Response to Comments – Part 1 (cont.)

Responses to Written Comments from the Public

Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
0148.01	Kelly E. Rowe Board Member Orange County Water District	Jan 20, 2020	I propose your board not permit this project as there is no need for it in Orange County. There has never been a need for this project, and will likely not be needed until about 40 years from now. Since Poseidon arrived in Orange County in 1999, there is abundant evidence the Poseidon Project is not needed. I consider Poseidon an insidious scam that has subverted the established public works projects development process by influencing our decision makers to move forward in providing a "sole source" contract for its very costly treatment/water supply project. A fundamental guideline for government procurement starts by defining a need for a project and concludes by awarding a competitively-bid contract to the least cost and most responsive and responsible contractor. What is stunning is OCWD is fully capable and experienced in completion of projects larger than Poseidon's and would achieve a significantly lower cost to the public on such an investment.	See responses to comments 0004.19 regarding alternative water supply options; 0014.04 and 0055.01 regarding the need for the desalinated water; and 0099.02, and 0139.03 regarding the Santa Ana Water Board's lack of involvement in the selection of the project and any contract related to the purchase of the water.
0148.02			Please note OCWD only has a <u>non-binding term sheet</u> set up with Poseidon, should they get required regulator permits	See responses to comments 0060.01 regarding the Term Sheet; 0004.19 and 0011 regarding alternative water supply

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			and MET subsidy funding, would OCWD consider purchasing water from their project. Several of the current "terms" appear to be a disadvantage to the public/OCWD. Please also note project proponents saying OCWD "sponsors", "supports" or is otherwise "a partner" with Poseidon, contributes to this scam, diminishes the integrity of OCWD, and provides unwarranted credibility to Poseidon's incredibly stupid project. We have many other sources of water for Orange County that are cheaper.	options; and 0032.01 regarding cost of the desalinated water.
0148.03			In its "2020 Master Plan" from 1999, OCWD did not consider seawater desalination as it is traditionally considered a "last resort" project, but did consider the development of the 130 million gallons per day (MGD) Groundwater Replenishment System (GWRS), as a natural replacement and expansion of its older 15 MGD Water Factory 21 plant used to prevent seawater intrusion since the mid-1970s. GWRS was viewed as a suitable solution as a "new water supply" for many future decades to supplement OCWD's groundwater recharge waters available from many other natural streamflow and imported water supplies. I strongly doubt there are any	The Santa Ana Water Board did not consider the 2020 Master Plan in the assessment of need for the desalinated water. The Board did, however, consider OCWD's more recent planning documents: the 2014 Long-Term Facilities Plan and the 2015 Groundwater Management Plan. (Attachment G.2 to the Tentative Order) See response to comment 0004.19 and 0011 regarding alternative water supplies.

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			water resources staff at OCWD that support the development of the Poseidon Project, as it does not make sense with so many other cheaper sources of water available for Orange County. Your own staff probably feels the same way, although they have done excellent work exploring the project's technical regulatory issues for the ocean intake.	
0148.04			Currently re-elected member on Board of Directors for the Orange County Water District – Representing Division 7 encompassing Costa Mesa and parts of Newport Beach, Fountain Valley, Tustin and Irvine – the only OCWD board member with professional experience on watershed, water resources and environmental management projects and programs. In brief, my background includes working 40 years primarily as a hydrogeologist for engineering and environmental consulting firms and as an independent consultant. I am a certified floodplain manager (through the Assoc. of State Floodplain Managers), and a California state-licensed professional geologist, certified engineering geologist and certified hydrogeologist.	The Santa Ana Water Board acknowledges the commenter's current position on the OCWD Board of Directors, his professional background, and his extensive water experience.

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0148.05			The Metropolitan Water District of Southern California (MET) provides water from the Colorado River and the State Water Project (SWP) to our coastal area ranging from Oxnard to San Diego. MET was started in 1927 with the goal to acquire water rights and build facilities from the Colorado River for delivery to SoCal coastal cities. In the 1960s MET joined the group known as the State Water Contractors to pay the state in the construction, operation and maintenance of facilities to get water from upstream of the SF Bay-Delta. MET presently has assets of about $17 billion. It is managed by a 38-member board of directors. Orange County is represented by 7 members, many of which have become distinguished MET leaders. Presently Met delivers about 1.5 MAF/year and has a record amount of water stored in surface water reservoirs and groundwater basins. Less MET water is being used due to long-term conservation and changes in public behavior from our recent years of drought and increased retail costs for water.	The Santa Ana Water Board acknowledges the background information provided by the commenter on the Metropolitan Water District.
0148.06			MET & the Los Angeles County Sanitation Districts (LACSD) joined forces recently for their “Carson Project”, and Los Angeles	See responses to comments 0004.19 and 0011 regarding alternative water supplies.

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			and San Diego each have new goals to "get off of MET" imported water supplies, by developing GWRS-equivalent wastewater purification projects to reduce their needs for MET's imported water supplies. *(OCWD was recently approached by MET to potentially contract for its future Carson Project water, on the order of 50,000 acre-ft/yr. This project was also not on OCWD's or MWDOC's list of potential future projects for the basin. It will be a substantially lower cost than Poseidon's water-that is not needed.)*	
0148.07			Most wholesale water supplies in Orange County are managed by three main groups: Orange County Water District (OCWD), Municipal Water District of Orange County (MWDOC) and "The Three Cities" which include Anaheim, Fullerton and Santa Ana. **The Orange County Water District (OCWD) manages the main Orange County groundwater basin.** This basin contains 60 million acre feet within a large northwest-plunging syncline connected with Los Angeles County's Central Basin. Orange County is extremely far from being short on our groundwater supplies to be worried about droughts.	The Santa Ana Water Board acknowledges the background information provided by the commenter on the Orange County wholesale water suppliers. The Board also received information from OCWD and MWDOC representatives at the May 15, 2020 workshop regarding the roles and responsibilities of the respective agencies.

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			OCWD has assets totaling $1.3 billion, owns 1100 acres of groundwater recharge basins in Anaheim and Orange, and owns 2200 acres of wetland areas upstream of Prado Dam in Riverside and San Bernardino Counties. OCWD has an extensive list of projects/programs it manages. It continuously plans these and many more projects/programs for when they are needed to improve the basin supplies and water quality conditions while minimizing costs to the public. **The Municipal Water District of Orange County (MWDOC)** is the main MET-wholesale water provider (except to the Three Cities) for communities in Orange County. MWDOC claims they are a county-wide resource planning agency whose efforts focus on sound planning and appropriate investments in water supply development, water use efficiency, public information, legislative advocacy, water education, and emergency preparedness. It has total assets of about $4 million and shares the same campus with OCWD in Fountain Valley. MWDOC advocates it represents all of OC's water	

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			interests, but owns no water resources facilities.	
0148.08			Poseidon worked with MWDOC (Municipal Water District of Orange County) from 1999 to 2012 to see if their seawater desalination project made sense for Orange County and to gain support for the MET Local Resources Program (LRP) subsidy. For Poseidon's project this equates to $400M through MWDOC as a MET member agency: 56,000 acre-ft at $475/acre-ft over 15 years. This subsidy would pass through MWDOC to OCWD. There is absolutely no guaranty the MET board will approve the subsidy, as it is a very large financial impact to MET and its member agencies. <u>For twelve years</u> MWDOC and Poseidon went through much iteration on their project issues and cost estimates that shifted dramatically higher for the worse. They could also get generous goodwill gestures no higher than 15,000 acre-ft capacity interest (nothing firm) from all of the OC producers, yet Poseidon insists their project does not make sense to them unless it produces 56,000 acre-ft.	The Santa Ana Water Board acknowledges the commenter's view of the history of this project. However, the OCWD Groundwater Management Plan – Update to 2015, has identified a need for the Facility's desalinated water that is consistent with MWDOC's UWMP. The Santa Ana Water Board's role is limited to evaluating whether an agency's identified need for the desalinated water has been adequately supported. OCWD, at the May 15, 2020 workshop and in their letter dated June 26, 2020, provided additional information related to their willingness to pay for the desalinated water. They explained there are many factors that go into the cost of the desalinated water that includes the Local Resources Program subsidy from Metropolitan Water District of Southern California. OCWD will make a decision on purchasing the water after the Facility has their permits and estimated costs of the water are refined. See response to comment 0004.19 regarding alternative water supply

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			There are over 60 other projects OCWD has plans for further study that are needed far more reasonably and are far less expensive. Poseidon's project has always been rated by OCWD as a very high cost. It also is a no priority project, like OCWD's entire list of potential projects that allows great flexibility for the OCWD board to select for advancement.	options; 0032.01 regarding the cost of the desalinated water; See responses to comments CCKA I.D and CCKA I.E regarding alternative design capacities for the project.
0148.09			**MWDOC's 2018 Reliability Study** The MWDOC 2018 Reliability Study concluded the following for the OCWD area: **"…The need for additional water supplies for the OC Basin is fairly small, meaning the OC Basin performs well under the scenarios evaluated. Without any new investments, the OC Basin may utilize demand curtailment at the level of 10 percent about once every 20 years to meet supply gaps. Alternatively, the study noted that there are a number of projects available to OCWD that can help meet supply gaps…"** In other words, MWDOC's report states the Poseidon project is not needed for Orange County. Out of the few of the	The purpose of MWDOC's 2018 reliability study was not to determine which projects should be implemented; rather, it was intended to provide independent, consistent and accurate information on current and future water supply conditions to allow water planning agencies to make informed decisions on water project investments. While there may be more cost-effective projects to meet water supply needs in Orange County, the proposed Project is among the potential projects that local suppliers can choose to pursue to meet water demand. In order to obtain clarification from Poseidon Water on the identified need for desalinated water, on January 8, 2020, Santa Ana Water Board staff requested additional information.

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			many other OCWD projects considered by MWDOC, Poseidon's was ranked lowest with its highest in costs and highest in environmental impacts. MWDOC noted a total of nine (9) water resources projects OCWD could pursue, out of the 63 OCWD listed in its 2014 Long Term Facilities Plan (LTFP). As a "renewed director" I plan to propose several additional projects to this list OCWD may pursue. Including the brand-new promise of an additional 5,000- to 10,000-acre-ft/yr from future cloud seeding operations within the Santa Ana River watershed.	Poseidon Water and OCWD submitted responses to Board staff inquiries. These documents have been provided to the Santa Ana Water Board. A second workshop (May 15, 2020) provided an additional opportunity for the Santa Ana Water Board to hear directly from the relevant water planning agencies on the identified need for the desalinated water. MWDOC also submitted a letter, explaining its role as a water supplier and the purpose and basis for the 2018 Reliability Study. MWDOC emphasized that the rankings of various projects on supply and system reliability apply only in the South Orange County service area, not within the OCWD basin. The OCWD letter of May 11, 2020, stated that the 2018 MWDOC Reliability Study did not accurately state the water supply needs for the OC Basin due to too many variables associated with this estimate and provided examples of assumptions used in the study that are now outdated. Also, see response to comment 0004.19.
0148.10			Completion of a combined EIR/EIS for the Poseidon project is needed for it to	Comments 0148.11 to 0148.22 raise challenges to the 2010 Final Subsequent

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			proceed further. The simple limited 2010 EIR the City of Huntington Beach approved for construction of the seawater desalination plant on the 12 acre AES site is pitifully inadequate. For one it did not state there is a need for this water. It also ignores many important environmental "connected actions" of using the OCWD groundwater basin for its insane idea to store and distribute its produced water. As a result the 2010 EIR violates CEQA and NEPA laws/regulations by separating actions that are closely tied together (piecemealing), hoping the separate actions may pass individually. A complete project description EIR/EIS will allow the project to be in environmental compliance. It will allow the project to qualify for large state and federal grants of funds and low-interest loans to significantly reduce the cost of the project and lower the costs to the public.	Environmental Impact Report (2010 FSEIR) that was prepared by the City of Huntington Beach. However, the deadline to challenge the adequacy of the 2010 Final Subsequent Environmental Impact Report (2010 FSEIR) has passed. (Pub. Resources Code, § 21167.) The 2010 FSEIR, as augmented by the 2017 Final Supplemental EIR and the Santa Ana Water Board's Addendum, is the governing CEQA document for the proposed Facility. The Santa Ana Water Board must rely on the 2010 FSEIR and may not prepare a subsequent EIR, unless there are substantial changes to the project or to circumstances that require major revisions to the 2010 FSEIR or new information that could not have been known when the 2010 FSEIR was certified. (Pub. Resources Code, § 21166; CEQA Guidelines, § 15162.) None of the factors are present here to justify the preparation of a subsequent EIR. The 2010 FSEIR analyzed the direct distribution of the desalinated water.

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				(2010 FSEIR, pp. 3-67 to 3-73.) OCWD has indicated that they do not know how they will use the water and the distribution design analyzed in the 2010 FSEIR may change. However, because OCWD has not indicated how it plans to distribute or otherwise use the water, it would be too speculative to analyze changes to the distribution system that may or may not occur. See responses to comment 0008.03, and CCKA V.A to V.C Finally, the 2010 FSEIR did discuss the need for the project. (2010 FSEIR, pp. 3-79 to 3-95.) However, the City of Huntington Beach's finding of need for CEQA purposes does not bind the Santa Ana Water Board in its consideration of need as it relates to Ocean Plan requirements.
0148.11			**Environmental Analyses of Alternatives** A wise key feature of EIR/EIS documentation, evaluation and public discussion is the "Analysis of Alternatives" for environmental impacts and mitigations from at least three basic alternatives. This includes the simple "No Project Action", "Proposed Project Action (Poseidon)" and "Alternative Project Action (More Recharge	The deadline to challenge the adequacy of the alternatives analysis in the 2010 FSEIR has passed. (Pub. Resources Code, § 21167.) Moreover, section 6.0 of the 2010 FSEIR includes an analysis of alternatives, including the "no project" alternative.

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			Basins/Areas in North Orange County)" alternatives related to relevant state and federal environmental laws and regulations, and Presidential Executive Orders. **No Project Action** OCWD's groundwater recharge basins in Anaheim and Orange have particularly great value to Orange County during above average rainfall years when higher than normal flows offset the lower percolation amounts from average or below average rainfall years. Often several years of drought may be offset from one wet year. Surplus MET water supplies may also be purchased during both dry and wet years to augment the OCWD local recharge water flows, at discounted rates. Both OCWD and MWDOC evaluated the sources of water managed for groundwater recharge and local municipal groundwater production, based on historical analyses and future trends from technical research results, and determined there is no need for a new significant/large source of water for the Orange county Groundwater Basin. OCWD has operated the groundwater basin on a very	Additionally, the Santa Ana Water Board has heard testimony from OCWD regarding the need for the desalinated water. The use of the water as supply or for recharge is entirely at the discretion of OCWD. The Santa Ana Water Board would have permitting authority if OCWD recharges the desalinated water into the groundwater basin utilizing the existing GWRS conveyance system. See responses to comments 0004.11, 0004.16, 0008.02, 0008.03 and 0148.11.

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			conservative basis, using one-half of 1-percent, or about 300,000 acre-ft of the 60 million acre-ft of groundwater in storage. It is practically always full. Additional use of a mere 5-percent or 3 million acre-ft of groundwater in storage is sufficient water to sustain the OCWD service area for about 10 years, under extreme drought conditions, without replenishment from outside water sources. During droughts OCWD may allow more groundwater to be produced for local use, or be traded as a commodity with other outside water agencies that do not have groundwater resources.	
0148.12			**Proposed Project Action (Poseidon)** The No Project Action alternative description identifies there is no need for the proposed Poseidon project and has never been needed. The Poseidon project has not established its need nor its environmental mitigations from impacts to Orange County through its inadequate 2010 Huntington Beach EIR. *(The summary realistically proves the Poseidon project has not and is not needed, as it will cause major environmental impacts, major disruptions to management of the groundwater basin,*	The deadline to contest the adequacy of the alternatives analysis in the 2010 FSEIR has passed. (Pub. Resources Code, § 21167.) Moreover, section 6.0 of the 2010 FSEIR includes an analysis of alternatives.

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			and will unnecessarily raise everyone's water bills in the OCWD service area.)	
0148.13			Regional Board staff did a great job evaluating the technical aspects and mitigation actions for construction of the proposed plant related to seawater intake scenarios. Many other aspects of impacts to the ocean have not been adequately addressed nor have satisfactory mitigation measures been included to satisfy CEQA and NEPA regulations. **Poseidon Site – Multiple Disasters Waiting to Happen** The 12-acre site Poseidon conveniently selected next to the AES power plant has many natural hazardous environmental and engineering problems/conditions that make it a very irresponsible idiotic selection for its "billion dollar project". For example, this includes the impacts from major active earthquake faults, soil liquefaction conditions, floodplain area design and construction, and tsunami flooding. These are typical California environmental hazards that need to be addressed and mitigated when public funds will be used. Some issues cannot be mitigated and cause the project to fail for	The deadline to challenge the adequacy of the environmental impact analysis in the 2010 FSEIR has passed. (Pub. Resources Code, section 21167.) Moreover, the 2010 FSEIR analyzed potential environmental effects for geology, soils, and seismicity and included mitigation measures that the Discharger must implement to address these potential effects. (2010 FSEIR, pp. 4.2-1 to 4.2-16.)

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			further consideration. Poseidon probably could not have picked a worst site for its plant.	
0148.14			The South Branch of the Newport-Inglewood Fault runs essentially through the middle of the site. It is Southern California's largest/major coastal strike-slip fault related to the regional San Andreas Fault Network of faulting zones. This active fault has the potential to generate earthquakes over 6.4 magnitude. Hospitals and schools are prevented by law from building within 500-feet of an active fault in California. One good earthquake beneath or near the site could totally destroy Poseidon's plant.	See responses to comments 0132.06, 0148.12, and 0177.09.
0148.15			The Liquefaction Maps by the California Geological Survey (CGS, 2009) note the Poseidon site lies in the middle of the Talbert Channel sedimentary deposits along the coast with soil types, shallow ground and earthquake energy source conditions ideal for liquefaction conditions. Poseidon's plant could easily sink into the ground with major structural damages from a nearby earthquake.	See responses to comments 0148.12 and 0177.09.
0148.16			The 2019 FEMA Flood Insurance Rate Map (FIRM), recently updated for the near-shore flood areas, shows the site is within a Special Flood Hazard Area "Shaded X"	See responses to comments 0148.12 and 0177.09.

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			flood zone, an area protected by levees from the 1-percent (or 100-year) chance flood. It is not protected from a 0.2-percent (or 500-year) chance flood event. However, the levees were originally constructed as a secondary containment facility, in case the large power plant fuel tanks ruptures, not for flood protection. A recent site visit and historical Google Earth images for the site show the levees have large trenches cut through them, at least since 2002, allowing the tanks areas to be easily flooded by 1-percent (or 100-year) chance flood events. New FEMA FIRMs expected by 2022, updating the 2009 FIRMs inland of the Orange County coastline should show more hazardous flood zone areas at and near the Poseidon site. The “Shaded X” zone designation should be changed to a more dangerous “AE” zone, since the levees have not been compliant with flood protection for about 20 years.	
0148.17			As sea levels have long been predicted to rise another four feet by the end of this century, Poseidon’s site is likely to require continuing flood prevention/protection actions, such as raising the levees and flood insurance requirements. The site is presently surrounded by “AE8”1-percent	The deadline to challenge the adequacy of the 2010 FSEIR has passed. (Pub. Resources Code, § 21167.) Moreover, the 2010 FSEIR analyzed the potential effects of climate change, including sea level rise, and concluded that there would not be significant impacts. (2010

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			(100-year) flood zones (flooding to 8 ft above mean sea level) along the Huntington Beach Channel. It is also located about 1000 feet from the more dangerous coastal "VE14" flood zone along the beach. The VE zone designates a "Coastal High-Hazard Flood Area" subject to a 1-percent (100-year) base flood elevation with an additional 3-ft "wave action" from winds of storm events. Construction within VE zones requires structures to be built on piles, suspending structures above with clear areas below, to withstand the force of dangerous storm/wind wave actions on top of flood waters. It is likely Poseidon's site raising the surrounding levee system, or raising the overall site grade many feet to be in compliance with the Coastal Commission's requirements due to anticipated sea level increases, will impact other properties to an unacceptable degree. It would be like putting a dam in front of a flood. It would increase the flood levels to neighboring properties, and fail the 8-Step Process as an unacceptable site for project construction. A licensed engineer would have to perform a formal "Hydrology &	FSEIR pp. 4.12-1 to 4.12-33.) The Discharger will also need to comply with the California Coastal Commission's siting requirements regarding tsunamis, floods, and other hazards. See response to comment 0177.09

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			Hydraulics (H&H) Study to prove the flood impacts and mitigation measures.	
0148.18			The Poseidon site lies near the beach edge of the predicted middle of a large tsunami inundation area, extending an additional mile or so inland, between the Huntington Mesa and Newport Mesa. There are numerous active major faults that lie within 60 miles of the Orange County coastline area. Tsunami waves, or seismic-induced waves, are serious major flooding incidents that may happen at any time, from local earthquakes or from distant seismic events. Such incidents may surge one or more 20-ft or taller waves of ocean water inland from the beach a mile or more.	See responses to comments 0148.12 and 0177.09.
0148.19			NOAA's National Hurricane Center tracks hurricanes in both the Atlantic and Pacific Oceans. FEMA staff is trained to monitor this site routinely, for their next job. Over the last 10 years hurricanes and major storms in the Pacific Ocean appear to be becoming more frequent and more dangerous, likely because of global climate changes. These hurricanes or their remnant storms may begin to impact Southern California with more rainfall/flooding, higher ocean coastal surge levels, and higher-velocity wind	The deadline to challenge the adequacy of the 2010 FSEIR has passed. (Pub. Resources Code, section 21167.) Moreover, CEQA requires agencies to consider a project's potential impacts on the environment—CEQA does not require agencies to analyze the potential impacts the environment will have on a proposed project. (*Cal. Building Industry Ass'n v. Bay Area Air Quality Management Dist.* (2015) 62 Cal.4th 369, 387.) The Discharger will, however, need to comply with the California

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			conditions. Such Pacific Ocean hurricanes and stronger coastal flood events may unexpectedly also impact the easily vulnerable coastal Poseidon site. Because of these many dangerous or hazardous conditions, the Poseidon site is absolutely the wrong location for a major seawater desalination facility in Orange County. It is likely the approaches and costs to mitigate these conditions have not been adequately considered and only increase the final cost and risk to the public. It will certainly fail miserably in environmental clearances for federal and state grants and loans. This supports the concern this project is very poorly thought out, a scam, or both.	Coastal Commission's siting requirements regarding tsunamis, floods, and other hazards. See response to comment 0177.09. The Santa Ana Water Board is not providing any loans or grants to the Discharger, so any environmental clearances associated with any such loans is outside of the Board's jurisdiction.
0148.20			In 2016 OCWD staff completed a report that evaluated alternatives to deliver Poseidon's water to the basin. Use of the three-times more expensive water ultimately appeared to make some sense by injecting the water in a network of pipelines and injection wells generally a distance of about 7 miles from the coast. This area has evidence of pumping depressions from local municipal groundwater production wells. GWRS water is dedicated by state-permits to only	See responses to comments 0148.10 regarding analysis of distribution pipeline in the 2010 FSEIR and OCWD's possible injection of the desalinated water; 0032.01 regarding costs of the desalinated water; and, 0014.04 and 0055.01 regarding need for the desalinated water.

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			be used in the Talbert Barrier set of seawater intrusion barrier injection wells closer to the coast, which precludes use of Poseidon's water for this purpose. It is insane to take Poseidon's expensive treated seawater, inject it into an aquifer and then pump it out for use when needed, when it is sane to pump the water directly into a potable water supply pipeline network. The OCWD 2014 study concluded the Poseidon project injection well network component would cost an additional $305 million in capital construction cost. It includes use of 26 new injection wells and about 7miles of new water transmission pipelines to the wells. The annual debt service for the construction was estimated to be $19.65 million over a 30-year period loan at a 5-percent interest rate. Assuming the MET LRP subsidy is not applied to this project the average increase in everyone's water bill was estimated to be about $6.77/month, or $81.24/year, from the additional injection wells and appurtenances.	
0148.21			OCWD recognized that additional production wells will be needed, as Poseidon's water will stuff the basin to its	The deadline to challenge the adequacy of the 2010 FSEIR has passed. (Pub. Resources Code, section 21167.)

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			capacity and become a large financial burden to pay for this water. This ignored third element of the Poseidon project, new production wells required for all producers, has not been adequately described or assessed for its financial, engineering and environmental issues. Injection of Poseidon's water into the basin and its cost will force OCWD to raise the RA from 82- to 97-percent. Stuffing so much water into the basin will not allows OCWD to capture the "free" stormwater from Coyote Creek, Santa Ana River and Santiago Creek. This is a serious cost impact raising Orange County's expenses for water resources management. The 19 OCWD producers will be compelled to produce an additional 15-percent of groundwater from new municipal production wells they need to construct, to match the amount of Poseidon's water injected into the basin. For simplicity, let's assume the capital and O&M costs for the new production wells are equal to those for the new injection wells. Therefore, the average additional increase in everyone's water bill is estimated to be about 6.77/month, or	Moreover, management of the groundwater basin is beyond the authority of the Santa Ana Water Board. See responses to comments 0148.10 regarding analysis of distribution pipeline in the 2010 FSEIR and OCWD's possible injection of the desalinated water; 0032.01 regarding costs of the desalinated water; 0014.04 and 0055.01 regarding need for the desalinated water.

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			$81.24/year. Addition of the costs for the injection wells and production wells would then equal to $13.54/month, or $162.48/year. This all ties into the increase in the RA for all producers and increases in producers expenses which are passed along to each Orange County resident in their water bills.	
0148.22			Orange County is considered very affluent, which is true mainly along the coast. However, there are very many pockets of disadvantaged communities located throughout the county. The main alignment for the Poseidon injection well field is Edinger Avenue in Santa Ana. Numerous residential properties will have to be acquired for the new injection well sites. The additional $162.48/year to the water bills will add to the burden of poor folks in Orange County. The issues involved and mitigation measures considered for Environmental Justice – Presidential Executive Order No. 12898, should be addressed in the Poseidon EIR/EIS for its complete project - desalination plant, injection wells and production wells required for the project.	The 2017 Final Supplemental Impact Report considered impacts to disadvantaged communities. See response to comment 0188.01. Additionally, see response to comment 0032.01 regarding costs of the desalinated water.
0148.23			The proposed Alternative Action –More Recharge Basins in North Orange County considers adding 500 acres of ONRA	See responses to comments 0148.10 and 0148.11.

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			recharge basins mainly near the Santa Ana River, Santiago Creek and Coyote Creek floodplain areas. It will require close coordination of the Fullerton, Anaheim and Orange land use planners and city councils with OCWD and its water resources facilities planners. Use of 500 acres for discussion is more or less equivalent to the capital cost for the Poseidon project, considering an acre of land costs about $2 million, equal to about $1 billion. Assuming 50 days of storm water percolating an average of 2-ft per day, across 500-acres of new percolation areas equals 50,000 acre-ft/year. This would be a value of about $50M/yr of new water resources in new recharge facilities that will essentially pay for themselves in about 20 years. Long-term operational and maintenance costs should be far less than Poseidon's project.	
0149	Dave Hamilton Residents for Responsible Desalination (R4RD)	Jan 17, 2020	Cover letter presenting two attachments, a 17-slide presentation given in 2015 and a comment letter	No substantive comments; no response is needed.

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0149a	Dave Hamilton R4RD		A 17-slide presentation given by Peter Swan of Irvine Ranch Water District at a 2015 public meeting of R4RD.	Commenter cites this attachment in his comments in 0149b. Santa Ana Water Board staff has reviewed this presentation in reference to the commenter's comments and responses to the presentation are incorporated in responses to the comments that cite the presentation. See responses to comments 0004.05, 0004.12, and 0014.03 related to energy, see responses to comments 0008.02 and 0062.02 related to water quality, see response to comment 0004.19 related alternative water supplies, and see responses to comments 0014.04 and 0055.01related to the need for the water.
0149b.01	Dave Hamilton R4RD	Jan 17, 2020	We believe that the proposed Doheny project will be found fully compliant with the requirements in the Ocean Plan amendment (OPA). However, the Poseidon proposal fails for several reasons we will document in a more thorough comment letter, as well as our general observations and comments below. We recognize the extraordinary effort staff has put into collecting information to analyze the Water Code 13142.5(b) determination, especially given the	The Santa Ana Water Board acknowledges this comment and provides detailed responses in the subsequent comments.

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			apparent resistance by Poseidon to submit adequate documentation when requested. Nonetheless, we respectfully disagree with some of the analyses and conclusions in the tentative permit. Given that this would be the first permit issued after adoption of the OPA regulatory guidance, it deserves heightened scrutiny to ensure full enforcement of the Water Code.	
0149b.02			The 50 MGD volume of product water was first proposed by Poseidon in Huntington Beach about the year 2000 with the first local coastal development permit issued by the City of Huntington Beach in 2005. It is our understanding that the rationale at the time was that this volume could be produced at the lowest cost by co-locating with the power plant, and using “source water” from the warm water discharged from the power plant’s “once through cooling” (OTC) system mixed with cold water diverted around the OTC system--to arrive at the preferred temperature to maximize RO treatment efficiency. OTC has been all-but outlawed by the State. And importantly, second, the demand for water has remained relatively	Once-through cooling systems are regulated by the State Water Board’s Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (OTC Policy), adopted in 2010 and amended several times since. The OTC Policy requires that affected power plants achieve specific reductions in intake flow rate by dates set forth in the Policy compliance schedule. See, response to comment number 0005.05. Seawater desalination facilities, are regulated by the Ocean Plan. The State Water Board amended the Ocean Plan in 2015 to add requirements for seawater desalination facilities to implement Water Code section

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			the same, while reliable local supplies have increased by approximately 130 MGD from the Groundwater Replenishment System (GWRS) development since 2005. Further, LA County Sanitation District and Metropolitan Water District plans are now progressing to replicate the GWRS in the nearby city of Carson, which would provide an approximately additional 60 MGD of local and reliable water available to OCWD for groundwater replenishment --at a fraction of the cost of seawater desalination. Despite nearly 4 times the volume of local and reliable water available now, or in the near future, compared to 2005, Poseidon's purported "need" for 50 MGD has inexplicably remained the same. In summary, the response to the question appears to be, "This is the volume Poseidon offered to sell and OCWD has tentatively agreed to purchase in a non-binding Term Sheet." OCWD has opined that any less than 50 MGD would not be as beneficial to the goal of reducing reliance on imported water. But that response isn't supported by any reason "why". The Regional Board might have asked both, "Why not 20 MGD or 100	13142.5(b), and the requirements include provisions for the intake and discharge systems. The relevance of water demand and potential availability of supplies from other projects are addressed in comments 0004.19, and 0055.01, and responses to comments CCKA I.D. and CCKA I.E.

