CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
Santa Ana Region

July 30 – 31, 2020
August 7, 2020

Item: **4**

SUBJECT: **Supplemental Staff Report**
Public Hearing – Order R8-2020-0005 - Renewal of Waste Discharge Requirements and National Pollutant Discharge Elimination System Permit (NPDES No. CA8000403) for Poseidon Resources (Surfside) L.L.C., Huntington Beach Desalination Facility

ERRATA SHEET

Staff proposes additional changes to Tentative Order R8-2020-0005 to correct the total mitigation acreage required in response to a public comment, add a finding regarding the public trust doctrine in response to a late comment, and make clarifying edits. The proposed changes are included in the Errata Sheet (Attachment 1).

BOARD MEMBER QUESTIONS

Additional questions have been raised by the Board Members since the Tentative Order and/or Staff Report was released. Staff's responses are provided below.

1. At the May 15, 2020 workshop, Mr. Markus indicated that completion of the distribution system would be a condition to the effectiveness of the agreement. The Term Sheet does not have such a condition. Can this be clarified?

   RESPONSE: OCWD staff provided the following response: "We will recommend that our Board approve a distribution plan before we begin negotiating a final water purchase agreement with Poseidon. This would occur if the Regional Board and the Coastal Commission approve the project." (July 2, 2020 email from OCWD [Attachment 3])

2. How does OCWD use water levels/storage capacities on a monthly or yearly basis to ensure water demands are met? Do you look at historic trends to determine current and/or future water demands?

   RESPONSE: OCWD staff provided the following response:

   "Here is a quick example. We have a very good idea going into a new year what total water demands will be. We have lots of historic data and there is not much growth remaining in OCWD. Total water demands are typically around 400,000 afy (I'm going to use round numbers for this example). These are the water demands of the 19 retail water agencies within OCWD – we call them Producers.

About 75% of the water demands are met by groundwater pumping or around 300,000 afy. The other 25% is met by MWD with imported water. We can change this 75/25% every year depending upon the condition of the groundwater basin and the availability of imported water supplies.

"Regarding the 300,000 afy of groundwater pumping – the District has a good idea of how much water we expect to recharge into the groundwater basin. We want to match recharge with pumping and we typically recharge 300,000 afy. If we have a dry year in the SAR watershed we may only recharge around 250,000 afy. So in that year we would overdraft our groundwater basin by 50,000 afy. The groundwater basin typically has around 300,000 af of storage water in it (The useable size of the groundwater basin is 500,000 afy but I'm assuming we have an overdraft of 200,000 af – which is typical - leaving 300,000 af of actual storage supplies)

"So with my example we could have 4 dry years in a row but still allow 300,000 afy of groundwater pumping to occur every year – and we would have drawn down the groundwater basin by 200,000 af.

"If MWD is having problems providing its 25% or 100,000 afy of water, OCWD can allow additional groundwater pumping to meet demands

"If the OCWD groundwater basin is becoming too over drafted, we can reduce how much groundwater pumping we allow and have the 19 retail water agencies take more MWD water." (July 22 email from OCWD [Attachment 3])

3. What was OCWD's water demand before, during, and after the recent drought?

RESPONSE:

Fiscal Year	Total Demand
2009-10	428,720
2010-11	412,794
2011-12	416,329
2012-13	434,535
2013-14	449,000
2014-15	425,349
2015-16	367,000
2016-17	388,851
2017-18	419,477
2018-19	393,222
2019-20	388,188

Source: OCWD, July 16, 2020 email (Attachment 3)

4. In their May 14, 2020 presentation, the Municipal Water District of Orange County (MWDOC) stated that Metropolitan Water District (MWD) has over 3.3 MAF in dry year storage (Slide 19). Is any of that storage dedicated to Orange County? How is that storage allocated to different water areas? Is there an agreement between The Orange County Water Agencies and MWD regarding this storage?

   RESPONSE: How MWD manages their supplies is summarized in section 3.2 of MWDOCs Urban Water Management Plan. MWD has two supplies State Water Project water (SWP) and Colorado River Water (CRW). MWD will supply water to the buyer upon request. In the case of Orange County, the buyer is either MWDOC, the cities of Buena Park, Fountain Valley or Fullerton. MWDOC will have agreements with MWD to purchase water to meet their water demands. OCWD will then purchase their imported water supply through MWDOC. As discussed by OCWD in their May 15, 2020 presentation to the Santa Ana Water Board, OCWD plans to use 110,000 AF of imported water in 2020 (slide 7).

   MWDOC stated in their presentation that MWD has 3.3 MAF in reserves for dry years, which is above normal. This is not all of the water available to MWD. If needed in the dry years, this 3.3 MAF would be made available to all member agencies including MWDOC and OCWD through MWDOC.

LATE COMMENTS

The Board received and accepted several late written comments regarding the Tentative Order that was published on November 22, 2019. Staff has reviewed and prepared responses to the late written comments that were received after the close of the written comment period but before the revised Tentative Order was issued on June 30, 2020. The late comments and the response to those comments are attached. In response to one of the late comments, staff is recommending the addition of a finding regarding the public trust doctrine. The proposed finding is included in the Errata Sheet to Tentative Order.

The Board also received late written comments after the revised Tentative Order was issued. The Board has not accepted those late comments and staff did not prepare responses to late comments received after June 30, 2020. The late comments received after June 30, 2020 are not included in the record of the proceedings for the proposed Facility.

STAFF RECOMMENDATION

Adopt revised Tentative Order R8-2020-0005 as amended by the errata sheet.

ATTACHMENTS

Attachment 1: Errata Sheet

Attachment 2: Late Comments and Responses to Late Comments (Through June 30, 2020)

Attachment 3 – Orange County Water District Communications

ATTACHMENT 1 – ERRATA

ORDER R8-2020-0005
NPDES NO. CA8000403

WASTE DISCHARGE REQUIREMENTS FOR POSEIDON RESOURCES (SURFSIDE) L.L.C. HUNTINGTON BEACH DESALINATION FACILITY

(language added is **underlined and bolded**; language deleted is shown in ~~strikeout~~)

(note - upon Order adoption, errata will be incorporated and in the finalization of the document, formatting and minor typographical corrections will be made; further, non-substantive changes may be made to improve readability in compliance with California Government Code section 11546.7 document accessibility requirements)

Order R8-2020-0005

Page 5, Section II.E

Add the following paragraph after the last paragraph in this section:
In its analysis for the Water Code section 13142.5(b) determination, the Santa Ana Water Board considered the impacts to public trust resources and minimized those impacts by requiring the Discharger to use the best available site, design, technology, and mitigation measures feasible. The Order also implements the Ocean Plan's applicable water quality objectives and prohibitions and includes requirements that protect public trust uses (including recreation, navigation, fishing, and marine habitat).

Page 28, Section VI.C.6

In the event of a complete or partial shutdown of the Facility for corrective maintenance that will or did have a significant impact on influent or effluent flow, the Discharger shall send email notice to and verbally notify the Santa Ana Water Board within 24 hours of becoming aware that **a** corrective action will or did result in a partial or complete shutdown **that** is or was necessary.

Attachment A - Definitions

Page 7, TCDD Equivalents
TCDD Equivalents

1. The sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

Isomer Group	Toxicity Equivalence Factor
	~~1.0~~
2,3,7,8-tetra CDD	**1.0**
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001

Attachment D – Standard Provisions

Page 11, Section VII.B

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 CFR § 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR § 122.42(b)(1)); and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 CFR § 122.42(b)(2).)

[Paragraph should be Indented]

Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR § 122.42(b)(3).**)**

Attachment E – Monitoring and Reporting Program

Page 23, Section VIII.C.4

Sport Fish Muscle Chemistry. The Discharger shall annually target for monitoring Scorpionfish (Scorpaena guttata) and Pacific Chub Mackerel (Scomber japonicus) at the Rig Fishing Monitoring Zones, R-001 and R-002, specified in Table E-1, as follows. The Discharger may propose additional or alternative fish species for monitoring subject to approval by the Santa Ana Water **Board.**

Attachment F – Fact Sheet

Page 45, Section G, Marine Life Mitigation Plan

Based on Santa Ana Water Board staffs' estimation of marine life mortality (Attachment G.4 to the Order), the wetland mitigation area required for marine life mortality impacts related to the Facility's construction and stand-alone operations is ~~89.47~~ ~~**109.5**~~ **112.1** acres ~~acres~~, as described in Finding 50 of Attachment G.

Attachment G – Water Code section 13142.5(b) Conditional Determination and Other Ocean Plan Requirements for the Huntington Beach Desalination Facility

Page G-62, Finding 38

The Discharger conducted numerous ETM/APF analyses using a one-sided, upper 95 percent confidence bound for the 95th percentile of the APF distribution to determine the impact to all forms of marine life that could be expected to occur from entrainment by the surface intake during the 50 ~~plus~~ year operational life of the proposed project.

Page G-63, Finding 38

The Santa Ana Water Board relied on the final APF calculations provided in the Raimondi Report. Dr. Raimondi reviewed the final calculations performed by the Discharger and Coastal Commission staff (Attachment G.3, Table 3 and Raimondi Report, Table 9). There were slight differences in the two sets of calculations due to differences in rounding and in the use of different larval durations for the mole crab (*Emerita spp.*). **In addition, Santa Ana Water Board staff revised both Coastal Commission staffs' and Poseidon's APF calculations for estuarine taxa (CIQ Gobies and Diamond Turbot) found in Dr. Raimondi's 2019 report to include larvae that may be dispersed from Bolsa Chica, the proposed mitigation project, and entrained by the proposed intake as required by Chapter III.M.2.e.(3)(b)ii.** The Santa Ana Water Board used the mean of the two sets of **revised** calculations for the surface intake to calculate APFs for both estuarine and coastal taxa. **This increased the required mitigation for estuarine species resulting from entrainment by the proposed intake by an additional 1.1 acres for a total of 9 acres**:

Estuarine taxa = ~~7.9~~ **9.0** acres
Coastal taxa = 154.9 acres
Total acres = ~~162.8~~ 163.9 acres

Page G-64, Finding 38

The Santa Ana Water Board applied a one percent (**1%**) credit for using a 1.0 mm **wedgewire** screen **(WWS)** on the surface intake to the estimated acres of impact (~~162.8~~ **163.9** – {~~162.8~~ **163.9** x 0.01}), yielding a **final intake APF of ~~161.2~~ 162.3 acres**.

Page G-66, Finding 39

After adjusting the taxon-specific APFs, the Santa Ana Water Board calculated the 95% APF for discharge-related mortality for both coastal and estuarine taxa. **As noted in Finding 38, the APF for the estuarine taxa was increased to account for potential entrainment from the mitigation area (Bolsa Chica):**

Estuarine taxa = ~~12.5~~ **23.2** acres
+ Coastal taxa = ~~245.6~~ **244.8** acres
Total Shearing-Related APF = ~~258.1~~ 259.0 acres

Note: Staff recalculated the discharge APFs for both estuarine and coastal taxa using the discharge to intake volume ratio of 1.58, instead of 168/106 without rounding, which resulted in slight differences in the final numbers.

Pages G-67 and G-68, Finding 39

The Santa Ana Water Board added the area of the BMZ to the shearing-related APF to calculate a final APF for discharge-related mortality:

Shearing APF = ~~258.1~~ **259.0** acres
+ BMZ = 1.09 acres
Total Discharge APF = ~~259.2~~ 260.1 acres

Page G-69, Finding 41

Estimated direct and indirect impacts on marine life and habitat expected from the construction and operation of the proposed desalination facility **(Note: some of the numbers below have been rounded)**:

Impact	**APF (acres)**
Seawater intake	~~161.2~~ **162.3**
Brine Discharge (shearing)	~~258.1~~ **259.0**
Brine Mixing Zone	1.09
Intake Construction	0.88
Diffuser Construction	0.15
Total	**~~421.42~~ 423.5**

Page G-78, Finding 46

The Discharger must mitigate ~~34.5~~ **~~41.9~~ 43.0** acres (this is the total **revised** intake APF from Finding 38 **[~~161.2~~ 162.3 Ac, which accounts for potential entrainment of larvae dispersed from the proposed mitigation area plus the 1% credit for the WWS]** with the mitigation ratio from Finding 50 **[1:4.5]** applied) for intake-related mortality.

There are approximately ~~128~~ **128.7** acres of mitigation available at Bolsa Chica which is sufficient to fully mitigate for the impacts caused by the intake for the Facility provided all mitigation components discussed in Finding 45 are approved and implemented. (See Attachment G.5.)

Page G-79, Finding 47

The Discharger must mitigate ~~54.1~~ **67.3** acres (this is the total **revised** discharge APF from Finding 39 **[~~259.2~~ 260.1 acres]** with the mitigation ratio from Finding 50 **[1:4.5]** applied**) for discharge-related mortality**.

Page G-80, Finding 48
The Discharger must mitigate ~~1.03~~ **~~0.19~~ 0.24** acres (this is the total construction APF from Finding 40

Pages G-83 and G-84, Finding 50

Impact	**APF (acres)**
Seawater intake	~~34.3~~ **~~41.9~~ 43.0**
Brine Discharge (shearing)	~~54.8~~ **~~67.1~~ 68.6**
Brine Mixing Zone	~~0.19~~ **0.24**
Intake Construction	~~0.15~~ **0.19**
Diffuser Construction	~~0.03~~ **0.04**
Total	**~~89.47~~ ~~109.4~~ 112.1**

Attachment G.1 – Narrowing of the Sites (Analysis in Support of Findings 6, 8-12)

Page 28, Section 2, Life Cycle Costs

Based upon project life cycle/unit costs for the two intake options, including total cost of planning, design, land acquisition, construction, operations, maintenance, mitigation,

equipment, replacement and disposal over the lifetime of the facility, in addition to the cost of decommissioning the facility, the Santa Ana Water Board concludes that construction of a ~~subsurface intake~~ **seafloor infiltration gallery** would render the proposed project economically unviable.

Page 59, Section 3, Summary of Environmental Feasibility Conclusions

There may be impacts from pipeline construction needed to connect the new intake to an onshore desalination facility located adjacent to the AES HBGS. However, these impacts are temporary in nature, especially when compared to the ~~30-plus~~ **50-**year operational life of the proposed Facility.

Attachment G.3 – ETM/APF Analysis for a Surface Intake and Discharge at Station E (Discharger's Proposed Intake/Discharge Location)

Page G.3-3 to G.3-4: Intake APF

Table 1 includes the APFs calculated by the Discharger and California Coastal Commission staff for intake-related mortality. Differences in the calculations are primarily due to differences in rounding. One substantial difference is a result of the different larval duration (time during which the larvae are vulnerable to entrainment and an integral part of the APF calculation) values used in calculating ETM for mole crab, *Emerita spp.,* the most abundant species entrained. The Discharger used a value of three days, while California Coastal Commission staff used a value of five days (Raimondi 2019).

In addition, Chapter III.M.2.e.(3)(b)ii requires that, "impacts on the mitigation project due to entrainment by the facility must be offset by adding compensatory acreage to the mitigation project." However, the impacts to the mitigation project were inadvertently omitted from the total mitigation acreage required of the Discharger. Santa Ana Water Board revised the estuarine APF to account for the potential entrainment of larvae dispersed from the proposed mitigation project by the intake and discharge from the proposed Facility.

Santa Ana Water Board staff revised the APF calculations for estuarine taxa (CIQ Gobies and Diamond Turbot) found in Dr. Raimondi's 2019 report to include larvae that may be dispersed from Bolsa Chica, the proposed mitigation project, and entrained by the proposed intake. Santa Ana Water Board staff conducted additional analysis to determine how much compensatory mitigation would be required to offset entrainment of larvae from the Bolsa Chica wetlands. Santa Ana Water Board staff discussed their proposed approach with Dr. Raimondi on July 16, 2020. Staff revised the ETM/APF calculations found in Dr. Raimondi's 2019

report, which included the ETM/APF results for the location of the proposed intake (Station E). Santa Ana Water Board staff developed a memorandum addressed to Dr. Raimondi documenting how and why the revisions were made (memorandum dated July 21, 2020).

Santa Ana Water Board staff recalculated the APF for the estuarine taxa with a new Source Water Area that included the 317-acre full tidal basin in Bolsa Chica, which is a spawning area for CIQ gobies and diamond turbot as well as other estuarine taxa. The net result was an increase of the Source Water Area for estuarine species from 2278.6 acres (used in the original ETM/APF calculations) to 2595.6 acres (used in the revised calculations discussed herein). Santa Ana Water Board staff made this change to the estuarine APFs originally calculated by both Coastal Commission staff and Poseidon. A new estuarine APF for the intake was calculated that increased the required mitigation for estuarine species resulting from entrainment by the proposed intake by an additional 1.1 acres for a total of 9 acres (see revisions to Table 1, below).

Table 1. Area of production foregone (APF) estimates for entrainment by a surface intake located at Station E, using each ocean current speed datasets and the mean APF across both ocean current speeds derived by the Discharger and California Coastal Commission staff. Taxa are split into two habitat groups: estuarine taxa and coastal taxa (Raimondi 2019). **Revised calculations for estuarine taxa based on Santa Ana Water Board staff memorandum to Dr. Raimondi dated July 21, 2020.**

	Discharger APF Estimates (acres)			Calif. Coastal Commission Staffs' APF Estimates (acres)		
	1999-00	**2007-08**	**Mean**	**1999-00**	**2007-08**	**Mean**
Estuarine Taxa						
CIQ Gobies	~~7.8~~ **8.85**	~~5.7~~ **6.54**	~~6.8~~ **7.70**	~~7.3~~ **8.26**	~~5.4~~ **6.18**	~~6.3~~ **7.22**
Diamond Turbot	~~2.7~~ **3.24**	~~2~~ **2.26**	~~2.4~~ **2.75**	~~2.6~~ **2.98**	~~1.9~~ **2.17**	~~2.3~~ **2.58**
Mean	~~5.2~~ **6.05**	~~3.9~~ **4.40**	~~4.6~~ **5.22**	~~4.9~~ **5.62**	~~3.7~~ **4.17**	~~4.3~~ **4.90**
Std Err	~~2.5~~ **2.80**	~~1.9~~ **2.14**	~~2.2~~ **2.47**	~~2.3~~ **2.64**	~~1.8~~ **2.00**	~~2~~ **2.32**
95% CI	~~9.4~~ **10.66**	~~6.9~~ **7.92**	~~8.2~~ **9.92**	~~8.7~~ **9.96**	~~6.6~~ **7.46**	~~7.6~~ **8.71**
Coastal Taxa						
Black Croaker	23.4	23.5	23.5	23.3	23.3	23.3
California Halibut	31.9	31.9	31.9	31.7	31.7	31.7
Combtooth Blennies	20.6	20.6	20.6	20.6	20.6	20.6
Jacksmelt	38.7	38.7	38.7	38.8	38.8	38.8
Mole Crab *(Emerita spp.)*	31.5	31.6	31.5	50	50.1	50.1
Queenfish	161.5	160.9	161.2	161.1	161.1	161.1
Rock Crab	265	265.8	265.4	265.7	265.8	265.7
Spotfin Croaker	13.6	13.6	13.6	13.7	13.7	13.7
Northern Anchovy	298.5	297.8	298.2	298.8	298.9	298.8
White Croaker	101.4	101.4	101.4	101.1	101.2	101.1
Mean	98.6	98.6	98.6	100.5	100.5	100.5
Std Err	33.9	33.8	33.8	33.5	33.6	33.5
95% CI	154.3	154.2	154.3	155.6	155.7	155.7
Total Est + Coastal APF	~~163.7~~ **165.0**	~~161.2~~ **162.1**	~~**162.4**~~ **163.6**	~~164.4~~ **165.6**	~~162.3~~ **163.2**	~~**163.3**~~ **164.4**

Page G.3-5, Intake APF

The mean of the two APFs calculated by the Discharger and California Coastal Commission staff for a surface intake located at Station E is approximately ~~162.8~~ **163.9** acres, with approximately ~~7.9~~ **9.0** acres resulting from potential impacts to estuarine taxa and 154.9 acres resulting from potential impacts to coastal taxa **(Table 2)**.

