required by CEQA.

Additionally, it should be noted that the 2010 finding of no significance took into account mitigation measures such as greenhouse gas reductions due to high-efficiency design, green building design, on-site solar power generation, CO₂ recovery, and reduced water importation, with remaining emissions mitigated via offsets and/or renewable energy credits. Poseidon had previously proposed similar offsets via reduced water importation from the State Water Project for its Carlsbad plant. However, a 2005 agreement between the California Department of Water Resources and the Metropolitan Water District (“MWD”) prohibited desalination projects from reducing MWD’s State Water Project entitlements. In addition, MWD’s 2009 contractual agreement with the San Diego member agencies who agreed to buy Poseidon’s water guaranteed that the desalinated water could not interfere with MWD’s ability to import or use its full State Water Project entitlements. Therefore, there was no “one-for-one” reduction in State Water Project imports.²

Meanwhile, four years later, the SEIR relies on Poseidon’s new Energy Minimization and Greenhouse Gas Reduction Plan (February 27, 2017). While the current plan does not appear to include a proposed reduction for import reductions, what happened in Carlsbad illustrates why this EIR must not rely upon or incorporate mitigation measures into the significance determination, in lieu of a full independent analysis of potential mitigation measures. Further, as with the prior SEIR, the current SEIR analysis similarly assumes that certain measures, such as offsets and/or renewable energy credit purchases, energy efficiency measures, and on-site use of renewable resources, will be undertaken, without any independent analysis of these potential mitigation measures. Yet the Energy Minimization and Greenhouse Gas Reduction Plan says merely that “energy efficiency

² See <https://documents.coastal.ca.gov/reports/2010/2/W6a-2-2010.pdf>.

measures and on-site use of renewable resources will be given the highest priority.” (Plan, p. 5.) Building design will follow the principles of Leadership in Energy and Environmental Design (LEED) program only “to the extent reasonably practicable;” and Poseidon will install rooftop solar panels only “if it is reasonably expected to provide a return on the capital investment over the life of the project.” (p. 10 – 11.)

Moreover, the Plan provides contingencies to the offset acquisition and verification “commitment.” (Plan, Section III(C),(E), & (F).) This includes contingencies for where sufficient offsets may not be available from specific providers at a “price that is reasonably equivalent to the price for offsets in the broader domestic market;” where offsets are not reasonably available (including where the market price has escalated to a level that renders the purchase of offsets/RECs economically infeasible to the Project, or where the market for offsets/RECs is suffering from significant market disruptions). In summary, Poseidon’s Energy Minimization and Greenhouse Gas Reduction Plan does not commit to a concrete suite of actions, and yet the analysis in the SEIR summarily assumes, “... Poseidon commits, pursuant to the following Applicant Proposed Measure (APM), to offset all direct and indirect construction and post-construction (operational) GHG emissions. APM-7. An Energy Minimization and Greenhouse Gas Reduction Plan, most recently updated February 27, 2017, shall be implemented to offset the total direct and indirect GHG emissions from construction and operations of the HB Desalination Plan. Upon implementation of APM-7, the GHG Plan would provide sufficient GHG offsets or RECs to “bring to zero the total amount of direct and indirect GHG emissions” from the overall HB Desalination Plant including the new modifications. With this design feature in place, the project-related GHG emissions would be less than significant.”

In *Lotus v. DOT*, described above, the court noted that the insufficient EIR at issue “contains numerous mitigation measures that are not enforceable and are therefore not compliant with CEQA.” (*Id.*, at 657.) Moreover, the intertwining of the impacts and mitigation analysis, instead of having a separate impacts analysis and *then* analyzing mitigation, precludes adequate analysis. As the *Lotus* court recognized, “Absent a determination regarding the significance of the impacts ..., it is impossible to determine whether mitigation measures are required or to evaluate whether other more effective measures than those proposed should be considered.”

In short, the greenhouse gas emissions analysis is inadequate in this SEIR. The SEIR cannot rely upon loose “commitments” proposed by Poseidon, in making a determination of significance. The Commission must separately analyze the emissions generated by the Project, including a full analysis of cumulative impacts associated with the distribution component, and other projects including other desalination projects proposed in California. Then only after it has assessed the full, and enormous magnitude of greenhouse gases to be generated by the Project, it must separately discuss all potential mitigation measures. And any mitigation measures adopted must be additional and enforceable. There must be “thoughtful analysis of the sufficiency of measures to mitigate [the Project’s] consequences.” (*Id.*, at 658.)

Additionally, an EIR generally may not defer evaluation of mitigation until a later date, and CEQA only allows a lead agency to defer mitigation when three narrow, specific prerequisites are met: (1) the EIR contains criteria or performance standards to govern future actions implementing the mitigation; (2) practical considerations preclude development of the measures at the time of the initial project approval; and (3) the agency has assurances that the future mitigation will be both “feasible and efficacious.” (*Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 94-95; *San Joaquin Raptor Rescue Center v. County of Merced* (2010) 149 Cal.App.4th 645, 669-71; CEQA Guidelines, § 15126.4(a)(1)(B).) To the extent that some of the measures identified in the SEIR and Energy Minimization and Greenhouse Gas Reduction Plan may not be feasible and efficacious, the SEIR cannot rely on them and fail to conduct a full independent analysis of mitigation measures.

The following measures should be independently considered in the SEIR:

- Incorporate U.S. Green Building Council’s LEED or comparable standards for energy and resource efficient building during pre-design, design, construction, operations and management.
- Design buildings for passive heating and cooling, and natural light, including building orientation, proper orientation and placement of windows, overhangs, skylights, etc.
- Design buildings for maximum energy efficiency including maximum possible insulation.
- Reduce the use of pavement and impermeable surfaces.
- Require water reuse systems.
- Maximize water conservation measures in buildings and landscaping using drought tolerant plants in lieu of turf, and planting shade trees.
- Install the maximum amount of solar panels available onsite, including solar canopies over parking areas.
- Install solar water heating systems to generate all of the Project’s hot water requirements.
- Install electric vehicle and plug-in hybrid vehicle charging stations to reduce emissions from vehicle trips.
- Install energy storage systems to ensure that the energy generated can be used on-site.
- Require recycled, low-carbon, and otherwise climate friendly building materials such as salvaged and recycled content materials for building, hard surfaces, and non-plant landscaping materials.

Similarly, provisions for monitoring to ensure compliance with any selected mitigation measures and emissions reductions must be included in the SEIR. (CEQA Guidelines, § 15126.4.)

Finally, Surfrider takes issue with the fact that Poseidon’s Energy Minimization and Greenhouse Gas Reduction Plan repeatedly says that Poseidon has “voluntarily” committed

to offset the indirect greenhouse gas emissions associated with the Project's operations. However, as explained above, greenhouse gas reduction is not voluntary - the project's enormous greenhouse gas emissions constitute a significant adverse impact to our environment which *must* be mitigated under CEQA. Any claim that this is voluntary is disingenuous, and inaccurate.

4. The State Lands Commission Cannot Disregard Subsurface Intakes or Comingling Brine Waste in its Alternatives Analysis.

As Surfrider raised during oral comments, the draft SEIR fails to adequately evaluate the Project for consistency with the Ocean Plan Desalination Amendment. The adoption of the Ocean Plan amendment is the reason for Poseidon requesting the lease modification but the SEIR falls short of the analysis required in the amendment. The SEIR does not consider the feasibility of subsurface intakes or comingling the brine.

The State Lands Commission Cannot Disregard Subsurface Intakes in its Alternatives Analysis. Pursuant to the Ocean Plan Desalination Amendment, the Regional Water Board shall conduct a Water Code Section 13142.5(b) analysis of the Project, which includes separately as independent considerations a range of feasible alternatives for the best site, technology, design, and mitigation measures to minimize the intake and mortality of all forms of marine life. (§ M(2)(a)(2).) With respect to site, an applicant is required to evaluate a reasonable range of sites, including sites that would likely support subsurface intakes. (§ M(2)(b).) Critically, with respect to technology, the Desalination Amendment articulates a clear preference for subsurface intakes. The Regional Water Board, in consultation with the state board staff, shall require subsurface intakes unless *it* determines based on a variety of factors, that subsurface intakes are infeasible. (§ M(2)(d).)

Finally, with respect to design, *only if the regional board determines that subsurface intakes are infeasible* and surface water intakes are proposed instead, there must be analysis of potential designs for those intakes to minimize the intake and mortality of all forms of marine life. (§ M(2)(b)), *emphasis added.*)

The Regional Water Board has not made any required determination under the Desalination Amendment, and in fact the Regional Water Board has indicated it may require additional third party analysis of the economic feasibility provisions of the Independent Scientific and Technical Advisory Panel ("ISTAP") Reports. (See July 29, 2016 letter from Santa Ana Regional Water Quality Control Board to Scott Maloni, Vice President of Poseidon Water, *attached.*).

Additionally, there are numerous problems with the ISTAP Reports. The Commission cannot rely on it as a basis for summarily excluding subsurface intakes in the Alternatives Analysis. The ISTAP Phase 1 report prematurely excluded slant wells, and the ISTAP Phase 2 report therefore only looked at intake galleries, resulting in double the cost estimate. It didn't consider the cost of using slant intake wells. The Commission cannot rely on this

faulty analysis, and exclude the Ocean Plan's preferred desalination intake technology from the Alternatives Analysis for the Project's intakes. This is illegal under CEQA.

Further, the SEIR fails to analyze the feasibility of comingling brine with wastewater. The Desalination Amendment states that, "the preferred technology for minimizing intake and mortality of all forms of marine life resulting from brine discharge is to commingle brine with wastewater (e.g., agricultural, municipal, industrial, power plant cooling water, etc.) that would otherwise be discharged to the ocean" (§ M(2)(d)(2)(a).) The SEIR does not analyze any possibility of comingling with wastewater and instead accepts without question Poseidon's proposal to use the less preferred option of employing a multiport diffuser.

The SEIR fails to discuss alternative options and the narrow focus precludes and alternative sites to minimize adverse impacts. Multi port diffusers are considered the second best option in the desalination amendment but only "when the brine cannot be diluted by wastewater." The SEIR cannot simply ignore this core component of the desalination amendment and is further evidence that a subsequent EIR is necessary in order to evaluate the Project as a whole as alternative sites or piping scenarios may enable comingling of brine with wastewater.

Finally, there must be a true "No Project" alternative, where the entire desalination plant is not built.

5. The SEIR Must Reconsider the Purpose and Need for the Project

The purpose and need for the Project must be reanalyzed in this SEIR in light of new information regarding demand and supply of the proposed Project's product water. It has not been proven that there is actually a need for the Project and its magnitude.

A high percentage of water supply in north Orange County is from groundwater, and self-sufficiency has increased with the Orange County Water District's ("OCWD") Groundwater Replenishment System ("GWRS") project (the world's largest wastewater recycling facility). And additional expansion of GWRS is planned, with the next expansion adding nearly as much water supply capacity as Poseidon's Project - from 100 MGD to 130 MGD.³ This supply will be without the associated environmental and cost impacts of the proposed desalination plant.

Additionally, new water demand projections revealed in February 2016 by OCWD showed significantly reduced water demand than OCWD previously reported - a difference of about 90,000 acre feet. New estimates show that demand by 2040 will be closer to 435,000 acre feet as opposed to 525,000 acre-feet per year.⁴

Accordingly, the SEIR needs to reanalyze the need for the 50 mgd Project proposed.

³ See <https://www.ocwd.com/media/4267/gwrs-technical-brochure-r.pdf>

⁴ See <http://www.oeregister.com/articles/water-703092-estimate-demand.html>

Further, Indirect Potable Reuse (IPR) projects⁵ are planned elsewhere in Southern California adding reliability to the region. Some, like San Diego Pure Water, will provide indirect reliability to Orange County by making the Metropolitan Water District (“MWD”) portfolio more reliable. The Los Angeles County and MWD planned IPR/GWRS project will provide both indirect and direct benefits by adding 67,000 acre feet per year during the project’s first operational phase and 30 miles of distribution lines to replenish both Los Angeles and Orange County groundwater basins. Approximately 168,000 acre feet per year will be produced to replenish groundwater systems in additional operational phases.⁶

Again, this underscores the need to reanalyze the purpose and need for the Project, and its current scale. And similarly, the consequences of constructing a Project that is not needed must be fully addressed.

In December 2015, despite several years of drought, the San Diego County Water Authority (“SDCWA”) had too much water, and was running low on available storage options, which were nearly filled to capacity. Despite this oversupply of water, the SDCWA was forced by its ‘take or pay’ contract to buy Poseidon’s expensive water (water officials agreed in 2012 to buy the water whether they need it or not, to make the plant financially feasible).

As a result, in February 2016, SDCWA dumped half a billion gallons of excess treated drinking water into the Lower Otay Reservoir. Of the three kinds of treated water it dumped, Poseidon’s water was by far the most expensive, at roughly \$2,131 per acre foot compared to Metropolitan’s treated water, at \$942 per acre foot, and the County’s treated water at \$830 per acre foot. After being dumped, the treated drinking water must be re-treated in order to be drinkable again. (See Ry Rivard, San Diego’s Oversupply of Water Reaches a New, Absurd Level, Voice of San Diego, February 2, 2016, *available at* <http://www.voiceofsandiego.org/topics/government/san-diegos-oversupply-of-water-reaches-a-new-absurd-level/>.)

According to the Voice of San Diego, in 2016 “desalinated ocean water will cost San Diego water agencies at least \$113.6 million — more than double the \$45.2 million they would pay for the same amount of imported water, which remains available despite a statewide drought.” (See Morgan Cook, While other parts of California are bone dry, San Diego faces the opposite problem: too much water, Los Angeles Times, Nov. 25, 2015, *available at* <http://www.latimes.com/local/lanow/la-me-drought-watch-20151125-story.html>)

The waste of water, and burdening ratepayers with overpriced water, which have been impacts of Poseidon’s Carlsbad plant, must not happen in Orange County with the proposed

⁵ IPR refers to the blending of advanced treated, recycled or reclaimed water into a natural water source (groundwater basin or reservoir) that could be used for drinking (potable) water after further treatment

⁶ See

http://mwdh2o.com/PDF_About_Your_Water/Regional_Recycled_Water_Supply_Program.pdf

Huntington Beach plant. The SEIR must be revised to include a thorough analysis of the purpose and need for the Project, in order to avoid these impacts.

6. New Information Regarding Poseidon's Violations at its Carlsbad, CA Desalination Plant Must be Included in this EIR.

New information has come to light regarding Poseidon's similar facility in Carlsbad, which has concerning implications with respect to the proposed Project. This information increases the likelihood that the proposed Project will result in more serious water quality impacts, and must be considered in a Subsequent EIR.

Poseidon's Carlsbad desalination plant has been cited by the State Water Resources Control Board and the San Diego Regional Water Quality Control Board for multiple permit violations, including water quality exceedences. This new information must be included in this SEIR, as it illustrates the foreseeable increased risk for violations at the proposed Huntington Beach project, and is cause for increased concern about more serious negative impacts on surrounding water quality, the marine environment, and species. Poseidon received 13 violations between September 2015 and June 2016, eight of which were for chronic toxicity.⁷ In its annual permit discharge monitoring report for 2016, which Poseidon submitted in February 2017, Poseidon stated that it had exceeded chronic toxicity limits in 35 out of 116 - or 30% - of chronic toxicity tests.⁸

More recently, between January and May 2017, the Carlsbad plant has been cited for 14 violations. Records of these violations are available at the State Water Resources Control Board's website, here:

<https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?reportName=facilityAtAGlance&placeID=640063>

Poseidon's failure to resolve this issue despite multiple violation notices must be taken into consideration in the SEIR.

7. The SEIR Must Adequately Address and Mitigate Climate Change Impacts

The SEIR, Sections 8.0 and 8.1 suggest that discussion of climate change and sea level rise related impacts are not required under CEQA, and are merely being considered voluntarily. It further restricts its consideration of this issue narrowly, to impacts on the intake and outfall components.

⁷ See

<https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?reportName=facilityAtAGlance&placeID=640063>

⁸ See Poseidon Channelside, Cover letter for NPDES Discharge Monitoring Report – Annual 2016 NPDES No. CA019223 (February 28, 2017), <http://bit.ly/2pb3pQH>.

However, as explained above, the State Lands Commission must consider all impacts of the entire desalination Project, and this includes impacts stemming from sea level rise and coastal erosion.

In California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369, the court held that while the general rule is that CEQA does not require an analysis of how existing environmental conditions will impact a project's future users or residents, *when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users.* (*Id.*, at 389.)

Here, as the SEIR acknowledges, the proposed Project is estimated by the State Water Resources Control Board to result in emissions of approximately 80,000 MTCO₂E/yr, based on an annual electricity use of 750,000 kilowatt-hours, before mitigation (again, pursuant to the above discussion, impacts and mitigation must be analyzed separately). This is significant, as it greatly exceeds the SCAQMD's threshold of 10,000 MTCO₂E/yr, and will contribute to global climate change, and exacerbate various climate related impacts, including sea level rise. Accordingly, CEQA requires an adequate evaluation and mitigation of the potential impacts related to sea-level rise and coastal erosion – critical issues given the coastal location of this proposed Project. This analysis is not something the Commission “may” consider, but instead is a legal requirement.

Conclusion

For the foregoing reasons, we respectfully request that the Commission revise the Supplemental EIR to be a comprehensive Subsequent EIR addressing all changes to the Project, changes in circumstances, and new information, in order to properly assess all of the Project's potentially significant impacts, including cumulative impacts, and all appropriate measures to mitigate those impacts.

Sincerely,



Staley Prom
Surfrider Foundation Legal Associate

VIA EMAIL: CEQA.comments@CSLC.ca.gov
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Mary Lynn Coffee

Refer To File #: 270817-0006

July 27, 2017

Jennifer Lucchesi, Esq.
Executive Director
California State Lands Commission
Suite 100-S
100 Howe Avenue
Sacramento 95825

Re: Poseidon Supplemental Environmental Impact Report Comments

Dear Ms. Lucchesi:

As counsel for, and on behalf of the Irvine Ranch Water District (IRWD or District), thank you for the opportunity to provide comments on the Draft Supplemental Environmental Impact Report for the Seawater Desalination Project at Huntington Beach: Outfall/Intake Modifications and General Lease — Industrial Use (PRC 1980.1) Amendment (DSEIR). IRWD is concerned about the Seawater Desalination Project at Huntington Beach (Desal Project),¹ including all of its components, because the District derives the majority its water supply from the Orange County Groundwater Basin (Basin). The District's use of groundwater from the Basin combined with its production and distribution of high quality recycled water are primary factors in IRWD's ability to sustainably and reliably serve the approximately one-half million people in the District's service area daily.

IRWD is not categorically opposed to seawater desalination or the proposed Desal Project. Furthermore, IRWD supports the development of desalination technologies, regulatory streamlining, public acceptance, and pursuit of regional, state, and federal funding programs that would reduce the cost of desalination. Notwithstanding this policy position, as IRWD has publicly expressed for some time, the District is concerned about the potential environmental impacts of the Desal Project, particularly as the project has been changed in the seven years that have passed since it was last subject to comprehensive public review in the City of Huntington Beach's Final Subsequent Environmental Impact Report, State Clearinghouse No. 2001051092 (2010) (2010 FSEIR). As it has been changed since the 2010 FSEIR, including its entirely new and different distribution and delivery components, the Desal Project is reasonably likely to result in significant adverse effects on IRWD's local groundwater supplies and recycled water production, affecting the core of IRWD's mission to provide a high quality, safe, and reliable water supply to its customers. Consequently, IRWD is compelled to submit comments on the DSEIR.

¹ The term "Desal Project" is used in this letter to refer generically to the Seawater Desalination Project at Huntington Beach, and is not intended to refer specifically to either the 2010 Desal Project or the Current Desal Project, as defined in the body of this letter below.

I. EXECUTIVE SUMMARY.

This section summarizes IRWD's comments on the DSEIR, noting that additional detail, legal authority, and facts are included in the other sections of this letter that follow this Executive Summary.

A. The DSEIR is an Improper Supplement.

The major problem with the DSEIR is that it is fundamentally an improper supplement to the 2010 FSEIR. The California State Lands Commission (CSLC) has improperly considered approval of the application by Poseidon Resources (Surfside) LLC (Applicant), which requests a lease amendment and approval of certain outfall/intake facility modifications (Outfall/Intake Components), in a vacuum within the DSEIR. The DSEIR examines the Outfall/Intake Components as if they were modifications to the Desal Project described and analyzed in the 2010 FSEIR (2010 Desal Project) ignoring:

- Major changes made to the 2010 Desal Project since the 2010 FSEIR (Current Desal Project),² including, without limitation planning and conceptual design of a completely different delivery and distribution system for the desalinated water (Product Water) produced by the Seawater Desalination Plant at Huntington Beach (HB Desal Plant);³ and
- New information and changed circumstances of substantial importance to the Desal Project that have become known since, and hence were not considered in, the 2010 FSEIR.

In light of the foregoing, the CSLC's preparation and use of the DSEIR to evaluate the proposed modifications to the Outfall/Intake Components is improper due to its misplaced reliance upon the 2010 FSEIR and its analysis of the 2010 Desal Project rather than the Current Desal Project. This violates CEQA because:

1. The City of Huntington Beach (City) has taken the position that it has no further discretionary approvals to grant related to the Desal Project. It is incumbent upon the CSLC, as the next CEQA responsible agency considering a discretionary action,

² The term "Current Desal Project" consists of the 2010 Desal Project plus all modifications to that project since the 2010 FSEIR, including entirely new and different planned distribution and delivery system project components for Product Water, new treatment technologies related to new and different Product Water end use specifications, and modifications to the Outfall/Intake Components under consideration by the CSLC, all of which the Applicant and CEQA reviewing agency rather than those submitting comments under CEQA, remain responsible to comprehensively identify and environmentally review prior to taking discretionary actions. Cal. Code Regs., tit. 14 (CEQA Guidelines), §§ 15121 (informational document), 15124 (project description), 15378 (defining "Project").