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			MGD?" and we think the answer would be the same: that's what Poseidon has always proposed, regardless of significant changes in State regulations, since they first proposed that volume. %) MGD does not relieve OCWD of reliance on imported water, and OCWD has not explained "why" any less or more water than 50 MGD would not be satisfactory to reducing reliance on imported water.	
0149b.03			It's important to note that the HydroFocus study concluded that withdrawing a lesser volume of water through slant wells could reduce the percentage of freshwater mixed in the source water, thereby reducing the concern of OCWD for additional costs from freshwater withdrawal. Further, we believe that if slant wells were used for source water, OCWD could reduce the volume of water injected into the seawater intrusion barrier without increasing the risk, and that saved volume of water available from reducing water injected into the barrier could be used to recharge the basin elsewhere. But until there are tests to calibrate the computer modeling provided by Poseidon, as was done for both the proposed Doheny and CalAm-Monterey proposals, and studies to	Run 5 of the hydrogeologic model was performed by Geosyntec on behalf of Poseidon, using OCWD's maximum allowable extraction rate of 1,000 acre-feet/year from the inland aquifer. This model run predicted that the extraction volume achievable by 3 slant wells would be 3.8 MGD given OCWD's specified maximum extraction rate. The Santa Ana Water Board agrees that if slant wells could extract enough water to supply the specified capacity for the proposed HBDF, without pulling any water from the OCWD's seawater intrusion barrier, then seawater intrusion might diminish. Otherwise, if slant wells did pull water from the inland aquifer (as predicted by the model), the slant wells

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			determine the interaction of slant wells with the injection of water for the seawater intrusion barrier, it is unclear what volume of water could be produced by slant wells for any amount of product water.	would be extracting some of the fresh water injected by the OCWD's barrier system. Therefore, it would not help the GWRS, and would instead require ongoing or increased injection of freshwater to compensate for the loss due to slant well extraction. The Santa Ana Water Board further acknowledges that test wells would be the most accurate way to demonstrate the actual capability of slant wells for seawater extraction. However, a test well is not required to confirm the modeling results. Because wells of any type are costly in most environmental settings, hydrogeologic models—without corresponding confirmation wells—have emerged as a widely accepted, robust and technically sound method of predicting and visualizing hydrogeologic conditions, including production capacity. See responses to comments 0035.02 and CCKA I.B.
0149b.04			We will document in our written comments on the tentative permit that the freshwater "drawdown" is not a "technical feasibility" criteria, but an economic consideration.	Santa Ana Water Board does not agree that freshwater drawdown may not be considered when determining the feasibility of subsurface intakes.

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			Unfortunately, reliance on the ISTAP Phase 2 economic feasibility analysis, included in the tentative permit, is void of any consideration of slant wells' life-cycle costs as required in the OPA.	Chapter III.M.2.d.(1)(a)i lists the factors that the regional water boards must consider to determine the feasibility of subsurface intakes. The technical feasibility factors include geotechnical data and hydrogeology. The drawdown of freshwater aquifers falls under hydrogeology and geotechnical data, and it is appropriate for the Santa Ana Water Board to consider such to determine the feasibility of subsurface intakes. See response to comment CCKA I.C. related to life cycle costs analysis, and Attachment G.1. Sections 2 and 3.
0149b.05			Any water injected into the basin would need to be pumped and treated after mixing with existing water in the basin. It is our understanding that the additional extraction pumping and treatment would be approximately $100 per AF. But that cost does not include construction, operation and maintenance of the delivery system for the Poseidon product water to the point where it would be injected into the basin, the additional injection wells, nor additional extraction wells. To our knowledge, some if not all these estimated costs were included in OCWD staff's	Commented noted. See response to comment 0032.01 regarding cost of the desalinated water.

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			analyses of alternative distribution systems.	
0149b.06			If the Poseidon water is injected into the basin, as it was considered by OCWD, it would be included with the injection of approximately 30 MGD from expansion of the GWRS, as well as potentially 60 MGD from development of a similar GWRS project planned by MWD and LA County Sanitation District. During deliberation of the OPA, the State Board found that recycled water and groundwater recharge when water is abundant must be considered as alternatives for meeting "identified need" prior to concluding subsurface intakes are not feasible. See below at A3: OPA SED at H-294, Response 20.4	Recycled water and groundwater storage are alternative water supplies that water supply agencies may consider as part of their water supply portfolio. According to both MWDOC and OCWD, the Carson project is still in the planning stages—the project needs to undergo CEQA review and the Metropolitan Water District needs to approve the project before it goes forward. OCWD has also stated that it does not necessarily see the Carson project as an additional supply because it may not extend to Orange County and the cost of the water is uncertain. OCWD is moving forward with the final expansion of the GWRS that will increase its treatment capacity by 30 MGD. OCWD included the GWRS expansion in its assessment of its water supply needs and has stated that the desalinated water is needed to increase water supply reliability.
0149b.07			If the groundwater basin is fully recharged during "wet periods", as hypothesized by the Board, it would be technically impossible to use Poseidon water for	The Santa Ana Water Board has no authority over the decisions OCWD makes to manage their water supplies and groundwater basin. These

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			recharge purposes. Importantly, proactively recharging the basin during wet periods can occur in several ways, including: capturing stormwater in-basin, purchasing additional imported water for basin recharge, and/or purchasing imported water for use by OCWD member agencies in-lieu of groundwater extraction. For additional consideration of groundwater storage during “wet periods” compared to purchases of the Poseidon product water, See Attachment “Peer Swan presentation”. It’s our recollection that the 2 options for using readily available imported water during “wet periods” were suggested at Board meetings in the past couple years. But the OCWD Board rejected the proposal given that the cost of additional imported water versus current imported water volumes would be fiscally irresponsible if the basin was already recharging from excess local stormwater. This logic is clearly hard to justify with the Term Sheet for a “take or pay” contracted purchase of the Poseidon water that mandates purchase of the entire 50 MGD regardless of whether or not the basin is fully recharged.	comments should be addressed by OCWD (see also response to comment 0004.19). See response to comment 0149a related to Peer Swan presentation.

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0149b.08			As stated clearly in the OPA guidance, the 2015 MWDOC UWMP is the relevant document to search for "identified need". According to the OPA regulations, "other planning documents" are only used when there is no UWMP available. And although all water supply agencies are required to provide updated UWMPs every five years, MWDOC has updated their demand and supply projections since 2015 to ensure reliability – the 2018 Reliability Study. It's our understanding that these "Reliability Studies" use the same analytical tools as what is summarized in the UWMP. Therefore, the "2018 Reliability Study" is effectively an update of the 2015 UWMP -- under a different title. The Board members are correct that the 2018 Reliability Study ranked several alternatives for ensuring a reliable supply to meet the projected demands –that is, it ranked cost and reliability values of the alternatives for meeting the "identified need"–and Poseidon ranked last. <u>Poseidon is objecting to actions nobody is proposing</u>. MWDOC prepared the UWMP and Reliability Study completely independent of any influence from this	Chapter III.M.2.b.(2) requires the regional water boards to require the owner or operator of a desalination facility to "[c]onsider 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." If an UWMP is not available, then other water planning documents may be considered. The 2015 MWDOC UWMP is the applicable UWMP under the Ocean Plan. However, the 2018 Orange County Water Reliability Study is not an update to the 2015 MWDOC UWMP—it is an update to the 2016 Orange County Water Reliability Study. (2018 OC Reliability Study, pp. 1-1 to 1-3.) In fact, the 2018 OC Reliability Study does not mention the 2015 UWMP or even cite it as a reference. Although the 2018 OC Reliability Study is not the applicable UWMP, the Santa Ana Water Board may consider it along with other relevant water planning documents in its assessment of the need for the desalinated water. MWDOC, in a submission explaining the basis for rankings contained within its

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			Board, and much less any influence to utilize a "loading order." We are simply pointing out there Is no "identified need" for 50 MGD in MWDOC's UWMP that overrides the "required" use of subsurface intakes, given there are clearly alternatives that MWDOC identified. Most importantly, can the Regional Board issue a permit to use surface screened intakes when there are clear alternatives to meet the projected future demand? No – "regional needs can be met by other resources", consequently, "the plant can be scaled down or redesigned so that subsurface intakes can be used." SED at H-294. MWDOC and OCWD can choose whatever alternative they prefer. But the Regional Board cannot approve screened surface intakes for 50 MGD of desalinated water in this case because there is no "identified need" that justifies overriding the required use of subsurface intakes. Ironically, the alternatives for meeting the "identified need" that were used for examples in the OPA SED at page H-294 (and repeated elsewhere in the SED) quoted above are	2018 Orange County Reliability Study, stated that it did not rank projects within the OC Basin. As a result, the rankings deal only with projects for the South Orange County service area; water from the Poseidon project was split between service areas for purposes of the comparison. See response to comment number 0148.09. The Ocean Plan requirement is that the identified need for the desalinated water be consistent with an UWMP. As discussed in detail in Attachment G.2 to the Tentative Order, and in Finding 7 of the Water Code determination (Attachment G), the Santa Ana Water Board finds that the project proponent has identified and supported a need for 50 MGD of desalinated water that is consistent with the MWDOC UWMP and the OCWD's Groundwater Management Plan (Update 2015) and therefore the Ocean Plan requirement is satisfied. Subsurface intakes were determined to be infeasible based on technical reasons—the determination of infeasibility was not solely based on the need for 50 MGD. Even if the Facility

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			exactly the same alternatives available here.	were to be scaled down, subsurface intakes still would not be feasible. Based on modeling by Geosyntec, slants wells could produce 3.8 MGD without impacting the seawater intrusion barrier. Seafloor Infiltration galleries were determined to be economically infeasible, see response to comment CCKA I.C. for explanation. See responses to comments 0035.02 and 0035.03.
0149b.09			The cost of the water is also a factor in the required economic feasibility analysis of subsurface intakes, including slant wells. But again, the tentative permit doesn't include an economic analysis of slant wells. And it's important to include that the costs for developing slant wells, would be offset in part by eliminating the construction and lifetime operation of in-plant pre-treatment of the source water. In short, the seafloor above the slant wells naturally "pretreats" seawater and eliminates in-plant pretreatment construction costs, energy demand, chemical use and discharge, etc. as well as the associated life cycle costs. And the 13% energy demand reduction from	Because slant wells were determined to be infeasible for technical reasons, economic factors, including costs of slant wells, were not considered. See response to comment 0149b.04. See response to comment 0032.01 regarding the cost of the desalinated water and 0004.19 regarding alternative water supply options.

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			avoided pretreatment is more of a life-cycle saving then the 10% increased energy demand of wells compared to open ocean intakes. This was not considered in the tentative permit.	
0149b.10			It's also important to note that the study cited in the OPA SED was completed after certification of the City 2010 FSEIR, which needs to be revised by the Regional Board in a SEIR, not the inadequate Addendum proposed. We will address the CEQA requirements in more detail in our formal written comments.	See responses to comments 0008.03, 0148.10, and CCKA V.A to CCKA V.C.
0149b.11			The estimated cost of the Poseidon water would be in excess of two times the cost of the next most expensive current source – fully treated imported water. And we also can't answer the question of where disadvantaged communities are, nor how much those communities may pay in additional household costs for water. But representatives of these communities submitted a report to the Regional Board prepared by UCLA to analyze the concern expressed in the Board members' question. As for OCWD's support for the proposed water, despite the high cost, it is our	See responses to comments 0032.01 regarding cost of the desalinated water and 0188.01 regarding impacts to low-income and minority communities. See response to comment CCKA I.C related to reliability premium. See response to comment 0149a related to Peer Swan presentation.

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			recollection that they believe the excess cost is a justified “reliability premium.” However, we have seen a presentation by Mr. Peer Swan (attached), an experienced expert in water supply management, and Director of Irvine Ranch Water District, that disputes OCWD’s conclusion about what is a reasonable “reliability premium.” See: Attached Peer Swan Powerpoint presentation.	
0149b.12			We would add that the development of the potable re-use and groundwater recharge plan proposed by LA County Sanitation District and Metropolitan Water District, similar to the OCWD GWRS, is also a new, local, drought and climate resistant supply that was not considered in the Poseidon White Paper. The LA County’s proposed potable reuse project in nearby Carson will provide approximately 60 MGD to recharge the OC groundwater basin managed by OCWD – approximately 20% more than Poseidon proposes to produce. The MWDOC 2018 Reliability Study did include a consideration of the development of a desalination plant in Doheny as one of the preferred alternatives for meeting future demand. Again, that is an update to the MWDOC	The Santa Ana Water Board recognizes that the LA County Sanitation District project would provide an additional water supply in Orange County. As noted in responses to comments 0004.19 and 0148.05, it is up to local agencies, not the Santa Ana Water Board, to decide on which water supply options to pursue. The 2018 OC Reliability Study is not an update to the 2015 MWDOC UWMP. See response to comment 0149b.08.

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			UWMP that, by the OPA guidance, is the document that should provide the updated figures to Poseidon's White Paper to reflect the current situation.	
0149b.13			It seems feasible that an intake could be constructed without any of the on-land development and the associated costs. A pipeline already exists to move the sea water into the property where the treatment plant is planned –the existing intake pipe. Rather than constructing a 2 kilometer pipeline on-land, then turning and crossing under the beach, and then building a trestle system to construct the pipe from the shore to the required depth – why not simply connect to the terminus of the existing pipe, and lay pipe on the seafloor for the 2 kilometers, then connect the screen at the alternative site? Wouldn't this reduce the costs of the proposed pipeline to alternative sites D2 or U2? It's our understanding that there were significant problems with the data used to analyze the benefits of U2 and D2. The best attempts at reconciling the data gaps resulted in showing those sites could minimize intake and mortality compared to Poseidon's preferred site, but that alternative was rejected because of the	This approach was determined to be not feasible due to the potential for the large diameter pipeline to affect the local hydrodynamic and wave characteristics. The pipe would also be subjected to a greater degree of wave loading. The detailed analysis can be found in the Discharger's January 2019 Appendix JJJJJ-2 which is posted here: https://www.waterboards.ca.gov/santaana/water_issues/programs/Wastewater/Poseidon/2019/Appendix_JJJJJ_2.pdf. To add additional certainty regarding these analyses, Santa Ana Water Board requested additional information regarding the analyses contained in Appendix JJJJJ-2. The Santa Ana Water Board reviewed and used the information in the Discharger's Appendix RRRRR in April 2019 to analyze the feasibility of the construction methods and impacts of trestles located off-shore. Appendix RRRRR, Part II, pages 7 to 12 is available here: https://www.waterboards.ca.gov/santaan

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			costs associated with construction. Now the costs estimates used in that decision are also clearly unacceptable.	a/water_issues/programs/Wastewater/Poseidon/2019/Appendix_RRRRR_Response_to_RWQCB_040219.pdf. The 2003-2004 data that Santa Ana Water Board staff and Dr. Raimondi used to determine which station or stations would be the best location for an offshore surface intake were not collected with that purpose in mind, The data were actually collected for the AES HBGS so that they could assess the extent of the source water body impacted by their existing surface intake located near Station E. While there wasn't sufficient data to do an ETM/APF analysis at any station other than Station E, Dr. Raimondi suggested using two different metrics that relied on the larval concentration data that were available for all seven stations. These two metrics (standardized larval concentration or SLC and mean larval concentration or MLC) were then used jointly as proxies for risk in lieu of an ETM/APF analysis. Dr. Raimondi's recommended approach to assessing the two joint metrics resulted in a finding that a surface intake at Stations U2 and D2 would result in less entrainment than an intake at

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				Station E. However, Santa Ana Water Board staffs' analysis of the other feasibility factors that need to be considered as part of the 13142.5(b) determination – social, technological and economic factors – indicated that moving the surface intake to either station U2 or D2 would result in significant social and economic impacts (the technology required for each station was the same). While the construction costs were significantly higher, the local social and economic impacts were also significant due to the need to restrict public access during construction, including restrictions on beach access and public events. Therefore, Santa Ana Water Board staff recommends that the existing surface intake and discharge structures at the AES HBGS (located adjacent to Station E) be used for the proposed desalination facility and upgraded as required by the Ocean Plan. See attachment G.1, Section 3. Other Feasibility Considerations for Alternative Intake Locations, for additional explanation.

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0150.01	Michael Wellborn Friends of Harbors, Beaches and Parks	Jan 20, 2020	As an organization focused on the environmental health of Orange County, we urge the Regional Board to deny the requested permits for Poseidon for reasons including these serious concerns: Should the plant be built and become operational at the 50 MGD level, the brine discharge to the Orange County coastline would be staggering. Negative impacts to coastal resources would be substantial with the equivalent of five tons of salts deposited in the near-shore zone every minute.	See responses to comments 0004.01, 0004.11, 0036.01, 0054.02, 0055.02, and 0062.02.
0150.02			Should the plant be built and become operational, the continued use of the old seawater intake pipes would remain a constant negative and significant impact to marine life. There is just no excuse to consider utilizing these out-of-date pipelines with the CA Water Resources Control Board's direction to implement sub-surface intakes.	See responses to comments 0005.04, 0035.02, and 0082.04 regarding feasibility of subsurface intakes; 0004.03 regarding required modifications to intake design and technology, and 0004.14 existing pipeline integrity.
0150.03			North Orange County is very fortunate to have an aquifer that has a capacity of over one million acre feet that provides highly effective drought protection for the local communities. The simple fact is that north Orange County <u>does not need</u> the water – especially high-priced water sourced from a for-profit corporation. As former Orange	See responses to comments 0014.04 and 0055.01 regarding need for the desalinated water; and 0004.19 regarding alternative supply options.

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			County Water District Director Phil Anthony pointed out, “if OCWD really needed the water, we would have already built it!”	
0150.04			In conclusion, FHBP urges the Regional Board to deny the requested permits for the proposed Poseidon desalination plant in Huntington Beach.	The intent of the draft tentative NPDES Permit and Water Code 13142.5(b) determination is to set the requirements to construct and operate the facility in accordance with the California Ocean Plan’s requirements for seawater desalination facilities. The Santa Ana Water Board’s decision on the Tentative Order will be based on whether the proposed Facility and the proposed discharge comply with the applicable state and federal requirements.
0151	Rob Hayashi	Jan 21, 2020	Having seen firsthand the positive benefits of the Carlsbad Desalination Plant in San Diego, I am writing to urge your support for desalination, which significantly improves both water reliability and quality. In addition to providing a reliable water supply that isn’t dependent on rain or snow, desalination has made a noticeable difference in our region’s water quality. In fact, water hardness and dissolved solids have been reduced since the introduction of desal in San Diego County, resulting in	The comments are not relevant to the Tentative Order. See responses to comments 0004.04, 0026.05, and 0079.03.

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			better tasting, softer water that extends the lifespans of household appliances.	
0152	Rob Hayashi	Jan 21, 2020	As you might imagine, I had concerns about the potential disturbances associated with the work to make the plant operational, but Poseidon Water did a stand-up job of minimizing construction-related impacts to our community and letting us know in advance of work that may impact our traffic routes. They hosted several open houses and generally made themselves available at any time to address questions and concerns. I commend them for being a good neighbor and pleased to see that they have also become a positive addition to our business community. I am proud to have the largest and most energy-efficient desalination plant in the nation right here in our backyard and I would recommend them without hesitation to our neighboring communities.	See response to comment 0151.
0153	Vito Bica	Jan 21, 2020	We live in San Diego, and fully believe that desalination is part of the equation when it comes to solving So Cal's water crisis. Interruptions in water supply can cause major losses for local businesses and	See response to comment 0003.01.

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			jeopardize economic growth. Desal gives local businesses the assurances they need to thrive and grow because they know that even during a drought, we will still have access to a reliable water supply. Desalination creates local control over water supplies, enabling the local economy to thrive.	
0154	Victor Cao California Apartment Association	Jan 21, 2020	Poseidon Water's Carlsbad Desalination Plant has effectively and efficiently produced more than 57 billion gallons of drinking water for San Diego County residents and businesses over the past four years. This project provides not only a drought-insurance policy for San Diego, but a climate-resilient water supply that creates water independence and security for the region. Orange County deserves that same opportunity for a reliable water supply. This project meets all of the state's new standards as defined in the Ocean Plan. This water supply has an identified need based on the water experts at the Orange County Water District (OCWD).	See response to comment 0003.01.

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0155	John Kerry	Jan 21, 2020	I am writing to urge your support for the proposed Huntington Beach seawater desal plant because it will improve both water reliability and quality for our community. Not only does desal create a reliable water supply not dependent on rain or snow, but it can also have a noticeable difference in regional water quality. In San Diego County, water hardness and dissolved solids have been reduced since the introduction of desal in 2015, helping to extend the lifespans of household appliances.	Desalination is one water source that local agencies may consider as part of their water supply portfolio. The comment regarding water from the Carlsbad desalination plant is not relevant to the Tentative Order. See responses to comments 0004.04, 0026.05, and 0079.03.
0156	Bertha Sterling	Jan 21, 2020	I'm writing to you today in support of desalination as a vital component of a long-term solution to California's water future. We must secure a diversified water portfolio to meet our state's growing population demands. We can no longer depend on snowpack and rainfall totals to fill our reservoirs, and the cost of importing water will only continue to rise. Desalination is a sustainable solution that we can depend on now and in the future.	See response to comment 0003.01.

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0157	Tim Florio	Jan 21, 2020	I'm in disbelief that we are still trying to get such a logical infrastructure program approved. Maybe dumbfounded is a better description. I've written letters and sent emails. I've even had an editorial printed in the local newspaper so when I say I support desalination I mean I've supported this project from the very beginning. How long has it been? I can't really remember but it has to be fifteen years. To me that's a long time to make such a logical affirmative decision. You have 99% of the world's water lapping up on your shoreline and all you have to do is take the salts out and you have potable water. You can remove the salts cheaper than you can transport water. I could go on and on listing all the positive logical reason this proposal should be approved but I won't. I will ask you to do this. If you don't approve this proposal give all of us supporters a detailed explanation why you didn't.	See responses to comments 0003.01 and 0084.01.
0158	Lancy Dyer	Jan 21, 2020	I am writing to express my support for the proposed desalination plant in Huntington Beach. I watched closely as the desalination plant was built in Carlsbad and had the opportunity to tour it last year. It is an incredible facility with a low	See response to comment 0003.01.

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			environmental footprint. Most importantly, it delivers 50 million gallons of drinking water to San Diego from seawater. As populations grow, we can build more power plants to meet demand, however we can't "build" any more rain. With rainfall constant and water demand growing, we need to develop alternate methods of securing drinking water which is critical for life. The proposed plant will diversify the water supply in OC and provide water security at a manageable cost.	
0159	Kaitlyn Kirkup	Jan 21, 2020	I encourage you to approve the permit for the proposed Huntington Beach desalination plant so that Orange County residents can enjoy the many benefits of desalination. The proposed Huntington Beach plant will produce 50 million gallons of fresh, desalinated water per day while taking important steps to protect and enhance our precious coastal resources. The plant will provide our region with the water reliability we need to continue growing and thriving by providing us with a water supply that is locally controlled and not dependent on weather.	See responses to comments 0003.01 and 0150.04.

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0160.01	Shawn Dewane Mesa Water District	Jan 21, 2020	The Pacific Ocean provides a climate resilient supply of water – given the recent drought, Colorado River water declining and a need for new supplies – this makes sense. We cannot conserve our way into creating new water, and the claim that we do not need the water is just patently false! Projects like this are smart investments in our region's future – look at the success of Orange County Water District's Groundwater Replenishment System – smart investments make sense.	See response to comment 0003.01.
160.02			Objections over the cost of desalination are a Red Herring and beyond the scope of the Regional Board. As proven by the Carlsbad project the household cost of desalination is on part with the cost of mandatory conservation or the investment in any new water supplies including wastewater recycling or stormwater capture.	See response to comment 0032.01.
160.03			Here a few of the key compelling components that are also supported by your staff's recommendation: • We NEED the water and are in compliance with the OPA's "identified" need provision	See responses to comments 0014.04 and 0055.01

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160.04			• Carlsbad using the same proven seawater intake technology received this same permit last year and the performance of the plant is of [sic] the charts	See response to comment 0079.03.
160.05			•Needed mitigation funding to maintain and assure future generations enjoyment of Bolsa Chica – which will literally be wiped out without this project	See response to comment 0017.03.
0160.06		Jan 21, 2020	Mesa Water currently participates in OCWD's coastal in lieu groundwater management program which allows OCWD to help prevent seawater intrusion by replacing Mesa's supplies from groundwater pumping with imported water. Mesa is held financial neutral in this transaction. In the future desalinated water from Huntington Beach could replace the imported water needed under OCWD's coastal in lieu program thus achieving multiple benefits of reducing demand on imported water, protecting the groundwater basin and enhancing the quality of the drinking water supply. Mesa senior staff have indicated to OCWD our interest in pursuing such an arrangement should the desalination plant be permitted.	See response to comment 0003.01.

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0161	Robert Sulnick	Jan 21, 2020	I support the need for desalination facilities and believe it is important for the future of California, which is why I strongly urge you to move forward on the Huntington Beach facility. In order to meet the needs of our region's growing population, it is crucial we develop options like desalination to keep up with demand. It is not practical to rely on annual rainfall and snowpack, as they are not consistent. The best option to secure a sustainable, long term and locally-controlled water supply solution is desalination.	See responses to comments 0003.01 and 0150.04.
0162.01	Barbara Boxer Former U.S. Senator	Jan 21, 2020	I am writing to express my strong support for the Huntington Beach Seawater Desalination Project and ask that the Regional Board approve National Pollutant Discharge Elimination System Permit Order No. R8-2020-0005, NPDES No. CA8000403. I'm pleased that your extremely diligent and thorough staff has found that the proposed Project complies with California Water Code section 13142.5(b) and the Ocean Plan Amendment and that the Project will continue to use the best available site, design, technology and	The comment supporting the proposed desalination project is acknowledged. Please note, however, that the Tentative Order's finding that the Facility complies with Water Code section 13142.5(b) and the Ocean Plan is conditioned on the Discharger's submittal of additional details, including a schedule, for final approval of a Marine Life Mitigation Plan (see Attachment K of the Tentative Order).

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			mitigation measures feasible to minimize the intake and mortality of all forms of marine life.	
0162.02			As someone who worked for many years on policies that will prepare us for the ravages of climate change, I am so pleased that our governor, Gavin Newsom, has put forward a plan for climate resilient water supplies that are critical to the people of our great state. Yes, prior governors have rolled out ambitious water plans before, but this is different. Governor Newsom's 2020 Water Resilient Water Plan released earlier this month emphasizes principles such as the incorporation of water reliability successes from around the world, embracing innovation and new technology, and encouraging regional approaches to our water reliability challenges. I am pleased that the Governor's Water Resilience Portfolio specifically includes seawater desalination as a water resource management strategy for the state and I believe the Huntington Beach Seawater Desalination Project can follow in the footsteps of the successful Carlsbad	The Governor issued Executive Order N-10-19 directing the California Natural Resources Agency, the California Environmental Protection Agency, and the California Department of Food and Agriculture (Agencies) to prepare a water resilience portfolio. The Agencies prepared a draft Water Resilience Portfolio that was released in January 2020. The Water Resilience Portfolio is an important step to ensure adequate water supply for all of California. While the draft plan does identify desalination opportunities, desalination facilities that are planned and built pursuant to that plan must still comply with requirements set forth in the Water Code and Ocean Plan. See response to comment 0162.01.

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			facility and be a model for desalination done right in the state of California.	
0162.03			The vast majority of the state's 40 million (and growing) residents live in coastal counties bordering the Pacific Ocean. Desalination doesn't depend on local precipitation or faraway snowpack. It's a proven technology that's worked around the world, and now it's working here at home. The Carlsbad Desalination Plant in San Diego County is the largest, most technologically advanced, energy efficient and environmentally sound desalination plant in the Western Hemisphere. The operation of the plant is carbon neutral and in its first 48 months of operation the plant provided San Diego County with more than 58 billion gallons of fresh drinking water.	Water supply issues in San Diego may involve significant differences from those in Orange County. The two areas may not be comparable in their water supply needs; water agencies with responsibility for specific areas are best suited to assess water supply conditions and make appropriate decisions regarding local supply options. See also response to comment 0079.03.
0162.04			Because seawater desalination is independent of climate and weather patterns the Carlsbad facility has helped protect public health, safety and the economy during the worst recorded drought in California's history.	See response to comment 0162.03.
0162.05			At the cost of less than a penny per gallon, desalination is cost competitive with other new sources of drinking water, and while areas of the state - and country - struggle with polyfluoroalkyl substances linked to	See response to comment 0032.01 regarding cost of the desalinated water.

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			cancer and other contaminated and unsafe drinking water, the plant's reverse osmosis technology has provided safe, ultra-pure water that has measurably enhanced drinking water quality throughout a 4,500-square mile county that touches the Mexican border.	
0163.01	Valerie Nera California Chamber of Commerce	Jan 21, 2020	CalChamber supports the proposed Seawater Desalination Project because it will provide a dependable, climate resilient/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. 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.	See responses to comments 0003.01 and 0015.03.
163.02			The project would generate several hundred million dollars in economic activity and approximately 3,000 jobs during	See responses to comments 0003.02. 0004.12, and 0162.01.

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			construction. Dozens of additional jobs would be created, high-paying jobs, once the facility is up and running. As confirmed by your staff, this project is fully compliant with the Ocean Plan Amendment and the design protects marine life and water quality. The facility is designed to be carbon neutral and is designed with an energy recovery system to reduce energy consumption.	
0164	Jesse Ben-Ron Orange County Business Council	Jan 21, 2020	Orange County Business Council urges the Santa Ana Regional Water Quality Control Board to approve the permit renewal to Poseidon Water for the Huntington Beach Seawater Desalination plant.	Comment noted. See response to comment 0150.04.
0165.01	Kevin Fockler	Jan 21, 2020	When Senator Boxer spoke about Poseidon (as a lobbyist), at the HB Study Session, she did so while touting a fact that is incredibly off base and is erroneous by its very nature. She claimed, her words, “Poseidon is a Carbon Neutral Plant.” The fact is this: Poseidon will have one of the **largest Carbon Footprints** in all of Orange County.	See responses to comments 0004.05, 0004.12, 0014.03, 0015.03, 0177.09 and 0177.10.
0165.02			At $2,600 an acre foot!? Do we really want to use the most expensive water around to pump into the ground to help mitigate seawater intrusion? The OCWD can buy	See responses to comments 0004.19 regarding alternative water supply options; 0014.04 regarding the need for

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			partially treated water for far less money to inject in order to stop the intrusion, or, better yet, use water from one of the distant wells to pump into Talbert in order to stop the intrusion of seawater. So who wants it? Northern and Central California farmers who want unlimited water sources; big Agri farming concerns; lobbyists representing the farming business; Wall Street Businesses who have an eye out for the next dollar; former political leaders turned lobbyists who reach out to politicians to do their bidding for them; and many, many others who will make money off this pyramid of an idea. Look at Boxer! Look at Governor Brown's sister, Kathleen, she is LEGAL COUNCIL for one of the lobbying firms! Even Governor Newsom has ties to some of these lobbying firms who helped get him into office. Every single one of them gains financially from this. I won't gain from it, and neither will anyone in the general population. Some will clap their hands because they bought the idea, they bought into the created fear from the Greatest Salesman that… *Californians need these plants because they are drought resistant!*	the desalinated water; and 0032.01 regarding cost of the desalinated water.

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0165.03			They have created a need for something that we already have plenty of...water, but people are focused on the horrors of what a drought could bring. It is a great diversion tactic. Their arguments are many, some are reasonable and many are flawed, but their biggest weapon is creating a vision that prays on our FEARS; your fears. What they are peddling is something that hits us right in the center of the gut...fear of the future without water. Poseidon will give us less than 10% of what we use in a year (if they were to ever hit their capacity), so couldn't the people just conserve? We will examine that later.	See responses to comments 0004.19 and 0014.04.
0165.04			Here are some questions for each Board Member: Is fear driving the Water Board? Is fear driving the public to think these plants are needed? Are the lobbyists that good at using half-truths to get their points across, or do they make salient points? Do their points truly address the future needs of the county?	The Tentative Order concerns the requirements of the Clean Water Act, the Porter-Cologne Act, and the California Ocean Plan desalination provisions. Regarding the need for the desalinated water; see responses to comments 0004.19, 0014.04 and 0055.01.
0165.05			This was the first Workshop since the Annual Carlsbad Poseidon report came out. IT WAS NOT A GLOWING AFFIRMATION OF THE PLANT!	See response to comment 0193.07 regarding the Carlsbad facility.

