

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

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**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**

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) finds:

**1. BACKGROUND**

- 1.1 The San Diego Water Board adopted Order No. R9-2019-0003 (NPDES No. CA0109223) on May 8, 2019, establishing waste discharge requirements for Poseidon Resources (Channelside) LP (Discharger) for the discharge of reverse osmosis concentrate (brine), seawater used for flow augmentation/brine dilution, and filter backwash from the Claude “Bud” Lewis Carlsbad Desalination Plant (Facility) into the Pacific Ocean. The San Diego Water Board adopted Order No. R9-2020-0004 on February 12, 2020, which amended Order No. R9-2019-0003. This Amending Order refers to Order No. R9-2019-0003, as amended by Order No. R9-2020-0004, as the “2019 Order.”
- 1.2. The Encina Power Station (EPS) was located adjacent to the Facility and ceased power generating operations on December 11, 2018. The Facility currently draws in up to 299 million gallons per day (MGD) of seawater from Agua Hedionda Lagoon for desalination and flow augmentation using the existing intake structure and screens for the EPS. The discharger installed new intake pumps in June 2020.
- 1.3 The Facility treats up to 120 MGD of seawater to produce up to 54 MGD of drinking water for distribution to the San Diego County Water Authority. The remaining seawater not treated to produce potable water is used to dilute reverse osmosis concentrate and filter backwash discharged from the Facility.
- 1.4. 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), which is described in Order No. R9-2019-0003. Pursuant to section III.M.2(a)(5)(b) of the *Water Quality Control Plan Ocean Waters of California* (Ocean Plan), section VI.C.7 of

the 2019 Order establishes a compliance schedule which allows the Discharger up to five years from the date the EPS permanently ceased operations to complete design and construction of a new intake structure for the Facility.

- 1.5. The compliance schedule specifies tasks and deadlines/compliance dates for completion of each task related to design and construction of the new intake structure. The compliance schedule requires the Discharger to complete construction of the new intake structure by September 1, 2023 (task 6 in the compliance schedule). The compliance schedule also requires the Discharger to achieve full compliance with the Ocean Plan, California Water Code (Water Code) section 13142.5(b) Determination for the Facility,<sup>1</sup> and intake specifications in section IV.C of the 2019 Order by December 11, 2023 (task 7 in the compliance schedule).
- 1.6. Alternative 21 was to be located within the outer basin of Agua Hedionda Lagoon and consisted of a floating debris barrier, four separate 900-foot pipelines referred to as intake laterals, and submerged 1 mm wedgewire screens with an intake water velocity designed for 0.5 feet per second (ft/s) or less. 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.
- 1.7. Subsequently, the Discharger submitted a letter dated December 22, 2021, proposing a modified intake design in lieu of Alternative 21. The San Diego Water Board requested, and the Discharger submitted, additional information on various dates between March and June 2022. The modified intake design will consist of a floating debris barrier, a large mammal exclusion device (only if required by a resource agency), and 1.0 millimeter (mm) dual flow traveling screens with an intake water velocity designed for 0.5 ft/s or less to be located along the southern shoreline of Agua Hedionda Lagoon outer basin. The Discharger proposed the modified intake design due to anticipated challenges associated with operating and maintaining the Alternative 21 intake laterals and wedgewire screens in a low-energy estuarine marine environment, and the potential need for extended Facility shutdowns during periodic cleaning of the intake laterals to remove biofouling organisms. Water production would need to be halted during cleaning of the intake laterals and would not resume until marine growth is removed and turbidity of the intake water was stabilized. The

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<sup>1</sup> Water Code section 13142.5(b) provides that “For each new or expanded coastal powerplant or other industrial installation using seawater for cooling, heating, or industrial processing, the best available site, design, technology, and mitigation measures feasible shall be used to minimize the intake and mortality of all forms of marine life.” Attachment H of the 2019 Order contains a Water Code section 13142.5 (b) Determination which describes the San Diego Water Board’s analysis of all alternatives evaluated in determining the best available site, design, technology, mitigation measures for the Facility to minimize intake and mortality of all forms of marine life.

Discharger estimated shutdowns associated with maintenance of the intake laterals would result in interruption of water production for about two months.

- 1.8. The San Diego Water Board approved the modified intake design by letter dated, August 4, 2022, and 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. For these reasons, an amendment to the 2019 Order and a new Water Code section 13142.5(b) Determination were not required for the Discharger to implement the modified intake design.
- 1.9. On October 19, 2021, Governor Gavin Newsom issued a Proclamation of a State of Emergency statewide, including in San Diego County, due to severe drought conditions. Pursuant to chapter III.M.1.a of the Ocean Plan, the Executive Director of the State Water Resources Control Board (State Water Board) may temporarily waive the application of chapter III.M of the Ocean Plan 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.
- 1.10. The Discharger and the San Diego County Water Authority submitted letters dated November 1, 2022, and December 2, 2022, to the State Water Board requesting a temporary waiver of chapter III.M of the Ocean Plan until December 11, 2024. The Discharger stated that supply chain issues related to the COVID-19 pandemic, the Russia-Ukraine war, global labor shortages, and decreased equipment availability has resulted in procurement delays of specialized materials and components for the new intake structure. The procurement delays have negatively impacted the construction schedule.
- 1.11. Pursuant to chapter III.M.1.a of the Ocean Plan and consistent with the statewide Proclamation of a State of Emergency issued by Governor Gavin Newsom on October 19, 2021, on March 27, 2023, the State Water Board Executive Director issued a temporary conditional waiver of the application of 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 (Conditional Waiver).
- 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 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.
- 1.13. Water Code section 13142.5 (b) and the Ocean Plan require mitigation to replace all forms of marine life or habitat lost due to construction and operation of a desalination facility after minimizing intake and mortality of all forms of marine life through use of the best available site, design, and technology. Chapter III.M.2.e of the Ocean Plan requires regional water boards to ensure that owners or

