



November 8, 2013

Agenda Items W19a & 20a

VIA E-MAIL, HAND DELIVERY, AND FEDEX

Chair Shallenberger and Honorable Commissioners
California Coastal Commission
45 Fremont, Suite 2000
San Francisco, CA 94105-2219

Re: Huntington Beach Desalination Project: Appeal No. A-5-HNB-10-225 (Agenda Item W19a) and Application No. E-06-007 (Agenda Item W20a)

Dear Chair Shallenberger and Honorable Commissioners:

We are writing in response to the Staff Report regarding Poseidon Water's ("Poseidon") proposed Huntington Beach Desalination Project (the "Project"). At its November 13, 2013 meeting, the Coastal Commission (the "Commission") is scheduled to consider an appeal of the City of Huntington Beach's approval of a coastal development permit ("CDP") for those portions of the proposed Project within the City's certified Local Coastal Program ("LCP") jurisdiction, as well as Poseidon's application for a CDP for those portions of the proposed Project within the Commission's retained jurisdiction. The proposed Project consists of the construction and operation of a 50 million gallon per day ("MGD") seawater desalination facility as well as water conveyance pipelines and other associated development. The Project would create a local drought-proof supply of domestic water and reduce Orange County's dependence on imported water.

While Poseidon appreciates Staff's efforts over the past seven years processing Poseidon's CDP application, we strongly disagree with Staff's recommendation that the Commission approve the Project as conditioned in the Staff Report. **Though masked as an approval recommendation, the Staff Report is an effective denial of Poseidon's proposed Project.** By imposing a series of unnecessary Special Conditions, including a requirement that the proposed Project be redesigned entirely, Staff essentially recommends approval of a different project than what is before the Commission. While the proposed Project has been thoroughly vetted and approved by independent state, regional, and local agencies over a period of many years, Staff's alternative project has not been approved by any agency. Approving Staff's alternative project would require Poseidon to restart the entitlement and environmental review processes, prepare dozens of new studies, and seek new approvals from those agencies with jurisdiction over the Project, including potentially obtaining multiple amendments to any CDP approved by the Commission. **This would effectively terminate this very important Project, a vital component of Orange County's future water supply.**

Staff's approach is unnecessary. One of the Staff Report's primary defects is its recommendation, through the imposition of numerous and internally inconsistent Special Conditions, that the redesigned Project obtain new discretionary approvals from permitting agencies, which itself would require reanalysis of the Project's potential impacts. The proposed Project's potential environmental impacts have already been thoroughly assessed and feasible mitigation measures imposed by permitting agencies. In addition, the many expert technical reports and analyses submitted

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to Staff over the past seven years demonstrate that the subsurface infiltration gallery proposed by Staff would be significantly more environmentally impactful than the proposed Project's use of an existing intake system. The proposed Project, as submitted by Poseidon, will minimize impacts to the marine environment, result in less than significant impacts to wetlands and environmentally sensitive habitat areas ("ESHA"), be designed and constructed to withstand worst-case scenario potential flooding, tsunami, and seismic risks, and is fully consistent with all applicable Coastal Act and LCP policies. In addition, the proposed Project's design takes into account a projected sea level rise of two feet by 2050, so is consistent with Staff's recently published draft guidance for incorporating sea level rise hazards and projections into LCP and CDP review.

In making its flawed recommendation, the Staff Report unreasonably: (i) fails to consider and/or summarily dismisses, without sound basis, significant information that Poseidon has submitted to Staff over the past seven years, which other agencies that have considered and approved the proposed Project have determined to be credible and relied upon; and (ii) misstates facts and makes inaccurate statements regarding the proposed Project. The Staff Report essentially ignores the comprehensive Subsequent Environmental Impact Report ("SEIR") certified by the City of Huntington Beach and the many technical reports regarding the proposed Project prepared by leading experts in the field, all of which found that the proposed Project will not have a significant, negative impact on the marine environment, wetlands, or ESHA.

As such, the Commission can approve the proposed Project as submitted by Poseidon. We acknowledge that the Commission is engaging in a site-specific and independent analysis of the proposed Project, and request that the Commission approve the proposed Project with the Special Conditions attached hereto as **Exhibit A**. Poseidon's proposed Special Conditions ensure the proposed Project is fully consistent with the Coastal Act and LCP. Given that the proposed Project is similar to and less impactful than the Carlsbad Desalination Project,¹ which the Commission approved and which has withstood numerous legal challenges, Poseidon's proposed Special Conditions are based in part on those imposed on the Carlsbad project, with modifications and additional conditions to address issues and circumstances unique to the proposed Project and its site.

Overall, the Staff Report bases its rejection of the proposed Project and recommendation that the Commission approve Staff's alternative project on a few key issues, described briefly below and in detail in Sections II to IV of this letter:

- **The Subsurface Infiltration Gallery Required By Staff's Alternative Project Is More Environmentally Impactful Than The Proposed Project's Use Of An Existing Intake.** Ignoring substantial evidence in the record that the use of an existing open water intake is the environmentally superior method of obtaining source water for the Project, the Staff Report seeks to require Poseidon to construct a far more environmentally impactful intake structure:

¹ For example, when Poseidon operates the existing Huntington Beach Generating Station's seawater intake system independently, the proposed Project's intake would have an average flow rate of 126.7 MGD, far less than the average flow rate of 304 MGD approved by the Commission for the Carlsbad Desalination Project.

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a subsurface infiltration gallery impacting 64 acres of coastal habitat on the seafloor and beachfront and requiring hundreds of thousands of cubic yards of excavation.²

That excavation would impact many types of benthic communities within the construction footprint, including species of polychaete annelids, hermit crabs, and Pacific sand dollar. In addition, these habitats support adult, juvenile and larval stage demersal fishes, including the speckled sanddab, northern anchovy, queenfish, sand bass, white croaker, honeyhead turbot, and California halibut. Furthermore, the water column surrounding the construction area supports numerous species of invertebrates, fish and marine mammals that would be adversely affected by noise and other construction-related effects. Removal of 64 acres of seafloor and beachfront and construction of an infiltration gallery will require dredging, drilling, anchoring, and tunneling activities that would result in direct removal, burial, crushing, breaking, cutting, unearthing and displacing of organisms on the sea floor. Turbidity resulting from dredging and other construction activities would clog feeding and respiration structures of organisms that occupy the water column well beyond the directly affected area.

Construction would have recreational impacts to commercial and recreational fishing by precluding fishing and potentially affecting fish behavior and biology. If sheet piles and dewatering are used for construction, an area of 64 acres of the seafloor and beachfront would be unavailable for recreational or commercial fishing. Both sheet pile and dredging methods of construction could have adverse effects on the shore break, affecting recreational activities, including surfing, which is a treasured recreational asset in Huntington Beach. Further, construction would require substantial pumping facility(ies), including associated acoustical and visual shielding, service road(s), and security fencing on the shoreline, which would restrict public access to the beach, resulting in a significant impact on the beneficial use of the shoreline by the public. During operations, the Project would require regular maintenance including dredging every 1 to 3 years, which would have ongoing and similar impacts to those described above. Moreover, once in operation, the energy and indirect greenhouse gas impacts associated with conveyance of seawater from the infiltration gallery to the desalination plant will be approximately double those from collecting seawater from the Huntington Beach Generating Station's existing intake system.