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			Here is a quick overview of the glowing Poseidon results: • 5 Citations for wastewater discharge violations • Underperformance in their water delivery schedule by more than 5,000 acre feet • Their water cost was an astonishing $2,695 an acre foot • That is 50% more than what it costs OCWD customers now per acre foot	The purpose of the Tentative Order is to regulate the discharge of pollutants from the Facility to the Pacific Ocean and to impose requirements ensuring the Discharger uses the best available site, design, technology and mitigation measures feasible for construction and operation of the Facility, in accordance with Water Code § 13142.5(b) and the California Ocean Plan's requirements for seawater desalination facilities. Also, see response to comment 0032.01 regarding water costs.
0165.06			Rising water prices will impact those who already struggle to make ends meet here in costly California.	See response to comment 0032.01.
0165.07			The brine being discharged is right at my surfing beach, which is a highly used State Beach here in California. Can you guarantee the toxicity levels of the brine will dissipate before hitting the surf line? Because we are not talking about just salt here, but the chemicals added to keep the pipes in order. Are you putting the public in harms way? On a strong South Swell that toxic-brine pool can easily flow to the surf zone and to the beach. Did you do any comprehensive studies on that? All you have to do is watch the water movement	See responses to comments 0004.01, 0036.01, 0054.02, and 0055.02 regarding impacts of brine discharge; 0004.11, 0033.01, 0020.02 0035.04 regarding toxicity; and 004.11, 0033.01, 0035.06, 0050 and 0062.02 regarding effluent and receiving water limitations in the permit intended to protect beneficial uses.

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			on a strong swell and you can see how the tainted water will move to shore. Then it is right in the middle of surfers, bathers, swimmers or anyone in that area.	
0165.08			Next, the MWDOC called Poseidon the most expensive alternative to adding new water of any county water project. Maybe they should not have said anything. Maybe they should have kept their report private. But they didn't. So the question now is this, "why would they slam another district's project"? Is it out of hatred, malice, jealousy? Or was it a warning saying there are better alternatives?	See responses to comments 0148.09 and 0149b.08.
0165.09			**Evaluate**-here are some real options to consider: • Buy lessor quality water to use for the GWRS or to use for the Talbert Injection Wells to control the Sea Water intrusion…not $2,600 an acre foot of Poseidon water. You can purchase partially treated water for far less money. • Tap into the over 2,000,000 A.F. (two million Acre Feet) of new ground water found in our aquifer as per the recent studies and the report by Mr. Kelly Rowe. • Import more water when there is no drought, conserve, so it can be used when we have a drought.	See responses to comments 0004.19, 0148.01 and 0148.22.

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			• Listen to Kelly Rowe, one of the most informed persons on the OCWD Board. As a geo-hydrologist, he knows what the aquifer can produce. Why would he lie? We have 6-8 million acre feet to tap. We only use 500,000 a year in all of O.C.	
0165.10			**Informed decisions:** • OCWD could build and operate a plant at a cost far less than Poseidon (We already use R.O. technology to purify water for our GWRS). It could be owned and operated by us…not a Wall Street firm that must guarantee profits. The money that would subsidize Poseidon would be used by the county to build a plant. OCWD would control it. • Even if we didn't use the GWRS we have over 10 years of water stored underground. (Per Kelly Rowe-OCWD) • Poseidon Carlsbad HAS NEVER MET THEIR GOALS, and we are to believe they can do it now? And deliver lower cost water? This is from their September report- NEW INFORMATION TO EVERYONE AT THIS WORKSHOP. • Poseidon would provide Orange County with less than 10% of the water consumed	The Santa Ana Water Board can only act on and analyze potential impacts of the project as currently proposed. If OCWD decides to build and operate its own desalination plant and submits a permit application to the Santa Ana Water Board, the Board will consider the application at that time. The Santa Ana Water Board does not have regulatory authority over OCWD with regard to management of the OC Groundwater Basin or the GWRS. The Santa Ana Water Board would have permitting authority if OCWD recharges the desalinated water into the groundwater basin utilizing the existing GWRS conveyance system. See responses to comments 0004.11, 0004.16, 0008.02, 0008.03 and 0148.11. See responses to comments 0004.19 regarding alternative water supply

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			in an average year. 10%...we want to mortgage ourselves over 10%? • Doheny's plant is a better model. Not many people are arguing about that one. If we need water for seawater intrusion mitigation, then build a plant of that size whose only goal is to shore up the defense of sea water intrusion.	options; 0004.04 and 0193.07 regarding the Carlsbad desalination facility.
0165.11			Here are more facts to consider… Water usage in Orange County, per person usage, is actually going down. And that is even with a growing population. The latest OCWD Annual Report has a chart that shows water usage over the last 20 years declining at a quickening pace. (Page 5 of OCWD annual report) So while the population in this water district has grown by over 10 percent over the last 20 years, the overall water consumption has decreased by almost 20%, or 60,000 acre feet of water!	See response to comment 0014.04.
0165.12			The people of Orange County do not deserve higher rates for doing a herculean effort at conserving water. They have done a great job conserving water and it would be a shame to reward that effort by raising rates, and compounding that chaos by	See responses to comments 0014.04 and 0032.01.

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			building a plant that will negatively impact the environment.	
0165.13			*The toxic brine.* We know the toxic brine could affect: the ocean; the nearby wetlands; the surfers who surf there; and the lifeguards who protect us. Passing it off as if it won't affect things is not prudent. No one knows the long term affects. Can you guarantee that when Red Tides occur the plant is shut down? That with a warming ocean the algae blooms won't affect the operation of the plant or what we drink?	See responses to comments 0004.01, 0004.03, 0017.02, and 0036.01 regarding marine life concerns. Under the Tentative Order, the Discharger is required to conduct monthly and semi-annual influent monitoring for the first year and annual monitoring for every year thereafter. See response to comment 0132.08 for comment regarding algae blooms.
0165.14			*Microplastics* The R.O. filters at the plant cannot filter out all the plastics. This means that Poseidon water will contain **microplastics**. Can you guarantee me safe drinking water? Can you guarantee that the consumption of microplastics is okay over the long haul?	The Santa Ana Water Board does not have jurisdiction over the quality of drinking water. The State Water Board's Division of Drinking Water (DDW) regulates public drinking water systems and water treatment devices. The Discharger will need to obtain the appropriate permit from DDW and comply with DDW's regulations and permit requirements. Additionally, DDW is developing new requirements for microplastics in drinking water. See https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/microplastics

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				.html for additional information on the topic.
0165.15			***IV Alternative Supply/Compromise*** 1. Build a smaller plant, along the lines of Doheny. 2. Lower the pumps we now have to a depth that will pump out the difference between what is pumped into the Talbert Wells and what the "Original Poseidon Plant" would have given to us. Look at purchasing water from other sources, during non-drought times to help enhance our GWRS system because it is maxed out.	For plant size comment, see responses to comments CCKA I.D. and CCKA I.E. For pump depth comment and for the comment on purchasing water from other sources, those would have to be decisions made by OCWD, not the Santa Ana Water Board. See also response to comment 0004.19.
0166	Tyler Diep Diep Assembly member, California State Assembly	Jan 21, 2020	As a follow-up to the letter I submitted on January 15, 2020, enclosed you will find support letters from the State Legislature for the Huntington Beach Seawater Desalination Facility. Please include the attached letters for part of the administrative record for the amendment and renewal of the Huntington Beach Desalination Project. I thought it would be valuable for the Board to appreciate the bipartisan support the desalination facility has. Most of the Assembly members and Senators of the	The enclosed letters of support that were previously submitted to the Santa Ana Water Board, State Water Resources Control Board, and the California Coastal Commission are noted and will be included in the administrative record. The Santa Ana Water Board's decision on the Tentative Order will be based on whether the Discharger's proposed Facility and the proposed discharge comply with the applicable state and federal requirements.

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			letters are still members of the Legislature today.	
0167.01	James Parkinson	Jan 21, 2020	When my wife and I moved our young family to Huntington Beach in about 1967, we settled in the Seabury housing tract, just off of Magnolia between Indianapolis and Atlanta streets. In those days Magnolia didn't run all the way to P.C.H, but stopped at Hamilton with a short length of Cannery Street extending from Magnolia and paralleling the mud dump. A low cost weekend entertainment we enjoyed with our new neighbors in those days was to car pool or bike to the beach and dig for Pismo Clams in front of the Edison Steam Plant. You could find the clams with your toes while wading on the sandy ocean floor. We would return to one of the neighbor's houses with our catch and grind up those tough old clams, make a chowder and add a bottle of cheap wine to the table and we had instant good times. This was, of course, before the adverse effects of the cooling water intake and return of the warmer effluent from the steam plant destroyed the marine habitat in the area. The new A.E.S. plant is air cooled and does not rely on the ocean for electricity	The Tentative Order has been developed to comply with Water Code and Ocean Plan requirements to ensure protection of marine life. Attachment E to The Tentative Order also includes an extensive monitoring and reporting program intended to monitor the effects of the intake and discharge on the marine environment. Monitoring specifications include aquatic life monitoring both prior to the facility operation and during operation, toxicity monitoring and chemical constituent monitoring. The monitoring data will be instrumental in allowing the Santa Ana Water Board to track impacts to the ocean receiving water and to modify the Order to include more protective discharge requirements as needed.

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			generation. Consequently, with time, healing of the environment and with it a return of healthy sea life should occur. However, if Poseidon is allowed to build their desalination plant and use the existing sea water intake system, nothing will change.	
0167.02			Further, the combined salt removed and the salt brine residue from the process (estimated at 5 Tons per minute of operation) will require disposal, least additional pollution of our ocean shall occur. It is already known that desalination is highly energy dependent, requiring vast amounts of electricity in its process. Adding to these costs with salt and brine disposal makes desalination a poor choice.	See responses to comments 0004.01, 0036.01, 0054.02, and 0055.02 regarding brine discharge impacts; 0004.05 and 0004.12 regarding energy use; and 0032.01 regarding the cost of desalinated water.
0167.03			I would support a far better solution to increasing our drinking water requirements: Recharging our ground water aquafers with reclaimed water. This is a proven process, requiring little in the way of infrastructure changes.	See response to comment 0004.19.
0168.01	Oscar Rodriguez	Jan 21, 2020	I am opposed to the project because of the cost. We all know that desalination is the most expensive way to produce fresh water because of the energy costs and at	The Santa Ana Water Board is not and will not be a party to any contract related to the purchase of the water and cannot negotiate contract terms such as the

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			the end of the day, ratepayers are the ones that will foot Poseidon's bill through increasing costs. While Poseidon states that the average increase will not be much, I am well aware that most in my community could not afford to pay more, especially for a project that will lock us in a contract that will be in place for decades.	price of the water and the duration of any such contract. See responses to comments 0004.19, 0031.02, and 0032.01.
0168.02			I have been following the developments of Poseidon's previous project in Carlsbad, CA and have found the news from there disturbing. For example, in a peer-reviewed scientific study on the ocean water at the site of intake and brine discharge there, scientists have found a significant increase in salinity and toxicity of the water that actually goes above the limits set by the state of California's Ocean Plan Amendment. What reason do I have to believe that anything different would occur in my community?	The Carlsbad facility uses a discharge technology known as “flow augmentation” to dilute and discharge brine. The Ocean Plan generally prohibits the use of flow augmentation as a discharge technology unless a facility meets certain criteria to qualify for an exception. The Carlsbad facility meets the criteria for the exception to the prohibition. The proposed Huntington Beach facility does not meet those criteria and may not use flow augmentation for its discharge. Under the Ocean Plan, the preferred technology is wastewater dilution. If wastewater is not available to mix with the brine discharge, the use of a multiport diffuser is considered the best available technology feasible. For the proposed Facility, wastewater is not available to mix with the Facility’s brine

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				discharge. Thus, the Discharger is required to install and utilize a multiport diffuser for the brine discharge to the ocean. This discharge technology leads to rapid dilution of the brine over a small area. The area where salinity will exceed natural background salinity by more than 2 parts per thousand (ppt) is less than 1 acre. Compensatory mitigation is required to offset these impacts. See also responses to comments 0004.01, 0036.01, 0054.02, and 0055.02.
0168.03			The carbon cost of the Huntington Beach project, despite the remediation plan for the Balsa Chica that Poseidon has yet to fully outline, will use as much energy as 2-300,000 homes, further contributing to climate change. Furthermore, I do not think we need to be killing the ocean any more than we already are, and we need to be thinking about how to make it better. Desalination only makes it worse and it be a black mark in my community.	See responses to comments 0004.05, 0004.12, 0177.02, 0177.09, and 0177.10 regarding energy usage. See responses to comments 0004.01, 0017.02, 0020.02, 0033.01, 0035.06, 0050, 0054.02, 0055.02, and 0062.02 regarding marine life impacts.
0168.04			Finally, I have yet to see a convincing argument that this plant is even needed. The MWDOC reliability study and other documents that my community members have circulated to me show that this project is listed last on list of necessary steps towards a sustainable water future.	See responses to comments 0004.19, 0014.04, 0055.01, and 0148.03.

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			We have the Groundwater Replenishment System, or GWRS that is working well in Orange County, and they are planning to expand this project in the future. For what reason do we need a desalination plant? Orange County doesn't need Poseidon's water, or the dead marine life and polluted water that go with it.	
0169	Keith Bohr Former Huntington Beach Mayor Diane Feinstein	Jan 21, 2020	As a former Huntington Beach Mayor that originally voted to approve this important project back in 2005, I respectfully request that the attached letter of support from Senator Feinstein dated September 3, 2019 be added to the record. Senator Feinstein's September 3, 2019 letter to Governor Newsom provided the following points in support of the Poseidon desalination project: • 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. • The project will create more than 3,000 jobs and infuse $500 million into Orange County's economy during its 35-month construction and start-up period and an	The letter of support from Senator Feinstein will be included in the administrative record. Also see response to comment 0003.02. See responses to Senator Feinstein's comments in responses 0147.01, and 0147.02.

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			additional 400 permanent jobs, according to Poseidon Resources. • support is based on the project's development in an environmentally safe manner that is consistent with the 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." • my understanding that Poseidon made three modifications to its Huntington Beach Desalination Plant design in order to adhere to the Board's requirements and to minimize the impact to marine life.	
0170	Charles Falzon Amigos de Bolsa Chica	Jan 21, 2020	Our mission is to advocate for the preservation, restoration, and maintenance of the Bolsa Chica wetlands. In order to maintain a viable ecosystem, it is critical that the tidal flows are able to circulate from the open ocean. This can only happen through a controlled sand management program at the wetland's tidal inlet.	See responses to comments 0070.06 and 0080.03.

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			Funding for this sand management program is expected to expire next year. Poseidon Water has proposed as a part of their mitigation requirements the continued funding of this sand management program that will keep the wetlands thriving for the next generations. This is critical to the survival of the wetlands where the Amigos de Bolsa Chica have spent almost 50 years working for its restoration and now for resources to maintain it. Keeping the tidal inlet open and functioning will mean that over 2,000 acres of wetlands will be protected, if not we will have a dying resource. Not only an environmental resource, but the loss of millions of dollars spent in restoration. Amigos supports the mitigation efforts of Poseidon because it will guarantee the financial resources to keep the tidal inlet functioning as designed. We are confident that this mitigation plan will be a net benefit to the region. We hope that you will remember that the benefits will not only be to Orange County, but to the State, as you determine the importance of your decisions.	

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0171.01	David Maricich	Jan 21, 2020	I am strongly opposed to the Poseidon project and desalination in Huntington Beach for the following reasons: The Marine Environment / Intake Pipes – I'm a surfer and have a strong concern based on research and science that the desal project would negatively impact the marine and coastal environment. The intake will kill many fish and eggs and for this reason alone should take the project off the table for consideration.	See responses to comments 0004.03 and 0132.03.
0171.02			Salt Brine - I'm also very concerned about the brine and impacts the environment. There is evidence that the salt brine at a Chilean desal toxifies the marine environment, turning the affected coast into a "dead zone"	See responses to comments 0004.01, 0036.01, 0054.02, 0055.02, and 0167.01. The commenter makes a general reference to evidence regarding impacts of Chilean desalination on the marine environment but does not provide enough information regarding the referenced impacts or to warrant a more specific response. Regardless of what happens at the Chilean desalination facility, the California Ocean Plan has strict regulations for desalination facilities that apply to the proposed Facility to minimize marine life mortality.
0171.03			Do we really need the water? - The answer is no. There are so many better	See responses to comments 0004.19, 0014.04, and 0055.01.

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			technologies like the water reclamation / infusion project here in Orange County. Also the recent news that LADWP will be creating a reservoir under Owens Lake is another positive development for our water resources in the region. I'm just scratching the surface here. There are multiple additional reasons that have been voiced by many others about why the water isn't needed at the premium price that would be charged and it's clear that this is a special interest play that would not benefit the community.	
0172	Tracy McNiven	Jan 21, 2020	We should not have to wait for another drought to realize what we already know – we need the water. We are fighting on all fronts to combat the impacts of Climate Change – wild fires, droughts – and this project provides for a climate resilient water source. You have the opportunity to do something that is right, that takes a step in the right direction and is in line with the Governor's Climate Resiliency Plan. Renew the permit and let's get moving.	See response to comment 0162.01.
0173.01	Rhona Villanueva	Jan 21, 2020	For many years I have been following this disaster in-the-making and never changed my mind. This is not the right solution.	The Santa Ana Water Board did not select the project and does not have the authority to issue a request for

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			Never have I heard or read that the city of Huntington Beach has requested proposals from companies other than Poseidon, which is a normal thing to do.	proposals. See response to comment 0055.01.
0173.02			The track record Poseidon has is not the best to say the least. Just look at Carlsbad. Citation after citation and never produced the amount of water they promised they would.	As noted in the March 13, 2020 Santa Ana Water Board staff report, according to the San Diego Water Board, there have been exceedances of the pH receiving water limit and failure of the Discharger to conduct required TCDD water quality sampling. There have been no other reported violations and Santa Ana Water Board staff are not aware of any formal enforcement action(s) taken by the San Diego Water Board for reported violations. Finally, failure to produce a minimum volume of water is not a requirement of the Tentative Order. Circumstances that may have led to the Carlsbad Desalination Facility not delivering- a contracted volume of product water to its client is beyond the Santa Ana Water Board's regulatory jurisdiction and is not relevant to the evaluation of the proposed Facility's compliance with the Ocean Plan.
0173.03			The damage to the ecosystem, the beaches, the ocean floor is horrible. Too	See responses to comments 0004.01,0167.01, and 0171.02.

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			much salt kills! I have lived in Chile for many years and know about the plant in Antofagasta. I know also about the fishermen's distress. They hardly can make a living because the ocean floor is dead, there are no more sea creatures of any kind.	
0173.04			It is too expensive as well and in about 40 or so years it will be sitting in water due to the rise of sea levels.	See responses to comments 0032.01 and 0041.01 and 0177.09.
0173.05			There are many ways to conserve water to avoid the installation of this monster.	The relevant water supply agencies are responsible for forecasting supply and demand to identify and develop their water supply programs. Such forecasting should account for decreased demand due to conservation measures. The Santa Ana Water Board is responsible for evaluating permitting requests and, where appropriate, developing requirements to ensure that the intake of seawater and the resulting brine discharge, conform to applicable federal and state laws and regulations.
0174.01	Scott Maloni Poseidon Resources LLC	Jan 21, 2020	The Tentative Order's prohibition of any discharge until Poseidon has obtained all necessary permits for restoration of the fieldstone and Oil Pad/Road parcels prohibits the successful and timely completion of the Project because it	The Ocean Plan requires that a regional water board ensure that an owner or operator fully mitigates for the operational lifetime of the facility. (Ocean Plan, section III.M.2.e.) Allowing for deferred mitigation until after the

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			impedes Poseidon's ability to secure construction financing. As described in greater detail in Exhibit to Cover Letter 3, Poseidon is proposing amendments to the Tentative Order and Attachment K that will (1) remove potential Project feasibility conflicts; (2) ensure the Bolsa Chica MLMP complies with OPA requirements, and; (3) ensure sufficient compensatory mitigation is in place prior to commercial operations and for the operating life of the desalination facility.	Facility becomes operational increases potential for delays in achieving the required mitigation of all operational impacts. It is up to Poseidon to work out their financial backing and not the Santa Ana Water Board's responsibility. Responses to Poseidon's edits to the Tentative Order are contained in a separate attachment to these Response to Comments.
0174.02			As explained most recently in Latham & Watkins' January 9, 2020 and Poseidon's January 16, 2020 letters to Regional Board Staff [Appendix CCCCCC], the Tentative Order's determination of compliance with the identified need for the desalinated water (California Ocean Plan, Chapter 1 1 1.M.2.b(2)) is well documented and legally sound. The State Water Resources Control Board has expressly concluded that the local water providers must make water supply need determinations; such determinations are not within the purview of the Water Boards. In addition to the agreed upon Water Purchase Agreement Term Sheet between Poseidon Water and the Orange	While the Santa Ana Water Board agrees that the State Water Board's supporting documentation for the Ocean Plan Desalination Provisions described deferring to water agencies in making choices for their water supply needs, the Ocean Plan does not define "identified need." The Santa Ana Water Board has discretion to consider whether the asserted need for 50 MGD of desalinated water has been demonstrated. Santa Ana Water Board notes that the Term Sheet between the Discharger and OCWD is not final, nor binding on either party and should not be characterized as such. Further, the court decision on the

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			county Water District, OCWD has provided substantial information (Appendices P, P2, P3, P4, P5, MM, VV, GGG, ZZZ3, ZZZ6, CCCCCC) in support of its interest in the Project's full 50 MGD capacity and the Project's compliance with the identified need for the desalinated water (California Ocean Plan, Chapter 1 1 1.M.2.b.(2)). Moreover, both the State Lands Commission, in its 2017 Final Supplemental Environmental Impact Report for the Project, and Superior Court Judge Sueyoshi, have confirmed that there is a substantial evidence supporting the need for Project water.	State Lands Commission's Supplemental EIR considered need as it relates to CEQA and does not address or control the Santa Ana Water Board's consideration of the 'identified need' provisions set forth in the Ocean Plan requirements.
0174.03			Poseidon's calculation of Project marine life impacts required by OPA Chapter III.M.2.e.(1) relies upon the best available biological data, which is from the 2003-2004 entrainment study prepared for the Huntington Beach generating Station. As described in the Regional Board's Neutral Third-Party Review of the marine life impact analysis, the 2003-2004 entrainment study complies with all OPA requirements and produced extremely robust data for use in the Project's Water Code section 13142.5(b) determination.	The Discharger's proposed edits to the Tentative Order were evaluated and addressed on a case-by-case basis (see Part 3 to this response to comments). The Discharger is correct that the 2003-2004 dataset is robust and scientifically sound. As such, it was used to determine the marine life impacts from the project at the proposed site and to determine the amount of mitigation acres required. However, "data limitations" do exist. Specifically, these "data limitations" made it impossible to conduct an ETM/APF analysis at stations other than the proposed intake

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			Indeed, Regional Board staff has already approved use of the 2003-2004 data in carrying out the Water Code section 13142.5(b) analysis. (See Tentative Order, Attachment G, Finding 38.) The Regional Board's approval of the Project's NPDES permit in 2006 and again 2012 relied on the 2003-2004 entrainment data as did the City of Huntington Beach's 2010 FSEIR and Stand Lands Commission's 2017 FSEIR. In addition to being OPA compliant, utilization of the 2003-2004 entrainment data ensures analytical consistency throughout the Project permit amendment and renewal process. However, the Tentative Order includes several confusing references to "data limitations" related to the 2003-04 study data. (See, e.g., Tentative Order, Staff Report, p. 9.) The 2003-2004 entrainment study data fully complies with OPA guidance and provided a complete analysis of all proposed project-related marine life mortality impacts. Thus, Poseidon proposed redline edits to the Tentative Order are designed to eliminate potential inconsistency and confusion caused by references to "data limitations"	site (Station E) which would be relevant to assessing whether the Facility as proposed represents the best available intake and discharge sites for minimizing intake and mortality of all forms of marine life. Instead, the Neutral Third Party Reviewer, Dr. Raimondi, recommended use of the standardized and mean larval concentrations (SLC and MLC) jointly as a proxy for risk as an ETM/APF analysis could not be performed for any of the seven stations other than Station E – the location of the existing intake. However, the reviewer also pointed out that while the joint SLC and MLC metrics could serve as proxies for risk, they do not provide the same level of assessment for the risk of entrainment as ETM/APF (for more details, see Attachment G.1,). Use of the 2003-2004 entrainment data for the 2006 and 2012 Permit is not relevant to consideration of this Tentative Order. Both of those Permits were adopted prior to adoption of Ocean Plan requirements for evaluation of marine life impacts from seawater desalination facilities.

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			or other concerns related to use of the 2003-2004 study data.	Clarifying language was added to Attachment G, Findings 9 and 38 of the Tentative Order.
0174.04			Poseidon concurs with the Regional Board's finding under OPA Chapter M.2.d.(1)(a)(ii) that a combination of subsurface and surface intakes are not a feasible alternative for the proposed Project. The environmental, social and economic impacts of a hypothetical small-scale combined surface-subsurface intake system outweigh any corresponding reduction in the intake and mortality of marine life. The administrative record, and Regional Board staff, identified multiple challenges presented by the subsurface intake wells that would be constructed in any hypothetical combined intake system. (See March 22, 2019 Regional Board Staff presentation.) The regional Board's findings are consistent with the conclusions of the California Coastal Commission's Independent Scientific & Iechnical [sic] Advisory Panel ("ISTAP"), which found beach wells, regardless of design capacity, are technically infeasible for the proposed Project due in part to: (a) performance risk; (b) local hydrologic	This is an accurate summary of staff's analysis of the feasibility of subsurface intakes.

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			conditions that would result in adverse environmental impacts including to fresh water aquifers and local wetlands; (c) sensitivity to sea level rise; (d) poor geochemistry; and € lack of precedent in similar geological conditions. Along with the Coastal Commission ISTAP reports, Poseidon also submitted numerous technical reports confirming that subsurface intakes, even with a reduced capacity, are infeasible for the Project due to site-specific factors. (See, e.g., Appendices A1, A2, A3, D, F, G, K, L, L2, L3, M, HHH, III, OOOO.)	
0174.05			Poseidon's proposed redline edits to the Monitoring and Reporting program ("MRP") for the Project are included as Attachment E to the Tentative Order, and are directed at clarifying certain monitoring and reporting requirements.	The Santa Ana Water Board has reviewed Poseidon's recommended changes to the MRP (Attachment E to the Tentative Order) and where appropriate have made modifications. See Part 3 to this response to comment document and revised Attachment E.
0175.01	Gary Germo	Jan 21, 2020	The information I have read and heard raises a number of concerns for me: the potential and significant increase in water costs, potential danger to our marine life caused by the intake pipes and the brine buildup and no less important, the poor history of Poseidon's implementation and follow through with their other desalination plants.	See response to comment 0032.01 regarding water costs. See responses to comments 0004.01, 0004.03, 0017.05, and 0036.01 regarding marine life concerns. Also, although seawater desalination projects may have similarities such as

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				the use of reverse osmosis technology, each facility have a unique set of circumstances (such as the source water, brine discharge technology, the regulatory context, etc.) and are not comparable. The Santa Ana Water Board evaluated the proposed Facility under a new regulatory context per the Ocean Plan and are applying pertinent intake and discharge specifications, prohibitions, provisions, and monitoring and reporting requirements to the operation of the proposed Facility in the Tentative Order to protect the beneficial uses of the receiving water body. If the Discharger violates the terms of the adopted order/NPDES permit, the Santa Ana Water Board would take enforcement action as appropriate. Finally, Santa Ana Water Board staff have consulted with staff from the San Diego Water Board regarding the compliance history of the Carlsbad Desalination Plant; Santa Ana Water Board staff have not been made aware of serious violations or a chronic pattern of non-compliance by the Discharger under their current NPDES permit issued by the San Diego Water Board.

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0175.02			It appears that there is no need for the plant other than to satisfy a business proposal that hopes its product will generate more money (with evidence suggesting that is certainly not the case). I urge you to consider that the citizens and marine life of my community do not benefit from this proposal and are indeed at risk if it is implemented.	See responses to comments 0011 and 0014.04.
0176.01	Eric Gillies California State Lands Commission	Jan 21, 2020	The new linear diffuser design would include two 7-port linear diffuser sections connected to the seaward and shoreward sides of the existing discharge tower. Each section would have a 4-foot-diameter pipe header, and the pipes would be placed directly on the seabed on concrete pipe saddles. The riprap currently surrounding the discharge tower would be removed and replaced around the new footprint, which would be smaller than that evaluated in the 2017 FSEIR. The new linear diffuser design would minimize the marine mortality impacts associated with diffuser shear, in accordance with California Water Code section 13142.5(b).	The Santa Ana Water Board appreciates the California State Land Commission providing comments on the Discharger's proposed linear diffuser design. Also, see response to comment 0004.01 for more details on the diffuser.
0176.02			Commission staff requests that the Regional Board consider the following comments on the Addendum, to ensure that impacts to State sovereign land are	The Santa Ana Water Board has clarified the language in the CEQA Addendum to address this comment.

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			adequately analyzed for the Commission's use of the Addendum to support any potential future lease amendment. General Comments "Similar To" Versus "The Same As": The Addendum evaluates the changes in onshore and offshore vehicles/vessels as well as activities and impacts, compared to what was analyzed in the 2017 FSEIR. However, the document refers to equipment, activities, or impacts that are "similar to" as well as "the same as" those evaluated in the 2017 FSEIR. For example, on page 9 the document states that "…construction of the new linear diffuser would entail use of a similar set of construction vessels as analyzed in the 2017 FSEIR" , page 10 states that the onshore support vehicles at the selected port would be the same as those analyzed for construction of the Lease Modification Project, and page 11 notes that "…a similar set of vessels and crew will be required as analyzed in the 2017 FSEIR." Commission staff assumes that these two terms are meant to distinguish the vehicles, vessels, impacts, or activities as they relate to what was analyzed in the	

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			2017 FSEIR. It would appear that “similar to” means that there will be the same type of activity and associated equipment/impact, but with additional equipment or other changes from the 2017 FSEIR evaluation. The Addendum would then be using the term “the same as” to mean that the same equipment/activity will be operating in the same manner and on the same days (unless otherwise specified) as what was presented in the 2017 FSEIR. When attempting to review the subsequent impact analysis, Commission staff are unable to determine whether there are changes in equipment numbers or days of operation, and thus the impact determinations are unclear. If this terminology is deliberate, Commission staff requests that the two terms be clearly explained and distinguished so that the impact analyses accurately depict the changes from the 2017 FSEIR. In instances where the equipment, activities, or impacts are “similar to” rather than “the same as” those analyzed in the 2017 FSEIR, please explain what specifically will be different and how that will not trigger any of the conditions described in California Code of Regulations, title 14, Section 15162.	

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0176.03			Project Description Dredged Sediment Disposal: Page 11 of the Addendum describes the construction approach for the linear diffuser installation. #2 discusses the leveling or dredging that would be required and states that the marine sediments "…would be side-cast and would be redistributed by natural ocean currents, as described in the 2017 FSEIR". Commission staff would like to clarify that the 2017 FSEIR evaluated the worst-case scenario, where the dredged sediments from the wedgewire screen installation could not be side-casted and instead would be towed to the Port of Long Beach for onshore disposal. Please include that information on page 11 so that the analysis is not misleading.	The Santa Ana Water Board has added the suggested information to the CEQAAddendum to address this comment.
0176.04			Air Quality Criteria Pollutant Emissions: The table on page 16 provides information relating to the emissions analyzed in the 2017 FSEIR as well as the calculated emissions from the linear diffuser construction activities. Commission staff has substantial concerns with the data presented. First row ("Typical Daily Construction Emissions"): This row is unnecessary and misleading. Under CEQA, other responsible agencies and the public are	The CEQA Addendum has been revised to address these comments and include clarifying language.