The Discharger is adding a wedgewire screen system with a 1.0-millimeter (mm) slot size to the existing AES HBGS surface intake. Therefore, as allowed under chapter III.M.2.e.(1)(a), Santa Ana Water Board staff applied a one percent (1%) credit to the intake APF. Application of this 1% credit yields a **final intake APF of ~~161.2~~ 162.3 acres**.

Page G.3-5, Discharge APF

This is the discharge APF, as shown in Table 2 below. **As noted above, the intake APF for estuarine taxa increased from 7.9 acres to 9.0 acres when adding the 317-acre full tidal basin at Bolsa Chica into the source water area calculation for estuarine taxa. This increase then affects the discharge entrainment. The numbers in Table 2 have been revised to reflect this change.**

Page G.3-6, Discharge APF

Table 2. Combined intake APF, ratio applied to determine discharge APF, and total APF for both intake and discharge. **(Revised to reflect increase in the APF for estuarine taxa.)**

	Mean of Discharger & Calif. Coastal Comm. Staffs' Intake APFs	**$V_{discharge}/V_{intake}$**	**Discharge APF**	**Total APF**
	Acres	**168 MGD/ 106 MGD**	**Acres**	**Acres**
Estuarine Taxa				
CIQ Gobies	~~6.55~~ **7.46**	1.58	~~10.4~~ **11.79**	
Diamond Turbot	~~2.35~~ **2.67**	1.58	~~3.7~~ **4.21**	
Mean	~~4.45~~ **5.06**	1.58	~~7.1~~ **7.99**	
Std Err	~~2.1~~ **2.40**		~~3.3~~ **3.79**	
95% CI	~~7.9~~ **9.00**		~~12.5~~ **14.23**	~~20.4~~ **23.23**
Coastal Taxa				
Black Croaker	23.4	1.58	~~37.1~~ **36.97**	
California Halibut	31.8	1.58	~~50.4~~ **50.24**	
Combtooth Blennies	20.6	1.58	~~32.6~~ **32.55**	
Jacksmelt	38.75	1.58	~~61.4~~ **64.23**	
Mole Crab *(Emerita spp.)*	40.8	1.58	~~64.7~~ **64.46**	
Queenfish	161.15	1.58	~~255.4~~ **254.62**	

Rock Crab	265.55	1.58	~~420.9~~ **419.57**	
Spotfin Croaker	13.65	1.58	~~21.6~~ **21.57**	
Northern Anchovy	298.5	1.58	~~473.1~~ **471.63**	
White Croaker	101.25	1.58	~~160.5~~ **159.98**	
Mean	99.5		~~157.8~~ **157.28**	
Std Err	~~33.7~~ **33.68**		~~53.4~~ **53.21**	
95% CI	~~154.9~~ **154.94**		~~245.6~~ **244.81**	~~400.5~~ **399.75**
Total Est + Coastal APF	**~~154.9~~ ~~162.8~~ 163.9**		**~~245.6~~ ~~258.1~~ 259.0**	~~420.9~~ **422.9**

Note: Staff recalculated the discharge APFs for both estuarine and coastal taxa using the discharge to intake volume ratio of 1.58, instead of 168/106 without rounding, which resulted in slight differences in the final numbers.

Page G.3-7, Discharge APF

Based on Table 2, the **discharge shearing APF for estuarine and coastal taxa is ~~245.6~~ ~~258.1~~ 259.0 acres**.

The **area effected by the** ~~brine mixing zone~~ (BMZ~~)~~ ~~impact area~~ has been modeled and calculated to be 1.09 acres (Discharger's Appendix TT4 and Finding 64). The BMZ increases the discharge APF to a **total discharge APF of ~~259.2~~ 260.1acres**.

Page G.3-7, Total APF

Therefore, **the total APF** for the construction, BMZ, and the ~~30~~ **50**-plus year operation of the Facility is:

~~161.2~~ **162.3** acres (intake APF **including 1% credit for the WWS**) + ~~259.2~~ **260.1** acres (discharge APF) + 1.03 acres (offshore construction APF) **= ~~421.4~~ 423.5 acres (total APF)**

Page G.3-7, Conclusion

Based on the results of this analysis, Santa Ana Water Board staff concludes that ~~421.4~~ **423.5** acres of impacts to all forms of marine life may occur from the construction and ~~30~~ **50**-~~plus~~ year operation of the proposed Facility. This is the total impact acreage and does not include the application of a mitigation ratio to account for differences in the relative productivity between the area of impact and the area being mitigated.

Attachment G.4 – Rationale for Determining an Appropriate Mitigation Ratio to Apply to the Area of Foregone Production (APF)

Page G.4-1 to G.4-2, Background

Therefore, the Discharger's calculation was reviewed by a neutral third-party reviewer, Dr. Pete Raimondi (Raimondi 2019). Based on Dr. Raimondi's review, Santa Ana Water Board staff **initially** determined that the estimated marine life mortality resulting from the construction and operation of the Facility is 421.4 acres. **Chapter III.M.2.e.(3)(b)ii requires that, "impacts on the mitigation project due to entrainment by the facility must be offset by adding compensatory acreage to the mitigation project." However, the impacts to the mitigation project were inadvertently omitted from the total mitigation acreage required of the Discharger. Santa Ana Water Board revised the estuarine APF to account for the potential entrainment of larvae dispersed from the proposed mitigation project by the intake and discharge from the proposed Facility. This resulted in an increase in the total APF to 423.5 acres** (see **revisions to** Attachment G.3.)

Page G.4-2, Background

The Discharger originally proposed to apply a mitigation ratio of 1:10 for the loss of open water and soft-bottom coastal species to the acres of impact (area of production foregone or APF) that would result from the construction and 50-~~plus~~ year operating life of the proposed Facility. Santa Ana Water Board staff, in consultation with other state and federal agencies' staff, has determined that this ratio is not appropriate and that a lower ratio should be applied.

Page G.4-3, Detailed Analyses/Discussion

The APF is based on the number of estuarine species and open coast, soft bottom substrate species that would be potentially subject to entrainment from the intake and discharge from the proposed Facility during its 50-~~plus~~ year operational life.

Page G.4-12, Detailed Analyses/Discussion: Intake APF

Santa Ana Water Board staff revised the APF calculations for estuarine taxa (CIQ Gobies and Diamond Turbot) found in Dr. Raimondi's 2019 report to include larvae that may be dispersed from Bolsa Chica, the proposed mitigation project, and entrained by the proposed intake. Chapter III.M.2.e.(3)(b)ii requires that, "impacts on the mitigation project due to entrainment by the facility must be offset by adding compensatory acreage to the mitigation project." However, the impacts to the mitigation project were inadvertently omitted from the total mitigation acreage required of the Discharger. Santa Ana Water Board staff conducted additional analysis to determine how much compensatory mitigation would be required to offset the impact to the Bolsa Chica wetlands from the proposed project. Santa Ana Water Board staff discussed the proposed approach with Dr. Raimondi on July 16, 2020. Staff revised the ETM/APF calculations found in Dr. Raimondi's 2019 report, which included the ETM/APF results for the location of the proposed intake (Station E). Santa Ana Water Board staff developed a memorandum addressed to Dr. Raimondi documenting how and why the revisions were made (memorandum dated July 21, 2020).

Santa Ana Water Board staff recalculated the APF for the estuarine taxa with a new Source Water Area that included the 317-acre full tidal basin in Bolsa Chica, which is a spawning area for CIQ gobies and diamond turbot as well as other estuarine taxa. The net result was an increase of the Source Water Area for estuarine species from 2278.6 acres (used in the original ETM/APF calculations) to 2595.6 acres (used in the revised calculations discussed herein). Santa Ana Water Board staff made this change to the estuarine APFs originally calculated by both Coastal Commission staff and Poseidon. A new estuarine APF for the intake was calculated that increased the required mitigation for estuarine species resulting from entrainment by the proposed intake by an additional 1.1 acres for a total of 9 acres.

The mean of the two APFs calculated by the Discharger and Coastal Commission staff for a surface intake located at Station E is approximately ~~162.8~~ **163.9** acres (Table 2), with approximately ~~7.9~~ **9.0** acres resulting from potential impacts to estuarine taxa and 154.9 acres resulting from potential impacts to coastal taxa.

Page G.4-13, Detailed Analyses/Discussion: Intake APF

Table 2. APF estimates for entrainment by a surface intake located at Station E, using each ocean current speed dataset and the mean APF across both ocean current speeds derived by the Discharger and California Coastal Commission staff. Taxa are split into two habitat groups: estuarine taxa and coastal taxa (Raimondi 2019). **Revised**

calculations for estuarine taxa based on Santa Ana Water Board staff memorandum to Dr. Raimondi dated July 21, 2020.

	Discharger APF Estimates (acres)			Calif. Coastal Commission Staffs' APF Estimates (acres)		
	1999-00	**2007-08**	**Mean**	**1999-00**	**2007-08**	**Mean**
Estuarine Taxa						
CIQ Gobies	~~7.8~~ **8.85**	~~5.7~~ **6.54**	~~6.8~~ **7.70**	~~7.3~~ **8.26**	~~5.4~~ **6.18**	~~6.3~~ **7.22**
Diamond Turbot	~~2.7~~ **3.24**	~~2~~ **2.26**	~~2.4~~ **2.75**	~~2.6~~ **2.98**	~~1.9~~ **2.17**	~~2.3~~ **2.58**
Mean	~~5.2~~ **6.05**	~~3.9~~ **4.40**	~~4.6~~ **5.22**	~~4.9~~ **5.62**	~~3.7~~ **4.17**	~~4.3~~ **4.90**
Std Err	~~2.5~~ **2.80**	~~1.9~~ **2.14**	~~2.2~~ **2.47**	~~2.3~~ **2.64**	~~1.8~~ **2.00**	~~2~~ **2.32**
95% CI	~~9.4~~ **10.66**	~~6.9~~ **7.92**	~~8.2~~ **9.92**	~~8.7~~ **9.96**	~~6.6~~ **7.46**	~~7.6~~ **8.71**
Coastal Taxa						
Black Croaker	23.4	23.5	23.5	23.3	23.3	23.3
California Halibut	31.9	31.9	31.9	31.7	31.7	31.7
Combtooth Blennies	20.6	20.6	20.6	20.6	20.6	20.6
Jacksmelt	38.7	38.7	38.7	38.8	38.8	38.8
Mole Crab *(Emerita spp.)*	31.5	31.6	31.5	50	50.1	50.1
Queenfish	161.5	160.9	161.2	161.1	161.1	161.1
Rock Crab	265	265.8	265.4	265.7	265.8	265.7
Spotfin Croaker	13.6	13.6	13.6	13.7	13.7	13.7
Northern Anchovy	298.5	297.8	298.2	298.8	298.9	298.8
White Croaker	101.4	101.4	101.4	101.1	101.2	101.1
Mean	98.6	98.6	98.6	100.5	100.5	100.5
Std Err	33.9	33.8	33.8	33.5	33.6	33.5
95% CI	154.3	154.2	154.3	155.6	155.7	155.7
Total Est + Coastal APF	~~163.7~~ **165.0**	~~161.2~~ **162.1**	~~**162.4**~~ **163.6**	~~164.4~~ **165.6**	~~162.3~~ **163.2**	~~**163.3**~~ **164.4**

The Discharger proposed to add a wedgewire screen system with a 1.0-millimeter slot size to the existing AES HBGS surface intake. Therefore, as allowed under chapter

III.M.2.e.(1)(a), Santa Ana Water Board staff applied a one percent (1%) credit to the intake APF. Application of this 1% credit yields a **final intake APF of ~~161.2~~ 162.3 acres**

Page G.4-14, Detailed Analyses/Discussion: Discharge APF

The discharge scaling factor is then applied to each taxon ***before*** the 95% CI is calculated. After adjusting the taxon-specific APFs, the new 95% APF is calculated (Raimondi 2019). This is the discharge APF, as shown in Table 3. **As noted above, the intake APF for estuarine taxa increased from 7.9 acres to 9.0 acres when adding the 317-acre full tidal basin at Bolsa Chica into the source water area calculation for estuarine taxa. This increase then affects the discharge entrainment. The numbers in Table 3 have been revised to reflect this change.**

Page G.4-15, Detailed Analyses/Discussion: Discharge APF

Table 3. Combined intake APF, ratio applied to determine discharge APF, and total APF for both intake and discharge. **(Revised to reflect increase in the APF for estuarine taxa.)**

	Mean of the Discharger & Calif. Coastal Comm. Staffs' Intake APFs	**$V_{discharge}/V_{intake}$**	**Discharge APF**	**Total APF**
	Acres	**168 MGD/ 106 MGD**	**Acres**	**Acres**
Estuarine Taxa				
CIQ Gobies	~~6.55~~ **7.46**	1.58	~~10.4~~ **11.79**	
Diamond Turbot	~~2.35~~ **2.67**	1.58	~~3.7~~ **4.21**	
Mean	~~4.45~~ **5.06**	1.58	~~7.1~~ **7.99**	
Std Err	~~2.1~~ **2.40**		~~3.3~~ **3.79**	
95% CI	~~**7.9**~~ **9.0**		~~**12.5**~~ **14.2**	~~*20.4*~~ ***23.2***
Coastal Taxa				
Black Croaker	23.4	1.58	~~37.1~~**36.97**	
California Halibut	31.8	1.58	~~50.4~~**50.24**	
Combtooth Blennies	20.6	1.58	~~32.6~~**32.55**	
Jacksmelt	38.75	1.58	~~61.4~~**61.23**	

Mole Crab *(Emerita spp.)*	40.8	1.58	~~64.7~~**64.46**	
Queenfish	161.15	1.58	~~255.4~~**254.62**	
Rock Crab	265.55	1.58	~~420.9~~**419.57**	
Spotfin Croaker	13.65	1.58	~~21.6~~**21.57**	
Northern Anchovy	298.5	1.58	~~473.1~~**471.63**	
White Croaker	101.25	1.58	~~160.5~~**159.98**	
Mean	99.55		~~157.8~~**157.28**	
Std Err	~~33.68~~		~~53.4~~ **53.21**	
95% CI	~~154.9~~ **154.94**		~~245.6~~**244.81**	~~*400.5*~~***399.7***
Total Est + Coastal APF	~~**162.8**~~ **163.9**		~~**258.1**~~ **259.0**	~~**420.9**~~ **422.9**

Note: Staff recalculated the discharge APFs for both estuarine and coastal taxa using the discharge to intake volume ratio of 1.58, instead of 168/106 without rounding, which resulted in slight differences in the final numbers.

Based on Table ~~2~~ **3**, the **discharge shearing APF for estuarine and coastal taxa is ~~245.6~~ ~~258.1~~ 259.0 acres**.

Page G.4-16, Detailed Analyses/Discussion: Discharge APF

The **area effected by the** ~~brine mixing zone~~ ~~(~~BMZ~~)~~ ~~impact area~~ has been modeled and calculated to be 1.09 acres (Discharger's Appendix TT4 and Finding 64). The BMZ increases the discharge APF to a **total discharge APF of ~~259.2~~ 260.1acres**.

Therefore, **the total APF** for the construction**, BMZ,** and the ~~30-plus~~ **50-**year operation of the Facility is:

~~161.2~~ **162.3** acres (intake APF **including the 1% credit for the WWS**) + ~~259.2~~ **260.1** acres (discharge APF) + 1.03 acres (offshore construction APF) **= ~~421.4~~ 423.5 acres (total APF).**

Page G.4-17, Detailed Analyses/Discussion: Applying the Mitigation Ratio to the APF (APF Scaling)

Intake:

- Estuarine taxa = ~~7.9~~ **9.0** Ac Mitigation Ratio = 1:1 ~~7.9~~ **9.0** Ac/1 = ~~7.9~~ **9.0** Ac
- Coastal taxa = 154.9 Ac Mitigation Ratio = 1:~~5.8~~**4.5** 154.9 Ac/~~5.8~~**4.5** = ~~26.7~~ **34.4** Ac
  ~~34.6~~ ~~**42.3**~~ **43.4** Ac

1% credit applied to intake APF for use of a 1-mm wedgewire screen [per Chapter III.M.2.e(1)(a) of the Ocean Plan]:

Total Intake APF = *~~34.6~~ ~~**42.3**~~ **43.4** – (~~34.6~~ ~~**42.3**~~ **43.4** X 0.01) = ~~34.3~~ ~~**41.9**~~ **43.0** **Ac***

- Discharge:
  - Estuarine taxa = ~~12.5~~ **14.2** Ac Mitigation Ratio = 1.1 ~~12.5~~ **14.2** Ac/1 = ~~12.5~~ **14.2** Ac
  - Coastal taxa = ~~245.6~~ **244.8** Ac Mitigation Ratio = 1:~~5.8~~ **4.5** ~~245.6~~ **244.8** Ac/~~5.8~~ **4.5** = ~~42.3~~ ~~**54.6**~~ **54.4** Ac
    ~~54.8~~ 68.6

- Brine Mixing Zone:
  - Coastal taxa = 1.09 Ac Mitigation Ratio = 1:~~5.8~~ **4.5** 1.09 Ac/~~5.8~~ **4.5** = *~~0.19~~* ***0.24*** ***Ac***

Total Discharge APF = ~~67.1~~ 68.6 + 0.24 = ~~67.3~~ 68.84 Ac

- Intake and Diffuser Construction
  - Coastal taxa = 1.03 Ac Mitigation Ratio = 1:~~5.8~~ **4.5** 1.03 Ac/~~5.8~~ **4.5** = *~~0.18~~* ***0.23*** ***Ac***

Total APF (mitigation acres needed to offset project impacts) = *~~89.47~~* ***~~109.5~~*** ***112.1*** ***Ac***

Page G.4-19, Detailed Analyses/Discussion: Alternative Methods to Develop an Appropriate Mitigation Ratio to Scale the APF

Table 4. Potential Mitigation Ratios for Scaling the APF for the Proposed Facility

Habitat	APF (acres)	Mitigation Ratio (MR) (Santa Ana Water Board staff)				Mitigation Ratio (MR) (Discharger)			
		Adjustment to habitat values (HV): None, Ports Loss, 30%; Both (Ports + 30%)							
Total (unscaled) APF	~~421.4~~ **423.5**	None	Ports Loss	30%	Both	None	Ports Loss	30%	Both
Estuarine MR	~~20.3~~ **23.2**	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1
Coastal MR (wetlands HV ÷shallow, soft substrate HV)	~~401.1~~ **399.7**	**1:6.2** (4005.4 ÷ 651.2)	**1:5.8** (4005.4 ÷ 688.3)	**1:4.7** (4005.4 ÷ 846.6)	**1:4.5** (4005.4 ÷ 894.8)	**1:7.5** (4005.4 ÷ 535.3)	**1:7.1** (4005.4 ÷ 565.8)	**1:5.8** (4005.4 ÷ 695.9)	**1:5.4** (4005.4 ÷ 735.5)
Total Scaled APF* (acres)	NA	~~85.3~~ ~~**85.0**~~ **87.7**	~~**89.5**~~ **92.2**	~~105.6~~ ~~**105.7**~~ **108.3**	~~109.4~~ ~~**109.5**~~ **112.1**	~~74.2~~ ~~**73.9**~~ **76.5**	~~73.8~~ ~~**76.9**~~ **79.5**	~~89.5~~ ~~**89.6**~~ **92.2**	~~94.6~~ ~~**93.3**~~ **97.3**

*These scaled APF estimates include the 1% credit that may be applied to the seawater intake APF for the use of a 1-millimeter wedgewire screen as allowed under Chapter III.M.2.e(1)(a) of the Ocean Plan.

