

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
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**DRAFT ORDER R3-2026-0057
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT CA3000003**

**WASTE DISCHARGE REQUIREMENTS
FOR THE MONTEREY ONE WATER REGIONAL TREATMENT PLANT AND
ADVANCED WATER PURIFICATION FACILITY AND THE CALIFORNIA AMERICAN
WATER COMPANY MONTEREY PENINSULA WATER SUPPLY PROJECT
DESALINATION PLANT DISCHARGE TO THE PACIFIC OCEAN, MONTEREY
COUNTY**

The following Dischargers are subject to waste discharge requirements (WDRs) set forth in this Order:

Table 1. Discharger Information

Discharger	Name of Facility	Facility Address
Monterey One Water	Regional Treatment Plant and Advanced Water Purification Facility	14811 Del Monte Boulevard Marina, CA 93933 Monterey County
California American Water Company	Monterey Peninsula Water Supply Project Desalination Plant	Charles Benson Road northeast of City of Marina, northwest of ReGen Marina, CA 93933 Monterey County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point (Latitude, Longitude)	Receiving Water
001	Secondary-Treated Wastewater, Hauled Saline Waste, Reverse Osmosis Concentrate, and Ocean Desalination Brine Waste	36.72778°N, -121.83750°W	Pacific Ocean
002	Disinfected Tertiary Recycled Municipal Wastewater		Reclamation Use

The anticipated adoption date of this Order is:
The anticipated effective date of this Order is:
The anticipated expiration date of this Order is:

December 10th, 2026
February 1st, 2027
February 1st, 2032

Depending on future circumstances, the Dischargers shall either individually or jointly file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations (CCR), and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than **180 days prior to the permit expiration date**. The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, Central Coast Region have classified this discharge as follows: **Major discharge**.

I, Ryan E. Lodge, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Central Coast Region on the date indicated above.

Ryan E. Lodge, Executive Officer

1. FACILITY INFORMATION	5
2. FINDINGS	5
2.1. Legal Authorities	5
2.2. Background and Rationale for Requirements.....	5
2.3. Provisions and Requirements Implementing State Law	5
2.4. Water Code Section 13142.5(b) Conditional Determination (applicable to the Cal- Am MPWSP Desalination Plant)	6
2.5. Water Code Sections 13263 and 13241 Considerations.....	7
2.6. Executive Officer Delegation of Authority	7
2.7. Notification of Interested Parties	8
2.8. Consideration of Public Comment.....	8
2.9. Long-Term Planning and Implementation	8
2.10. Water Reclamation Requirements for Recycled Water Production and Use.....	8
2.11. Response to Climate Change	8
2.12. Human Right to Water.....	9
2.13. Disadvantaged Community Status	9
2.14. California Environmental Quality Act (CEQA)	9
3. DISCHARGE PROHIBITIONS	10
3.1. Standard Prohibitions.....	10
3.2. Facility-Specific Prohibitions.....	11
4. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS.....	12
4.1. Final Effluent Limitations	12
4.2. Land Discharge Specifications – Not Applicable	23
4.3. Recycling Specifications	23
5. RECEIVING WATER LIMITATIONS	26
5.1. Surface Water – Not Applicable	26
5.2. Groundwater – Not Applicable	26
6. PROVISIONS	26
6.1. Standard Provisions	26
6.2. MRP Requirements	26
6.3. Special Provisions	27
7. COMPLIANCE DETERMINATION	40
7.1. General	40
7.2. Multiple Sample Data	40
7.3. 6-Month Median Effluent Limitation	40
7.4. 30-Day Average Effluent Limitation	40
7.5. Average Monthly Effluent Limitation (AMEL).....	41
7.6. 7-Day Average Effluent Limitation.....	41
7.7. Average Weekly Effluent Limitation (AWEL)	41
7.8. Maximum Daily Effluent Limitation (MDEL).....	41
7.9. Instantaneous Maximum Effluent Limitation (IMAX).....	41
7.10. Instantaneous Minimum Effluent Limitation (IMIN).....	42
7.11. Acute and Chronic Toxicity.....	42

TABLE OF TABLES

Table 1. Discharger Information	1
Table 2. Discharge Location	1
Table 3. M1W Total Combined Waste Effluent Limitations (with compliance measured at Monitoring Location EFF-001)	12
Table 4. M1W RTP Secondary-Treated Waste Effluent Limitations (with compliance measured at Monitoring Location EFF-001A)	13
Table 5. Cal-Am MPWSP Desalination Plant Brine Waste Effluent Limitations (with compliance measured at Monitoring Location EFF-001C)	14
Table 6. Final Commingled Waste (After Dilution) Effluent Limitations (with compliance measured at Monitoring Location EFF-001B)	15
Table 7. Bacteria Effluent Limitations (with compliance measured at Monitoring Location EFF-001B)	21
Table 8. Approved Dms and Related Discharge Scenarios Prior to M1W Outfall and Diffuser Modifications	22
Table 9. Approved Dms and Related Discharge Scenarios After M1W Outfall and Diffuser Modifications	22
Table 10. IWC for Acute and Chronic Toxicity (before M1W outfall and diffuser modifications)	23
Table 11. IWC for Acute and Chronic Toxicity (after M1W outfall and diffuser modifications)	23
Table 12. Disinfected Tertiary Recycled Water Effluent Limitations (with compliance measured at Monitoring Location REC-001)	25