In contrast, Poseidon's use of the existing intake would cause a *de minimis* estimated impingement loss of just 0.78 pounds per day, and based on a fairly constant pumping rate for the existing intake, larval entrainment losses are projected to affect only a small fraction of the larvae (0.02-0.28%) of the source water populations. In addition, Poseidon's use of the existing

² In the Special Conditions recommended by Staff, Staff proposes an arbitrary limitation of 30 acres of seafloor for the installation of a subsurface infiltration gallery, which conflicts with the Santa Ana Regional Water Quality Control Board's finding that a subsurface infiltration gallery would impact approximately 64 acres of benthic habitat and beachfront. Regional Board NPDES Order No. R8-2012-0007 (NPDES CA 80000403) at pp. F-27. The record supports that the construction of any subsurface infiltration gallery sized sufficiently to provide an average flow rate of 126.7 MGD would consist of 33 intake filtration bed cells and 33 connector pipelines. The intake filtration bed gallery would disturb about 30 acres of sea floor, and the connector pipelines would disturb an additional 30 acres of sea floor, resulting in an estimated seafloor impact of 60 acres. There would also be a loss of 3.6 acres associated with onshore components for a total loss of 63.6 acres. Staff suggests that Poseidon's design overstates the area of impact because a single connector pipeline could be used instead of 33. Staff has provided no evidentiary explanation of the feasibility or constructability of that design.

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intake would not result in construction on the seafloor and beachfront, nor any permanent beachfront structures, would not result in continued visual and recreational impacts along the beachfront, and would require less energy. In comparison, the infiltration gallery's impact to 64 acres of coastal habitat on the seafloor and beachfront would be significantly greater than the use of the existing intake.

- **The Subsurface Infiltration Gallery Required By Staff's Alternative Project Is Infeasible, Conflicts With The Coastal Act, And Cannot Be Legally Imposed By The Commission.**

The SEIR, technical reports and legal findings from permits issued for the Project, site-specific geotechnical data and analysis, and other evidence in the record demonstrate that a subsurface infiltration gallery for the Project is infeasible (under the Coastal Act definition of that term) and conflicts with applicable Coastal Act policies. Notably, the shallow sediments in the coastal margin offshore Huntington Beach are not beach sand, but are fine-grained "muddy sand" of low permeability. The muddy character of the shallow sea sediments would rapidly clog up the infiltration gallery and require dredging every 1 to 3 years, resulting in an ongoing impact to the benthic environment. Moreover, the cost of an infiltration gallery for the average 126.7 MGD intake required for the Project is estimated to be at least \$270 million.³ The cost for this type of intake system would significantly increase the construction cost of the Project. Because an infiltration gallery of the size and scale required for the Project has never been attempted worldwide, economical or cost-effective financing cannot be obtained.

In addition, the Santa Ana Regional Water Quality Control Board ("Regional Board"), the agency with primary legal authority over matters related to water quality, found that an infiltration gallery would be "technologically infeasible and/or environmentally inferior" and that the proposed Project's use of the existing intake would comply with Section 13142.5(b) of the Water Code. Under Section 30412(b) of the Coastal Act, the Commission is prohibited from taking any action in conflict with the Regional Board's determination. Put simply, the Commission cannot legally require Poseidon to construct an infiltration gallery as it would directly contradict the Regional Board's independent findings that an infiltration gallery is environmentally inferior to Poseidon's use of the existing intake.

- **Staff's Proposed Redesign Of The Project Is Not Necessary Because The Project Will Not Impact Wetlands And ESHA.** The proposed Project complies with all applicable Coastal Act and LCP policies governing development adjacent to wetlands and ESHA. However, the Staff Report raises two wetlands and ESHA issues. First, Staff erroneously claims that the proposed Project does not comply with the LCP's requirement that new development be set back 100 feet from all wetland areas. Staff's alternative project would require Poseidon to redesign the Project to locate its structures farther away from an alleged wetland in a degraded area adjacent to the eastern portion of the Project Site. Staff's requirement is unnecessary and unwarranted. The proposed Project complies with the LCP's minimum wetland setback policy, which allows less than 100-foot buffers if wetlands are protected. No structures are located within 100 feet of any purported wetlands and the Project's design and an existing berm ensure that no adverse

³ Water Globe Consulting, 2011, Evaluation of Alternative Desalination Plant Subsurface Intake Technologies, at p. 14. This cost is in 2011 dollars, so based on inflation and other factors, the cost would likely be greater.

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impacts to wetlands will occur. Although limited components of the proposed Project (portions of an access road and a few parking spaces) would be located within 100 feet of an alleged wetland in a degraded area east of the Project Site, all Project components are separated from that area by an existing 14-foot high, 60-foot wide containment berm, which assures that none of the development on the site will have an impact on this adjacent area. With the physical barrier provided by the existing containment berm, the proposed Project's buffer zone is consistent with LCP Policy C 7.1.4 and no redesign is required.

Second, Staff asserts that before the current property owner conducted routine vegetation removal on its property, the Project Site itself contained approximately 3.5 acres of wetlands. Staff's alternative project would require Poseidon to develop a mitigation plan to create and/or restore at least 14 acres of coastal wetland habitat. The Jurisdictional Determination prepared for the Project's SEIR confirms that wetlands did not exist on the Project Site (an industrial site) at the time of Staff's evaluation. Staff's assertion that there were wetlands on the Project Site is not supported by the evidence in the record. Accordingly, there is no nexus to condition the proposed Project to create and/or restore new coastal wetland habitat.

In sum, we respectfully request that the Commission reject Staff's recommendation, find that the proposed Project, as submitted and conditioned by Poseidon, is consistent with the Coastal Act and LCP, and approve the Project as submitted so that Poseidon can implement this critically important facility.

I. THE COMMISSION SHOULD APPROVE THE PROJECT WITH SPECIAL CONDITIONS IN LINE WITH THOSE IMPOSED ON THE CARLSBAD DESALINATION PROJECT

As noted above, to allow the Commission to approve the Project at its November meeting, Poseidon has prepared its own set of proposed Special Conditions, attached hereto as **Exhibit A**. As a starting point, Poseidon's proposed Special Conditions are based on the Special Conditions imposed by the Commission on the Carlsbad Desalination Project. In addition, Poseidon's proposed Special Conditions include several additional conditions that differ from those for the Carlsbad project to reflect issues and circumstances unique to the proposed Project and its site. These Special Conditions reflect issues such as structural stability, tsunami and flooding risks, among others. Despite our concerns with the Staff Report and its conclusions, Poseidon is proposing the adoption of several of Staff's proposed Special Conditions that relate to these issues, either in whole or with some modifications.

Poseidon's Special Conditions also provide necessary conditions in a variety of non-controversial areas in the exact same matter they were provided for the Carlsbad project, including Poseidon's liability for certain Commission costs and attorneys' fees, and imposition of a lease and deed restriction to restrict future use of the property, among others.⁴

⁴ One notable exception is that with respect to the Standard Conditions, Poseidon is requesting a three-year period to commence development, in light of the complexity of the Project and the time it will take to finalize plans and complete financing.

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In addition, given the differing views on marine life mitigation and climate change issues discussed in the Staff Report, Poseidon is proposing Special Conditions based on those imposed on the Carlsbad project, which require Poseidon to submit a Marine Life Mitigation Plan and Energy Minimization and Greenhouse Gas Reduction Plan (“GHG Plan”) for the Commission to consider at a future hearing.⁵ If the Commission chooses to approve the permit as proposed by Poseidon then these special conditions will provide the Commission with additional time to devote to analyzing these important issues and the differing perspectives on them.