Page G.4-22 and G.4-23, Conclusions and Recommendations

Based on an assessment of the above, Santa Ana Water Board staff recommend using Santa Ana Water Board staffs' calculations to adjust the final APF for impacts to coastal, soft bottom species from intake and discharge at the proposed Facility using a mitigation ratio of **1:~~5.8~~ 4.5 to account for the difference in biological productivity between the habitat being impacted and the habitat that will be used to mitigate for those impacts. This results in a final APF of ~~109.5~~ 112.1 acres.**

Attachment H

Footer

ATTACHMENT H – ~~TRIGGERS FOR MONITORING POLLUTANTS~~ **MINIMUM LEVELS OF OCEAN PLAN APPENDIX II**

Attachment K – Marine Life Mitigation Plan Schedule

Page 1, 2nd paragraph

All of the mitigation activities combined will result in mitigation acres that exceed the mitigation acres needed to offset the marine life impacts and mortality that may result from the construction and 50 ~~plus~~ year operation of the Facility.

Page 6, Task 2

iii. A plan for disposal of the saline soils that may be removed from the site.

F. A 60% complete plan for the excavated material that includes:

i. Confirmation from California Department of Fish and Wildlife (CDFW) and California State Lands Commission that suitable material may remain on site (if necessary or desirable).

ATTACHMENT 2

Late Written Comments Received Between January 22, 2020 and June 30, 2020 and the Responses to Late Comments

RESPONSES TO LATE COMMENTS

The following table provides the Santa Ana Regional Water Quality Control Board's responses to the late written comments the Board received regarding Tentative Order R8-2020-0005. The table covers late comments received after the written comment period closed on January 21, 2020 but before the revised Tentative Order was published on June 30, 2020.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
L-1	Brenda Norton	May 14, 2020	I am Southern California resident opposed to any new desalination plant. We do not need a desalination plant that would contribute to climate change, death zones in the ocean and tripling of water rates only to benefit Wall Street investors. Municipalities should fully implement conservation programs, promote potable re-use — or treat storm water runoff.	See responses to comments 0004.19, 0014.04, and CCKA I.D regarding need for the desalinated water and water supply alternatives; 0032.01 regarding cost of the desalinated water; and 0041.01 regarding climate change impacts.
L-2.1	Glenn Brooks Brooks Works Corp. Merritt Energy Park, Inc. Green Jobs for Haiti 501(c)(3) Pacific Imperium LLC	June 15, 2020	Poseidon is not a source of water that Orange County has a true need for. With 60 million acre feet of water in its aquifer, Poseidon's nameplate capacity of 50 million gallons/day will take 1,071 years to equal our Orange County aquifer. Stated another way, it takes over 1,000 years of Poseidon water to equal Orange County's existing aquifer. Orange County does not need Poseidon water and Huntington Beach does not need its ocean environment disturbed.	See responses to comments 0014.04 and CCKA I.D regarding need for the desalinated water.
L-2.2			Maybe I should say Brookfield instead of Poseidon Let me explain. Brookfield owns Poseidon. Brookfield had $510	This comment is not relevant to the Santa Ana Water Board's consideration of the

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			billion in assets under management in 2019 -$510 billion dollars! Brookfield is primarily a real estate development company managed by a genius accountant named Bruce Flatt. When Bruce Flatt became CEO in 2002, Brookfield was not a stellar investment vehicle. Since 2002 Brookfield stock has returned 1,350%. Over that same time the S&P has returned 183%. 1,350% vs. S&P's 183%. That 15 year period equals an average return of 19%/year. In 2017, Brookfield's market cap was $36 billion. Forbes says that Brookfield is the size of KKR, Apollo, Carlyle Group and Colony Northstar combined. So if Brookfield Asset Management is actually the holding company for its real estate investor called Brookfield Property Partners, why is it building desalination plants with its company Brookfield Infrastructure Partners? And why does it make renewable energy with its Brookfield Renewable Partners? The answer is that Brookfield does not pay market rates for water or energy, rather it makes its own - to build its real estate developments. So maybe	Tentative Order. See response to comment 0003.02.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			desalinated water is not really Poseidon's end game.	
L-2.3			Right now Brookfield is building a Los Angeles project called 755 Figueroa. Technically, the project address is 945 W. 8th street in downtown Los Angeles and it has to provide a water source for it. In my opinion, Poseidon is trying to make water in Huntington Beach so OCWD will surrender its MWD allotment. OCWD does not need more water. It is expanding the Ground Water Replenishment System with an additional 30MGD to its full nameplate capacity of 130 MGD. OCWD does not need Brookfield's 50MGD but in my opinion Brookfield needs it in downtown Los Angeles. I believe Brookfield will snatch up the OCWD allotment from MWD. Rate payers for OCWD will get stuck with the $3,000/AF water bill and an unsuccessful depreciating-asset water-plant. In my opinion, Brookfield will get the MWD water at wholesale cost of $1,200/AF for 755 Figueroa and OCWD rate payers get stuck. I believe Brookfield will then sell the Huntington Beach plant for $1 billion like it just did for the Carlsbad plant - when it only	See responses to comments 0014.04 and CCKA I.D regarding need; and 0032.01 regarding cost of the desalinated water.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			had invested $266 million. That alone is another whooping Bruce Flatt win of 275% ROI for Brookfield, while California bond payers pay off the $734 million dollars in bonds for the Carlsbad plant. California can hardly afford to give Brookfield another cash cow desal plant. Make Brookfield carry its own water	
L-3	Brian and Mary Bateman	March 11, 2020	I am writing to you today to express our complete support of the proposed Huntington Beach Desalination Project. We have done our homework on this subject and toured the desal plant in Carlsbad. My wife and I came away very impressed with how much the project engineers focused on mitigating any harm to the environment and wildlife. Every detail seemed very well thought out. A drought resistant project like this that brings additional quality water to an at-times parched region without building new dams or drilling more wells is an absolute no-brainer in our view.	Comment noted. See response to comment 0003.01.
L-4	Patrick Brenden Bolsa Chica Conservancy	January 22, 2020	At almost 1,500 acres, the Bolsa Chica Wetlands is the largest saltwater marsh between Monterey Bay and the Tijuana River Estuary, and it's designated by the	See responses to comments 0017.02, 0017.03, 0080.03, and 0109.03. Additionally, Santa Ana Water Board staff have recommended approval of the Bolsa

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			state as a Marine Protected Area. Bolsa Chica has a variety of vital functions including; natural flood control, organic water purification, land erosion control, as well as providing critical habitats to over 1,100 species, including 50 endangered fish and wildlife species. Approximately 30,000 people visit the reserve each year for recreational activities, educational tours, and wildlife watching. About a decade ago, tidal action to the Bolsa Chica Ecological Reserve (Bolsa Chica) wetlands was restored. This restoration effort assures long-term and effective tidal action to support estuarine and coastal fish populations in this important regional wetland habitat. Unfortunately, The State Lands Commission has advised us that the funds to maintain the ocean inlet will be depleted by the end of 2021. As part of the proposed Huntington Beach Desalination Project, Poseidon and the Regional Board staff have reached an agreement that will ensure the long-term restoration and preservation of Bolsa Chica.	Chica mitigation project, but they have not “reached an agreement” with the Discharger and do not have the authority to do so.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			Without this funding the wetlands and restoration efforts will all but be wiped out. All the efforts, and years of work, will be for not. The State Water Board's Ocean Plan desalination policy states "Mitigation projects that increase or enhance the viability and sustainability of all forms of marine life* in Marine Protected Areas are preferred, if feasible." Bolsa Chica includes not one but two MPAs – Bolsa Bay State Marine Conservation Area and Bolsa Chica Basin State Marine Conservation Area. The Final Order should acknowledge that the proposed mitigation plan will contribute to California's MPA network. In closing, this important mitigation measure makes the Huntington Beach desalination plant a net environmental benefit. All while providing us with a climate resilient water supply. I urge you to approve the permit for renewal on April 3rd.	
L-5	Lieutenant Governor Eleni Kounalakis	March 10, 2020	I would like to encourage the Santa Ana Regional Water Quality Control Board (Board) to prioritize Bolsa Chica	Comment noted. See responses to comments 0017.02, 0017.03, 0080.03, and 0109.03 regarding the proposed Bolsa Chica mitigation project.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			Wetlands for mitigation associated with Poseidon's proposed Huntington Beach Desalination Plant. As you know, wetlands throughout southern California have declined by 90 percent over the last 200 years, and Bolsa Chica is one of the few remaining refuges for native flora and fauna. With the projected impacts to our coastal ecosystems from climate change and sea level rise, restoring and protecting our wetland ecosystems is essential for the protection of California's natural resources and the critical services they provide to the state. In addition, Bolsa Chica provides the public with a rare opportunity - in the heart of an urbanized region - to experience a coastal wetland. Furthermore, restoration efforts at Bolsa Chica have already made important progress, including work carried out in 2006 that restored tidal connectivity between Bolsa Chica and the Pacific Ocean after being cut off for 100 years. Future efforts to preserve, enhance, and restore Bolsa Chica will build upon those important efforts. Finally, I would like to point out that the California State Lands	

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			Commission, of which I am a member, formally expressed its desire for Bolsa Chica to be considered as a mitigation site for Poseidon's mitigation plan as part actions it took at its October 19, 2017 meeting. In the coming weeks, the Board has important decisions to make regarding the proposed Huntington Beach Desalination Plant, but taking actions to preserve, enhance, and restore Bolsa Chica should not be in question. I encourage you to take this opportunity to improve the health of the Bolsa Chica Wetlands and make om coast more resilient to a changing climate.	
L-6	Peter Fiske National Alliance for Water Innovation	February 3, 2020	I am writing this letter to urge you to support of the Huntington Beach Desalination Project. As Executive Director of the National Alliance for Water Innovation (“NAWI”), I lead a world-class team of industry and academic partners who are dedicated to making technology like desalination more accessible and affordable. NAWI is funded by over $130 million dollars in research grants from the U.S. Department of Energy and the State of California, among others	Comment noted. Desalination is one water source that water supply agencies may consider as part of their water supply portfolio. See responses to comments 0004.05 and 0004.12 regarding energy use.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			As evidenced in a recent *Popular Science* article (www.popsci.com/story/environment/desalination/), we need to make a more concerted effort to incorporate desalination into our regional infrastructure systems to stabilize and diversify our water supplies now and in the future. In the past, skeptics have criticized desalination as requiring too much energy, but that discounts a crucial element of the equation – transporting freshwater over great distances is also hugely energy intensive. It is becoming increasingly common, especially in California, for the amount of energy used to import water from distant sources to be approximately equal to the energy required to desalinate seawater. As a prime example, when San Diego officials considered the energy used by the State Water Project ("SWP") – California's single greatest energy user – the total amount of energy per gallon of water imported by the SWP was comparable to that for water produced by the Carlsbad Desalination Plant.	

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			The Huntington Beach project will be the most technologically-advanced, energy-efficient and environmentally-sound large-scale desalination plant in the world. This project will not only help ease California's growing water reliability concern, but plants like the one in Carlsbad and the one proposed in Huntington Beach are absolutely necessary to support the development and advancement of the state of the art in the water industry. Desalination is a critical component of our collective water future, and we can't wait until our basins dry up to start implementing it. I urge you to take the next step toward securing a safe and reliable water supply for all of California and approve the Huntington Beach desalination facility.	
L-7.1	Kristy Pace	May 8, 2020	The Poseidon desalination plant is NOT needed. Please shut the plan down. Water use in Orange County is down, and with the economic crisis it is expected to decrease even further. There is no reason to even consider an expensive desalination plant to give us more water than we need, at a price we cannot afford. The idea that the contract specifies that even if the county does not	See responses to comments 0014.04 and CCKA I.D regarding need for the desalinated water; 0031.02 regarding contract for the purchase of water; 0032.01 regarding the cost of the desalinated water; and 0192.01 regarding the human right to water.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			take/need/utilize the water, they must pay for it is absurd! It will be the most expensive water the county would source- this is a scheme to start privatizing water while selling it to the highest bidder, which could double or triple water rates. This is NOT consistent with the Human Right to Water policy that the Regional Water Board adopted on December 6, 2019	
			If you need more reasons why you should close it 1) Poseidon lobbies regulators to allow more toxic brine into the ocean that ends up killing more marine life. 2) There is absolutely no way Poseidon can go around the Newport fault line that will avoid irreparable damage to the plant and the entire ecosystem around it. 3) This proposed plant uses the same amount of energy as 35,000 homes year-round, including in the summer as we keep breaking heat records, while the public is asked to conserve. 4) As the pipes from this plant go through the Huntington Beach Superfund site, it will just be a matter of time before the water from it gets contaminated.	See responses to comment 0004.01, 0036.01, 0054.02, and 0055.02 regarding impacts of the brine discharge; 0132.06 regarding seismic risks; 0004.05 and 0004.12 regarding energy use; 0132.06 regarding the Ascon Landfill superfund site; and 0004.03 regarding intake screens.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			5) The "new" intake mesh that Poseidon proposes to use will only decrease marine life fatality by ONE PERCENT. That is hardly an improvement worth considering as mitigation. Please for the people, the budget and the ocean life close this plant.	
L-8.1	Ryan Gallagher Mills Legal Clinic Stanford Law School	May 11, 2020	I. CEQA REQUIRES THAT THE REGIONAL BOARD PREPARE AN UPDATED EIR BEFORE ISSUING ANY DISCRETIONARY APPROVALS FOR THE PROJECT (pages 2–15)	The Santa Ana Water Board is not required to prepare a subsequent or supplemental EIR under CEQA. None of the factors that would allow the Board to prepare a subsequent EIR are present here. See responses to CCKA comments V.A to V.C.
L-8.2			II. THE REGIONAL BOARD WOULD BREACH ITS MANDATORY DUTIES UNDER THE PUBLIC TRUST IF IT WERE TO ISSUE A DISCRETIONARY APPROVAL FOR THE PROJECT WITHOUT PREPARING ADDITIONAL, TRUST-SPECIFIC ANALYSIS (pages 15–19)	The purpose of Water Code section 13142.5(b) and the implementing provisions in the Ocean Plan is to minimize impacts to marine life. (See Desalination Amendment Staff Report, Response to Comment J-12.21, p. J-93 [“The Desalination Amendment represents an extensive effort to consider all competing interests and to require the best available site, design, technology and mitigation measures feasible to minimize the intake and mortality of all forms of marine life.”].) By implementing Water Code section 13142.5(b) and complying with the Ocean Plan provisions, the Santa Ana Water Board adequately considered the effects that the intake and discharge of the

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
				proposed Facility would have on public trust resources. The Santa Ana Water Board's Water Code section 13142.5(b) analysis identifies the impacts to marine life and requires the Discharger to use the best available site, design, technology, and mitigation measures feasible to minimize those impacts. Additionally, the Tentative Order includes receiving water limitations, effluent limitations, and prohibitions to protect the beneficial uses of the Pacific Ocean in accordance with the water quality objectives and prohibitions established in the Ocean Plan. Many of the beneficial uses of the Pacific Ocean (including water contact and non-contact recreation; commercial and sport fishing; rare and endangered species; marine habitat; fish migration; and fish spawning) overlap with public trust uses; while others, like industrial water supply, may compete with public trust uses. The requirements of the Ocean Plan, as implemented in the Tentative Order, protect public trust uses while also accounting for the other beneficial uses of the water. The Discharger must conduct regular monitoring to demonstrate compliance with the permit limits and other requirements that protect

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
				beneficial uses. (See Attachment E to the Tentative Order.) The Board also considered impacts to public trust resources in the antidegradation analysis. (See Attachment F to the Tentative Order, § IV.D.2.) The Board determined that any degradation to water quality is consistent with the maximum benefit to the people of the State and that the highest quality of water will be maintained to protect beneficial uses. (See Fact Sheet, § IV.D.2.) The Santa Ana Water Board has implemented the applicable requirements of the Ocean Plan in the Tentative Order. In doing so, the Board has considered the impacts to the public trust resources and imposed requirements to protect those resources where feasible. A separate analysis of impacts to public trust resources is not required. (See *San Francisco Baykeeper, Inc. v. State Lands Commission* (2015) 242 Cal.App.4th 202, 240–242; *State Water Resources Control Board Cases* (2006) 136 Cal.App.4th 674, 778.) A finding is included in the Errata Sheet for the Tentative Order to make clear that the Board considered impacts to public trust