³ The definition of the term "Current Desal Project" in this letter is not intended to, and does not replace or relieve the obligation of the Applicant and CEQA reviewing agency to provide a current, accurate, and complete project description, which the DSEIR fails to do in contravention of CEQA as discussed in Section III.C.1. CEQA Guidelines, §§ 15121, 15124, 15378.

to assume the role of the lead agency for the purpose of conducting any additional and appropriate analysis needed for the project to comply with CEQA, including, but not limited to, completion of subsequent Environmental Impact Report (EIR).

2. CEQA precludes reliance via a supplemental EIR upon the now stale and outdated 2010 FSEIR. CEQA requires preparation of a new or subsequent EIR because the 2010 Desal Project has fundamentally changed since 2010, and the major changes to the 2010 Desal Project must be comprehensively analyzed consistent with CEQA prior to or concurrently with review of the Outfall/Intake Components. The 2010 Desal Project relied on direct surface distribution of Product Water to the potable delivery systems of Orange County retail water agencies (Surface/Potable Distribution Components). The Current Desal Project is now proposed to distribute and deliver Product Water by injecting it into the groundwater aquifer and blending it with higher quality groundwater. Then Orange County groundwater producers, including IRWD, pump it from the Basin using their own wells and distribute the water through their own potable distribution systems (Recharge Distribution Components⁴). Recharge Distribution represents a major change to the distribution and delivery system component of the 2010 Desal Project that is likely to result in new significant adverse impacts to, among other resources, groundwater quality and supply. Because the Recharge Distribution Components were not a part of the 2010 Desal Project, any impacts associated with them were not analyzed in the 2010 FSEIR.
3. CEQA requires comprehensive, unsegmented evaluation of the Current Desal Project's environmental impacts, feasible alternatives, and feasible mitigation measures. Serial review and approval by responsible agencies, such as CSLC, focused only on the specific Desal Project components within that responsible agency's jurisdiction "piecemeals" the environmental review of the Current Desal Project. The result is a failure to identify the severity of adverse impacts; a failure to identify and consider a reasonable range of alternatives to avoid or reduce ; and a failure to consider and prescribe all feasible and available mitigation measures to reduce adverse impacts of the entire project, as planned.
4. CEQA requires that a new or subsequent EIR (rather than a supplemental EIR) must be prepared to analyze the Outfall/Intake Components in the context of the Current Desal Project, because the Outfall/Intake Components modify the Current Desal Project and not the 2010 Desal Project. Proper evaluation of potential significant adverse impacts of the Outfall/Intake Components requires consideration of the interrelationship and interaction of the various components of the Current Desal Project, including the Recharge Distribution Components and the Outfall/Intake Components. For example, anticipated adverse groundwater quality impacts associated with Recharge Distribution, which result from the injection of Product Water containing a higher total dissolved solids (TDS) concentration into the Basin, might be feasibly mitigated by imposing lower TDS limits on Product Water to protect

⁴ Recharge Distribution Components include OCWD's identified Distribution Option 1A (encompassed within Option 6), *i.e.*, the 100% Recharge Option, and all associated injection wells, pump stations, associated pipelines, and other facilities. OCWD, Workshop #3: Distribution of Poseidon Resources Ocean Desalinated Water (Jul. 6, 2016).

groundwater quality. Those mitigation measures, however, are likely to impact the design and operation of technology and facilities comprising the Outfall/Intake Components, including those facilities relied upon to collect seawater through the intake for desalination, the treatment process used to create Product Water, and the facilities relied upon to discharge the more concentrated brine produced by enhanced TDS treatment through the outfall.

5. CEQA requires preparation of a new or subsequent EIR to address newly available information of substantial importance to the Desal Project that was not known and could not have been known at the time with the exercise of reasonable diligence seven years ago when the 2010 FSEIR was certified. For example, the Municipal Water District of Orange County's (MWDOC) *Executive Report: Orange County Water Reliability Study* (Dec. 2016)⁵ establishes that water supply reliability is achievable through the year 2040 in supply stressed conditions with implementation of reasonably foreseeable, planned projects and programs by the Metropolitan Water District of Southern California (MWDSC) and its member agencies, in combination with implementation by Orange County water agencies of a cost effective portfolio of projects and programs *other than* the Desal Project. This information calls into question, and requires a subsequent EIR to:
 - reevaluate the 2010 FSEIR project purpose and objectives as carried forward in the DSEIR; and
 - provide the CEQA review required by law to support the Santa Ana Regional Water Quality Control Board (RWQCB) analysis of "identified need for desalinated water" as required by the May 2015 State Water Resources Control Board (SWRCB) amendment (Desal Amendment) to the Statewide Water Quality Control Plan for the Ocean Waters of California (Ocean Plan) addressing desalination facility intakes and brine discharges, and incorporating other non-substantive changes to the Ocean Plan.
6. CEQA requires preparation of a new or subsequent EIR to identify and evaluate an updated reasonable range of alternatives in light of project changes associated with the Current Desal Project and refinements to the project purpose and objectives set forth in the 2010 FSEIR. New information now exists regarding potentially reasonable alternatives to the Current Desal Project, which are likely to reduce significant adverse impacts associated with that project, including the Orange County Basin Optimization Program described in IRWD's *Reliability Alternatives Report* (2015),⁶ and a significant number of projects described in MWDSC's *Integrated*

⁵ MWDOC, Orange County Water Reliability Study (Dec. 2016), p. 4-1, available at http://www.mwdoc.com/Uploads/OC%20Study%20Executive%20Report_with%20Appendices_1-4-2017%20FINAL%20Low%20Resolution.pdf

⁶ IRWD, Improving Orange County Water Reliability: Comparing Alternatives (Aug. 2015) available at <http://www.irwd.com/images/pdf/about-us/public-policy/20150826%20Desal%20Project%202-pager.pdf>

Water Resources Plan 2015 Update,⁷ and the Orange County Water District (OCWD) *Long-Term Facilities Plan 2014 Update*.⁸ Further, many alternatives that were rejected in the FSEIR should be reevaluated based on new information because they may comply with the Desal Project's refined purpose and objectives and the RWQCB's assessment of the need for desalinated water now required by the Desal Amendment and are likely to reduce significant adverse impacts associated with the Current Desal Project. These alternatives include Alternative Site, Alternative Ownership and Operation, Alternative Facility Configuration, and Reduced Facility Size previously rejected by the FSEIR and excluded from consideration in the DSEIR.

B. The DSEIR is Inadequate under CEQA for Review of the Outfall/Intake Components.

The DSEIR is also inadequate under CEQA for even the narrow purposes of the CSLC's focused review and approval of the proposed Outfall/Intake Components. The DSEIR violates CEQA even for its focused purpose because it:

1. The DSEIR defines impermissibly narrow project objectives, even for the limited project consisting of the Outfall/Intake Components;
2. The DSEIR fails to consider a reasonable range of alternatives, even for the limited project consisting of Outfall/Intake Components; and
3. The DSEIR fails to identify the Recharge Distribution Components as a reasonably foreseeable future project for purposes of analyzing the cumulative impacts of its approval of the Outfall/Intake Components. This error is prejudicial because the adverse environmental impacts of implementing the 2010 Desal Project, including the Outfall/Intake Components, when considered together with the potential adverse environmental impacts of the Recharge Distribution Components, are reasonably likely to result in cumulatively considerable ground and surface water quality and water supply impacts, which the DSEIR failed to disclose. Consequently, at a minimum, an adequate cumulative impacts assessment must be developed for the DSEIR, and the DSEIR must be recirculated for public review and comment to remedy the error.

⁷ MWDSC, *Integrated Water Resources Plan 2015 Update*, Report No. 1518 (Jan. 2016), p. 4.4, available to [http://www.mwdh20.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20\(web\).pdf](http://www.mwdh20.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20(web).pdf)

⁸ OCWD, *Long-Term Facilities Plan 2014 Update* (Nov. 4, 2014), p. 3-20, available at <http://www.ocwd.com/media/3308/long-term-facilities-plan-2014-update.pdf>

II. IRWD'S INTERESTS AND DESAL PROJECT BACKGROUND.

A. IRWD's Interests in High Quality and Reliable Water Supplies.

IRWD is the largest retail water district in Orange County. IRWD's service area includes the City of Irvine and portions of the cities of Tustin, Newport Beach, Costa Mesa, Orange and Lake Forest along with unincorporated areas of Orange County. IRWD's diverse water supply portfolio relies primarily on local groundwater and recycled water, but also includes imported water supplied by MWDSC. Nearly 60 percent of IRWD's total water supply comes from local groundwater wells in the Basin, as well as wells in the Irvine and Lake Forest sub-basins.

To reliably serve a daytime population of more than one-half million, IRWD has planned, designed, constructed, and operates numerous state-of-the-art, conventional, and advanced water treatment, sewage treatment, and water recycling facilities. IRWD has a vested interest in California's water supply reliability and in the implementation of local water supply reliability projects. IRWD operates multiple facilities to produce drinking water, employing technologies such as microfiltration, nanofiltration, reverse osmosis membrane filtration, ultraviolet systems, and other advanced processes, to provide high quality, safe, and highly reliable potable water supplies for its customers.

IRWD's recycled water system is one of the largest in the nation and is used to meet nearly one-third of the total water demand within IRWD's service area. This recycled water system provides an exceptionally reliable and high-quality, non-potable water supply that is used for irrigation, industrial processes, and toilet flushing in more than 80 commercial buildings. Consistent with SWRCB policy,⁹ the use of recycled water is a key component of IRWD's conservation and water use efficiency programs. The use of recycled water extends IRWD's drinking water supplies; reduces the need for additional potable water facilities; reduces the amount of treated wastewater discharged into the ocean; increases water supply reliability; and reduces reliance on more costly sources of water, including imported and desalinated supplies. As part of IRWD's water recycling program, sewage from the community is collected and treated to tertiary standards at both IRWD's MWRP located in Irvine, and the Los Alisos Water Recycling Plant located in Lake Forest. Once treated, recycled water is delivered throughout IRWD's service area through an extensive recycled water distribution system, which is separate from and supplements IRWD's potable water supply and sanitary sewer conveyance systems.

As a leader in water supply reliability planning, IRWD has implemented innovative reliability projects, such as IRWD's groundwater water banking projects in Kern County that are operated in conjunction with innovative water exchange and transfers programs. These projects and programs have been implemented with the objective of IRWD being 100 percent reliable, even under the most severe drought conditions and during major water supply interruptions.

⁹ SWRCB, *Policy for Water Quality Control for Recycled Water*, Resolution No. 2013-0003 (2013).

B. Project Background.

1. The City of Huntington Beach's 2010 FSEIR.

In 2005, the City, acting as the designated CEQA "lead agency," certified a Final Recirculated Environmental Impact Report (2005 REIR) that evaluated the proposed desalination plant as a "co-located" facility at the existing AES Huntington Beach Generating Station (HBGS). 2010 FSEIR, Fig. 1-3. In 2010, the City certified the 2010 FSEIR, which replaced the 2005 REIR, based on "changes to the project and circumstances surrounding the project [that] have occurred, and new [] information [that] has become available." *Id.* at p. 1-1. The 2010 FSEIR evaluates both a co-located desalination plant and a "stand-alone" facility that would continue drawing cooling water through the power plant's open ocean intake system after the power plant stopped using the ocean intake system. *Id.*, Fig. 1-3. The 2010 FSEIR's project description defines the 2010 Desal Project as including the construction and operation of those desalination plant facilities necessary to desalinate seawater, and the facilities and infrastructure necessary to distribute Product Water to Orange County water purveyors. The 2010 Desal Project defined the project as:

- Construction and operation of a 50 million gallon per day (MGD) Desal Plant; and
- Construction and operation of off-site improvements and infrastructure necessary to deliver Product Water via direct surface distribution to Orange County retail water purveyors, including a new water delivery pipeline, underground booster pump stations, and modifications to an existing booster pump station (collectively, the "Surface/Potable Distribution System").

Id. at p. 3-1.

In 2010, and based on the 2010 FSEIR, the CSLC approved the Applicant's request to amend General Lease – Industrial Use PRC 1980.1, allowing the Applicant to use the AES HBGS seawater intake and discharge pipelines for 2010 Desal Project operations. The City takes the position that it lacks continuing jurisdiction over further environmental review of the Current Desal Project because it has no further discretionary approvals to issue.

2. Changes to the 2010 Desal Project Since the 2010 FSEIR.

(a) Introduction of the Recharge Distribution Components.

On May 14, 2015, the Orange County Water District (OCWD) Board of Directors approved a term sheet setting forth preliminary and non-binding terms for future negotiations of a possible contract for OCWD to purchase 56,000 acre-feet per year (AFY) of Product Water from the Applicant for distribution to Orange County water retailers and for OCWD to construct and operate the necessary infrastructure to take, store, and deliver Product Water (Term

Sheet). *Term Sheet Water Reliability Agreement: Huntington Beach Seawater Desalination Project* (Term Sheet) (May 2015).¹⁰

Pursuant to the Term Sheet, OCWD has undertaken planning and conceptual design of the Recharge Distribution Components of the Current Desal Project, including but not limited to directly injecting and recharging desalinated water into the Basin,¹¹ then distributing Product Water blended with groundwater to Orange County retail water supply agencies (Direct Recharge Distribution) via the 100% Recharge related infrastructure of Option 1A encompassed within Option 6, and all associated injection wells, pump stations, associated pipelines, and other facilities. OCWD, *Workshop #3: Distribution of Poseidon Resources Ocean Desalinated Water* (Jul. 6, 2016).¹²

In July 2016, the OCWD Board of Directors authorized staff to proceed with — and OCWD staff is currently advancing with — the study, planning, and design of the Recharge Distribution Components for the Current Desal Project; however, no CEQA review of the environmental issues relating to OCWD's recharge and distribution of the Product Water has been performed. The 2010 FSEIR only evaluated the Surface/Potable Distribution System, and no evaluation of the Recharge Distribution Components has been undertaken. In 2016, the OCWD Board of Directors further directed staff to seek commitments from other Orange County retail water agencies to purchase Product Water, but OCWD has not sufficiently reviewed the potential adverse environmental impacts of delivering Product Water to those agencies pursuant to CEQA.

(b) The Orange County Water Reliability Study.

In December 2016, MWDOC published its *Executive Report: Orange County Water Reliability Study (OC Study)*. The *OC Study* comprehensively evaluates current and future water supply and system reliability for Orange County through the year 2040, and makes statewide, regional, and local recommendations for purposes of advancing water reliability for Orange County as a whole. *Id.* at p. 4-1 through 4-3. The *OC Study* concludes that there are multiple paths to achieving water supply reliability without the Desal Project.

¹⁰ Term Sheet Water Reliability Agreement: Huntington Beach Seawater Desalination Project (May 2015), available at <http://www.irwd.com/images/pdf/about-us/Desalination/Revised%20Poseidon%20Term%20Sheet%20May%202015.pdf>.

¹¹ The Orange County Groundwater Basin is the largest groundwater source in Orange County, serving almost 78 percent of the County's total population. The Basin is managed by OCWD, which manages use of the groundwater and recharge of the Basin via the natural, imported, and treated sources of water to which it has access. To augment groundwater recharge, OCWD operates its state-of-the-art Groundwater Replenishment System (GWRS) that purifies wastewater and reintroduces it into the Basin as a saltwater intrusion barrier and to augment water supplies. To supplement recharge and the overall potable water supply, 28 water providers and OCWD purchase water from MWDOC, which, in turn, purchases water from MWDOC. MWDOC, *Orange County Water Reliability Study* (Dec. 2016) p. 1-2.

¹² OCWD, *Workshop #3: Distribution of Poseidon Resources Ocean Desalinated Water* (Jul. 6, 2016), available at http://www.irwd.com/images/pdf/about-us/Desalination/OCWD_Board_Minutes_7-6-2016_Approving_Option6.pdf

In December 2014, MWDOC convened the Orange County Workgroup (the “OC Workgroup”), made up of managers from MWDOC, MWDOC member agencies, OCWD, and the cities of Anaheim, Fullerton, and Santa Ana, and initiated the *OC Study* to comprehensively evaluate current and future water supply and system reliability for all of Orange County. The OC Workgroup met over 25 times, provided key direction and guidance for the *OC Study*, agreed to key assumptions, and reviewed all findings of the *OC Study*. The *OC Study* examined supply and system reliability for three specific areas of the county: Brea/La Habra, Orange County Basin, and South Orange County. *Id.* at p. 1-3.

The *OC Study* evaluates three planning scenarios (Planned Conditions, Moderately Stressed Conditions, and Significantly Stressed Conditions) defined by differing assumptions that the OC Workgroup deemed reasonable, taking into consideration local water supplies, water demands, climate change impacts, and base flows that recharge the Basin. *Id.* at p. 2-6. The OC Workgroup determined that the Moderately Stressed Conditions scenario, without the California WaterFix, called Scenario 2a, was the appropriate baseline for the *OC Study*. *Id.* at p. 2-11.

The OC Workgroup identified a suite of regional water supply projects that would likely be implemented in response to the shortages identified for the baseline. *Id.* at p. 3-1. These regional water supply projects were grouped into regional portfolios of projects that are expected to be implemented by MWDSC and its member agencies (regional Portfolio B) and evaluated for effectiveness in offsetting the shortages identified in Scenario 2a included the following:

- Expanded MWDSC/Palo Verde Irrigation District Programs;
- Other Colorado River Programs and Transfers;
- Central Valley Water District Transfers;
- Carson Indirect Potable Reuse Project;
- City of San Diego Pure Water Program;
- Los Angeles Department of Water and Power Groundwater Replenishment Project;
- Los Angeles Department of Water and Power Groundwater Remediation Project;
- Eastern Municipal Water District Indirect Potable Reuse Project; and
- Other MWDSC member agency projects in design or in advance planning stages.

Id. at p. 3-5 and 3-6.

The *OC Study* concluded with respect to the Brea/La Habra and Basin areas that “remaining shortages after implementing MWDSC regional Portfolio B would be small enough to manage by enhanced groundwater management or additional conservation.” *Id.* at p. 3-6. With respect to the South Orange County area, the *OC Study* documented several illustrative South

Orange County portfolios to show that there are multiple cost effective projects and programs in which both the supply and system reliability needs of South Orange County can be met. *Id.* at p. 3-8. Of importance to the CSLC, the *OC Study* concluded that, even if the WaterFix is not implemented, there are multiple paths to achieving water supply reliability at the MWDC regional level without the Desal Project. See *id.* at p. 4-1.

3. The CSLC's DSEIR for the Outfall/Intake Components.

The Applicant is now seeking the following agency approvals:

- CSLC approval for the Outfall/Intake Components;
- Regional Water Quality Control Board (RWQCB) determination that the Current Desal Project complies with Water Code section 13142.5(b);
- California Coastal Commission (CCC) approval of a coastal development permit; and
- OCWD approval of the purchase and distribution of Product Water.

On May 26, 2017, the CSLC published the DSEIR for public comment. The DSEIR is a focused document that addresses only the Outfall/Intake Components of the Current Desal Project on the legally flawed theory that the scope of the DSEIR need only be commensurate with CSLC's jurisdiction and approval authority. DSEIR, pp. 1-17 – 1-18. Specifically, the DSEIR states its reasoning as: "The Supplemental EIR is intended to provide the Commission with information required to exercise its jurisdictional responsibilities with respect to the Lease Modification Project [Outfall/Intake Components]" DSEIR, p. ES-3. Although it may be expedient to narrowly focus the DSEIR on the Outfall/Intake Components such an approach does not comply with CEQA, and its prohibitions against basing environmental analysis on a stale and outdated project description; it improperly piecemeals the project components rather than analyzing the full project and its reasonably foreseeable impacts. See CEQA Guidelines, §§ 15121, 15328. The DSEIR attempts to remedy these CEQA violations by incorporating by reference the City's 2010 FSEIR but it fails because the project description in the 2010 FSEIR describes the 2010 Desal Project – and not the full extent of the Current Desal Project. See DSEIR, p. 1-17 ("the CSLC is evaluating the incremental effects associated with the proposed Lease Modification Project [Outfall/Intake Components] when evaluating whether such modifications to the approved 2010 Project would result in any significant environmental impacts"). The DSEIR also does not analyze the potential environmental impacts of the Outfall/Intake Components in the context and as a part of, the Current Desal Project, rendering the DSEIR's project description additionally flawed.

4. The Desal Amendment to the Ocean Plan.

After certification of the 2010 FSEIR, the SWRCB adopted the Desal Amendment to the Ocean Plan in May 2015. Among other things, the Desal Amendment created new section III.M of the Ocean Plan governing implementation provisions for desalination facilities. Pursuant to the Desal Amendment, regional water quality control boards must conduct analysis under

Water Code section 13142.5(b) in accordance with the requirements of the Desal Amendment to make “feasibility determinations” regarding desalination facility sites, designs, technologies, and mitigation measures. Further, regional water quality control boards must analyze and make feasibility determinations in consultation with the CSLC, CCC, and other state agencies, regarding the following factors (among others):

- Whether the identified need for desalinated water is consistent with regional and local water planning documents, such as the *OC Study*; and
- The lowest impact design, layout, form and function of desalination project infrastructure.

Desal Amendment §§ III.M.2.b(2), d.