operators of desalination facilities fully mitigate for the operational lifetime of the facility and use the best available mitigation measures to minimize intake and mortality of all forms of marine life. Pursuant to these requirements, the 2019 Order requires the Discharger or any subsequent owner of the Facility to provide 68.3 acres of functional mitigation.

1.14. Consistent with the Ocean Plan and 2019 Order, the Discharger prepared the following:

- A Marine Life Mortality Report (MLMR) estimating the marine life mortality resulting from estimated impacts to all forms of marine life resulting from construction and operation of the facility after implementation of the Facility's required site, design, and technology measures; and
- A Marine Life Mitigation Plan (MLMP, dated December 23, 2020) establishing the specific steps and methods necessary to provide 68.3 acres of mitigation to compensate for the marine life mortality impacts associated with the Facility's construction and operation.

The MLMR and MLMP indicate that the Discharger will compensate for the temporal loss of marine life and habitat productivity from the start of Facility operations that result in marine life impacts until the mitigation project meets performance standards. Mitigation will be continued for an equivalent time after the Facility shuts down.

1.15. While construction of the mitigation project commenced in October 2022, entrainment impacts for the Facility had been unmitigated for 7 years and it is unclear when project performance metrics will be met. Additional information on the status of the mitigation project and on performance metrics to be achieved are necessary to ensure the mitigation will replace all forms of marine life or habitat lost due to construction and operation of the Facility. Further, the 2019 Order applied a one-percent mitigation credit for Ocean Plan-compliant intake screens. However, the one-percent credit should be applied when an Ocean Plan compliant intake screen is operational. The Discharger does not have an Ocean Plan compliant intake screen at this time. Additional mitigation is required to compensate for impacts of marine life associated with the compliance extension. Consequently, the Conditional Waiver requires the Discharger to provide an additional 0.132 acres of mitigation, submit a revised MLMR and revised MLMP reflecting additional mitigation required, and submit quarterly reports describing progress towards meeting the compliance schedule and mitigation requirements.

**2. PURPOSE OF ORDER NO. R9-2023-0137, ADDENDUM NO. 1 TO ORDER NO. R9-2019-0003 AS AMENDED (AMENDING ORDER)**

2.1. This Amending Order makes the following modifications to the 2019 Order to implement the Conditional Waiver:

- Amends the compliance schedule in Table 7, section VI.C.7.a of the 2019 Order;

- Requires the Discharger to provide an additional 0.132 acres of mitigation;
- Requires the Discharger to submit a revised MLMR and revised MLMP; and
- Requires the Discharger to submit quarterly reports describing progress towards meeting the compliance schedule and mitigation requirements.

### **3. LEGAL AUTHORITIES**

- 3.1. Water Code section 13263(e) provides that the San Diego Water Board may, upon application by any affected person, or on its own motion, review and revise waste discharge requirements. Section 122.62(a) of title 40 of the Code of Federal Regulations (40 CFR) authorizes the reopening and modification of a National Pollutant Discharge Elimination System (NPDES) permit based upon the receipt of new information that was not available at the time of permit issuance.
- 3.2. The 2019 Order is not being reopened for any other purpose than the revisions contained herein. Except as contradicted or superseded by the findings and directives set forth in this Amending Order, all of the previous findings and directives of the 2019 Order shall remain in full force and effect.

### **4. CALIFORNIA ENVIRONMENTAL QUALITY ACT**

This action is exempt from the requirement of preparation of environmental documents under the California Environmental Quality Act (Public Resources Code, division 13, chapter 3, section 21000 et seq.) in accordance with section 13389 of the Water Code.