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
				resources through its analysis of Water Code section 13142.5(b) and imposed measures, where feasible, to minimize those impacts.
L-9	Brett Korte Azul	January 28, 2020	I write to reiterate Azul's concern regarding the lack of opportunity for public comment on Poseidon's response to the Regional Board's Additional Information Request. Presumably, the Regional Board received Poseidon's response on the date of the letter, January 16. Even if the Regional Board had made the response publicly available upon receipt, or on the January 17 deadline, there still would have been insufficient time for public review of the more than 250 pages of responsive documents before the written comment deadline on January 21. Inexplicably, the Regional Board did not publish the response until yesterday, January 27, almost a week after the Regional Board stopped accepting written public comment. Could you please explain how the Regional Board intends to rectify this deficiency in the public participation process for Poseidon's draft Waste Discharge Requirements?	See responses to comments 0001 and 0023.02.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
L-10.1	Sarah Goldzweig		1. I am speaking in support of the staff recommendation for CC to formally OPPOSE SB1090 (Bates).	The Santa Ana Water Board is not considering SB 1090.
L-10.2			2. There is NO NEED for the Poseidon plant — Water usage has been trending down in the Orange County area, yet the Poseidon project would INCREASE the cost of water for consumers (a UCLA report suggested that rates would increase between 200-300%). With the economic crisis accompanying and resulting from the COVID 19 crisis, it is clear that a more expensive water source would be a BURDEN on OC residents. 3. We don't need more water at a price we can't afford and which would require massive ecological destruction to function.	See responses to comments 0014.04 and CCKA I.D regarding need for the desalinated water; 0032.01 regarding cost of the desalinated water; and 0004.01, 0004.03, 0017.02, and 0036.01 regarding environmental impacts.
L-10.3			4. As one of the Board Members just said: we need to look at climate change — This project will only INCREASE the negative and disproportionate impacts of climate change AND negates the fact that such projects are contributing to climate change. This proposed plant uses the same amount of energy as 35,000 homes year-round, including in the summer as we keep breaking heat	See responses to comments 0041.01 regarding climate change impacts; and 0004.05 and 0004.12 regarding energy use and GHG emissions.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			records, while the public is asked to conserve. The plant will only be as clean as the energy used to run it — suggesting that this project will actually result in growing GHG emissions. So basically, approving this project means that my future is being destroyed for the sake of profit! (as need has been disproven).	
L-10.4			5. This scheme privatizes water by selling to the highest bidder which is in direct VIOLATION of the Human Right to Water Policy the Board passed last year.	See response to comment 0192.01 regarding the human right to water.
L-10.5			6. Poseidon has PROVEN it is irresponsible — it has shown, time and time again, that it does not responsibly dispose of the toxic brine byproduct that this project will require. AND why are we choosing to implement a technology with such an ecologically destructive byproduct. Brine is proven to have negative and deadly impacts on sea life and ecosystems polluted by it.	See responses to comments 0004.01, 0036.01, 0054.02, and 0055.02 regarding impacts of the brine discharge; and 0004.11, 0033.01, 0020.02, and 0035.04 regarding toxicity.
L-10.6			7. The only pipe that doesn't leak is the one that is never built. The pipes from this plant will go through the Huntington Beach Superfund site, it will just be a matter of time before the water from it gets contaminated.	See responses to comments 0022.04 and 0132.06 regarding the Ascon Landfill superfund site.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
L-10.7			8. Supposed “mitigation” is non-existent. The "new" intake mesh that Poseidon proposes to use will only decrease marine life fatality by ONE PERCENT. That is hardly an improvement worth considering as mitigation. THIS IS CLIMATE DESTRUCTION — Approving this project is a step backwards to fighting climate change.	See response to comment 0004.03 regarding intake screens.
L-10.8			9. For the sake of your children and your grandchildren, for the sake of California and the climate. For the sake of the animals whose lives you are willingly sacrificing: please OPPOSE SB1090.	See response to comment L-10.1.
L-10.9			Also, I want to correct that it was Mr. Markus who brought up climate change as a consideration factor — even though this project would actually make climate change worse!	See response to comment 0041.01 regarding climate change impacts.
L-11	Milt Dardis		The Poseidon 4 from HB should have told everyone they received various types of financial remuneration from Po$eidon for reading the Po$eidon handouts and were nothing more than paid shills or honks. Such is life in SEHB as we are disenfranchised and have no voice in City Hall. Have been fighting Po$eidon	This comment is not relevant to the Santa Ana Water Board’s consideration of the Tentative Order.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			since 2005 and it has not been a clean fight. OCWD has 4 paid Po$eidon honks on it and the non binding contract was mainly developed by Po$eidon along with the prepared speeches including Million Dollar Senator Boxer.	
L-12.1	Mary Jo Baretich Resident 4 Responsible Desalination	June 6, 2020	I do not see any Positive reasons for building this desalination plant in Huntington Beach. The following are comments showing Negatives – important reasons against building this facility. Negative 1 - This desal plant is Not Needed. Our phenomenal Ground Water Replenishment System, the largest in the world, has proven to the world that this technology is efficient and cost worthy with the next phase of water production to be 134 million gallons of water per day. Per MWDOC, we will already have adequate water through 2050 without a desalination plant.	See responses to comments 0014.04 and CCKA I.D regarding need for the desalinated water.
L-12.2			Negative 2 - This desal plant will be extremely Energy intensive and Expensive at several times the cost of imported MWDOC water.	See responses to comments 0004.05 and 0004.12 regarding energy use; and 0032.01 regarding cost of desalinated water.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
L-12.3			Negative 3 – Per this proposal this desal plant will cause Significant risk to marine life and sensitive habitats using the existing Intake Pipe, even with the filters proposed. The intake velocity factor will contribute to the destruction of marine life which cannot swim away, especially juvenile fish, massive amounts of plankton along with billions of fish eggs and larvae, and jellyfish which become impinged on the filters and are sucked into the system when the filters fail. According to Huntington Beach LCP C6.1.1 requirement, the project must prevent the degradation of water quality and prevent substantial ecological losses of source populations of marine organisms.	See responses to comments 0004.03 regarding the intake; and 0062.02 and CCKA IV.B regarding antidegradation.
L-12.4			Negative 4 - The salt and chemicals produced as a byproduct of desalination discharged into the ocean will settle on the seafloor creating a dead zone, and will have adverse effect on marine organisms and sensitive habitats. A 2002 dye study shows that these outflow pollutants from this dead zone outflow flow back to shore. Surfers and swimmers have experienced eye infections and other	See responses to comment 0004.01, 0036.01, 0054.02, and 0055.02 regarding impacts of the brine discharge; 0020.02 and 0035.04 regarding “dead zone”; and 0132.04 regarding the dye study.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			illnesses. And marine life in the area can be adversely affected.	
L-12.5			Negative 5 - The 1933 Long Beach Quake was centered less than a mile away and the fault line runs under the proposed plant. It was a magnitude 6.4. Negative 6 - The analysis of the soil layers beneath the proposed desal plant show unstable ground that would be prone to liquefaction and lateral movement - since it is located on the Santa Ana Riverbed. Predicted sea level rise and potential tsunami occurrences from earthquakes will negatively affect a desalination plant at this location since it is in a designated tsunami runoff area.	See responses to comments 0132.06 regarding seismic hazards; 0041.01 regarding sea level rise; and 0177.09 regarding tsunami risks.
L-12.6			Negative 7 - The issue of cross-contamination from the Ascon Toxic Waste Dump due to a potential pipe crack in the proposed Poseidon pipeline running next to it can potentially poison thousands of people downstream in the event of an earthquake before being detected.	See response to comment 0132.06.
L-12.7			Negative 8 – With potential decibels above acceptable levels, severe Noise and vibration impact from the 33 pumps	See responses to comment 0004.15, 0014.01.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			going 24 hours a day, 7 days a week will be impacted not only by the people living in the homes to the west and north of the proposed plant, but on the birds and animals living in the nearby restored wetlands, and the Humane Society Shelter across Edison Street directly to the north of the proposed facility.	
L-12.8			Negative 9 - The quality of the desalination water will have extremely unacceptable levels of Boron. The Boron molecules are the same size as water molecules and extremely difficult to remove. Using subsurface intake could dramatically reduce the amount of Boron present.	See responses to comments 0008.02, 0008.04, and 0192.04 regarding boron. Subsurface intakes may reduce the need for pretreatment of the intake water but may not necessarily reduce boron levels. However, subsurface intakes are not feasible for the proposed Facility. See responses to comments 0005.04, 0035.02, 0082.04, CCKA I.B, and CCKA I.C.
L-12.9			Negative 10 – Periodic Red Tide, harmful algae blooms (HAB), produce deadly neurotoxins that are difficult to remove in the reverse osmosis process. These Red Tides produces potent neurotoxins, called brevetoxins, that can affect the central nervous systems. They also have caused desal facilities throughout the world to shut down because of membrane clogging. These Red Tides can last as little as a few	See response to comment 0132.08.

Late Comment Number	Commenting Parties	Date of Comment Letter(s)	Comment	Response
			weeks or longer than a year. Again, adhering to responsible desalination principles, subsurface intake can be a robust pretreatment for sea water reverse osmosis (SWRO) during HABs. We plead with you to please deny this destructive Poseidon Desalination Plant from being built in Huntington Beach.	
L-13	Carol Kravetz	May 10, 2020	We do not need a salination plant in Orange County that will raise water prices on residents that many cannot afford. In this tragic time of COVID, let's look to better solutions than a billion dollar project that isn't really going to solve the problem. It will create bigger problems for residents. And a final point, whatever the budget is today, it will balloon after they begin. Stop it now or be sorry later.	See response to comment 0032.01 regarding cost of the desalinated water.

From: Smythe, Mark@Waterboards
To: WB-RB8-PoseidonHB.comments
Subject: FW: Public Comment
Date: Thursday, May 14, 2020 8:45:44 AM

From: Smythe, Hope@Waterboards <Hope.Smythe@waterboards.ca.gov>
Sent: Thursday, May 14, 2020 8:25 AM
To: Smythe, Mark@Waterboards <Mark.Smythe@waterboards.ca.gov>
Subject: FW: Public Comment

From: Brenna Norton <brennanorton@gmail.com>
Sent: Thursday, May 14, 2020 1:45 AM
To: Smythe, Hope@Waterboards <Hope.Smythe@waterboards.ca.gov>
Cc: andrea@azul.org
Subject: Public Comment

EXTERNAL:

My name is Brenna Norton. I am Southern California resident opposed to any new desalination plant. We do not need a desalination plant that would contribute to climate change, death zones in the ocean and tripling of water rates only to benefit Wall Street investors.

municipalities should fully implement conservation programs, promote potable re-use — or treat storm water runoff.

Thank you,
Brenna Norton

From:	Glenn Brooks
To:	WB-RB8-PoseidonHB.comments
Subject:	Fwd: Poseidon/Brookfield comments to California Coastal Commission June 10-12
Date:	Thursday, June 18, 2020 6:25:04 AM
Attachments:	6-15-20 CCC Brookfield comments v5.pdf

EXTERNAL:

---------- Forwarded message ---------
From: **Glenn Brooks** <glen2ns@gmail.com>
Date: Mon, Jun 15, 2020, 7:29 PM
Subject: Poseidon/Brookfield comments to California Coastal Commission June 10-12
To: <RB8-PoseidonHBcomments@waterboards.ca.gov>

Greetings,
These comments were presented via Zoom last week to the CA Coastal Commission. These comments are far more well thought out than such comments that were presented to your body in your own Zoom meeting workshop.

In any event, these are material to your decision in my opinion.

Glenn Brooks MBA president
Brooks Works Corp.
Merritt Energy Park, Inc.
Green Jobs for Haiti 501(c)(3)
Pacific Imperium LLC
(714) 478-1053

Glenn Brooks
re: Brookfield's desalination impetus

DAY 1 CCC 6-10-20

Poseidon is not a source of water that Orange County has a true need for. With 60 million acre feet of water in its aquifer, Poseidon's nameplate capacity of 50 million gallons/day will take 1,071 years to equal our Orange County aquifer. Stated another way, it takes over 1,000 years of Poseidon water to equal Orange County's existing aquifer. Orange County does not need Poseidon water and Huntington Beach does not need its ocean environment disturbed.

Maybe I should say Brookfield instead of Poseidon Let me explain. Brookfield owns Poseidon. Brookfield had $510 billion in assets under management in 2019 -$510 billion dollars! Brookfield is primarily a real estate development company managed by a genius accountant named Bruce Flatt. When Bruce Flatt became CEO in 2002, Brookfield was not a stellar investment vehicle. Since 2002 Brookfield stock has returned 1,350%. Over that same time the S&P has returned 183%. 1,350% vs. S&P's 183%. That 15 year period equals an average return of 19%/year. In 2017, Brookfield's market cap was $36 billion. Forbes says that Brookfield is the size of KKR, Apollo, Carlyle Group and Colony Northstar combined.

So if Brookfield Asset Management is actually the holding company for its real estate investor called Brookfield Property Partners, why is it building desalination plants with its company Brookfield Infrastructure Partners? And why does it make renewable energy with its Brookfield Renewable Partners? The answer is that Brookfield does not pay market rates for water or energy, rather it makes its own - to build its real estate developments. So maybe desalinated water is not really Poseidon's end game.

DAY 2 CCC 6-11-20

Yesterday, I spoke of Brookfield's CEO Bruce Flatt returning 1,350% vs. S&P's 183% over 15 years & how maybe desalinated water is not Poseidon's true end game.
That is, Brookfield built then sold the Carlsbad desalination plant. Interestingly, Brookfield has another large asset holding in San Diego: 1,200 acres of residential development in Chula Vista called Otay Ranch Village with as many as 11 separate development phases. Brookfield is a real estate company but can't develop real estate without a water supply, and it can't make water without renewable energy – so it bought into both markets.

Brookfield bought bankrupt Poseidon after a bankrupt project in Tampa Florida to make water for its real estate projects worldwide. Brookfield's Tampa plant is only making half the nameplate capacity and it was 50% over budget. Similarly, the Carlsbad project has never made its nameplate 50MGD. Poseidon is not really a successful water desalination company, but it can make water. All it has to do, is make water - a lot of water to satisfy the requirement of providing a water source for Brookfield's real estate.

Interestingly, Brookfield never builds a water desalination plant to directly supply its real estate projects, because they are not dependable enough. It looks like its strategy is to make water in one place for a water district that already has a MWD agreement and then use that water supply from the MWD for its own real estate developments. Brookfield takes the MWD water supply after the water district like OCWD or San Diego surrenders its use of MWD water. Brookfield & Poseidon seem disingenuous.

DAY 3 CCC 6-12-20

Right now Brookfield is building a Los Angeles project called 755 Figueroa. Technically, the project address is 945 W. 8th street in downtown Los Angeles and it has to provide a water source for it. In my opoinion, Poseidon is trying to make water in Huntington Beach so OCWD will surrender its MWD allotment. OCWD does not need more water. It is expanding the Ground Water Replenishment System with an additional 30MGD to its full nameplate capacity of 130 MGD. OCWD does not need Brookfield's 50MGD but in my opinion Brookfield needs it in downtown Los Angeles. I believe Brookfield will snatch up the OCWD allotment from MWD. Rate payers for OCWD will get stuck with the $3,000/AF water bill and an unsuccessful depreciating-asset water-plant. In my opinion, Brookfield will get the MWD water at wholesale cost of $1,200/AF for 755 Figueroa and OCWD rate payers get stuck. I believe Brookfield will then sell the Huntington Beach plant for $1 billion like it just did for the Carlsbad plant - when it only had invested $266 million. That alone is another whooping Bruce Flatt win of 275% ROI for Brookfield, while California bond payers pay off the $734 million dollars in bonds for the Carlsbad plant. California can hardly afford to give Brookfield another cash cow desal plant. Make Brookfield carry its own water.

From: bbateman@socal.rr.com
To: WB-RB8-PoseidonHB.comments
Subject: Huntington Beach Desalination Project
Date: Wednesday, March 11, 2020 2:03:56 PM

EXTERNAL:

Dear Regional Water Board

I am writing to you today to express our complete support of the proposed Huntington Beach Desalination Project. We have done our homework on this subject and toured the desal plant in Carlsbad. My wife and I came away very impressed with how much the project engineers focused on mitigating any harm to the environment and wildlife. Every detail seemed very well thought out.
A drought resistant project like this that brings additional quality water to an at-times parched region without building new dams or drilling more wells is an absolute no-brainer in our view.

Thank you,
Brian and Mary Bateman

From: Patrick Brenden
To: WB-RB8-PoseidonHB.comments
Subject: Letter of Support - HB Seawater Desalination Facility
Date: Wednesday, January 22, 2020 3:23:26 PM

EXTERNAL:

January 21, 2020

Mr. William Ruh, Chairman
Santa Ana Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside, CA 92501-3348

Re: **Huntington Beach Seawater Desalination Facility –** ***APPROVE National Pollutant Discharge Elimination System Permit Order No. R8-2020-0005, NPDES No. CA8000403***

Dear Chair Ruh:

Established in 1990 by a coalition of government, community, business and environmental leaders, the **Bolsa Chica Conservancy** is a not-for-profit organization that is invested in the ongoing preservation of the Bolsa Chica wetlands.

At almost 1,500 acres, the Bolsa Chica Wetlands is the largest saltwater marsh between Monterey Bay and the Tijuana River Estuary, and it's designated by the state as a Marine Protected Area. Bolsa Chica has a variety of vital functions including; natural flood control, organic water purification, land erosion control, as well as providing critical habitats to over 1,100 species, including 50 endangered fish and wildlife species. Approximately 30,000 people visit the reserve each year for recreational activities, educational tours, and wildlife watching.

About a decade ago, tidal action to the Bolsa Chica Ecological Reserve (Bolsa Chica) wetlands was restored. This restoration effort assures long-term and effective tidal action to support estuarine and coastal fish populations in this important regional wetland habitat.

Unfortunately, The State Lands Commission has advised us that the funds to maintain the ocean inlet will be depleted by the end of 2021. As part of the proposed Huntington Beach Desalination Project, **Poseidon and the Regional Board staff have reached an agreement that will ensure the long-term restoration and preservation of Bolsa Chica.**

Without this funding the wetlands and restoration efforts will all but be wiped out. All the efforts, and years of work, will be for not.

The State Water Board's Ocean Plan desalination policy states "Mitigation projects that increase or enhance the viability and sustainability of all forms of marine life* in Marine Protected Areas are preferred, if feasible." Bolsa Chica includes not one but two MPAs –

Bolsa Bay State Marine Conservation Area and Bolsa Chica Basin State Marine Conservation Area. The Final Order should acknowledge that the proposed mitigation plan will contribute to California's MPA network.

In closing, this important mitigation measure makes the Huntington Beach desalination plant a net environmental benefit. All while providing us with a climate resilient water supply. I urge you to approve the permit for renewal on April 3rd.

Sincerely,

Patrick W. Brenden

Patrick W. Brenden, CEO
Bolsa Chica Conservancy
714-309-2618 (cell)
patrickb@bolsachica.org

Connect with Bolsa Chica Conservancy:

From:	Matthew Dumlao
To:	WB-RB8-PoseidonHB.comments
Cc:	Smythe, Hope@Waterboards
Subject:	Letter of Support for Mitigation at Bolsa Chica
Date:	Wednesday, March 11, 2020 11:32:50 AM
Attachments:	image001.png image002.png image003.png Bolsa Chica Letter of Support 3Mar2020.pdf

EXTERNAL:

Dear Regional Water Board,

Please see the attached letter regarding mitigating the effects of the proposed Huntington Beach Desalination Plant through actions taken at Bolsa Chica Wetlands.

Please let me know if you have any questions.

Thank you,

Matt Dumlao, PhD
Environmental Policy Advisor
Office of Lt. Governor Eleni Kounalakis
T: (916) 445-8994
F: (916) 323-4998
matthew.dumlao@ltg.ca.gov

ELENI KOUNALAKIS
LIEUTENANT GOVERNOR

March 10, 2020

Chair William Ruh and Board Members
Santa Ana Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside, CA 92501-3348

Sent via email: *RB8-PoseidonHB.comments@waterboards.ca.gov*.