However, many of Staff’s proposed Special Conditions are unnecessary and/or unwarranted. For instance, certain Staff Special Conditions would not be necessary should the Project be approved as submitted by Poseidon, including:

- Staff Special Condition 2 is not necessary because (1) the Commission would no longer need a reconfigured site plan to be approved by the City of Huntington Beach; (2) Poseidon is not developing any pipelines in the coastal zone in the City of Costa Mesa; and (3) Poseidon has provided all known agreements, easements or other forms of proof of legal interest demonstrating Poseidon’s ability to use the relevant property(ies) within the coastal zone for construction and operations of the proposed Project.
- Staff Special Condition 5 (with the exception of provisions governing lighting and windows) is not necessary because the Commission would not be requiring revised facility plans for the proposed Project.
- Staff Special Condition 9 is not necessary because the Project Site did not previously contain wetlands, so there is no nexus to condition the proposed Project to require wetland restoration.
- Staff Special Condition 16 is not necessary because the proposed Project is not required to be designed to be elevated above, and protected from, a 500-year flood event. The proposed Project is not a “critical facility.”⁶ In any event, pursuant to Poseidon’s proposed Special Condition 16, the proposed Project will be designed to resist without collapse or structural damage the forces resulting from flooding from the 500-year flood event.
- Staff Special Condition 19 is not necessary because the City of Huntington Beach has not identified the Project as a critical City facility. The desalination plant, including its water storage tank, will be privately owned when constructed.

⁵ Staff’s recommendation to modify Poseidon’s GHG Plan to require Poseidon to offset the Project’s gross indirect GHG emissions violates the Coastal Act by attempting to establish or modify an emission standard or air pollution control program. Section 30414(a) of the Coastal Act expressly prohibits the Commission from establishing such a program. In light of those limitations, the Commission may only ensure that new development shall “[b]e consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development,” and “minimize energy consumption and vehicle miles traveled.” Public Resources Code § 30253(c) – (d).

⁶ Staff incorrectly states that the aboveground product water storage tank to be constructed as part of the Project will be turned over to the City for use as a reservoir in the City’s water system. Rather, that tank will be owned and operated by Poseidon to store potable water before it is released to the product water transmission pipelines.

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In addition, other Staff Special Conditions would not be necessary because they are either duplicative of technical data and reports submitted by Poseidon, or are in excess of Coastal Act standards, including:

- Staff Special Condition 10 is not necessary because Poseidon has already provided data and analysis to the Commission concerning subsurface faults, liquefaction, lateral spread and dewatering.
- Staff Special Condition 11 and 12 are not necessary because they establish an arbitrary sound level at the boundary of an area that may not even support sensitive avian species, and require an intricate program of surveying and monitoring, only to default to a standard of prohibiting “any development that would disturb sensitive species or habitat,” an arbitrary standard open to subjective interpretation. Poseidon has proposed a new Special Condition 10 to replace Staff’s proposed conditions based on past actions taken by the Commission, and which will sufficiently protect sensitive species from potential impacts of construction noise and vibration. The main differences are that Poseidon’s proposed condition, which is based on past actions taken by the Commission, uses a 65 dBA standard rather than a 60 dBA standard, and is triggered with the discovery of any active nesting site of a special status species within 500 feet of the Project Site.⁷
- Staff Special Condition 14, which would require removal of Project structures or portions thereof should “an appropriate government agency” determine that such structures are not to be occupied or used due to “any coastal hazards,” exceeds Coastal Act standards and thus is not necessary. Neither the Coastal Act nor the LCP require the Commission to revoke issued CDPs if the Executive Director determines in the future that a particular site could become “threatened” by coastal hazards. Staff’s proposed condition gives the Commission and Executive Director the discretion to revoke the CDP based on speculative, future threats, and on standards that exist nowhere in the Coastal Act Regulations. The Commission’s authority and grounds to revoke a CDP are set forth clearly in the Coastal Act Regulations,⁸ and should not be expanded through an onerous permit condition which may be prone to subjective interpretation.
- Staff Special Condition 17 is not necessary because Poseidon has already provided the Commission with a Seismic, Tsunami and Flood Design Mitigation and Emergency Response Plan that fully addresses potential risks at the Project Site from seismic, tsunami, and flood risks, and provides compliance measures to ensure risks are minimized consistent with the requirements of the Coastal Act. These compliance measures are included as one of the Special Conditions proposed by Poseidon.

⁷ Staff claims the 60 dBA standard is based on conditions recommended on other projects by the California Department of Fish and Wildlife (“CDFW”) and the U.S. Fish and Wildlife Service (“USFWS”). To that end, we also note that the SEIR already includes a mitigation measure to protect potential construction impacts to nesting savannah sparrows. Neither CDFW, nor USFWS, the State and Federal regulatory agencies with primary oversight of listed and sensitive species, provided any comments or objections to the SEIR mitigation measure during the CEQA process.

⁸ Cal. Code Regs., tit. 14, §§ 13104 – 13108.

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- Staff Special Condition 21 is not necessary because the Traffic Management Plan required by the City of Huntington Beach (SEIR Mitigation Measure CON-34) will ensure that the Project's construction traffic will have a less than significant impact, and therefore that public access to the shoreline will not be impaired.

Prior to the Commission's November meeting, Poseidon will be providing the Commission with a further detailed response to the Staff Report which (i) responds to the many misstatements and inaccuracies set forth in the Staff Report, including supporting technical reports from Poseidon's consultants which also provide evidentiary and scientific support to many of the responses in this letter, (ii) provides a detailed explanation of the differences between Staff's proposed Special Conditions and Poseidon's recommended Special Conditions; (iii) provides a substitute Motion and Resolution to allow the Commission to approve the proposed Project as submitted by Poseidon, and (iv) includes substitute findings to replace those in the Staff Report, and which demonstrate that the proposed Project is consistent with all applicable Coastal Act and LCP policies. However, the remainder of this letter addresses several of the key issues raised in the Staff Report and Poseidon's response to them.

II. THE PROJECT'S USE OF THE EXISTING INTAKE AND OUTFALL SYSTEM WILL RESULT IN MINIMAL IMPACTS TO THE MARINE ENVIRONMENT

To obtain seawater to convert into potable drinking water, the proposed Project would use the adjacent AES Huntington Beach Generating Station's ("HBGS") existing open water intake and outfall system. As long as HBGS continues to use the intake for its once-through cooling water system, the proposed Project will use HBGS' cooling water discharge to provide source water (the "co-located scenario"). When HBGS ceases operations of its once-through cooling water system, either temporarily or when that system is retired, the Project would operate the existing intake independently to provide source water (the "stand-alone scenario"). Under either scenario, and in order to protect the marine environment, approximately 50 MGD of concentrated seawater would reenter the Pacific Ocean via the existing HBGS discharge pipe after blending with additional seawater for dilution.

The SEIR concluded that the proposed Project's use of the existing intake and outfall system would not result in any significant impacts to the marine environment. In addition, the Regional Board issued a NPDES permit to Poseidon that determined the proposed Project's use of the existing intake system would utilize the best available site, design, technology and mitigation measures feasible to minimize the intake and mortality of marine life, consistent with the requirements of Water Code section 13142.5(b). The Regional Board also confirmed that the Project's discharge through the existing outfall system complies with the California Ocean Plan and all state and federal receiving water quality requirements.

A. The Proposed Project Minimizes Impingement And Entrainment Impacts

The proposed Project will have insignificant impingement impacts under both the co-located and stand-alone scenarios. Under the co-located scenario, neither the intake volume nor the velocity would be increased, and so existing impingement losses from HBGS' operations would not increase. Under the stand-alone scenario, **Poseidon's use of the intake would cause an estimated impingement loss of just 0.78 pounds per day.** To put this in context, one brown pelican eats 4

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pounds of fish per day. The proposed Project's use of the intake during the stand-alone scenario at the Project's average flow rate of 126.7 MGD will result in **a 92% reduction in impingement compared to the HBGS' impingement losses**. At the time of the hearing on the Carlsbad Desalination Project, which produces the same volume of desalinated water as the proposed Project, the Commission determined that project's even greater level of impingement was *de minimis* and insignificant.