TABLE OF ATTACHMENTS

ATTACHMENT A – DEFINITIONS	A-1
ATTACHMENT B – MAPS	B-1
ATTACHMENT C – FLOW SCHEMATIC	C-1
ATTACHMENT D – STANDARD PROVISIONS	D-1
ATTACHMENT E – MONITORING AND REPORTING PROGRAM	E-1
ATTACHMENT F – FACT SHEET	F-1
ATTACHMENT G - CONDITIONAL WATER CODE SECTION 13142.5(B) DETERMINATION	G-1

1. FACILITY INFORMATION

Information describing the Monterey One Water (M1W) Regional Wastewater Treatment Plant (RTP) and Advanced Water Purification Facility (AWPF) and the California American Water Company (Cal-Am) Monterey Peninsula Water Supply Project (MPWSP) Desalination Plant (collectively Facilities) is summarized on the cover page and in sections 1 and 2 of the Fact Sheet (Attachment F). Section 1 of the Fact Sheet also includes information regarding M1W's and Cal-Am's (collectively Dischargers) permit applications. This Order specifies unique requirements that apply only to M1W and other unique requirements that apply only to Cal-Am. However, because the waste streams from M1W's facilities and Cal-Am's facility will be commingled directly prior to discharge to the Pacific Ocean, there are also requirements that apply both to M1W and to Cal-Am.

2. FINDINGS

The California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board) finds:

2.1. Legal Authorities

This Order serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (Water Code) (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Dischargers to discharge into waters of the United States at the discharge location described in Table 2, subject to the WDRs in this Order, with individual or joint compliance measured as expressly provided in this Order. This Order also includes a conditional Water Code section 13142.5(b) determination for Cal-Am's MPWSP Desalination Plant.

2.2. Background and Rationale for Requirements

The Central Coast Water Board developed the requirements in this Order using information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet, which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes findings of this Order. Attachments A through E and G are also incorporated into this Order.

2.3. Provisions and Requirements Implementing State Law

The provisions and requirements in subsections 2.4, 4.2, 4.3, 5.1.1, 6.3.5.3, 6.3.5.4, and 6.3.6.2 of this Order and sections 6 and 7 of the monitoring and reporting program (MRP) found in Attachment E implement state law only. These provisions and requirements are not required or authorized under the federal CWA;

consequently, violations of these provisions and requirements are not subject to the enforcement remedies that are available for NPDES violations.

2.4. Water Code Section 13142.5(b) Conditional Determination (applicable to the Cal-Am MPWSP Desalination Plant)

Water Code section 13142.5(b) requires that for each new or expanded coastal power plant 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. Section III.M of the 2019 *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) provides the implementation provisions for desalination facilities to comply with Water Code section 13142.5(b). The Central Coast Water Board has analyzed, separately as independent considerations and in combination, a range of intake and outfall design alternatives proposed by Cal-Am and has determined that the MPWSP Desalination Plant will use the best available site, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life. Attachment G to this Order summarizes the considerations and basis for this Water Code section 13142.5(b) determination.

This Water Code section 13142.5(b) determination is conditional and a new Water Code section 13142.5(b) determination will be required if any of the following occur:

- 2.4.1. Cal-Am fails to submit the final Marine Life Mortality Report (final MLMR) as required in section 6.3.2.6 of this Order to the Central Coast Water Board for review and approval.
- 2.4.2. Cal-Am fails to submit the Marine Life Mitigation Plan (MLMP) as required in section 6.3.2.7 of this Order to the Central Coast Water Board for review and approval.
- 2.4.3. The Central Coast Water Board does not approve the final MLMR or the MLMP.
- 2.4.4. Cal-Am fails to implement some or all of the approved MLMP.
- 2.4.5. The final MLMR demonstrates that the mitigation requirements of this Order are insufficient to fully compensate for the mortality of all forms of marine life associated with the MPWSP Desalination Plant. If the final MLMR demonstrates that the mitigation requirements of this Order are insufficient to fully compensate for the mortality of all forms of marine life associated with the MPWSP Desalination Plant, then Cal-Am shall apply for a new Water Code section 13142.5(b) determination. If the final MLMR demonstrates that the mitigation requirements of this Order are excessive to fully compensate for the mortality of all forms of marine life associated with the MPWSP Desalination Plant, then Cal-Am may apply for a new Water Code section 13142.5(b) determination.

- 2.4.6. The volume of municipal wastewater discharged through the M1W ocean outfall is reduced below the flow rate required for a positively buoyant plume significantly more frequently than modeled- based on the average daily salinity at Monitoring Location EFF-001D.
- 2.4.7. The MPWSP Desalination Plant drinking water production flow rate increases above an average monthly flow rate of 4.8 MGD. If Cal-Am increases the MPWSP Desalination Plant drinking water production rate above an average monthly flow rate of 4.8 MGD, then Cal-Am shall apply for a new Water Code section 13142.5(b) determination.
- 2.4.8. The brine discharge flow rate from the MPWSP Desalination Plant increases above a maximum instantaneous flow rate of 8.66 MGD. If Cal-Am increases the brine discharge flow rate from the MPWSP Desalination Plant above a maximum instantaneous flow rate of 8.66 MGD, then Cal-Am shall apply for a new Water Code section 13142.5(b) determination.
- 2.4.9. The reverse osmosis (RO) recovery rate for the MPWSP Desalination Plant is greater than 42.5 percent, as determined by the final design plans for the MPWSP Desalination Plant. If the final design plans for the MPWSP Desalination Plant result in a RO recovery rate greater than 42.5 percent, then Cal-Am shall apply for a new Water Code section 13142.5(b) determination.