Dear Chair Ruh and Regional Board Members,

I would like to encourage the Santa Ana Regional Water Quality Control Board (Board) to prioritize Bolsa Chica Wetlands for mitigation associated with Poseidon's proposed Huntington Beach Desalination Plant.

As you know, wetlands throughout southern California have declined by 90 percent over the last 200 years, and Bolsa Chica is one of the few remaining refuges for native flora and fauna. With the projected impacts to our coastal ecosystems from climate change and sea level rise, restoring and protecting our wetland ecosystems is essential for the protection of California's natural resources and the critical services they provide to the state. In addition, Bolsa Chica provides the public with a rare opportunity – in the heart of an urbanized region – to experience a coastal wetland.

Furthermore, restoration efforts at Bolsa Chica have already made important progress, including work carried out in 2006 that restored tidal connectivity between Bolsa Chica and the Pacific Ocean after being cut off for 100 years. Future efforts to preserve, enhance, and restore Bolsa Chica will build upon those important efforts. Finally, I would like to point out that the California State Lands Commission, of which I am a member, formally expressed its desire for Bolsa Chica to be considered as a mitigation site for Poseidon's mitigation plan as part actions it took at its October 19, 2017 meeting.

In the coming weeks, the Board has important decisions to make regarding the proposed Huntington Beach Desalination Plant, but taking actions to preserve, enhance, and restore Bolsa Chica should not be in question. In encourage you to take this opportunity to improve the health of the Bolsa Chica Wetlands and make our coast more resilient to a changing climate.

Sincerely,

AMBASSADOR ELENI KOUNALAKIS (RET.)
Lieutenant Governor

STATE CAPITOL, ROOM 1114, SACRAMENTO, CALIFORNIA 95814 • PHONE (916) 445-8994
WWW.LTG.CA.GOV

From: Peter Fiske
To: WB-RB8-PoseidonHB.comments
Subject: Letter regarding Huntington Beach Desalination Project
Date: Monday, February 3, 2020 3:52:45 PM
Attachments: NAWI letter to SARWQCB 01.16.2020.v2 pf signed.pdf

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EXTERNAL:

Dear Santa Ana Regional Water Quality Control Board Colleagues,

Attached is my letter in support of the Huntington Beach Desalination Project.

I would be happy to discuss with you any details of my letter.

Warmest personal regards,

Dr. Peter S. Fiske
Executive Director – National Alliance for Water Innovation (NAWI)
Phone: 415-309-0336
Website: www.nawihub.org

January 16, 2020

Santa Ana Regional Water Quality Control Board, Region 8
3737 Main Street, Suite 500
Riverside, CA 92501

Re: ORDER R8-2020-0005, NPDES No. CA8000403 FOR POSEIDON RESOURCES (SURFSIDE) LLC HUNTINGTON BEACH DESALINATION FACILITY ORANGE COUNTY

Honorable Santa Ana Regional Water Quality Control Board Members,

I am writing this letter to urge you to support of the Huntington Beach Desalination Project. As Executive Director of the National Alliance for Water Innovation ("NAWI"), I lead a world-class team of industry and academic partners who are dedicated to making technology like desalination more accessible and affordable. NAWI is funded by over $130 million dollars in research grants from the U.S. Department of Energy and the State of California, among others

As evidenced in a recent *Popular Science* article (www.popsci.com/story/environment/desalination/), we need to make a more concerted effort to incorporate desalination into our regional infrastructure systems to stabilize and diversify our water supplies now and in the future.

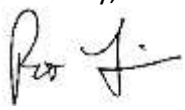
In the past, skeptics have criticized desalination as requiring too much energy, but that discounts a crucial element of the equation – transporting freshwater over great distances is also hugely energy intensive. It is becoming increasingly common, especially in California, for the amount of energy used to import water from distant sources to be approximately equal to the energy required to desalinate seawater.

As a prime example, when San Diego officials considered the energy used by the State Water Project ("SWP") – California's single greatest energy user – the total amount of energy per gallon of water imported by the SWP was comparable to that for water produced by the Carlsbad Desalination Plant.

The Huntington Beach project will be the most technologically-advanced, energy-efficient and environmentally-sound large-scale desalination plant in the world. This project will not only help ease California's growing water reliability concern, but plants like the one in Carlsbad and the one proposed in Huntington Beach are absolutely necessary to support the development and advancement of the state of the art in the water industry.

Desalination is a critical component of our collective water future, and we can't wait until our basins dry up to start implementing it. I urge you to take the next step toward securing a safe and reliable water supply for all of California and approve the Huntington Beach desalination facility.

Sincerely,



Peter Fiske
Executive Director
National Alliance for Water Innovation

From: Kristy Pace
To: comments@waterboards.ca.gov; WB-RB8-PoseidonHB.comments
Subject: Poseidon Desalination Plant Public Comments
Date: Friday, May 8, 2020 3:42:34 PM

EXTERNAL:

Dear Water Board,

The Poseidon desalination plant is NOT needed. Please shut the plan down.

Water use in Orange County is down, and with the economic crisis it is expected to decrease even further. There is no reason to even consider an expensive desalination plant to give us more water than we need, at a price we cannot afford. The idea that the contract specifies that even if the county does not take/need/utilize the water, they must pay for it is absurd! It will be the most expensive water the county would source- this is a scheme to start privatizing water while selling it to the highest bidder, which could double or triple water rates.

This is NOT consistent with the Human Right to Water policy that the Regional Water Board adopted on December 6, 2019

If you need more reasons why you should close it
1) Poseidon lobbies regulators to allow more toxic brine into the ocean that ends up killing more marine life.

2) There is absolutely no way Poseidon can go around the Newport fault line that will avoid irreparable damage to the plant and the entire ecosystem around it.

3) This proposed plant uses the same amount of energy as 35,000 homes year-round, including in the summer as we keep breaking heat records, while the public is asked to conserve.

4) As the pipes from this plant go through the Huntington Beach Superfund site, it will just be a matter of time before the water from it gets contaminated.

5) The "new" intake mesh that Poseidon proposes to use will only decrease marine life fatality by ONE PERCENT. That is hardly an improvement worth considering as mitigation.

Please for the people, the budget and the ocean life close this plant.

Thank you for your time,

Kristy Pace

From:	Ryan Kelly Gallagher
To:	WB-RB8-PoseidonHB.comments
Cc:	Smythe, Mark@Waterboards; Smythe, Hope@Waterboards
Subject:	Public Comment - Huntington Beach Desalination Facility Project - May 15, 2020 Public Workshop
Date:	Monday, May 11, 2020 9:14:00 PM
Attachments:	Santa Ana Regional Water Board_CEQA-PTD Comment Letter_05.11.2020.pdf

EXTERNAL:

To whom it may concern,

Attached please find comments regarding the Regional Board's CEQA and public trust doctrine obligations for the upcoming May 15, 2020 public workshop on the Huntington Beach Desalination Facility Project.

Regards,

Ryan Gallagher

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May 11, 2020

Via Electronic Mail
RB8-PoseidonHB.comments@waterboards.ca.gov

Chair William Ruh and Board Members
Santa Ana Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside, CA 92501

Huntington Beach Desalination Facility NPDES Permit
Tentative Order R8-2020-0005, NPDES No. CA000403
Additional Comments on CEQA Compliance and Public Trust Obligations

Dear Chair Ruh and Regional Board Members,

We write on behalf of our clients, California Coastkeeper Alliance, Orange County Coastkeeper, and California Coastal Protection Network, regarding the above-referenced matter. On January 21, 2020, our clients submitted comments to the Santa Ana Regional Water Quality Control Board ("Regional Board") regarding the legal deficiencies with the draft Waste Discharge Requirements and Water Code Section 13142.5(b) Determination ("Tentative Order") that the Regional Board had issued for the Poseidon Resources L.L.C. ("Poseidon") Huntington Beach Desalination Facility ("Project" or "modified Project"). The Regional Board has scheduled another public workshop regarding the Project for May 15, 2020 to focus on the need for the Project, as currently proposed, and the mitigation of its marine life impacts. These topics implicate both the California Environmental Quality Act ("CEQA") and the Regional Board's affirmative obligations as a fiduciary of the public trust, as well as the 2015 Ocean Plan amendments. Accordingly, we provide these additional legal comments on the application of CEQA and the public trust doctrine to supplement our clients' other submissions.

To the best of our knowledge, the Regional Board has not prepared an adequate CEQA or public trust analysis for the Project or addressed our clients' ongoing concerns about these important public laws. For the reasons discussed in this letter and our clients' prior comments, approval of the Project cannot lawfully go forward until the Regional Board complies with these independent legal obligations, separate and apart from its compliance with the Ocean Plan amendments. We briefly summarize the legal issues immediately below and then provide a more thorough legal analysis in the discussion that follows. We urge the Board in the strongest possible terms to direct staff to address these substantial legal deficiencies before taking any approval action on the Project.

CEQA requires the preparation of a single, comprehensive Environmental Impact Report ("EIR") for any project that may have a significant environmental impact. Where, as here, a project is delayed and conditions change enough to render an old EIR deficient, an updated EIR must be issued before an agency can grant a new discretionary approval for

the modified project. Like an initial EIR, an updated EIR must fully analyze the modified project's direct, indirect, and cumulative environmental impacts, and must consider reasonable alternatives and mitigation measures that could reduce or eliminate those impacts.

To date, the Regional Board has indicated that it will assess the environmental impacts of the modified Project by relying exclusively on the 2010 EIR issued by the City of Huntington Beach, the 2017 Final Supplemental EIR ("FSEIR") issued by the State Lands Commission, and the Regional Board's own 2019 Addendum to the 2017 FSEIR. But these existing documents do not come close to providing the sort of comprehensive analysis of the modified Project that CEQA demands and that the Regional Board itself has recognized is necessary. The 2010 EIR, even assuming it was adequate when it was certified, is now indisputably out of date; the 2017 FSEIR and 2019 Addendum, though recent, are unlawfully narrow in scope. Thus, if the Regional Board finalizes the Tentative Order solely on the basis of the environmental review currently available to it, its action will violate CEQA. We urge the Regional Board to fulfill its CEQA obligations in the only way it now can: By preparing a single, comprehensive updated EIR that fully analyzes the reasonably foreseeable impacts of, and reasonable alternatives to, the modified Project.

Similarly, the Regional Board would violate its affirmative duties as a fiduciary of the public trust if it were to finalize the Tentative Order without providing additional analysis. The public trust doctrine dictates that all state agencies have an independent obligation to both consider and balance the competing uses of the trust resources within their jurisdiction and to preserve the resources they support. There is currently no indication in the record that the Regional Board has even explicitly considered – much less balanced – competing trust uses, values, and resources. And by finalizing a Tentative Order that would enable the deaths of millions of fish larvae per year when viable mortality-free Project alternatives are available, the Regional Board would violate its substantive duty to avoid or minimize impacts to trust resources. At a minimum, the Regional Board must more explicitly analyze the public interest in and need for destroying those trust resources, and then balance those considerations against the public's interest in preserving them.

I. CEQA REQUIRES THAT THE REGIONAL BOARD PREPARE AN UPDATED EIR BEFORE ISSUING ANY DISCRETIONARY APPROVALS FOR THE PROJECT.

CEQA, the state's bedrock environmental statute, requires public agencies to "give prime consideration to preventing environmental damage when carrying out their duties."[1] Whenever there is a fair argument that a discretionary agency action could significantly impact the environment, CEQA requires that the agency first prepare an EIR.[2] The EIR is

[1] Mountain Lion Found. v. Fish & Game Comm'n, 16 Cal. 4th 105, 112-14 (1997).
[2] See Cal. Pub. Res. Code (hereafter "PRC") §§ 21080(d), 21100, 21151.

"the heart of CEQA,"[3] and serves as "the primary means of achieving the Legislature's considered declaration that it is the policy of the state to take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state."[4] Every valid EIR must include a detailed analysis of the proposed project's direct, indirect, and cumulative effects on the environment, as well as potential mitigation measures and alternatives (including a "no project" alternative) that could reduce or avoid those impacts.[5] The analysis and supporting data in an EIR must be sufficient to allow a full assessment of significant environmental impacts and must be presented in a way that meaningfully informs the public and decisionmakers who did not participate in the EIR's preparation.[6] By alerting "the public and its responsible officials to environmental changes before they have reached the point of ecological no return," the EIR also serves as a "document of accountability" that "protects not only the environment but also informed self-government."[7]

A. It is undisputed that CEQA required some agency to prepare a comprehensive updated EIR before any agency could issue a discretionary approval for the modified Project.

The Legislature recognized that a project might not go forward immediately after an EIR is issued – exactly what happened here. Section 21166 of the Public Resources Code expressly accounts for these situations. That section requires the preparation of a "subsequent or supplemental" EIR whenever "substantial changes" occur with respect to the project or the circumstances under which it is carried out that will require "major revisions" to the initial EIR.[8] When one of these "updated" EIRs is necessary, no agency may grant a new discretionary approval for the project until that document is certified.[9] As

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[3] Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal., 47 Cal. 3d 376, 392 (1989).
[4] No Oil, Inc. v. City of Los Angeles, 13 Cal. 3d 68, 75 (1974) (internal quotations omitted).
[5] CEQA Guidelines §§ 15120, 15126.2; see Muzzy Ranch Co. v. Solano Cty. Airport Land Use Com., 41 Cal. 4th 372, 379-80 n.2 (2007) ("The term 'CEQA Guidelines' refers to the regulations for the implementation of CEQA authorized by the Legislature . . . In interpreting CEQA, we accord the CEQA Guidelines great weight except where they are clearly unauthorized or erroneous.").
[6] Id. at § 15147; Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova, 40 Cal. 4th 412, 442 (2007); Laurel Heights Improvement Ass'n, 47 Cal. 3d at 405.
[7] Laurel Heights Improvement Ass'n, 47 Cal. 3d at 392.
[8] See PRC § 21166(a)-(b).
[9] CEQA Guidelines § 15096(c). Note that neither Public Resources Code section 21166 nor CEQA Guidelines section 15096 substantively distinguishes between subsequent and supplemental EIRs. Under both the Public Resources Code and the CEQA Guidelines, each form of EIR is triggered by – and can only be carried out after – "substantial changes" to a project or its circumstances require "major revisions" to the initial EIR. See PRC § 21166; CEQA Guidelines §§ 15162-15163. Subsequent and supplemental EIRs are collectively referred to herein as "updated" EIRs. The CEQA Guidelines reference a third type of supplemental CEQA document – "addenda" – that are not mentioned in the Public Resources Code and that are not triggered by the same major changes and substantial revisions as subsequent or supplemental EIRs. See CEQA Guidelines § 15164. We do not use the term "updated EIR" to include addenda to EIRs.

discussed in greater detail below, an updated EIR has effectively the same procedural and substantive requirements under CEQA as an initial EIR.

1. *By 2015, circumstances had changed drastically since the City of Huntington Beach issued its initial 2010 EIR such that all parties agreed an updated EIR was required under CEQA.*

The City of Huntington Beach initially assumed lead agency status for the Project and certified a Final EIR in September 2010.[10] The City's 2010 EIR evaluated environmental impacts associated with construction and operation of the desalination facility itself, as well as construction of the Project's proposed water transmission lines and pumps that would convey the treated water for direct, immediate use by local customers. Based on this EIR, the City approved a coastal development permit for those portions of the Project within its jurisdiction. Concerned parties appealed the City's permit to the California Coastal Commission, and that appeal remains pending before the Coastal Commission. The Project was never built following the certification of the 2010 EIR, nor did Poseidon even obtain the requisite final approvals from at least four other public agencies with discretionary approval authority over the Project – the Coastal Commission, the Regional Board, the State Lands Commission, and the Orange County Water District ("OCWD"). After certifying the 2010 EIR, the City has consistently maintained that it has no further discretionary authority over the Project and thus no further CEQA obligations.

Since 2010, changed circumstances and new information have significantly altered the planning landscape and compelled Poseidon to modify the Project in several substantial ways. Chief among these changes were the new regulations for desalination facilities that the State Water Quality Control Board adopted in 2015 ("Ocean Plan amendments") and that were addressed at length in our clients' January 2020 comment letters. In sum, the Ocean Plan amendments created a strong presumption against open-ocean intake systems – directing Regional Water Boards to <u>require</u> subsurface intakes unless they would be

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[10] Under CEQA, the "lead agency" is that public agency that "has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment." PRC § 21067. When a project is subject to discretionary approvals by more than one public agency, "one public agency shall be responsible for preparing an EIR or Negative Declaration for the project. This agency shall be the lead agency." CEQA Guidelines § 15050(a). The public agency with the "greatest responsibility for supervising or approving the project as a whole" ordinarily acts as lead agency. <u>Id.</u> at § 15051(b). When more than one agency could meet this description, "the agency which will first act on the project in question shall be the lead agency." <u>Id.</u> Those other agencies that have responsibility for carrying out or approving a part of the project are "responsible agencies." PRC § 21069. Responsible agencies comply with CEQA by providing relevant input and comments to the lead agency and by "considering the EIR . . . prepared by the lead agency" in making their own approval decisions. CEQA Guidelines § 15096. Although a responsible agency may be required to first step into the shoes of the lead agency and then prepare a substitute EIR under certain narrow circumstances that are relevant here and discussed in Section I.C.2., <u>supra</u>, a responsible agency <u>generally</u> cannot prepare its own CEQA analysis. <u>See</u> CEQA Guidelines § 15096(e); <u>but see</u> <u>id.</u> at § 15164 (regarding addenda to EIRs).

infeasible – and mandated that the Regional Water Boards analyze a range of feasible alternatives for site, design, and technology and identify mitigation measures that will "minimize intake and mortality of all forms of marine life." Additionally, and as also discussed in detail in the January 2020 comment letters, there has been a diminishing demand for water and need for the Project since the 2010 EIR was certified. Water users in Orange County and the surrounding area have increased their water conservation practices as new sources of recycled water have become available. Finally, as discussed at greater length below in Section I.B.2., there are new, reasonably foreseeable alternative plans for distributing the Project's desalinated water that had not yet been developed in 2010.

As a result of the 2015 Ocean Plan amendments, the Regional Board informed Poseidon that discharge permits the Board had granted for the Project in 2012 were no longer valid. The Regional Board asked for additional information from Poseidon regarding the Project's compliance with the new regulations. In response, Poseidon modified the proposed Project to add wedgewire screens to the facility's intake system and a brine diffuser to the outfall pipes, and then submitted a flurry of applications for new agency approvals. Poseidon itself also acknowledged at this time that to obtain these approvals, a new CEQA review would need to be carried out and a new lead agency would need to be identified. Poseidon envisioned this updated CEQA review as taking the form of an updated EIR.

The State Lands Commission, the Coastal Commission, and the Regional Board ultimately formulated an agreement to coordinate and conduct the necessary updated CEQA review in October 2016.[11] The language in the final agreement indicates that the State Lands Commission would prepare an updated EIR for the modified Project, and the Regional Board and Coastal Commission would then rely on that certified EIR to comply with their own "responsible party" CEQA obligations. Therefore, as the interagency agreement and Poseidon's own correspondence make clear, there has never been any dispute among the permitting agencies or Poseidon itself that the new CEQA review for the modified Project would need to take the form of an updated EIR under Public Resources Code section 21166. While section 21166 may set a higher bar for preparing a subsequent environmental review after an EIR has already been completed than section 21151 does for initiating an initial environmental review, all parties properly recognized that the section 21166 threshold had been cleared.[12] The changes since 2010 and the resulting gaps in the

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[11] The final agreement was formally titled the "Interagency Permit Sequencing Framework Agreement." Poseidon was also a signatory to this final agreement.

