

January 21, 2022

Tom Luster, Senior Environmental Scientist
California Coastal Commission
455 Market Street St, Ste 300
San Francisco, California 94105
Sent via email: Tom.Luster@coastal.ca.gov

Re: Expert Reports on Poseidon Seawater Desalination Project – Huntington Beach Coastal Hazard Analysis

Dear Mr. Luster,

On behalf of the environmental coalition, we appreciate your consideration of the attached expert reports regarding coastal hazards and their inclusion into the administrative record. Poseidon has submitted application materials asserting that sea level rise and coastal hazards associated with the proposed seawater desalination plant in Huntington Beach (proposed project) are insignificant. The expert reports enclosed within are evidence to be considered as part of the administrative record and demonstrate that Poseidon's 2020 sea level rise analysis by Moffat and Nichol is incomplete and incorrectly concludes that there are no significant coastal hazards associated with the project proposal. Poseidon also conducted an ex parte with Chair Brownsey and included a chart that essentially dismisses any significant impacts to the proposed project over its 50-year permit term.

Shocking findings at the Thwaites Glacier in Antarctica recently made headlines as scientists warn that newly discovered fracturing may lead to significant loss of the glacier in three to ten years and result in two to ten additional feet of sea level rise within the century. As emerging evidence mounts, it is anticipated that SLR and related coastal hazards will increase at a more rapid pace than initially anticipated in current projects. As a result, coastal development - especially critical infrastructure - must take the extreme sea level rise scenario into account; however, it is absent from the Project proposal application materials.

The enclosed resources include expert reports commissioned by Surfrider Foundation and Orange County Coastkeeper to offer an independent third- party analysis of the technical accuracy of Poseidon's application materials with regard to coastal hazards.

1. **2018 Ocean Protection Council Sea Level Rise Guidance.** This updated document provides a science-based methodology for state governments to assess sea level rise risk. In particular, the document states that the extreme sea level rise scenario, known as H++, is unassociated with a probabilistic projection but warrants careful consideration for high-stakes, long-term decisions.
2. **2021 City of Huntington Beach Final Sea Level Rise Vulnerability Assessment.** This assessment by the City of Huntington Beach finds that 4.9 and 6.6 feet of sea level rise

will bring devastating effects to the City including the surrounding public infrastructure that would provide public services and access to the proposed Project site.

3. **2018 Technical Memorandum from Dr. David Revell.** The memorandum evaluates the impacts of coastal hazards and sea level rise on the proposed Project site. Key findings include: an “Island Effect” where coastal hazards impact access and public services to the surrounding areas, isolating the site; 6 of the 18 proposed structures on site may be flooded by 2070 in the H++ scenario; tidal inundation may occur several times a year with only 3 feet of sea level rise; and that the entire site will be reliant on maintenance of the flood control channel including possible extensive retrofits and maintenance of the barrier beach outlet. The report also identifies that more research is needed into the H++ scenario, groundwater daylighting, fluvial impacts not yet incorporated into available modeling and impacts to the water distribution pipeline network which has not yet been identified by Poseidon.
4. **2021 Technical Memorandum by Dr. Dave Revell.** This Technical Memorandum responds to Poseidon’s 2/4/2019 comment letter. The Memorandum highlights the need to consider the H++ scenario, tsunami exposure, FEMA flooding map updates, barrier beach flooding, shoreline definition and shoreline armoring, groundwater daylighting and concludes that the proposed Project is maladaptive to sea level rise and discourages resilient long-term planning for the City of Huntington Beach and surrounding communities.
5. **2022 Comment Letter by Dr. Dave Revell.** This letter reaffirms the need to evaluate H++, the risks of reliance on the flood control channel and shoreline armoring associated with the flood control channel, road access to the plant risks, and risks to the distribution network.
6. **2017 Fact Sheet by Robert Young.** This memo reviews NOAA sea level rise flood maps, FEMA flood maps and USACE LiDAR as well as tsunami data and concludes that the location of the proposed project will prove impossible to maintain due to the vulnerability of the surrounding area to coastal hazards, including over a 50-year lifespan.
7. **2021 News Report by Cooperative Institute for Research in Environmental Sciences.** This report, titled, “The Threat of Thwaites: The Retreat of Antarctica’s Riskiest Glacier”, describes the newfound discovery that the Thwaites Glacier may experience rapid melting within three to ten years and poses the biggest threat for increasing sea level rise this century. It also includes a link to the AGU Fall Meeting press conference recording with more information from leading climate scientists studying the glacier.
8. **2021 Antarctic Ice Sheet Articles.** This document includes links with further analysis regarding the Thwaites Glacier and recent discoveries.

We respectfully request these expert reports and additional resources be considered by the Coastal Commission as part of the administrative record. The reports individually, and in whole, demonstrate that Poseidon’s application materials are legally flawed and do not meet their burden of demonstrating that the proposed Project site is in compliance with the Coastal Act or City of Huntington Beach LCP policies regarding coastal hazards, critical infrastructure, shoreline armoring or the siting and design of new development.

Sincerely,

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

Mandy Sackett
California Policy Coordinator
Surfrider Foundation