In addition, Cal-Am is required to apply for a new Water Code section 13142.5(b) determination in accordance with the Ocean Plan requirements if any potential future expansion of the facility occurs, including any design change or operational change to the MPWSP Desalination Plant that could increase the intake or mortality of any form of marine life beyond that which is approved under this Order. The Central Coast Water Board's Water Code section 13142.5(b) analysis for the expanded facility may be limited to those expansions or other changes that result in the increased intake or mortality of all forms of marine life, unless the Central Coast Water Board determines that additional measures that minimize intake and mortality of all forms of marine life are feasible for the existing portions of the facility.

2.5. Water Code Sections 13263 and 13241 Considerations

When requirements in an NPDES permit are more stringent than is required by the federal CWA, regional water quality control boards must consider the factors in Water Code section 13263, including the provisions of Water Code section 13241. The Central Coast Water Board has considered these factors in establishing the WDRs in this Order.

2.6. Executive Officer Delegation of Authority

The Central Coast Water Board, by prior resolution, has delegated all matters that may legally be delegated to its Executive Officer (EO) to act on its behalf pursuant to Water Code section 13223. Therefore, the EO is authorized to act on the Central Coast Water Board's behalf on any matter within this Order unless such delegation

is unlawful under Water Code section 13223 or this Order explicitly states otherwise.

2.7. Notification of Interested Parties

The Central Coast Water Board has notified the Dischargers and interested agencies and persons of its intent to prescribe WDRs for the discharge and of its Water Code section 13142.5(b) determination with conditions and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

2.8. Consideration of Public Comment

The Central Coast Water Board, in a public meeting, heard and considered all comments pertaining to the discharge and the Water Code section 13142.5(b) determination. Details of the public hearing are provided in the Fact Sheet.

2.9. Long-Term Planning and Implementation

Federal regulations limit the duration of NPDES permits to a fixed term not to exceed five years, after which permits may be administratively extended prior to renewal. Planning and instituting measures to support long-term beneficial reuse of the Facilities' effluent may span multiple permit terms. As a result, this Order includes requirements the Central Coast Water Board plans to carry over into future permit terms.

2.10. Water Reclamation Requirements for Recycled Water Production and Use

This Order regulates the production and onsite use of disinfected tertiary recycled water in compliance with applicable state and local requirements regarding the production and use of reclaimed wastewater, including those requirements established by the California Department of Public Health in Title 22, sections 60301-60357 of the California Code of Regulations (Water Recycling Criteria). Additionally, this Order includes water reclamation requirements for the M1W RTP and Salinas Valley Reclamation Project (SVRP) pursuant to State Water Resources Control Board (State Water Board) Division of Drinking Water (DDW) recommendations submitted to the Central Coast Water Board. The distribution and offsite reuse of recycled water for the Castroville Seawater Intrusion Project and by Marina Coast Water District and production, distribution, and offsite reuse of recycled water for the Pure Water Monterey groundwater replenishment project are regulated by separate WDRs.

2.11. Response to Climate Change

Aligning with State Water Board Resolution 2017-0012, *Comprehensive Response to Climate Change*, this Order supports the beneficial reuse of the treated effluent from M1W's RTP to offset potable water use for irrigation and increase groundwater augmentation of the Seaside basin aquifers. These reuse projects, as well as Cal-Am's MPWSP, serve to diversify the state's water supply portfolio to prepare for uncertainties in water resources due to the changing

climate. Additionally, M1W continues to update its climate action planning efforts using the best available data and technology for wastewater treatment and operation.

2.12. Human Right to Water

This Order does not authorize the discharge of wastes to waters that serve as a primary source of drinking water or waters that are designated with municipal or domestic water supply beneficial uses as described in the 2024 *Water Quality Control Plan for the Central Coastal Basin* (Basin Plan). This Order incorporates requirements to support M1W in providing recycled water for potable and non-potable beneficial reuse and supports the further diversification of the Monterey Peninsula's water supply portfolio by incorporating requirements for the discharge of desalination brine. Therefore, this Order is consistent with Water Code section 106.3, which establishes state policy for the human right to water, and Central Coast Water Board Resolution R3-2017-0004, *Environmental Justice and the Human Right to Water*.

2.13. Disadvantaged Community Status

Using 2020 census data, the California Department of Water Resources Disadvantaged Communities (DAC) Mapping Tool identifies the areas in the vicinity of Discharge Point 001 as not disadvantaged. Within the communities that send wastewater to M1W, 43 block groups, or approximately 25 percent of the population, are disadvantaged communities. The tool defines a DAC as a census block with a median household income between \$50,458 and \$67,278 and a severely disadvantaged community (SDAC) as a census block with a median household income below \$50,458. The SDAC census blocks in the community served have median household incomes between \$14,683 and \$49,732. The DAC census blocks in the community served have median household income between \$51,893 and \$61,250.

2.14. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit for the discharge of waste to waters of the United States is exempt from the California Environmental Quality Act (CEQA) provisions in Public Resources Code, division 13, chapter 3. The Water Code section 13142.5(b) determination in this Order and the provisions listed in Finding 2.3 above are issued under state law authority only and are discretionary approvals subject to compliance with CEQA.

A final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS) analyzing the potential environmental impacts of the Monterey Peninsula Water Supply Project (MPWSP or proposed project) proposed by Cal AM was prepared by the California Public Utilities Commission (PUC) and the Monterey Bay National Marine Sanctuary (MBNMS) in March 2018. On September 18, 2018, The PUC issued Decision 18-09-017, *Decision Approving a Modified Monterey Water Supply Project, Adopting Settlement Agreements, Issuing Certificate of Public Convenience and Necessity and Certifying Combined*

Environmental Report (State Clearinghouse No. 2006101004) approving the Final EIR/EIS..