[12] See PRC § 21151 (setting out the conditions requiring the preparation of an initial EIR); Bowman v. City of Petaluma, 185 Cal. App. 3d 1065, 1073-75 (1986) (explaining that section 21151 intentionally sets a "low threshold" for initial review, requiring an EIR if there is a "fair argument" that a project "may have" a significant environmental effect, while section 21166 embodies a "quite different" intent to prohibit a "subsequent or supplemental [EIR] unless the stated conditions are met").

initial EIR were simply too significant to allow the Project's CEQA review to be updated through some lesser form of environmental analysis.[13]

2. *CEQA required that this updated EIR – like any other form of EIR – comprehensively analyze the impacts of the modified Project.*

Once all parties correctly determined that an updated EIR was required under Public Resources Code section 21166, that determination settled the question, as a legal matter, of how comprehensive the new CEQA analysis for the Project needed to be. Importantly, neither the Public Resources Code nor the CEQA Guidelines substantively distinguish the procedural and substantive requirements for "updated" EIRs from those for "initial" EIRs.[14] An EIR is an EIR: Once CEQA requires that an agency's environmental review take this form, there are certain requirements that must always be satisfied.

Chief among these requirements is that an EIR analyze "the whole of an action."[15] The "project" that an EIR must analyze under CEQA encompasses "the activity which is being approved and which may be subject to several discretionary approvals."[16] As the courts have affirmed, "[t]he term 'activity' plays an important role in the definition of 'project' – a role reflected in the statement that "'project' refers to the underlying activity which may be subject to approval" and not the approval of that activity."[17] In other words, the "project" an EIR must analyze "does not mean each separate governmental approval."[18] And while the decision to prepare an updated EIR is predicated on a finding that the initial EIR retains some relevance to the modified Project – and that an entirely new initial EIR therefore is not required – this has no bearing on how comprehensive the scope of the updated EIR must be. By the very terms of CEQA and its implementing regulations, an updated EIR must provide whatever new information and analysis is necessary to account for the "substantial changes" and supply the "major revisions."[19] A comprehensive analysis of the whole of the action is still the legally required endpoint; an updated EIR

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[13] No party has ever thought – and our clients do not now contend – that the modified Project is so different from what was proposed in 2010 that a new initial EIR is required under Public Resources Code section 21151. The 2010 EIR retains substantial relevance, and an updated EIR is appropriate under Public Resources Code section 21166. But this does not change the fact that initial and updated EIRs share substantially similar core requirements under CEQA.

[14] See Friends of the Coll. of San Mateo Gardens v. San Mateo Cty. Cmty. Coll. Dist., 1 Cal. 5th 937, 952 n.3 (2016) ("Although CEQA distinguishes 'subsequent EIRs' (§ 21166) from initial EIRs, (see § 21151), both types of EIRs are subject to the same general procedural and substantive requirements."); CEQA Guidelines § 15160 (noting "[a]ll EIRs" must meet the same general "content requirements," in reference to the requirements in CEQA Guidelines sections 15120 through 15132).

[15] CEQA Guidelines § 15378(a); see also PRC § 21065.

[16] CEQA Guidelines § 15378(c) (emphasis added).

[17] POET, LLC v. State Air. Res. Bd., 12 Cal. App. 5th 52, 73 (2017) (quoting Cal. Unions for Reliable Energy v. Mojave Desert Air Quality Mgmt. Dist., 178 Cal. App. 4th 1225, 1238 (2009)).

[18] CEQA Guidelines § 15378(c).

[19] See PRC § 21166; CEQA Guidelines § 15162.

simply has a head-start in getting there relative to a new initial EIR. Furthermore, like an initial EIR, an updated EIR must be prepared by a single lead agency with the input of any responsible agencies that will then rely on it in making their own discretionary approvals.[20] Therefore, taken together, CEQA, its implementing regulations, and the case law plainly require the preparation of a single, comprehensive EIR that encompasses an entire Project – regardless of whether that EIR is "initial" or "updated."

The corollary to this "single, comprehensive updated EIR" framework is the well-established principle that agencies cannot "piecemeal" their CEQA analysis. Piecemealing refers to the process by which agencies purport to analyze only the project elements and impacts within their own narrow respective jurisdictions, deferring to any future responsible agencies the task of analyzing the rest of the project. California courts have uniformly held for over forty years that piecemealing is impermissible because it contradicts both the language and the purpose of CEQA.[21] A public agency cannot simply "subdivide a single project into smaller individual sub-projects in order to avoid the responsibility of considering the environmental impact of the project as a whole."[22] This longstanding, universal requirement that a single EIR prepared by a single agency consider all individual and collective activities involved in a project fosters efficiency and ensures sound and transparent public decision making.[23] It eliminates the risk of redundant and possibly contradictory analysis by multiple agencies, and consolidates all relevant analysis in a single administrative process for easier public review and – when necessary – contestation.

The upshot is that CEQA does not allow for an "updated EIR by committee." The agency preparing the updated EIR can of course reference any still-valid analysis from the initial EIR in its updated document. And responsible agencies may occasionally find that they need to supplement the analysis in a valid updated EIR by issuing their own subsequent, narrow addenda to that EIR. But the case law and CEQA itself explicitly forbid public agencies from trying to cobble together the rough equivalent of an adequate EIR from several discrete, independently inadequate documents. In short, if CEQA requires an updated EIR, some agency must actually prepare a single, comprehensive updated EIR.

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[20] See CEQA Guidelines §§ 15096, 15162.

[21] See Bozung v. Local Agency Formation Comm., 13 Cal. 3d 263, 283-84 (1975) (describing "the mandate of CEQA that environmental considerations do not become submerged by chopping a large project into many little ones – each with a minimal potential impact on the environment – which cumulatively may have disastrous consequences"); see, e.g., Nelson v. Cty. of Kern, 190 Cal. App. 4th 252, 272 (2010); Ass'n for a Cleaner Env't v. Yosemite Cmty. Coll. Dist., 116 Cal. App. 4th 629, 639 (2004); San Joaquin Raptor/Wildlife Rescue Ctr. v. Cty. of Stanislaus, 27 Cal. App. 4th 713, 732 (1994); Christward Ministry v. Superior Court, 184 Cal. App. 3d 180, 195 (1986); Citizens Ass'n for Sensible Dev. Of Bishop Area v. Cty. of Inyo, 172 Cal. App. 3d 151, 167 (1985); Topanga Beach Renters Ass'n v. Dep't of Gen. Servs., 58 Cal. App. 3d 188, 195-96 (1976).

[22] Orinda Ass'n v. Bd. Of Supervisors, 182 Cal. App. 3d 1145, 1171 (1986).

[23] See, e.g., Berkeley Keep Jets Over the Bay Comm. v. Bd. of Port Comm'rs, 91 Cal. App. 4th 1344, 1358 (2001).

B. Because the State Lands Commission unlawfully limited the scope of its 2017 FSEIR to a "Lease Modification Project," no adequate updated EIR has been prepared for the Project.

Pursuant to the plan laid out in the 2015 interagency agreement, the State Lands Commission prepared and certified what it called a "Final Supplemental EIR" for the modified Project in 2017. Under CEQA, the State Lands Commission could issue this FSEIR only if it believed that a comprehensive updated EIR was necessary.[24] And the State Lands Commission did seem to act as a lead agency preparing an updated EIR would. It issued a Notice of Preparation for the EIR and a Notice of Public Scoping Meeting; it held a public scoping meeting; it issued a Notice of Availability for the draft EIR; it noticed and held another public meeting; it accepted public and agency comments; and it prepared and certified the FSEIR that included responses to comments. Based only on these facts, the public – and other agencies – would be forgiven for assuming that the State Lands Commission was diligently seeking to satisfy its CEQA obligations. The problem is that the State Lands Commission never intended to – and in fact did not – prepare an updated EIR that comprehensively analyzed the entirety of the modified Project.

1. *The State Lands Commission explicitly intended to analyze only a "Lease Modification Project" that was much narrower than the full Project.*

Throughout its supplemental CEQA review process, the State Lands Commission was unequivocal that its FSEIR would address only a narrow "Lease Modification Project" that encompassed just the proposed intake screens and outfall brine diffusers – not the whole of the action. By way of comparison, the 2010 EIR had properly defined the Seawater Desalination Project as "consist[ing] of a seawater intake system, pretreatment facilities, a seawater desalination facility utilizing reverse osmosis (RO) technology, post-treatment facilities, product water storage, on- and off-site landscaping, chemical storage, on- and off-site booster pump stations, and 48- to 54-inch diameter product water transmission pipelines."[25] But at a public hearing following the certification of the 2017 FSEIR, State Lands Commission Executive Officer Jennifer Lucchesi explained that the Lands Commission had "approached the CEQA review, and our analysis and processing of the application within that narrow lens of the minor modification to the existing property rights, and the existing authorization that the [Lands] Commission had already granted in

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[24] As discussed in Section I.A.2., infra, there is no situation under CEQA in which both (1) an updated EIR is necessary, and (2) the supplementary CEQA review can be less than comprehensive in scope. If the changes to the project or its circumstances are not substantial and only minor revisions to the initial environmental review are required, other non-EIR means of supplementation are available. See PRC § 21166 (listing conditions that must be met before an updated EIR can be prepared); CEQA Guidelines § 15162 (same); id. at § 15164 (listing the lesser requirements for the preparation of an addendum); see also id. at § 15096 (describing when an agency must step into the shoes of the lead agency).

[25] 2010 EIR, at 3-17.

2010."[26] As a result of this cabined approach, the 2017 FSEIR addressed "only the Lease Modification Project (i.e., the proposed modifications to the 2010 Project that lie offshore within the [tidelands lease] footprint) which includes operational change and two physical modifications" needed to address the new Ocean Plan amendments.[27] In fact, the FSEIR explicitly cited the State Lands Commission's "limited discretionary" authority as a basis for not covering "the entire HB Desalination Plant Project approved in 2010."[28] In short, the State Lands Commission defined the "Project" as only those limited elements of the desalination facility that fell within its narrow regulatory jurisdiction, and then limited its CEQA review to those elements. That is exactly the interpretation of an EIR's "project" that the CEQA Guidelines and the courts have explicitly disavowed.[29]

For the vast majority of the Project components that fell outside of the 2017 FSEIR's artificially cabined "Lease Modification Project," the State Lands Commission intended to punt the CEQA analysis to other agencies. At the aforementioned public hearing, Executive Officer Lucchesi insisted that "the [Regional Board], and the Coastal Commission, and other agencies still have discretionary approvals and permits to give to consider for this project to move forward, including compliance with the [2015 Ocean Plan amendments] under the Ocean Plan, which is a responsibility, and under the sole authority of the Water Board."[30] At the same hearing, Lands Commissioner Eraina Ortega argued that many environmental review issues being raised were "more appropriately addressed at the [Regional Board], and not in the context of the decision" before the Lands Commission, which was "really about the amendment to the [tidelands] lease."[31] The FSEIR itself reiterated those same sentiments. For example, it asserted that the Regional Board must determine "whether Poseidon's proposal for the entire Huntington Beach seawater desalination facility (not simply the offshore modifications to the Commission's 2010 lease) avoids or minimizes [marine] impacts"[32]; that a review of factors associated with the Ocean Plan amendments was not included in the FSEIR because that analysis is "within the responsibility and jurisdiction of the [Regional Board], not the [State Lands] Commission," and the Regional Board must conduct its own CEQA review for the Project[33]; and that "it would not be prudent to begin an extensive environmental analysis related to" the distribution of treated Project water until the Regional Board had issued its own approvals.[34] The State Lands Commission not only impermissibly segmented the Project; it did so with the knowledge and expectation that other agencies would prepare their own future CEQA analysis to fill in the gaps. This was illegal piecemealing by design.

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[26] STATE LANDS COMM'N, Meeting Transcript (Oct. 19, 2017), at 85.
[27] 2017 FSEIR, at 2-3.
[28] Id. at II-18.
[29] CEQA Guidelines § 15378(c) (emphasizing that "each separate governmental approval" does not constitute its own CEQA "project").
[30] STATE LANDS COMM'N, Meeting Transcript (Oct. 19, 2017), at 83.
[31] Id. at 328.
[32] 2017 FSEIR, at II-36.
[33] Id. at II-21.
[34] Id. at II-16.

The State Lands Commission's unabashed intent to carve out a small sliver of the Project for its own CEQA review and to defer the rest triggered intense concern among the other agencies involved. For example, the Coastal Commission vehemently objected to the Lands Commission's approach, explaining that "review solely of the [Lease Modification Project] means that [the 2017 FSEIR] will be of limited use for the Coastal Commission to rely on for evaluating conformity of the Poseidon Project to relevant provisions of the Coastal Act and the City of Huntington Beach Local Coastal Program."[35] It further noted that "the majority of" the "project changes and changed circumstances that have occurred since 2010" were "not addressed in the [2017 FSEIR]."[36] The Irvine Ranch Water District ("IRWD") urged the Lands Commission to defer its approval "until after a comprehensive environmental review of the changed project has been completed."[37] And the California Fish and Game Commission asked that "at a minimum the supplemental CEQA review . . . fully evaluate how the proposed open intakes as modified would adversely impact productivity and connectivity of the affected [Marine Protected Area] system."[38] In spite of these agency comments and similar concerns raised by the general public, the State Lands Commission made no adjustments to the scope of its "Lease Modification Project."

2. *True to the State Lands Commission's express intent, its 2017 FSEIR failed to provide the comprehensive analysis of the full Project that CEQA requires.*

The State Lands Commission did not somehow produce a comprehensive updated EIR after repeatedly stating that it had no intention to do so.[39] Rather, the scope of its 2017 FSEIR was exactly as narrow – and impermissible – as advertised. The FSEIR suffered from at least two fundamental omissions. First, and most importantly, the FSEIR did not provide an adequate analysis of alternatives to the proposed Project. The 2015 Ocean Plan amendments radically altered the authorization process for desalination facilities by mandating an analysis of a reasonable range of (1) alternative sites where subsurface wells are feasible, (2) alternative sizes to minimize marine life mortality and avoid impacts to sensitive habitats and species, and (3) alternative technologies, including a comparative analysis of different design capacities and combinations of surface and subsurface wells. But with respect to such critical alternatives as beach intake wells, subsurface infiltration

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[35] CAL. COASTAL COMM'N, "Comments on Draft Supplemental Environmental Impact Report ("DSEIR" for the proposed Poseidon desalination project ("Poseidon Project") in Huntington Beach (SCH #2001051092)" (July 27, 2017), at 1.
[36] Id.
[37] IRWD, "Written Comments on Agenda Item 97 – AES Huntington Beach LLS and Poseidon Resources (Surfside) LLC (Se-Lessees): Certification of the SEIR and Consideration of Lease Amendment" (Oct. 13, 2017), at 2.
[38] CAL. FISH & GAME COMM'N, "Comments on Poseidon Resources' Proposed Seawater Desalination Project at Huntington Beach (Poseidon Project)" (Aug. 17, 2017), at 4.
[39] This point would seem so self-evident as to not require detailed explanation, except that Poseidon apparently now has taken the position that the 2017 FSEIR did sufficiently analyze the entire Project. See Poseidon Response to the Regional Board's January 8, 2020 Information Request (Jan. 9, 2020).

galleries, alternative location, and reduced facility size, the FSEIR merely noted that the 2010 EIR had found each of these alternatives technically or practically infeasible to satisfy Poseidon's proposed design capacity. The 2017 FSEIR did not re-evaluate these alternatives in light of the dramatically changed regulatory requirements to analyze those design capacity issues. Nor did it evaluate new water demand data that would be necessary to provide an informed feasibility analysis. Instead, the 2017 FSEIR restricted its analysis of alternatives to variants of the wedgewire screen and brine diffuser elements. In short, the 2017 FSEIR effectively left out the bulk of the alternatives analysis that courts have recognized as "the core of the EIR."[40]

Second, the 2017 FSEIR failed to consider new reasonably foreseeable alternatives for the distribution of the Project's treated water that were not analyzed in the 2010 EIR. As previously noted, the 2010 EIR analyzed the impacts of various options for transmission of treated Project water because the City of Huntington Beach properly recognized that the water distribution component fell under the umbrella of the "whole project."[41] At the time of the 2010 EIR, all reasonably foreseeable distribution alternatives involved conveying the water directly into the existing municipal water transmission system adjoining the proposed desalination facility for direct use; the alternatives differed only with respect to what pipelines and pumps would need to be constructed or modified. But direct conveyance to the existing transmission system is now not the only – and maybe not even the most likely – alternative for water distribution. No later than 2016, OCWD had begun considering a new distribution option that involved injecting Project water into the underlying aquifer via injection wells that would be constructed for that purpose. OCWD commissioned a lengthy technical and economic feasibility study for this distribution option in 2016 that compared its costs and challenges to those alternatives analyzed in the 2010 EIR.[42] This groundwater recharge alternative has potentially significant impacts to water quality and other resource areas that have never been analyzed. Yet the State Lands Commission refused to include these groundwater injection alternatives in its 2017 FSEIR on the grounds that they are not reasonably foreseeable. OCWD's 2016 technical study proves that a groundwater recharge alternative is, at minimum, just as foreseeable as any of the alternatives analyzed in the 2010 EIR. By omitting any analysis of this reasonably foreseeable change to the Project, the FSEIR failed to analyze the "whole of the action" in a second discrete way.[43]

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[40] In re Bay-Delta etc., 43 Cal. 4th 1143, 1162 (2008).

[41] There is no legitimate dispute that the desalination facility component of the Project would have no independent utility if it had no means to distribute the treated water it produces. Thus CEQA requires that both components be analyzed in a single EIR. Tuolumne Cty. Citizens for Responsible Growth v. City of Sonora, 15 Cal. App. 4th 1214, 1229 ("[W]hen one activity is an integral part of another activity, the combined activities are within the scope of the same CEQA project.").

[42]

[43] See Laurel Heights Improvement Ass'n, 47 Cal. 3d at 399 ("While foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.") (citing CEQA Guidelines § 15144). Because this change to the Project is reasonably foreseeable, neither the State Lands Commission nor any other agency can satisfy CEQA by

C. The Regional Board would violate CEQA if it were to issue a final discretionary approval for the Project without first preparing an adequate updated EIR.

The State Lands Commission indisputably intended to – and did – defer the CEQA analysis of most of the modified Project to other agencies, instead of including all relevant information and analysis within its 2017 FSEIR. It was not allowed to do so under CEQA. But because it did, and because the Regional Board apparently now intends to move ahead with issuing its own discretionary approvals for the modified Project, the Regional Board must first prepare and certify that deferred CEQA analysis. The Regional Board cannot fulfill its obligations under CEQA simply by tacking on a brief addendum to the State Lands Commission's illegal EIR. Rather, the Regional Board must now prepare the single, comprehensive updated EIR that all parties had agreed was necessary at the outset.