The proposed Project also will have insignificant entrainment impacts under both the co-located and stand-alone scenarios. The most frequently entrained species in the existing intake structure are very abundant both in the local area as well as the Southern California Bight, and therefore actual ecological effects due to Project-related entrainment are insignificant and will have no effect on the ability of the species to sustain their populations. Based on a fairly constant intake pumping rate with an annual average of approximately 126.7 MGD, larval entrainment losses due to the long-term stand-alone operation of the Project are **projected to affect only a small fraction of the larvae (0.02-0.28%) of the source water populations**. Further, no state or federal threatened or endangered species are expected to be impacted by the Project, and the intake structure is not within or near an Area of Special Biological Significance or Marine Life Protection Area.

Staff inaccurately overestimates the proposed Project's expected impingement and entrainment impacts. With respect to impingement, Staff claims that data regarding HBGS' use of the intake shows higher impingement rates than described by Poseidon. Staff misconstrues the record. The data presented in the Staff Report combine results from monthly impingement sampling during normal HBGS operations with sampling during five HBGS heat treatments performed in 2011, when impingement is materially greater. As such, comparing this data to the proposed Project's estimated impingement losses is inappropriate because heat treatments will not occur during operation of the proposed Project.

With respect to entrainment, Staff notes that use of the intake would result in annual entrainment of about 80 million larvae of 11 different fish and invertebrate species (out of a total source water population of 115 billion larvae), including several with commercial or recreational value, such as California halibut. Staff overestimates the impact. For instance, the entrainment study used for the proposed Project, which followed generally accepted protocols, estimates the annual entrainment of 1.26 million halibut larvae. A typical 5-year old halibut releases approximately 300,000 eggs each time it spawns.⁹ Based on the number of spawnings per year, **the entrainment estimate for California halibut likely represents much less than the total annual output from a single female halibut**.

Substantial evidence in the record shows that the proposed Project's use of the existing intake will minimize both impingement and entrainment impacts.

⁹ See California Department of Fish and Wildlife, California Halibut Stock Assessment, July 2011, page A14, <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=36257&inline=true>.

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B. Discharge Impacts Will Be Less Than Significant And Staff's Proposed Special Condition Is Unnecessary

The Project has an approved NPDES permit, confirming that the Project's discharge complies with the California Ocean Plan and all state and federal receiving water quality requirements. The NPDES permit sets limitations for the Project's discharge to avoid degradation consistent with the Ocean Plan's requirements. Neither the Project's discharge of trace amounts of cleaning compounds nor the slightly increased salinity levels resulting from the Project's discharge will degrade the quality of ocean water surrounding the Project Site. The Staff Report's recommendation that the Project be conditioned to require the installation of multiport diffusers on the existing outfall goes beyond the Commission's authority to impose mitigation. The State Water Resources Control Board ("State Board") and Regional Boards have primary responsibility for the regulation of water quality.¹⁰ As the Regional Board's issuance of the NPDES permit is a determination with respect to water quality, the Commission may not take any action in matters relating to water quality that conflict with that permit.¹¹

In any event, Poseidon recognizes that the State Board is preparing an amendment to the California Ocean Plan to address desalination intake and discharge impacts and related mitigation ("Desalination Policy"). Poseidon is proposing a Special Condition for the Commission's consideration requiring that the Project comply with all components of the approved Desalination Policy that are applicable to the Project, including any requirements that may require modifications to the existing HBGS outfall. (See **Exhibit A**, Special Condition 2.c.)

III. A SUBSURFACE INFILTRATION GALLERY IS MORE ENVIRONMENTALLY IMPACTFUL THAN USING THE EXISTING INTAKE SYSTEM, IS INFEASIBLE, CONFLICTS WITH KEY COASTAL ACT POLICIES, AND CANNOT BE LEGALLY IMPOSED UPON THE PROJECT BY THE COMMISSION

Despite substantial evidence in the record demonstrating that the proposed Project's use of the existing intake is the environmentally superior method of obtaining source water for the Project, the Staff Report ignores and/or rejects that evidence and seeks to require Poseidon to construct a far more environmentally impactful intake structure: **a subsurface infiltration gallery impacting 64 acres of coastal habitat on the seafloor and beachfront and requiring hundreds of thousands of cubic yards of excavation.**

The feasibility and environmental impacts of the type of infiltration gallery proposed by Staff have been thoroughly assessed. Staff portrays the subsurface infiltration gallery as a feasible and less damaging alternative to the existing intake. However, Staff ignores the SEIR, technical literature, and findings from permits issued for the Project, site-specific geotechnical data and analysis, and other information, all of which demonstrate that a subsurface infiltration gallery for the Project would be vastly more environmentally impactful than Poseidon's proposed use of the existing intake system,

¹⁰ See Water Code §§ 13001, 13160; Public Resources Code § 30412(b); *Pacific Lumber Co. v. State Water Resources Control Bd.* (2006) 37 Cal. 4th 921.

¹¹ Public Resources Code § 30412(b).

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would be infeasible, and would conflict with applicable Coastal Act policies. **Indeed, the Commission rejected the construction of an infiltration gallery for those same reasons when it approved Poseidon's Carlsbad Desalination Project.**

Moreover, the Regional Board found that an infiltration gallery would be “technologically infeasible and/or environmentally inferior.”¹² As noted above, the Coastal Act prohibits the Commission from “modify[ing], adopt[ing] conditions, or tak[ing] any action in conflict with any determination by . . . any California regional water quality control board in matters relating to water quality or the administration of water rights.”¹³ As such, the Commission cannot legally require Poseidon to abandon its proposed use of the existing intake and instead construct an infiltration gallery.

A. Staff's Proposed Subsurface Infiltration Gallery Is More Environmentally Impactful That Poseidon's Proposed Use Of The Existing Intake System

Staff asserts that a subsurface infiltration gallery would be more environmentally friendly for the Project. That is incorrect. Excavation required for an infiltration gallery sized to provide an average flow rate of 126.7 MGD would impact benthic organisms and fishes within the construction footprint and numerous species of invertebrates, fish and marine mammals in the water column surrounding the construction area, which would be adversely affected by noise and other construction-related effects. Removal of 64 acres of seafloor and beachfront and construction of an infiltration gallery will require dredging, drilling, anchoring, and tunneling activities that would result in direct removal, burial, crushing, breaking, cutting, unearthing and displacing of organisms on the sea floor. In addition, turbidity resulting from dredging and other construction activities would clog feeding and respiration structures of organisms that occupy the water column well beyond the directly affected area. Additional indirect effects would include construction noise and vibration that could injure, harass or kill a number of fish and marine mammal species.

In addition, the Staff Report fails to address that the infiltration gallery would require regular maintenance. That would likely include regular removal of unsuitable material regularly deposited in the area offshore of the Project Site. The San Gabriel and Santa Ana Rivers deposit fine-grained sediments that would clog the filter, and require dredging and removal every 1 to 3 years. **Thus, impacts on benthic communities would be ongoing on an annual or multi-year basis.**

Construction also would have recreational impacts to commercial and recreational fishing by precluding fishing and potentially affecting fish behavior and biology. Both sheet pile and dredging methods of construction could have adverse effects on the shore break, affecting recreational activities, including surfing, which is a treasured recreational asset in the City of Huntington Beach. Construction would also require substantial pumping facility(ies), including associated acoustical and visual shielding, service road(s), and security fencing on the shoreline, which would restrict public access to the beach, resulting in a significant impact on the beneficial use of the shoreline by the public. Moreover, once in operation, the energy and indirect greenhouse gas emissions associated with conveyance of seawater from the infiltration gallery to the desalination plant will be approximately

¹² Regional Board NPDES Order No. R8-2012-0007 (NPDES CA 80000403) at pp. F-23 to F-35.

¹³ Public Resources Code § 30412(b).

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double those from collecting seawater from the Huntington Beach Generating Station's existing intake system.

