

California Regional Water Quality Control Board
San Diego Region

Response to Comments Report

Tentative Order No. R9-2023-0137, Addendum No.1 to Order No R9-2019-0003 as
Amended by Order No. R9-2020-0004

NPDES No. CA0109223

Amending Waste Discharge Requirements and National Discharge Elimination System
Permit for the Poseidon Resources (Channelside) LP Claude “Bud” Lewis Carlsbad
Desalination Plant Discharge to the Pacific Ocean

September 13, 2023



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INTRODUCTION

This report contains the California Regional Water Quality Control Board, San Diego Region's (San Diego Water Board) responses to written comments received from interested parties and persons on Tentative Order No. R9-2023-0137, Addendum No. 1 to Order No. R9-2019-0003 as amended by Order No. R9-2020-0004, NPDES No. CA0109223 (Tentative Order). The San Diego Water Board received only one comment letter from San Diego Coastkeeper (Coastkeeper) on the Tentative Order.

The San Diego Water Board provided public notice of the release of the Tentative Order on July 10, 2023, and provided a period of at least 30 days for public review and comment on the Tentative Order. The public comment period ended on August 9, 2023.

Comments and Responses

The summarized written comments and San Diego Water Board responses are set forth below. The responses include a description of any actions taken to revise the Tentative Order in response to the comment. Proposed revisions to the Tentative Order are in red-underline for added text and ~~red-strikeout~~ for deleted text.

COMMENTS AND RESPONSES

1. Comment (Cost of Desalinated Water)

As further detailed in Coastkeeper's most recent comments related to the Facility, dated March 23, 2023, opposing the California State Water Resources Control Board's (State Water Board) temporary conditional waiver, the cost of desalinated water from the Facility has skyrocketed. See Attachment 1, Environmental Groups' March 23, 2023 Comment Letter. While Poseidon projected the cost of water from the Facility would be a maximum of \$2,257.8,¹ The San Diego County Water Authority (Water Authority) itself recently projected the cost of desalinated water in San Diego County to reach \$3,736 an acre foot by 2026.² According to a December 2021 report prepared by economist Michael Hanemann, Poseidon's Carlsbad plant is a significant factor in the higher water rates in San Diego County³ where water rates are 26% to 37% higher than that of the Metropolitan Water District of Southern California.⁴

Response

This comment regarding the cost of desalinated water is outside the scope of the Tentative Order. Written comments are only being received on Tentative Order and revised portions of Order No. R9-2019-0003 (NPDES permit for the Carlsbad Desalination Plant, 2019 Order).

No changes have been made to the Tentative Order as a result of this comment.

2. Comment (Energy and Climate Change Impacts from Desalination)

Desalination remains the most energy-intensive water supply. The most recent Intergovernmental Panel on Climate Change report calls desalination "maladaptive" as it would exacerbate the climate crisis.⁵ The Carlsbad Facility relies on a renewable energy credits (RECs) scheme to claim the facility is entirely carbon neutral, when in fact every REC purchased was an out-of-state project and

¹ \$734 Million Carlsbad Desalination Project Financing Closes. San Diego County Water Authority, Dec 24, 2012. <https://carlsbaddesal.sdcwa.org/734-million-carlsbad-desalination-project-financing-closes/>

² San Diego Union Tribune, San Diegans poised to pay skyrocketing price for Poseidon's desalinated water. Dec. 15, 2022. <https://www.sandiegouniontribune.com/news/environment/story/2022-12-15/san-diegans-poised-to-pay-skyrocketing-price-for-poseidons-desalinated-water>.

³ San Diego Union Tribune, San Diego water prices driven up by falling demand and costly projects, report says. February 12, 2022. <https://www.latimes.com/california/story/2022-02-12/water-cost-san-diego>

⁴ Professor Michael Hanemann. Fallbrook PUD and Rainbow MWD Wholesaler Reorganization. December 31, 2021. <https://www.sdlafco.org/home/showpublisheddocument/6068/637777538812570000>.

⁵ <https://www.ipcc.ch/sr15/chapter/chapter-4/>

consisting almost entirely of polluting landfill gas,⁶ which hinder meaningful greenhouse gas reductions, and exacerbate pollution in already overburdened communities.⁷

Response

Consideration of energy and climate change impacts from desalination is outside the scope of the Tentative Order. Written comments are only being received on Tentative Order and revised portions of revised portions of the 2019 Order. The purpose of the Tentative Order is to implement a temporary conditional waiver issued by the State Water Board (Conditional Waiver), which waived application of the *Water Quality Control Plan Ocean Waters of California* (Ocean Plan) chapter III.M.2.a.(5)(b) for the requirements of chapter III.M.2.d.(1)(c)ii. and iv. until construction of the Facility's new intake infrastructure is completed and no later than December 11, 2024. The Tentative Order does not reassess impacts considered during development of the 2019 Order.