As stated in the DSEIR, the RWQCB has notified the Applicant that it is necessary for the Applicant to submit the information required by the Desal Amendment, and for the RWQCB to conduct the analysis of the Current Desal Project required by the Desal Amendment to make feasibility determinations. DSEIR, p. 1-8. As further acknowledged in the DSEIR, the RWQCB must have sufficient “CEQA documentation or CEQA functional equivalent analysis” to conduct the feasibility analysis determinations required by the Desal Amendment and Water Code section 13142.5(b). DSEIR, p. 1-8.

III. THE DSEIR IS AN IMPROPER SUPPLEMENT BECAUSE NO COMPREHENSIVE ANALYSIS OF THE CURRENT DESAL PROJECT IN ITS ENTIRETY EXISTS.

A. The CSLC is Responsible for Preparing a Comprehensive Update to the 2010 FSEIR.

The City takes the position that it has no further discretionary approvals to grant to the Desal Project, therefore, it has no further duties as the lead agency. Nevertheless, it is clear that other agencies must issue further discretionary approvals for the Desal Project to move forward. In addition to seeking the approval of the Outfall/Intake Components from the CSLC, the Applicant is also seeking permits/approvals from other CEQA responsible agencies, including both the RWQCB and CCC.

The *Interagency Permit Sequencing Framework Agreement (Permitting Agreement)*¹³ by and among the CSLC, RWQCB, and CCC provides that:

[I]n developing its draft Tentative Order [the RWQCB] can rely on the [2010 FSEIR] in combination with CEQA analysis prepared and approved by the State Lands Commission in its evaluation of [the Applicant’s] proposed seawater intake and discharge technology modifications for the purposes of complying with CEQA.

¹³ Interagency Permit Sequencing Framework Agreement (Oct. 2016) available at <http://www.slc.ca.gov/Info/Reports/Seawater/B.pdf>

Permitting Agreement, p. 2. As a matter of law, the CSLC, RWQCB, and other CEQA responsible and trustee agencies must evaluate the impacts of issuing their discretionary permits and approvals under CEQA based on a current, accurate, and comprehensive description of: (1) the Current Desal Project with all changes, modifications and/or new components; (2) currently relevant information and circumstances; and (3) currently available and feasible mitigation measures. Pub. Resources Code § 21166; CEQA Guidelines, §§ 15121, 15378. Therefore, to proceed in compliance with the Permitting Agreement and the requirements of CEQA, it is incumbent upon the CSLC to prepare a new or subsequent EIR that provides sufficient support for its own actions, and those of other CEQA responsible and trustee agencies, and that includes a thorough impacts analysis of new and substantially more severe environmental effects of the Current Desal Project.

CEQA provides that, where a responsible agency is called on to grant a discretionary approval for a project subject to CEQA for which another public agency was the appropriate lead agency, the responsible agency shall assume the role of the lead agency where:

“(2) The lead agency prepared environmental documents for the project, but the following conditions occur:

- (A) A subsequent EIR is required pursuant to Section 15162,
- (B) The lead agency has granted a final approval for the project, and
- (C) The statute of limitations for challenging the lead agency's action under CEQA has expired.”

CEQA Guidelines, § 15052(a). Here, major changes to the 2010 Desal Project, significant new information, and changed circumstances necessitate a subsequent EIR. The assumption of the lead agency's role falls to the next responsible agency to issue a discretionary approval. In this case, the next responsible agency is the CSLC, and as such is required to prepare a new or subsequent EIR that addresses all new and changed components of the project description, including the Recharge Distribution Components, the attendant impacts to groundwater and recycled water quality, and the feasible alternatives and mitigation measures to reduce impacts. CEQA Guidelines, § 15162. No responsible agency – CSLC, RWQCB, or CCC – may grant an approval for the project until the CSLC prepares a new or supplemental EIR with a current, accurate, and complete project description. A complete and accurate project description is “the *sine qua non* of an informative and legally sufficient EIR.” See *Mira Monte Homeowners Assn. v. County of Ventura* (1985) 165 Cal.App.3d 357, 365 (internal citations omitted).

IRWD recognizes that under the Term Sheet, it was and is anticipated that OCWD would prepare and complete a subsequent EIR for the delivery and distribution system components of the Desal Project. See Term Sheet, p. 6. However, OCWD has not prepared a subsequent EIR – or any CEQA document. Further, OCWD's ongoing planning is for an entirely different distribution and delivery system project component than that analyzed as a part of the 2010 Desal Project in the 2010 FSEIR. See DSEIR, p. 1-11 – 1-12 (OCWD declines to prepare an EIR). As a result, the burden to prepare the subsequent EIR falls upon the CSLC. See CEQA Guidelines, § 15052(a).

B. Substantial Changes to the 2010 Desal Project Require a New or Subsequent EIR.

The 2010 FSEIR cannot be made current with minor modifications via preparation of either an addendum or a supplemental EIR because changes to the 2010 Desal Project and significant new information and circumstances require major rather than minor revisions to the 2010 FSEIR. These revisions include a project description that includes the Recharge Distribution Components and an attendant environmental impacts analysis, updated purpose and objectives based on the new supply reliability information in the *OC Study*, and feasible alternatives and mitigation measures to reduce the Current Desal Project's significant effects. See CEQA Guidelines, §§ 15162, 15163(a), (b). When an EIR already exists and major revisions are required in order to bring the EIR up to date, a subsequent EIR is required.

When one or more further discretionary approvals is required by a lead or responsible agency for a project for which an EIR has already been certified or adopted, the agency must determine whether additional CEQA review is required. Pub. Resources Code, § 21166. Such new CEQA review may, in appropriate cases, consist of either a supplemental or a subsequent EIR. The difference between a subsequent EIR and a supplemental EIR involves the level of changes needed to update the existing EIR to fully and adequately analyze the project in its entirety, as it has changed. CEQA Guidelines, §§ 15162, 15163(a). Specifically,

- A subsequent EIR is required when substantial changes proposed in the project resulting in “new significant environmental effects or a substantial increase in the severity of previously identified significant effects” will require major revisions of the EIR.
- A supplemental EIR is appropriate only when the EIR that is relied upon addresses **the same project** to be considered in the supplemental EIR with minor modifications.

Pub. Resources Code, § 21166(a); CEQA Guidelines, §§ 15162(a)(1), 15163(a), (b); see *City of San Jose v. Great Oaks Water Co.* (1987) 192 Cal.App.3d 1005, 1016 (supplemental EIR consists of “[only] *minor additions or changes* . . . necessary to make the previous EIR adequately apply to the project in the changed situation []” and must be considered in conjunction with the previous EIR) (emphasis added).

Here, no EIR exists that includes a current, accurate, and complete project description on which a supplemental EIR can rely, due to major changes to the 2010 Desal Project that have occurred since certification of the 2010 FSEIR. The DSEIR, which addresses only the proposed Outfall/Intake Components combined with the outdated 2010 FSEIR, is not a sufficient basis upon which the CSLC can approve the proposed Outfall/Intake Components because this improperly segregates the Outfall/Intake Components of the overall project. In fact, the focused Outfall/Intake Components project actually modifies Current Desal Project, which, to date, has not been properly reviewed pursuant to CEQA. The Current Desal Project, which includes the Recharge Distribution Components as well as the Outfall/Intake Components, has (as documented below in Sections III.C.2 and III.C.3) new and substantially more severe impacts than previously analyzed, necessitating a comprehensive update to the 2010 FSEIR via a new or subsequent EIR. See CEQA Guidelines, § 15162 (requiring a subsequent EIR when

“important revisions of the previous EIR . . . due to the involvement of new significant environmental impacts” that were not previously considered are needed).

Absent a new or subsequent EIR that analyzes the Current Desal Project -- as changed since certification of the 2010 FSEIR -- and its impacts, alternatives, and mitigation measures, the CSLC’s CEQA document is an improper supplement that fails to analyze the environmental impacts of implementing the Outfall/Intake Components of the Current Desal Project in contravention of the CEQA Guidelines. The DSEIR therefore fails to fulfill its essential role as an informational document, and is thus not “sufficient to allow informed decision making” by the CSLC, or by the RWQCB or CCC. *See Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 402-403 (holding that the failure to provide a full and meaningful discussion of impacts and alternatives renders an EIR inadequate under CEQA). Consequently, the CSLC is required to prepare a comprehensive new or subsequent EIR to update the 2010 FSEIR, including a thorough impacts analysis of the new and substantially more severe environmental effects of the Current Desal Project, in addition to a focused analysis of Current Desal Project components within its jurisdiction (i.e., the Outfall/Intake Components).

C. Desal Project Changes Must be Comprehensively – and Not in a Piecemealed Fashion – Reviewed in a Subsequent EIR.

The DSEIR improperly relies on the now stale, inaccurate 2010 FSEIR as its basis. No accurate project description of the entire Current Desal Project, as planned in 2017, is available, nor is a comprehensive evaluation of the Current Desal Project’s environmental impacts, feasible alternatives, or feasible mitigation measures available for the DSEIR to supplement. Furthermore, by seeking environmental review and approval of only the Outfall/Intake Components -- one of many changes made to the 2010 Desal Project -- from a responsible agency (the CSLC), rather than seeking comprehensive environmental review of the entire Current Desal Project from the CSLC, OCWD (based on the Term Sheet) or another lead agency, the Applicant is cleverly avoiding comprehensive CEQA review and the need to consider new feasible alternatives and mitigation measures. A limited environmental review was chosen despite the fact that new feasible alternatives and mitigation measures not considered for the original 2010 Desal Project may be appropriate for the Current Desal Project. Allowing the Applicant to serially seek focused review and approval by responsible agencies, such as the CSLC, with each review focusing only on those specific 2010 Desal Project components within the responsible agency’s jurisdiction, would lead to the approval of the Desal Project without appropriate CEQA review. This method is ultimately likely to lead to the Current Desal Project’s full approval and permitting without full consideration of the degree to which the Current Desal Project, in its entirety (including the introduction of the Recharge Distribution Components or the significant new information and circumstances developed over the last seven years since certification of the 2010 FSEIR), results in new adverse environmental impacts, or requires implementation of new or different alternatives and mitigation measures to avoid and reduce impacts to the fullest extent feasible.

Segmentation or “piecemealing” the environmental review of the Current Desal Project violates CEQA. CEQA Guidelines, § 15378 (EIR must evaluate the “whole of the action”). The purpose of the piecemealing prohibition is to prevent segmented review focused on only certain project components resulting in: (1) a failure to identify the severity of adverse impacts of the

entire project as planned; (2) a failure to identify and consider a reasonable range of alternatives to avoid or reduce impacts of the *entire project as planned*; and (3) a failure to consider and prescribe all feasible and available mitigation measures to reduce adverse impacts of *the entire project as planned*. See, e.g., *Christward Ministry v. Superior Court* (1986) 184 Cal.App.3d 180, 195–96 (city impermissibly chopped up single project into three separate projects, which was “exactly the type of piecemeal environmental review prohibited by CEQA”).

To fulfill the purposes of and comply with CEQA, the Applicant cannot be allowed to piecemeal the CEQA review of the Current Desal Project by improperly failing to prepare a subsequent EIR when one is required to evaluate the project *in its entirety*. Moreover, the Applicant cannot be allowed to further segment environmental review of the many, various updated components of the Desal Project among a variety of different CEQA responsible agencies, including the CSLC, RWQCB and CCC, while OCWD fails to initiate a full subsequent EIR necessary to review environmental impacts associated with the Current Desal Project, including its delivery and distribution system components, as they have changed since certification of the 2010 FSEIR. See n. 10, *supra*, Term Sheet, pp. 3, 6. The following discussion highlights the differences between the 2010 FSEIR Desal Project and the Current Desal Project, which requires a comprehensive, updated subsequent EIR; the environmental review of which cannot and should not be piecemealed.

1. The Project Description in the 2010 FSEIR and “Supplemented” by the DSEIR is Inaccurate and Incomplete in 2017.

The DSEIR purports to provide supplemental environmental evaluation of changes to the 2010 Desal Project associated with the Outfall/Intake Components as if those changes were being proposed to the 2010 Desal Project as defined in the 2010 FSEIR, rather than as a part of the Current Desal Project. The 2010 FSEIR project description does not include or anticipate replacement of the 2010 Desal Project’s delivery and distribution components with the Recharge Distribution Components approved by OCWD in 2016 for planning, conceptual design and, in the future, further environmental review. More specifically, Section 3.5 of the 2010 FSEIR specifies that the 2010 Desal Project would deliver Product Water via the Surface/Potable Water Distribution System consisting of off-site pipelines connecting to the existing OC-44 water transmission line in three locations including the Newport Beach Reach B and the East Orange feeder .

Contrary to the 2010 FSEIR’s project description, the Recharge Distribution Components (identified by OCWD as Option 6) would require as many as 26 new injection wells in various Basin locations, a pump station, a different pipeline route, and associated infrastructure necessary to inject, store, recover, and deliver groundwater recharged with Product Water. *Workshop #3: Distribution of Poseidon Resources Ocean Desalinated Water, supra*.¹⁴ These facilities, which comprise the Recharge Distribution Components, represent significant changes to the 2010 Desal Project’s Surface/Potable Distribution System evaluated in the 2010 FSEIR; however, the adverse impacts of those components have not been identified or evaluated, nor have potentially feasible alternatives or mitigation measures to reduce those impacts, which

¹⁴ See footnote 12, *supra*.

may reasonably affect project design features of the Current Desal Project, including the Outfall/Intake Components, been studied in in the DSEIR.

These changes to the 2010 Desal Project, which have already been approved by OCWD for inclusion in one form or another as a part of the Current Desal Project, substantially and materially change the environmental impacts of the Current Desal Project as discussed in more detail below. The failure to acknowledge the substitution of the Recharge Distribution Components in place of the 2010 Desal Project's Surface/Potable Distribution System is also anticipated to directly affect the reliability of the DSEIR's environmental evaluation of the Outfall/Intake Components. Nevertheless, these changes to the 2010 Desal Project are not taken into account in the DSEIR's evaluation because the DSEIR relies on the outdated 2010 FSEIR project description rather than preparing and evaluating an updated project description that accurately reflects the Current Desal Project.

"An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR. The defined project and not some different project must be the EIR's bona fide subject." *Mira Monte Homeowners Assn. v. County of Ventura, supra* (internal citations omitted). CEQA Guidelines section 15378(a) defines the term "Project" as "the whole of an action, which has a potential for resulting in a physical change in the environment, directly or ultimately," and which is undertaken, supported or approved by a public agency. Subdivision (c) of this section states, "[t]he term 'project' refers to the activity which is being approved and which may be subject to several discretionary approvals by governmental agencies. The term 'project' does not mean each separate governmental approval." For example, in *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, the Court held an EIR was inadequate because it failed to include a description of the facilities that would have to be constructed to deliver water to a proposed mining operation. *Id.* at pp. 829-30. The Court noted:

"The construction of additional water delivery facilities is undoubtedly one of the significant environmental effects of the project. As such, a description of the necessary construction had to be included if the EIR was to serve its informational purpose. [Citations.] Because of this omission, some important ramifications of the proposed project remained hidden from view at the time the project was being discussed and approved. This frustrates one of the core goals of CEQA."

Ibid.

All EIRs must evaluate the "whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." CEQA Guidelines, § 15378. "From this principle, 'it is clear that the requirements of CEQA 'cannot be avoided by chopping up proposed projects into bite-sized pieces' which, when taken individually, may have no significant adverse effect on the environment." *Assn. for a Cleaner Environment v. Yosemite Cmty. Coll. Dist.* (2004) 116 Cal.App.4th 629, 638 (project to close shooting range included cleanup and dismantling); see also *Citizens Assn. for Sensible Development of Bishop Area v. County of Inyo* (1985) 172 Cal.App.3d 151, 165 (project improperly segmented into two projects for CEQA purposes). The task of additional environmental review cannot be segmented into the individual project

components among the different agencies that are responsible for approval. *See generally, Banning Ranch Conservancy v. City of Newport Beach* (2017) 2 Cal.5th 918 (CEQA requires EIRs to take a comprehensive view and coordinate their analysis with the planning and environmental review processes of other responsible agencies).

As noted, the Current Desal Project includes the Recharge Distribution Components, which replace the Surface/Potable Delivery System, and were not previously evaluated as part of the 2010 Desal Project. In fact, the 2010 FSEIR only briefly discusses the Surface/Potable Delivery System. 2010 FSEIR, p. 3-72 – 3-73. It is entirely clear that the 2010 FSEIR does not contemplate the Recharge Distribution Component or any alternative that would directly or indirectly recharge or replenish the Basin, with Product Water because the 2010 FSEIR incorrectly concludes, without analysis, that: Use of desalinated seawater from the [2010 Desal Project] will not affect any groundwater basin water quality objectives via groundwater spreading, conjunctive use, or the use of recycled water in Orange County.” 2010 FSEIR, p. 4.11-5.

As a result, the DSEIR’s project description precludes environmental analysis of a fully and accurately described project by the CSLC. In addition, the 2010 Desal Project description, relied upon by the DSEIR, is insufficient because it does not take into account the end use(s) of Product Water. Taking the end use(s) of Product Water into consideration as a part of the DSEIR’s project description is critical to effective analysis of potential significant impacts associated with the Desal Project and all of its components. For example, an evaluation of the end use(s) of the desalinated water is necessary to determine:

- Acceptable target concentrations of boron, TDS, and salts for Product Water, which in turn drive treatment facilities that must be included in the design of the Desal Project and any associated modifications to the use and design of Outfall/Intake Components, and
- Blending water requirements for Product Water, which in turn drive facilities related to providing source water for blending that must be included in the design of the Desal Project and any associated modifications to the use and design of Outfall/Intake Components.

Identification of all project design features of the Current Desal Project that are necessary for enhanced treatment of boron, TDS, and salts and for delivery of blending source water, and evaluation of the relationship between those project design features and the Outfall/Intake Components, is required for an accurate evaluation of adverse impacts of, and appropriate mitigation for, both the Current Desal Project as a whole, and of the discrete Outfall/Intake Components of the Current Desal Project. (Trussell Technologies, Inc., Technical Memorandum: Review of the Proposed Water Quality Requirements for the Huntington Beach Desalter, Apr. 13, 2016, pp. 74-75.)¹⁵

¹⁵ Trussell Technologies, Inc., *Review of Proposed Water Quality Requirements for the Huntington Beach Desalter* (Apr. 13, 2016), available at <http://www.irwd.com/images/pdf/about-us/Desalination/Trussell%20Tech%20Final%20Report%20for%20OCWD%2020160413.pdf>.

Similarly, while it may have been appropriate to use drinking water standards to set TDS limits for the Surface/Potable Distribution component of the 2010 Desal Project in the 2010 FSEIR, when the Product Water (with TDS concentrations of 350 mg/l to 500 mg/l as described in the Term Sheet) will be used to recharge groundwater that is of better quality (currently about 270 mg/l in the vicinity of IRWD wells), it is essential to set lower TDS limits for Product Water so as not to degrade baseline groundwater quality in the Basin.¹⁶ Different TDS limits may affect the design and use of technology and facilities relied upon to:

- collection of seawater through the intake for desalination;
- treatment of seawater to create Product Water; and
- discharge treatment effluent with higher concentrations of pollutants (brine) through the outfall and back to the ocean.

The conditions, technologies, and treatment processes involved in the desalination process that must be incorporated into the Desal Plant to accommodate the new Recharge Distribution Components are all a part of the Current Desal Project. Without a description of these project components, the DSEIR project description is inaccurate and incomplete and consequently impossible to evaluate from an environmental compliance perspective. See *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 734 (holding that failure to consider the expansion of the wastewater treatment plant as part of the project under consideration resulted in an inaccurate project description and incomplete identification and analysis of the environmental effects). In addition, failure to identify end use omits a discussion of the impacts associated with Current Desal Project infrastructure needed to deliver, store, and distribute Product Water. MWDSC, *Integrated Water Resources Plan 2015 Update* (hereinafter, "2015 IRP"),¹⁷ 2015, p. 44 ("[F]actors affecting [desalinated seawater] cost include the types of processes needed to meet water quality goals as well as the length of pipeline and pumping requirements for integrating desalinated seawater into the distribution system.")¹⁸

The construction and interrelated operation of the Outfall/Intake Components, Desal Plant design features, and Recharge Distribution system design features (including recharge facilities and the infrastructure needed to recover and distribute water from the ground) are all part of a single project that must be considered together in a comprehensive, updated subsequent EIR. To comply with CEQA, therefore, the CSLC must prepare a new or subsequent EIR for the entire project that covers impacts from all substantial changes to the Desal Project, including changes to aspects of the Desal Project that do not involve the Outfall/Intake Components.

¹⁶ Please note that IRWD does not concede that TDS levels meeting drinking water standards are sufficiently protective even for direct distribution because an elevation in TDS levels in the influent entering the MWRP as compared to influent without Product Water is reasonably likely to adversely affect IRWD's recycled water program as discussed in Section III.C.3.

¹⁷ See footnote 7 *supra*.

¹⁸ *Id.*

The other responsible agencies must also be able to rely on the subsequent EIR for any additional discretionary approvals. In particular, the new facilities comprising the Recharge Distribution Components – the pipeline, the groundwater injection wells, and groundwater production and conveyance facilities – are facilities required to attain the Desal Project purpose and objectives (as described in the 2010 FSEIR and DSEIR), they unquestionably are part of the same project for CEQA purposes. *Tuolumne Cty. Citizens for Responsible Growth, Inc. v. City of Sonora* (2007) 155 Cal.App.4th 1214, 1226 (“The relationship between the particular act and the remainder of the project is sufficiently close [to constitute a single project under CEQA] when the proposed physical act is among the “various steps which taken together obtain an objective.”) As such, the CSLC must evaluate these facilities as part of its project description in an updated or new subsequent EIR. *Rural Landowners Assn. v. City Council* (1983) 143 Cal.App.3d 1013, 1024-25 (where the responsible agency stepped into the shoes to prepare a subsequent or supplemental EIR, all parts of project, including new parts, had to be evaluated).