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			looking at the linear diffuser emissions to determine how man additional pounds per day will be added to the highest emissions evaluated under the 2017 FSEIR that could occur on the same day. This provides the “adjusted” worst-case scenario to support or refute the conclusion that there are no substantial increases in the severity of the previously identified significant and unavoidable air quality impact. Commission staff recommends that this row be removed, or its purpose clearly explained.	
0176.05			Second row (“One Day Total Construction Emissions for the New Linear Diffuser”): This row provides that 40.05 pounds per day (lbs/day) of nitrogen oxides (NOx) will be emitted during the linear diffuser construction. Commission staff notes that if this amount is added to the 73.85 lbs/day of NOx emissions evaluated in the 2017 FSEIR, then the combined total will exceed the CEQA threshold. The table currently lacks a critical piece of information to determine whether there is a potentially significant air quality impact – the amount of Nox that would have been emitted as part of the 73.85 lbs/day. Once that volume is identified, the 40.05 lbs/day of NOx can be added to concurrent	The Santa Ana Water Board has revised the language in the CEQA Addendum to address this comment.

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			wedgewire installation activity emissions, and Regional Board staff can appropriately determine which construction day has the worst-case criteria pollutant emission scenario to evaluate. This information is important to understand the extent of the proposed changes.	
176.06			Third row ("2017 FSEIR- Lease Modification ... "): Commission staff does not believe this row clearly shows what information it is providing. It appears to be the worst-case scenario of criteria pollutant emissions evaluated in the 2017 FSEIR, which would have been the last day of wedgewire screen dredging (as indicated in table note 3). Please review and revise table notes 1 through 3. They do not appear to be placed appropriately in the table, and should include more explanatory text in the case of note 3.	The Santa Ana Water Board revised the CEQA Addendum to clarify the discussion of air emissions as indicated in this comment.
0176.07			Air Quality Impact Analysis: On the bottom of page 16, the Addendum provides a rationale for no substantial increase in the severity of the air quality impacts compared to those evaluated in the 2017 FSEIR. Commission staff notes, however, that this determination is focused on the dredged sediment volume rather than how that volume relates to the criteria pollutant emissions, which would be needed to	The Santa Ana Water Board has revised the language in the CEQA Addendum to address this comment.

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			understand the air quality impact. The Addendum needs to explain whether the equipment needed for dredging and potential onshore sediment disposal would be operating on the same day that it was anticipated to be used for wedgewire screen activities in the 2017 FSEIR. It appears that the Regional Board is assuming the two occur simultaneously, as evidenced on page 15 in the paragraph below Table 2. The Addendum does not explain, if this equipment could be working simultaneously on the wedgewire intake and linear diffuser dredging, how there is not a one-day increase in emissions over the 73.85 lbs/day of NOx evaluated in the 2017 FSEIR. Commission staff believes that the issue to be evaluated is not whether there are additional total hours of equipment use and how those can be “absorbed” into the conservative dredge volume estimates evaluated in the 2017 FSEIR, but rather whether using that equipment for the linear diffuser sediment dredging and onshore disposal would increase emissions on the same day or a different day than was evaluated under the 2017 FSEIR. Please clarify whether there	

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			is a new worst-case daily emissions scenario given the potential use of the dredging and disposal equipment in two places at the same time.	
0176.08			Installation Details: The Addendum states, on page 15, that "there is no change between the 2017 proposal and the modified design for the technical details of installation". Commission staff does not believe this is correct. The 2017 FSEIR evaluated a diffuser that would have been set upon a lowered concrete discharge tower. The new linear diffuser configuration will require dredging or leveling, concrete cradles placed on the seafloor, and access ports cut into both sides of the existing tower. Please revise this statement to more accurately indicate what remains unchanged from the 2017 FSEIR diffuser design.	The Santa Ana Water Board has revised the language in the CEQA Addendum to address this comment.
0176.09			Dredged Volume Change: The table on page 15 notes in the far right-hand column "Unsure about change from 400 to 600 cy". This is relating to the volume of dredged or leveled sediments that would be affected by the linear diffuser installation activities. While evaluating the impacts associated with 600 cubic yards of dredged sediment is sufficient under CEQA to cover the worst-case scenario	This text was removed from the CEQA Addendum.

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			(as compared to 400 cubic yards), Commission staff requests the Addendum explain the purpose of that information in the table, and identify any additional areas of uncertainty that should be identified in the document.	
0176.10			Marine Biological Resources Special-Status Species Impact: Commission staff requests that page 17 of the Addendum clarify, as it does for other resource areas, that the special-status species impact in the 2017 FSEIR was ultimately determined to be less than significant with mitigation. The mitigation assumed species within the diffuser shear area would suffer 100 percent mortality.	The CEQA Addendum was revised in accordance with this comment.
0176.11			Marine Transportation Marine Vessels: The Addendum notes, on the bottom of page 22, that “the new diffuser will be constructed and submerged at the same depth as the 2017 [Final] Supplemental EIR”. Commission staff notes that this is not correct, because the linear diffuser will be placed on the seafloor and it appears the existing discharge tower will not be lowered, as it was in the 2017 FSEIR. Therefore, the Addendum should instead distinguish any height differences for both the discharge	The CEQA Addendum was revised to address this inconsistency.

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			tower and the seafloor components and evaluate any marine vessel conflicts.	
0176.12			Technical Corrections • Please correct all the Figures to reference the defined term "2017 FSEIR" or indicate more clearly if the intent is to reference the Draft SEIR. • Page 10: insert "the" before "City's Municipal Code". • Page 11: The following sentences already occur on page 10 under "Installation of the Diffuser". Please remove ○ "Installation of the diffuser may occur before, or concurrently with, the wedgewire screen intake installation. In either case, a similar set of vessels and crew will be required as analyzed in the 2017 FSEIR". • Page 12: "This Addendum evaluates the potential for the new linear diffuser design, installation, and operation to result in new or…" (new recommended language in underline). Page 18: The third line of the "Previous Environmental Analysis" section has Appendix G calculations that are from the 2017 FSEIR which included the combined wedgewire intake and diffuser construction activities. Please revise accordingly.	The CEQA Addendum was revised in accordance with these comments.

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0177.01	Tom Luster California Coastal Commission	Jan 21, 2020	Our concerns focus on the following five issue areas: 1) Operating Life: The Tentative Order describes the proposed facility as having a shorter operating life than is proposed by Poseidon. This results in an underestimate of the magnitude of the proposed project's expected effects in at least two issue areas – mitigation and hazards. 2) Mitigation: It appears that additional mitigation is needed for the proposed project to meet the Ocean Plan Amendment's requirement that the project fully mitigate its adverse effects on marine life. 3) Hazards: The Tentative Order's approach for addressing climate change-related hazards does not appear to conform to relevant requirements and would delay the analyses of these hazards and their related risks. We believe the analyses should be done now, so as to inform the proposed siting of the facility. 4) Water Need: The Tentative order appears to conflate the OPA's required determination of water supply "need" with water supply "opportunity" or "potential." 5) Ocean Acidification: The Tentative Order does not evaluate the proposed	Coastal Commission staff has been extensively involved throughout the multi-year review of the Discharger's proposed project. Santa Ana Water Board staff greatly appreciate Coastal Commission staff's continued engagement and expertise as part of the interagency consultation process. Detailed responses to comments 1-5 are provided below in responses to comments 0177.02 – 0177.07.

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			project's expected effects related to ocean acidification or mitigate for these effects. Overall, we recommend that the Board modify the Tentative Order to address these comments and concerns prior to your consideration of approval.	
0177.02			Poseidon has proposed that its facility operate for at least 50 years. However, the facility is characterized in the Tentative Order as having just an expected "30-plus year operating life." As a result, the Tentative Order's analyses in at least two issue areas – project mitigation and hazards to the facility –do not appear to adequately evaluate the proposed project's expected impacts and risks.	The Tentative Order has been revised to note that project's expected operational life is 50 years (Attachment G, Finding 38, Attachment G - Finding 38, Attachment G.3, Attachment G.4 and Attachment K. The Discharger's *Attachment 6-OCWD-Poseidon WRA term sheet* specifically notes, on page 7 and 17 that expected contract is 50 years. Additionally, the California State Lands Commission (SLC) 2017 FSEIR noted that the project had a, "presumed 50-year project life" (page 4-125, 4-126). Chapter III.M.2.e of the Ocean Plan states, "the regional water board shall ensure an owner or operator fully mitigates for the operational lifetime of the facility." Therefore, whether the facility operates for 30 years or 50 years is immaterial, as mitigation for that entire

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				time is required. If mitigation ceases (e.g. if Bolsa Chica were to fail), then the Discharger would be in violation of the Ocean Plan requirements and subject to enforcement action for any violation. Nonetheless, for consistency, the references to “30-year operating life” have been revised to state “50-year operating life,” or “entire operating life” depending on the context. Regarding the hazards analysis for the facility, see responses to comments 0177.09 and 0177.10.
0177.03			We concur with the selection of Bolsa Chica as a suitable site for some of the required mitigation. However, for the reasons described below, we believe that the Tentative Order’s proposed mitigation approach would not fully comply with the OPA’s requirement (at Section M.2.e(3)(b)(I)) that mitigation take the form of “expansion, restoration, or creation” of suitable habitat, or its requirement (at Section M.2.e) that the mitigation be sufficient to address the expected project impacts over the “operational lifetime of the facility.” further, and as we have informed Board staff, the proposed mitigation is likely not sufficient to conform	The actions taken by the Santa Ana Water Board and the Coastal Commission are governed by different regulations and statutes. No action taken by the Santa Ana Water Board limits or infringes upon Commission’s authority to require additional mitigation or other provisions or conditions pursuant to their regulatory authority.

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			to Coastal Act and Local Coastal Program mitigation provisions.	
0177.04			Regarding the OPA requirement that mitigation take the form of expansion, restoration, or creation, Poseidon's proposed mitigation would instead consist primarily of dredging to maintain and preserve areas of Bolsa Chica that are already restored (and for which mitigation credits have already been approved – see below). The Tentative Order's mitigation approach would provide relatively little actual restoration acreage – about 10 acres – which, when compared to Poseidon's 421.4-acre APF suggests that the additional productivity provided by the proposed mitigation will be far less than the relatively extensive loss of marine life the facility would cause.	While acreage was determined for the individual activities comprising Poseidon's proposed mitigation, when the mitigation project is examined as a whole, it constitutes the best available mitigation feasible. The restoration portion of the project described in the comment can only be successful if paired with the additional components (e.g. water circulation improvements and dredging) that the Discharger is proposing. See response to comment 0070.08. Also, although the Discharger's raw APF is 421.4 acres, this does not account for the mitigation scaling that has been applied (see comment 0070.04). When the mitigation ratio has been applied, as set forth more fully in Attachment G.4 to the Tentative Order , the total acreage requiring compensatory mitigation by the Discharger is approximately 109.5 acres. See also Attachment G, Finding 50.
177.05			Regarding the proposed mitigation's conformity to Coastal Act and LCP provisions, both generally require that the	See response to comment 0177.03

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			project provide “mitigation to the maximum extent feasible,” which is a different standard than the OPA’s requirement to provide “best available” mitigation feasible. This will likely result in Poseidon needing to provide additional mitigation beyond what that Tentative Order currently proposes. Additionally, and as the Tentative Order describes (at Attachment G.5), the Coastal Commission, along with several other state and federal agencies, has already awarded mitigation credits to the Ports of Long Beach and Los Angeles for most of the actions Poseidon is proposing to conduct as mitigation.	
177.06			To ensure that impacts to marine life are fully mitigated as required by the OPA, we recommend that the Board decrease the number of mitigation credits Poseidon would receive for the proposed work at Bolsa Chica to reflect the type of mitigation being proposed - I.e., primarily preservation – and to account for the “double counting” described above.	For double-counting, see response to comment 0070.06. Regarding the issue of “preservation” see response to comment CCKA III.C.
177.07			Finally, and importantly, Commission staff is concerned that the mitigation opportunities available at Bolsa Chica will not provide the full amount of mitigation required for the proposed project. The documentation provided	See response to comment 0177.02. Per Chapter III.M.2.e (and subsections therein) of the Ocean Plan, the discharger is required to provide mitigation for the operational lifetime of the proposed facility. In the event that

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			as part of the Board and Commission staff review of Poseidon's mitigation proposal points to Bolsa Chica as not being able to provide adequate mitigation during the expected "operational lifetime of the facility;' as required by the OPA. As noted above, the Tentative Order describes Poseidon's project as having a "30-plus year" expected operating life, while Poseidon's application to the Board states that its facility has an expected operating life of at least 50 years. However, Bolsa Chica is not expected to function or provide the expected levels of productivity in its current form for either of those time periods. Bolsa Chica was restored based on a mid-l990s *Bolsa Chica Restoration Plan* that anticipated just a half-foot of sea level rise over the upcoming century. Current projections far exceed that amount, and Bolsa Chica's constraints…limit its ability to adapt to higher ocean elevations. In 2018, the Bolsa Chica Managing Agencies, which are responsible for the day-to- day and long-term management of the site, stated that Bolsa Chica is	the proposed mitigation at Bolsa Chica ceases to function, the discharger will be required to submit for approval and then complete an alternative mitigation project. As noted in attachments G.4 and G.5 to the Tentative Order, the proposed mitigation does provide sufficient acreage to compensate for the calculated impact of the facility's operation and construction, as evaluated and determined by the Santa Ana Water Board pursuant to its regulatory authority and Ocean Plan requirements. Regarding the MRC, a Tmax value of 12 years does not indicate that "mitigation would be successful for just 12 years," as stated in the comment. Instead, as discussed in Attachment G.5, 12 years was selected because 1) there is no assumed risk of failure in the calculation (this is the "E" parameter in the MRC which is set at 0), so a shorter project Tmax horizon addressed, in part, the risk of failure; 2) climate change will continue to affect the function and success of Bolsa Chica; and 3) adaptive management actions are likely to affect the design and function of the Bolsa Chica wetland system in the next 5-10

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			subject to "extreme risk of failure" within five years. The Board staff's above-referenced use of the MRC included an assumption that mitigation would be successful for just 12 years, and Poseidon's suggested MRC calculation included expected mitigation success for just 25 years. None of these time periods would be sufficient to mitigate for Poseidon's expected 50+ year operating life. Importantly, during all of these periods – 5, 12, 25, 30, or 50 years – available documentation shows that Bolsa Chica will be experiencing significant and severe effects of climate change and sea level rise…most of which are likely to lead to diminished estuarine functions and productivity. This suggests that, without significant design or management changes, none of which are identified or proposed as part of the Tentative Order, Bolsa Chica will not provide adequate mitigation for the expected operating life of the facility. Importantly, the types of extensive and fundamental changes Bolsa Chica is expected to experience go beyond those that are addressed through the	years. While these adaptive management actions are still being developed, maintenance dredging will remain an essential component for Bolsa Chica to successfully function. Furthermore, as noted above, in the event that Bolsa Chica ceases to function, it will be a violation of permit conditions and the Discharger will be subject to enforcement action. Finally, the Santa Ana Water Board acknowledges the California Coastal Commission's authority pursuant to the Coastal Act. The decisions made by the Santa Ana Water Board do not limit or infringe upon the Coastal Commission's regulatory authority. In the event that the Coastal Commission requires additional or different mitigation, it will not conflict with the Santa Ana Water Board's decision. Santa Ana Water Board does not agree that the adaptive management plan would not address 'extensive and fundamental' changes that occur at Bolsa Chica. That is the intent of an adaptive management plan – to ensure

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			kind of adaptive management plan begin contemplated in the Tentative Order - i.e., the plan would identify corrective actions at a site that may be no longer functioning in a way that would provide the level of productivity needed to mitigate for the project's impacts. To address these concerns, we recommend the Tentative Order be modified to include an evaluation of the long-term expectations (i.e., at least 50 years) of mitigation success and to identify additional mitigation that will be needed to comply with the OPA's requirement that Poseidon fully mitigate for its adverse marine life effects over the operational lifetime of the facility. Doing so will also help ensure consistency with any future Coastal Commission permitting action.	all contingencies are addressed and a plan is implemented. Please also see Attachment K to the Tentative Order, Section 4) C-D., regarding additional requirements for the Adaptive Management Plan, which includes evaluation of various SLR scenarios for Bolsa Chica that may occur during the 50-year operational life of the Facility, and a corrective action plan to implement any actions needed to meet performance standards or success criteria should functions in Bolsa Chica diminish. Also see Attachment K, Section 4) G., which requires the Discharger to identify contingency mitigation options in their Adaptive Management Plan to address the potential that the proposed mitigation at Bolsa Chica for the Project may not succeed for the entire operating life of the proposed Facility.
0177.08			The Tentative Order proposes that Poseidon be required to develop and implement a Climate Change Action Plan ("CCAP") within three years of the effective date of the Tentative Order. This proposed CCAP is based on recommendations in Poseidon's	The comment accurately summarizes the CCAP requirement in the Tentative Order.

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			February 4, 2019 letter to the Regional Board (which is Appendix 00000 of Poseidon's application materials to the Board). The Tentative Order states (on page A-38) that the "purpose of the CCAP is to project potential climate change impacts on the Facility and operations, and document steps to address potential impacts on the Facility." The CCAP would include analyses of flooding effects, greenhouse gas emissions, sea level rise, and other impacts related to the proposed facility's design and location. The Tentative Order's Section VI.A.2 includes a provision that would require the facility to be protected to reduce infrastructure vulnerability to these and other events associated with climate change. The Tentative Order further states that the proposed CCAP is meant to conform, in part, to the OPA's Section M.2.b.(4), which requires that the Regional Board "analyze the direct and indirect effects on all forms of marine life resulting from facility construction and operation, individually and in combination with potential anthropogenic effects on all forms of	

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			marine life resulting from other past, present, and reasonably foreseeable future activities within the area affected by the facility." Appendix OOOOO additionally asserts that including the CCAP in the Tentative Order would make the permit consistent with the State Water Board's Resolution No. 2017-12- *Comprehensive Response to Climate Change,* which requires various implementation measures be integrated into State and Regional Water Boards' actions. As detailed below, Commission staff has several concerns about this proposed CCAP and Appendix OOOOO, including several mischaracterizations of expected hazards and risks at the proposed project site	
0177.09			Commission staff concurs with the Board that a full analysis of climate change impacts on the proposed facility as well as impacts on the surrounding environment by the facility is a critical component of project review. However, given that the proposed project would be located within an extensive low-lying area that is designated as flood-prone, that is within a	Santa Ana Water Board recognizes the importance of addressing climate change impacts to the proposed facility. The Discharger is required to prepare and implement a CCAP to address climate change impacts for purposes of the Tentative Order. The CCAP requirement does not prevent the Coastal Commission from exercising its

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			designated tsunami inundation zone, and that is expected to experience inundation risk from sea level rise and associated increased wave and storm energy in the relatively near future, we believe it is critical that these hazards and risks be identified prior to permitting. Appendix OOOOO instead proposes delaying those analyses until three years after the effective date of the Board's approval (and presumably after facility construction has started). This would inappropriately delay analysis of any potential adverse climate change-related effects identified through those analyses as well as identification of mitigation measures that may be needed to address those adverse effects. The Coastal Commission will be conducting most of the analyses identified in the CCAP as part of its review to determine whether Poseidon's proposed project can conform to relevant provisions of the Coastal Act and Local Coastal Program, and we note that Appendix OOOOO acknowledges that "development of the Project site falls under the land use	regulatory authority to impose additional requirements to address the climate change issues related to the Facility. As noted in the comments, the Facility will be required to obtain approval for a Coastal Development Permit (CDP) from the California Coastal Commission. During its review of the CDP application for the Facility, the Coastal Commission may require the Discharger to provide additional climate change analyses, including an analysis of the tsunami inundation zone. The Coastal Commission may also impose mitigation measures or other requirements to address sea level rise that it deems appropriate in the CDP that is issued for the Facility. The Coastal Commission may also require the development of climate change analysis/plan sooner than the Santa Ana Water Board and any plan submitted to the Coastal Commission could be used to satisfy the Santa Ana Water Board CCAP requirement. Moreover, the Discharger is required to prepare a CCAP that is in conformity

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			authority of the Coastal Commission." It is also not clear that the CCAP is needed to conform to OPA Section M.2.b.(4), since that section requires the Board to analyze the facility's direct and indirect effects on marine life, not effects of climate change on the facility. With that acknowledgement, and with there being no requirement for the CCAP pursuant to the above-cited provision of the OPA, it would be appropriate for the Board to make the Tentative Order effective only after the Coastal Commission completes its required hazards evaluations. However, if the Board wishes to require that the Tentative Order be revised to include the completed analyses from the proposed CCAP, we recommend that it consider the concerns described below as part of that review. Coastal Commission staff would be happy to coordinate with Board staff on these analyses to ensure they are adequate for purposes of Board requirements and of Coastal Act and Local Coastal Program provisions.	with plans and requirements of other agencies, including the Coastal Commission. (Tentative Order, section VI.C.4.e.) The Santa Ana Water Board will consult with the Coastal Commission and other state agencies in the review and approval of the CCAP to ensure that the approved CCAP does not conflict with plans and requirements of other agencies. A provision expressly providing for such consultation has been added to section VI.C.4 of the Tentative Order. Finally, given that the proposed project will not be constructed and operated for at least three years (following obtaining all permits), all hazards associated with climate change do not need to be identified prior to the Santa Ana Water Board's decision on the Tentative Order. The schedule for submittal of the CCAP allows time for additional analyses and consultation with resource agencies before the Facility becomes operational.
0177.10			Regarding Appendix OOOOO's statement that the CCAP would conform to the State Water Board's Resolution No. 2018-012, it appears that neither the Tentative Order	State Water Board Resolution 2017-012 encourages regional water boards to consider climate change impacts in permitting decisions and to address

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			nor Poseidon's letter provide sufficient information or analysis to determine conformity to this Resolution. We are also concerned that Appendix OOOOO and other relevant submittals from Poseidon do not accurately characterize several key elements of existing and expected site conditions, leading to a significant underestimation of hazards and risks at the site and surrounding area and an unsupported conclusion that the proposed project will remain feasible over its full proposed operating life. Our Specific concerns include: • Climate resiliency: Appendix OOOOO states that seawater desalination in general, and its Huntington Beach proposal in particular, are climate resilient water supplies. The letter does not acknowledge, however, that determining whether a particular desalination facility is "climate resilient" requires a site –and project –specific evaluation. • Critical facility determination: Appendix OOOOO contends that the proposed project should not be considered a "critical facility" or "critical	climate change impacts in permits. In accordance with Resolution 2017-012, the Tentative Order requires the Discharger to prepare and implement a CCAP that identifies and takes steps to address certain climate change impacts. See also response to comment 0177.09.

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			infrastructure" for purposes of hazards planning. State and local guidance and requirements direct that "critical facilities" and other types of projects be reviewed under the "extreme," or "H++" sea level rise scenarios, but Poseidon believes its project should not be subject to that level of evaluation. • Tsunami run-up elevations: Appendix OOOOO proposes that a maximum four-foot tsunami run-up elevation would be appropriate and conservative for reviewing the proposed project, but it does not provide a basis for that proposed elevation. Importantly, Poseidon, in its 2013 *Geotechnical Hazards Assessment Report*, already provided an analysis based on a 10- to 12-foot tsunami runup that showed expected onsite inundation. Appendix OOOOO provides no rationale for decreasing the runup elevation from that previous assessment. Commission staff, in consultation with staff of the California Geologic Survey, selected an 11-foot runup (plus SLR) as a reasonable elevation to use in our hazards analyses.	
0177.11			The OPA establishes that if a desalination facility's proposed production volume	Attachment G.2 notes that the MWDOC UWMP is the relevant document for

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			exceeds the need for water as identified in applicable Urban Water Management Plans (“UWMPs”), that excess volume cannot be used to determine that subsurface intakes are infeasible. We believe that the Tentative Order interprets these OPA ”need” requirements for Poseidon’s proposed project in a manner that is inconsistent with the intent of OPA’s required feasibility determination and could serve as a precedent in which a Board determination on subsurface intake feasibility is based on inflated water need estimates. …[t]he Tentative Order states that the MWDOC UWMP is the relevant document for determining compliance with the OPA's assessment of whether water from the proposed project is 'needed’…[The MWDOC] UWMP's statement of need shows that MWDOC, and by extension, OCWD, expect all needed supplies will be available from MWD and surface storage. The Tentative Order, though, cites the UWMP's inclusion of Poseidon project in its Section 7.3 – "Planned Water Supply Projects and Programs" as the basis for the area having an identified need for	determining whether the identified need for desalinated water is consistent with an UWMP. As illustrated in revisions and clarifications to Attachment G.2, the Santa Ana Water Board has discretion to rely on a range of water planning documents and on recommendations from water planning agencies in determining whether the identified need for desalinated water has been demonstrated, a separate question from whether that need is consistent with an UWMP or other planning document. The Santa Ana Water Board believes that the identified need for 50 MGD of desalinated water board is consistent with the applicable UWMP’s. However, the identified need for desalinated water is supported by a range of other information contained within the water planning documents, letters, studies and analyses from water supply agencies, and other submissions. Inclusion of the Facility in Section 7.3 of the MWDOC UWMP (“Planned Water Supply Projects and Programs”) satisfies the requirement for consistency with an UWMP. It does not, by itself, address whether the Discharger and associated water supply

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			56,000 acre-feet of seawater desalination. We believe this does not accurately characterize the identified need in the UWMP or as required for an OPA determination. The cited section of the UWMP identifies not only the Poseidon project, but several dozen other projects that would be potential sources of additional or improved supplies, not needed supplies. Importantly, if the inclusion of Poseidon's project in this UWMP section is sufficient evidence of need, then all the projects included in this section would also be considered needed. This is clearly not the case, as these projects together would represent thousands of acre-feet of additional supplies, far more than what MWDOC has identified as need and far more than the service area could handle. Just as these other projects identified in this section represent "potential," not "needed" water, so does Poseidon's proposal. The UWMP's inclusion of Poseidon in this section does not serve as evidence of need for OPA purposes. The Tentative Order's currently	agencies have demonstrated an identified need for 50 MGD of desalinated water. OCWD has put forth its goals of water supply diversification and policies for managing the Groundwater Basin as the basis for why 50 MGD is needed. OCWD points to the need to reduce reliance on imported water needed in the OCWD service area and susceptibility of available supplies to climate change impacts, while differing assumptions about alternative projects and potential declines in Santa Ana River flows could also affect volumes of new needed supplies. These assessments provide further demonstration of why the agency is pursuing the desalination facility, independent of inclusion in an UWMP. Revisions to Attachment G.2 further illustrate the water planning agencies' position that water supply planning and investment decisions involves a complex analysis that must account for changing conditions and adaptive management. Coastal Commission staff's comment that if the inclusion of Poseidon's

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			proposed interpretation of the OPA's "need" requirements could render key elements of the OPA meaningless. The Tentative Order proposes that the OPA's "identified need" provisions can be met if a UWMP mentions a proposed seawater desalination project just as a future opportunity or potential project. Because all UWMPs are required to identify future desalination opportunities regardless of whether they are part of their future needed supplies, the Tentative Order's proposed approach could result in any potential desalination project mentioned in a UWMP being able to contend that it is needed, even if its proposed production volume exceeds the amount that c0uld be provided using a subsurface intake. This could inappropriately limit the analyses conducted pursuant to the OPA's subsurface feasibility determination and result in an increased likelihood of marine resource impacts from new facilities with open water intakes, which is clearly not the OPA's intent.	proposed project in the UWMP section 7.3 is sufficient evidence of need, then all projects in that section should also be considered needed is misplaced. Because this does not represent the Santa Ana Water Board's interpretation of the "identified need" provisions, it does not render the requirements meaningless, nor does it contravene the intent of the Ocean Plan requirement. Regarding feasibility of a subsurface intake, see response to comment 0035.02.
177.12			As a final concern regarding need, we note that the 56,000 acre-feet of water	See response to comment 0177.11. While the planned capacity has not

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			supply from this proposed project has remained consistent throughout its approximately 20-year review history. If this volume was actually need-based, it presumably would have changed during that period - for example, increasing or decreasing as the area's water districts developed other sources of water, addressed concerns about the effects of long-term drought on available water supplies, etc. This unchanging characteristic of the project during three cycles of UWMP preparation during which water districts re-evaluated their needed supplies, during a significant statewide drought, and during development of substantial new water sources in the region, suggest that the consistently proposed 56,000 acre-feet is based on something other than an identified water need.	changed, water agencies have evaluated the project among other potential water supplies as part of their water planning and decision-making process. OCWD's identification of the need for the water reflects its current understanding of water supply issues and needs within its service area.
0177.13			As Board staff is aware, desalination effluent is generally more acidic than ocean water. For example, the effluent at Poseidon's Carlsbad desalination facility, which uses a treatment process similar to that proposed at Huntington beach, generally ranges from about 7.7 to 8.0 pH units while the nearshore receiving waters have an ambient pH varying from about	The Tentative Order implements the water quality objective (WQO) prescribed in the Ocean Plan for pH as technology-based effluent limitations and receiving water limitations. Santa Ana Water Board must prescribe effluent limits that comply with applicable objectives and limitations.

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			7.9 to 8.2 pH units. It is not clear whether this effluent consistently meets the required water quality objectives, since the permit for that facility does not require simultaneous collection of effluent and ambient pH levels. As a result, although the effluent discharge generally appears to remain between the required 6.0 and 9.0 pH units, monitoring data indicates that there could be times when the discharge exceeds the water quality objective of no more than "0.2 units from that which occurs naturally." This is significant because even if these discharges are within the required water quality objective of between 6.0 to 9.0 pH units, a 0.2 unit difference between effluent pH and ambient pH would represent a significant increase in acidification. At the scale of Poseidon's proposed discharge at Huntington beach of approximately 60 million gals per day, this could result in a substantial degradation of nearshore water quality and of conditions for marine life. Importantly, even if the discharge remained within these numerical water quality objective limits, it could be inconsistent with the water quality	The Ocean Plan WQO referred to in the comment provides that the discharge may not cause a change of more than 0.2 pH units from that which occurs naturally in the receiving water. For any change in the pH of the receiving water, the Santa Ana Water Board would need to assess whether the discharge from the Facility is responsible for the change in pH. Compliance with this receiving water WQO is determined at the edge of the zone of initial dilution (ZID). There is a pH buffering effect of the receiving water to be expected within the ZID (Dm of 15:1 ratio; which is the volume of seawater to volume of effluent). According to the brine dilution plume model submitted by the Discharger, this ZID is about 130-feet away from the diffuser structure. The dilution factor includes the volume of seawater entrained by the jets of brine effluent ejected upward from the ports of the diffuser and its subsequent movement of the brine plume as it descends and bounces off the seafloor and reaches the near-field location (130-feet from the diffuser structure).

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			objective's requirements regarding biological characteristics, which state, in part: "Marine communities, including vertebrate, invertebrate, algae, and plant species, shall not be degraded."	The comment raises valid concerns regarding the lack of synchronicity between the monitoring frequency of pH in the discharge from the facility and the monitoring frequency of pH in the receiving water, as specified in the Tentative Order. The lack of synchronicity could prevent the Santa Ana Water Board from determining whether the discharge from the Facility is contributing locally to changes in the pH of the receiving water of more than 0.2 pH units (i.e., a cause-and-effect relationship between the discharge and changes in the pH). To address this concern, the Santa Ana Water Board has modified the MRP (Attachment E) of the Tentative Order to specify continuous monitoring and recording of pH in the influent and effluent of the Facility. This change to the Tentative Order will require the Discharger to provide a sufficient amount of Facility influent and effluent pH data to compare against pH data gathered from the receiving water on a quarterly basis and allow the Santa Ana Water Board to verify the pH of the discharge and if any pH changes noted

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				in the receiving water are a result of the discharge. If the Santa Ana Water Board determines that the Discharger is exceeding the receiving water pH WQO, the Discharger may be subject to enforcement action.
0177.14			We recommend that the Tentative order require Poseidon to modify its discharge so that it is no more acidic than the receiving waters. We also recommend the Board modify the Tentative Order to include additional monitoring provisions that allow Poseidon to demonstrate that its effluent is no more acidic than the receiving waters and to allow Poseidon to adjust its effluent as needed, or to at least allow the Board to determine whether the effluent remains within 0.2 pH units of the receiving waters. We recommend that, along with the continuous influent monitor, the effluent and receiving water monitoring be done weekly and concurrently to allow a comparison of the samples taken from all three monitoring locations. Alternatively, the Board could require additional mitigation to address the adverse marine life impacts resulting from Poseidon's more acidic discharge.	The Tentative Order was revised to ensure pH monitoring of the effluent and receiving water is adequate. See response to comment 0177.13. With respect to the option of increasing the mitigation, the mitigation requirements specified in the Tentative Order and Attachment K adequately mitigate for the marine life impacts.