In contrast, Poseidon's use of the existing intake would cause a *de minimis* estimated impingement loss of just 0.78 pounds per day. To put this in context, one brown pelican eats 4 pounds of fish per day. Further, based on a fairly constant pumping rate for the existing intake, larval entrainment losses due to the long-term stand-alone operation of the Project are projected to affect only a small fraction of the larvae (0.02-0.28%) of the source water populations. In addition, Poseidon's use of the existing intake would not result in construction on the seafloor and beachfront, nor any permanent beachfront structures, would not result in continued visual and recreational impacts along the beachfront, and would require less energy. In comparison, the infiltration gallery's impact to 64 acres of coastal habitat on the seafloor and beachfront would be significantly greater than the use of the existing intake.

B. Staff's Proposed Subsurface Infiltration Gallery Is Infeasible

Site-specific study and analysis of alternative subsurface intakes has been a primary focus throughout the Project's CDP application process. Contrary to the assertions in the Staff Report, substantial site-specific evidence¹⁴ in the record confirms that subsurface intakes are not a viable option for the Project. **No large-scale operating desalination plants anywhere in the world today have effectively demonstrated that a subsurface intake system is feasible.** Indeed, the Fukuoka desalination plant, the facility Staff references to claim that a subsurface infiltration gallery is feasible for the proposed Project, is the largest reverse osmosis desalination plant worldwide with an infiltration gallery. That facility is much smaller than the proposed Project, and has been experiencing substantial operational problems.¹⁵

The Commission's review of the feasibility of a project's components or alternatives must be based on the Coastal Act's definition of that term. The Coastal Act defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."¹⁶ Here, the construction, operation and maintenance of a proposed subsurface infiltration gallery would not be "feasible" for the Project.

¹⁴ See, e.g., Psomas, 2005, Technical Memorandum on Feasibility of Vertical Extraction Wells for Poseidon Desalination Plant Feed Water Supply; Psomas, 2007, Feasibility of Alternative Seawater Intakes for the Huntington Beach Desal Project, May 2007; RBF, 2005, Draft Recirculated Environmental Impact Report for the Seawater Desalination Project at Huntington Beach; Dudek/RBF, 2010, Final Subsequent Environmental Impact Report for the Seawater Desalination Project at Huntington Beach; Water Globe Consulting, 2011, Evaluation of Alternative Desalination Plant Subsurface Intake Technologies; Water Globe Consulting, 2012, Well Intake Capacity Updated Based on 2012 Soil Transmissivity Study; Water Globe Consulting, 2013, Critical Review of 2013 Desalination Journal Publication on Subsurface Intakes; Regional Board NPDES Order No. R8-2012-0007; Tetra Tech, 2012, Technical Document Review for Site-Specific Hydraulic Conductivity Values; Geosyntec, May 2013, Review of Aquifer Properties and Potential Pumping, Huntington Beach Desalination Plant; Geosyntec, Sept. 2013, Feasibility Assessment of Shoreline Subsurface Collectors, Huntington Beach Desalination Plant.

¹⁵ Water Globe Consulting, Critical Review of 2013 Desalination Journal Publication on Subsurface Intakes at p. 4 (Oct. 21, 2013).

¹⁶ Public Resources Code § 30108.

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Substantial evidence in the record demonstrates the technical, economic, environmental, and other factors why such an infiltration gallery would be infeasible, including but not limited to:

- An infiltration gallery of the size required for the Project's water intake requirements has never been implemented. The existing Fukuoka plant, which has a capacity of 13.2 MGD, has the largest operational subsurface infiltration gallery in the world. Today the plant is actually operating at only 75% of its original capacity (i.e., 10 MGD) due to irreversible biological fouling of the infiltration gallery intake.¹⁷ To withdraw the seawater required for the Project, Poseidon and its public agency partners would be required to bear the uncertainty of a massive scale up in this technology;
- The shallow sediments in the coastal margin offshore Huntington Beach are not beach sand, but are fine-grained "muddy sand" of low permeability. The muddy character of the shallow sea sediments would rapidly clog up the infiltration gallery and require frequent dredging, resulting in an ongoing impact to the benthic environment;
- An infiltration gallery sized for the Project would impact approximately 64 acres of benthic habitat and beachfront habitat, including the installation of 33 connector pipes from the shore through the surf zone to the filter bed, and 33 wells on the beachfront needing electrical supply and service roads for regular maintenance. Even if an infiltration gallery could be designed with just one connector pipeline, as Staff contends, such a design would require the excavation and construction of a large intake well, a substantial pumping facility, including associated acoustical and visual shielding, as well as security fencing on the shoreline which would restrict public access to the beach, and still would impact over 30 acres (over 1.3 million square feet) of benthic environment;
- The need to dewater and dispose over 290,000 to 560,000 cubic yards of ocean bottom sediments to a sanitary landfill or ocean disposal site makes the use of a subsurface infiltration gallery infeasible. Despite Staff's assertion that such constraints are not a concern, the fine-grained sediments on the seafloor would likely not be suitable for beach nourishment, and any ocean disposal would require approvals by a number of agencies beyond the Commission, including the Army Corps of Engineers, among others; and
- The cost of an infiltration gallery for the average 126.7 MGD intake required for the Project is estimated to be at least \$270 million.¹⁸ The cost for this type of intake system would significantly increase the construction cost of the Project, imposing a significant burden on the purchasers of water with no measurable environmental benefits. Because an infiltration gallery of the size and scale required for the Project has never been attempted worldwide, economical or cost-effective financing cannot be obtained.

¹⁷ Water Globe Consulting, Critical Review of 2013 Desalination Journal Publication on Subsurface Intakes at p. 4 (Oct. 21, 2013).

¹⁸ See footnote 3.

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In sum, a subsurface infiltration gallery would undermine the Project's objective to use proven technology to reliably produce high-quality drinking water at an affordable cost without causing significant environmental impacts.

C. Staff's Proposed Infiltration Gallery Conflicts With Coastal Act Policies

In addition, construction, operation, and maintenance of Staff's proposed subsurface infiltration gallery would result in environmental impacts that are in direct conflict with several Coastal Act policies. The construction, operation and maintenance of such an intake system would cause significant impacts to the offshore benthic environment and marine resources, obstruct public access to the beach and impair visual resources, and increase energy consumption. Substantial evidence in the record demonstrates the many reasons such an infiltration gallery would conflict with Coastal Act policies, including but not limited to:

- **Marine Environment (Coastal Act Sections 30230, 30231).** As noted in detail above, excavation of the seafloor would permanently impact the offshore benthic environment, causing adverse impacts to coastal and biological resources. The infiltration gallery and filter bed also would need to be dredged every 1 to 3 years, resulting in the repeated disturbance of marine habitat;
- **Public Access and Recreation (Coastal Act Sections 30211, 30220, 30221).** The infiltration gallery would negatively impact public access and recreation, as it would require the construction of 33 intake water collection wells and trenches for connector piping along a one-mile strip of the shoreline, including service roads. Each of the 33 wells would require approximately 2,800 square feet of beachfront property, for a combined loss of over 2.1 acres of beachfront property. The collection pipeline would require an easement over 1.5 additional acres of shoreline. Even if an intake system could be designed with just one connector pipeline as Staff contends, such a design would require the excavation and construction of a large intake well, a substantial pumping facility, including associated acoustical and visual shielding, and security fencing on the shoreline which would restrict public access to the beach, and still would impact over 30 acres (over 1.3 million square feet) of benthic environment; and
- **Energy Consumption (Coastal Act Section 30253(d)).** Once in operation, the energy associated with conveyance of source seawater from the infiltration gallery to the desalination plant will be approximately 2 times higher than those from collecting seawater from the existing intake system.¹⁹ In addition, the removal and transportation of hundreds of thousands of cubic yards of ocean bottom sediments will significantly increase total direct greenhouse gas emissions associated with the Project.

¹⁹ Water Globe Consulting, 2011, Evaluation of Alternative Desalination Plant Subsurface Intake Technologies, at p. 13.