No changes have been made to the Tentative Order as a result of this comment.

3. Comment (Impingement and Entrainment Impacts and Poseidon's Failure to Meet Deadlines)

The Facility kills an enormous amount of marine life via impingement and entrainment, and the discharge of chemical-laden ultra-saline brine through high-velocity diffusers. Poseidon also has a well-documented track-record of missed deadlines pertaining to requirements to mitigate for this damage. Poseidon failed to begin construction on the habitat restoration project by its Marine Life Mitigation Plan deadline, and only began work on its restoration plan six months after receiving a violation letter from the California Coastal Commission, in 2022.⁸ As a result, the Facility has operated since 2015 without mitigation, accumulating a deficit of more than 400 acres of lost nearshore and estuarine marine life productivity, which continues to grow until construction is completed and the site eventually starts providing the expected amount of productivity (if it able to do so at all).

Response

California Water Code (Water Code) section 13142.5(b) requires all new and expanded desalination facilities to use the best available site, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life. The 2019 Order includes a Water Code section 13142.5(b) determination in which the San Diego Water Board analyzed all four factors collectively as well as separately as independent considerations to determine the

⁶ <https://www.environmentalpollutioncenters.org/news/landfill-gas-pollution/>

⁷ <https://insideclimatenews.org/news/25022022/why-do-environmental-justice-advocates-oppose-carbon-markets-look-at-california-they-say/>

⁸ California Coastal Commission. Notice of Violation, Violation File No.: V-9-22-009 (Poseidon Resources Channelside L.P.) February 11, 2022.

best available site, design, technology, and mitigation measures to minimize intake and mortality of all forms of marine life. The San Diego Water Board evaluated a range of intake alternatives proposed by the Discharger during development of the 2019 Order and approved a new intake alternative for the Facility (referred to Alternative 21, and described in finding 1.6 of the Tentative Order). Alternative 21 was previously approved by the San Diego Water Board in the 2019 Order as the best available intake alternative feasible to minimize intake and mortality of all forms of marine life. The Discharger requested to use a different intake alternative (modified intake design) which was approved by the San Diego Water Board after review of the Discharger's request. The San Diego Water Board concluded that the modified intake design will not result in an increase in intake and mortality of marine life beyond that which was originally approved in the 2019 Order and its Water Code section 13142.5(b) determination. In addition, the modified intake design complies with Ocean Plan requirements to minimize entrainment through use of 1 millimeter traveling screens, and minimize impingement through maintaining intake water velocity below 0.5 feet/second.

The San Diego Water Board is aware that the Discharger did not begin construction of its mitigation project within the timeframe specified in its Marine Life Mitigation Plan. The Tentative Order addresses these delays by requiring the Discharger to do the following:

- Provide an additional 0.132 acres of mitigation;
- Submit a revised Marine Life Mitigation Plan and revised Marine Life Mitigation Report;
- Submit quarterly status reports that describe progress towards meeting mitigation requirements; and
- Submit an updated schedule for completing the approved mitigation project.

The updated schedule will include dates the mitigation project is expected to meet performance metrics. The first quarterly progress report (April-June 2023 status report) required by the Conditional Waiver was submitted on June 2, 2023. The April-June 2023 status report states the Discharger concluded earthwork for the mitigation project in the first quarter of 2023 in accordance with the planned seasonal migratory bird shutdown, and that primary construction activities through the first quarter of 2023 included excavation of the Otay River Floodplain Site (ORFS), partial dewatering of Pond 15, and placement of fill soil in Pond 15.⁹ The April-June 2023 status report also includes a schedule of planned mitigation activities with proposed completion dates.

No changes have been made to the Tentative Order as a result of this comment.

⁹ The Discharger's mitigation project involves restoration of tidal wetlands in the Otay River Floodplain and an active solar salt pond site (Pond 15).

4. Comment (Use of 2014 Encina Impingement and Entrainment Data and Facility is not an Essential Water Supply)

Regarding the instant Tentative Order, Coastkeeper is concerned with 1) the Order's reliance on the Proclamation of a State of Emergency statewide due to severe drought conditions; 2) the Regional Board's finding that the 2004 Encina impingement and entrainment data is still representative of current operating conditions; and 3) the Order's multiple statements that the Facility provides ten percent of the region's supply.