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0178	Chris Cagle		The Regional Board's Tentative Order finds that project alternatives including subsurface seawater intakes and/or moving the proposed screened ocean intake up or downcoast are infeasible due in part to short and long-term social and economic impacts to Huntington State Beach. Towards this end I am enclosing for your review a copy of the recent 2019 "Economic Impact of Tourism" study commissioned by Visit Huntington Beach. The study concludes that an estimated 3.74 million non-Orange County resident visitors spent $565 million in 2018, increases of 7.0% and 13.3%, respectively, from 2017 and that international visitation has reached almost at a half-million tourists per year. These are astounding facts. During the Regional Board's December 6, 2019 workshop Board President Ruh asked staff for details on the Project's potential tourism impacts. It should be clearly noted for Chairman Ruh in your final permit that while the City of Huntington Beach's environmental analysis finds the proposed project will have NO social or economic impacts to the beach, the alternatives studied by the	As the commenter notes, Santa Ana Water Board staff's analysis of alternatives that included either moving the open intake pipe to a location that minimizes the impact to marine organisms, would in fact, adversely impact beach access as well as other infrastructure. Such project alternatives could result in impacts to the tourism industry and, if selected, would have required additional environmental analysis. The study attached to the comment was reviewed and will be included in the administrative record.

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			Regional Board would have pronounced impacts that could affect the city's primary economic engine.	
0179	Sean Bothwell - Ca Coastkeeper Alliance	Jan 21, 2020	The responses to this comment is in a separate table, "Responses to Comments from California Coastkeeper Alliance".	The responses to these comments are in a separate table**, "Part 2 - Responses to Comments from California Coastkeeper Alliance".**
0180.01	Michael Posey Council-member City of Huntington Beach	Jan 21, 2020	I am writing at this time to submit my personal perspective on the Regional Board's evaluation of alternative seawater intake technologies and sites. I believe the Tentative Order correctly finds that alternative subsurface seawater intakes are infeasible and relocating the proposed 1-mm screened seawater intake over 1 mile up or downcoast is infeasible due to the economic, social and environmental impacts. The Tentative Order says that the Regional Board continues to rely on the City's 2010 FSEIR and that the City is the lead CEQA agency. However, missing from your analysis is the fact the City of Huntington Beach's 2010 Final Substitute Environmental Impact Report already reached the same conclusion that Project alternatives that have social and recreational impacts on the beach are infeasible.	The Santa Ana Water Board relied on the 2010 Final Subsequent EIR certified by the City of Huntington Beach and the 2017 Final Supplemental EIR for purposes of CEQA. While the Santa Ana Water Board may consider the information in the EIRs in its analysis of whether subsurface intakes or alternative locations for surface intakes are feasible for purposes of the Ocean Plan, the Board is not bound by these findings. [The Santa Ana Water Board did consider the findings in the 2010 FSEIR in its analysis of the feasibility of alternative locations for surface intakes and the discussion in Section 3 of Attachment G.1 was revised to reflect such.]
0180.02			It should be noted in your final permit that moving the Project's proposed seawater	As discussed in Attachment G.1, the Santa Ana Water Board finding reflects

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			intake up or downcoast is also infeasible because it would require a host of approvals from the City of Huntington Beach including additional environmental certification under CEQA. It is unlikely the City would make those permits available to Poseidon given our current CEQA findings and permit conditions, and the lack of changed circumstances or any clear environmental benefit.	that moving the intake location upstream to U2 or downstream to D2 is not feasible.
0181.01	Duane D. Cave Moulton Niguel Water District	Jan 21, 2020	I am writing to you today as a board member of the Moulton Niguel Water District in South Orange County. We have made significant strides in water savings during the recent drought. As a result, we have become more efficient and all treat water like the precious commodity it is.	Comment noted.
0181.02			However, conservation and development of new water supplies cannot be mutually exclusive. The Ocean Plan Amendment details the requirements a desalination plant must meet, and the Huntington Beach Proposal has come through, meeting all the requirements of the Ocean Plan Amendment.	See responses to comments 0002.03 and 0003.01.
0181.03			As a coastal county, desalination must be part of our new water portfolio. It is essential that we become more independent from imported water supplies. This is literally the only climate resilient	See responses to comments 0003.01 and 0004.19.

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			water source available and we would be foolish to pass up on this opportunity.	
0181.04			I urge you to once again support the renewal of the permit for the Huntington Beach desalination project. The project has been studied by independent marine biologists and other scientists for nearly two decades and has passed every test and earned every permit.	See response to comment 0162.01. The Discharger has not obtained a Coastal Development Permit from the Coastal Commission, which it needs before proceeding with the construction and operation of the proposed Facility.
0181.05			As an elected water board member, I can tell you that new water supplies like this are needed.	See responses to comments 0014.04 and 0055.01.
0182.01	Wendy Ridderbusch CalDesal		I am the Executive Director of CalDesal, a non-profit organization dedicated to educating and advocating for brackish water and ocean desalination and salinity management as a part of California's diverse water supply portfolio….I also testified in support of this project at the December 6th workshop in Huntington Beach. My statewide background has given me a unique perspective on the state's water system and how we must work locally to ensure environmentally sound desalination projects like the Huntington Beach Project move forward.	Comment noted. See also, response to comment 0003.01.
0182.02			That day you heard a number of comments focused on the nuances of the	While the development of the State Water Board's provisions for

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			draft permit but I will hope you will not lose sight of why this project is before you for yet a 3rd permit renewal in the last 13 years. The origin of the State Water Board's Ocean Plan Amendment is an acknowledgement that seawater desalination is needed to diversify water supplies and protect the state against the effects of a changing climate. Seawater desalination is a proven technology currently used successfully in California and around the world by many other countries.	desalination facilities in the Ocean Plan acknowledges that desalination provides an alternative source of potable water, it also recognized that the surface water intakes and discharges associated with desalination facilities can result in marine life mortality and harm beneficial uses of ocean waters. The purpose of the Ocean Plan's desalination provisions is to protect ocean water quality and all forms of marine life from impacts associated with the intake of seawater and discharge of brine by desalination facilities. See also, responses to comments 0003.02 and 0014.04.
0182.03			The HB Desal project complies with the new State Water Board Ocean Plan regulations. It will be the second plant to use wedgewire screens as the best feasible intake technology, as the San Diego Regional Board made the same finding on the Carlsbad facility last year.	See responses to comments 0002.03, 0004.03, and 0079.03.
0182.04			This project represents a key piece of Southern California's water portfolio diversity and water supply security. I encourage you to reject calls from desalination opponents to pit this project's application to amend and renew an existing permit against alternative water facilities. This is not the role of the	See responses to comments 0003.01 and 0014.04.

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			Regional Board and not the intent of the Ocean Plan Amendment as your staff report correctly notes.	
0183.01	Ronald Gilbert	Jan 21, 2020	Please keep that in mind when deciding on the proposed Huntington Beach seawater desal plant that the future depends on these kinds of projects. The Huntington Beach plant will utilize innovative technology to recapture energy from the desalination process, decreasing carbon emissions and cutting down on overall energy usage. On average, these devices help save an estimated 146 million kilowatt-hours of energy per year, reducing carbon emissions by 42,000 metric tons annually – roughly equivalent to the annual greenhouse gas emissions from 9,000 passenger vehicles.	See responses to comments 0003.01 and 0004.05.
0183.02			Additionally, the process is incredibly efficient – turning seawater into drinking water in just a couple of hours!	See response to comment 0004.05.
0184.01	Jeremy Crutchfield San Diego County Water Authority	Jan 21, 2020	On behalf of the San Diego County Water Authority and in response to misleading statements and mischaracterizations about the Claude “Bud” Lewis Carlsbad Desalination Plant, I am writing to share with you several benefits that have been realized by integrating high-quality water from the plant into our regional supply.	Comment noted. See also, response to comment 0026.01.

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			As a Water Resources Manager at the Water Authority, I have been closely involved in this process and observed the benefits firsthand. The 50 mgd Carlsbad Desalination Plant immediately increased local control and climate resiliency of the San Diego region's water supply after being certified by the state in 2016 as a drought-resilient supply. The plant's timely commercialization was a critical factor in minimizing the impacts of the 2012-2016 drought on our residents and economy.	
0184.02			In addition, the Carlsbad Desalination Plant created significant water quality benefits. The Water Authority has quantified water quality improvements by participating in a comprehensive Water Research Foundation study. The study analyzed the integration of desalinated water using water samples from throughout the region. The results showed a 30 percent reduction in total dissolved solids ad compared with imported supplies, no disinfection by-product formation in the desalinated water, and a decrease in nitrification potential in parts of the system. They also showed that the region has successfully managed the	Comment noted, See also, response to comment 0026.01.

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			disinfectant residual and distribution pipeline corrosion potential.	
0184.03			In addition, water recycling facilities in the San Diego region have benefitted from decreased salinity in their recycled water supplies, reducing operating costs. For example, the Vallecitos Water District observed a reduction of nearly 50 percent in total dissolved solids at one of its wastewater reclamation facilities since the introduction of desalinated water.	Comment noted. See also, response to comment 0026.01.
0184.04			In addition, the Otay Water District reported positive feedback from residents after desalination was introduced due to the reduction in total dissolved solids. The many secondary benefits include prolonging the lifespans of household appliances across the region, improving manufacturing and other industrial operations, and supporting local agriculture by decreasing the hardness of our water.	Comment noted. See also, response to comment 0026.01.
0185.01	Ray Heimstra Orange County CoastKeeper	Jan 21, 2020	It is critical to note that this is the first application of the desalination amendments to Ocean Plan (OPA) to a new desalination plant. Poseidon's Carlsbad plant was explicitly exempted from the OPA when constructed and their recent NPDES renewal for that plant fell under the requirements for an "expanded	The Santa Ana Water Board agrees that the proposed facility qualifies as a "new facility" under Ocean Plan chapter III.M.1.b.(3). By contrast, the Carlsbad facility approved by the San Diego Water Board was approved as a new determination for standalone operation because the prior conditional

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			facility" that is already in place. The permit and determination underway for Poseidon's Huntington Beach proposal will set the precedent for "new facilities" and desalination plant design in California going forward. Since the role of the Regional Board under the OPA is to minimize the intake and mortality of all forms of marine life, it must directly consider the intake capacity of the proposed plant using this lens. There is ample evidence in the public record to show that a smaller project, or no project at all, is functionally appropriate. Unfortunately the Regional Board left this information out of their analysis. An analysis of the necessity of any impact to marine life from the project must be included in any revised permit. These facts clearly demonstrate that the Regional Board analysis must look beyond the mere listing of the Poseidon project in a UWMP in determining whether the impacts the project will have on marine life meet the goals of the OPA. This includes requiring a detailed analysis of different intake capacities and technologies to limit the mortality of marine life. Alternates to	determination had been premised on co-located operation. The Tentative Order establishes requirements for an individual facility and will not set the precedent for new facilities going forward. See responses to comments 0082.02, 0096.02, 0103.02 and 185.01. See responses to comments 0014.04, 0055.01 and 0177.11 regarding the "need" for the 50 MGD facility. The Santa Ana Water Board has considered a range of information submitted by the Discharger and by water agencies supporting the project in concluding that an identified need of 50 MGD has been demonstrated and that the need is consistent with an applicable urban water management plan (UWMP). The Santa Ana Water Board's finding on need was not based on the "mere listing of the Poseidon project in an UWMP." See responses to comments 0174.03 and CCKA.III.A. regarding the data quality. See also response to comment CCKA I.B regarding drilling test wells and

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			Poseidon's proposed 50 million gallon per day capacity were only given a cursory look in previous studies. The Board members must direct staff to do a full analysis of intake capacities including the drilling of test wells to prove groundwater models related to subsurface intake feasibility. The goal of this analysis needs to be the minimization of impacts to marine life rather than maximizing Poseidon's profits.	CCKA I.D and CCKA I.E related to design capacity evaluations.
0185.02			The Water Reliability studies provide the details behind the UWMP and the 2018 Study stated that: o Local groundwater makes up more than 75% of North Orange County's supplies. With effective groundwater management, this region can manage potential shortages that occur only about once every 20 years with conservation mandates alone. o The projected average shortage for Orange County Water District (OCWD) is 13,500 AFY. That is less than 1/4 of the amount of water that would be produced by Poseidon's proposed Huntington Beach seawater desalination plant (56,000 AFY). As of January 2020, no end users within the OCWD service area have been	See responses to comments 0014.04, 0148.03, 0148.09 and 0149b.06. OCWD has indicated that the water from the Facility would offset their imported water demands and future shortfalls. The projected imported water demands could be cut in half, increasing their water supply reliability. At the workshop on May 15, 2020, OCWD confirmed that they are still exploring options regarding how the desalinated water will be distributed. OCWD could distribute the desalinated water directly to interested users or inject the desalinated water into the groundwater basin if does not find

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			identified, two users outside the service area have expressed an interest in a combined 3,000 AFY of water, and no delivery system has been developed. This leaves 53,000 AFY, 95% of Poseidon's 56, 000AFY total capacity, uncommitted and OCWD's official position remains that they have reached no conclusions on how desalinated water could be used by the district or distributed.	agencies that are interested in direct distribution of the water.
0185.03			The Regional Board members pointed out the tentative nature of this term sheet at the June 2019 Regional Board meeting, and suggested that OCWD pass a resolution committing to purchase Poseidon's water to show real interest. OCWD has declined to do so. When this was brought up during public comment at a OCWD board meeting in July 2019 the Board Chair Vicente Sarmiento stated "It is not a priority at this time". However, in desperation to make it appear there is an agreement Poseidon re-named the Term Sheet a "water purchase Term Sheet" in their January 16, 2020 letter appendix CCCCCC. This is contradicted by the actual title of the 2018 Term Sheet Water Reliability Agreement Huntington Beach Desalination Project. So while OCWD continues to support the Poseidon project	The Santa Ana Water Board agrees that the Term Sheet is non-binding and that the Discharger does not have a binding commitment from OCWD to purchase any amount of water.

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			politically through the state review process and some members of the OCWD board are willing to speak in support of the project, the fact is, Poseidon still has no commitment from OCWD for any amount of water.	
0185.04			Another issue that must be addressed by the Regional Board is the lack of fish data to effectively conduct an analysis on the appropriate location for a surface intake as required by the OPA. The board staff recognized that the data used was nineteen years old, but then tried to rationalize that by saying ocean conditions have not changed. This is spite of abundant evidence of major changes in ocean circulation patterns, fish species distribution, ocean acidification, and more.	See Attachment G.1, Section 3 for a discussion of fish data. See also response to comment 0035.05.
0185.05			Another critical issue that was ignored in the draft permit is the impact that desalinated water would have on the groundwater basin if injected on a large scale. This is a likely scenario as the last workshop OCWD held on the potential distribution of desalinated water (July 2016) identified five potential distribution options, all of which included injecting desalinated water into the groundwater basin.	The Santa Ana Water Board acknowledges that test wells would be the most accurate way to demonstrate the actual capability of slant wells for seawater extraction. Because wells of any type are costly in most environmental settings, hydrogeologic models have emerged as a widely accepted, robust and technically sound method of predicting and visualizing hydrogeologic conditions, including production capacity.

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			At the December 6, 2019 Regional Board workshop on Poseidon the Irvine Ranch Water District (IRWD) gave a detailed presentation on the risks injecting desalinated water into the groundwater basin would pose to drinking water quality in the groundwater basin and to IRWDs ability to continue their existing water recycling program. Injecting Poseidon's water would degrade water quality in the groundwater basin. The board members need to direct the staff to include an analysis on the impacts of desalinated water on the groundwater basin.	Carrying out an environmental analysis of OCWD's possible use of product water for recharge would be too speculative at this point as OCWD has not decided how it will use the product water. If OCWD decides to use or distribute the product water in a manner that differs from that analyzed in the 2010 Final Subsequent Environmental Impact Report, OCWD will need to prepare the appropriate CEQA documentation for such changes. Further, depending on the final distribution of the desalinated water, OCWD may need an amendment to the current water recycling requirements from the Santa Ana Water Board. See also responses to comments 0004.11, 004.16, 0008.02. 0008.03 and 0148.01.
0186.01	Diane Thompson Huntington Beach Chamber of Commerce	Jan 9 2020	The Huntington Beach Chamber has been supportive of the Huntington Beach Seawater Desalination plant since it was first proposed nearly 20 years ago. We have testified in support of this climate resilient water reliability project in front of the City Planning Commission, the City Council, the State Lands Commission as well as in front of your board.	The Santa Ana Board acknowledges your comments in support of the desalination facility. The issuance of the 2006 and 2012 permits predated the State Water Board's adoption of the amendment incorporating requirements for desalination facilities into the Ocean Plan.

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			We were there in 2006 when you first approved the permit for the project and again in 2012 when your board voted unanimously to renew that permit. We ask that you again renew the permit for the project in an effort to bring this needed water reliability project to fruition.	
0186.02			This is a water reliability project that will not only provide us with a locally-controlled, climate resilient supply from a near infinite source (the Pacific Ocean), but it will also protect and preserve one of Huntington Beach' s greatest ecological jewels, the Bolsa Chica wetlands. The Marine Life Mitigation Plan as proposed by Poseidon Water, will ensure the viability of the wetlands for the next generation. The wetlands are essential for both environmental and economic reasons in Huntington Beach. Tourism is one of our main economic drivers in Surf City and visitors are not only here for our beautiful beaches and surf, but also to visit our wetlands and other attractions.	The Bolsa Chica wetlands project as a whole provides the best available, feasible mitigation project to fully mitigate for the operational life of the project. However, the Tentative Order remains conditioned upon the Discharger's submittal of additional detail and a schedule for completion of various milestones for the project for Santa Ana Water Board review and approval. The required submittals are detailed in Attachment K to the Tentative Order.
0186.02			This project will create billions of gallons of water, millions of dollars in tax revenue and thousands of jobs for our local economy. On behalf of the Huntington	Comment noted. See response to comment 0003.02.

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			Beach Chamber of Commerce Board of Directors, I ask that you approve the amended permit for this project.	
0187	George Lambert		I am writing this letter as a life long resident of the amazing town of Huntington Beach. I am also a 2nd generation Huntington Beach surfer and now my children are 3rd generation surfers. I urge you to be opposed to the proposed desalination plant in Huntington Beach. I am opposed to a private entity being in charge of us the tax payers water rates. This is a total fleecing of the Tax payers! It is a potential environmental disaster and the effect it could have on the environment will be damaging! There are definitely other ways that we can save and produce water without this boondoggle being forced upon us.	Comment noted. See responses to comments 0004.19, and 0032.01 regarding water supply alternatives and water cost. See responses to comments 0004.01, 0004.03, 0004.05, 0004.11, 0004.12, 0020.02, 0022.04, 0033.01, 0035.04, and 0035.06 regarding environmental impacts.
0188.01	Yvonne Gonzalez Duncan California League of United Latin American Citizens	Jan 21, 2020	We have closely followed this project through the years and stand steadfastly in support of the project and encourage your approval at your April 3, 2020 hearing. The State Lands Commission conducted an extensive review of environmental justice considerations before certifying the Final Environmental Impact Report (FEIR)	The 2017 Final Supplemental Environmental Impact Report certified by the State Lands Commission concluded that “some members of minority or low-income populations may be slightly affected by vessels emissions or construction impacts”; however, “impacts from Lease Modification Project activities would not disproportionately affect

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			for the Huntington Beach Seawater Desalination project on October 19, 2017. At this hearing, the State Lands Commission found that this project has "no impact" as it relates to environmental justice issues with disadvantaged communities. Further, the State Lands Commission evaluated the project's environmental impacts to disadvantaged communities in the areas of noise, air, traffic, etc. and found that this project would have no significant impact to any disadvantaged communities under its Environmental Justice policy.	minority or low-income populations." (2017 FSEIR, p. 8-6.) The Santa Ana Water Board has considered these findings in its review of the FSEIR. As part of its permitting process, the Santa Ana Water Board also considers and evaluates environmental justice issues. In a continuing effort, and in accordance with the Santa Ana Water Board's Human Right to Water Resolution R8-2019-0078, staff of the Santa Ana Regional Water Board have begun the task of assessing the equity of its programs and potential impacts to disadvantaged, tribal, and environmental justice communities. The assessment includes a review of activities such as inspections of regulated facilities, enforcement actions and impaired waters/TMDLs. The outcome of this assessment is expected to be included in the Executive Officer's Report to the Santa Ana Water Board during the latter part of 2020.
0188.02			The Santa Ana Regional Water Quality Control Board should be lauded for adopting its Human Right to Water policy at its December 6, 2019 board meeting. Not only is the Huntington Beach Seawater Desalination Project not in	Comment noted. See also, response to comment 0188.01

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			conflict with that policy, this type of water reliability project is essential because availability of quality drinking water is the most basic of human rights.	
0188.03			As we noted in our letter to you and your board members on July 10, 2019, LULAC recognizes that the development of all new local water supply projects is projected to result in initial cost increases to the consumers. This is not unique to seawater desalination. Desalinated water costs less than a penny a gallon and has proven to be a great boon to San Diego County where the Carlsbad desalination project has been operational for more than five years. Latino families and businesses in San Diego County have benefited from this high-quality, drought-proof, affordable water supply. The scare tactics about the cost of desalination is nothing but a red herring, which is evident by the deafening silence we hear in San Diego County regarding the cost of desalination.	Comment noted. See also, responses to comments 0004.19 and 0032.01.
0188.04			In addition to adding a new drought-proof, climate-resilient water supply to serve Orange County, this project has many other benefits that will serve disadvantaged communities, including: ● the preservation and restoration of the Bolsa Chica wetlands;	Santa Ana Water Board staff acknowledge your comments on mitigation, educational programs, revenue, and possible job creation. See responses to comments 0017.02, 0070.06 and 0109.03 regarding mitigation of the Bolsa Chica wetlands.

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			● educational programs organized and funded by Poseidon Water for Latino youth from inland communities to visit and learn about the wetlands at Bolsa Chica; ● millions in tax revenue that will benefit our local schools, parks, police and fire; and ● thousands of good-paying construction jobs that benefit Latino men and women throughout Orange County	The creation of tax revenue and jobs is beyond the scope of the Santa Ana Water Board's scope of review for the Tentative Order. The Tentative Order is intended to regulate the discharge of pollutants from the Facility to the Pacific Ocean to protect water quality and beneficial uses and to impose requirements related to the best available site, design, technology, and mitigation feasible in accordance with Water Code section 13142.5(b) and the California Ocean Plan's provisions for seawater desalination facilities to minimize the intake and mortality of marine life.
0189.01	Zeke Hernandez League of United Latin American Citizens	Jan 21 2020	I am deeply troubled by those why claim to oppose the Project on environmental justice grounds. Such claims undermine the integrity of such serious issues. The State Lands Commission conducted an extensive review of environmental justice considerations before certifying the Project's Environmental Impact Report in 2017 and found that environmental impacts to disadvantaged and minority communities in the areas of noise, air emissions, traffic, etc. to be insignificant.	Comment on the supplemental environmental review conducted by the California State Lands Commission is acknowledged. See response to comment 0188.01.
0189.02			The Santa Ana Regional Water Quality Control Board should be lauded for	See response to comment 0188.01.

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			adopting its Human Right to Water policy at its December 6, 2019 board meeting. Not only is the Huntington Beach Seawater Desalination Project not in conflict with that policy, this type of water reliability project is essential because availability of quality drinking water is the most basic of human rights.	
0189.03			The effects of climate change will negatively affect millions of middle-and-low income Latino families in California. The 2012-2016 drought drained about $10 billion from the California economy according to the American Society of Civil Engineers and Latino families and businesses suffered.	Comment noted.
0189.04			As LULAC California State Director Yvonne Gonzales noted in her letter to you and your board members on July 10, 2019, LULAC recognizes that the development of all new local water supply projects is projected to result in initial cost increases to the consumers. This is not unique to seawater desalination. Desalinated water costs less than a penny a gallon and has proven to be a great boon to San Diego County where the Carlsbad desalination project has been	Comment noted. See also, responses to comments 0004.19 and 0032.01.

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			operational for five years. Latino families and businesses in San Diego County have benefited from this high-quality, drought-proof, affordable water supply.	
0189.05			In addition to adding a new drought-proof, climate-resilient water supply to serve Orange County, this project has many other benefits that will serve disadvantaged communities, including: • the preservation and restoration of the Bolsa Chica wetlands; • educational programs organized and funded by Poseidon Water for Latino youth from inland communities to visit and learn about the wetlands at Bolsa Chica; • millions in tax revenue that will benefit our local schools, parks, police and fire; and • thousands of good-paying construction jobs that benefit Latino men and women throughout Orange County.	Santa Ana Water Board staff acknowledge your comments on the potential benefits to disadvantaged communities. See response to comment 0188.04.
0190	Dave Simpson	Jan 21 2020	This debate needs to end soon. We are wasting time. I encourage you to approve the permit for the proposed Huntington Beach desalination plant so that Orange County residents can enjoy the many benefits of desalination.	The commenter's support of the proposed seawater desalination facility to be located in Huntington Beach is noted. See response to comment 0084.01.

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			The proposed Huntington Beach plant will produce 50 million gallons of fresh, desalinated water per day while taking important steps to protect and enhance our precious coastal resources. The plant will provide our region with the water reliability we need to continue growing and thriving by providing us with a water supply that is locally controlled and not dependent on weather	
0191	Timothy Reilly	Jan 21, 2020	Please do the right thing and figure out how to ensure the southern California population has sufficient drinking water! I urge you in the strongest possible terms to think about our region's future needs and vote in favor of the Huntington Beach desal plant. The Huntington Beach desalination project will produce 50 million gallons of fresh water per day. The process takes steps in protecting and enhancing our cherished coastal resources. The plant will provide assurance and local control over precious water resources, rather than depending on the weather and rainfall – which varies each year. Desalination is a perfect example and solution that communities like ours need to support the needs of residents and minimize vulnerability to statewide drought conditions. Please	The commenter's support of the proposed seawater desalination facility is noted. See responses to comments 0003.01 and 0004.18.

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			move forward ASAP with the Huntington Beach plant.	
0192.01	Andrea Leon-Grossman Azul Suzanne Denbow Environmental Law Clinic, UC Irvine	Jan 21 2020	**I. Approving the Draft Permit Would Not Align with the Regional Board's Commitment to the Human Right to Water** Just last month, the Regional Board committed to take action that "[w]ill promote policies that advance the human right to water and discourage actions that delay or impede opportunities for communities to secure safe, clean, affordable, and accessible water . . . ." Additionally, the Regional Board vowed to "promote achievement of the human right to water through . . . outreach and public participation . . . and partnership with communities, agencies and municipalities." In addition, to these general policies, the Regional Board adopted a more detailed "Work Plan." The Work Plan for 2020 commits the Regional Board to performing equity assessments on its existing programs to identify any adverse impacts to disadvantaged communities, tribes, and environmental justice communities. The Work Plan specifically states that the Regional Board's permitting program, which	See response to comment 0188.01. Additionally, the Santa Ana Water Board's Resolution R8-2019-0078 requires staff to implement a work plan, which includes the task of performing an equity assessment of each of its programs. Staff have commenced this task by obtaining and preparing maps that designate the locations of program activities and regulated facilities, with overlays showing the disadvantaged communities, tribes, and environmental justice communities. Staff will be carrying out the analysis of program activities, such as inspections, enforcement actions and impaired waters/TMDLs in comparison with the detailed maps. The outcome of the Program Assessment is expected to be included the Executive Officer's Report to the Regional Board in the later part of 2020. A finding related to the human right to water was added to section II.I of the Tentative Order.

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			includes NPDES permitting, will receive an equity assessment in 2020. To Azul's knowledge, no such equity assessment has been performed for the Draft Permit, leaving potential adverse impacts on environmental justice communities unaccounted for. Azul respectfully requests that the Regional Board perform an equity assessment of the NPDES program, as it committed to in its Human Right to Water Resolution, before granting a NPDES permit for Poseidon's facility. Alternatively, the Regional Board should at least complete a project-specific equity assessment of the Draft Permit. Without conducting this assessment, the Regional Board will have failed to live up to its recent commitment to California's Human Right to Water, and have failed to consider the impacts of the Poseidon facility on Orange County's most vulnerable communities.	

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0192.02			**A. The Regional Board's Public Comment Process Is Insufficient** The opportunities for public participation provided in Poseidon's permitting process are inadequate and at odds with commitments the Regional Board made in its Human Right to Water Resolution. Environmental justice, the human right to water, and basic fairness all require that the Regional Board provide the public with a reasonable opportunity to engage and participate meaningfully. Here, the Regional Board neglected its commitment to the human right to water by not providing a sufficient opportunity for either oral or written public comment on the Draft Permit. The Regional Board released the Draft Permit and related documents—nearly 500 pages of material—one week prior to the only public workshop scheduled before the adoption hearing. To make matters worse, that week included the Thanksgiving holiday. Despite numerous appeals to provide at least one additional public hearing before the adoption meeting, the Regional Board has not yet granted even this very basic request. The refusal to provide an opportunity to speak	The Santa Ana Water Board has provided the public with many opportunities to participate in the permitting process and has not neglected its commitment to the human right to water. The Board has heard oral comments regarding the proposed Facility at [number of informational items and workshops] different board meetings, two of which were workshops for the Tentative Order. Additionally, the Board allowed 60 days for the public to review the Tentative Order and submit written comments, 30 days more than what is required by law. The Board will also hear additional comments from the public at the hearing for the Tentative Order. The opportunities for public participation in the permitting process has been more than reasonable. See response to comment 0001.