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D. The Commission Cannot Legally Require That The Project Be Redesigned With A Subsurface Infiltration Gallery

Pursuant to Coastal Act section 30412(b), the Regional Board has primary jurisdiction to enforce water quality policies, such as Water Code section 13142.5(b). In approving the Project's NPDES permit, the Regional Board found that the Project's proposed use of the existing intake complies with section 13142.5(b), but that subsurface intakes, including an infiltration gallery, are either technologically infeasible or environmentally inferior for the specific site of the Project. Because the Regional Board's issuance of the NPDES permit is a determination with respect to water quality, the Commission may not take any action in conflict with this NPDES permit in matters relating to water quality.²⁰ As such, the Commission cannot legally require that the Project be redesigned to include a subsurface infiltration gallery.

IV. THE PROPOSED PROJECT WILL NOT IMPACT WETLANDS AND DOES NOT NEED TO BE REDESIGNED

The proposed Project complies with all Coastal Act and LCP policies governing development adjacent to wetlands and ESHA, including the LCP policy that new development generally include a 100-foot setback from the landward edge of a wetland.²¹ Staff claims that the proposed Project does not comply with the LCP's 100-foot buffer zone policy. To compensate for that alleged deficiency, Staff's alternative project requires Poseidon to redesign its Project to locate all development over 100 feet from an alleged wetland in a degraded area adjacent to the eastern portion of the Project Site. Staff's proposed requirement is unnecessary and unwarranted.

The proposed Project is consistent with the LCP's wetland buffer zone policy. To the extent the area east of the Project Site is even wetlands, **all Project structures would be set back over 100 feet from that area.** The LCP policy also allows for a less than 100-foot buffer if certain standards are met to assure protection of the wetlands, and the proposed Project meets those standards. The only components of the Project within 100 feet of that area would be portions of a fire-lane access road surrounding the Project's structures that will be used for maintenance vehicles and in-plant traffic, but will carry very few trips per day, as well as portions of a few 20-foot long parking spaces adjacent to the road. All Project facilities would be separated from the alleged wetland area by an existing 14-foot high, 60-foot wide earthen containment berm that provides a physical barrier between the Project and the subject area.

For those limited portions of the Project (access road and parking spaces) less than 100 feet from the alleged wetland area east of the Project Site, the proposed Project's buffer zone satisfies all the factors that permit a less than 100-foot setback under LCP Policy C 7.1.4. With the separation provided by the existing containment berm, the buffer protects the functional relationship between the wetland and adjacent upland, is wide enough to allow for interception of material eroded as a result of

²⁰ Public Resources Code § 30412(b). See also Public Resources Code §§ 30400, 30401 (The Legislature did not intend for the Regional Board and the Commission to make separate and potentially conflicting determinations regarding water quality compliance for the same project; inter-agency duplication and conflict are to be avoided).

²¹ LCP, Policy C 7.1.4.

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the proposed development, and uses existing features to provide protection from the wetland. In addition, as the alleged wetland does not exhibit potential for use of any sort by the burrowing owl, western snowy plover, salt marsh skipper, California brown pelican, light-footed clapper rail, California least tern, Dorothy's El Segundo dune weevil or the California brackish water snail, and provides only marginal foraging habitat for the Belding's savannah sparrow due to the presence of pickleweed, the buffer ensures sensitive species are not disturbed significantly. Accordingly, the proposed Project's buffer zone is consistent with LCP Policy C 7.1.4 and no redesign is required. Moreover, to ensure compliance with this LCP policy, Poseidon has proposed a Special Condition requiring review of the proposed Project's buffer zone by the California Department of Fish and Wildlife prior to construction. (See **Exhibit A**, Special Condition 2.d.)

Further, Staff incorrectly asserts that until 2012 (when routine vegetation clearing occurred on the property), approximately 3.5 acres of the Project Site constituted wetlands. Staff's alternative project requires Poseidon to develop a Wetland Mitigation Plan that provides for the creation and/or restoration of at least 14 acres of coastal wetland habitat. In 2009, Poseidon's consultant prepared a wetlands Jurisdictional Determination ("JD") of the Project Site, which was included in the SEIR. The JD concluded that vegetation, soils, and hydrology on the Project Site were not wetlands in accordance with the federal or Coastal Act definitions. The Staff Report inaccurately characterizes components of the JD and fails to apply sound wetland science and practice to the Project Site. For instance, the Staff Report indicates that the presence of a single wetland parameter subjects an area to LCP policies related to wetland protection and restoration. That is incorrect and misconstrues the Commission's established wetlands delineation methodology, which allows a project applicant to demonstrate that, despite the presence of a single parameter, the other wetland parameters are not present and therefore the area is not a wetland. That is what the JD did here – all wetland parameters were fully evaluated, and the JD concluded that no wetlands were present. In addition, the Staff Report makes improper conclusions regarding wetland hydrology and wetland indicator plants, fails to document onsite observations, and fails to delineate actual wetland boundaries. In sum, none of the onsite areas meet the threshold for wetlands.²² Because no wetlands were impacted, there is no nexus to condition Poseidon to create and/or restore at least 14 acres of coastal wetland habitat.²³

V. CONCLUSION

The proposed Project is needed to reduce Orange County's demand for imported water, strengthen reliability and diversify the Orange County region's water supply portfolio. The Municipal Water District of Orange County's ("MWDOC") 2010 Regional Urban Water Management Plan ("RUWMP") includes a number of important findings relative to the need for further local resource projects, and includes the Project as one of the projects to help meet future demands. Water demand in

²² The California Energy Commission's Preliminary Staff Assessment for the Huntington Beach Energy Project ("HBEP") also indicates that the project area for the proposed HBEP (adjacent to the proposed Project's site) is "actively maintained to facilitate operation of existing power generation and therefore does not support wetlands or other waters potentially under the jurisdiction of USACE, CDFW, and/or the California Coastal Commission." See CEC Preliminary Staff Assessment – Part A, p. 4.2-33.

²³ See *Nollan v. Cal. Coastal Com.* (1987) 483 U.S. 825; *Dolan v. City of Tigard* (1994) 512 U.S. 374; see also Public Resources Code § 30607 (CDPs are subject to *reasonable* terms and conditions). In addition, we note that AES has confirmed that no enforcement action has been instituted against it, as the Staff Report claims.

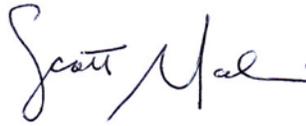
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the MWDOC service area has increased approximately 70 percent since 1970. Given the growth projected for the Orange County region over the next 25 years and the water demand that has been determined for that growth, should the Project not be constructed, Orange County would need to continue to rely on imported water. To that end, the RUWMP identifies seawater desalination as a vital component of the plan to diversify the County's water supply with a new local source.

In all, the Project is an urgently needed and environmentally responsible solution to the region's water supply needs, which is consistent with and will further Coastal Act and LCP policies and will provide significant public and environmental benefits. We urge the Commission to approve this important Project, as already reviewed and permitted by a number of independent regulatory authorities, and as designed, planned and proposed by Poseidon.

Sincerely,

A handwritten signature in black ink that reads "Scott Maloni". The signature is written in a cursive, flowing style.

