

Meeting Agenda

Carlsbad Desalination Project – NPDES Permit Development Update

Date and Time

Tuesday, April 10, 2018

2:00 pm – 4:00 pm

Location

California Regional Water Quality Control Board, San Diego Region

Mildred Dilucia Library – Third Floor

2375 Northside Drive, Suite 100

San Diego, CA 92108

Teleconference

Phone number: 1-888-808-6929

Access code: 2535683

Meeting participants

Entity	Staff
Poseidon, LLC	Peter MacLaggan Josie McKinley Sachin Chawla
San Diego County Water Authority	Robert Yamada Toby Roy Jeremy Crutchfield
San Diego Water Board	David Gibson David Barker Brandi Outwin-Beals Ben Neill
State Water Board	Catherine Hagan Marleigh Wood Kim Tenggardjaja Daniel Ellis

Meeting Agenda

1. Introductions
2. Water Boards Response to the Draft Alternative 21 Term Sheet
3. Status of Third Party Review
4. Schedule for Permit Development, Review, and Approval
5. Additional Discussion

A GENDA

Carlsbad Desalination Project Permit Renewal Meeting

April 10, 2018

1. Regional Water Board response to Poseidon/Water Authority Intake Modifications Proposal.

Poseidon/Water Authority Proposal

- a. The Tentative Order would include a phased schedule to achieve compliance with the California Water Quality Control Plan for Ocean Waters (Ocean Plan):

Phase 1 - Continue temporary stand-alone operations using existing Encina Generating Station (EGS) intake screens and pumps from the effective date of the Tentative Order until the low turbulence flow augmentation pumps are permitted, installed, and operational.

Phase 2 - Operate the low turbulence flow augmentation pumps in conjunction with the existing EGS intake screens until the permanent intake screens are permitted, installed, and operational.

Phase 3 – Achieve full compliance with the Ocean Plan requirements within 60 months of the effective date of the Tentative Order.

- b. For purposes of the draft Water Code determination, the Regional Water Board has determined that flow augmentation brine discharge technology provides a comparable level of intake and mortality of all forms of as multiport diffusers, and wastewater dilution is unavailable. Within 18 months of beginning operation, the Discharger shall submit to the Regional Water Board an empirical study of alternative brine discharge technology in accordance with subsection M.2.d.(2).(c).iv and subsection M.2.d.(2).(c).v of the Ocean Plan. In determining whether the flow augmentation discharge technology results in more intake and mortality of all forms of marine life than a facility using wastewater dilution or multiport diffusers pursuant to subsection M.2.d.(2).(c).v, the Regional Water Board will rely on the findings in the Water Code Determination that: (i) wastewater dilution is unavailable; and (ii) the intake and mortality of all forms of marine life associated with the multiport diffuser is as set forth in the Water Code Determination.

- c. Mitigation required for Alternative 21:

Intake - Same as the mitigation for Alternative 1 and Alternative 15, less the fish return impacts which are avoided.

Discharge - Same as the mitigation for Alternative 1 and Alternative 15.

Permanent Construction Impact – Mitigation required for permanent impacts to marine habitat limited (e.g., 0.2 acre footprint of screens sitting on the floor of the lagoon).

Temporary Construction Impact – The Regional Water Board, pursuant to subsection M.2.e.(1).(c) of the Ocean Plan, determines that the construction related disturbance in the lagoon does not require mitigation because the disturbance is temporary and the habitat is naturally restored.