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			after sufficient time to read and analyze the Draft Permit is burdensome even to well-equipped stakeholders. It is particularly onerous, however, for environmental justice community members who do not enjoy the benefit of paid staff, attorneys, or technical experts to assist them in voicing their concerns. The opportunity for interested parties to submit written comment is also inadequate. Azul has requested repeatedly that the deadline for written comments be extended through February 28, 2020, in order to allow interested parties to thoroughly analyze and provide feedback on the relevant documents. The need for such an extension only increased after the Regional Board sent Poseidon a Request for Additional Information, with a response deadline of January 17. As of January 21, Poseidon's full response was not available, leaving no opportunity for the public to provide written feedback on this relevant information. Interested parties should have time to review all information the Regional Board will rely upon in acting on the Draft Permit. The Regional Board's lackluster efforts to provide public participation in the	

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			administrative process do not align with the promise of community partnership it made in its Human Right to Water Resolution. To rectify deficiencies in the public participation process, the Regional Board should extend the deadline for written public comment through at least February 28, 2020, and provide at least one additional opportunity for public testimony well before the Regional Board holds any adoption hearing.	
0192.03			**B. Poseidon's Desalinated Water Will Decrease Affordability** The Draft Permit also raises concerns about affordability, a key tenet of the Human Right to Water Resolution. Poseidon's desalinated water will unquestionably raise rates for consumers. Estimates by the Orange County Water District ("OCWD") and the Irvine Ranch Water District ("IRWD") estimate that the price of desalinated water will be between $1,641 and $1,941 per acre-foot. The cost of groundwater, recycled water, and imported water in Orange County, in both the near- and long-term, will almost certainly be more affordable than Poseidon's desalinated water.	The Santa Ana Water Board adopted the human right to water as a core value and is committed to the advancement of this core value. Affordability is a fundamental component of the human right to water and has been considered in the permitting process. However, the Santa Ana Water Board's implementation of the human right to water may not infringe on the rights and responsibilities of public water systems. Adding desalinated water to OCWD's water may increase the price of water for consumers, but it is up to OCWD as the water supply agency to determine whether increased reliability justifies the rate increase to consumers. The adoption of the Tentative Order would

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			A study by UCLA's Luskin Center for Innovation found that groundwater is a far more affordable source of water than Poseidon's desalinated water. As of 2018, the rate for groundwater was about $666 per acre-foot. Recycling also provides a less costly source of water than desalination. Orange County, home to OCWD's Groundwater Replenishment System, one of the nation's largest water recycling facilities, receives more than 111,100 acre feet of water annually from recycled sources. Without factoring in any subsidies, and factoring in distribution costs, recycled water is estimated to cost $1,200 per acre-foot, a significantly more cost-effective alternative than the most favorable estimates for Poseidon's desalinated water. Finally, imported water is also more affordable than Poseidon's desalinated water. The cost of imported water is currently $1,015 per acre-foot.19 In every tested scenario, the cost of water imported by Metropolitan Water District ("MWD"), which manages the majority of water imported to Orange County, is consistently cheaper than the expected cost of desalinated water from Poseidon.	not violate the Board's commitment to the human right to water. See responses to comments 0004.19 and 0032.01.

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			These sources of water are not only more cost effective now, but will remain so for the foreseeable future. Under current plans, Poseidon's water will be heavily subsidized by taxpayers. These subsidies will not last indefinitely, and costs will necessarily increase once the subsidies expire. Based on historical data from similar agreements, including Poseidon's Carlsbad facility, the Regional Board can reasonably expect Poseidon will pass the extra cost of desalinated water on to consumers. The UCLA report suggests that Poseidon's proposed agreement with OCWD will not only create moderate to severe affordability concerns for disadvantaged residents in the immediate term, but that those concerns will persist throughout the lifespan of the Facility. Granting the Draft Permit would violate the Regional Board's commitment to promoting affordability made in its Human Right to Water Resolution.	
0192.04			**C. Poseidon's Desalinated Water Will Not Improve Water Quality** Thankfully, drinking water quality is a relatively minor issue in Orange County for most of its citizens. In fact, Orange County has the lowest number of drinking water system health violations per capita in the	The Santa Ana Water Board's primary responsibility is to ensure that waste discharges do not degrade water quality by prescribing appropriate waste discharge requirements. The Tentative Order includes effluent and receiving water limits to protect the receiving water

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			state. There have only been 139 violations since 1993, and over half of those violations were monitoring and compliance related. Most of the health-related violations were concentrated within small drinking water systems or mobile home parks. Eight of the smallest systems in the county serve a high proportion of low-income households. While any number of drinking water violations is concerning, there is no evidence that the communities most at risk would receive Poseidon's desalinated water. The Facility will not improve water quality for any residents, and in fact, may lead to new water quality issues for Orange County. Rather than improving water quality, the desalination process has the potential to cause boron and chloride contamination. Poseidon water would in no way benefit Orange County communities most vulnerable to water quality issues.	(Pacific Ocean) as well as a rigorous monitoring and reporting program. See responses to comments 0004.11, 0033.01, 0035.06, 0036.01, 0050 and 0062.02. With respect to potential impacts to the Orange County Water Management Zone, the Santa Ana Water Board understands that OCWD has not yet decided on the ultimate distribution of the desalinated water. If OCWD decides to inject the desalinated water into the groundwater basin, OCWD will need to obtain a permit from the Santa Ana Water Board. The Santa Ana Water Board would address water quality issues related to any proposed injection through that permitting process and impose appropriate requirements to protect water quality. See responses to comments 0004.11, 0004.16, 0008.02, 0008.03 and 0148.11. The State Water Board Division of Drinking Water (DDW) regulates drinking water systems and water treatment devices through the issuance of permits. The Discharger will need to obtain the appropriate permit from DDW, and

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				issues related to drinking water quality will be addressed DDW through their permitting process. The Santa Ana Water Board does not have the authority to regulate drinking water quality. See responses to comments 0008.02 and 0008.03.
0192.05			The amended Ocean Plan requires the Regional Board to analyze any proposed desalination facility for "feasibility" in a multi-step process. First, the Regional Board must analyze a range of "feasible alternatives for the best available site, the best available design, the best available technology, and the best available mitigation measures to minimize intake and mortality of all forms of marine life." At this stage of the analysis, each factor must be examined independently, not in the aggregate. After the objective feasibility analyses of all four factors, the Regional Board must consider the factors collectively to "determine the best combination of feasible alternatives to minimize intake and mortality of all forms of marine life." Appendix I of the Ocean Plan defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic,	The Water Code 13142.5 (b) determination is contained in Attachment G of the Tentative Order. Attachments G.1 to G.5 provide additional analyses supporting the Santa Ana Water Board's findings in Attachment G that the proposed Facility uses the best available site, design, technology, and mitigation measures to minimize intake and mortality of all forms of marine life. Attachment G.1 includes an analysis of the proposed Facility's onshore and offshore sites and a reasonable range of nearby sites in accordance with the criteria set forth in the Ocean Plan for site evaluation. The analysis reviewed multiple sites along the Orange County coast to determine the best available site using the criteria outlined in the Ocean Plan and concluded that the Discharger's proposed onshore location for the Facility and the proposed

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			environmental, social, and technological factors." It is the Regional Board's responsibility to conduct independent feasibility analyses. Regional Board staff's December 6, 2019 presentation on the Draft Permit did not demonstrate that alternative sites, designs, technologies, or mitigation measures were truly infeasible, but rather, were undesirable from Poseidon's perspective. For example, the Ocean Plan requires that new or expanded desalination facilities use the least-invasive intake technology, where feasible. Subsurface intake technology is the most successful method of reducing marine life entrainment, but the Regional Board failed to consider this technology, apparently due to Poseidon's proposed intake volume of 107MGD. According to the Regional Board, this is "a large intake compared to the known uses of slant wells anywhere else." The Regional Board has therefore concluded that subsurface intake technology is infeasible for Poseidon's facility, based on the fact that Poseidon's intake volume is larger than the Regional Board believes existing slant well technology can support. Not only did the	offshore locations for the discharge and intake pipes were the best available sites feasible. The Santa Ana Water Board rigorously evaluated the feasibility of subsurface intakes and ultimately determined that subsurface intakes are not feasible. The feasibility determination was not based solely on the Discharger's proposed intake volume. See responses to comments 0035.02 0082.04, CCKA I.B and CCKA I.C. The Santa Ana Water Board also thoroughly analyzed the other design, technology, and mitigation measures proposed by the Discharger. The Santa Ana Water Board evaluated the intake design, diffuser design, and mitigation requirements. The intake location and the diffuser design were evaluated by neutral third-part reviewers. See Attachment G, Finding 1 and responses to comments CCKA I.D and CCKA I.E.

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			Regional Board fail to evaluate any sites where Poseidon's proposed intake volume may feasibly support the Ocean Plan's preferred intake technology (for example, a site that could support test wells), it also failed to consider another feasible design alternative: requiring Poseidon reduce its intake volume. Considering alternatives that would be available if Poseidon's proposed intake volume were reduced is particularly relevant because, as explained in III below, there is no identified need for such a large volume of desalinated water	
0192.06			Another factor considered in the feasibility analyses regarding site selection is the current use of the proposed site by Applied Energy Services ("AES") for a gas-based power generating facility. The AES facility is currently scheduled to cease intake and discharge operations after December 31, 2020, when AES will bring newer, more efficient technology online. After AES terminates intake operations, the potential exists for environmental conditions at the intake and discharge locations to eventually return to background conditions. Poseidon's proposed intake activity was repeatedly mischaracterized by Regional Board staff at the December 6 workshop as "neutral"	The Ocean Plan does not require the Santa Ana Water Board to evaluate how proposed impacts associated with the proposed Facility compare to conditions without any anthropogenic influences and staff has not "downplayed" the planned termination of once-thru cooling operations at the AES site. The relevant Ocean Plan requirement is to evaluate feasibility under existing conditions at a reasonable range of alternative sites. The Santa Ana Water Board has conducted this evaluation, as set forth more fully in Attachment G.1. Review of the transcripts from the December 6, 2019 workshop has staff

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			given the current AES operations at the site, and the imminent cessation of intake activity and discharge activity by AES was repeatedly downplayed. By failing to consider the potential for the site to return to background environmental conditions, the Regional Board further obfuscated the feasibility of the site in its Water Code § 13142.5(b) determination.	referring to 'neutral' in terms of the neutral third-party reviewers and the carbon neutral aspect of the proposed project. Further, there was no comments made by Santa Ana Water Board staff about AES operations' impacts on the marine environment.
0192.07			In addition to design, technology, and environmental factors that do not align with Poseidon's interests, the Regional Board also failed to adequately analyze pertinent economic factors, a relevant consideration under the Ocean Plan's definition of "feasibility." As discussed in I.B. above, the cost of Poseidon's water will ultimately raise rates for Orange County residents. MWDOC conducted a study of five proposed desalination facilities in the Southern California area. Of the five, MWDOC's report found Poseidon to be the least cost-effective due to the enormous discrepancy between purported output and the region's need. Even in the event of catastrophic climate change, the estimated shortage of water supply that Poseidon water could be used to supplant would be 22,000 acre-feet annually, which is far less than the 56,000	The feasibility analysis prepared for the seawater desalination project evaluated alternatives to the proposed site, design and technology measures proposed. The Santa Ana Water Board staff analyzed environmental, technological economic, and social factors related to alternative intake systems as required by the Ocean Plan. The analysis is provided in Attachment G.1. The Santa Ana Water Board's staff feasibility analysis was not intended to evaluate cost of water to the consumer; that aspect of the project is under the purview of responsible water agencies. See response to comment CCKA.I.C regarding the cost of the water. Regarding the cost to produce potable water, it is up to the on water agencies to determine the need to develop

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			acre-feet Poseidon intends to produce. The MWDOC has also projected that the cost of imported water will likely rise at a rate of 4.1% annually. Poseidon has countered with an estimation of 6.25%. No matter which figure is correct, the end user still loses. Even using Poseidon's biased estimate, it would still take 13 years for the cost of produced desalinated water to fall below that of imported water, 13 years of unnecessarily high costs for Orange County residents. The term "feasible," as it relates to Water Code § 13142.5(b) determinations, does not mean whatever is necessary for Poseidon to achieve the financial return it has promised to its investors. Azul strongly encourages the Regional Board to reject the Draft Permit, and conduct another feasibility study in which it considers a full range of alternatives to the site, design, technology, and mitigation measures favored by Poseidon, as required by the Ocean Plan	additional supplies and to decide how best to serve their customers. The Santa Ana Water Board's authority is restricted to ensuring that the project uses the best available site, design, technology and mitigation measures feasible to minimize intake and mortality of all forms of marine life. Because water agencies are responsible for determining how to serve their customers in a cost-efficient and reliable manner, these comments regarding the project cost and water demands should be addressed to the appropriate water agency.
0192.08			**III. The Regional Board Failed to Adequately Consider the Need for Poseidon's Desalinated Water** The Regional Board has not sufficiently considered the need for Poseidon's	See responses to comments 0014.04, 0055.01, 0148.02, 0148.09, 0177.11 and 0185.02.

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			desalinated water. The Ocean Plan requires the Regional Board to "[c]onsider whether the identified need for desalinated water is consistent with an applicable adopted urban water management plan . . . ." In the Additional Information Request sent to Poseidon on January 8, the Regional Board acknowledged a critical flaw in the Draft Permit's tentative Water Code § 13142.5(b) determination, stating that comments from the public, an OCWD board member, and IRWD, along with the fact that OCWD has not made final plans for distributing Poseidon's desalinated water "raised questions with board members as to whether the need for the desalinated water has been sufficiently identified." Poseidon refused to respond to the inquiry, and has not offered any need-based justification that does not rely on reaching its own intended profit margin. OCWD, which is comprised of 19 individual water distributors in Orange County, receives 75% of its water from "abundant groundwater aquifers and a landmark groundwater replenishment system that turns wastewater into potable water." The remaining 25% of the water distributed by OCWD is imported by	Related to the 2018 MWDOC Reliability study, OCWD provided additional information in their May 11, 2020, letter to the Santa Ana Water Board. It states "Based on numerous future assumptions and estimates, including the assumed successful completion of the California Water Fix, available base flow in the Santa Ana River, and an enhancement to the MWD supply portfolio through the implementation of the Carson Indirect Potable Reuse Project, the 2018 Study concluded that the maximum supply reliability gap through 2050 for OCWD's service area would be "small" or 22,000 acre-feet per year after the imposition of 10% mandatory conservation. "OCWD's overall general comment to the 2018 Study is that it would be a fundamental misunderstanding for any person or agency to state that OCWD only needs an additional maximum 22,000 acre-foot per year water supply project by the year 2050. No one can accurately predict what the OCWD water supply picture will be in 2050, There are too many variables and too many uncertainties for any person or any agency to make any absolute

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			MWDOC, and it is this portion of the current water supply that Poseidon seeks to supplant. As discussed above, costs of Poseidon's desalinated water could nearly double that of this imported water. IRWD, one of the largest distributors of water within the OCWD, has explained that it is not interested in purchasing Poseidon's water. While Poseidon insists on producing 56,000 acre-feet of desalinated water, it would take, at most, 22,000 acre-feet annually to replace the water Orange County may need from imports. Though decreasing reliance on imported water may be desirable, there are better options available to meet this need.	conclusions thirty years in the future. Only reasonable future scenarios can be developed using information we have today based upon numerous assumptions. OCWD is therefore evaluating and considering a range of future water supply projects to provide water supply reliability to our service territory."
0192.09			It is possible that there is need for desalinated water in some parts of Orange County. For example, the South Coast Water District ("SCWD"), which would be served by the pending Doheny Beach desalination facility, imports 95% of its water. This leaves SCWD with far more vulnerability, and therefore a greater need for desalinated water than OCWD, yet the Doheny Beach desalination facility is still substantially smaller than the behemoth proposed by Poseidon. Despite the arguably greater need for desalination in the service area, initial proponents of the	The Santa Ana Water Board acknowledges that OCWD has not yet determined how the water will be distributed in Orange County. Initially, the water is planned for use as recharge water for the Talbert seawater barrier and by the City of Huntington Beach. OCWD anticipates finalizing the distribution plan once all permits are in place. Nonetheless, as discussed in Attachment G.2 to the Tentative Order, while the project proponent or a water supply agency must make a showing of why the desalinated water is needed, the

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			Doheny Beach facility are still concerned with the potential for drastic departure between projected and actual costs. This shows that even dire need may not justify exorbitant cost, and here, neither the Regional Board, Poseidon, nor any of its proponents, have established sufficiently established “identified need” for Poseidon’s desalinated water in the proposed service area as required by the Ocean Plan.	relevant water supply agency is responsible for water supply planning, not the Santa Ana Water Board.
0192.10			IV. The Mitigation Requirements in the Draft Permit Are Inadequate Poseidon’s proposed mitigation efforts primarily concern the maintenance and “restoration” of the Bolsa Chica Wetlands, the southernmost portion of which are located adjacent to the current AES facility. As mentioned in II above, AES is currently scheduled to cease intake and discharge operations on December 31, 2020. This would provide a valuable opportunity for the surrounding Bolsa Chica wetlands to return to background environmental conditions – an opportunity that both state lawmakers and environmentalists have long advocated for. However, the proposed location of Poseidon’s facility would squander that opportunity.	See response to comment 177.07, which notes the proposed mitigation project provides more acres than required, based on the ETM/APF analysis. See also responses to comments 0070.05 and 0070.06. The Ocean Plan requires that the project proponent mitigate for loss marine life or habitat due to construction and operation of the facility. (Chapter III.M.2.e.). If there are additional impacts caused by onshore construction of the facility, these impacts may require additional mitigation that will be addressed by the California Coastal Commission through a Coastal Development Permit application.

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0192.11			In the Draft Permit, the Regional Board determined that the Facility will detrimentally impact approximately 421.42 acres of wetlands. Yet, the Draft Permit requires Poseidon to mitigate for only 89.47 acres. While this 1:5.8 ratio is higher than the 1:10 ratio prescribed by the Ocean Plan, it still falls well short of a desirable solution. The Draft Permit's mitigation measures would give Poseidon credit for performing restoration that would likely occur naturally were it not for Poseidon continuing intake and discharge activities at the site. As with the other aspects of the Regional Board's feasibility analyses in the Draft Permit, the mitigation measures imposed on Poseidon should be reevaluated to adequately consider the economic, environmental, social, and technological factors, particularly in light of the site's potential to return to baseline environmental conditions.	See responses to comments 0070.05, 0177.05 through 0177.08The mitigation ratio was revised to 1:4.5 As noted in response to comment 0070.04 and discussed in Attachment G.5 to the Tentative Order, the required mitigation is approximately 109 acres. This amounts to a 20-acre increase from the previous recommendation by Santa Ana Water Board staff. The mitigation measures the Discharger proposes would not occur naturally. In fact, the ocean inlet at Bolsa Chica will naturally fill with sediment and close, if the Discharger or another entity does not provide maintenance dredging. The closing of the inlet would significantly degrade the function and productivity of the Bolsa Chica wetlands. As discussed in attachment G.4 and G.5, the maintenance dredging is an essential component to the success of the Bolsa Chica ecosystem. The discharger's proposed restoration and enhancement activities will provide further significant benefits to the overall function of Bolsa Chica, but these improvements would not occur without a responsible party to undertake these actions.

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0193.01	Elizabeth Taylor and Mandy Sackett Surfrider Foundation	Jan 21, 2020	Surfrider strongly opposes the Draft Permit issued for the Poseidon-Huntington Beach ocean desalination project. The Huntington Beach plant would be the first to be permitted under California's new Water Quality Control Plan for the Ocean Waters of California 2016 Desalination Amendment (OPA). It violates the letter and the spirit of the Ocean Plan Amendment and would set an unacceptably low standard for interpretation of the new regulations that could be mimicked throughout the state. While desalination may have a time and a place in California, this proposal in Huntington Beach is not needed and is not sited or designed in accordance with state regulations. Surfrider is not categorically opposed to ocean desalination. In some places that have exhausted conservation and recycling potential, desalination can be a valuable new water source. For most of the state, however, there are better options to meet water needs and this includes Orange County where Poseidon Resources, LLC has proposed a plant for Huntington Beach.	See responses to comments 0193.02 through 0193.13.

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			Conservation and efficiency are the easiest and most cost-effective supply options, and the state has a new framework to scale up efficiency. Recycling and stormwater capture are also more affordable, and are being adopted by communities across the state. These solutions also offer an added benefit of reducing polluted runoff, while seawater desalination impairs water quality through the release of toxic brine. These other options also avoid marine life mortality associated with open ocean intake for desalinated water. We recycle just 13% of wastewater in California. According to research by the Pacific Institute, we could increase our water conservation by 57% if cities would adopt common conservation and efficiency measures. Surfrider's objections to the Poseidon-Huntington Beach ocean desalination project are numerous but will focus on failure to comport with the OPA requirements. To comply with the OPA and its relevant regulations, the Santa Ana Water Board must analyze separately as independent considerations a range of feasible alternatives for the best available site, the best available design, the best	

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			available technology, and the best available mitigation measures to minimize intake and mortality of all forms of marine life. The Draft Permit fails to meet these requirements, as these comments elaborate below, including: (1) Poseidon has not adequately demonstrated need for the project; (2) there is insufficient data to adequately measure impacts to marine life and a failure to adequately address marine mortality and water quality impacts; and (3) the proposed plant does not comply with mitigation requirements.	
0193.02			1. Poseidon Has Not Adequately Demonstrated Need for the Project The Ocean Plan requires that an identified need for the desalinated water must be consistent with an urban water management plan (UWMP) or similar planning document. The mere inclusion of a 50-million gallon a day ocean desalination facility in an UWMP list of potential water sources does not demonstrate “need” in the region. At present, Orange County’s existing water supply is anticipated to be sufficient to cover its anticipated needs through 2040. The Metropolitan Water District of Orange County (“MWDOC”) has published an Urban Water Management Plan which	See responses to comments 0014.04, 0055.01, 0148.02, 0148.09, 0177.10 and 0185.02.

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			highlights several options to ensure the conservation of Orange County's water supply through this date. These alternatives include water recycling, stormwater capture, and enhanced water storage facilities. MWDOC has also identified brackish groundwater desalination, as well as smaller seawater desalination projects as viable, and preferred, local water supply options. As Regional Board staff note in the Tentative Order, MWDOC recently released its 2018 reliability study that projects water supply and demand in Orange County through the year 2050 and compares local projects that can meet the forecasted water demands. The proposed Poseidon project is among the local projects that were compared and ranked last based on system reliability and supply reliability metrics. Further, even in a multi-year drought, MWDOC is capable of meeting all customers' needs through 2040 via its water reserves. MWDOC staff have also determined that the Poseidon-Huntington Beach ocean desalination plant would "supply more water than needed in most every year." While seawater desalination projects are among these options included in the Urban Water Management Plan, this	

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			inclusion by itself is not sufficient to demonstrate need for such a facility in Orange County. We urge the Regional Water Board to deny the Poseidon-Huntington Beach ocean desalination permit. Our communities should invest in ocean desalination only after all feasible and less-costly methods of water conservation have been pursued and implemented.	
0193.03			2. Failure to Address Impacts to Marine Life and Water Quality This permit violates the Ocean Plan mandate that marine communities, including vertebrate, invertebrates, and plant species, shall not be degraded. In the Ocean Plan Amendment, the State Water Board has made a clear and definitive finding that subsurface intakes are the preferred technology for ocean desalination in California. In addition, California Water Code Section 13142.5(b) makes it clear that desalination plants must use “best available site, design, technology, and mitigation measures feasible … to minimize the intake and mortality of all forms of marine life.” The Draft Permit must be rejected because it incorrectly relies on freshwater drawdown	Although the Ocean Plan requires that marine communities not be degraded, the Ocean Plan does allow for a zone of initial dilution (ZID) in which the final effluent mixes with the receiving water and in which applicable water quality objectives (WQOs) may be exceeded. In the case of the proposed Facility the ZID is equivalent to the brine mixing zone (BMZ) where a dilution ratio of 15:1 (volumes of seawater per volume of effluent flow) would be applied, with the proposed use of a linear multiport diffuser to allow for the reduction of the salinity of the effluent brine plume and comply with the salinity WQO of the Ocean Plan within a short distance from the effluent structure.

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			as the reason for concluding subsurface intakes are infeasible. The Regional Water Board erroneously concluded that subsurface intakes were infeasible for a 50 MGD facility without independently determining the best available design capacity to minimize marine life mortality. The Draft Permit inappropriately relies on 1-millimeter screens – screens that only have a one percent rate of efficacy in preventing entrainment or impingement of marine life – in place of subsurface intakes to reduce marine life mortality.	In accordance with the Ocean Plan, section V.A.2.d.i. of the Tentative Order specifically requires discharges from the Facility to comply with the narrative marine communities protection WQO. This section of the Tentative Order provides that "[m]arine communities, including vertebrate, invertebrate, and plant species, shall not be degraded." The Discharger must meet this objective outside of the brine mixing zone and must provide mitigation for all impacts to marine life within the brine mixing zone. For wedgewire screen efficiency, see response to comment 0004.03. For freshwater drawdown, see responses to comments CCKA I.A. and CCKA I.B. For 50 MGD intake capacity, see responses to comments CCKA I.D and CCKA I.E. The Tentative Order also includes salinity effluent limitations (section IV.A.1.d of the Tentative Order) intended to ensure that the receiving water limitation for salinity is met. In

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				compliance with the Ocean Plan, additional effluent limitations are specified for a range of water quality constituents (Section IV.A.1.a), as well as for toxicity (Section IV.A.1.b), pH (Section IV.A.1.d) and temperature (Section IV.A.1.e) to ensure that beneficial uses are protected. As set forth in Attachment E to the Tentative Order, the Discharger must implement an extensive receiving water quality and biological monitoring program to assess whether the Facility's discharges comply with effluent limitations, receiving water limitations, and other permit requirements. See responses to comments 0035.02, CCKA I.B and CCKA I.C regarding feasibility of subsurface intakes.
0193.04			…. The Ocean Plan requires the use of the Empirical Transport Model/Area of Production Foregone (ETM/APF) method to estimate entrainment of marine life. However, the staff report notes that there was insufficient data to calculate ETM/APF at the relevant sites. Rather than require additional monitoring to obtain the necessary data, the Draft Permit allows for	See response to comment CCKA.III.A, CCKA.III.B and CCKA.III.C. The Ocean Plan only requires the owner or operator of a desalination facility to conduct an ETM/APF analysis to assess potential impacts from entrainment when using a surface intake (chapters III.M.2.d.(1)(c)iii and III.2.e.(1)(a)). The Ocean Plan does not require the use of the ETM/APF

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			an alternative approach, in violation of the Ocean Plan requirements.	method to determine which alternative site is the best site feasible for a surface intake (chapter III.M.2.b.(1-7). In accordance with chapter III.M.2.e.(1)(a), the Discharger estimated marine life mortality for the proposed surface intake using the ETM/APF method. Dr. Raimondi, an expert on the use of ETM/APF method for both Once Through Cooling and desalination intakes, provided review of the Discharger's calculation of ETM/APF for the proposed intake. Dr. Raimondi determined that sufficient larval data are available for Station E, location of the proposed surface intake, to calculate an ETM/APF to estimate marine life mortality that would result from the operation of the facility. Therefore, pursuant to Ocean Plan Chapter III.M.2.e (and sections therein), an ETM/APF analysis was completed for the proposed intake. This analysis was also utilized in determining mortality from the operation of the diffuser, specifically shearing-related mortality. Impacts to marine life from construction were calculated separately and did not require an ETM/APF analysis.

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				Although not specifically required under the Ocean Plan, an ETM/APF analysis could also be used to analyze potential impacts from a surface intake located at alternative sites (i.e., stations D2, D4, O2, O4, U2, and U4). However, sufficient larval data were not available to conduct an ETM/APF analysis for these alternative intake locations, and as such, an ETM/APF analysis could not be used to compare alternative intake sites. In lieu of an ETM/APF analysis, Santa Ana Water Board staff relied on the neutral third-party expert, Dr. Raimondi to evaluate multiple lines of evidence, which were used to evaluate the direct and indirect effects on marine life for the assessment of the best available site for a surface intake (see also Section 3 of Attachment G.1 to the Tentative Order, and response to comment 0035.05).
0193.05			The proposed facility will produce high-salinity brine and then discharge it into the coastal ecosystem. In addition to elevating salinity levels, the discharged brine contains residual chemicals used in the desalination process that are toxic to marine organisms. Effluent limitations listed in Table 4 of the Draft Permit do not comport with discharge prohibitions and	Effluent Limitations are intended to be protective of Beneficial Uses as noted in responses to comments CCKA IV.A, CCKA IV.B, CCKA IV.C, CCKA IV.D, and CCKA IV.E. Table E-1 of the Tentative Order contains extensive monitoring requirements, including monitoring at

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			water quality objectives of the Ocean Plan. There is no analysis of impacts to marine life caused by these effluents, which include persistent chemicals such as hexavalent chromium and large quantities of oil and grease. The permit fails to address the complexity of ocean ecosystems and the fact that models are often inaccurate. For example, the permit states that models indicated that initial dilution will always be completed within 100 meters of the discharge point and therefore monitoring stations beyond 100 meters are not required. However, a recent independent study at the Carlsbad desalination facility found elevated salinity up to 600 meters beyond the discharge point, well outside of the permitted area. Poseidon claims that monitoring is not necessary beyond 100 meters of the discharge point. However, this study proves that claim erroneous. It also shows that the harm to marine life is greater than predicted and is indicative of the failure to require adequate controls to prevent harm to marine life.	distances greater than 100 meters. This monitoring will provide a check on the results of the Discharger's modeling and will provide the Santa Ana Water Board with information regarding compliance with receiving water limits. See also responses to comments 0004.01, 0020.02, 0033.01, 0035.04, 0035.06, 0050 and 0062.02.
0193.06			Poseidon's Proposed Desalination Plant Does Not Comply with Mitigation Requirements	See responses to comments 0070.05, 0070.06, 0070.07, and 0177.04 through 0177.07. The proposed mitigation does comply with the Ocean Plan's

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			The Ocean Plan requires expansion, restoration, or creation of specific habitat types to offset impacts to marine life. To comply with the Ocean Plan Amendment, the Santa Ana Water Board must first analyze as an independent consideration the best available mitigation measures to minimize intake and mortality of all forms of marine life. As proposed, the Poseidon–Huntington Beach ocean desalination project would withdraw roughly 107 million gallons of seawater each day, killing all larvae and other marine life caught in its open-ocean intake system, and would discharge 60 million gallons of brine waste a day into coastal waters. The OPA requires mitigation to be accomplished through expansion, restoration or creation of marine habitat. However, the calculated mitigation includes only 5.5 acres of restored wetlands, 15 acres of "restoration credit" from improved circulation, and 108 acres of "restoration credit" from maintaining tidal influence that already exists. As a result, the Regional Board's mitigation is not large enough to restore the acreage harmed by the Poseidon Huntington Beach ocean desalination project. Further, the	requirements for best available mitigation feasible. See also response to comment 0193.05 regarding additional monitoring requirements at distances greater than 100 meters.