Scott Maloni
Vice President, Poseidon Water

Attachments

cc: Alison Dettmer, California Coastal Commission
Tom Luster, California Coastal Commission

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EXHIBIT A

STANDARD CONDITIONS

- 1) **Notice of Receipt and Acknowledgment:** This permit is not valid until a copy of the permit is signed by the Permittee or authorized agent, acknowledging receipt of the permit and the acceptance of the terms and conditions, and is returned to the Commission office.
- 2) **Expiration:** If development has not commenced, this permit will expire three years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
- 3) **Interpretation:** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
- 4) **Assignment:** The permit may be assigned to any qualified person, provided the assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
- 5) **Terms and Conditions Run with the Land:** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

SPECIAL CONDITIONS

- 1) **Liability for Costs and Attorneys' Fees:** Permittee shall reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys' fees – including (a) those charged by the Office of the Attorney General, and (b) any court costs and attorneys' fees that the Coastal Commission may be required by a court to pay – that the Coastal Commission incurs in connection with the defense of any action brought by a party other than Permittee against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this permit. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission.
- 2) **Evidence of Other Agency Approvals:**
 - a. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval, documentation showing that the project has obtained the following final approvals, or documentation showing that these approvals are not needed:²⁴
 - NPDES Permit from the Regional Water Quality Control Board.

²⁴ Condition to be removed to the extent satisfied prior to issuance of the permit.

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- Authorization from the Army Corps of Engineers to proceed pursuant to Nationwide Permit (NWP) No. 12 for Utility Line Activities.
 - b. WITHIN 90 DAYS FOLLOWING THE COMMENCEMENT OF COMMERCIAL PROJECT WATER DELIVERIES, the Permittee shall submit to the Executive Director documentation showing that the project has obtained a domestic water supply permit from the California Department of Public Health.
 - c. State Water Resources Control Board (State Board). If the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) is amended by the State Board to address desalination facilities, including intake and brine discharge impacts and related mitigation, the Permittee shall comply with all components of the Ocean Plan applicable to the Project as determined by the Regional Water Quality Control Board through the Project's NPDES Permit.
 - d. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director documentation from the California Department of Fish and Wildlife demonstrating that it has reviewed the project's buffer zone between nearby wetlands and determined the buffer is sufficient to avoid significant impacts to nearby wetlands.
- 3) **State Lands Commission.** Prior to cessation of the AES Power Plant's use of its seawater cooling system, the Permittee shall provide to the Executive Director documentation from the California State Lands Commission of a lease or lease amendment authorizing the Permittee's continued use of state tidelands for construction and operation of an ocean outfall and intake.
- 4) **California Department of Parks and Recreation (DPR).** Prior to cessation of the AES Power Plant's use of its seawater cooling system, the Permittee shall provide to the Executive Director documentation from the DPR of a grant of easement providing the Permittee any legal interest necessary to use those portions of the intake and outfall structures within DPR property, or documentation from the DPR stating that no easement is required.
- 5) **Lease, Agreement, or Deed Restriction:** PRIOR TO ISSUANCE OF THE PERMIT, the applicant shall provide to the Executive Director for review and approval documentation demonstrating that the applicant has executed and recorded against its interest(s) in the property where the desalination facility is to be located (i.e., the Huntington Beach Generating Station), and which is governed by this permit, a lease, agreement, or deed restriction (in which any private owner of the fee interest in such property shall join or to which it shall agree to be bound), in form and content acceptable to the Executive Director (a) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the property, subject to terms and conditions that restrict the use and enjoyment of the property; and (b) imposing all of the Special Conditions of this

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permit as covenants, conditions and restrictions on the use and enjoyment of the property. The restriction shall include a legal description of the property. It shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the Standard and Special Conditions of this permit shall continue to restrict the use and enjoyment of the property so long as either this permit or the development it authorizes – or any part, modification, or amendment thereof – remains in existence on or with respect to the property.

- 6) **Hazardous Materials at Facility Site:** PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the Permittee shall provide the Executive Director documentation that a Remedial Action Plan has been approved by the Department of Toxic Substances Control for the site consistent with all relevant conditions of the project’s SEIR.
- 7) **Construction Plan:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit two copies of a Construction Plan to the Executive Director for review and approval. The Construction Plan shall, at a minimum, include the following:

Best Management Practices (BMPs)

- a. The Construction Plan shall include a Stormwater Pollution Prevention Plan which shall clearly identify all BMPs to be implemented during construction and their location and comply with all Regional Board requirements. Such plans shall contain provisions for specifically identifying and protecting all natural drainage swales (with sand bag barriers, filter fabric fences, straw bale filters, etc.) to prevent construction-related runoff and sediment from entering into these natural drainage areas which ultimately deposit runoff into the Pacific Ocean. Silt fences, straw wattles, or equivalent measures shall be installed at the perimeter of all construction areas. At a minimum, such plans shall also include provisions for stockpile management, temporary stormwater detention facilities, revegetation as necessary, and restricting grading and earthmoving during rainy weather.

The Construction Plan shall indicate that:

- i. dry cleanup methods are preferred whenever possible and that if water cleanup is necessary, all runoff shall be collected to settle out sediments prior to discharge from the site;
- ii. all de-watering operations shall include filtration mechanisms;
- iii. off-site equipment wash areas are preferred whenever possible; if equipment must be washed on-site, the use of soaps, solvents, degreasers, or steam cleaning equipment shall not be allowed; in any event, such wash water shall not be allowed to enter any natural drainage;

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- iv. concrete rinsates shall be collected and they shall not be allowed to enter any natural drainage areas;
- v. good construction housekeeping shall be required (e.g., clean up all leaks, drips, and other spills immediately; refuel vehicles and heavy equipment offsite and/or in one designated prepared location; keep materials covered and out of the rain (including covering exposed piles of soil and wastes);
- vi. all wastes shall be disposed of properly, trash receptacles shall be placed on site for that purpose, and open trash receptacles shall be covered during wet weather);
- vii. all erosion and sediment controls shall be in place prior to the commencement of grading and/or construction as well as at the end of each day;
- viii. particular care shall be exercised to prevent foreign materials from making their way to the beach or Pacific Ocean;
- ix. contractors shall ensure that work crews are carefully briefed on the importance of observing the appropriate precautions and reporting any accidental spills; and
- x. construction contracts shall contain appropriate penalty provisions, sufficient to offset the cost of retrieving or cleaning up improperly contained foreign materials.

Construction Site Documents

- b. The Construction Plan shall provide that copies of the signed coastal development permit and the approved Construction Plan be maintained in a conspicuous location at the construction job site at all times, and that such copies are available for public review on request. Prior to any individuals commencing construction work onsite, those individuals shall be briefed on the content and meaning of the coastal development permit and the approved Construction Plan.

Construction Coordinator

- c. The Construction Plan shall provide that a construction coordinator be designated to be contacted during construction should questions arise regarding the construction (in case of both regular inquiries and emergencies), and that their contact information (i.e., address, phone numbers, etc.) including, at a minimum, a telephone number that will be made available 24 hours a day for the duration of construction, is conspicuously posted at the job site where such contact information is readily visible from public viewing areas, along with indication that the construction coordinator

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should be contacted in the case of questions regarding the construction (in case of both regular inquiries and emergencies). The construction coordinator shall record the name, phone number, and nature of all complaints received regarding the construction, and shall promptly investigate complaints and take remedial action as appropriate.

Notification

- d. Poseidon shall notify staff of the Coastal Commission's Energy and Ocean Resources Unit at least 3 working days in advance of commencement of construction, and immediately upon completion of construction.

Poseidon shall undertake development in accordance with the approved Construction Plan. Any proposed changes to the approved Construction Plan shall be reported to the Executive Director. No changes to the approved Construction Plan shall occur without a Commission approved amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

- 8) **Coordination with Other Concurrent Project.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall provide documentation from the Department of Toxic Substances Control showing that the location and timing of the Permittee's proposed pipeline construction will not interfere with proposed cleanup and remediation activities at the Ascon Landfill site.
- 9) **Change in Seawater Withdrawal:** If at any time during the life of the project the Permittee proposes or is required to withdraw more than an average annual flow of 127 MGD of seawater, it must obtain first an amendment to this permit.