In keeping with the Water Code section 13142.5 determination, an addendum (Addendum) to the Final EIR/EIS was prepared. The Addendum is discussed at length in section 3.2 of the Fact Sheet. In accordance with the requirements of 14 Cal. Code Regs. § 15164, the Central Coast Water Board independently considered the environmental effects, mitigation measures, and alternatives of the project as described in the Final EIR/EIS and the contents of the Addendum, and finds that the Addendum is appropriate in this case because only minor technical changes or additions to the Final EIR/EIS were necessary, and none of the conditions in 14 Cal. Code Regs. § 15162 are present.

THEREFORE, IT IS HEREBY ORDERED that to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder and the provisions of the CWA and regulations and guidelines adopted thereunder, the Dischargers shall comply with the requirements in this Order. It is also ordered that Order R3-2024-0045 (NPDES Permit CA0048551) authorizing the discharge from the M1W RTP and AWP is terminated on the effective date of this Order. This action in no way prevents the Central Coast Water Board from taking enforcement action against M1W for violations of Order R3-2024-0045.

3. DISCHARGE PROHIBITIONS

3.1. Standard Prohibitions

- 3.1.1. The discharge of waste at any location or in a manner other than that described in this Order is prohibited, unless the discharge is regulated by another discharge permit.
- 3.1.2. The discharge of any waste in any manner other than as described by this Order, excluding stormwater regulated by General Permit CAS000001, State Water Board Order WQ-2014-0057, as amended by Order WQ 2015-0122-DWQ and Order WQ 2018-0028-DWQ, (*Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities*), is prohibited.
- 3.1.3. The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into the ocean is prohibited.
- 3.1.4. Pipeline discharge of sludge to the ocean is prohibited by federal law. The discharge of municipal and industrial waste sludge directly to the ocean, or into a waste stream that discharges to the ocean, is prohibited by the Ocean Plan. The discharge of sludge digester supernatant directly to the ocean, or to a waste stream that discharges to the ocean without further treatment, is prohibited.
- 3.1.5. The bypassing or overflow of untreated wastes containing concentrations of pollutants in excess of those in Table 3 or Table 4 of the Ocean Plan is prohibited, except as provided for in Attachment D, Standard Provisions 1.7 (Bypass).

- 3.1.6. The discharge of trash to surface waters of the state or the deposition of trash where it may be discharged into surface waters of the state is prohibited.
- 3.1.7. The discharge of material that is floatable, or will become floatable upon discharge, is prohibited.
- 3.1.8. The discharge of oil or any residual products of petroleum products to waters of the state, except in accordance with waste discharge requirements or other provisions of division 7 of the Water Code, is prohibited.

3.2. Facility-Specific Prohibitions

- 3.2.1. The influent flow to the M1W RTP secondary treatment system shall not exceed 29.6 million gallons per day (MGD) average dry weather flow (ADWF) and 75.6 MGD peak wet weather flow (PWWF).
- 3.2.2. The flow of M1W RTP secondary-treated waste (not including flow to the M1W AWPf or M1W SVRP) shall not exceed an instantaneous maximum of 29.6 MGD in dry weather or an instantaneous maximum of 75.6 MGD in wet weather.
- 3.2.3. The effluent flow of M1W AWPf reverse osmosis (RO) concentrate shall not exceed an instantaneous maximum of 1.78 MGD.
- 3.2.4. The effluent flow of M1W hauled saline waste shall not exceed an instantaneous maximum of 0.05 MGD.
- 3.2.5. The effluent flow of M1W total combined waste (which may include M1W RTP secondary-treated waste, M1W AWPf RO concentrate, and M1W hauled saline waste) shall not exceed an instantaneous maximum of 29.6 MGD in dry weather or an instantaneous maximum of 75.6 MGD in wet weather.
- 3.2.6. The effluent flow of Cal-Am MPWSP Desalination Plant brine waste must either be 0 MGD, or be between 5.80 and 8.66 MGD. Cal-Am MPWSP Desalination Plant brine waste flow shall never exceed an instantaneous maximum of 8.66 MGD, and shall only fall between 0 and 5.80 MGD during ramp up and ramp down, for a total time of no more than 2 hours per day.
- 3.2.7. The effluent flow of final commingled waste (which may include one or more of the following: M1W RTP secondary-treated waste, M1W AWPf RO concentrate, M1W hauled saline waste, and/or Cal-Am MPWSP Desalination Plant brine waste) through the M1W ocean outfall shall not exceed an instantaneous maximum of 38.26 MGD in dry weather or an instantaneous maximum of 75.6 MGD in wet weather.
- 3.2.8. The discharge of waste from the MPWSP Desalination Plant to Discharge Point 001 is prohibited unless and until (1) the Central Coast Water Board has approved Cal-Am's Marine Life Mitigation Plan (MLMP), as described in section 6.3.2.7; (2) Cal-Am has obtained all permits and other governmental approvals necessary to implement all components of the approved MLMP;; and (3) all MPWSP improvements to the M1W outfall and diffuser (as described in Fact Sheet sections 2.1.1. and 2.1.3) have been completed.

4. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

4.1. Final Effluent Limitations

4.1.1. Discharge Point 001

4.1.1.1. M1W Total Combined Waste

M1W shall maintain compliance with the effluent limitations in Table 3 below for its total waste (combined M1W RTP secondary-treated waste, M1W AWP RO concentrate, and M1W hauled saline waste) to Discharge Point 001 with compliance measured at Monitoring Location EFF-001, as described in the MRP (Table E-6).