2. Impacts Associated with the Construction and Operation of the Recharge Distribution Components Must be Evaluated.

The manner in which Product Water is integrated with existing potable water distribution systems can affect the existing distribution systems, project operations, and recycled water systems, and can be a determining factor stranding water supply infrastructure. See *2015 IRP*, p. 48. Construction and operation of the facilities comprising the Recharge Distribution Components, including up to 26 new injection wells, was not considered in the 2010 FSEIR or the DSEIR, and such facilities would result in significant new and substantially more severe impacts. Construction-phase effects would include significant ground disturbance with potential biological resource, and cultural/paleontological impacts, and involve the use of heavy equipment with potential air quality impacts. Operations-phase effects of such facilities may include hydrogeologic impacts as well as ground and surface water quality impacts, groundwater mounding impacts, and water supply impacts, as further discussed in Section III.C.3. See *City of San Jose v. Great Oaks Water Co.* (1987) 192 Cal.App.3d 1005 (holding that agency’s failure to prepare additional CEQA analysis when the EIR did not address the impact of three new wells violated CEQA and rendered the agency’s project approval unlawful); *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818 (holding EIR on proposed mining operation inadequate because it failed to include a description of the facilities that will have to be constructed to deliver water to mining operation).

3. The Recharge Distribution Components Would Significantly Adversely Affect Water Quality and Water Supply.

Water Quality Impacts. The 2010 FSEIR only evaluated the Surface/Potable Distribution System as a part of the 2010 Desal Project. In response to OCWD’s planning and consideration of the Recharge Distribution Components, IRWD has identified multiple potential significant adverse impacts from the Current Desal Project related to water quality. These potential adverse water quality impacts associated with the Recharge Distribution Components include the potential to:

- Degrade high quality groundwater in contravention of the SWRCB Anti-Degradation Policy (Resolution No. 68-16);

- Reduce the quality of water delivered to IRWD customers; and
- Encumber IRWD's continued ability to comply with individual National Pollutant Discharge Elimination System (NPDES) Permit standards for discharge of recycled water due to elevated concentrations of TDS in Product Water.

As explained in Section III.C.1, the 2010 FSEIR only analyzed the introduction of Product Water into the potable water system and direct delivery to water supply retailers (i.e., surface/potable distribution). Consequently, the 2010 FSEIR did not evaluate Desal Project impacts to groundwater quality. Instead, the 2010 FSEIR only analyzed Product Water quality impacts vis-à-vis their compliance with regulatory drinking water standards, and not in comparison to Basin groundwater quality objectives or existing groundwater quality conditions. See 2010 FSEIR, § 4.11.

As documented in IRWD preliminary study results that were presented to OCWD by IRWD and its consultants on March 8, 2016, the recharge of Product Water is reasonably likely to significantly degrade the quality of groundwater within the Basin. Thomas Harder & Company; HDR, Inc., *Preliminary Analysis Impact of Desalinated Seawater Use to IRWD's Recycled Water* (IRWD Presentation to OCWD) (Mar. 8, 2016).¹⁹ The 2010 FSEIR predicts that boron is expected to be present in the Product Water at concentrations of approximately 0.6–1.0 mg/L (2010 FSEIR, p. 4.11-13) and the Term Sheet specifies Product Water will have concentrations at levels of 0.75-1.0 mg/L. *Term Sheet Water Reliability Agreement: Huntington Beach Seawater Desalination Project* (Term Sheet) (May 2015,) Att. A.²⁰ These Product Water boron concentrations exceed:

- Current Basin groundwater quality objectives for boron of 0.75 mg/L (RWQCB, Water Quality Control Plan for Santa Ana Basin, Region 8, (Basin Plan), updated Feb. 2016, p. 4-21);²¹ and
- Current concentrations of boron in groundwater pumped from the Basin, which range from .08 mg/l to 0.138 mg/l as measured by IRWD at the Dyer Road Wellfield between September 27, 2016 and April 4, 2016.

In addition, TDS concentrations in the Product Water are anticipated to range from 350 to 500 mg/L (Term Sheet, Att. A), exceeding:

¹⁹ OCWD, Preliminary Analysis Impact of Desalinated Seawater Use to IRWD's Recycled Water (Mar. 8, 2016) available at <http://www.irwd.com/images/pdf/about-us/Desalination/Desalination%20Preliminary%20Impact%20Presentation%20March%202016.pdf>

²⁰ Term Sheet, Attachment A (May 2015) available at <http://www.irwd.com/images/pdf/about-us/Desalination/Attachment%20A%20Water%20Reliability%20Agreement%20Term%20Sheet%20May%202015.pdf>

²¹ RWQCB, Water Quality control Plan for Santa Ana Basin, Region 8 (Feb. 2016) available at http://waterboards.ca.gov/santaana/water_issues/programs/basin_plan/docs/2016/Chapter_4_Feb_2016.pdf

- Current concentrations of TDS in Basin groundwater in the vicinity of IRWD's well facilities, which are approximately 270 mg/L on an average annual basis as measured by IRWD at the Dyer Road Wellfield in calendar year 2016.

Accordingly, recharging Product Water into the Basin, is reasonably likely to increase the boron and TDS loads, and significantly degrade the existing and future high quality groundwater within the Basin in the proximity of IRWD wells. Such water quality degradation would unreasonably adversely impact the beneficial use of groundwater by increasing the concentration of those pollutants. These groundwater quality impacts must not only be analyzed and mitigated in a properly prepared new or subsequent EIR pursuant to CEQA, but must also be analyzed for violation of the SWRCB Antidegradation Policy (Resolution No. 68-16) and the Basin Plan.

In addition to the potential significant adverse impacts that recharging Product Water will have on boron and TDS concentrations in the groundwater Basin, the recovery and use of the groundwater recharged with Product Water is also likely to significantly and adversely affect the quality of potable water delivered to IRWD customers, which was never evaluated in the 2010 FSEIR or DSEIR. Customer use of the lower quality potable water will result in sewage being delivered to the MWRP that is also higher in boron and TDS concentrations. Higher concentrations of these pollutants in sewage are likely to adversely impact the quality of recycled water produced at the MWRP and distributed through IRWD's recycled water system.

These potential adverse impacts on recycled water production and use were not analyzed in the 2010 FSEIR or the DSEIR but IRWD has contracted with consultants Thomas Harder & Company and HDR, Inc. to preliminarily, and subject to full CEQA review, evaluate and determine the potential for significant adverse impacts of Product Water pollutant concentrations on the quality of recycled water produced for and served to IRWD customers. On March 8, 2016, IRWD's consultants participated with IRWD in presenting to OCWD their preliminary analysis regarding the impact of recharging Product Water on the quality of groundwater and recycled water produced at MWRP. IRWD Presentation to OCWD. The results of this study indicate that the increases in concentrations of boron and TDS in the groundwater that IRWD extracts from the Basin resulting from recharge with Product Water is likely to increase those pollutants in recycled water produced by IRWD. These increased pollutant concentrations in IRWD's recycled water, in turn, are likely to result in significant impacts to:

- ornamental and agricultural plants irrigated with recycled water throughout IRWD's service area (Trussell Technologies, Inc., Technical Memorandum: Review of the Proposed Water Quality Requirements for the Huntington Beach Desalter, Apr. 13, 2016, pp. 74-75);
- surface receiving waters in reservoirs accepting discharges of recycled water, based on the potential for exceedances of IRWD's NPDES permit requirements governing such discharges (RWQCB, Order No. RS-2015-0024/NPDES No. CA8000326).

These impacts not only must be evaluated in a properly prepared new or subsequent EIR pursuant to CEQA, but the potential adverse impacts to IRWD's recycled water program

due to decreased demand for recycled water must also be analyzed for contravention of SWRCB Policy for Water Quality Control for Recycled Water (Resolution 2013-0003).

The treatment of sewage and production of recycled water using current technologies available at the MWRP would not be effective to remove or reduce the significant increases in boron and TDS concentrations that are reasonably likely to occur upon implementation of the Recharge Distribution Components to the same low levels currently characterizing IRWD's recycled water. The magnitude of these increases would be dependent upon the end use of Product Water, *e.g.*, how and where Product Water is injected into the Basin, and cannot be determined until detailed plans for injection alternatives are made available. Nevertheless, increased concentrations of TDS in Product Water are reasonably likely to result in IRWD recycled water discharged into storage reservoirs exceeding RWQCB permit requirements for TDS. See RWQCB, Order No. RS-2015-0024/NPDES No. CA8000326. These potential adverse surface water quality impacts must be evaluated in a properly prepared new or subsequent EIR pursuant to CEQA.

Water Supply Impacts. Another potentially significant adverse impact of OCWD recharging a large volume of Product Water into the Basin as a component of the Current Desal Project is that it would impair the ability to capture and recharge the Basin aquifer using above average storm water flows and above average base flows that occur in the Santa Ana River. Even with the additional wells and groundwater recovery infrastructure that OCWD has described as comprising the Recharge Distribution Components, as described in Section III.C.2, recharging the Basin aquifer with a large volume of Product Water on a long-term basis would likely result in much higher groundwater levels and shallower depths to groundwater in the Basin. Continuous long-term recharge of the Basin aquifer with Product Water would maintain high groundwater levels, which would provide limited available aquifer capacity to store above average storm water and above average base flows in the Santa Ana River. Storm water and freshwater base flows are a current primary source of recharge to the Basin and are relied upon by the groundwater producers. The recharge of the Basin using Product Water rather than storm flows and base flows would in effect result in many hundreds of thousands of acre-feet of Santa Ana River water being lost to the ocean that otherwise would have been recharged into the Basin over the life of the Desal Project. This loss of access to an existing source of water that is currently used by the groundwater producers is another significant environmental impact, and the potential impact to beneficial uses also needs to be evaluated in a properly prepared, comprehensive new or subsequent EIR pursuant to CEQA.

In summary, the DSEIR fails to comply with CEQA requirements triggering the preparation of a subsequent EIR, and fails as an informational document because it does not disclose or address the Current Desal Project's potentially significant adverse water quality and water supply impacts. The impacts associated with construction and operation of the Recharge Distribution Components are not evaluated in any CEQA document prepared for any iteration of the Desal Project to date, and neither the 2010 FSEIR nor the DSEIR address the Recharge Distribution Components. The CSLC is responsible for preparing a subsequent EIR that includes the 2010 Desal Project changes, including construction and operation of facilities necessary to implement the Recharge Distribution Components as a part of its project description, and evaluates the potential environmental effects therefrom.

D. Significant New Information Necessitates Preparation of a Subsequent EIR.

As discussed in Section II.B.2.b, MWDOC published the *OC Study* in 2016, which documents that water supply reliability in Orange County is achievable through 2040 with implementation of regional and local banking, groundwater management, indirect potable reuse, and wastewater recycling plans and programs. This new information should be evaluated in a new or subsequent EIR because this information requires major changes to the 2010 FSEIR by calling into question the validity of the Desal Project purpose and objectives as carried forward into the DSEIR, and presents new or considerably different project design features, mitigation measures, and alternatives available to reduce one or more significant adverse impacts of the Desal Project. See Pub. Resources Code § 21166; CEQA Guidelines, §§ 15162, 15163(a), (b).

CEQA requires additional review if new information of substantial importance to the project, which was not known and could not have been known at the time with the exercise of reasonable diligence when EIR was certified, becomes available. Pub. Resources Code § 21166(c). New information relevant to a project is of substantial importance and requires preparation of a new or subsequent EIR if new information shows that any one of the following conditions exists:

- The project will have one or more new significant effects not evaluated in the prior EIR;
- Significant effects previously examined in the prior EIR will be substantially more severe than shown in the prior EIR; or
- New or considerably different feasible project design features or mitigation measures, or new or considerably different alternatives not previously examined in the prior EIR would substantially reduce one or more significant adverse impacts that the applicant declines to adopt.²²

See CEQA Guidelines § 15162(a)(3); see also 2 Kostka & Zischke, Practice Under the California Environmental Quality Act (Cont.Ed.Bar 2015) § 19.18.

1. The Orange County Water Reliability Study Constitutes New Information Regarding Sufficient Water Supply and System Reliability in Orange County for the Foreseeable Future and Calls into Question the 2010 FSEIR Project Purpose and Objectives.

As documented in the *OC Study*, water supply and system reliability can be achieved throughout the county through MWDSC and MWDSC member agency planned projects and programs and by optimizing the use of the Basin using methods that are consistent with existing OCWD policies for managing the Basin. *Id.* at p. 3-6 – 3-8. Among the *OC Study's* recommendations are: advocacy for the WaterFix, regional storage and water banking, water recycling, groundwater production, and groundwater indirect potable reuse. *Id.* at p. 4-1.

²² New and more severe environmental impacts not addressed in the 2010 SEIR or the DSEIR, particularly to Basin groundwater quality and IRWD's recycled water program, are discussed in Section III.C.3.

The *OC Study* identifies a suite of regional water supply projects that would likely be implemented by MWDSC and MWDSC member agencies in response to the shortages identified for the baseline Scenario 2a. *Id.* at p. 3-1. The OC Workgroup evaluated the regional portfolio of projects for effectiveness in offsetting the shortages identified in Scenario 2a. *Id.* at p. 3-5 – 3-6. The *OC Study* concludes the following:

- With respect to the Brea/La Habra and Basin areas, “remaining shortages after implementing MWDSC regional Portfolio B would be small enough to manage by enhanced groundwater management or additional conservation.”
- With respect to the South Orange County area, there are multiple cost effective projects and programs in which both supply and system reliability needs of South Orange County can be met.

Id. at pp. 3-6, 3-8. In other words, the Desal Project is not needed to meet Orange County water supply and system reliability goals through 2040.

2. A New or Subsequent EIR Must be Prepared to Update the 2010 FSEIR Project Purpose and Objectives Based on New Information of Substantial Importance to the Desal Project in the *OC Study* and the Desal Amendment.

The new information in the *OC Study* revealed that water supply reliability is achievable with implementation of MWDSC and MWDSC member agencies’ likely plans and programs in combination with a cost effective South Orange County portfolio of projects and programs. This revelation is of substantial importance to the Desal Project because it calls into question the continued viability of the project purpose and objectives identified in the 2010 FSEIR as carried forward into the DSEIR, *i.e.*, “to . . . strengthen regional self-reliance and satisfy regional water supply planning goals.” 2010 FSEIR, pp. 3-80, 3-95; DSEIR, p. 2-3. Based on the conclusions of the *OC Study*, the Desal Project is not needed to satisfy these purposes or objectives because there are portfolios of projects and programs other than the Desal Project which, in combination, are sufficient through the year 2040 to:

- Reduce local dependence on MWDSC water because *MWDSC water is available in amounts sufficient to meet reliability goals*;
- Improve regional self-reliance because *Orange County groundwater management, conservation, and regional and local water projects provide for ongoing self-reliance*; and
- Meet water supply and system reliability regional planning goals.

In light of this new information, a new or subsequent EIR must be prepared based on updated project purpose and objectives that accurately reflect this new information of substantial relevance to the Desal Project regarding Orange County’s water supply reliability.

The 2010 FSEIR project objectives as incorporated into the DSEIR are grounded in outdated and inaccurate assumptions regarding a water supply problem that does not exist,

namely: there is a foreseeable and unaddressed water supply shortage in Orange County. Because these 2010 FSEIR and DSEIR objectives are grounded in the inaccurate assumption that there is a water supply problem, the 2010 SEIR objectives inevitably resulted in identification of a range of alternatives that constitute a solution to the problem, even if though current information shows that the problem does not exist. See CEQA Guidelines, § 15124(b) (project objectives are directly related to the range of alternatives analyzed in an EIR); *North Coast Rivers Alliance v. Kawamura* (2015) 243 Cal.App.4th 647, 669 (holding the definition of project objectives improperly limited the analysis of alternatives where assumptions underlying the project objective could become inaccurate or unattainable at any time). The CSLC is required to prepare a new or subsequent EIR with updated project purpose and objectives that accurately reflect the new information of substantial importance to the Desal Project regarding water supply reliability in the *OC Study*.

Further, the new information revealed by the *OC Study* combined with the adoption of the Desal Amendment requires that a new or subsequent EIR be prepared to support RWQCB analysis and issuance of desalination feasibility determinations regarding the identified need for Product Water based on consideration of adopted regional and local water supply planning documents. Pursuant to the Desal Amendment, the RWQCB must analyze, in consultation with the CSLC, CCC, and other responsible and trustee agencies, whether an identified need for Product Water exists. Desal Amendment § III.M.2.b(2). This RWQCB determination must be reviewed in CEQA documentation or a CEQA functional equivalent. DSEIR p. 1-8. In light of the new information in the *OC Study* and the requirements of the Desal Amendment, the CSLC must prepare a new or subsequent EIR because:

- CEQA review and documentation is required for the RWQCB's Desal Amendment feasibility determinations;
- the Desal Amendment requires coordination between the RWQCB and the CSLC in completing the feasibility analysis and issuing those determinations; and
- CSLC agreed in the Permitting Agreement to facilitate the CEQA review necessary for issuance of required RWQCB approvals.

In addition, a new or subsequent EIR must take into account the findings of the *OC Study* regarding the ability to provide reliable water supply in Orange County without reliance on the Desal Project.

3. A New or Subsequent EIR Must Analyze a Revised Reasonable Range of Alternatives in Light of Changes to the Desal Project and New Information of Substantial Importance to that Project.

To comply with CEQA, a new or subsequent EIR must both evaluate the new supply reliability information in the *OC Study* and the resulting proper formulation of (i) project purpose and objectives, (ii) a new project description that accurately reflects the Recharge Distribution Components and all associated conveyance, injection, storage, recovery, and delivery infrastructure. A new or subsequent EIR must also evaluate the Outfall/Intake Components, (iii) associated potentially significant impacts, and (iv) an updated reasonable range of

alternatives designed to reduce or eliminate significant project impacts. CEQA Guidelines, § 15126.6(a); *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477 (scope of the alternatives analysis must be considered in light of the nature of the project, the project's impacts, relevant agency policies, and other material facts).

The discussion of mitigation and alternatives is “the core of an EIR.” *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564. One of CEQA's principal objectives is to ensure that public agencies systematically identify both the significant effects of proposed projects and the feasible mitigation measures and alternatives that will avoid or substantially lessen such effects. Pub. Resources Code, § 21002. New information of substantial importance to Desal Project implementation, related refinements to the Desal Project purpose and objectives, and new information regarding the Current Desal Project, including the Recharge Distribution Components and associated new and more substantial impacts, all require an updated identification and evaluation of feasible alternatives that meet project purpose and objectives and reduce significant adverse impacts.

(a) New Alternatives Recommended for Evaluation.

Based on a required updated and refined Desal Project purpose and objectives, and new information relevant to the Desal Project presented by the *OC Study*, the 2015 IRP,²³ IRWD's August 26, 2015 research paper titled “Improving Orange County Water Reliability: Comparing Alternatives” (IRWD 2015 Reliability Alternatives Report) (Aug. 26, 2015),²⁴ and OCWD's Long-Term Facilities Plan 2014 Update (OCWD Facilities Plan) (Nov. 19, 2014),²⁵ the new or updated subsequent EIR should explore the following alternatives for meeting the Desal Project's updated purpose and objectives, that are likely to reduce significant adverse impacts associated with the Desal Project:

1. **The Orange County Basin Optimization Program.** The Orange County Basin Optimization Program would optimize water storage within the Basin by maximizing purchases of MWDSC water in years when available, with the goal of storing more water in the Basin. This would keep the Basin fuller and closer to the top of the current Basin operating range. This program, in combination with managing the Basin with OCWD's existing management tools (e.g., the Basin Production Percentage (BPP) and the Replenishment Assessment), would result in maintaining higher groundwater levels during non-shortage years. During water short years, this stored water could then be utilized to the benefit of the Groundwater Producers. This approach would provide ample supplies during a multi-year MWDSC Water Supply Allocation. By directly serving MWDSC Tier-1 treated water during wet years in-lieu of pumping groundwater when Basin recharge facilities are full, and recharging MWDSC Tier-1 untreated water when there is extra recharge capacity in the Basin, the supplies stored in the Basin would increase. This would provide a much more cost-effective approach to improving Orange County's water supply reliability than either the 2010 Desal Project or the Current Desal Project. The details and feasibility of Orange County Basin Optimization Program are documented in the IRWD 2015 Reliability Alternatives Report.

²³ See footnote 7, *supra*.

²⁴ See footnote 6, *supra*.

²⁵ See footnote 8, *supra*.

The Orange County Basin Optimization Program would meet the project objectives identified on page 3-95 of the 2010 FSEIR as follows:

- Provide a reliable local source of potable water to Orange County that is sustainable independent of climatic conditions and the availability of imported water supplies or local groundwater supplies because *the stored water would reliably offset MWDSC water delivery reductions during water short years over a wide range of conditions.*
- Provide Basin recharge water that not only meets the drinking water requirements of the Safe Drinking Water Act and the California Department of Public Health, but would also avoid the adverse groundwater and surface water quality impacts as well as water supply impacts discussed in Section III.C.3 that could result from recharge of the Basin with Product Water because *MWDSC water used to directly or indirectly recharge the Basin would comply with the applicable regulatory requirements that protect groundwater and surface water, including Basin Plan objectives, NPDES permit limitations, and the Antidegradation Policy.*
- Avoid water supply impacts discussed in Section III.C.3 that could result from the use of Product Water to recharge the Basin because *management of purchases of MWDSC water would be governed by the capacity of, and the need to recharge the Basin and to maximize the use of storm water and base flows in the Santa Ana River, rather than a contractual obligation to purchase and use all Product Water every year for the next 50 years.*
- Decrease energy use, ecosystem, and biologic resource pressures and adverse impacts associated with production of new Product Water by *relying on existing water resources and by optimizing storage using supplies that are already available.*
- Minimize demands on the existing imported water system *because increased demands for imported water when optimizing the storage and use of the Basin would be extremely small when compared to MWDSC's 1.8 to 1.9 million acre-feet annual sales.*

2. **Implementation of the MWDSC IRP Recommendations.** The 2015 IRP forecasts improvements to water supply reliability in Orange County resulting from implementation of adaptive management strategy as applied to the development of local supplies and conservation in MWDSC's service area, as described in the *2015 IRP*, as along with the MWDSC and MWDSC member agency projects and programs discussed above in Sections II.B and III.D.1.