1. *The Regional Board's 2019 Addendum is wholly inadequate to satisfy the Board's CEQA obligations because the Addendum is based on – and has an even narrower scope than – the State Lands Commission's 2017 FSEIR.*

At the same time the Regional Board published its Tentative Order in November 2019, it also issued what it called an "Addendum to the Final Subsequent Environmental Impact Report (State Clearinghouse No. 2001051092) Approved August 23, 2010" ("2019 Addendum" or "Addendum"). The 24-page document makes clear that it is intended to serve as an addendum to both the 2010 EIR and the 2017 FSEIR, and that its purpose is to fulfill the Board's CEQA obligations for the modified Project. Unfortunately, the 2019 Addendum is entirely inadequate for that purpose. Just like the 2017 FSEIR that it supplements, the Addendum is unequivocal in defining the "project" as encompassing only Poseidon's minor proposed modifications to the intake and outfall systems. In fact, the scope of the 2019 Addendum is <u>even narrower</u> than that, because the Addendum is concerned only with assessing the impacts of a proposed alternative brine diffuser design. In a hypothetical scenario where the 2017 FSEIR's "Lease Modification Project" <u>actually</u> represented the "whole of the action" that needed to be re-analyzed under CEQA, this Addendum may have been an adequate way for the Regional Board to satisfy its CEQA obligations.[44] But for all the reasons described in Sections I.B.1. and I.B.2. above, the "Lease Modification Project" does not – and was never intended to – encompass anything close to the whole of the action. Legally or not, the State Lands Commission explicitly left substantial portions of the Project's CEQA analysis to be completed by the Regional

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claiming that another agency will provide the necessary environmental analysis in the future. <u>See Vineyard Area Citizens for Responsible Growth</u>, 40 Cal. 4th at 431 ("CEQA's demand for meaningful information 'is not satisfied by simply stating information will be provided in the future.'") (quoting <u>Santa Clarita Org. for Planning the Env't v. Cty. of Los Angeles</u>, 106 Cal. App. 4th 715, 723 (2003)).

[44] Because the 2019 Addendum is facially inadequate as a matter of law, the accuracy of the limited information and technical analysis it contains – while unchallenged – is irrelevant.

Board. The Regional Board responded by publishing an Addendum that provides virtually none of this analysis. Because the 2019 Addendum analyzes a "project" even narrower than the State Lands Commission's illegitimate "Lease Modification Project," it violates CEQA for the same fundamental reasons as the 2017 FSEIR. The Regional Board cannot simply paper over the Lands Commission's piecemealing violation by issuing its own piecemealed analysis.

2. *The Regional Board can satisfy CEQA only by preparing a comprehensive updated EIR on which the Regional Board and all future responsible agencies can rely.*

In 2015, the State Lands Commission, the Regional Board, the Coastal Commission, and Poseidon all explicitly and properly acknowledged that the modified Project could not be approved until an agency had prepared a full updated EIR. An adequate updated EIR does not yet exist. Therefore the Regional Board cannot both approve the Tentative Order and comply with CEQA unless it first prepares and certifies the missing EIR. The CEQA Guidelines foresaw this exact scenario and called for precisely this result: When a responsible agency is called upon to grant a discretionary approval for a project, but (1) an adequate updated EIR is still not available, (2) the lead agency – here, the State Lands Commission or the City of Huntington Beach – has purported to grant its final approval for the Project, and (3) the statute of limitations for challenging the lead agency's action has expired,[45] the responsible agency – here, the Regional Board – must step into the shoes of the lead agency and prepare an adequate updated EIR before it or any other responsible agency can issue a discretionary approval.[46]

The Regional Board's updated EIR must serve as the single, comprehensive CEQA analysis for the modified Project. The Regional Board need not rehash still-relevant information and analysis from the 2010 EIR. But the updated EIR must assess the extent to which the whole of the action has been altered due to Project modifications and changed regulatory or environmental circumstances. Most importantly, the updated EIR (1) must identify and analyze alternatives at the whole-Project scale – not just alternative ways of implementing Poseidon's own proposed minor modifications – and (2) must analyze in full the reasonably foreseeable modifications to the treated water distribution system. There is simply no basis under CEQA for preparing an updated EIR that analyzes a narrower

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[45] Under CEQA Guidelines section 15162(a)(2)(C), the Regional Board had the opportunity – and, indeed, the obligation – to sue the State Lands Commission to correct its faulty FSEIR. The Regional Board did not pursue that option within the statute of limitations, despite having actual or constructive knowledge that the 2017 FSEIR was inadequate at the time the State Lands Commission certified it. As a result, the Regional Board now has no choice under the CEQA Guidelines but to assume substitute lead agency status and prepare its own comprehensive updated EIR before it can issue any discretionary approvals. See id. at § 15162(a)(2).

[46] See CEQA Guidelines §§ 15096(c); 15162(a)(2).

version of the "Project" than the initial EIR.[47] And, of course, the Regional Board's updated EIR must also comply with all of the general procedural and substantive requirements listed in the Public Resources Code and the CEQA Guidelines.

The recent comments and actions of other public agencies involved in the Project underscore the immediate need for comprehensive, updated CEQA analysis. For example, in an addendum to its December 4, 2019 Comment Letter to the Regional Board, IRWD expressed concern that the aforementioned proposals to inject treated Project water into the regional groundwater basin could have adverse impacts on the production of recycled water, reduce the quality of water delivered to IRWD's customers, and cause corrosion in IRWD pipelines and facilities.[48] IRWD explicitly called for the preparation of an adequate updated EIR, noting that these and other potentially significant environmental impacts associated with the Project had not yet been analyzed in the 2010 EIR, the 2017 FSEIR, or the Board's own 2019 Addendum.[49] Likewise, the Municipal Water District of Orange County ("MWDOC") is currently moving forward with technical studies to gauge the impact of treated Project water on the existing Orange County water distribution system, as no existing CEQA document has provided analysis sufficient for that purpose.[50] Whatever the Regional Board itself believes as to the adequacy of the 2017 FSEIR, it is clear that additional CEQA analysis and public disclosure of this new information is required. And given changing water needs and local government financial priorities as a result of the coronavirus pandemic, the Regional Board's CEQA analysis must, as well, take a harder look at the purpose and need for this particular Project.

Importantly, the Regional Board cannot simply substitute the analysis in the two existing Independent Scientific Technical Advisory Panel ("ISTAP") reports for the CEQA analysis it still needs to prepare. The Regional Board may certainly incorporate relevant and correct analysis from those reports in its new updated EIR. And as noted in the January 2020 comment letters, the Regional Board <u>should</u> incorporate in its updated EIR

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[47] To reiterate, if the Project has changed enough since the initial EIR was certified that the new EIR cannot possibly analyze a "Project" with the same scope, a new <u>initial</u> EIR – not an <u>updated</u> EIR – is required. <u>Compare</u> PRC § 21151 (initial EIRs) <u>with</u> <u>id.</u> at § 21166 (updated EIRs). If the changes to the Project and its circumstances are so minor that any re-analysis would be substantially redundant with the initial EIR, then an agency <u>cannot</u> prepare an updated EIR under Public Resources Code section 21166, and should instead likely prepare an addendum to the initial EIR under CEQA Guidelines section 15164. For nearly four years, all relevant parties have invariably agreed than an updated EIR is required.

[48] <u>See</u> IRWD, "Summary of IRWD Investigations of Water Quality Impacts of the Proposed Huntington Beach Desalination Project" (Dec. 4, 2019), at 7.

[49] <u>Id.</u> at 11 ("The significant water quality impacts, described above and substantiated by the professional reports provided in the appendices to this letter, that will occur with the distribution of product water from the [Project], either by recharge or direct delivery, dictate that a new or subsequent EIR must be prepared.").

[50] <u>See</u> MWDOC, "Orange County Water Distribution System – Hydraulic Model Phase 1 – Model Investigation" (Feb. 14, 2020), at 1-1 (describing the need for a model "to help evaluate the feasibility and impacts of integrating new water supply projects into the existing system").

several analytical considerations that the Board had erroneously misplaced in these ISTAP reports.[51] But for three major reasons, the Board cannot avoid preparing an EIR on the grounds that it has prepared the ISTAP reports. First, as discussed above, CEQA imposes specific and demanding procedural and substantive requirements on the preparation of EIRs. The preparation and contents of the ISTAP reports objectively do not satisfy those requirements. Trying to repurpose these reports as the necessary updated EIR would, at minimum, violate CEQA's single, comprehensive EIR doctrine and its public participation rationale. Second, the ISTAP reports also do not include any analysis of the new treated water distribution alternatives or the most recent developments regarding need for Project water that must be addressed in any adequate updated EIR. Third, as described at length in the January 2020 comment letters, the ISTAP reports are replete with serious inaccuracies and must be revised if they are to serve even their own intended purposes.

It is critical that the Regional Board step in – and step up – to end the cycle of illegal piecemealing and place the Project's CEQA process back on track. It is unfortunate for all parties that the State Lands Commission shirked its legal duty to prepare a single, comprehensive updated EIR for the Project. But that failure does not absolve the Regional Board of its legal obligation to issue discretionary approvals only after reviewing a legally adequate CEQA analysis. And as previously noted, at least two other agencies – the Coastal Commission and OCWD – must make future discretionary findings for this Project. CEQA requires that the Regional Board, as the agency with the next discretionary approval, now prepare a comprehensive updated EIR on which both the Regional Board itself and all other responsible agencies can base their findings. To approve the Tentative Order without first preparing a comprehensive updated EIR would be to commit the exact same CEQA violation as the State Lands Commission. And it would call into serious question whether a project of substantial regional and statewide importance would ever receive the comprehensive review that the environment and public transparency demand.

II. THE REGIONAL BOARD WOULD BREACH ITS MANDATORY DUTIES UNDER THE PUBLIC TRUST IF IT WERE TO ISSUE A DISCRETIONARY APPROVAL FOR THE PROJECT WITHOUT PREPARING ADDITIONAL, TRUST-SPECIFIC ANALYSIS.

The public trust "imposes an affirmative duty on the state to act on behalf of the people to protect their interest in navigable water."[52] Whenever an agency's actions have the potential to harm a public trust resource, the agency has the "affirmative duty to take the public trust into account in the planning and allocation of trust resources, and to protect

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[51] For example, any drawdown of freshwater that could result from a subsurface intake alternative is an economic feasibility consideration that should be analyzed in the updated EIR; it is not a technical feasibility question of the sort that the ISTAP report was intended to answer. See Orange County Coastkeeper Comment Letter to the Regional Board (Jan. 21, 2020), at 7-8.

[52] Envtl. Law Found. v. State Water Res. Control Bd., 26 Cal. App. 5th 844, 857 (2018), review denied (Nov. 28, 2018); see also Nat'l Audubon Soc'y v. Superior Court, 33 Cal. 3d 419, 441 (1983) (affirming the "duty of the state to protect the people's common heritage").

public trust uses whenever feasible."[53] "Any action which will adversely affect" a public trust resource shall "be made only if there has been a full consideration of the state's public trust interest in the matter."[54] "Only with such a safeguard can there b[e] any assurance that the public interest will get adequate attention."[55] Additionally, the acting agency must "attempt, so far as feasible, to avoid or minimize any harm to those interests."[56] In short, the public trust doctrine imposes a twofold mandate on agencies to (1) evaluate public trust impacts and feasible alternatives to avoid them, and (2) adopt whatever feasible alternative avoids or minimizes those impacts.

There is no dispute here that the Regional Board's discretionary approval of the Project has the potential to harm a public trust resource. By authorizing the proposed Project, the Regional Board would sign off on an action that will entrain and kill hundreds of millions of fish larvae each year.[57] Such mortality affects more than just the larvae themselves; for instance, it will reduce the food supply for the native California least tern, a federal- and state-listed endangered species that has one of the most productive colonies in the state at the proposed Project location; it will reduce migration (and thus connectivity) between nearby marine protected areas, potentially decreasing the health of those ecosystems; and it will impact commercially significant fish species by reducing a primary food source. The tidelands are obviously a navigable waterbody subject to the public trust,[58] and fishing and the "preservation of [trust resources] in their natural state" are uses of trust resources that California courts have long held fall within the protections of the public trust doctrine.[59] In short, there is no question that the Regional Board's prospective discretionary actions trigger the Board's public trust duties.

In spite of the Regional Board's public trust obligations having been triggered, the Board has not yet explicitly identified or analyzed the public trust interests at stake. The

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[53] San Francisco Baykeeper, Inc. v. Cal. State Lands Comm'n, 242 Cal. App. 4th 202, 233 (2015) (quoting Nat'l Audubon Soc'y, 33 Cal. 3d at 419) (internal quotations omitted).
[54] Id. at 234 (quoting Zack's, Inc. v. City of Sausalito, 165 Cal. App. 4th 1163, 1188-89).
[55] Id.
[56] Nat'l Audubon Soc'y, 33 Cal. 3d at 426.
[57] Because no version of the Project can be built without the Regional Board's pending discretionary approval, the appropriate baseline for determining whether a public trust duty has inured and what the impact of the Project on public trust resources will be is a scenario in which no Project is built at all, not a scenario in which the original Project analyzed in the 2010 EIR is built.
[58] As discussed above, the test for whether an agency's action triggers its public trust obligations is whether the action will adversely affect a public trust resource, not whether the discretionary action applies to activities or development sited on or within public trust land. Zack's, Inc., 165 Cal. App. 4th at 1188-89. Regardless, the Regional Board's discretionary authorization is necessary for any part of the Project to be built, since the various Project elements within each agency's regulatory jurisdiction do not have independent utility.
[59] City of Berkeley v. Superior Court, 26 Cal. 3d 515, 521 (1980); see also Marks v. Whitney, 6 Cal. 3d 251, 259-60 (1971) (finding public trust uses include the "preservation of [trust resources] in their natural state, so that they may serve as ecological units for scientific study, as open space, and as environments which provide food and habitat for birds and marine life, and which favorably affect the scenery and climate of the area").

Tentative Order does not mention the public trust at all, and the accompanying CEQA Addendum mentions it only once – to imply that public trust considerations are within the sole jurisdiction of the State Lands Commission.[60] This is wholly inadequate. The Regional Board must, at minimum, explicitly identify and analyze the public trust impacts associated with the entrainment and killing of millions of fish larvae, and weigh those interests against any countervailing trust interests in the proposed Project being carried out. Unless the Regional Board first prepares that missing analysis and then authorizes only the feasible alternative that avoids or minimizes impacts to trust resources, the Regional Board will breach its mandatory public trust duties.

It is important to emphasize that the Regional Board's mandatory public trust obligation is a common law duty distinct from – and not supplanted by – any of its other statutory responsibilities. California courts have repeatedly held that the public trust doctrine is not subsumed by statutory or constitutional duties, including CEQA.[61] Thus, just as the Regional Board cannot use its existing ISTAP reports to satisfy its CEQA obligations, it cannot claim that the existing analysis in those reports fulfills or supplants its duties under the public trust doctrine. Nor can the Regional Board claim that any future adequate updated EIR that it may prepare inherently satisfies the Board's public trust obligations. The public trust doctrine constitutes a distinct legal obligation that the Regional Board must affirmatively and explicitly address.[62] That the Regional Board has provided adequate CEQA or Water Code section 13142.5(b) analysis – neither of which it has yet done – would have no direct bearing on whether it has provided adequate public trust analysis.

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[60] See 2019 Addendum, at G.1-27. In its own public trust analysis, the State Lands Commission erroneously concluded that Poseidon had a "vested right" to operate a desalination facility at the Project site, based on the tidelands lease the Lands Commission had approved for the Project in 2010. The Lands Commission reasoned that because the modified Project would have marginally less severe environmental impacts than the 2010 version of the Project, the modified Project's net effect on public trust resources would be beneficial. The State Lands Commission was wrong about this "vested right"; the 2010 tidelands lease remained active only so long as Poseidon could build the version of the Project approved in 2010. Regardless, the Regional Board can make no similar "vested right" claim, as the 2015 Ocean Plan amendments have since barred any version of the Project from being built without a new discretionary approval from the Board. Thus, as explained in footnote 57, supra, the only appropriate baseline for the Board's public trust analysis is a scenario in which no Project is built.

[61] See, e.g., S.F. Baykeeper, 242 Cal. App. 4th at 241 (CEQA); Envtl. Law Found., 26 Cal. App. 5th at 858 (Sustainable Groundwater Management Act, reasonable use of water); Nat'l Audubon, 33 Cal. 3d at 434 (water appropriations).

[62] As discussed in San Francisco Baykeeper, the Regional Board could potentially place its public trust analysis in its future updated EIR. 242 Cal. App. 4th at 242-43. But as the court noted in that case, the Regional Board must actually and affirmatively address the public trust in its EIR; it cannot simply claim that certain CEQA analysis has served the dual purpose of fulfilling its public trust duties. Id. at 243. And because the Regional Board has so far prepared only a narrow addendum to a legally deficient EIR, there is no dispute that the Board's existing CEQA analysis cannot possibly satisfy its public trust obligations.

* * *

Both CEQA and the public trust doctrine impose certain analytical requirements on agencies before they can issue discretionary approvals for environmentally impactful projects. These legal duties are triggered by, but independent of, the Regional Board's approval of the Project under the Porter-Cologne Act and the Ocean Plan amendments. Here, the Regional Board has not yet satisfied those requirements. To comply with CEQA, the Regional Board would first need to issue the comprehensive updated EIR that all relevant agencies have agreed is necessary, but that none has yet prepared. To satisfy its public trust obligations, the Regional Board must, at minimum, more explicitly identify and balance the public interests favoring trust resource protection versus those favoring their destruction. Until those requirements are fulfilled, finalizing the Tentative Order is not a legally viable option. The Regional Board must instead either decline to proceed with approval of the Project or prepare the missing analysis.

Sincerely yours,

Ryan K. Gallagher, Certified Law Student
Deborah A. Sivas, Supervising Attorney

cc: Hope Smythe, Executive Officer, Santa Ana Regional Water Quality Control Board, Hope.Smythe@waterboards.ca.gov
Mark Smythe, Manager, Santa Ana Regional Water Quality Control Board, Mark.Smythe@waterboards.ca.gov

From:	Brett Korte (clinic)
To:	Smythe, Hope@Waterboards; Smythe, Mark@Waterboards; Lara, Julio@Waterboards; WB-RB8-PoseidonHB.comments
Cc:	Marce Graudinš; Andrea Leon-Grossmann; Suzanne Denbow (clinic); Michael Robinson-Dorn
Subject:	RE: Azul Request: Written Comment Deadline Extension
Date:	Tuesday, January 28, 2020 5:09:39 PM

EXTERNAL:

Dear Executive Officer Smythe and Regional Board Staff,

I write to reiterate Azul's concern regarding the lack of opportunity for public comment on Poseidon's response to the Regional Board's Additional Information Request. Presumably, the Regional Board received Poseidon's response on the date of the letter, January 16. Even if the Regional Board had made the response publicly available upon receipt, or on the January 17 deadline, there still would have been insufficient time for public review of the more than 250 pages of responsive documents before the written comment deadline on January 21. Inexplicably, the Regional Board did not publish the response until yesterday, January 27, almost a week after the Regional Board stopped accepting written public comment.