Table 3. M1W Total Combined Waste Effluent Limitations (with compliance measured at Monitoring Location EFF-001)

Parameter	Units	Average Monthly Effluent Limitation (AMEL)	Average Weekly Effluent Limitation (AWEL)	Instant. Minimum Effluent Limitation (IMIN)	Instant. Maximum Effluent Limitation (IMAX)
Oil and Grease	milligrams per liter (mg/L)	25	40		75
Oil and Grease	pounds per day (lb/day) ^[1]	6,200	9,900		19,000
pH	standard units (SU)			6.0	9.0
Settleable Solids	milliliters per liter (mL/L)	1.0	1.5		3.0
Turbidity	nephelometric turbidity units (NTU)	75	100		230
Total Suspended Solids (TSS)	mg/L	60			
TSS	lb/day ^[1]	15,000			

^[1] The mass-based effluent limitations in Table 3 were calculated using Equation 3 of the Ocean Plan as follows:

$$\text{lb/day} = 8.34 \times \text{Ce} \times \text{Q},$$

where Ce is the concentration-based effluent limit (mg/L) and Q = 29.6 MGD is the permitted dry weather flow rate for M1W total combined waste.

4.1.1.2. M1W RTP Secondary-Treated Waste

M1W shall maintain compliance with the effluent limitations in Table 4 below for the RTP secondary-treated waste, with compliance measured at Monitoring Location EFF-001A as described in the MRP (Table E-7).

Table 4. M1W RTP Secondary-Treated Waste Effluent Limitations (with compliance measured at Monitoring Location EFF-001A)

Parameter	Units	AMEL	AWEL	MDEL ^[1]	IMIN	IMAX
Carbonaceous Biochemical Oxygen Demand, 5-day @ 20 Deg. C (CBOD ₅)	mg/L	25	40	85		
CBOD ₅	lb/day ^[2]	6,200	9,900	21,000		
CBOD ₅	percent (%) removal	Not less than 85				
pH ^[3]	SU				6.0	9.0
TSS	mg/L	30	45	90		
TSS	lb/day ^[2]	7,400	11,000	22,000		
TSS	% removal	Not less than 85				

^[1] Maximum Daily Effluent Limitation.

^[2] The mass-based effluent limitations in Table 4 were calculated using Equation 3 of the Ocean Plan as follows:

$$\text{lb/day} = 8.34 \times \text{Ce} \times \text{Q},$$

where Ce is the concentration-based effluent limit (mg/L) and Q = 29.6 MGD is the permitted dry weather flow rate for M1W RTP secondary-treated effluent.

^[3] Excursions from the effluent limit range are permitted subject to the following limitations (Title 40 of the Code of Federal Regulations, CFR, § 401.17):

- a. The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month, and
- b. No individual excursion from the range of pH values shall exceed 60 minutes.

Note: 40 CFR section 401.17(2)(c) notes that, for the purposes of 40 CFR section 401.17, “excursion” is defined as “an unintentional and temporary incident in which the pH value of discharge wastewater exceeds the range set forth in the applicable effluent limitations guidelines.” The State Water Board may adjust the requirements set forth in paragraph 40 CFR section 401.17(a) with respect to the length of individual excursions from the range of pH values, if a different period of time is appropriate based upon the treatment system, plant configuration, or other technical factors.

4.1.1.3. Cal-Am MPWSP Desalination Plant Brine Waste

Cal-Am shall maintain compliance with the effluent limitations in Table 5 below for the Cal-Am MPWSP Desalination Plant brine waste, with compliance measured at Monitoring Location EFF-001C as described in the MRP (Table E-8).

Table 5. Cal-Am MPWSP Desalination Plant Brine Waste Effluent Limitations (with compliance measured at Monitoring Location EFF-001C)

Parameter	Units	AMEL	AWEL	IMIN	IMAX
Oil and Grease	mg/L	25	40		75
Oil and Grease	lb/day ^[1]	1,800	2,900		5,400
pH	SU			6.0	9.0
Salinity	parts per thousand (ppth)				238 ^[2]
Settleable Solids	mL/L	1.0	1.5		3.0
TSS	mg/L	60			
TSS	lb/day ^[1]	4,300			
Turbidity	NTU	75	100		225

^[1] The mass-based effluent limitations in Table 5 were calculated using Equation 3 of the Ocean Plan as follows:

$$\text{lb/day} = 8.34 \times C_e \times Q,$$

where C_e is the concentration-based effluent limit (mg/L) and $Q = 8.66$ MGD is the instantaneous maximum permitted flow rate for Cal-Am MPWSP Desalination Plant brine waste effluent.

^[2] The salinity effluent limit is calculated using Equation 3 of the Ocean Plan. However, this Order's approved Dm's were based on modeling that assumed salinity of approximately 60 ppth. The salinity is not expected to exceed approximately 60 ppth unless the Cal-Am MPWSP Desalination Plant's reverse osmosis recovery rate increases above 42.5%. If that occurs, Cal-Am must apply for a new Water Code section 13142.5(b) determination, as described in section 2.4.

4.1.1.4. Final Commingled Waste (After Dilution)

The Dischargers shall maintain compliance with the effluent limitations in Table 6 below for the diluted, final commingled effluent (including the M1W total waste stream and any Cal-Am MPWSP Desalination Plant brine waste), with compliance measured at Monitoring Location EFF-001B. The Dischargers shall follow the procedures described in MRP section 4.6 for calculating the C_{zid} concentration using the appropriate daily Dm and for calculating the mass discharge using the appropriate lowest Dm. For compliance determination, the

calculated C_{zid} and mass discharge values are compared to the effluent limitation values in Table 6. .