The MWDSC IRP recommended adaptive management strategy is best described in the *2015 IRP* as follows:

"The fundamental goal of the IRP is for Southern California to have as reliable a water system for tomorrow as the region has enjoyed for decades, regardless of the challenges that emerge along the way. Metropolitan plans to meet this goal

through an adaptive management strategy that is the cornerstone of the 2015 IRP Update.” *2015 IRP*, p. VI.

“Adaptive water management, as opposed to a rigid set of planned actions over the coming decades, is the most nimble and cost-effective manner for Metropolitan and local water districts throughout Southern California to effectively prepare for the future.” *Id.* at p. IX.

“This strategy for continued water supply reliability includes a diversified portfolio of actions that calls for stabilizing and maintaining imported supplies; meeting future growth through increased water conservation and the development of new – and protection of existing – local supplies; pursuing a comprehensive transfers and exchanges strategy; building storage in wet and normal years to manage risks and drought; and preparing for uncertainty with Future Supply Actions.” *Id.* at p. 6.5.

The implementation of this diversified portfolio of actions would ensure water supply reliability in Orange County and avoid significant adverse impacts associated with the Desal Project and the water supply impacts resulting from the Recharge Distribution Components discussed in Section III.C.3.

3. **OCWD’s Groundwater Replenishment System Final Expansion Project (GWRS Expansion).** The OCWD Facility Plan identifies the GWRS Expansion as a water reuse project that creates additional drought-proof drinking water supply by expanding highly purified recycled water facilities from 100 million gallons per day (MGD) to 130 MGD at the lowest cost of water for Southern California.²⁶ The GWRS Expansion would provide an additional 33,600 AFY supply of recharge water. *Id.*, App. 1, p. 1. On July 19, 2017, the OCWD Board awarded a contract for the final design of the GWRS Expansion. This project would avoid the significant adverse impacts associated with the Desal Project and the water supply impacts resulting from the Recharge Distribution Components discussed in Section III.C.3.

4. **Western Wellfield Project.** The OCWD Facility Plan identifies that,

“[T]here are a number of ways to decrease outflow to Los Angeles County by increasing production near the county line. Potential projects include: 1) Coastal Agencies paying for well construction and connection costs for wells in northwest Orange County and then connecting these wells to the West OC Water Board Pipelines to service the Coastal Agencies; 2) Increasing the Basin Production Percentage of producers in the vicinity of the county line, such as Fullerton and Anaheim, thereby shifting pumping closer to the county line; and 3) OCWD constructing four production wells near the county line and building a discharge pipeline to the West OC Water Board Pipeline.²⁷ The objective of this project is to decrease groundwater losses to Los Angeles County.”

²⁶ See footnote 8, *supra*.

²⁷ See footnote 8, *supra*.

Id., App. 1, p. 6. The reduction of losses to Los Angeles County would help ensure water supply reliability in Orange County and avoid the significant adverse impacts associated with the Desal Project and the water supply impacts resulting from the Recharge Distribution Components discussed in Section III.C.3.

5. **Deep Aquifer Recovery and Treatment.** IRWD operates its Deep Aquifer Treatment facility to make use of the good quality water located in the deep aquifer that has a brownish tint imparted from the remains of ancient vegetation. The use of supplies located in the Deep Aquifer does not substantially impact storage in the main aquifer of the Basin and could therefore be relied upon to improve water supply reliability in Orange County. The increased use of water in the Deep Aquifer would help to ensure water supply reliability in Orange County and avoid the significant adverse impacts associated with the Desal Project and the water supply impacts resulting from the Recharge Distribution Components discussed in Section III.C.3.

(b) Alternatives Rejected in the 2010 FSEIR Recommended for Reevaluation.

To be consistent with the refined Desal Project purpose and objectives, as well as new and available information relevant to the Desal Project presented by the *OC Study*, Term Sheet, *2015 IRP*, IRWD 2015 Reliability Alternatives Report, the alternatives discussed above, and the DSEIR, the updated new or subsequent EIR should reevaluate the following alternatives which were rejected in the FSEIR because they comply with the Desal Project's purpose and objectives, including improving Orange County's water supply reliability, and are likely to reduce significant adverse impacts associated with the Desal Project:

- Alternative Site
- Alternative Ownership and Operation
- Alternative Facility Configuration
- Reduced Facility Size

The DSEIR improperly eliminates from further consideration the first three listed alternatives because they would entail onshore components outside the jurisdiction of the CSLC's approval of the Outfall/Intake Components and, it is claimed, are therefore beyond the scope of the DSEIR. DSEIR, pp. 5-9 – 10. Elimination of these alternatives is based on an inaccurate and incomplete project description that defines the CSLC's approval under consideration as limited to changes to the 2010 Desal Project and comprised only of the Outfall/Intake Components. The elimination ignores the changes to the Product Water delivery and distribution through the Recharge Distribution Components that make up the Current Desal Project as it exists in 2017. If the CSLC had prepared a subsequent EIR as required under CEQA, including an accurate, complete, and unsegmented project description consisting of the changes to the 2010 Desal Project, including the Recharge Distribution Components and the Outfall/Intake Components, these three alternatives would not have been eliminated from further consideration.

Furthermore, the DSEIR wrongly concludes that these alternatives need not be considered because they are outside of the CSLC's Lease Premises. See *id.* at p. 5-7. It is

inconsistent with CEQA's purpose to ignore off-site alternatives simply because on-site alternatives are being considered. *Citizens of Goleta Valley v. Board of Supervisors* (1988) 197 Cal.App.3d 1167, 1179. As such, the Alternative Site, Alternative Ownership and Operation, and Alternative Facility Configuration alternatives should be further evaluated for their consistency with the CEQA screening criteria in a new or subsequent EIR prepared pursuant to CEQA to determine whether one or more should be carried forward for further analysis as alternatives to eliminate or reduce significant project impacts.

The DSEIR also improperly eliminates from further consideration the Reduced Facility Size Alternative. The 2010 FSEIR's Reduced Facility Size Alternative, which would produce approximately 25 MGD or half of the Product Water produced by the preferred alternative), is rejected as an alternative in the DSEIR on the grounds that it would not (i) contribute desalinated water to satisfy regional water supply planning goals; (ii) improve water supply reliability; or (iii) avoid or reduce significant impacts. DSEIR, Tab. 5-2. Not only does the DSEIR fail to explain why a Reduced Facility Size Alternative that produces 25 MGD does not meet project objectives, but it also fails to take into account the new water supply and system reliability documented in the *OC Study* as discussed in Sections II.B.2 and III.D.1.

Contrary to the DSEIR's conclusory statement that the Reduced Facility Size Alternative would not meet project objectives, the Reduced Facility Size Alternative meets the majority, if not all, of the Desal Project's objectives as stated in the DSEIR and the 2010 FSEIR by: (1) using proven technology to provide a long-term water source and (2) contributing desalinated water to satisfy regional water supply planning goals. See DSEIR, p. ES-6 (summarizing the project objectives); CEQA Guidelines section 15126.6(c) (a potentially feasible alternative may be eliminated from further consideration if it fails to meet *most* of the basic project objectives or is unable to avoid significant environmental effects of the project under review); *Habitat & Watershed Caretakers v. City of Santa Cruz* (2013) 213 Cal.App.4th 1277, 1304 (alternative could not be eliminated from consideration solely because it would impede to some extent the attainment of the project's objectives). Furthermore, the DSEIR fails to explain how a Reduced Facility Size Alternative would not reduce significant environmental impacts to ocean water quality and marine biological resources, regional air quality impacts associated with construction of the Desal Project. See DSEIR, p. 5-4; *Laurel Heights Improvement Assn. v. Regents of Univ. of Cal.*, *supra*, at p. 404 (conclusory comments used to eliminate alternatives from further consideration does not foster informed decision-making and informed public participation).

The DSEIR is devoid of any legally relevant basis for eliminating the Reduced Facility Size Alternative from further consideration. The DSEIR's decision to summarily dismiss a smaller facility as incapable of meeting regional water supply goals or improving water supply reliability is without basis. The DSEIR also fails to identify the specific "regional water supply planning goals" that cannot be met with a smaller facility, or to include a consistency analysis supporting its conclusion that a smaller facility is inconsistent with such goals. As the California Supreme Court recently held in *Cleveland National Forest Foundation v. San Diego Association of Governments*, Case No. S223603, 2017 Cal. LEXIS 5125 (Jul. 13, 2017), to be adequate, an EIR must include a fact-based analysis of project consistency with long-term planning objectives. *Id.* at p. *31. The DSEIR's conclusory discussion and rejection of the Reduced Facility Size Alternative fails to meet CEQA's substantive and procedural requirements.

(c) Alternatives that are Not Recommended for Evaluation because They are Unlikely to Reduce Adverse Impacts.

Based on the updated and refined Desal Project purpose and objectives, and the changes and potential adverse impacts of the 2010 Desal Project, a new or subsequent EIR must evaluate feasible alternatives that could reduce one or more of the significant adverse impacts of the Current Desal Project. These potential impacts include groundwater quality, surface water quality, and water supply impacts resulting from the Recharge Distribution Components discussed in Section III.C.3. Information developed as a part of OCWD's ongoing planning and conceptual design work on a delivery system for Product Water, as required by the Term Sheet, indicates that one alternative to the Current Desal Project that may be evaluated is a Desal Project incorporating "In-Lieu Distribution Components" as the delivery system for Product Water in place of the Surface/Potable Distribution System and/or the Recharge Distribution Components. (In-Lieu Distribution Alternative). OCWD includes this type of distribution method in its Option 6 proposal, which would deliver Product Water to the coastal groundwater producing agencies in lieu of those agencies producing groundwater from the Basin. This would result in the in-lieu recharge of the aquifer. Although this alternative may be recommended for evaluation, it will not avoid or mitigate the significant adverse environmental impacts of the Current Desal Project which must be avoided to protect the existing high quality local water supplies.

The In-Lieu Distribution Components would deliver and distributed Product Water directly to Orange County retail water supply agencies in the current groundwater conveyance system in-lieu of recovering supply from groundwater pumping from the Basin, incidentally resulting in additional recharge to the Basin due to decreased groundwater pumping. As studied and documented by IRWD, implementation of the In-Lieu Distribution Component, like implementation of the Recharge Distribution Components, would result in significant adverse impacts to IRWD's recycled water quality and system. This information has been presented to OCWD and the Applicant in IRWD's March 8, 2016 presentation of preliminary analysis results, as well as adverse water supply impacts. IRWD Presentation to OCWD.

Because Product Water that is much higher in TDS and boron would be delivered in lieu of high quality groundwater as potable water to IRWD customers, customer use of the lower quality potable water will result in sewage that is also higher in boron and TDS concentrations being delivered to the MWRP as influent. Treatment of influent that is much higher in these pollutants is reasonably likely to result in adverse impacts on the quality of recycled water produced at the MWRP and then distributed throughout IRWD's recycled water system because the MWRP treatment facilities cannot remove these pollutants. As noted in Section III.C.3. above, IRWD and its consultants have preliminarily evaluated the potential adverse impacts of Product Water pollutants on the quality of recycled water produced for, and served to IRWD customers. Further, IRWD has made these results public. For example, IRWD has shared them with OCWD and the Applicant in a letter dated March 8, 2016. See IRWD Presentation to OCWD. This preliminary evaluation indicates that the higher constituent levels in Product Water would not be sufficiently removed during the MWRP treatment process, which in turn is expected to result in:

- Significant adverse impacts to ornamental and agricultural plants irrigated with recycled water throughout IRWD's service area, which is likely to reduce demand for recycled water in contravention of SWRCB Policy for Water Quality Control for Recycled Water;²⁸ and
- Discharges into recycled water storage reservoirs exceeding NPDES permit requirements for TDS and adversely affecting surface water reservoirs. See RWQCB Order No. RS-2015-0024/NPDES No. CA8000326.

IV. THE CSLC CANNOT LAWFULLY APPROVE THE OUTFALL/INTAKE COMPONENTS BASED ON THE DSEIR, WHICH IS INADEQUATE.

Even if it were somehow legally appropriate for the CSLC to conduct focused CEQA review addressing only the Outfall/Intake Components rather than preparing a comprehensive new or subsequent EIR, the DSEIR is inadequate even the narrow purposes of the CSLC's focused review and approval of the proposed Outfall/Intake Components. As documented in this Section IV, the DSEIR fails as an informational document because it (i) defines impermissibly narrow project objectives, (ii) fails to consider a reasonable range of alternatives, (iii) fails to incorporate a sufficient cumulative impacts analysis, and (iv) fails to identify, fully evaluate, and consider appropriate mitigation for a number of environmental impacts associated with implementation of the Outfall/Intake Components under consideration by the CSLC.

A. The Statement of Project Objectives in the DSEIR is Impermissibly Narrow.

The statement of project objectives must relate to the underlying purpose of the project under review. CEQA Guidelines, § 15124(b); *Habitat & Watershed Caretakers v. City of Santa Cruz*, *supra*, 213 Cal.App.4th at p. 1299. The DSEIR includes among the project objectives "obtaining the necessary approvals" from the RWQCB and the CCC. DSEIR, p. 2-3. This objective does not illuminate the underlying purpose of the Desal Project. See *Habitat & Watershed Caretakers v. City of Santa Cruz*, *supra*, 213 Cal.App.4th at p. 1299. The DSEIR identifies the following underlying purposes of the Project: to affordably provide a long-term, reliable source of water, to reduce local dependence on imported water, and to contribute desalinated water to satisfy regional water supply planning goals. See DSEIR, p. 2-3.

The DSEIR's definition of the project objectives in terms of obtaining the regulatory approvals (e.g., coastal development permit) specifically necessary to construct and operate intakes, wedgewire screens, and a multiport diffuser for the Desal Project unduly limits the selection of feasible alternatives that can satisfy the underlying project purpose, *i.e.*, to provide an affordable and reliable regional water supply. See CEQA Guidelines, § 15124(b) (project objectives are directly related to the range of alternatives analyzed in an EIR). Such a narrow characterization of project objectives is also improper because it jettisons the CSLC's goal to ensure a **cost-effective**, reliable local water supply and presupposes the approval of the Desal Project. As a result, and as further discussed in Section IV.B, the DSEIR is invalid because it fails to consider a range of alternatives that allows for informed decision-making. See *Mann v.*

²⁸ SWRCB, Policy for Water Quality Control for Recycled Water (Jan. 2013) available at http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/docs/rwp_revto.pdf

Community Redevelopment Agency of the City of Hawthorne (1991) 233 Cal.App.3d 1143, 1151.

B. The Alternatives Analysis is Inadequate.

The alternatives analysis in the DSEIR is inadequate because it fails to identify the rationale for selecting those potentially feasible alternatives eliminated from further consideration and fails to include a reasonable range of alternatives. These errors are fatal to the DSEIR and for this reason, the DSEIR must be revised to include an adequate alternatives analysis and recirculated for public review and comment.

1. The DSEIR Fails to Disclose the CSLC's Rationale for Selecting Potentially Feasible Alternatives.

An EIR is required to explain the rationale for selecting the alternatives to be discussed. CEQA Guidelines, § 15126.6(c). The DSEIR identifies the following six potentially feasible alternatives and concludes that each alternative fails to meet one or more screening criteria set forth in CEQA Guidelines section 15126.6:

- Intake Pipeline Extension (increased construction-related impacts)
- Two-port Diffuser (feasibility)
- Beach Well Intake (increased impacts)
- Subsurface Infiltration Gallery Intake (increased impacts)
- Alternative Discharge Location (technically infeasible)
- Alternative Discharge Design – Diffuser (does not reduce impacts).

DSEIR, pp. 5-6 – 8, Tab. 5-2. However, the DSEIR fails to explain the rationale for selecting these particular alternatives or identify the impacts that may be avoided with the implementation of these alternatives. Indeed, three of the six potentially feasible alternatives would result in greater environmental impacts than the Desal Project. For these reasons, the alternatives analysis in the DSEIR must be revised to fully document the logic behind the selection of potentially feasible alternatives in order that the public and decision-makers may determine whether the alternatives considered are consistent with CEQA's principal objective of avoiding potentially significant impacts where feasible.

2. The Range of Alternatives Evaluated is Unreasonable.

An EIR must describe a reasonable range of alternatives. CEQA Guidelines, § 15126.6(a). The scope of the alternatives analysis must be considered in light of the nature of the project, the project's impacts, relevant agency policies, and other material facts. *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477. The key criterion in judging the adequacy of the range of alternatives analyzed in an EIR is whether the alternatives considered provide enough variation with respect to environmental concerns to allow for

informed decision-making. *Mann v. Community Redevelopment Agency of the City of Hawthorne* (1991) 233 Cal.App.3d 1143, 1151.) The DSEIR fails this test.

The alternatives carried forward for detailed analysis in the DSEIR are the No Project Alternative — an alternative that is legally required to be included in an EIR — and alternative engineering designs of the two Outfall/Intake Components (Rotating Brush-Cleaned, Stainless Steel Wedgewire Screens Alternative and the Six-Port Diffuser Alternative). The range of alternatives is unreasonable because it fails to present enough of a variation to allow for informed decision-making. See *Mann v. Community Redevelopment Agency of the City of Hawthorne*, *supra*, 233 Cal.App.3d at p. 1151.

3. The DSEIR Fails to Evaluate Significant Environmental Impacts.

The DSEIR fails to identify, fully evaluate, and consider feasible mitigation measures for a number of significant environmental impacts associated with implementation of the Outfall/Intake Components, including air quality, greenhouse gas emission, energy use, noise, transportation and hazardous conditions impacts.

C. The DSEIR Fails to Identify and Address Cumulative Impacts Likely to be Associated with the Reasonably Foreseeable Recharge Distribution Components.

Although the proper characterization of the Recharge Distribution Components under CEQA is as an element of the Current Desal Project, the CSLC is required by CEQA to at least identify the Recharge Distribution Components as a reasonably foreseeable project for purposes of conducting an analysis of potentially significant adverse cumulative impacts.

The cumulative impacts analysis of the DSEIR is required to, but has not identified and analyzed the Recharge Distribution Components as a reasonably foreseeable future project. Supplemental EIRs are required to identify all reasonably foreseeable or “probable future projects producing related or cumulative impacts [with the project under review], including, if necessary, those projects outside the control of the agency.” *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 396-397; CEQA Guidelines, § 15130, subd. (b)(1)(A). A project need not be formally approved, nor precisely defined in order to qualify as a reasonably foreseeable future project. *Ibid.* A significant investment of time and financial resources in preparation for formal regulatory review of a project is sufficient to qualify a project as reasonably foreseeable. 2 Kostka & Zischke, Practice Under the California Environmental Quality Act, § 13.42, p. 13-43.

The Recharge Distribution Components under development by OCWD are reasonably foreseeable, as reflected in OCWD’s Board minutes, staff presentations, and other materials. See, e.g., OCWD, *Workshop #3: Distribution of Poseidon Resources Ocean Desalinated Water* (Jul. 6, 2016). OCWD staff’s presentation at an OCWD Board of Directors meeting held on July 6, 2016 indicates that OCWD had committed Recharge Distribution Components as a method of distributing Product Water, having invested considerable staff resources toward refining, planning, and conceptually designing this proposal. *Id.*, Slide 4. In short, there is “telling evidence” that OCWD had formulated “a reasonably definite proposal for the development” of

the Recharge Distribution Components long before CSLC issued the Notice of Preparation of the DSEIR. *Laurel Heights*, supra, 47 Cal.3d at p. 397.

The DSEIR states that although the 2010 FSEIR analyzed construction and operation of a distribution and delivery system component of the 2010 Desal Project, the only reason that the Recharge Distribution Components are not considered at least as a reasonably foreseeable projects in the cumulative impacts analysis of the DSEIR is because the CSLC deems them to be “speculative” as “OCWD staff placed on hold any plans to begin an extensive environmental impacts analysis” of the Recharge Distribution Components. DSEIR pp. 1-2, 3-7. Whether or not an agency has, for the moment and subject to reconsideration at any time, placed environmental review of a project on hold is not the test for whether it is a reasonably foreseeable project for purposes of cumulative impacts analysis. Instead, the test is whether there is “telling evidence” that OCWD had formulated “a reasonably definite proposal for the development” of the Recharge Distribution Components. *Id.* The available information regarding the Recharge Distribution Components is sufficiently developed for evaluation of potential adverse cumulative groundwater and surface water quality, as well as recycled water impacts. However, that cumulative impacts analysis has not been conducted in the DSEIR.

For the above reasons, the DSEIR is required, at a minimum, to consider the Recharge Distribution Components as part of the cumulative impacts analysis in the DSEIR. See CEQA Guidelines, § 15130, subd. (b)(1)(A). Failure to include the Recharge Distribution Components among the list of probable future projects and to conduct, at a minimum, an analysis of potentially significant cumulative water quality and water supply impacts associated with those components renders the DSEIR inadequate. In the event that for some reason CSLC is not required to prepare a new or subsequent EIR to fully evaluate the Current Desal Project, this inadequacy of the DSEIR can only be remedied by the preparation of a proper cumulative impacts analysis that considers the Recharge Distribution Components as a reasonably foreseeable project, and recirculation of the DSEIR.