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- 10) Noise:** Noise generated by construction (including, but not limited to, pile driving) shall not exceed 65 dBA Leq(h)* at any active nesting site within 500 feet of project site for Belding's savannah sparrow's (*Passerculus sandwichensis beldingi*), light-footed clapper rail (*Rallus longirostris levipes*), western snowy plover (*Charadrius alexandrinus nivosus*) and the California least tern (*Sternula antillarum browni*), or other special status species. If construction occurs during the breeding season for these species (January through August), applicant shall conduct a nesting bird survey for these bird species. If active nests for any of these species are found, the applicant shall prepare a noise report to document the noise levels that would result from proposed construction activities at the location of the active nests. If construction noise exceeds 65 dBA Leq(h), or ambient, if ambient noise levels are determined to be higher than 65 dBA Leq(h), then alternative methods of construction and/or pile driving (including, but not limited to, vibratory pile driving, press-in pile placement, drilling, dewatered isolation casings, etc.) or other sound mitigation measures (including, but not limited to, sound shielding and noise attenuation devices) shall be used as necessary to achieve the required dB threshold levels. If these sound mitigation measures do not reduce noise levels to the prescribed levels, the applicant shall consult with the California Department of Fish and Wildlife to determine a course of action, which may include new sound mitigation or curtailment of construction until nesting is complete.

*dBA Leq (h) is the noise levels in decibels measured with a frequency weighting network, corresponding to the "A-Scale" on a standard sound level meter averaged on an hourly basis.

11) Final Plans:

- a. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval final plans for the project components located in the coastal zone.
- b. The final plans shall document that all exterior windows will be non-glare glass, and all other structures and surfaces constructed or installed as part of the project and that are visible from public areas shall be painted or otherwise finished in neutral tones that minimize their visibility from those public areas.
- c. The Permittee shall undertake development in accordance with the approved plans and any changes shall be reported to the Executive Director. No material changes within the coastal zone shall occur without a Commission-approved amendment to this coastal development permit unless the Executive Director determines that no amendment is necessary. Changes to the project requiring review for amendment would include changes in the physical, operational, or delivery capacity increases, or extension of water supply distribution pipelines beyond those shown on the final plans.

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- 12) Term of Permit:** This permit authorizes the approved seawater desalination plant and associated facilities for thirty-five years from the date the facility commences commercial project water deliveries. If the Permittee intends to continue operating the desalination facility and associated components after this authorization expires, then the Permittee shall apply for a new coastal permit authorization to allow the approved development (including, as applicable, any potential modifications to it requested by the Permittee). Provided an application is received before the permit expiration, the expiration date shall be automatically extended until the time the Commission acts on the application.
- 13) Marine Life Mitigation Plan:** PRIOR TO ISSUANCE OF THE PERMIT, the Permittee shall submit to and obtain from the Commission approval of a Marine Life Mitigation Plan (the Plan) that complies with the following:
- a. To the maximum extent feasible, the mitigation shall take the form of maintenance, creation, enhancement, or restoration of aquatic or wetland habitat, or the payment of an equivalent mitigation fee.
 - b. Unless payment of an equivalent mitigation fee is required, goals, objectives and performance criteria for each of the proposed mitigation sites. It shall identify specific maintenance, creation, restoration, or enhancement measures that will be used at each site, including grading and planting plants, the timing of the mitigation measures, monitoring that will be implemented to establish baseline conditions and to determine whether the sites are meeting performance criteria. The Plan shall also identify contingency measures that will be implemented should any of the mitigation sites not meet performance criteria.
 - c. Unless payment of an equivalent mitigation fee is required, requires submittals of “as-built” plans for each site and annual monitoring reports for no less than five years or until the sites meet performance criteria.
 - d. Unless payment of an equivalent mitigation fee is required, defines legal mechanism(s) proposed to ensure permanent protection of each site – e.g., conservation easements, deed restriction, or other methods.

The Permittee shall comply with the approved Plan. Prior to implementing the Plan, the Permittee shall submit a proposed wetlands restoration project or projects that complies with the Plan in the form of a separate coastal development permit application for the planned wetlands restoration project(s). The Commission shall hold a hearing on the proposed Plan within ninety days of the Permittee’s request for such hearing.

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- 14) Assumption of Risk and Waiver of Liability:** By acceptance of this permit, the Permittee acknowledges and agrees (1) that the site may be subject to hazards from ground motion, liquefaction, lateral spread, storm waves, storm surges, erosion, and flooding; (2) to assume the risks to Poseidon and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (3) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (4) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.
- 15) Flood and Tsunami Hazard Mitigation Planning:** The Permittee shall comply with the specific measures identified in the Seismic, Tsunami and Flood Design Mitigation and Emergency Response Plan dated March 2013, as provided below:
- a. The Permittee shall implement SEIR mitigation measure HWQ-3: Prior to issuance of grading permits, the applicant shall submit to the City for approval a plan outlining the specific planning measures to be taken to minimize or reduce risks to property and human safety from tsunami during operation. Planning measures could include but would not be limited to the following: (a) provision of tsunami safety information to all facility personnel, in addition to posting signage on site; (b) identification of the method for transmission of tsunami watch and warnings to facility personnel and persons on the site in the event a watch or warning is issued; and (c) identification of an evacuation site for persons on site in the event of a tsunami warning.
 - b. The Permittee shall develop a Hazard Emergency Response Plan with AES HBGS prior to the commencement of project operations. The Permittee has submitted a Draft Hazard Emergency Response Plan tailored to the current AES plan but revised to address a non-essential water treatment plant. The Permittee will meet with AES HBGS to work together on a coordinated plan that is in accordance with the draft plan submitted.

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- 16) Structural Stability.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall provide to the Executive Director documentation from a qualified and licensed structural engineer, certifying that the new desalination plant owned by the Permittee is designed to resist without collapse or structural damage the forces resulting from any and all of the following seismic, geologic, flood, and tsunami hazards:
- a. The “design-level” earthquake, which, as specified in SEIR Mitigation Measure GEO-3, is to be determined based on methods required in the 2010 California Building Code;
 - b. Ground motion based on 2010 California Building Code requirements for Site Class F, with an acceleration response spectrum corresponding to 80% of the Site Class E response spectrum;
 - c. Soil settlement or displacement due to liquefaction or lateral soil spread of at least nine inches vertically and at least thirty-eight inches horizontally;
 - d. Groundwater table elevations at the ground surface;
 - e. Tsunami runup at the facility site of 11 feet above mean sea level with an additional two feet of sea level rise for a total of 13 feet above mean sea level; and
 - f. Flooding from the 100-year and 500-year flood events, including increased flood elevations resulting from two feet of sea level rise. Flood elevations shall be based on the flood map in the Environmental Hazards Element of the City of Huntington Beach General Plan.
- 17) Lighting Plan:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit a Lighting Plan to the Executive Director for review and approval. The Lighting Plan shall document that the facility’s exterior lighting is the minimum necessary for safety purposes. All lighting (exterior and interior) shall be sited and designed so that it limits the amount of light or glare visible from offsite areas (including but not limited to views from the shoreline, public accessways, and the adjacent wetlands and environmentally sensitive habitat areas managed by the Huntington Beach Wetlands Conservancy) to the maximum extent feasible (including through uses of lowest luminosity possible, directing lighting downward, etc.).
- 18) Energy Minimization and Greenhouse Gas Reduction Plan:** PRIOR TO ISSUANCE OF THE PERMIT, the Permittee shall submit to the Commission an Energy Minimization and Greenhouse Gas Reduction Plan. The permit shall not be issued until the Commission has approved an Energy Minimization and Greenhouse Gas Reduction Plan after a public hearing. The Commission shall hold a hearing on the Energy Minimization and Greenhouse Gas Reduction Plan within ninety days of the Permittee’s request for such hearing.

EXHIBIT A

- 19) Stormwater and Drainage Plan:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director a Stormwater and Drainage Plan that complies with the stormwater and drainage requirements in the project's NPDES Permit.