Table 6. Final Commingled Waste (After Dilution) Effluent Limitations (with compliance measured at Monitoring Location EFF-001B)

Parameter	Units	6-Month Median	AMEL	MDEL ^[1]	IMAX ^[2]
Marine Aquatic Life					
Arsenic, Total Recoverable	micrograms per liter (µg/L)	8.0		32	80
Arsenic, Total Recoverable	lb/day ^[3]	2.6		10	26
Cadmium, Total Recoverable	µg/L	1.0		4.0	10
Cadmium, Total Recoverable	lb/day ^[3]	0.32		1.3	3.2
Chromium (VI), Total Recoverable ^[4]	µg/L	2.0		8.0	20
Chromium (VI), Total Recoverable ^[4]	lb/day ^[3]	0.64		2.6	6.4
Copper, Total Recoverable	µg/L	3.0		12	30
Copper, Total Recoverable	lb/day ^[3]	0.96		3.8	9.6
Lead, Total Recoverable	µg/L	2.0		8.0	20
Lead, Total Recoverable	lb/day ^[3]	0.64		2.6	6.4
Mercury, Total Recoverable	µg/L	0.040		0.16	0.40
Mercury, Total Recoverable	lb/day ^[3]	0.013		0.051	0.13
Nickel, Total Recoverable	µg/L	5.0		20	50
Nickel, Total Recoverable	lb/day ^[3]	1.6		6.4	16
Selenium, Total Recoverable	µg/L	15		60	150
Selenium, Total Recoverable	lb/day ^[3]	4.8		19	48
Silver, Total Recoverable	µg/L	0.70		2.8	7.0
Silver, Total Recoverable	lb/day ^[3]	0.22		0.89	2.2
Zinc, Total Recoverable	µg/L	20		80	200
Zinc, Total Recoverable	lb/day ^[3]	6.4		26	64
Cyanide, Total ^[5]	µg/L	1.0		4.0	10
Cyanide, Total ^[5]	lb/day ^[3]	0.32		1.3	3.2
Chlorine, Total Residual ^[6]	µg/L	2.0		8.0	60
Chlorine, Total Residual ^[6]	lb/day ^[3]	0.64		2.6	19
Ammonia, Total (as N)	µg/L	600		2,400	6,000
Ammonia, Total (as N)	lb/day ^[4]	190		770	1,900
Acute Toxicity ^[7]	Pass/Fail			Pass	
Chronic Toxicity ^[7]	Pass/Fail			Pass	

Parameter	Units	6-Month Median	AMEL	MDEL ^[1]	IMAX ^[2]
Phenols, (Non-chlorinated) ^[8]	µg/L	30		120	300
Phenols, (Non-chlorinated) ^[8]	lb/day ^[3]	9.6		38	96
Phenols, (Chlorinated) ^[8]	µg/L	1.0		4.0	10
Phenols, (Chlorinated) ^[8]	lb/day ^[3]	0.32		1.3	3.2
Endosulfan ^[8]	µg/L	0.0090		0.018	0.027
Endosulfan ^[8]	lb/day ^[3]	0.0029		0.0057	0.0086
Endrin	µg/L	0.0020		0.0040	0.0060
Endrin	lb/day ^[3]	0.00064		0.0013	0.0019
Hexachlorocyclohexane (HCH) ^[8]	µg/L	0.0040		0.0080	0.012
HCH ^[8]	lb/day ^[3]	0.0013		0.0026	0.0038
Radioactivity ^[9]	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, section 30253 of the California Code of Regulations. Reference to section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.				
Human Health (Non-carcinogens)					
Acrolein	µg/L		220		
Acrolein	lb/day ^[3]		70		
Antimony, Total Recoverable	µg/L		1,200		
Antimony, Total Recoverable	lb/day ^[3]		380		
Bis (2-Chloroethoxy) Methane	µg/L		4.4		
Bis (2-Chloroethoxy) Methane	lb/day ^[3]		1.4		
Bis (2-Chloroisopropyl) Ether	µg/L		1,200		
Bis (2-Chloroisopropyl) Ether	lb/day ^[3]		380		
Chlorobenzene	µg/L		570		
Chlorobenzene	lb/day ^[3]		180		
Chromium (III) Total Recoverable	µg/L		190,000		
Chromium (III) Total Recoverable	lb/day ^[3]		61,000		
Di-n-butyl Phthalate	µg/L		3,500		
Di-n-butyl Phthalate	lb/day ^[3]		1,100		
Dichlorobenzenes, Sum ^[8]	µg/L		5,100		
Dichlorobenzenes, Sum ^[8]	lb/day ^[3]		1,600		
Diethyl Phthalate	µg/L		33,000		
Diethyl Phthalate	lb/day ^[3]		11,000		

Parameter	Units	6-Month Median	AMEL	MDEL ^[1]	IMAX ^[2]
Dimethyl Phthalate	µg/L		820,000		
Dimethyl Phthalate	lb/day ^[3]		260,000		
4,6-Dinitro-2-Methylphenol	µg/L		220		
4,6-Dinitro-2-Methylphenol	lb/day ^[3]		70		
2,4-Dinitrophenol	µg/L		4.0		
2,4-Dinitrophenol	lb/day ^[3]		1.3		
Ethylbenzene	µg/L		4,100		
Ethylbenzene	lb/day ^[3]		1,300		
Fluoranthene	µg/L		15		
Fluoranthene	lb/day ^[3]		4.8		
Hexachlorocyclopentadiene	µg/L		58		
Hexachlorocyclopentadiene	lb/day ^[3]		19		
Nitrobenzene	µg/L		4.9		
Nitrobenzene	lb/day ^[3]		1.6		
Thallium, Total Recoverable	µg/L		2.0		
Thallium, Total Recoverable	lb/day ^[3]		0.64		
Toluene	µg/L		85,000		
Toluene	lb/day ^[3]		27,000		
Tributyltin (TBT)	µg/L		0.0014		
TBT	lb/day ^[3]		0.0045		
1,1,1-Trichloroethane	µg/L		540,000		
1,1,1-Trichloroethane	lb/day ^[3]		170,000		
Human Health (Carcinogens)					
Acrylonitrile	µg/L		0.10		
Acrylonitrile	lb/day ^[3]		0.032		
Aldrin	µg/L		0.000022		
Aldrin	lb/day ^[3]		0.0000070		
Benzene	µg/L		5.9		
Benzene	lb/day ^[3]		1.9		
Benzidine	µg/L		0.000069		
Benzidine	lb/day ^[3]		0.000022		
Beryllium, Total Recoverable	µg/L		0.033		
Beryllium, Total Recoverable	lb/day ^[3]		0.011		
Bis (2-Chloroethyl) Ether	µg/L		0.045		
Bis (2-Chloroethyl) Ether	lb/day ^[3]		0.014		