- d. The Tentative Order would include a time schedule and compliance dates for (i) performing a pilot-scale demonstration study of the wedge wire screens in Agua Hedionda Lagoon; (ii) determining whether the wedge wire screens are the best available intake technology feasible to minimize the intake and mortality of all forms of marine life (the “Best Available Intake Technology”); and (iii) implementing the Best Available Intake Technology. The Tentative Order would provide that: (1) Alternative 21 is the Best Available Intake Technology unless the demonstration study shows that the lagoon based intake screens do not meet the Ocean Plan Feasibility criteria. (e.g., technical feasibility: the intake screens are unable to sustain reliable flow; economic feasibility: the intake screens are unable to sustain reliable flow without a material increase the construction and/or O&M cost; environmental feasibility: operation of the intake screens results in significant environmental impacts); and (2) the substitute Best Available Intake Technology is Alternative 15 if the demonstration study shows that the lagoon based intake screens do not meet the Ocean Plan Feasibility criteria.

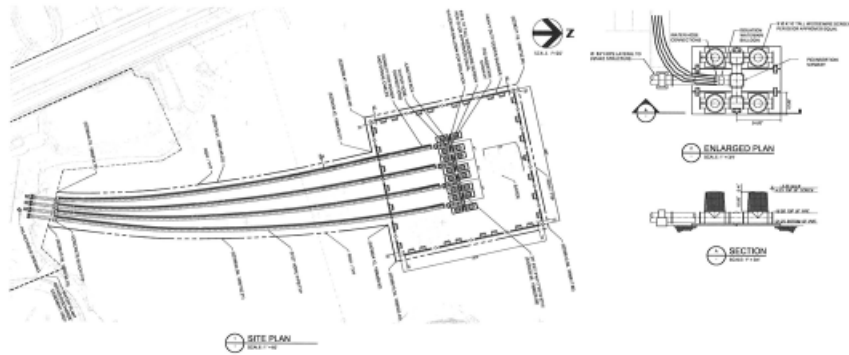
2. Third Party Review Kickoff Meeting
3. Process and Timeline for Completion of Permit Renewal and Water Code Determination
4. Identification of any other open issues

Appendix EEE
Carlsbad Desalination Project
Revised Feasibility Assessment for Intake Alternatives 1, 15, and 21
April 4, 2018

Environmental Impact	Impact Assessment Method	Impacted Area (Acres)			
		Alternative 1	Alternative 15	Alternative 21 Active Screens	Alternative 21 Passive Screens
Intake	APF calculated per Appendix E of the Staff Report/SED to the Ocean Plan Amendment using a 95% confidence bound for an assumed 100% mortality of all forms of marine life entrained by 127 MGD CDP process water with an APF of 35.76 acres and 172 MGD flow augmentation with an APF of 47.68 acres after accounting for a 1% credit for 1 mm screening technology.	83.44	83.44	83.44	83.44
	Potential mortality associated with the operation of the fish return system.	0.93	0.85	0	0
Discharge	Area within the BMZ potentially exposed to a salinity in excess of 2 ppt over natural background salinity.	18.51	18.51	18.51	18.51
Construction	Permanent impacts to marine habitat.	<0.10	<0.10	0.20	0.20
	Total Environmental Impacts (Acres)	102.98	102.90	102.15	102.15
Cost	Capital Cost	\$68,159,000	\$71,935,000	\$55,982,000	\$52,835,000
	Annual O&M Cost	\$4,808,000	\$4,808,000	\$5,288,000	\$5,895,000
	Annualized Cost (Capital and O&M)	\$10,674,000	\$11,002,000	\$10,167,000	\$10,499,000
Schedule	Expected Operation Date of Ocean Plant Compliant Intake and Discharge Facilities	2021	2021	2023	2023
Conclusion	Overall Feasibility Assessment	Feasible	Feasible	TBD¹	TBD¹

¹ Currently there is no operational data available to assess the performance and reliability of wedge wire screens (WWS) in an estuarine environment similar to Agua Hedionda Lagoon. A pilot-scale demonstration project will be conducted in Agua Hedionda Lagoon to determine the feasibility of using WWS at this location, refine the design and operation and Maintenance (O&M) requirements for the WWS, and validate the capital and O&M cost assumptions included above.

Intake Screen Layout



Intake Screens Permanent Impact - 0.2 Acres