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			overwhelming majority of mitigation is 108 acres of credit for dredging the inlet. This maintenance dredging does not equate to a satisfactory mitigation requirement. The Ocean Plan clearly states that in-kind mitigation is preferred and should be required. In addition, based on the 2019 Carlsbad study referenced above, the area of impact is significantly greater than 100 meters beyond discharge, requiring significantly greater area for mitigation. In sum, based on its evaluation and issuance of the Draft Permit, the Santa Ana Water Board has erroneously determined that the proposal uses the best available mitigation measures. Hereafter, evidence is presented that Poseidon Resources has not been a trustworthy permit holder, especially with respect to numerous and ongoing discharge violations. To better understand what to expect in Huntington Beach, we can look to Poseidon's Carlsbad and Tampa Bay plants.	
0193.07			Poseidon's Carlsbad plant began delivering water to San Diego County in December 2015 and is the nation's largest seawater desalination plant. Poseidon's efforts to cut costs and maximize profit	The San Diego Water Board adopted a revised Order for the Poseidon Carlsbad Facility (Order R9-2019-0003) on May 8, 2019 that updated toxicity testing requirements. Since adoption of the

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			have resulted in numerous and ongoing water quality violations and exceedances since operations began. In April 2016, the Regional Water Board issued a notice of violation finding that the Carlsbad plant had failed to comply with several provisions of its discharge permit, including failures to comply with discharge prohibitions, receiving water limitations, and effluent limitations, and failure to monitor in accordance with discharge provisions. Later, in December 2016, the Regional Water Board issued a staff enforcement letter describing 19 occasions on which Poseidon had exceeded daily maximum toxicity limits. In its annual discharge permit monitoring report for 2016, Poseidon stated that it had exceeded chronic toxicity limits in 30% of tests. In 2017, the Regional Water Board cited Poseidon for exceeding chronic toxicity violations in 36 out of 90 total toxicity tests as well as 11 deficient monitoring and 2 reporting violations. In 2018, Poseidon was cited for 11 chronic toxicity violations, 1 deficient monitoring violation and 1 Category one pollutant violation for exceeding total suspended solids effluent	revised Order, there have been no exceedances of the toxicity limit. Also, in Table F-5 of section II.D (Compliance History) of the Fact Sheet (Attachment F) to Order R9-2019-0003, the San Diego Water Board does not list the chronic toxicity exceedances reported by the Discharger as actual violations. Finally, in the last paragraph of section II.D. of the Fact Sheet (Attachment F to Order R9-2019-003), the San Diego Water Board states the following: "Additionally, between December 2015 through January 2018, the Discharger reported 61 exceedances of the chronic toxicity maximum daily effluent limitation of 16.5 TUc at monitoring location M-001 of the undiluted brine. In response to the effluent limitation exceedances for chronic toxicity, the Discharger reported that the violations are an artifact of the chronic toxicity effluent limitation in Order No. R9-2006-0065 not accounting for the flow augmentation dilution water provided by the Encina Power Station. Monitoring samples that account for the flow augmentation dilution water provided by the Encina Power Station

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			limitations. In 2019, Poseidon violated order conditions by causing discoloration of receiving waters beyond the discharge channel. They also failed to maintain ELAP laboratory certification for turbidity, received 1 chronic toxicity violation and 4 salinity exceedances and conducted TCDD analysis for the entire CY19 Q3 reporting period out of accordance with the orders. For several years, Poseidon was unable or unwilling to resolve the chronic toxicity issue. The testing limits established for chronic toxicity at location M-001 (see Figure 1), before the brine is diluted, and listed as enforceable in the plant's original NPDES permit. To resolve the issue, Poseidon simply proposed to remove the testing location where the violation occurred all together. Fortunately, the San Diego Regional Water Board did not remove the testing location in Poseidon's new stand-alone permit that was approved in 2019. The new permit was necessary due to the closing of the Encina Power Plant. In the new permit, chronic toxicity is listed as enforceable only at location M-002, after the brine is diluted and no longer at M-001 (pre-dilution).	did meet the chronic toxicity effluent limitation prior to discharging to the Pacific Ocean, and also passed the TST statistical approach for determining compliance with chronic toxicity monitoring included in this Order. Nevertheless, the Discharger conducted an extensive Toxicity Identification Evaluation (TIE), and the results were inconclusive as to the source and cause of toxicity." Also, see response to comment 175.01

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			Poseidon's explanation of the toxicity exceedances comes without any further justification for changing the testing requirements. The new order states that: "[…] between December 2015 through January 2018, the Discharger reported 61 exceedances of the chronic toxicity maximum daily effluent limitation of 16.5 TUc at monitoring location M-001 of the undiluted brine. In response to the effluent limitation exceedances for chronic toxicity, the Discharger reported that the violations are an artifact of the chronic toxicity effluent limitation in Order No. R9-2006-0065 not accounting for the flow augmentation dilution water provided by the Encina Power Station. Monitoring samples that account for the flow-augmentation dilution water provided by the Encina Power Station did meet the chronic toxicity effluent limitation prior to discharging to the Pacific Ocean, and also passed the TST statistical approach for determining compliance with chronic toxicity monitoring included in this Order. Nevertheless, the Discharger conducted an extensive Toxicity Identification Evaluation (TIE), and the results were	

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			inconclusive as to the source and cause of toxicity" (emphasis added).	
0193.08			In summary, Poseidon's explanation for the chronic toxicity violations is that the brine is undiluted. However, this is precisely the point of the (once) enforceable testing location M-001. The pre-dilution limitation was set according to acceptable chronic toxicity limitations in concentrated brine. Testing location M-001 is crucial to understanding the Carlsbad plant's discharge. There is an acceptable limit of chronic toxicity – no matter how much the brine is diluted. This is because the discharge is released into the nearshore environment upon which marine life, ocean users, beach goers and recreational users rely. According to toxicologists, there is a potential for accumulation of elements of the chronic toxicity in the nearshore environment, despite dilution.	See responses to comment 0193.05 and 0193.07.
0193.09			Poseidon completed a series of toxicity evaluations to determine the cause of the chronic toxicity and released the final evaluation report (TRE report) in April 2018 (Attachment A). The report rules out several potential direct causes such as salinity and harmful algal blooms. The report found that certain chemical and	See responses to comments 0006 and 0193.07. With respect to the request to add sediment monitoring, sediment monitoring is currently required in the MRP of the Tentative Order. Semi-annual and annual monitoring is required

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			polymer additives could contribute to the toxicity findings at higher concentrations. And though the evaluation did not test the actual concentration of polymer additives in the final effluent, the report states that the effluent is "suspected" to have low enough additive concentration levels that polymers would not have a significant effect. The TRE report speculates that a confluence of polymer and chemical additives may be at fault. In light of the Carlsbad plant's past and ongoing discharge permit violations and the inconclusive results of the Poseidon's toxicity evaluations, the San Diego Regional Water Board included increased sampling and monitoring locations in their stand alone permit issued in 2019. The Sediment Assessment for Physical and Chemical Properties section of the permit, attachment E requires Poseidon to conduct a sediment assessment as part of the Benthic Monitoring Work Plan. The results of the first Sediment Assessment samples will be available in July 2020. According to the plant's order, "Sediments can accumulate these particles over the years until the point where sediment	to be conducted for a suite of chemical constituents. See Attachment E of the Tentative Order, section VIII.B and Table E-5.

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			quality is degraded and beneficial uses are impaired. Benthic organisms are strongly affected by sediment contaminant exposure because these organisms often live in continual direct contact with sediment/pore water, and many species ingest significant quantities of sediment as a source of nutrition." Given the potential for serious impacts, along with ongoing chronic toxicity violations at the Carlsbad plant, Surfrider is highly concerned about the impact that such a violation would have in Huntington Beach over several years if left unresolved as it was in Carlsbad. Notably, the impact may be exacerbated in Huntington Beach given that the plant would not have a dilution pond. In Huntington Beach, the exceedingly toxic brine would be discharged directly into the ocean through a multi-port diffuser. At a minimum, Poseidon should be required to conduct an annual Sediment Assessment for Physical and Chemical Properties in Huntington Beach as they are in Carlsbad and as described in the Carlsbad plant order no. R9-2019-0003 on page E-17 in Attachment E.	

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0193.10			There are ways to make desalination much less impactful and harmful to humans and marine life. One of those is to use subsurface intakes. Subsurface intakes are a way to reduce marine life entrainment and impingement associated with open ocean seawater intake and it reduces the toxicity of discharge by avoiding chemical additives in the first place. We must locate desalination plants in places where subsurface is feasible. One way to potentially avoid chronic toxicity issues is to avoid chemical additives in the first place. This is exactly what subsurface intakes do – as Figure 2 above demonstrates. A 2013 study created the diagram above to show the reverse osmosis treatment process. The study surveyed sea water reverse osmosis plants located globally and found that "[i]n many cases, the water produced from a subsurface intake can be transmitted directly to the cartridge filters, thereby eliminating mixed media filtration, coagulation processes, and the need to use various chemicals (e.g., ferric chloride, chlorine)." Subsurface intakes, shown at the bottom of the diagram, are able to	Santa Ana Water Board agree that subsurface intakes are less impactful to marine life than open ocean intakes. As detailed in Attachment G and G.1 to the Tentative Order, the sites analysis included an assessment of feasibility of subsurface intakes (SIGs and slant wells). The proposed alternative sites did not support subsurface intakes at the proposed volume for the facility; however, based on the analyses conducted by the Discharger, a lesser amount of water can be provided by 3 slant wells operating at a total extraction volume of 3.8 MGD, based on OCWD's specification for protection of its seawater intrusion barrier system, regardless of the total volume that Poseidon will propose to produce at the HBDP. As discussed in Attachment G, Finding 20 and Attachment G.1, subsurface intake systems were ruled out based on feasibility (SIGs) and possible impacts to the freshwater aquifer and wetland areas (slant wells) in the vicinity of the preferred site location.

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			bypass many of the chemical laden treatment processes. The main finding of the publication is that: "The use of chlorine, coagulants, and other chemicals can be essentially eliminated by the use of subsurface intake systems. Reduction in chemical use and power consumption in operation of pretreatment systems causes a reduction in the carbon footprint of a sea water RO system and in potential environmental impacts." Thus, subsurface intakes would clearly reduce the likelihood of toxicity exceedances in brine discharge. Unfortunately, the Carlsbad plant and Poseidon's proposed Huntington Beach plant use outdated and inefficient open ocean intakes. With open ocean intakes, pretreatment is done with anti fouling chemicals to reduce fouling of membranes and increase permeate water quality and to kill all the marine life they've sucked in. Figure 2 demonstrates the number of steps involved with pretreatment from open ocean intake compared to subsurface intakes in the diagram here. Subsurface is shown at the bottom of the diagram with far fewer processing steps.	The 5th round of groundwater modeling performed by Poseidon's consultant, Geosyntec, used OCWD's specified 1,000 acre-feet per day as the maximum allowable freshwater removal from the inland aquifer by slant wells. Based on that maximum, Poseidon would be able to use approximately three slant wells, and extract only 3.8 MGD without exceeding OCWD's requirement, regardless of the total volume that Poseidon might propose to produce at the HBDP.

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0193.11			Desalination may not be as drought friendly and reliable as Poseidon would like us to believe. Poseidon's Carlsbad plant has had numerous and ongoing supply water shortfalls since operations began. Desalination is not the miracle water supply it's being painted out to be by Poseidon and it's clearly far less reliable and far more costly than those paid by Poseidon are spinning it to be. The San Diego County Water Authority's 2019 fiscal year report on the Carlsbad desalination plant was recently released and not surprisingly, it shows poor performance. The report showed that water from the Carlsbad facility was far more costly than any other alternative, at a cost of $2,685 per acre foot, and is expected to increase 5 percent over the next year, around $2800 per acre foot. 15 In 2018, the average cost for the year was $2,511 per acre-foot. The myth of Poseidon's water getting less expensive over time is just that. In fact, Poseidon's desalinated water rings in as one of California's most expensive water sources. In 2019, the County Water Authority paid an astonishing total of $121 million for Poseidon's desalinated water for one year.	Many of the issues raised in this comment relating to Carlsbad are outside the scope of the Tentative Order and the Santa Ana Water Board's purview. For additional information regarding the Carlsbad facility, contact the San Diego Regional Water Quality Control Board. Also note that San Diego County Water Authority submitted letters addressing some of these concerns. (See comments 0026.01–0026.06 and 0184.01–0184.04. See responses to comments 0032.01 regarding the cost of the desalinated water and 0004.19 regarding alternative water supply options.

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			In one instance in 2018, the plant was $3 million over budget due to what they called an “unexpected” increase in energy costs. Poseidon also failed to deliver enough water to comply with their contract according to the annual report, falling short by more than 5,000 acre feet and paid an associated $1.9 million penalty in 2019. Despite this, the report also indicated that Poseidon received a ‘Management Fee’ from the Water District based on their performance and the amount of the fee was not disclosed. Since Poseidon’s Carlsbad desalination plant became operational, it has been notably unreliable. In the San Diego County Water Authority’s recent 2018 Performance Report for the Carlsbad plant, significant water delivery shortfalls were reported. Poseidon was unable to deliver 10,880 acre-feet of a requested 51,772 acre-feet. The previous year, the plant operated at similar shortfalls of 9,196 acre-feet. Both years, the plant fell short by approximately 20% on average, and in the third quarter of 2017, operating capacity was at just 42%. Is this really the	

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			rate of reliability we want to depend on for critical water sources? The primary cause, up to 60% of the shortfall in 2018, was due to a mechanical failure of the plant's reverse osmosis high-pressure feed piping (train 5). Other causes of the water supply shortfalls include: ocean water quality issues such as algae blooms and elevated ocean water salinity; SDG&E power outages and other mechanical, inspection and repair issues. In 2018, the water supply shortfalls resulted in payment from Poseidon to the County Water Authority of $5,359,070 for not meeting its supply obligations. Reliability is one of desalination's key selling points, yet the Carlsbad Desalination Plant has been anything but reliable. Meanwhile, Poseidon has been spending millions lobbying state officials and making campaign contributions, as well as hiring influential lobbyists including former Senator Barbara Boxer and Axiom Advisors, a lobbying firm with ties to Governor Newsom. Poseidon is also funding a front group called OCWISE. All this in order to push forward a plant that does not conform with California state	

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			regulations and to skirt our environmental protection laws.	
0193.12			In March 1999, Florida water officials authorized the construction of a 25 MGD desalination facility at Apollo Beach to serve the city of Tampa. Poseidon Resources was selected to design, build, own and operate a desalination plant for local water agency Tampa Bay Water. Tampa Bay Water chose the private partnership approach in order to save costs – but, as explained hereafter, this tactic was costly in the long run. Since construction, the plant has been fraught with reliability issues. As noted in Carlsbad, reliability is a key claim of water agencies and private companies that are pushing desalination. However, this claim has only become more problematic over the years, and especially now in light of the historical record of large-scale desalination globally. The Tampa facility was promised to be privately owned and operated with a budget of $110 million and scheduled to be operational in 2003. Intended to offset declining groundwater levels and a growing population, the Poseidon facility	This comment falls outside the scope of the Tentative Order. See also responses to comments 0004.19 and 0032.01.

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			would generate enough water to supply 1.8 million customers. In Tampa Bay, Poseidon Resources claimed that the cost of water would be very low and competitive with other local sources. However, the project was fraught with difficulties, and after 7 years, was still not in operation due to serious management and technological failures. After a series of contractor bankruptcies and running $40 million over budget, the Tampa Bay desalination plant opened five years behind schedule in 2008. The plant failed its initial performance test, and required $30 million dollars in repairs to replace such items as corroded machinery and frequently fouling membranes. To date, Tampa has consistently failed to meet their promised freshwater production levels. According to one report, the membranes lasted months instead of years and cartridges that should last months were lasting for weeks. In 2002, Tampa Bay Water had to buy out Poseidon's interest in the plant to complete it, which ended up saving the utility $1 million/year in financing charges.21 After several years of	

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			redesign, the 2018 Comprehensive Annual Financial Report indicates that Tampa Bay Water produced only 5.8 mg/d of desalinated water in 2018, which has been on the steady decline from the 2009 amount of 16.6 mg/d. This failure not only weakens Poseidon's argument of water independence, but also demonstrates the significantly increased costs of private desalinated water. Similarly to the Carlsbad plant, the facility also violated their sewer discharge permit due to the discharge of cleaning chemicals used to treat the sensitive membranes.	
0193.13			Additionally, according to Poseidon's term sheet with the Orange County Water District (OCWD), OCWD will be required to purchase desalinated water whether needed or not, guaranteeing Poseidon and its investors a substantial profit. However, this places ratepayers at substantial financial risk. Elsewhere, such as Santa Barbara, Tampa Bay and four of the six plants built in Australia, water agencies have decided to let expensive desalination plants sit idle due to extremely high operational costs. Orange County Water District will not have that option, even in the wettest of years.	The Santa Ana Water Board is not and will not be a party to any contract related to the purchase of the water and cannot negotiate or enforce the terms of any such contract.

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			With so many factors that can go wrong – and obviously are going wrong – we need to make sure we can trust the entities we rely on to deliver our water and develop our water infrastructure.	
0194	Sam Ross Visit Carlsbad A Desalination Marketing Organization		I am writing to shed some light on the many benefits the Claude "Bud" Lewis Carlsbad Desalination Plant has brought to our region and to attest to Poseidon Water's strong dedication to the local marine environment. As the committed steward of the Agua Hedionda Lagoon, Poseidon Water has steadfastly upheld its promise to preserve and protect our local marine environment here in Carlsbad. Since assuming stewardship last year, Poseidon has taken steps to help ensure the ongoing vitality of this magnificent estuary while also preserving local access to the Lagoon's many recreational attractions. Poseidon Water has also proven to be a great neighbor, and we're proud to have such an important regional resource like the Carlsbad Desalination Plant contributing to the Agua Hedionda Lagoon's health and longevity.	See response to comment 0057.

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			The Agua Hedionda Lagoon encompasses more than 400 acres of marine, estuarine and wetlands habitat teeming with hundreds of fish, invertebrate and bird species. Today, Poseidon Water maintains the periodic dredging of the lagoon which ultimately improves its overall environmental health and allows it to realize the life-sustaining benefits of an open connection to the Pacific Ocean. This stewardship also helps maintain the lagoon's tidal circulation, which is critical to the biological operations of the Carlsbad Aquafarm and Hubbs-SeaWorld Fish Hatchery and provides extra sandy to keep local beaches beautiful and sandy for visitors to enjoy.	
0195	Timothy Karpinski	Jan 12,2020	I strongly oppose this action by Poseidon. I'm a local fisherman who will be affected by this action. Please stop this unnecessary and wasteful activity!	Comment noted; however, a response is not required as no specific comment is made on the Tentative Order.
0196	Timothy Stripe Grand Pacific Resorts	Jan 13,2020	On behalf of Grand Pacific Resorts, I am writing in support of the critical role desalination plays in supporting the San Diego region's booming tourism industry. As you know, tourism is a vital economic engine for our state, injecting millions of dollars each year into local economies, and generating billions more in local and	The comments relate to the importance of the Carlsbad Desalination facility to providing a reliable water source to support the San Diego tourism industry. The comments raised are not specifically relevant to the proposed Huntington Beach desalination facility.

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			state tax revenue. However, one of our biggest operational concerns is the reliability of our local water supply, because without it, we can't maintain our operations and provide the quality of service that attracts guests. That's why I've been a longtime supporter of the Carlsbad Desalination Plant, which provides San Diego County with 50 million gallons of drought-proof water every day. As the largest seawater desalination plant in the nation, the Carlsbad plant provides tremendous benefits for the San Diego region's water reliability and gives local businesses the assurances they need to thrive. Additionally, the plant has boosted the local tourism market by attracting 30,000 visitors since its opening, and the steady water supply it provides has helped enhance the region's economic competitiveness.	
0197	Brad Coffey The Metropolitan Water District of Southern California	Jan 21,2020	The purpose of this letter is to express The Metropolitan Water District of Southern California's (Metropolitan) support for seawater desalination as part of our service area's water resource portfolio. The severity of California's recent drought, coupled with the extended dry period on	Comment noted. See responses to comments 0003.01 and 0094.

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			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 stabilizing Metropolitan's imported supplies while developing new local resources to accommodate projected future growth. A 2015 update to the IRP established a local supply production goal—which includes desalinated seawater—of 2.4 million acre-feet by 2040. The Huntington Beach Seawater Desalination Project is identified in the IRP as a potential project that can help the region meet these goals. Desalination, like other local resource development and conservation programs, provides benefits across the region regardless of the project's location. Benefits include helping increase reliability, improving water quality, reducing imported water demands, decreasing the burden on infrastructure, reducing system costs, freeing up conveyance capacity, providing critical	

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			insurance against potential imported supply disruptions, and helping meet legislative mandates.	
0198	Allan Bernstein Orange County Water Independence Sustainability and Efficiency (OCWISE) 16K signatories	Jan 15, 2019	More than 16,000 individuals have signed the petition asking the Santa Ana Regional Water Quality Control Board and the California Coastal Commission to grant the final permits necessary to build the Huntington Beach Seawater Desalination Plant	Comment from the signatories is acknowledged. The Coastal Commission permit is a separate action and is not contingent on the Santa Ana Water Board's action, nor is the Coastal Commission bound by any action by the Santa Ana Water Board.
0199.01	Surfrider 1K signatories		Each signatory submitted a form letter with the following comments: I am writing in opposition to the Regional Water Board permit for the Huntington Beach - Poseidon Desalination Plant. Poseidon's proposed desalination plant would have a disastrous impact on California's marine life, ocean water quality and greenhouse gas emission goals. The draft Permit disregards the state's desalination regulations and would set a terrible precedent for future desalination projects. The draft permit holds a private company looking to profit off Californian's drought fears to an	See responses to comments 004.01, 0020.02, 0033.01, 0035.06, 0050, 0062.02 regarding marine life impacts. See responses to comments 0004.05 and 0004.12 regarding greenhouse gas emissions. See responses to comments 0082.02, 0096.02, 0103.02 and 185.01 regarding the precedential nature of the Santa Ana Water Board's action. With regard to a private company proposing the project, this comment falls outside the scope of the Tentative Order.

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			abysmally low standard for the protection of our precious coastal resources.	See also responses to comments 0004.19 and 0032.01.
0199.02			Since 2010, the residents of Orange County have dramatically reduced our cumulative demand for freshwater, despite significant population and economic growth. The Orange County Water District has expanded Orange County's world-renowned Groundwater Replenishment System by 30 million gallons a day and is set to expand by that size again soon. Now Los Angeles County is planning a similar Groundwater Replenishment System that will contribute 60 million gallons a day to replenish Orange County's groundwater basin. Further, a recent study by the Municipal Water District of Orange County ranked Poseidon's project as the least attractive option for meeting Orange County's water needs.	See responses to comments 0004.19 and 0011, 148.09, and 149b.08.
0199.03			California state regulations for seawater desalination require projects to utilize sub-surface intakes to avoid impacts to marine life and to mix the brine with the nearby wastewater discharge before disposal to the ocean. The draft permit does not adequately address the absence of these design features in Poseidon's proposal.	See responses to comments 0035.02, 0082.04, CCKA I.B and CCKA I.C regarding feasibility of subsurface intakes. 0004.01, 0036.01, 0082.02, 0168.02 and CCKA IV.A regarding availability of wastewater to mix with the brine discharge.

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			Instead, Poseidon plans to use outdated and harmful technology.	
0199.04			The people of Orange County do not want this project. We do not want to perpetuate the industrialization of our coastline. The people of California own our ocean public trust resources, yet Poseidon proposes to profit from taking seawater and converting it to the most expensive water supply available without showing a need for the water. It is your responsibility to protect our public trust resources. We deserve clean water to recreate in, clean air to breathe and a beautiful coastline to enjoy and share with visitors.	The California Coastal Commission is the agency responsible for considering coastline development as part of their review and permitting process. See response to comment 0032.01 regarding cost of the desalinated water and responses to comments 0014.04, 0055.01 and 0148.02 regarding the need for the water. See responses to comments 0004.01, 0004.11, 0020.02, 0033.01, 0035.05, 0050, 0062.02 regarding water quality.
0199.05			Please stand up to Poseidon and reject the currently proposed draft permit. Poseidon has failed to demonstrate adequate need for this project and we should not undermine our state regulations so that private corporations can exploit and profit off of our coastal resources.	See responses to comments 0014.04, 0055.01, 0148.02, 0149b.06 and 0177.11.
0200	Scott Walker, Bjarne Nicolaisen, Douglas Hawkins, Ronald Magnuson,		Each signatory submitted a form letter with the following comments: We support of desalination as a vital component of a long-term solution to California's water future. We must secure a diversified water portfolio to meet our	Comment noted. The Santa Ana Water Board must ensure that the proposed seawater desalination facility complies with the Water Code and Ocean Plan. See also response to comment 0002.03.

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	William Clow, Gerald Crain, Doug Klick, Linda Cordero, Allan Leader, Larry Greenfield, Charles Hyde, Sevada Mkrdichian, Sue Taylor, Eric Pivaroff, Mark Blair, George Ludwig, Joe Tipton, Don Logan, David Schuman		state's growing population demands. We can no longer depend upon snowpack and rainfall totals to fill our reservoirs, and the cost of importing water will only continue to rise. Desalination is a sustainable solution that we can depend on now and in the future. The Carlsbad Desalination Plant in San Diego County is meeting about 10 percent of the region's potable water needs. Since coming online in 2015, the region has had a dependable, locally controlled source of water. As a result, during recent drought restrictions, residents had relief from mandatory water cutbacks due in large part to the locally controlled, drought-proof water provided by the Carlsbad Desalination Plant. I encourage you to support the diversification of our state's water supply and embrace desalination as a viable solution for Huntington Beach, as well.	
0201	Scott Bamsey, Sachin Chawla, Benjamin Medina, James Woods, Stefanie Tellez,		Each signatory submitted a form letter with the following comments: As proven in recent years, California's weather pattern is unpredictable and ever-changing. The snowpack swings	Comment supporting the need for the desalinated water to ensure reliable water supplies in Orange County is noted. See response to comment 0003.01.

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	Rob Hayashi, Robert Brislin, Fernando Morales, Elena Galkina, Stefanie Tellez, Eleanora Robbins, Victor Gruber, Dennis Vannote, Jack Allen, Roger Quintal, William Lochrie, Richard Lefrancois, Jim Bieber, Linda Ohlsen, Ray Herrera, Vickie Bakki, Zachary Macquarrie, Stefanie Tellez		from years of high-highs to low-lows and spotty rainfall cannot be relied upon in our arid state, which is why finding attainable solutions to our state's water crisis is crucial. In California, we have access to an endless supply of water along our 840-mile coastline and the technology to turn ocean water into clean, drinking water that is sustainable, locally controlled and drought-proof. We have a responsibility to protect our valuable environmental resources like the Bay Delta, Colorado River and groundwater basins and we can do that by integrating desalinated water into our existing supply and reducing the demand on these sources. I hope you will consider supporting desalination as a viable, long-term solution to our state's water crisis.	
0202	Dan Hytrek, Rita Tayenaka, Leatrice Yarborough, Larry Dick, Sharon Larson,		Each signatory submitted a form letter with the following comment: I encourage your support of the Huntington Beach desalination project to	Santa Ana Water Board acknowledges the letter supporting the proposed Facility.

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	Stefan Heitzmann, Stephen Sharp, Don Macallister, Brian Mitchell, John Joyce Robert Kramer, Claude Bouchard, Carla Stark, Candice Golden-Gelegotis, Barbara Chu, William Nichols, Richard Troesh, Paul Gaca		help ensure a locally controlled supply of high-quality water for our region.	
0203	Kileigh Phillips, Ted Stearns, Jeffrey Sotingco, Kenneth Hegemann, Steven Teachout		Each signatory submitted a form letter with the following comment: As evidenced by the plant in Carlsbad, desalination is the future and I encourage you to bring the same technological advancements we have in San Diego to Huntington Beach.	Comment supporting the proposed Facility is noted. See responses to comments 0079.03 and 0175.01 regarding differences between the Carlsbad plant and the proposed Huntington Beach Facility.
0204	Ronald Gilbert, Gary Petersen, James Masologites, Coury McKinlay, Joseph Petrone,		Each signatory submitted a form letter with the following comment: I encourage you to help our state become more climate-resilient by supporting the	Comment supporting the proposed Facility is noted. Desalination is one water source that local agencies may consider as part of their water supply portfolio.

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	Kristy Selleck, Nicholas Lines, Ed Puccetti, Vitold Tchaikovsky, Geri Ditto, Bob Kelly, Andrea Maglidt, Robert Condon, Anastacio Villanueva, Gary Evereklian		proposed Huntington Beach desalination project. Please move forward with the Huntington Beach desalination plant so we can ensure water reliability for our region now and in the future.	
0205	Ronald Gilbert, Eric Thomas, Jonathan Summers, Betsy Buckner, Edward Ramaekers, James Ping Judith Farkas, Thomas Polkow, Tom Corbett, Claude Bouchard, Terry Cincotta, Susumu Miyashiro, Steve Amundson,		Each signatory submitted a form letter with the following comments: I encourage you to approve the permit for the proposed Huntington beach desalination plant so that Orange County residents can enjoy the many benefits of desalination. Desalination is exactly the kind of solution more regions in California need to adopt to support the needs of residents and minimize vulnerability to statewide drought conditions. Please take action to move the Huntington Beach plant forward.	Comment supporting the proposed Facility is noted. Desalination is one water source that local agencies may consider as part of their water supply portfolio.

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	Herb Kleeman, Claude Bouchard, Eric Johnson, Eugene Verin, William Leinheiser, Carl Gardner, Judith Farkas, Dan Bosch			
0206	Paul Renfrow, Jamene Utt, Martha Peckham, Hector Avalos, Donna Miller, Jonathan Dietrich, Steven Spear, Luis Medina, Diana Apodaca, Susan Osmanski, Karem Elhams, Jennifer Mcgraw, Jay Toci, Joshua Golden, Elias Sebhatu		Each signatory submitted a form letter with the following comments: Desalination is the future and I encourage you to think long-term when deciding on the proposed Huntington Beach seawater desal plant. When making decisions of this magnitude, we need to think about tomorrow, rather than just today. Given recent weather patterns and water demand, we are undoubtedly going to need a locally controlled, drought-proof water supply in the future, which is why we should start working to develop that supply now by approving the Huntington Beach desal plant.	Comment supporting the proposed Facility is noted. Desalination is one water source that local agencies may consider as part of their water supply portfolio.
0207	Lori Jones, Jesse Wu,		Each signatory submitted a form letter with the following comment:	Comment supporting the proposed Facility is noted. Desalination is one

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	Bjarne Nicolaisen, Vince Vasquez, Robert Brislin		I am writing to express my support for desalination and the many benefits that the proposed Huntington Beach plant would provide for our local economy.	water source that local agencies may consider as part of their water supply portfolio.
0208	Peter Hollub, Alex Benedettini, Frank Lograsso, Edward Heins, Roger Carr, Howard Wynn, Sean Eyre, Michael Crevda, Linda Pappoff, Michael Ball, John Perry, Randal Neal		Each signatory submitted a form letter with the following comments: I am writing in favor of the many benefits of desalination and to encourage your support of the proposed Huntington Beach plant. Interruptions in the water supply can cause major losses for local businesses and jeopardize economic growth. In San Diego County, we have seen firsthand how the Carlsbad Desalination Plant gives local businesses the assurances they need to thrive and grow because they know that even during a drought, we will still have access to a reliable water supply. Desalination allows cities and their residents and businesses to prosper.	Comment supporting the proposed Facility is noted. Desalination is one water source that local agencies may consider as part of their water supply portfolio.
0209	Lawrence Neumeister, Elizabeth Foley, Mathilda Sarh, Tjoanhouw Lim,		Each signatory submitted a form letter with the following comments: You are facing a crucial decision that will impact millions of current residents and businesses, as well as future residents for	Comment supporting the proposed Facility is noted. Desalination is one water source that local agencies may consider as part of their water supply portfolio.

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	Scott Mcanally, Karen Cornell		generations to come. Act in the best interest of our children and our children's children and approve the Huntington Beach desal plant.	
0210	George Nierlich, Anji Clemens, Thomas Lepper, Sherri Butterfield		Each signatory submitted a form letter with the following comments: I urge you in the strongest possible terms to think about our region's future needs and vote in favor of the Huntington Beach desal plant. The Huntington Beach desalination project will produce 50 million gallons of fresh water per day. The process takes steps in protecting and enhancing our cherished coastal resources. The plant will provide assurance and local control over precious water resources, rather than depending on the weather and rainfall – which varies each year.	See response to comment 0002.03.
0211	Marvin Cruse, Charles Babiracki, Bonnie Jeffrey, Gary Yudin		Each signatory submitted a form letter with the following comment: I support the need for desalination facilities and believe it is important for the future of California, which is why I strongly urge you to move forward on the Huntington Beach facility.	Comment supporting the proposed Facility is noted. Desalination is one water source that local agencies may consider as part of their water supply portfolio.

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0212	Victor Heman, Tim Day		Each signatory submitted a form letter with the following comment: I encourage you to approve the permit for the proposed Huntington Beach desalination plant so Orange County residents can enjoy the many benefits desalination has brought to the San Diego region.	Comment supporting the proposed Facility is noted. Desalination is one water source that local agencies may consider as part of their water supply portfolio.
0213	Linda Ohlse, Bjarne Nicolaisen, Robert Brislin		Each signatory submitted a form letter with the following comments: Through the entire planning and construction process for the Carlsbad Desalination Plant, Poseidon Water has been a consistent and reliable neighbor. They have never failed to keep the public and any interested parties informed of construction updates and have made every effort to avoid inconvenience for all parties involved. Poseidon's regular communications and responsible development strategies have enabled the Carlsbad Desalination Plant to become a great new addition to our community and a major resource for our entire region. As you can see, we are very satisfied with the results of the Carlsbad Desalination Plant and strongly encourage you to move ahead with one in Huntington Beach, too!	Comments on water supply are noted. See responses to comments 0079.03 and 0175.01 regarding differences between the Carlsbad plant and the proposed Huntington Beach Facility.