### **5. PUBLIC PARTICIPATION**

- 5.1. The San Diego Water Board notified the Discharger and interested agencies and persons of its the intent to adopt this Amending Order and provided them with an opportunity to submit written comments and recommendations.
- 5.2. The San Diego Water Board in a public meeting heard and considered all comments pertaining to the adoption of this Amending Order.
- 5.3. Any person aggrieved by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 et seq. The State Water Board must receive the petition by 5:00 p.m., 30 days after the adoption date of this Amending Order. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request. For instructions on how to file a petition for review, see the State Water Board website at: [https://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/wqpetition\\_instr.shtml](https://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml)

THEREFORE, IT IS HEREBY ORDERED that, pursuant to Water Code section 13263 and 40 CFR section 122.62, Order No. R9-2019-0003, as amended by Order No. R9-2020-0004, is amended as follows:

**1. SECTION II.E OF THE 2019 ORDER (FINDING RELATED TO COMPLIANCE SCHEDULE)**

Section II.E of the 2019 Order shall be replaced with the following:

Pursuant to Ocean Plan chapter III.M.2.a.(5)(b), the San Diego Water Board may allow the Discharger up to five years to make modifications to the Facility required by the new Water Code section 13142.5(b) Determination, including but not limited to a new source water intake structure. On March 27, 2023, the Executive Director for the State Water Resources Control Board issued a temporary conditional waiver of the application of 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. On September 13, 2023, the San Diego Water Board modified the compliance schedule in Table 7, section VI.C.7.a, of the 2019 Order, to implement the temporary conditional waiver. The temporary conditional waiver and modification 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 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.

**2. COMPLIANCE SCHEDULE FOR DESIGN AND CONSTRUCTION OF THE NEW INTAKE STRUCTURE**

Table 7 of the 2019 Order shall be replaced with the following:

**Table 7. Compliance Schedule for Design and Construction of the New Intake Structure**

<b>Task</b>	<b>Compliance Date</b>
1. Submit to the San Diego Water Board a Construction Work Plan outlining in detail the steps and schedule with specific milestones to construct the new intake structure.	September 30, 2019
2. Complete construction and begin operation of the new dilution water intake pumps.	June 30, 2020
3. Complete 30% design of the new intake structure in conformance with the Water Code section 13142.5(b) Determination in Attachment H of this Order and select contractor for construction of new intake structure.	June 30, 2022
4. Secure necessary permits to construct the new intake system. This may include but is not limited to: California	December 31, 2022

Task	Compliance Date
Coastal Commission Coastal Development Permit Amendment, and Army Corps of Engineers CWA section 404 Permit, and San Diego Water Board CWA section 401 Water Quality Certification. Additional permits or approvals may be necessary that are not listed here.	
5. Begin construction of the new intake structure.	January 15, 2023
6. Complete construction and begin operation of the new intake structure.	November 11, 2024
7. Achieve full compliance with the Ocean Plan, Water Code section 13142.5(b) Determination for the Facility, and intake specifications in section IV.C of this Order.	December 11, 2024

**3. MITIGATION REQUIREMENTS**

The following subsection shall be added as section VI.C.2.d.iii of the 2019 Order:

- ii. The Discharger shall submit a revised Marine Life Mortality Report (MLMR) and revised Marine Life Mitigation Plan (MLMP) to the San Diego Water Board for the San Diego Water Board’s or Executive Officer’s approval that includes:
  - a) An additional 0.132 acres of mitigation through expansion of the approved mitigation project to correctly apply the one percent mitigation credit for the intake screen as commencing on December 11, 2024, rather than July 1, 2019 (the effective date of the Permit). The current MLMR and MLMP apply an intake screen credit of 0.66 acres for the 30-year operational life of the Facility (see, Table H-2, Finding 39 of the 2019 Order), but due to the approximately six-year delay in installing the screen, the credit must be prorated to 0.528 acres to fully compensate for the marine life mortality attributable to the Facility’s operations. If the new intake infrastructure is completed and fully functional before December 11, 2024, the San Diego County Water Authority or Discharger may request the San Diego Water Board, in consultation with the State Water Board, to prorate the amount of additional mitigation acreage based on meeting the compliance schedule earlier.
  - b) An updated schedule for initiating the approved mitigation project including the dates the mitigation project is expected to meet performance metrics.

The Discharger must submit the revised MLMR and revised MLMP to the San Diego Water Board by **March 4, 2024**.

**4. RENUMBERING**

Section VII.D of the Monitoring and Reporting Program (MRP, Attachment E) shall be renumbered as section VII.D.i.

**5. PROGRESS REPORTS**

The following shall be added as section VII.D.ii of the MRP:

The Discharger shall submit quarterly progress reports to the San Diego Water Board and State Water Board that describe progress towards meeting the compliance schedule and mitigation requirements, the associated project schedules, any critical path issues that may result in further delays, and any relevant information regarding compliance with the conditions of the Order that implement the temporary condition waiver issued by the State Water Board Executive Director on March 27, 2023. The progress reports shall be submitted according to the following schedule:

**Table E-13. Due Dates for Submitting Quarterly Progress Reports**

<b>Reporting Period</b>	<b>Due Date</b>
January 1 through March 31	June 2
April 1 through June 30	August 2
July 1 through September 30	November 2
October 1 through December 31	February 2

**6. ORDER EFFECTIVE DATE**

Order No. R9-2023-0137, Addendum No. 1 to Order No. R9-2019-0003 as amended by Order No. R9-2020-0004, shall become effective on September 13, 2023.

I, David W. Gibson, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an order adopted by the California Regional Water Quality Control Board, San Diego Region, on September 13, 2023.

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David W. Gibson, Executive Officer