Parameter	Units	6-Month Median	AMEL	MDEL ^[1]	IMAX ^[2]
Bis (2-Ethylhexyl) Phthalate	µg/L		3.5		
Bis (2-Ethylhexyl) Phthalate	lb/day ^[3]		1.1		
Carbon Tetrachloride	µg/L		0.90		
Carbon Tetrachloride	lb/day ^[3]		0.29		
Chlordane ^[8]	µg/L		0.000023		
Chlordane ^[8]	lb/day ^[3]		0.0000073		
Dibromochloromethane	µg/L		8.6		
Dibromochloromethane	lb/day ^[3]		2.7		
Chloroform	µg/L		130		
Chloroform	lb/day ^[3]		41		
Dichlorodiphenyltrichloroethane (DDT/DDD/DDE, Sum of P,P and O,P Isomers) ^[8]	µg/L		0.00017		
DDT/DDD/DDE, Sum of P,P and O,P Isomers ^[8]	lb/day ^[3]		0.000054		
1,4-Dichlorobenzene	µg/L		18		
1,4-Dichlorobenzene	lb/day ^[3]		5.7		
3,3'-Dichlorobenzidine	µg/L		0.0081		
3,3'-Dichlorobenzidine	lb/day ^[3]		0.0026		
1,2-Dichloroethane	µg/L		28		
1,2-Dichloroethane	lb/day ^[3]		8.9		
1,1-Dichloroethylene	µg/L		0.90		
1,1-Dichloroethylene	lb/day ^[3]		0.29		
Dichlorobromomethane	µg/L		6.2		
Dichlorobromomethane	lb/day ^[3]		2.0		
Methylene Chloride	µg/L		450		
Methylene Chloride	lb/day ^[3]		140		
1,3-Dichloropropylenes, Sum	µg/L		8.9		
1,3-Dichloropropylenes, Sum	lb/day ^[3]		2.8		
Dieldrin	µg/L		0.000040		
Dieldrin	lb/day ^[3]		0.000013		
2,4-Dinitrotoluene	µg/L		2.6		
2,4-Dinitrotoluene	lb/day ^[3]		0.83		
1,2-Diphenylhydrazine	µg/L		0.16		
1,2-Diphenylhydrazine	lb/day ^[3]		0.051		

Parameter	Units	6-Month Median	AMEL	MDEL ^[1]	IMAX ^[2]
Halomethanes, Sum ^[8]	µg/L		130		
Halomethanes, Sum ^[8]	lb/day ^[3]		41		
Heptachlor	µg/L		0.000050		
Heptachlor	lb/day ^[3]		0.000016		
Heptachlor Epoxide	µg/L		0.000020		
Heptachlor Epoxide	lb/day ^[3]		0.0000064		
Hexachlorobenzene	µg/L		0.00021		
Hexachlorobenzene	lb/day ^[3]		0.000067		
Hexachlorobutadiene	µg/L		14		
Hexachlorobutadiene	lb/day ^[3]		4.5		
Hexachloroethane	µg/L		2.5		
Hexachloroethane	lb/day ^[3]		0.80		
Isophorone	µg/L		730		
Isophorone	lb/day ^[3]		230		
N-Nitrosodimethylamine	µg/L		7.3		
N-Nitrosodimethylamine	lb/day ^[3]		2.3		
N-Nitrosodi-N-Propylamine	µg/L		0.38		
N-Nitrosodi-N-Propylamine	lb/day ^[3]		0.12		
N-Nitrosodiphenylamine	µg/L		2.5		
N-Nitrosodiphenylamine	lb/day ^[3]		0.80		
Polynuclear Aromatic Hydrocarbons (PAHs) ^[8]	µg/L		0.0088		
PAHs ^[8]	lb/day ^[3]		0.0028		
Polychlorinated Biphenyls (PCBs), Sum ^[8]	µg/L		0.000019		
PCBs, Sum ^[8]	lb/day ^[3]		0.0000061		
2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) Equivalents ^[8]	µg/L		3.9E-09		
TCDD Equivalents ^[8]	lb/day ^[3]		1.2E-09		
1,1,2,2-Tetrachloroethane	µg/L		2.3		
1,1,2,2-Tetrachloroethane	lb/day ^[3]		0.73		
Tetrachloroethene	µg/L		2.0		
Tetrachloroethene	lb/day ^[3]		0.64		
Toxaphene	µg/L		0.00021		
Toxaphene	lb/day ^[3]		0.000067		

Parameter	Units	6-Month Median	AMEL	MDEL ^[1]	IMAX ^[2]
Trichloroethene	µg/L		27		
Trichloroethene	lb/day ^[3]		8.6		
1,1,2-Trichloroethane	µg/L		9.4		
1,1,2-Trichloroethane	lb/day ^[3]		3.0		
2,4,6-Trichlorophenol	µg/L		0.29		
2,4,6-Trichlorophenol	lb/day ^[3]		0.093		
Vinyl Chloride	µg/L		36		
Vinyl Chloride	lb/day ^[3]		11		

^[1] The MDEL shall apply to 24-hour composite samples, and also grab samples of ammonia, total chlorine, phenolic compounds, and toxicity. The MDEL shall also apply to continuous monitoring.