V. CONCLUSION.

For all of the above reasons, an updated new or subsequent EIR that includes a complete and accurate project description and discussion of environmental effects, statement of purpose and objectives, and appropriate and feasible mitigation measures and alternatives to reduce Current Desal Project impacts must be prepared and circulated for public comment.

If you have any questions, please contact Mary Lynn Coffee at (949) 833-7800.

Sincerely,



Mary Lynn Coffee
of Nossaman LLP

MLC:snc

cc: Mike Markus, General Manager, Orange County Water District
Hope Smythe, Executive Director, Santa Ana Regional Water Quality Control Board
128 John Ainsworth, Executive Director, California Coastal Commission

4. LACK OF NEED VS. ALTERNATIVES

Pages 130-131

Municipal Water District of Orange County (MWDOC) Letter
RE: Orange County Water Supply Options

Pages 132-134

Orange County Coastkeeper Brief on Water Supply Scenarios in Orange County

Pages 135-136

Orange County Water District (OCWD) Letter to Regional Water Quality Control
Board (RWQCB) – Cessation of CEQA Review for Distribution System for Poseidon’s
Desalinated Water

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OCWD Board President Op-Ed, “Recycled water: Better for business, better for the long
haul,” The Hill, Aug. 2, 2017



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Trabuco Canyon Water District
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City of Westminster
Yorba Linda Water District

June 13, 2017

Via e-mail: garry@coastkeeper.org

Mr. Garry Brown, President
Orange County Coastkeeper
3151 Airway Avenue, Suite F-110
Costa Mesa, CA 92626

Dear Mr. Brown,

RE: Orange County Water Supply Needs Clarification
MWDOC Letter to Santa Ana Regional Water Quality Board
(July 7, 2016)

I am in receipt of your letter of June 1, 2017 and your email of June 2, 2017 requesting a clarifying statement from the Municipal Water District of Orange County (MWDOC) regarding our July 7, 2016 letter to the Santa Ana Regional Water Quality Control Board (Regional Board). This will require a somewhat technical response in two areas: the specifics of the MWDOC letter and the conclusions of the OC Reliability Study.

MWDOC July 7, 2016 Letter to Regional Board

This letter was written to address a specific regulatory requirement of the Desalination Amendment which took effect on January 28, 2016. Specifically it addresses two points: (1) is there a need for additional supply documented in the adopted Urban Water Management Plan (UWMP) and (2) is the proposed project included in the UWMP. The answer to both these questions is yes. However, as clearly stated in the letter, the Poseidon project is only one of several different projects that can provide that supply. The letter does not state that the Poseidon project is specifically necessary to meet Orange County's future water supply needs. It is simply one of several local, regional, and state project options.

Mr. Garry Brown
June 13, 2017
Page Two

OC Reliability Study

MWDOC agrees that the most comprehensive, accurate and current analysis and documentation of Orange County water demand and supply projections is the OC Reliability Study. That study details the probable shortfall or gap between water demand and supply through the year 2040 under various assumptions. It also emphasizes that there are many routes to reliability and that different combinations of different projects (Scenarios) can produce future water reliability. Additional water supply projects are necessary but no one project is absolutely essential to meet reliability goals for southern California and Orange County. Some projects make greater and more cost-effective contributions to reliability. Paramount amongst these projects would be the California WaterFix and EcoRestore in the Bay-Delta.

Please don't hesitate to contact me if you have any questions or require additional information.

Sincerely,



Robert J. Hunter
General Manager

cc: MWDOC Board

Memorandum

To: Susan Jordan, California Coastal Protection Network

From: Ray Heimstra, Orange County Coastkeeper

Re: Clarification of MWDOC 2016 letter to SARWQCB and Need for Brookfield Poseidon Water in Orange County

Date: 5/14/17

The purpose of this memo is to clarify the current situation regarding future Orange County water supply. Apparently Poseidon proponents are using a July 2016 letter from the Municipal Water District of Orange County (MWDOC) to the Santa Ana Regional Water Quality Control Board as supporting documentation for the need for the Poseidon Huntington Beach Desalination project. This is inappropriate for several reasons.

1. The letter was intended only to show that desalination was listed as a potential water source in the 2015 MWDOC Urban Water Management Plan (UWMP). The Poseidon desalination project is not considered an essential or priority project in the plan.
2. The letter was submitted before the completion of the Final MWDOC Water Reliability Study in December of 2016. The 2016 plan contains a more detailed analysis of the water supply needs and options for Orange County than was available in July 2016.
3. The letter talks about potential water demands for all of Orange County. The Poseidon project as currently proposed is not intended to supply all of Orange County, only the Orange County Water District (OCWD). OCWD only serves north and central Orange County and is not legally able to sell water outside of its district. The MWDOC would have to distribute Poseidon's water outside of OCWD's service area and MWDOC has indicated no interest in purchasing Poseidon's water or distributing it. The Santa Margarita Water District is the only water district in Orange County outside of OCWD's service area to express an interest in Poseidon's water and only for 5,000 acre feet a year.

When discussing desalinated water in Orange County it is important to note that there is a second desalination project proposed for Orange County, the Doheny Desalination project. This project is specifically designed to meet the needs of south Orange County. As proposed this project meets the requirements of the statewide desalination policy, including the use of subsurface slant wells, and is not opposed by the environmental community. This eliminates any need to consider Orange County beyond the OCWD service area in regards to the need for the Poseidon Huntington Beach plant.

Additionally it is important to note that there is opposition from some of the largest water agencies within OCWD's service area to the idea of being forced to buy desalinated water. The cities of Anaheim and Fullerton have both informed OCWD in writing that they are only interested in buying desalinated water on an "as needed" basis, not as part of a take or pay contract. The Irvine Ranch Water District

(IRWD) has sent twelve letters to OCWD detailing their concerns of the impacts of desalinated water on their operations, the lack of need for, and the high the cost of desalinated water.

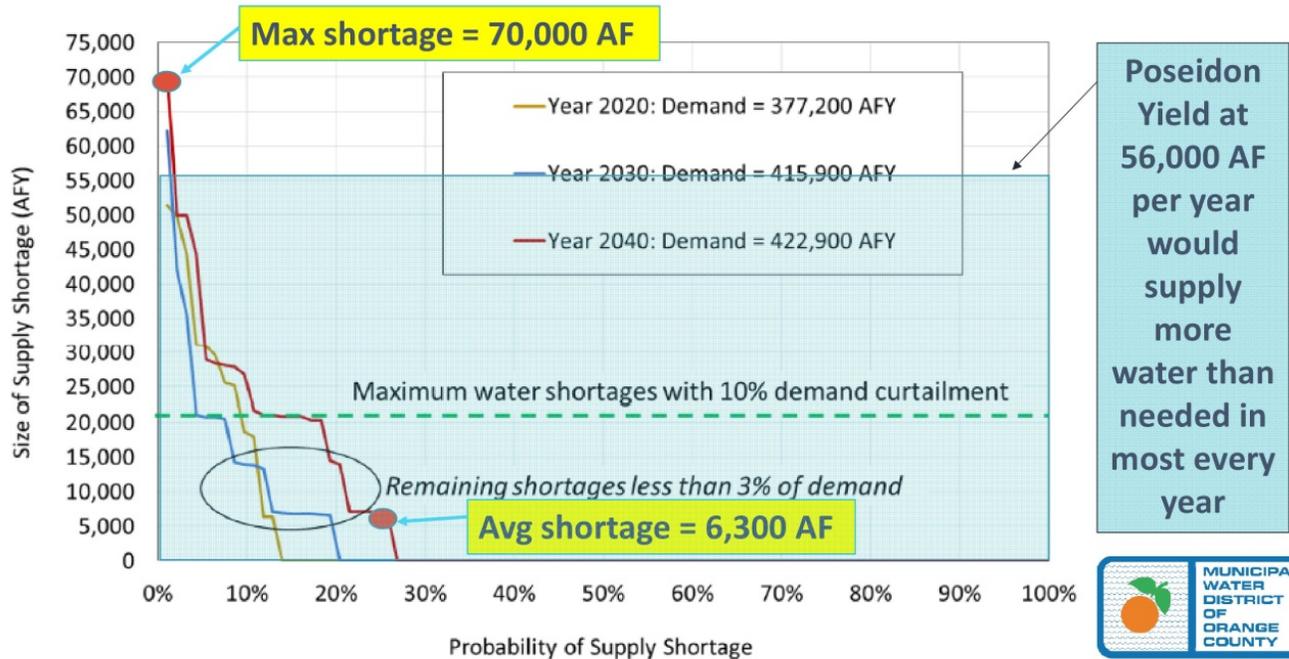
In February of 2017 MWDOC staff gave a presentation of their final Water Reliability Study that explicitly discussed the future need for water by OCWD and concluded that the average future shortage through 2040 would be only 6,300 AFY and that the **“Poseidon Yield at 56,000 AF per year would supply more water than needed in most every year”**. The presentation also documented that the average future shortage through 2040 for all of Orange County is projected to be only 10,700 AFY, still far below the proposed 56,000 AFY planned for the Poseidon Huntington Beach project.

With this conclusion it should be no surprise that in a March 20, 2017 letter to the Santa Ana Regional Water Quality Control Board OCWD stated that “...it would not be prudent for OCWD to begin an extensive analysis of the environmental analysis related to the use of desalinated water in OCWD’s operations and facilities, along with distributing the water to other agencies prior to the approval of the permits for the HBDP”. This is after OCWD staff did extensive work on developing alternatives for OCWD to distribute water from the Poseidon project. After six months of study and three public presentations the options were narrowed down to five options. Two of the options would require a varying number of cities near the Poseidon plant take a large percentage of their water from the plant, another involved selling water outside of their district, both outcomes the OCWD board admitted were unlikely to succeed. The other two options involve injecting Poseidon water (the majority of the capacity of the plant) into the ground. To inject all the water into the ground OCWD would have to spend up to \$200 million to create new injection wells and related facilities. All of the water injected into the ground would have to be re-treated before use at a cost of at least \$90/AF. From this study it has become clear to the OCWD board that the engineering challenges to OCWD buying the full capacity of the plant are enormous.

In closing there is overwhelming evidence that the Poseidon Huntington Beach Desalination project is oversized for any projected need for water in Orange County and that it would be extremely difficult if not impossible for the Orange County Water District to distribute the amount of desalinated water the Poseidon plant would produce. It is also very likely that OCWD will face litigation from the IRWD if OCWD goes forward with the project. And there are many other options. OCWD recently approved expanding its existing recycling program by 30,000 AFY, and a recycled water plant planned by the Metropolitan Water District in the city of Carson is would provide up to 60,000 AFY of water to OCWD. Just this year OCWD expanded its stormwater capture capacity by 5,000 AFY through an agreement with the Army Corps of Engineers (ACOE) to store stormwater behind Prado Dam, and they are working with the ACOE to expand that project. An aggressive water conservation program being run by the MWDOC is also yielding long term water savings.

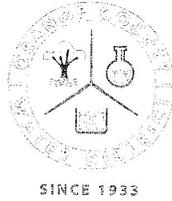
Below is a chart from the 2017 MWDOC Water Reliability Study presentation.

Poseidon Yield Example for OCWD



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ORANGE COUNTY WATER DISTRICT
ORANGE COUNTY'S GROUNDWATER AUTHORITY

OFFICERS

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Second Vice President
SHAWN DEWANE

General Manager
MICHAEL R. MARKUS, P.E., D.WRE

March 20, 2017

Mr. Kurt Berchtold
Santa Ana Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside CA 92501

Re: Status of Orange County Water District Water Purchase Agreement with Poseidon Resources Regarding the Proposed Huntington Beach Desalination Project

Dear Mr. Berchtold:

As you are aware the Orange County Water District ("OCWD or District") has approved a term sheet to purchase 56,000 acre feet per year of water from the proposed Huntington Beach Desalination Project ("HBDP"). The term sheet calls for Poseidon Resources to permit, finance, construct and operate the treatment plant. OCWD would be responsible for purchasing the water and for permitting, financing, constructing and operating the necessary system to distribute the water to the local Orange County water community.

As part of the planning process, the District has been considering a variety of water conveyance and utilization options that OCWD might implement once it purchases the desalinated water from the HBDP. One of these options includes potential modifications to OCWD's existing groundwater basin recharge and seawater barrier operations. Additionally, OCWD has been working with other water agencies in the area who may be interested in participating in the integration of the desalinated water supply. This could lead to alternative distribution options that have yet to be considered. At this time, OCWD has not reached any conclusions or made any decisions regarding how desalinated could be used by the District and distributed to the local water community, so no specific conveyance and utilization option has been formally selected.

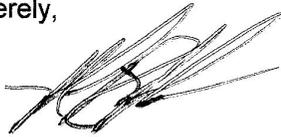
As previously discussed with John Kennedy in our office a water purchase agreement between Poseidon and OCWD will not be finalized until after the HBDP has received all of its required state permitting approvals, including those from the California State Lands Commission, Santa Ana Regional Water Quality Control Board and California Coastal Commission. OCWD continues to monitor the permitting process for these three state agencies which remain ongoing. Given the expected timeline for the HBDP's permitting process, OCWD has also concluded that it would not be prudent to begin an extensive environmental analysis related to use of the desalinated water in OCWD's operations and facilities, along with distributing the water to other agencies, prior to the approval of the permits for the HBDP. Decisions by the Regional Board and the other permitting agencies may result in new or different information that could increase the cost of the desalinated water and/or modify OCWD's plans for using and distributing the water.

Mr. Kurt Berchtold
March 20, 2017
Page 2 of 2

The OCWD staff and Board have discussed many options related to the use of desalinated water. After the HBDP has been permitted, and when OCWD decides upon specific plans and facilities that OCWD could employ to use and distribute the desalinated water, the District would notify the Regional Water Quality Control Board and the other state permitting agencies.

The District will continue to work closely with the Regional Board on this project. If you have any further questions or would like to meet please contact John Kennedy at (714) 378-3304 or at JKennedy@OCWD.com.

Sincerely,



Michael R. Markus, P.E., D.WRE, BCEE, F.ASCE
General Manager

cc. OCWD Board of Directors
CA State Lands Commission – Cy Oggins
CA Coastal Commission – Tom Luster
Municipal Water District of Orange County – Rob Hunter
Poseidon Resources – Scott Maloni



Recycled water: Better for business, better for the long haul

BY DENIS R. BILODEAU AND GREGORY SEBOURN, OPINION CONTRIBUTORS - 08/02/17

During a live streamed video conference between the White House and the International Space Station, President Donald Trump asked astronaut Peggy Whitson what the country is learning in space. She gave a timely response, revealing the secret to solving water shortages across the country.

“Water is such a precious resource up here that we also are cleaning up our urine and making it drinkable,” she said. “And it’s really not as bad as it sounds.”

“I’m glad to hear that.” Trump responded, “Better you than me.”

But highly-purified recycled water is not just better for the International Space Station and its astronauts. Here on Earth in Orange County, Calif., the Groundwater Replenishment System (GWRS) just began bottling highly-purified recycled water for educational purposes — and it’s better for business.

The GWRS recycling facility provides the lowest cost of manufactured water per drop for Southern California. And as we increase local water recycling, drought prone population areas will not be held hostage to a lack of reliable water from imported water sources from other regions. This means more money locally to expand infrastructure and increase jobs. At the GWRS facility alone, expanded water purification will create 700 jobs over the next three years.

The GWRS is the world’s largest advanced water purification project for potable reuse and its advanced purified water is the first to be bottled in the Western Hemisphere. The facility, a collaboration between the Orange County Water District (OCWD) and the Orange County Sanitation District (OCS), recycles wastewater that would otherwise be released into the Pacific Ocean. Instead, the water is channeled through a three-step advanced purification process.

The product? Near-distilled-quality water superior to current drinking water standards in all 50 states. And it’s all going into an underground reservoir of water in Southern California, stored and pumped at our fingertips whenever we need it. In the future, such water recycling programs can be expanded to drought affected regions across the country ensuring robust local economies, sustainable recreation and a high quality of life for all.

Highly purified recycled water offers an innovative solution to an urgent problem. According to the National Integrated Drought Information System (NIDIS), 40.2 million people in the United States are impacted by drought right now. And they’re not just in California. NIDIS has declared primary drought disaster

regions across the Southeast, including counties in Oklahoma, Mississippi, Alabama, Georgia and Tennessee.

For Americans who rely on agriculture, the impact of water shortage is especially hard. In 2012, an intense period of drought cost an estimated \$31.8 billion due to widespread crop failure and disaster relief funds, according to the National Climatic Data Center. Crop failures are passed down to consumers, too, as fewer crops lead to higher prices at the grocery store register. And in 2014, California alone lost 17,100 jobs to drought conditions, says the Brookings Institute.

There is no single challenge to our localities that touches on every facet of our lives more than a safe and reliable water supply. With innovative thinking and forward-looking commitments from all levels of government, we can fix the water shortage. The expansion of the GWRS and our highly-purified recycled water facility will increase our water production by approximately 30 million gallons every day (mgd) to a total capacity of 130 mgd of scientifically tested, clean, pure water. This is the equivalent of one year’s water supply for more than one million people.

The GWRS Final Expansion will continue to produce reliable, clean water at the lowest cost per drop for Southern California. Helping to create a more cost-effective project, the United States Environmental Protection Agency (EPA) recently invited OCWD to apply for \$124 million-dollar Water Infrastructure Finance and Innovation Act (WIFIA) loan to help fund this critical water project.

In addition, the United States Bureau of Reclamation invited OCS to apply for a Water Infrastructure for Improvements to the Nation (WIIN) Act to maximize wastewater flows to be recycled, which will help OCS meet its goal of 100 percent recycling. Federal support of recycled water projects is critical and we look forward to the continued support of the administration to move these projects forward.

Ultimately, increased water supplies better prepare our country for future water shortage, protecting all Americans from higher prices and job loss.

Denis R. Bilodeau, P.E., is the president of the board of directors of the Orange County Water District and Gregory Sebourn, PLS, is the chair of the board of directors of the Orange County Sanitation District.

“Fortunately, we can meet long-term needs without resorting to billion-dollar boondoggles like the proposed Huntington Beach desalination plant... We don’t need their costly water. It’s a bad deal, and we have better alternatives.”

—Terry Tamminen, CEO of Leonardo DiCaprio Foundation

“While Poseidon has spent millions trying to sell its desalination cash cows, many communities have forged ahead with smart water supply solutions that save money and energy... Hard working ratepayers in Orange County should not have to foot the bill for this billion dollar boondoggle.”

—Marcela Gutierrez-Graudins, Azul

THE SACRAMENTO BEE



“Let’s tackle the cheaper, most cost-effective things first: improving water-use efficiency, expanding water reuse and capturing more storm water. If we do the right things in the right order, we can avoid spending billions on what ultimately could be an expensive white elephant.”

—Heather Cooley, Pacific Institute

“Orange County does not need Poseidon’s water. The majority of our water comes from our aquifer, which is constantly replenished with purified recycled water.”

—Garry Brown, Orange County Coastkeeper

5. OP-EDS

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a.

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Desalination will not solve California's water woes

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Sacramento Bee

Why go for desal when California has cheaper options?
A billion-dollar boondoggle to increase water supply in California

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Orange County Register

Poseidon tries a new face, but facts unchanged
Desalination loses urgency in super-wet winter
OC needs desalination like it needs another housing development

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Daily Pilot

Orange County should learn from San Diego's mistakes

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Voice of OC

Velasquez Institute Poll on Latino Voters and Water Issues Ignores True Community
Interests

San Jose Mercury News

Desalination will not solve California's water woes

Leon Szeptycki and Newsha K Ajami | June 1, 2017

In the wake of the recent drought, desalination of ocean water continues to be a central topic in California water debates.

Some coastal communities were particularly hard hit by the drought, including a large swath of the central coast that is among the last regions in the state still suffering from drought conditions. Desalination seems to hold the potential for limitless, drought-proof supplies, but the reality is far more complex.

Desalination comes with the obvious downsides of very high capital costs and energy consumption, not to mention the high cost of operation and maintenance.

The potential impacts on ocean ecosystems have generated controversy and delays. In addition, communities are only starting to tap alternative sources, such as recycled wastewater and storm water, that have the potential to be less costly and more sustainable in the long-term. The decision whether to build a coastal desalination plant should be based on a consideration of all of these factors for each community.

Such decisions should not, however, be based on the hope that ocean desalination will fundamentally alter the state's overall water budget and supply portfolio. More specifically, we cannot rely on ocean desalination to meaningfully reduce the stress on freshwater ecosystems, particularly the Bay Delta and its tributaries, the heart of California's water supply.

Part of this is just due to the numbers. We withdraw approximately 42 million acre-feet per year from rivers, streams, and aquifers in California. We use up a net total of 33 million acre-feet of that. According to the 2013 update to the state's water plan, even if every proposed ocean desalination facility were built (an unlikely scenario), they would produce a combined total of approximately 382 thousand acre-feet a year, less than 1 percent of the state's existing water budget. Looking at just the Bay-Delta, humans use up or export approximately 6 million acre-feet per year. Again, even if all of the current ocean desalination proposals were built and run at full capacity, they collectively would not put a meaningful dent in our use of the Bay-Delta.