Could you please explain how the Regional Board intends to rectify this deficiency in the public participation process for Poseidon's draft Waste Discharge Requirements?

Sincerely,

Brett Korte

Brett M. Korte, Esq.
Fellow | Environmental Law Clinic
UC Irvine School of Law
401 E. Peltason Dr. | Irvine, CA 92697
e: bkorte@law.uci.edu | p: 949.824.6688

From: Brett Korte (clinic)
Sent: Friday, January 10, 2020 7:23 PM
To: julio.lara@waterboards.ca.gov; Hope.Smythe@waterboards.ca.gov; RB8-PoseidonHB.comments@waterboards.ca.gov
Cc: Marce Graudinš <mar@azul.org>; Andrea Leon-Grossmann <andrea@azul.org>; Michael Damasco (clinic) <mdamasco.clinic@law.uci.edu>; Suzanne Denbow (clinic) <sdenbow.clinic@law.uci.edu>; Michael Robinson-Dorn <mrobinson-dorn@law.uci.edu>
Subject: Azul Request: Written Comment Deadline Extension

Dear Executive Officer Smythe,

On behalf of Azul, the UC Irvine Environmental Law Clinic again requests that the Santa Ana Regional Water Quality Control Board extend of the deadline for written comments on Poseidon's Draft Waste Discharge Requirements (Order No. R8-2020-0005, NPDES No. CA8000403), and Water Code § 13142.5(b) Conditional Determination through at least February 28, 2020.

Since receiving Azul's last deadline extension request, the Regional Board took a laudable step by sending an Additional Informational Request to Poseidon on January 8. However, the deadline for Poseidon to respond, currently set for January 17, does not allow sufficient time

for interested parties to analyze and comment on additional information provided before the written comment deadline of January 21, a mere four days later and spanning a holiday weekend.

Please confirm receipt of this email. Thank you for your attention to this request.

Sincerely,

Brett Korte

Brett M. Korte, Esq.
Fellow | Environmental Law Clinic
UC Irvine School of Law
401 E. Peltason Dr. | Irvine, CA 92697
e: bkorte@law.uci.edu | p: 949.824.6688

From: Sarah Goldzweig
To: Aguilar, Jeannie@Waterboards
Subject: Re: Question for Water Quality Control Board
Date: Friday, May 15, 2020 12:43:17 PM

EXTERNAL:

Also, I want to correct that it was Mr. Markus who brought up climate change as a consideration factor — even though this project would actually make climate change worse!
--
Sarah Goldzweig
she/her/hers
Sunrise LA
sarahgoldzweig@gmail.com | (310) 890-9017

On May 15, 2020, at 12:38 PM, Sarah Goldzweig <sarahgoldzweig@gmail.com> wrote:

Hi,

I hope it's not too late to submit questions — I'm not clear on how to do so.

My comment:

1. I am speaking in support of the staff recommendation for CC to formally OPPOSE SB1090 (Bates).

2. There is NO NEED for the Poseidon plant — Water usage has been trending down in the Orange County area, yet the Poseidon project would INCREASE the cost of water for consumers (a UCLA report suggested that rates would increase between 200-300%). With the economic crisis accompanying and resulting from the COVID 19 crisis, it is clear that a more expensive water source would be a BURDEN on OC residents.

3. We don't need more water at a price we can't afford and which would require massive ecological destruction to function.

4. As one of the Board Members just said: we need to look at climate change — This project will only INCREASE the negative and disproportionate impacts of climate change AND negates the fact that such projects are contributing to climate change. This proposed plant uses the same amount of energy as 35,000 homes year-round, including in the summer as we keep breaking heat records, while the public is asked to conserve. The plant will only be as clean as the energy used to run it — suggesting that this project will actually result in growing GHG emissions. So basically, approving this project means that my future is

being destroyed for the sake of profit! (as need has been disproven).

5. This scheme privatizes water by selling to the highest bidder which is in direct VIOLATION of the Human Right to Water Policy the Board passed last year.

6. Poseidon has PROVEN it is irresponsible — it has shown, time and time again, that it does not responsibly dispose of the toxic brine byproduct that this project will require. AND why are we choosing to implement a technology with such an ecologically destructive byproduct. Brine is proven to have negative and deadly impacts on sea life and ecosystems polluted by it.

7. The only pipe that doesn't leak is the one that is never built. The pipes from this plant will go through the Huntington Beach Superfund site, it will just be a matter of time before the water from it gets contaminated.

8. Supposed “mitigation” is non-existent. The "new" intake mesh that Poseidon proposes to use will only decrease marine life fatality by ONE PERCENT. That is hardly an improvement worth considering as mitigation.THIS IS CLIMATE DESTRUCTION — Approving this project is a step backwards to fighting climate change.

9. For the sake of your children and your grandchildren, for the sake of California and the climate. For the sake of the animals whose lives you are willingly sacrificing: please OPPOSE SB1090.

--
Sarah Goldzweig
she/her/hers
Sunrise LA
sarahgoldzweig@gmail.com | (310) 890-9017

From: M Dardis
To: Aguilar, Jeannie@Waterboards
Subject: Re: Regional Water Quality Control Board on Meeting May 15, 2020
Date: Friday, May 15, 2020 7:28:15 PM

EXTERNAL:

Miss Jeannie:
Complements to you for doing a great job under duress on Friday. I know it was nerve racking and you maintained your cool.

Meetings like this are usually barn burners and a lot of fun to watch and participate in.

You did a yeoman's job and did it well under the circumstances. At least no chairs were thrown. Any issue that concerns SEHB are fun and several local politicians would be smelling tar and would wonder why people brought all of those pillows. The Poseidon 4 from HB should have told everyone they received various types of financial remuneration from Po$eidon for reading the Po$eidon handouts and were nothing more than paid shills or honks.

Such is life in SEHB as we are disenfranchised and have no voice in City Hall. Have been fighting Po$eidon since 2005 and it has not been a clean fight.

OCWD has 4 paid Po$eidon honks on it and the non binding contract was mainly developed by Po$eidon along with the prepared speeches including Million Dollar Senator Boxer

Oh what fun it is

Milt Dardis
Unofficial Mayor of SEHB by signed Proclamation from the Mayor.

-----Original Message-----
From: Jeannie Aguilar <no-reply@zoom.us>
To: MILT DARDIS <mdardis@verizon.net>
Sent: Wed, May 13, 2020 4:24 am
Subject: Regional Water Quality Control Board Santa Ana Region Meeting May 15, 2020 Confirmation

Hi MILT DARDIS,

Thank you for registering for "Regional Water Quality Control Board Santa Ana Region Meeting May 15, 2020".

Please submit any questions to: Jeannie.Aguilar@Waterboards.ca.gov

Date Time: May 15, 2020 09:00 AM Pacific Time (US and Canada)

Join from a PC, Mac, iPad, iPhone or Android device:
Click Here to Join
Note: This link should not be shared with others; it is unique to you.
Password: 851852
Add to Calendar Add to Google Calendar Add to Yahoo Calendar
Description: Regional Water Quality Control Board
Santa Ana Region

Or iPhone one-tap :
US: +16699006833,,88614939385# or +14086380968,,88614939385#

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Dial(for higher quality, dial a number based on your current location):
US: +1 669 900 6833 or +1 408 638 0968 or +1 346 248 7799 or +1 253 215 8782 or +1 646 876 9923 or +1 301 715 8592 or +1 312 626 6799
Webinar ID: 886 1493 9385
International numbers available: https://us02web.zoom.us/u/kcvunGVdK8

You can cancel your registration at any time.

From: MJ Baretich
To: WB-RB8-PoseidonHB.comments
Subject: VOICE AGAINST THE POSEIDON DESALINATION PLANT
Date: Saturday, June 6, 2020 5:22:27 PM

EXTERNAL:

My name is Mary Jo Baretich. I am a Board member of the Residents for Responsible Desalination (R4RD) and the President of the Cabrillo Wetlands Conservancy.

I am a retired engineer and do understand the technologies and logistics associated with the accessing of water from existing sources, and have been involved with the preservation of coastal wetlands since 1983.

I do not see **any Positive** reasons for building this desalination plant in Huntington Beach. The following are comments showing **Negatives** – important reasons against building this facility.

- **Negative 1 - This desal plant is Not Needed. Our phenomenal Ground Water Replenishment System, the largest in the world, has proven to the world that this technology is efficient and cost worthy with the next phase of water production to be 134 million gallons of water per day. Per MWDOC, we will already have adequate water through 2050 without a desalination plant.**

- **Negative 2 - This desal plant will be extremely Energy intensive and Expensive at several times the cost of imported MWDOC water.**

- **Negative 3 – Per this proposal this desal plant will cause Significant risk to marine life and sensitive habitatsusing the existing Intake Pipe, even with the filters proposed.The intake velocity factor will contribute to the destruction of marine life which cannot swim away, especially juvenile fish, massive amounts of plankton along with billions of fish eggs and larvae, and jellyfish which become impinged on the filters and are sucked into the system when the filters fail.**

- **According to Huntington Beach LCP C6.1.1 requirement, the project must prevent the degradation of water quality and prevent substantial ecological losses of source populations of marine organisms.**

- **Negative 4 - The salt and chemicals produced as a byproduct of desalination discharged into the ocean will settle on the seafloor creating a dead zone, and will have adverse effect on marine organisms and sensitive habitats. A 2002 dye study shows that these outflow pollutants from this dead zone outflow flow back to shore. Surfers and swimmers have experienced eye infections and other illnesses. And marine life in the area can be adversely affected.**

- **Negative 5 - The 1933 Long Beach Quake was centered less than a mile away and the fault line runs under the proposed plant. It was a magnitude 6.4.**

- **Negative 6 - The analysis of the soil layers beneath the proposed desal plant show unstable ground that would be prone to liquefaction and lateral movement - since it is located on the Santa Ana Riverbed. Predicted sea level rise and potential tsunami occurrences from earthquakes will negatively affect a desalination plant at this location since it is in a designated tsunami runoff area.**

- **Negative 7 - The issue of cross-contamination from the Ascon Toxic Waste Dump due to a potential pipe crack in the proposed Poseidon pipeline running next to it can potentially poison thousands of people downstream in the event of an earthquake before being detected.**

- **Negative 8 – With potential decibels above acceptable levels, severe Noise and vibration impact from the 33 pumps going 24 hours a day, 7 days a week will be impacted not only by the people living in the homes to the west and north of the proposed plant, but on the birds and animals living in the nearby restored wetlands, and the Humane Society Shelter across Edison Street directly to the north of the proposed facility.**

- **Negative 9 - The quality of the desalination water will have <u>extremely unacceptable</u> levels of Boron. The Boron molecules are the same size as water molecules and extremely difficult to remove. Using subsurface intake could dramatically reduce the amount of Boron present.**

- **Negative 10 – Periodic Red Tide, harmful algae blooms (HAB), produce deadly neurotoxins that are difficult to remove in the reverse osmosis process. These Red Tides produces potent neurotoxins, called brevetoxins, that can affect the central nervous systems. They also have caused desal facilities throughout the world to shut down because of membrane clogging. These Red Tides can last as little as a few weeks or longer than a year. Again, adhering to responsible desalination principles, <u>subsurface intake</u> can be a robust pretreatment for sea water reverse osmosis (SWRO) during HABs.**

- **We plead with you to please deny this destructive Poseidon Desalination Plant from being built in Huntington Beach.**

From: Carol Kravetz
To: Aguilar, Jeannie@Waterboards
Subject: Water board meeting
Date: Sunday, May 10, 2020 8:07:16 AM

EXTERNAL:

We do not need a salination plant in Orange County that will raise water prices on residents that many cannot afford. In this tragic time of COVID, let's look to better solutions than a billion dollar project that isn't really going to solve the problem. It will create bigger problems for residents. And a final point, whatever the budget is today, it will balloon after they begin. Stop it now or be sorry later.

:)Ck
323-449-6781
Sent from my iPhone

ATTACHMENT 3

Correspondence from

Orange County Water District (OCWD) Staff

From: Kennedy, John
To: Smythe, Hope@Waterboards
Cc: Markus, Mike; Joy, Jayne@Waterboards
Subject: RE: Distribution Plan
Date: Thursday, July 2, 2020 1:48:14 PM
Attachments: template05_sm_twitter_1ec5fca1-3c01-4a7c-9061-1608511af66e11111.png

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EXTERNAL:

Hi Hope

Here are answers to your three questions.

1. We have come up with about 7-8 different options for distributing the water. The capital cost ranges from $200 M to $500 M. The O&M for these options ranges from about $2 to $4M per year. In general we are: (1) sending the water to cities and water agencies who want to participate in the project and (2) OCWD is taking the remaining water and constructing pipelines and injection wells to recharge the water into the groundwater basin. The capital cost generally increases as the percentage of water OCWD is taking increases due to the cost of the injection wells.
2. We will recommend that our Board approve a distribution plan before we begin negotiating a final water purchase agreement with Poseidon. This would occur if the Regional Board and the Coastal Commission approve the project.
3. The necessary pipeline to get Poseidon water to our Fountain Valley campus is about 5 miles. That pipeline along with a new pump station would allow us to blend the Poseidon water into our existing 14 mile GWRS pipeline that goes up to Anaheim. We would also construct spurs off of the GWRS pipeline to feed the new injection wells we would construct to recharge the blended (GWRS and Poseidon) water into the groundwater basin.

Call or email if you have any other questions.

John Kennedy
Executive Director Engineering/Local Resources

Orange County Water District
18700 Ward Street, Fountain Valley, CA 92708
tel: (714) 378-3304
fax: (714) 378-3373
email: jkennedy@ocwd.com

From: Smythe, Hope@Waterboards <Hope.Smythe@waterboards.ca.gov>

Sent: Thursday, July 2, 2020 8:02 AM
To: Kennedy, John <jkennedy@ocwd.com>
Cc: Markus, Mike <mmarkus@ocwd.com>; Joy, Jayne@Waterboards <Jayne.Joy@Waterboards.ca.gov>
Subject: FW: Distribution Plan

Hi John – 3 additional questions for you.

- Does OCWD have the Total capital cost for the construction of the distribution system and ongoing operation and maintenance costs for Operating the distribution system from the proposed Poseidon desal plant to the OCWD pipeline. If this hasn't been identified yet, any ballpark estimates would be helpful.

- At the workshop, Mike indicated that completion of the distribution system would be a condition to the effectiveness of the agreement. The Term Sheet does not have such a condition. Can you please clarify this issue?

- Approximately how long would be the distribution system from the desal plant to the OCWD facility?

Thank you for your assistance.
Hope

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From: Kennedy, John
To: Smythe, Hope@Waterboards; Markus, Mike
Subject: RE: Drought conditions
Date: Thursday, July 16, 2020 9:29:46 AM
Attachments: template05_sm_twitter_1ec5fca1-3c01-4a7c-9061-1608511af66e11111.png

EXTERNAL:

Hi Hope
Here are total water demands within OCWD back to 2009-10. FY 2015-16 was the year the governor required ~25% conservation for everyone.

Fiscal Year	Total Water Demands
2009-10	428,720
2010-11	412,794
2011-12	416,329
2012-13	434,535
2013-14	449,000
2014-15	425,349
2015-16	367,000
2016-17	388,851
2017-18	419,477
2018-19	393,222
2019-20	388,188

John Kennedy
Executive Director Engineering/Local Resources

Orange County Water District
18700 Ward Street, Fountain Valley, CA 92708
tel: (714) 378-3304
fax: (714) 378-3373
email: jkennedy@ocwd.com

From: Smythe, Hope@Waterboards <Hope.Smythe@waterboards.ca.gov>
Sent: Thursday, July 16, 2020 8:24 AM
To: Kennedy, John <jkennedy@ocwd.com>; Markus, Mike <mmarkus@ocwd.com>
Subject: Drought conditions

Hi John, Mike – sorry to bug you with another question, but when the drought hit a couple of years ago, did the OCWD water demand change? If so, what was it before and what was the change?

Thanks,
Hope
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Hope Smythe
Executive Officer
Santa Ana Regional Water Quality Control Board
Hope.Smythe@waterboards.ca.gov

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From: Kennedy, John
To: Joy, Jayne@Waterboards
Cc: Smythe, Hope@Waterboards; Markus, Mike
Subject: RE: Question
Date: Wednesday, July 22, 2020 4:31:58 PM
Attachments: template05_sm_twitter_1ec5fca1-3c01-4a7c-9061-1608511af66e11111.png

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EXTERNAL:

Hi Jayne, Here is a quick example. If I'm not answering your question give me a call. If you can't call until tomorrow call Mike Markus as I will be on vacation.

We have a very good idea going into a new year what total water demands will be. We have lots of historic data and there is not much growth remaining in OCWD. Total water demands are typically around 400,000 afy (I'm going to use round numbers for this example). These are the water demands of the 19 retail water agencies within OCWD – we call them Producers. About 75% of the water demands are met by groundwater pumping or around 300,000 afy. The other 25% is met by MWD with imported water. We can change this 75/25% every year depending upon the condition of the groundwater basin and the availability of imported water supplies.

Regarding the 300,000 afy of groundwater pumping – the District has a good idea of how much water we expect to recharge into the groundwater basin. We want to match recharge with pumping and we typically recharge 300,000 afy. If we have a dry year in the SAR watershed we may only recharge around 250,000 afy. So in that year we would overdraft our groundwater basin by 50,000 afy. The groundwater basin typically has around 300,000 af of storage water in it (The useable size of the groundwater basin is 500,000 afy but I'm assuming we have an overdraft of 200,000 af – which is typical - leaving 300,000 af of actual storage supplies)

So with my example we could have 4 dry years in a row but still allow 300,000 afy of groundwater pumping to occur every year – and we would have drawn down the groundwater basin by 200,000 af.

If MWD is having problems providing its 25% or 100,000 afy of water, OCWD can allow additional groundwater pumping to meet demands

If the OCWD groundwater basin is becoming too over drafted, we can reduce how much groundwater pumping we allow and have the 19 retail water agencies take more MWD water.

Hope this helps

John Kennedy
Executive Director Engineering/Local Resources

Orange County Water District
18700 Ward Street, Fountain Valley, CA 92708
tel: (714) 378-3304
fax: (714) 378-3373
email: jkennedy@ocwd.com

From: Joy, Jayne@Waterboards <Jayne.Joy@Waterboards.ca.gov>
Sent: Wednesday, July 22, 2020 3:34 PM
To: Kennedy, John <jkennedy@ocwd.com>
Cc: Smythe, Hope@Waterboards <Hope.Smythe@waterboards.ca.gov>
Subject: Question

We have another questions related to water usage: How do you use water levels/storage capacities on the monthly or yearly basis to ensure water demands are met? Do you look at historic trends to determine current and/or future water demands?

Thanks,
Jayne

Jayne Joy, P.E.
Assistant Executive Officer
Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside, CA 92501
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