As noted in Attachment 1, while the Governor's drought emergency remains in effect, just last year, San Diego County Water Authority (Water Authority) lobbied that San Diego County should be exempt from this same emergency exception under which they now request a waiver. Specifically, the Water Authority lobbied for an exemption from the drought emergency requirements insisting that San Diego County has sufficient supplies through 2045.¹⁰ The Water Authority cannot claim that it is exempt from emergency drought conditions, while simultaneously emphasizing severe drought conditions to apply for this waiver pursuant to Section III.M.1.a of the Ocean Plan, and the Regional Board should not incorporate these claims into the Tentative Order. Furthermore, California has experienced record-breaking rainfall and snowpack accumulation this winter, dramatically easing drought conditions across the state. As such, Poseidon and the Water Authority's claims that the Facility's supply are essential during an emergency drought ring hollow.

Coastkeeper disagrees the 2004 Encina impingement and entrainment data is representative of current operating conditions at the Facility largely due to significant regulatory improvements, storm water management practices, sanitary sewer overflow reductions, and the establishment of California's Marine Protection Area (MPA) network. Indeed, Coastkeeper expects the forthcoming MPA decadal review to provide telling data on this front.

Response

The Tentative Order implements the Conditional Waiver issued by the State Water Board Executive Director. Pursuant to the Ocean Plan, the Executive Director "may temporarily waive the application of chapter III.M to desalination facilities that are operating to serve as a critical short-term water supply during a state of emergency as declared by the Governor." Consistent with the Ocean Plan, the State Water Board Executive Director issued the Conditional Waiver while the Governor's drought proclamation was still in effect. As a result, the Tentative Order appropriately

¹⁰ Joshua Smith, San Diego continues to argue for exemption to emergency drought rules; state officials disagree, L.A. TIMES, June 4, 2022, <https://www.latimes.com/california/story/2022-06-04/san-diego-colorado-river-water>; KUSI News, As California declares water crisis, San Diego County declares water surplus until 2045, YOUTUBE (Aug. 4, 2021), <https://www.youtube.com/watch?v=pta1HjZSztA>

references the Governor's drought proclamation. Seawater desalination also plays a key role in the maintaining a diverse water supply portfolio for the San Diego Region as it reduces the Region's dependence on imported water supplies that may be vulnerable to droughts, natural disasters, and regulatory restrictions.

Entrainment and impingement impacts from the Facility were estimated in the Tena Environmental *2008 Encina Power Station Clean Water Act Section 316(b) Impingement Mortality and Entrainment Characterization Study* (EPS Study) which used data collected in 2004/2005. Comments regarding the use of the data from the 2008 EPS Study were addressed by the San Diego Water Board prior to adoption of the 2019 Order.¹¹

The Tentative Order and 2019 Order do not require the Discharger to deliver a specified quantity of desalinated water to the Water Authority. The following sections of the Tentative Order have been modified to address concerns raised that the Facility not consistently providing ten percent of local water supplies:

Finding 1.12 of the Tentative Order has been modified as shown:

- 1.12. The Conditional Waiver and extension of the compliance schedule for an additional year will enable the Facility to operate as a critical water supply. The Facility is the largest source of local water for San Diego County and can provide up to makes up 10 percent of San Diego County's water supply. The continued operation of the Facility will help ensure that this water supply remains available during drought emergencies.

Item 1, page 6 of the Tentative Order has been modified as shown:

1. Section II.E of the 2019 Order (Finding Related to Compliance Schedule).
..... The Facility is the largest source of local water for San Diego County and can provide up to makes up 10 percent of San Diego County's water supply. The continued operation of the Facility will help ensure that this water supply remains available during drought emergencies. Additional information regarding the compliance schedule is in section VI.C.7 of the Order, section VI.G of the Fact Sheet, and in Attachment H to the Order.

5. Comment (Facility Does Not Consistently Provide Ten Percent of Local Water Supplies)

Finally, Coastkeeper disagrees that the Facility consistently provides ten percent of local water supplies. While the Facility can provide up to this percentage, Poseidon has repeatedly failed to deliver the quantity of water ordered by the Water Authority. In 2016, the Carlsbad plant failed to deliver nearly 20 percent of the water that San

¹¹ See response to comment 17 on pages 52 and 53 of the San Diego Water Board's Response to Comments Report prepared for Tentative Order No. R9-2019-0003: https://www.waterboards.ca.gov/sandiego/board_info/agendas/2019/may/item10/04_Response_to_Comments-with%20Attachment.pdf

Diego ordered from it. During the same period, there were 46 days when it delivered no water at all. In 2017, Poseidon only filled 70 percent of its promised allocation. During quarter one of 2019, the plant supply shortfalls were nearly 20 percent. In 2020, the plant operated at 40 percent capacity during the entire month of March. Red tides and other harmful algal blooms (HABs), exacerbated by climate change, can force the Facility to shut down, thus significantly reducing the quantity of water produced. Coastkeeper asks that references simply accepting that the Facility provides ten percent of local supplies be struck from the Tentative Order.

Response

See response to comment no. 4 above.