Furthermore, and just as importantly, there is no guarantee that every acre-foot of desalinated water would reduce demand on the Bay-Delta by an acre-foot. Currently there exists no systematic or legal mechanism to ensure that the water purveyors that opt into desalination facilities will directly reduce their reliance on the Delta. →

→ To our knowledge, there is just one proposed desalination facility that will in fact reduce strain on a local freshwater ecosystem. The proposed California American Water plant near Monterey will directly reduce surface water withdrawals from the Carmel River. Those reduced withdrawals, however, were mandated by the state more than 20 years ago. Such mandates with direct links to meaningful improvements in stream flow should certainly be a factor in deciding whether to build a desalination plant. We are not aware, however, of any other proposed plant that can yet claim such a link.

While often Californians are persuaded to consider desalination as a way to future water supply security using Israel and Western Australia as examples, one should remember that California is a highly populated state of about 40 million compared to 8 million in Israel and 2.6 million in Western Australia.

Seawater desalination, while can be a very small part of water supply portfolio of some of California's coastal regions, will not be a significant part of the pie. The math is just not there.

Leon Szeptycki is an attorney specializing in water use and watershed restoration, and executive director of Stanford University's Water in the West. Newsha K. Ajami, is a hydrologist specializing in water management and policy, and directs urban water policy at Stanford's Water in the West. They wrote this for The Mercury News.

THE SACRAMENTO BEE



Why go for desal when California has cheaper options?

By Heather Cooley | June 1, 2017

While winter rains have refilled California reservoirs and dumped near-record snow on the mountains, communities across the state are wisely seeking ways reduce their vulnerability to future droughts. One option some are considering is seawater desalination.

Tapping the vast ocean seems like a promising solution, and proponents often tout Australia and Israel, which have adopted this technology. We agree that California should look at experiences in other parts of the world. But we need to have all the facts and make the right decisions for our communities. For example, Israel didn't turn to desalination until it had first dramatically cut production of water-intensive crops such as cotton, invested in urban conservation and efficiency far beyond what California has achieved, and massively expanded wastewater treatment and reuse. Household water use in Israel is 44 gallons per person per day, far below the 115 for an average California household. Israel reuses 94 percent of its wastewater, compared to a paltry 13 percent in California. Israeli farmers apply an average of 1.6 acre-feet of water per acre of land, while California farmers apply nearly twice as much.

In Australia, per person household water use averages 54 gallons a day. During a severe multiyear drought, Australia spent \$10 billion to build six desalination plants, but closed four because the water is far too expensive compared to other options. Australia failed to pursue the cheaper options first, an important lesson we should heed.

California is reaching and in many cases has exceeded the physical, economic, ecological and social limits of traditional water-supply options. Rivers are over-allocated, and options for new surface reservoirs are expensive, controversial and offer only modest improvements.

The good news is that communities across California have plenty of other options. Recent research from the Pacific Institute, in collaboration with experts at the Natural Resources Defense Council and UC Santa Barbara, found that widely available conservation and efficiency measures could reduce annual water use in urban areas by as much as 57 percent. Additionally, recycled water could produce 1.2 million acre-feet per year, nearly twice as much water as Los Angeles uses a year. Finally, capturing runoff in Southern California and the San Francisco Bay area could increase supplies by 420,000 to 630,000 acre-feet a year, while also reducing flooding and water pollution.

These alternatives are typically far less expensive than seawater desalination, which is estimated to cost \$2,100 per acre-foot. Capturing and reusing storm water is the least expensive option, at \$590 per acre-foot. Indeed, some efficiency measures have a "negative cost," meaning that the long-term non-water benefits, such as lower energy bills, exceed the cost.

Let's tackle the cheaper, most cost-effective things first: improving water-use efficiency, expanding water reuse and capturing more storm water. If we do the right things in the right order, we can avoid spending billions on what ultimately could be an expensive white elephant.

Heather Cooley is water program director at Pacific Institute, a water policy think tank in Oakland.

THE SACRAMENTO BEE



A billion-dollar boondoggle to increase water supply in California

By Terry Tamminen May 20, 2017

As former Sen. Barbara Boxer noted in her op-ed “South state desalination project is a ‘no-brainer’ ” (Viewpoints, April 30), California is facing a hotter and drier future. In order to keep our communities and economy thriving, we need to develop smart and reliable local water supplies. Fortunately, we can meet long-term needs without resorting to billion-dollar boondoggles like the proposed Huntington Beach desalination plant.

There is a reason desalination companies are spending millions of dollars in lobbying. Proposals like the Huntington Beach plant can’t stand on their own merit. Desalinated water costs twice as much as imported water, and up to 8 times as much as harvesting the rain that has fallen all around us lately.

The high cost means big profits for Wall Street water companies like Poseidon. But what about customers that will be stuck with the tab? In Orange County, Poseidon wants to lock ratepayers into a 50-year contract that would force them to buy desalinated water even in wet years. That will drive up utility bills at a time when many families are struggling to make ends meet. We are lucky to live in a time of tremendous innovation, when there are better water solutions than costly dams or desalination plants. Those mega projects, with big environmental impacts to match their price tags, are old news. Twenty-first century water solutions are affordable, energy efficient and climate resilient.

California has rules to ensure new desalination plants minimize environmental impacts and address a real need. The Poseidon proposal fails on both counts. It would hurt sea life by sucking up baby fish and eggs and pollute coastal waters with chemical-laden brine. It would also require vast amounts of energy when California is working to kick fossil fuels. Finally, it’s an unnecessary expense since Orange County’s own water plan shows it can meet all water needs through 2040.

At the end of the day, Poseidon can hire former senators to lobby, but even politicians with previously green credentials know they can’t change the facts: We don’t need their costly water. It’s a bad deal, and we have better alternatives. Indeed, a “no-brainer.”

Terry Tamminen, former secretary of the California Environmental Protection Agency, is CEO of the Leonard DiCaprio Foundation. He can be reached via his assistant at April@LD-Cfoundation.org.

THE ORANGE COUNTY REGISTER

Poseidon tries a new face, but facts unchanged

Garry Brown | May 17, 2017

For the last 17 years, Poseidon Water has spent millions of dollars on an army of lobbyists, consultants, lawyers and PR teams to sell Orange County ratepayers a desalination plant, urging us to sign the dotted line on a 50-year government contract that Poseidon's investors have salivated over.

Year after year, they have worked around the clock trying every sales tactic in the book. They've sent charming lobbyists to schmooze decision-makers everywhere from the offices of City Council to state legislators and regulators in Sacramento. They've invited TV news crews to see how large and impressive their technology looks. They squeezed their way onto a list of Trump's preferred private-public partnership projects. They played on drought hysteria and fears of the tap running dry. In their final days before they face a decision from state authorities, they've stooped to paying former Sen. Barbara Boxer to give them a new celebrity face, attempting to create the illusion of environmentalist support.

But despite Poseidon's efforts to obscure them, the hard facts of the proposed plant haven't changed. Poseidon's desalination plant is the most expensive, most energy-intensive, most environmentally harmful option on the market. Orange County has several other water supply technologies available that produce more water per ratepayer-dollar while using less energy and creating more jobs. There's a reason both economists and environmental scientists widely refer to Poseidon's desalination technology as a "last resort option." Why pay top dollar when cheaper, more sustainable water options are waiting to be implemented?

Poseidon's billion-dollar project would create the most expensive water in Orange County history and would only supply around eight percent of our water needs. And even that wouldn't make a difference, because there's a much bigger problem for Poseidon, and it's the toughest yet for them to spin: Orange County doesn't need more water. The current plan is to take most or all of the expensive desalinated water and re-pollute it by sending it all to the underground aquifer. We can purchase Metropolitan Water District water for the aquifer at less than half the cost of Poseidon water.

When the drought hit, Orange County got a wakeup call and stepped up to the plate. All without Poseidon, we invested millions of dollars in the largest and most advanced water-recycling facility in the world, the Ground Water Replenishment System. Our recycling plant turns wastewater into 100 million gallons of drinking water every day. With the expansion currently underway, the number will grow to 130 million gallons daily. Sitting atop an underground aquifer the size of Lake Mead, Orange County is poised to become one of the most drought-independent counties in the United States. This is why Poseidon won't accept a contract unless it stipulates that Orange County ratepayers buy every drop of water they produce, whether or not it's actually used. They know we don't need their water. →

→ Who would not want to own or invest in a company that had a contract with a customer that would help with financial assistance to build your facility, purchase 100 percent of all you produce for 50 years, and guarantee you a huge profit? Well, that is what Poseidon has in an approved term sheet from Orange County Water District.

Poseidon's investors are still waiting, with the hopes of a lucrative government contract and a steady stream of ratepayer-funded profits. Poseidon has already spent more than \$50 million selling this project as a legitimate public works project. So there is no doubt that Poseidon will continue to knock on our door, trying on new faces and new spins. But Orange County is too smart for slimy sales tricks and propaganda. Our money is too precious. Our environment is too important. Poseidon, we're not buying even if Barbara Boxer is now the one selling.

Garry Brown founded Orange County Coastkeeper in 1999 and serves as the organization's executive director and board president.

Desalination loses urgency in super-wet winter

March 7, 2017 | By Thomas D. Elias

Here's a cold, wet reality: the more water in California's reservoirs, the less urgency there is to build new ocean-water desalination plants that became a major talking point during the state's long, parched years of drought, an ultra-dry period some folks insist has still not ended despite months of heavy rains. Those record or near-record rains have replenished everything reservoirs lost over the last few years of drought, and sometimes more.

Desalination is always tantalizing here because — like Samuel Coleridge's ancient mariner, who complained of "Water, water everywhere, nor any drop to drink" — Californians can see billions of acre-feet of water every day in the form of the Pacific Ocean, complete with all its bays and estuaries. But that's briny salt water, containing an array of minerals that make it almost as inaccessible today as it was to the parched, fictitious sailor of 187 years ago.

It won't necessarily stay that way. Whenever the price of other water goes up, desalinating Pacific waters becomes more enticing. It will become more so if the price of filtering minerals out of salt water drops.

But if the price and availability of fresh water remains reasonable, as it surely will be this year, desal stays in the back seat. Yes, Boston-based Poseidon Water since late 2015 has operated the largest desalination plant in America on the coast at Carlsbad, just north of San Diego. The facility supplies almost 10 percent of the San Diego area's water needs. →

THE ORANGE COUNTY REGISTER

→ That's a region which has long wanted to be as independent as possible from the Metropolitan Water District of Southern California (often called the Met), through which it gets supplies from the State Water Project and the Colorado River Aqueduct. Expensive as Carlsbad water may be at about \$2,200 per acre foot, it improves the San Diego County Water Authority's negotiating position with the Met.

During the drought, that water agency signed a contract with the plant operator to purchase at least 48,000 acre-feet per year of water, but it can also demand up to 56,000 acre-feet in any year it feels the need. An acre-foot of water contains about 330,000 gallons, about the amount a typical family uses in a year.

That water costs more than \$100 per acre-foot above the price of recycled water and about \$1,000 more than reservoir water or supplies from the Met, approximately doubling water cost. The San Diego authority claims that its take from the Met has been overpriced for years, and now pays more than \$300 per acre foot for Colorado River water bought from the Imperial Valley's irrigation district, which reaches San Diego County via the Met's aqueduct.

At the depth of the drought, the Met paid some farmers in the Sacramento Valley an average of \$694 per acre foot for parts of their supply. So even at drought-inflated prices, fresh surface water remained much cheaper than desalinated supplies.

These numbers all establish that desalinated water is now by far the most expensive alternative California water districts can pursue. This is one reason a proposed desal plant at Huntington Beach in Orange County has run into resistance. Environmental problems are another: The Carlsbad plant was cited several times for environmental violations during its first few months of operation.

But the price tag is the biggest problem. The Carlsbad plant cost \$1 billion to build, with about \$50 million in yearly operating costs. When treating wastewater or catching more storm runoff can keep supplies at acceptable levels, there's no need to pay so much for desalination.

But if new methods to purify sea water beyond the standard technique of reverse osmosis ever become workable, all bets will be off.

Despite claims by some companies that they can desalinate water for less than \$700 per acre foot, none has yet demonstrated it can do the job on the extremely large scale needed to assure California water supplies.

Which means the more it rains, the more the prospects for new desalinated water supplies fall. But they will surely resurface the moment a new drought arrives.

Thomas D. Elias is a writer in Southern California. Contact him at tdelias@aol.com

O.C. needs desalination like it needs another housing development

August 4, 2016 | Adriana Maestas

California has never been a stranger to environmental justice problems – at one point or another our communities, including farmworkers, families and students have had to fight against the health impacts caused by poisons in pesticides, persistent industrial contaminants produced by refineries, decades of urban oil drilling and toxic battery recycling operating next to their homes and schools, as well as fracking and poor air quality, to name a few.

In this context, it is perplexing to see some in the community refer to the \$1 billion Poseidon desalination boondoggle as an environmental justice priority while irresponsibly mentioning drought stricken Porterville as if the plant would benefit them. The proposed desalination plant in Huntington Beach has some hurdles to cross before the project can proceed.

But one thing we do know is that the Orange County Water District plans to continue taking its full allocation from the State Water Project every year, so building this plant will not benefit dry inland communities like Porterville. The water is going to stay in the county, and, while Poseidon is trying to play off drought fears, the latest Urban Water Management Plan shows that Orange County has all the water it needs for now and the next 25 years.

Orange County residents need to re-evaluate the cost and energy that will go into this project. On its surface, desalination sounds like a good idea, but there are hidden costs once you scratch that surface. According to a 2013 study from the Department of Water Resources, the cost of water obtained from desalination is roughly double that from water that comes from building a new reservoir or wastewater recycling. The energy that a desalination plant requires is outrageous because of the reverse osmosis process. And then, with rising sea levels, planners would have to factor in how to protect the desalination plant from the water that it is supposed to treat.

Before resorting to an expensive solution to get more water, we should look to maximize conservation efforts and for ways to capture rainwater. In some parts of Orange County, there are still sprinklers that aren't scheduled to water at night and plenty of properties where lawns could still be ripped out and replaced with drought tolerant native plants. When we do get rain, much of it simply goes back down the storm drains instead of staying in the ground or finding its way into storage receptacles. Green alleyways could be restored in some of our cities to promote the capture of rainwater as well as water barrels strategically placed under public and private buildings. →

→ The latest attempt to frame the desalination plant as a social justice issue for Latinos is probably one of the more ridiculous arguments in favor of this project. The Latino community is sensitive to cost, and a project that will raise water costs in the immediate term is not something that a community who is impacted by price hikes needs. We are quite good at conserving and know how to stretch resources. If we aren't even maximizing our efforts with water capture and preserving the ground water that we do have, why should we rush to support the expensive Poseidon project?

Latinos in California have fought for decades to overcome environmental injustices. Equating an expensive, superfluous project that benefits only investors to the life-threatening struggles at hand is not only offensive, it belies an ignorance about our environmental justice issues, and ultimately, confirms how worthless the plant would be to our communities.

Adriana Maestas resides in Fullerton and is a freelance writer, educator and environmentally conscious citizen.

Daily Pilot

Orange County Should Learn From San Diego's Mistakes

November 4, 2016 | Julia Chunn-Heer

Poseidon Water has San Diego ratepayers on the hook for the county's most expensive water for the next 30 years, whether we need that water or not.

While Poseidon's propaganda machine operates ceaselessly, no amount of spin can conceal the problems that have plagued the first year of the desalination plant in Carlsbad. But those problems haven't stopped Poseidon from pushing to build a similar plant in Huntington Beach.

Orange County deserves a look at the Carlsbad plant's short-but-troubled history because they're currently walking the same path with Poseidon. Here are five ways San Diego consumers have been misled and otherwise let down by Poseidon, and how we know that this history will repeat itself in Huntington Beach:

Making residents pay for unnecessary water.

Carlsbad: When the plant came online earlier this year, our region actually had water exceeding our needs and had to dump half a billion gallons of Poseidon's costly treated water into a lake near Chula Vista.

Huntington Beach: Orange County's most recent water plan indicates that Orange County can meet all of its water needs through at least 2040 without investing in a pricey desalination facility. →

→ **Failure to offset its huge energy use**

Carlsbad: Poseidon claimed that the Carlsbad plant would be carbon neutral by offsetting water that would otherwise be imported. But the amount of water we import has not been reduced.

Huntington Beach: Poseidon is pulling the same argument in Orange County, but ocean desalination uses over 10 times more energy than water recycling, according to an Inland Empire Utilities Agency report.

Polluting our coast and poisoning fisheries

Carlsbad: In less than a year, the Carlsbad desalination plant has had water quality violations, according to the Voice of San Diego.

Huntington Beach: The brine discharge from the plant will degrade water quality and threaten marine life. Using outdated technology that does not meet current standards

Carlsbad: Last year, California adopted a statewide desalination policy to help minimize harm to the state's coastline and its wildlife, according to the California Environmental Protection Agency. The nearly completed Carlsbad plant was exempted from the requirement that its seawater intake be placed below the sand rather than exposed to open water — so as water is pulled in, marine life is destroyed.

Huntington Beach: The design of the proposed plant mirrors the same obsolete technology.

Using a billion-dollar desalination plant instead of cheaper, commonsense conservation

Carlsbad: San Diegans cut water use by 25% during the drought. So why did San Diego County Water Authority want a special exemption from conservation targets? To justify its huge and ill-advised bet on desalination.

Huntington Beach: Just this month, the Pacific Institute released a report that confirms desalination is by far the most expensive water supply option available.

On top of this, the Orange County plant is proposed to be built on an earthquake fault in a tsunami run-up zone that is subject to encroaching sea-level rise and Poseidon has not adequately studied alternative sites for the plant. And adding desalinated water would degrade the groundwater aquifer and require the desalinated water to go through a second round of treatment before use.

This month, Poseidon and state permitting agencies finally agreed on the terms of an appropriate review process for the Huntington Beach project. As proposed, the plant is not in compliance with the latest desalination regulations. This process should result in either substantial changes or disapproval of the project.

Julia Chunn-Heer is with the Surfrider Foundation's San Diego Chapter.

Rodriguez and Valladares: Velasquez Institute Poll on Latino Voters & Water Issues Ignores True Community Interests

October 30, 2016 | By OSCAR RODRIGUEZ AND VICTOR VALLADARES

We grew up in the Oak View community in Huntington Beach. Like all Californians, our Oak View neighbors are aware of the ongoing drought. We want safe, reliable water for today and tomorrow. We also expect it to be affordable for families, and that is why we take the marketing efforts of the desalination industry with a grain of salt. Orange County voters and water customers deserve to understand the costs of any projects they will have to pay for.

Earlier this month, William C. Velasquez Institute (WCVI) and Sextant Research released an internet survey that was designed to show Latino support for desalination. As organizers in Oak View, we knew right away that the survey results did not represent the views of my community, so we dug into the background materials to understand how it was conducted.

The first thing we noticed is that respondents had to receive an email to participate, therefore, our parents could not participate. The second thing we noticed was that the survey was conducted in English, so some people in our community could not participate. The biggest problem, though, is that the survey left out vital information to help voters decide which water investments they support: it said nothing about cost.

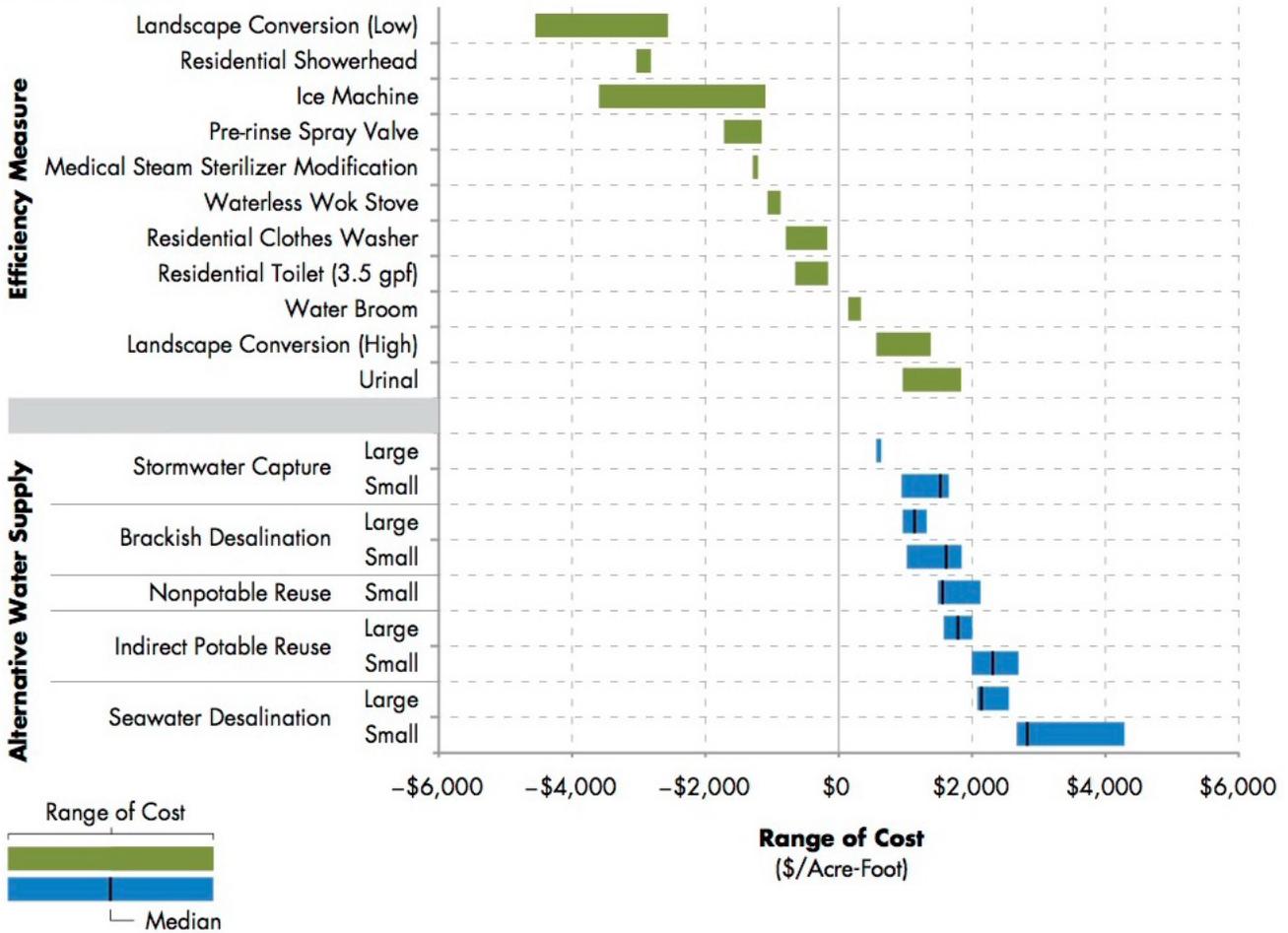
A new study released this month by the Pacific Institute helps put our choices in perspective. This independent report shows what ratepayers in San Diego already know: seawater desalination is by far the most expensive water supply.