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0214.01	Sean Bothwell California Coastkeeper Alliance Azul, California Coastal Protection Network, Center for Biological Diversity, The Center for Oceanic Awareness, Research, and Education, Water Program Manager Clean Water Action, Climate Reality Project, Orange County Coastkeeper, Defenders of Wildlife, Desal Response Group, Endangered Habitats League, Environment California, Environmental Justice Coalition for Water, 5 Gyres, Food and Water Watch, Climate Reality Leader Green Dream Campaign, Heal the Bay, Indivisible-43, Los Angeles Waterkeeper, Los Cerritos Wetlands Land Trust, Natural Resources Defense Council, Oak View ComUNIDAD, Orange County Earth Stewards, Orange County Environmental Justice, Pachamama Alliance, Physicians for Social Responsibility, Planning and Conservation League, Plastic Pollution	Jan 21, 2020	**A. The Draft Permit does not minimize marine life mortality as required by the Ocean Plan Amendment and will result in significant adverse impacts to California's coast and marine environment.** The Poseidon-Huntington Beach ocean desalination facility, as proposed, will withdraw 107 million gallons per day of seawater from the Pacific Ocean to produce roughly 50 million gallons per day of potable drinking water. Entrainment and impingement caused by the proposed facility is anticipated to affect a minimum of 36 different fish and shellfish species including northern anchovy and yellow crab, Pacific rock crab, and squid. Depending on the size of the fish, the Poseidon-Huntington Beach facility may impinge a total of 2,000 –8,000 fish on the intake screen each year. Under the proposed design of the Poseidon-Huntington Beach desalination facility, the brine would be dispersed using a multi-port diffuser that will not only impact marine life with its brine discharge, but would create high-velocity jets of water that would kill marine life upon contact.	See responses to comments 0004.01, 0004.03, 0017.02, 0033.01, 0036.01, 0050, 0054.02, 0055.02 and 0062.02 regarding marine life impacts associated with the surface intakes and brine discharge. See response to comments 0070.01 and 0070.02 regarding impingement and entrainment. Also, while a 1 mm wedgewire screen is only 1% effective at preventing entrainment of organisms 1mm or less in length or diameter, a 1 mm wedgewire screen combined with the low flow intake velocity ($\leq$0.15 meters per second or 0.5 feet per second) requirement of the Ocean Plan prevents impingement of fish and other organisms larger than 1mm. Regarding impacts from the multiport diffuser and brine discharge, see responses to comments 0004.01, 0036.01, 0054.02 and 0055.02. Regarding MPAs: The Ocean Plan desalination amendments do not require a specific assessment of operational impacts to MPAs, apart from chapter III.M.2.b.(7), which requires discharges

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	Coalition, People Organized for Westside Renewal, Residents for Responsible Desalination, San Francisco Baykeeper, Santa Barbara Channelkeeper, Seventh Generation Advisors, Sierra Club, SoCal 350, Sunrise Movement Los Angeles, Surfrider Foundation, 350 South Bay Los Angeles, Wholly H20 and WILDCOAST		The brine discharged from the proposed ocean desalination facility may impact marine life up to 30 miles from the site, threatening neighboring wetlands and the historic network of Marine Protected Areas (MPAs) located off the California coast. There are 9 Marine Protected Areas within 25 miles of Poseidon's proposed desalination plant, yet the Draft Permit does not assess the potential impacts of long-term operation (30 –55 years) of this plant on the future viability of those protected areas, and the benefits of replenishing marine life populations outside the MPAs' boundaries. The proposed Poseidon-Huntington Beach desalination facility is projected to require two times more energy than importing water via the State Water Project. The energy needs of the proposed Poseidon-Huntington Beach ocean desalination facility are in direct conflict with California's energy "loading order" policy and current renewable energy targets by increasing demand on the existing electric grid and increasing reliance on out-of-state importation of electricity from non-renewable sources.	be sited at a sufficient distance from an MPA to ensure no exceedance of natural background salinity, and that intake siting should maximize distance from MPAs (this is demonstrated in Appendix W of the Discharger's ROWD). In addition, distance to MPAs and biologically sensitive habitats were considered when assessing the best site feasible for both onshore and offshore locations for the proposed facility, For the onshore locations, only Segment 3 did not contain an MPA; however, this segment is hydrologically connected to Upper Newport Bay, which is also an MPA (see Section 1, Attachment G.1 to the Tentative Order). For the offshore locations, the three candidate locations for the proposed intake (stations D2, E, and U2) were reviewed for their proximity to nine MPAs (see Section 3, Table 2 in Attachment G.1 of the Tentative Order). There was very little difference in the cumulative distance to the MPAs for each of the three stations. Stations D2, E, and U2 are located on the inner shelf and nearshore zone of the San Pedro shelf. Because of this, the

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				coastal dynamics are consistent across these three sites, indicating no difference in current structure between them. As it is not linear distance but current directions and velocity that control the transport of larvae along the San Pedro Shelf and the potential effect of a surface intake on MPA connectivity that are the most important metrics, an intake located at anyone of the three sites may equally entrain larvae dispersed from one or more of these MPAs depending on the dominant current and wind directions during seasonal larval dispersal events. The purpose of the proposed compensatory mitigation is to offset the impacts from the 50-year operational life of the proposed Facility in accordance with the Ocean Plan requirements. The proposed mitigation at the Bolsa Chica wetlands will preserve and restore habitat that is more biologically productive than the habitat being impacted (soft bottom substrate along the shallow portion of the San Pedro Shelf) and will offset impacts from intake of larvae dispersed from any of the MPAs located nearby, including the

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				Bolsa Chica and Bolsa Bay State Marine Conservations Areas. The Santa Ana Water Board would also note that larvae dispersed from MPAs are not static and continue to grow; not all larvae may be vulnerable to entrainment by the proposed intake. The ETM/APF method ensures that entrainment from the proposed Facility is accounted for and the calculation includes the entire source water area for the different taxa that may be impacted by the project (Both estuarine and coastal taxa. See also response to comment CCKA III.C. regarding revisions to the source water area and APF for estuarine taxa.) Regarding the energy usage of the proposed Facility, see responses to comments 0004.05 and 0004.12; see also response to comment 0015.13 regarding 2017 Final S EIR finding that the Facility will be carbon neutral.
0214.02			**B. Orange County does not have an "identified need", as described in the Ocean Plan Amendment, for water from the proposed Poseidon-Huntington Beach ocean desalination facility.**	See responses to comments, 0014.04, 0055.01, 0148.02 and 0185.02 and CCKA.I.D.

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			The OPA requires the use of subsurface intakes, if feasible, to minimize the intake and mortality of marine life. To address this feasibility question, the OPA requires that the relevant Urban Water Management Plan include an identified need for the water produced. Orange County's existing water supply is anticipated to be sufficient to cover its anticipated needs through 2040, even during a multi-year dry period. Future water demand in MWDOC's service area will also be limited due to increased water efficiency and conservation measures. By 2040, MWDOC expects total retail water demand in its service area to increase by only 3.27 percent, even as population grows by 10 percent. 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	See responses to comments 0004.19 and 0055.01 regarding alternative supplies.

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			more water than needed in most every year." Further, as it works to reduce its reliance on imported water over time, Orange County has cheaper and more sustainable alternatives to the proposed Poseidon-Huntington Beach ocean desalination facility. Specifically, 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 as viable, and preferred, local water supply options. Neither the evidence in the relevant urban water management plan, the MWDOC UWMP, nor any other UWMP, adequately supports a finding of identified need for the proposed 50 MGD facility.	
0214.03			Given this project proposal is the first to be considered since adoption of the OPA and can set precedent for future desalination proposals statewide, it is critical for the Regional Board to ensure there is an identified need for the project before determining a subsurface intake is not feasible.	Proposed desalination facilities will be required to comply with the Ocean Plan requirements. This project sets requirements for an individual proposed facility and does not establish a precedent for other proposed projects with distinguishable facts and site-specific issues that may be considered

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			We urge the Regional Water Board to deny the Draft Permit as it is presented, and instruct Poseidon to site and design a facility using subsurface intakes. At a minimum, the project must be downsized to meet the demonstrated water supply needs of the region and be designed to minimize its impact on neighboring communities and the marine environment.	by the Santa Ana Water Board or other regional water boards in the future. See responses to comment 0082.02, 0096.02, 0103.02 and 185.01. The Santa Ana Water Board thoroughly evaluated the feasibility of subsurface intakes at the proposed site and at a reasonable range of feasible alternative sites. Subsurface intakes are not feasible at the proposed site or at alternative sites. See responses to comments 0035.02, CCKA I.B and CCKA I.C. Additionally, subsurface intakes are not feasible for alternative design capacities. See response to comment CCKA I.D and CCKA I.E.
0214.04			**C. The proposed Poseidon-Huntington Beach ocean desalination facility fails to meet the requirements of the OPA.** To comply with the OPA and its relevant regulations, the Santa Ana Water Board must first analyze separately as independent considerations a range of feasible alternatives for the best available site, the best available design, the best available technology, and the best available mitigation measures to minimize intake and mortality of all forms of marine	As discussed in Finding 2 of Attachment G to the Tentative Order, the Santa Ana Water Board first analyzed a range of feasible alternatives for best available site, design, technology, and mitigation feasible to minimize intake and mortality of all forms of marine life. The Santa Ana Water Board then considered the four factors collectively to determine the best combination to minimize intake and mortality of all forms of marine life

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			life. The Regional Board should then consider all four factors collectively and determine the best combination of feasible alternatives to minimize intake and mortality of all forms of marine life.	
0214.05			**1. The Proposed Poseidon-Huntington Beach Ocean Desalination facility fails to use the Best Available Technology by allowing the use of harmful open ocean intakes instead of the preferred subsurface intakes.** The OPA establishes a strong preference for the use of subsurface water intakes for seawater desalination facilities and provides an analytical framework for regulating proposed desalination facilities to ensure the selection of appropriate sites, facility design, and control technologies in the first instance, with mitigation measures available only after such selections have been made. Specifically, the OPA requires a stringent analysis of the feasibility of subsurface intakes for a range of reasonable facility sites and designs (including facility sizes, layouts, forms, and functions), and directs the Regional Boards to ***require*** subsurface intakes unless they determine that subsurface intakes are not feasible	Santa Ana Water Board has fully complied with the Ocean Plan requirements related to the evaluation of subsurface intakes. Attachment G.1 to the Tentative Order provides the evaluation conducted by the Board as required by the Ocean Plan. The drawdown of the freshwater aquifer is one of several factors evaluated in finding that subsurface intakes are not technically or economically feasible. The 5th round of groundwater modeling performed by Poseidon's consultant, Geosyntec used OCWD's specified 1,000 acre-feet per day as the maximum allowable freshwater removal from the inland aquifer by slant wells. Based on that maximum, Poseidon would be able to use approximately three slant wells, and extract only 3.8 MGD without exceeding OCWD's requirement, regardless of the total volume that Poseidon might propose to produce at the HBDP.

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			with respect to each of those considerations. We oppose the Draft Permit because, among other things, it incorrectly relies on freshwater drawdown as the reason for concluding subsurface intakes are infeasible. Even if freshwater drawdown was allowed to be used to conclude subsurface intakes are infeasible for Poseidon, the Regional Board should require a third-party review of Poseidon's drawdown analyses prior to the adoption of the Draft Permit. The ISTAP Phase 2 economic analysis cited by Regional Board staff is not adequate for the section 13142.5(b) analysis required in the OPA.	See responses to comments CCKA I.A and CCKA I.B regarding freshwater drawdown. See response to comment CCKA I.C regarding feasibility for subsurface intakes and the economic analysis conducted by the ISTAP.
0214.06			**2. The proposed Poseidon-Huntington Beach Ocean Desalination facility fails to use the Best Available Design and the Regional Board did not conduct an evaluation of different design capacities (e.g. 25MGD, 20MGD, etc.) as part of its analysis as required by the OPA.** The Regional Board has failed to determine whether subsurface intakes are	See responses to comments CCKA I.D and CCKA I.E.

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			feasible for a reasonable range of alternative intake design capacities in the Draft Permit. The Regional Board inappropriately asked Poseidon to only consider alternative design capacities for one site –Poseidon's predetermined site. The Draft Permit only considers a 50 MGD project at alternative sites –never considering alternative design capacities at other sites. The Draft Permit cannot determine subsurface intakes are not the best available technology based solely on the project's design capacity without an adequate showing of need and size of the facility. The Draft Permit must include a determination as to whether subsurface intakes are feasible for a reasonable range of alternative intake design capacities at Poseidon's predetermined site by removing freshwater drawdown from the analysis and analyze alternative intake design capacities at alternative sites. The Regional Board never independently assessed whether 50 MGD is the best available design capacity to minimize marine life mortality. The OPA is explicit that "[d]esign is the size, layout, form, and function of a facility, including the intake capacity and the configuration and type of	

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			infrastructure, including intake and outfall structures." The Regional Board's Findings are completely devoid of any analysis to independently determine the best available size and design capacity to minimize marine life mortality.	
0214.07			**3. The proposed Poseidon-Huntington Beach Ocean Desalination facility inappropriately relies on 1-millimeter screens in place of subsurface intakes to reduce marine life mortality.** The Ocean Plan explicitly requires an evaluation of the intake and mortality of all forms of marine life. Poseidon's analysis, however, fails to account for the fact that Santa Ana Water Board staff does not approve of omitting Emerita (mole crab) from any analyses as Emerita make up 90% of the diet of barred surf perch (Amphistichus argenteus), which are an important sport fish species in southern California. The OPA requires that the entire planktonic community, and the food web it supports, be protected to the maximum extent feasible from entrainment. Omitting a "form of marine life" – in this case *Emerita* – is not compliant with the OPA, especially when	The Ocean Plan requires an evaluation of mortality to all forms of marine life as part of each analysis for best available site, design and technology to minimize intake and mortality. While Poseidon's initial APF calculations omitted *Emerita*, the final APF calculations performed by both Poseidon and Coastal Commission staff included *Emerita* (see Table 1 in Attachment G.3 to the Tentative Order). The Ocean Plan is the governing regulatory policy for desalination facilities, not the Once Through Cooling Policy (OTC). The Ocean Plan does not require that marine life mortality be reduced by 90%. While subsurface intakes are the preferred best technology feasible to avoid impacts to marine life, the Ocean Plan requires the use of 1mm wedgewire screens (or equivalent technology) for surface intakes when subsurface intakes are not feasible. While a 1 mm wedgewire

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			that species accounts for up to 50% of the entrained larvae. The State Lands Commission has required the installation of screens with a one-millimeter aperture on the intake pipe to "mitigate" marine life impacts, however, studies commissioned by the State Water Board have concluded that screens with one-millimeter openings only reduce marine life entrainment by less than one percent. In contrast, the OTC Policy requires marine life mortality be reduced by 90 percent. Because screens cannot minimize all forms of marine life, they are an inappropriate substitute for subsurface intakes.	screen is only 1% effective at preventing entrainment of organisms 1mm or less in length or diameter, the Ocean Plan also requires compensatory mitigation to offset impacts to all forms of marine life. In addition, the proposed surface intake will be modified to add a manifold with *four* 91-inch-diameter, 1-millimeter slot cylindrical wedgewire screens. Screen lengths would be about 26 feet, each with an effective screening area of approximately 105 inches. The wedge wire screens would be spaced approximately 3.8 feet from each other to maximize the sweeping velocities between screens to sweep debris and organisms away from the intake area, which will assist in reducing entrainment of marine organisms (State Lands Commission 2017 SEIR).
0214.08			**4. The proposed Poseidon-Huntington Beach Ocean Desalination facility fails to use the Best Site Location.** The Draft Permit failed to adequately assess whether alternative sites exist to make subsurface intakes feasible in Phase I of the sites analysis. The OPA states that for "each potential site, in order to	See responses to comments CCKA.I.D and CCKA.I.E for the 50 MGD Facility. Attachment G.1 provides the rationale for the onshore and offshore site evaluations in accordance with chapter III.M.2.b, which has six factors to be considered including feasibility to assist with site comparison. Feasibility

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			determine whether a proposed facility site is the best available site feasible to minimize intake and mortality of all forms of marine life, the regional water board shall require the owner or operator to: Consider whether subsurface intakes are feasible." Erroneously, the Regional Board concluded that the "Santa Ana Water Board finds that subsurface intakes are not feasible for a 50 MGD facility at the proposed site or at nearby sites." As discussed above, the Regional Board's Finding is erroneous because it assumes a 50 MGD design capacity without first independently assessing whether a smaller design capacity is the best available for minimizing marine life mortality. But regardless of this error, the Regional Board also fails to properly consider alternative sites for a 50 MGD facility because it relied upon Poseidon's assertions and socio/economic factors to throw out viable sites. Furthermore, neither the proposed site nor any alternative site was analyzed using the common practice of drilling test wells to calibrate the modeling used, as was done for both the proposed Cal Am Monterey desalination plant and the proposed Doheny	includes environmental, technical, social and economic factors. See responses to comments 0035.03 and CCKA I.B regarding test wells.

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			desalination plant in Southern Orange County.	
0214.09			From our review of the record, Poseidon's hydrogeological analysis was nothing more than reviewing topography and determining conclusions without the evidence to bridge the analytical gap as to why sites should be eliminated. The Draft Permit failed to select the best available site for minimizing marine life mortality for the open ocean intake. Yet, the Draft Permit explicitly admits that Poseidon's proposed open ocean intake site (Station E) is not the best site for minimizing marine life mortality. The Draft Permit states: "Based on the above considerations, Santa Ana Water Board staff *cannot agree* with the Discharger's conclusion that Station E is the best site feasible for an offshore seawater surface intake based on environmental factors. All three sites have similar geology, bathymetry, hydrodynamic and oceanographic characteristics. Dr. Raimondi's review indicates that *the best site feasible, based on the dual MLC/SLC metric, is not Station E but either U2 or D2*."	The 5th round of groundwater modeling performed by Poseidon's consultant, Geosyntec used OCWD's specified 1,000 acre-feet per day as the maximum allowable freshwater removal from the inland aquifer by slant wells. Based on that maximum, Poseidon would be able to use approximately three slant wells, and extract only 3.8 MGD without exceeding OCWD's requirement, regardless of the total volume that Poseidon might propose to produce at the HBDP. See also responses to comments CCKA II.A, CCKA II.B and CCKA II.C. See response to comment 0149b.13 regarding Santa Ana Water Board staffs' assessment of the other feasibility factors (technological, economic, and social) that the Ocean Plan requires to be considered in determining the best site feasible for an offshore surface intake. While the MLC/SLC metric indicated U2 or D2 may result in lower mortality for marine life than Station E, the best available site analysis examined

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				the technical, environmental, social, and economic factors. Also see attachment G.1, Section 3, Other Feasibility Considerations for Alternative Intake Locations, for additional explanation.
0214.10			Despite the Regional Board acknowledging that Station E is not the best available site for minimizing marine life mortality, staff inexplicably allows Poseidon to site their intake at Station E simply because it is a less expensive option. The OPA Best Available Site section does not include any economic feasibility criteria to eliminate sites that are better at reducing marine life mortality. Furthermore, a site is not economically infeasible simply because it is more expensive. The OPA is clear that economic feasibility cannot be determined simply because one option is more expensive than the other. The OPA is explicit that economic feasibility "shall not be determined to be economically infeasible solely because subsurface intakes may be more expensive than surface intakes." It is inexplicable why the Draft Permit does not consider an alternative of simply utilizing the terminus of the existing pipe,	See response to comment 0004.13 regarding extending the discharge pipeline and regarding the intake pipe. See response to comment CCKA I.C. related to paying the reliability premium. See response to comment 0149b.13 regarding Santa Ana Water Board staffs' assessment of the other feasibility factors (technological, economic, and social) that the Ocean Plan requires to be considered in determining the best site feasible for an offshore surface intake. Also see attachment G.1, Section 3, Other Feasibility Considerations for Alternative Intake Locations, for additional explanation. Section 3 of Attachment G.1 also discusses the issues with connecting the existing intake pipe to pipelines that would extend to alternative sites D2 or U2 for both offshore and onshore configurations.

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			and adding pipe that would extend up or down the coast – avoiding all the on-land expense and nuisance. The Regional Board has failed to adequately analyze alternative sites for use of subsurface intakes, and has failed to require the best available site for Poseidon's open ocean intake. Other sites exist that would reduce marine life mortality more than Poseidon's self-selected Station E. The Best Available Site analysis contains no economic feasibility element. Yet Station E is being allowed simply because it is less expensive than other sites that would best minimize marine life mortality.	
0214.11			**5. The proposed Poseidon-Huntington Beach Ocean Desalination facility fails to use proper Mitigation measures and does not require adequate mitigation to address the level of anticipated harm to marine resources.** The Regional Board's mitigation is not large enough to restore the acreage required to replace marine life killed by the Project. The draft mitigation documentation shows the estimated Area of Production Foregone (APF) as 421.4	See responses to comments 0070.05, 0070.06, 0177.04, 0177.05, 0177.06, and 0177.07. The Discharger did not propose artificial reefs in their MLMP and therefore, the Santa Ana Water Board did not evaluate this potential mitigation option. Pursuant to Water Code, section 13360, the regional boards cannot specify the manner of compliance. Thus, the Santa Ana Water Board must rely upon the Discharger to propose a mitigation plan

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			acres. Yet the calculated mitigation includes a mere 5.5 acres of restored wetlands and 15 acres of “restoration credit” from improved circulation. The overwhelming majority of “restoration credit”is108 acres from maintaining tidal influence that already exists–what the Draft Permit characterizes as “preservation.” Given that the Draft Permit does not include any enforcement of the requirement to use the best available technology, and relies on a flawed rationale for excluding alternative design capacities and sites, the proposed mitigation, with all the imprecision and uncertainties of success, is the only proposed measure to minimize the intake and mortality of marine life. This logic must be rejected by the Board. The mortality associated with the open ocean intake must be resolved by utilizing a subsurface intake. Alternative sites to mitigate the mortality of estuarine species from the discharge must also be analyzed. Finally, separate mitigation for ocean species must be explored, including the use of artificial reefs.	in the Marine Life Mitigation Plan (MLMP) and then approve or deny the project proponent proposal.

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0214.12			**D. The Santa Ana Regional Water Board is the Lead Agency for the Poseidon-Huntington Beach CEQA Project and has unlawfully segmented its environmental review by failing to consider the full range of impacts caused by the Project** The CEQA process for this Project evolved as follows: (1)The City of Huntington Beach served as the original CEQA lead agency, preparing and certifying an EIR for the desalination Project in 2010; (2) Poseidon never obtained all of the necessary government approvals for the Project evaluated in the 2010 EIR and never constructed that Project; (3) In 2015, California adopted stringent new regulations for ocean desalination facilities that required Poseidon to redesign certain aspects of the Project, to assess the need for the Project as sized, and to reevaluate alternative intake designs, technologies, and their locations that could mitigate or avoid marine impacts; (4) Changes to the Project and its circumstances, in turn, triggered CEQA's requirement for an updated EIR to be used in future approvals by at least four public agencies;	The Santa Ana Water Board is not the lead agency for the proposed project; the Santa Ana Water Board is a responsible agency for this project. The lead agency was and remains the City of Huntington Beach. Regulations directing when a responsible agency is to assume the role of lead agency include the circumstance in which a subsequent EIR is required pursuant to California Code of Regulations, Title 14, section 15052, subd. (a)(2)(A). The commenter has not shown that the conditions requiring a subsequent EIR have been met. When an EIR has been certified, no subsequent EIR shall be prepared for that project unless the lead agency determines that substantial changes are proposed that will require major revisions of the previous EIR due to new significant environmental effects or a substantial increase in the severity of previously identified significant effects; substantial changes occur with respect to the circumstances under which the project is undertaken, which will require major revisions due to new significant

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			(5) At that point, the City of Huntington Beach disclaimed any further discretionary approval authority over the Project; and (6) The State Lands Commission thereafter volunteered to prepare and certify an updated supplemental EIR when it issued the next discretionary approval for the Project –which included a modification and substantial extension of its expiring public tidelands lease with Poseidon. Rather than evaluate impacts and alternatives for the Project, however, Regional Board staff redefined the subject and scope of its updated environmental review as an Addendum to the Final Subsequent Environmental Impact Report and limited the analysis to Poseidon's "Outfall Modifications—New Linear Diffuser." In doing so, the Regional Board expressly deferred additional necessary environmental impacts review and alternatives analysis to other agencies. The Regional Board's explicit refusal to evaluate the full range of impacts and alternative of the Project undermines CEQA's single EIR mandate and flies directly in the face of the California Supreme Court's recent holding in	environmental effects or a substantial increase in the severity of previously identified significant effects; or new information that could not have been known at the time of certification showing new significant effects or increase in the severity of those effects. (CEQA Guidelines section 15162(a)(1).) An addendum is appropriate if some changes or additions to a previously certified EIR are necessary, but none of the conditions requiring a subsequent EIR have occurred. (CEQA Guidelines section 15164.) Modifications to the multiport diffuser design as reflected in the proposed Tentative Order do not involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects and as a result, do not meet the standard for requiring a subsequent EIR. . The CEQA Addendum prepared by the Santa Ana Water Board as a responsible agency under CEQA evaluates modifications to the new linear diffuser that were not previously evaluated by either the City of Huntington Beach or the State Lands Commission. While

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			Banning Ranch Conservancy v. City of Newport Beach, which reaffirmed that such truncated CEQA analysis is unlawful.	additions to the SLC supplemental EIR are necessary to accurately reflect minor modifications to the project after the supplemental EIR was certified, they do not include new significant environmental effects or an increase in the severity of previously-identified effects. The argument that the proposed modifications are selectively narrow and require a new complete review of the 50 MGD HB Desalination Plant Project approved in 2010 does not consider the extensive environmental review that has already occurred, the characteristics of the proposed modifications, and other considerations.
0214.13			Given the significant costs to ratepayers, marine life impacts caused by the proposed facility high energy use, GHG emissions, and improper permit analyses, we strongly urge you to deny the Draft Permit and instruct Poseidon to design and site a facility using subsurface intakes if they choose to continue pursuing desalination in this region at this time.	Santa Ana Water Board disagrees that the analyses conducted are “improper”. The Santa Ana Water Board carefully and thoroughly evaluated the proposed project’s compliance with the Ocean Plan and developed the Tentative Order in compliance with the Ocean Plan.
0215	Lynn Schaulis	Jan 23, 2020	The decimation to the marine environment and proximity to the Superfund toxic clean-up site will not be tolerated by lifelong	See responses to comments 0004.01 and 0004.03regarding impacts to the marine environment.

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			citizens like myself. We do not want this project and see through the massive corporate effort to make money off of our community. Though the argument for a stable, clean water source is valid, we know that there are other viable plans - most notably water recycling, water conservation, and cleaning up available groundwater sources. Do not be swayed by the argument that funding this Newland/PCH development will help protect the Bolsa Chica wetlands. This is false logic as we know there are countless other sources that can protect this area and many concerned citizens are actively involved in seeking those non-destructive avenues. Please honor the voices of locals and protect our ocean. We have seen enough development plague this narrow, beautiful coastline. It belongs to future generations and they should not have to pay for the shortsightedness of people looking for corporate profits – or council members swayed by those pressures.	See responses to comments 0022.04 and 0132.06 regarding location of the proposed Facility and proximity to the Ascon Landfill superfund site. See response to comment 0004.19 regarding alternative water supply options. See comment letter 0217 from Keith Bohr, Bolsa Chica Conservancy Board Member and the discussion in Attachment G.5 regarding lack of available funding for mitigation at the Bolsa Chica wetlands. According to Mr. Bohr, funding for maintaining the inlet channel ends in 2021. Given that, there is a need to obtain a secure funding source. See also response to comment 0080.03. Further, pursuant to Ocean Plan requirements, Bolsa Chica wetlands is within the Facility's source water body (see response to comment 0070.07).

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0216	Lauren Lloyd	Jan 17, 2020	I'm writing to you today to express my deep objection to the Poseidon desalination plant proposal in Huntington Beach. As a mother and lover of our coastline, I plan to live in Huntington Beach for decades to come, and I will not stand to see my environment negatively impacted by a proposed water solution that we simply do not need.	See responses to comments 0004.01, 0004.03, 0014.04, 0022.04, 0055.01 and 0148.02.
216.01			Orange County Coastkeeper laid out facts against desalination in their petition	See responses to Orange County Coastkeeper's letter – comments and responses 0185.01 – 0185.05.
216.02			I found it interesting that when I asked my friend, who is a local marine biologist, about the subject of desalination plants, she said, "Desalination plants are good, but I haven't seen one work in full effect, not for long."	Comment noted.
216.03			A Wired article (https://www.wired.com/story/desalination-is-booming-as-citiesrun-out-of-water/) published on June 27, 2019, entitled, "Desalination Is Booming as Cities Run out of Water," leads with, "In California alone there are 11 desalination plants, with 10 more proposed. But there are big downsides to making seawater drinkable." It goes on to state:	The comment does not pertain specifically to the proposed Huntington Beach Desalination Facility and the general concerns are addressed in multiple responses to comments.

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			"Desal, however, is plagued by some serious environmental problems. There are two types of desalination-thermal, which heats up water and then captures the condensation, and reverse osmosis, which forces sea water through the pores of a membrane that are many times smaller than the diameter of a human hair. This traps salt molecules, but allows the smaller water molecules to go through. Both require a great deal of energy, and greenhouse gas emissions created by the power needed-especially in the Middle East, where fossil fuels generate electricity-are a significant contributor to global warming." "There are ecological impacts as well. It takes two gallons of sea water to make a gallon of fresh water, which means the gallon left behind is briny. It is disposed of by returning it to the ocean and—if not done properly by diffusing it over large areas—can deplete the ocean of oxygen and have negative impacts on sea life." "A study of the UN Institute for Water, Environment and Health published earlier this year contends that the problem of brine waste has been underestimated by	

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			50 percent and that, when mixed with the chemicals meant to keep systems from fouling, the brine is toxic and causes serious pollution." "Another problem comes from the sucking in of sea water for processing. When a fish or other large organism gets stuck on the intake screen, it dies or is injured; in addition, fish larvae, eggs and plankton get sucked into the system and are killed." "According to Heather Cooley, research director at the Pacific Institute, 'There are a lot of unknowns around the impact on sea life. There hasn't been a lot of monitoring at the facilities.'" "The Pacific Institute's Cooley argues that before building desal plants, municipalities should fully implement conservation programs, promote potable reuse—the re-use of wastewater, also known as toilet-to-tap recycling—or treat storm water runoff. 'It makes sense to do the cheaper options first and leave the more expensive options down the road to be developed when you need them,' she said."	

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0217.01	Keith Bohr Board Member, Bolsa Chica Conservancy	Jan 14, 2020	As a former Huntington Beach Mayor and Bolsa Chica Conservancy Board Member I am writing you to urge the Board to support the staff recommendation and approve the permit on the HB Desal project in April. The Bolsa Chica Conservancy needs funds. We are out of money in 2021. All the hard work, effort and restoration will be for not. We lose all that we have worked for at Bolsa Chica without continued funding.	See responses to comments 0017.03 and 0080.03 regarding funding for mitigation at the Bolsa Chica Wetlands.
0217.02			And while the Bolsa Chica mitigation is compelling, there are other compelling reasons to renew this permit. • Seawater desalination is drought-proof • Seawater desalination is climate resilient • Seawater desalination is needed to reduce the need to pump water from Northern California and the Colorado River	See response to comment 0003.01.
			The state-of-the-art seawater intake technology is the best available and feasible technology to protect against marine life impacts. Your staff agrees. It's time to renew of this permit.	The seawater intake with the modifications required under the Tentative Order is the best available technology feasible for the proposed Facility. See response to comment 0004.03.