By contrast, harnessing the rain that falls on our roofs—stormwater that currently gets funneled into drains dumped into the ocean—costs about one quarter as much as treating seawater for drinking. The survey also didn't educate voters about recycled water, which will soon supply almost half the drinking water we need in Orange County, for a fraction of the cost of desalination.

Pursuing expensive water projects when we aren't even maximizing the more cost effective solutions doesn't make sense. Members of my community cannot afford the increases in their water bill that would be passed on to ratepayers from costly projects like the Poseidon desalination plant.

Aside from the high cost of desalination, the WCVI poll doesn't mention any of the environmental consequences that come with desalination. It's already known that desalination plants harm marine life, but what isn't known is the impact of the highly concentrated salty brine they spew back into the ocean. The Carlsbad desalination plant that Poseidon built last year has racked up more than a dozen water quality violations for polluting the nearby coastline. Oak View is already ~200ft away from a waste transfer station that impacts the community with constant foul-smelling odors. The last thing we need is to worry about where the waste from desalination will go and how it will impact our existing water supply. →

Levelized Cost of Alternative Water Supply and Water Conservation and Efficiency Measures, in 2015 dollars per acre-foot



Notes: All values are rounded to two significant figures. Costs for water supplies are based on full-system cost, which includes the cost to integrate the supply into a water distribution system. Ranges for water supplies are based on 25th and 75th percentile of project costs, except for large stormwater projects, which include the full cost range of the two projects. Conservation and efficiency measures shown in this figure represent only a subset of the measures examined in this study due to space limitations. Cost ranges for water conservation and efficiency measures are based on varying assumptions about the incremental cost and/or water savings associated with a measure.

Credit: Pacific Institute, *The Cost of Alternative Water Supply and Efficiency Options in California*

→ In volunteering in the Oak View Community and in speaking with our neighbors, we know that environmental concerns are top priorities for Latinos. Let’s present the Latino community with all of the evidence about the costs and the environmental impacts of water projects to address before jumping to conclusions about what the community wants.

Oscar Rodriguez is co-founder of Oak View ComUNIDAD, a grassroots group advocating for the Oak View community in Huntington Beach. He is a recent graduate from California State University, Long Beach and is currently working on pre-requisites for medical school. He is currently working as a high school academic advisor in Buena Park and Huntington Beach.

Victor Valladares is co-founder of Oak View ComUNIDAD, a grassroots group advocating for the Oak View community in Huntington Beach. He also sat on the Citizens Participation Advisory Board (CPAB) for the City of Huntington Beach which allocated nearly 1 million dollars in CDBG fund for the 2016/2017 fiscal year. Currently, he is running for Coast Community College Trustee, Area 3 which includes Golden West College, Orange Coast College and Coastline.

NO WALL STREET WATER



**Poseidon's billion \$ boondoggle puts
corporate profits over public good**

6. PROBLEMS AT POSEIDON'S CARLSBAD PLANT

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Voice of San Diego

“Carlsbad Plant Producing Less Than Promised”

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Surfrider Foundation

“Poseidon Water LLC Not Trustworthy to Protect The Public Trust”

Desal Plant Is Producing Less Water Than Promised

Posted By [Ry Rivard](#) On August 29, 2017 @ 8:00 am

When the Carlsbad desalination plant opened in December 2015, regional water officials gushed about how reliable it would be. San Diego could now drink from the endless Pacific Ocean rather than be stuck depending on rain and snowmelt to come from hundreds of miles away.

So far, though, the plant has not been as reliable as promised.

Over the last year, the privately owned plant failed to deliver nearly a fifth of the water the San Diego County Water Authority ordered from it.

During the same period, there were 46 days when it delivered no water at all, according to business and regulatory filings by the plant's owner, Poseidon Water.

Some of the shortfalls can be blamed on hiccups at a plant that is still getting its sea legs. The plant is the country's largest ocean water desalination plant.

But, if anything, the plant's reliability has gotten worse since it first opened. In 2016, Poseidon filled 95 percent of the Water Authority's orders for water. So far in 2017, the company has only filled 70 percent of the Water Authority's orders.

Reliability was [the plant's key selling point](#) ^[2]. Otherwise, it would be hard to justify the cost of its water. An acre foot of water from the plant costs \$2,400. An acre foot is about as much water as two single-family homes use in a year. The Water Authority's other major sources of water cost about half as much.

On Thursday, Poseidon CEO Carlos Riva met with the Water Authority's board to reassure it that "these types of shortfalls are not unusual in large and complex projects" and that the company is adjusting.

"I want to assure you that Poseidon will continue to be a good steward of this important water supply asset for the community over the 30-year life of the project," he said.

Water Authority officials also continue to speak highly of the 30-year deal they signed with Poseidon and of the company itself. They say ratepayers are insulated from financial risks – when the plant isn't working, we don't pay for it. There's also so much water available after a wet winter that the plant's water isn't needed right now anyway. The issues at the plant have not affected the safety of people's drinking water.

But, even as Riva spoke, the plant was down because of a mechanical failure that happened a week earlier. He said the plant would be back up and running "as soon as possible."

The deal between the Water Authority and Poseidon is being closely watched around California. For one thing, besides the expense of the water, the Water Authority has to buy Poseidon water [even when it doesn't need it](#) ^[3], which is one reason San Diego has [some of the highest water rates in the country](#) ^[4]. Poseidon is also hoping to use the success of the Carlsbad plant to [sell another one to water agencies in Orange County](#) ^[5].

The San Diego County Water Authority promised to buy at least 48,000 acre feet of water per year from Poseidon.

In the first full budget year since the plant opened – July 1, 2016 to June 30, 2017 – the Water Authority ordered 49,600 acre feet of water from Poseidon. The plant only delivered 40,400, 18 percent less than the Water Authority asked for. Nearly all those shortfalls occurred in the first six months of this year.

As a result, Poseidon had to pay the Water Authority a penalty of \$3.5 million – though the Water Authority still owed Poseidon \$97.5 million for the water it did get. Despite its issues, the plant now produces about 10 percent of the region's water.

"We have a very good story to tell," said Peter MacLaggan, a senior vice president at the company. "The first year was exceptional in terms of performance. The second year we ran into some challenges, we're addressing those challenges."

The various problems at the plant include plant failures, regulatory wrinkles that will almost certainly be ironed out and some things beyond the plant's control.

In April, for instance, the plant shut down for 15 days when an algal bloom along the coast soured the water. The plant was unable to treat any water without fouling up the expensive filters it uses to remove salt and other impurities from water.

Poseidon and IDE, an Israeli company that is hired to operate the plant, were apparently caught off guard by the algal bloom, which Riva called an "extreme" challenge.

Ron Watkins, a member of the Water Authority board, said he used to work at a power plant right next to the desalination plant. The plant fought algal bloom problems for years.

"It's an issue you're probably going to have to deal with for a long time, and perhaps in greater magnitude than you're seeing this year," he said.

Poseidon officials said they are changing their operations so they can produce drinking water even during future algal blooms, though [they can't guarantee they'll be able to](#).



VOICE of SAN DIEGO

"We now have a battle plan for dealing with these situations, and we will learn from the next one and the one after that," MacLaggan said.

Fortunately, the algal blooms near the plant seem to be associated with intense rainfall, so when they are most likely to happen, the region will least need the plant's water.

In another significant shutdown, the plant was out of service for 10 days straight days in February for repairs to a water tank that had been causing problems since the plant opened.

The plant has also been shut down sporadically for inspections, tests and other water quality issues.

Other problems are a result of the unique way the plant gets water from the ocean.

The plant piggybacks off ocean water withdrawn by the adjacent power plant. The Encina Power Station uses ocean water to cool itself. The water from the power plant then goes to the desalination plant and then Poseidon tries to make it drinkable.

This arrangement has caused two problems.

First, sometimes the power plant is taken offline by its owner, NRG Energy. When the power plant is down, Poseidon can't get ocean water, so it too must shut down.

Second, a state regulation sometimes prevents Poseidon from delivering water even if the water is clean and drinkable. State water regulators use the amount of salt in the water as a proxy for pathogens. Because salt molecules are far smaller than bacteria, if there's not much salt in the water, there cannot be other nasty stuff. The problem for Poseidon is that water

sometimes gets very hot when it passes through the power plant. When the temperatures rise too much, a bit more salt can make its way through the plant's filters, even though worrisome toxins still cannot. The water is safe but can't be sold.

Poseidon said it is working on a new way to test the plant's water quality so the plant isn't shut down because of temperature.

The power plant is also set to close soon and, once it does, Poseidon will have direct access to the ocean and won't have to deal with hot water coming from the power plant.

"After that project is complete, the desal plant won't be subject to temperature fluctuations beyond the seasonal changes, and the temperature issue will be resolved," said Sean Sterchi, the top drinking water regulator for the San Diego region.

Besides the days it produced no water at all, on 73 days of the plant's first 18 months in operation, it produced less than half of the 50 million gallons per day of drinkable water it is designed to make. Some of that low production is because of days the plant was dealing with less severe versions of the same issues that caused full-blown outages; other times the Water Authority simply may not have needed the water.

On other days, though, the plant has been able to make up some of the difference by producing more water than the 50 million gallons per day it is designed to: In early October, for instance, it produced about 53 million gallons of water for 16 straight days.

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Poseidon Water LLC not Trustworthy to Protect the Public Trust

The testimony below was presented to the State Lands Commission on Aug. 17, 2017 by Surfrider Foundation California Policy Manager Jennifer Savage and California Policy Coordinator Mandy Sackett. The presentation can be viewed [here](#).

We are here on behalf of our 20 California chapters and thousands of supporters statewide regarding Poseidon Water's long history of dodging state regulations and the numerous noncompliance problems at the company's Carlsbad Desalination Plant. The plant began delivering 50 million gallons of water per day to San Diego County in December 2015 and is the nation's largest seawater desalination plant. It's also home to chronic toxicity violations. As an agency charged with protecting the public trust, we expect you will want to investigate these violations further before issuing another lease to the company for their proposal in Huntington Beach.

This is especially imperative as Poseidon has repeatedly attempted to disregard California state regulations designed to protect the public trust.

First, during the 2007 permitting process for the Carlsbad plant, Poseidon deliberately deceived the California Coastal Commission with an inadequate greenhouse gas reduction plan by, according to Commission staff, deliberately providing inaccurate information in the course of seeking a coastal development permit.

At its CDP hearing, Poseidon testified that its project would be "net carbon neutral," claiming that it would fully mitigate the project's net greenhouse gas emissions by causing a one-to-one reduction in State Water Project imports. Based on Poseidon's statements, the Commission approved Poseidon's Greenhouse Gas Reduction Plan and gave it an automatic credit.

Coastal Commission staff later learned that a 2005 agreement between the California Department of Water Resources and the Metropolitan Water District prohibited desalination projects from reducing State Water Project imports. Poseidon had been aware of this information, but did not share it with the Commission – instead Poseidon misled the Commission in order to gain approval.

Under pressure and after years of pushback, Poseidon has finally purchased and retired certified carbon offsets to mitigate its first year of emissions. This is a strong – and sadly characteristic – indicator of their unwillingness to act as a responsible party, echoed again in 2013, when the company submitted its permit application to the Coastal Commission for the proposed Huntington Beach desalination plant with an almost identical greenhouse gas plan. Once again Poseidon attempted to obtain an automatic credit based on a one-to-one reduction in imports from the State Water Project. Poseidon has temporarily withdrawn its application, not because of a sudden shift in ethics, but only due to procedural changes in the permitting process.

Another example of Poseidon deliberately attempting to skirt obligations is the company's Marine Life Mitigation Plan. Poseidon is required by the Coastal Commission in their 2011 permit to offset their impacts to marine life from the Carlsbad Plant through a 66 acre wetland restoration project with the US Fish and Wildlife Service. Poseidon has been operating for nearly two years now and does not yet have a design or proposal, let alone environmental review, for a plan! The delays are caused by Poseidon's paid consultants who continuously offer insufficient proposals and junk science that is of course then rejected by federal review - further exemplifying Poseidon's characteristic resistance to accepting agency recommendations and regulations.

And if that weren't egregious enough, Poseidon is continuously violating the Regional Water Board's discharge permit and have done so since operations began in 2015. To give you a little more detail:

In April 2016, the San Diego Regional Water Quality Control Board issued a notice of violation finding that Poseidon's Carlsbad facility had failed to comply with several provisions of its permit, including failures to comply with discharge prohibitions, failures to comply with receiving water limitations, failure to comply with effluent limitations, and failure to monitor in accordance with permit provisions.

In December 2016, the board issued a staff enforcement letter describing 19 occasions on which Poseidon had exceeded daily maximum toxicity limits.

In its annual permit discharge monitoring report for 2016, Poseidon stated that it had exceeded chronic toxicity limits in 35 out of 116 or 30%, of chronic toxicity tests. Since then, Poseidon has been cited for 5 more chronic toxicity violations in 2017 and 9 deficient monitoring violations.

18 months ago, Poseidon initiated a toxicity evaluation, and has yet to reach any conclusions.

To this day, Poseidon has been unable or unwilling to identify the cause of the chronic toxicity - even with two notices of violation and 18 months of evaluation.

Now that Poseidon's Carlsbad facility is in operation, it is highly unlikely that the plant would be shut down due to a water quality violation. At the very least, the State Lands Commission must take a serious look at this and also take into account Poseidon's track record before issuing the same company another lease.

Now, Poseidon is proposing outdated intake technology and providing insufficient alternatives analysis for their proposed Huntington Beach desalination plant. They continue to fight the Water Board's seawater intake regulations and refuse to comply with the state's Ocean Plan desalination regulations.

The State Lands Commission issues the lease to the applicant and it is your duty to ensure that the lessee is trustworthy and able to meet state regulations with regard to their impact on public trust resources. The State Lands Commission has a duty to protect the public trust and that includes compliance with permits, pollution abatement, water quality protection and marine life protection.

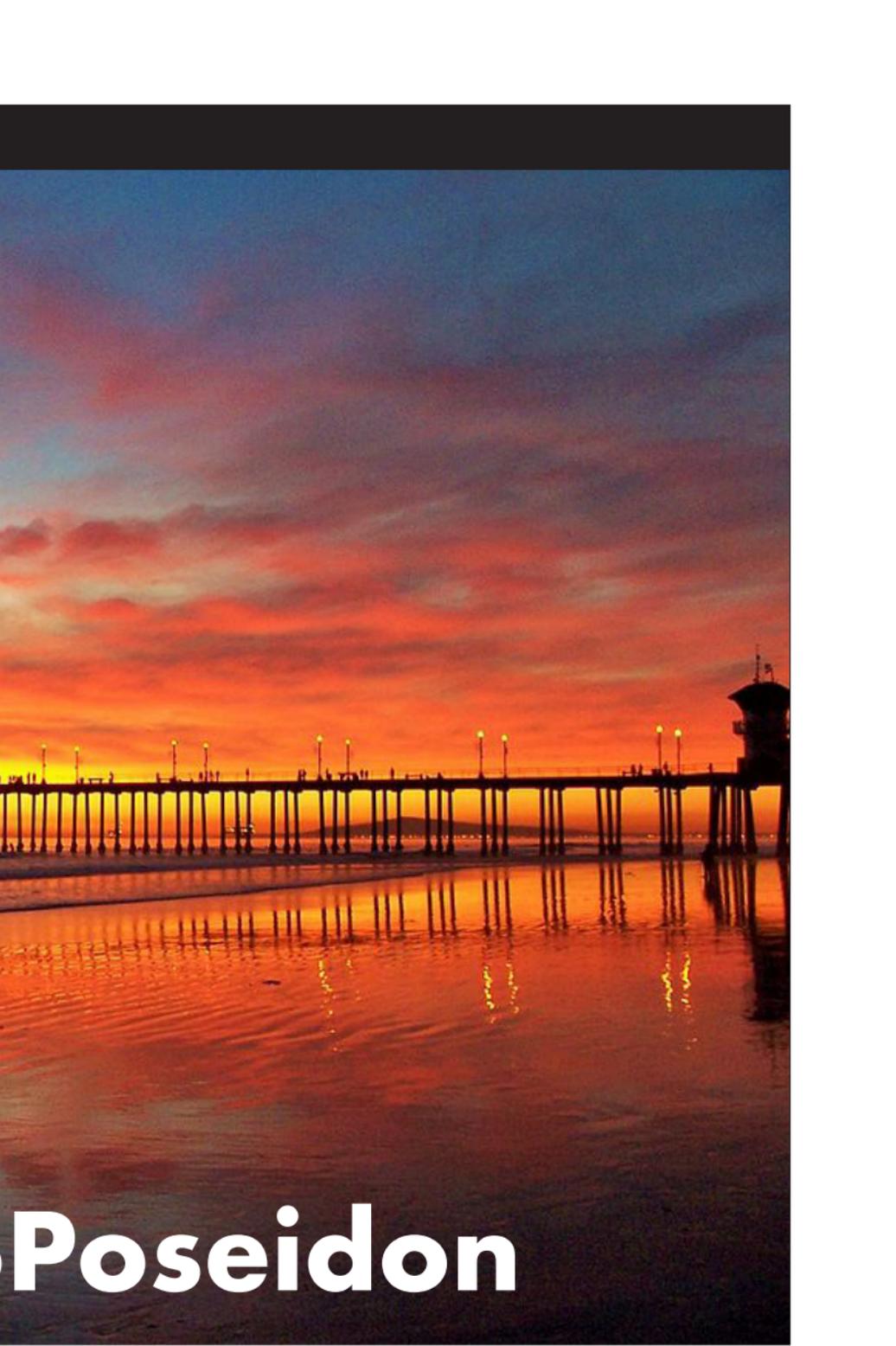
We ask you to please look into the chronic toxicity violations more closely and carefully evaluate Poseidon's trustworthiness. Do not allow our shared public resources to be compromised by a company clearly more invested in influence than complying with the state laws you are obligated to uphold.





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Prepared by Surfrider Foundation, C
and California Co



Poseidon

salFacts.org

California Coastal Protection Network
Castkeeper Alliance

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ORANGE COUNTY'S GROUNDWATER AUTHORITY

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October 18, 2017

The Honorable Gavin Newsom, Chairman
California State Lands Commission
100 Howe Ave., Suite 100 South
Sacramento CA 95825-8202

Subject: Huntington Beach Desalination Plant – October 19, 2017 State Lands Commission Hearing

Dear Chairman Newsom:

Orange County Water District (OCWD or District) previously transmitted a letter to the State Lands Commission dated September 8, 2017 providing local water supply and background information regarding the proposed Huntington Beach Poseidon Resources Ocean Desalination project. The letter included previous OCWD Board actions and policies along with future water supply projections.

Orange County Coastkeeper recently sent a letter to the State Lands Commission regarding the proposed project which made incorrect statements about the District's September 8, 2017 letter. The District offers the following comments to ensure the Commission is considering accurate information.

1. The Orange County Coastkeeper letter indicates that the future water demand projections and water supply pie charts provided in the September 8, 2017 OCWD letter to the State Lands Commission are based upon previous and higher demand projections that are now outdated. This is incorrect. The demand projections and water supply pie charts provided by OCWD account for new lower future water demand projections that were estimated with the 2016 Municipal Water District of Orange County Water Reliability Report.
2. The statement that a staff member of Orange County Water District concluded at the July 6, 2016 public workshop "that 10,000 acre-feet per year was a more feasible amount of water for the project" is some type of misunderstanding. The OCWD staff has never made any type of comment that a 10,000 acre-feet per year project is more feasible than a 56,000 acre-feet per year project.

The Honorable Gavin Newsom, Chairman

October 18, 2017

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3. The letter indicates that if the proposed Metropolitan Water District (MWD) Carson Indirect Potable Reuse project is completed and provides OCWD with water, that the Poseidon project would not be needed. OCWD believes this statement is incorrect. At this time it is OCWD's understanding that if recycled water from the MWD Carson project is received by the District it would replace the 65,000 acre-feet per year of untreated MWD water that is currently annually purchased by OCWD. Additionally this comment from Orange County Coastkeeper does not account for the primary purpose of the proposed Poseidon project which is too reduce the areas need for imported water.

We hope this letter helps resolve any questions the Commission may have. Staff and board members from Orange County Water District will attend the October 19, 2017 Commission hearing in Huntington Beach and can answer any further questions that may arise.

OCWD appreciates your support for the Project and the District's efforts to enhance regional water supply reliability by reducing the need to import water from Northern California and the Colorado River.

Sincerely,



Michael R. Markus, P.E., D.WRE, BCEE, F.ASCE

General Manager