^[2] The IMAX shall apply to grab samples other than ammonia, total chlorine, phenolics, and toxicity. The IMAX shall also apply to continuous monitoring.

^[3] The mass-based effluent limitations in Table 6 were calculated using Equation 3 of the Ocean Plan as follows:

$$\text{lb/day} = 0.00834 \times C_e \times Q,$$

where C_e is the concentration-based effluent limit (µg/L) and $Q = 38.26$ MGD is the permitted dry weather flow rate for final commingled effluent (including 29.6 MGD of permitted total M1W RTP effluent and 8.66 MGD of permitted Cal-AM desalination plant brine waste).

^[4] Dischargers may at their option meet this objective as a total chromium objective.

^[5] If the Dischargers can demonstrate to the satisfaction of the Central Coast Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR part 136, as revised May 14, 1999.

^[6] Limitations for total chlorine residual applying to intermittent discharges not exceeding two hours shall be recalculated using the following equation:

$$\log y = -0.43 (\log x) + 1.8$$

where y is the concentration limitation in Table 6 above and x is the duration of uninterrupted chlorine discharge in minutes.

^[7] As specified in section 7.11 of this Order and section 5 of the MRP.

^[8] As defined in Attachment A.

^[9] As per Ocean Plan section III.C.3, radioactivity shall not be diluted. WQOs for radioactivity apply directly to undiluted waste effluent.

4.1.1.4.1. Bacteria

The Dischargers shall maintain compliance with the bacteria effluent limitations in Table 7 below for the diluted, final commingled effluent (including the M1W total waste stream and any Cal-Am MPWSP Desalination Plant brine waste), with compliance measured at Monitoring Location EFF-001B as described in MRP section 4.6.

Table 7. Bacteria Effluent Limitations (with compliance measured at Monitoring Location EFF-001B)

Parameter	Units	IMAX	Maximum Monthly Median	Maximum 30-Day Geometric Mean ^{[1],[2]}	Maximum 6-Week Geometric Mean ^{[2],[3]}
Enterococci	most probable number (MPN)/100 mL	110 ^[4]			30
Fecal Coliform	MPN/100 mL	400		200	
Total Coliform	MPN/100 mL	230 ^[4]	70		

^[1] Compliance is determined from the five most recent samples.

^[2] Geometric mean effluent limits shall be applied based on a statistically sufficient number of samples, which is not less than five samples distributed over a six-week period. If a statistically significant number of samples is not available to calculate the geometric mean, then attainment of the WQO shall be determined based only on the IMAX.

^[3] Compliance is determined as a rolling 6-week geomean, calculated weekly.

^[4] Not to be exceeded by more than 10 percent of the samples collected in a calendar month.

4.1.1.4.2. Minimum Initial Dilution (Dm)

4.1.1.4.2.1. Dm for Ocean Plan Table 3 Parameters (Except Toxicity and Radioactivity) and Bacteria

The minimum initial dilution (Dm; parts seawater per part wastewater) of the final commingled waste stream at the point of discharge to the Pacific Ocean at Monterey Bay shall not be less than the minimum probable initial dilution values in Table 8 below prior to the completion of M1W outfall and diffuser modifications, and shall not be less than the minimum probable initial dilution values in Table 9 below after the completion of M1W outfall and diffuser modifications. This allowable Dm value depends on the presence of Cal-Am MPWSP Desalination Plant brine waste, the flow rate

of secondary treatment waste from the M1W RTP, and the M1W Waste Ratio, defined as:

$$(\text{AWPF RO Concentrate} + \text{Hauled Saline Waste}) / \text{M1W total waste}$$

For compliance with the effluent limitations in Table 6 and Table 7 above for Ocean Plan Table 3 pollutants and bacteria at Discharge Point 001, the Dischargers will report a calculated concentration using the appropriate Dm, according to instructions in section 4.6 of the MRP.

Table 8. Approved Dms and Related Discharge Scenarios Prior to M1W Outfall and Diffuser Modifications

Daily Average M1W Waste Ratio ^[1]	Daily Dm
> 0.747	453
0.416 – 0.747	368
0.129 – 0.415	248
0 – 0.128	145

^[1] M1W Waste Ratio is defined as:

$$(\text{M1W AWP RO concentrate} + \text{hauled saline waste}) / \text{M1W total combined waste}$$

Table 9. Approved Dms and Related Discharge Scenarios After M1W Outfall and Diffuser Modifications

Daily Average Cal-Am MPWSP Desalination Plant Brine Waste (MGD) ^{[1],[2]}	Daily Average M1W Total Combined Waste (MGD)	Daily Average M1W Waste Ratio ^[3]	Daily Dm
0	0 – 29.6	> 0.691	464
0	0 – 29.6	0.285 – 0.690	348
0	0 – 29.6	0 – 0.284	194
0	29.7 – 75.6	0 – 0.128	142
5.80 – 8.66	0 – 75.6	0 – 1	101

^[1] If any MPWSP Desalination Plant brine waste is discharged, the daily average flow shall be calculated considering only times in which flow occurs. For example, if MPWSP Desalination Plant brine waste is only discharged for 12 hours in a 24-hour period, the daily average only considers the 12-hour period in which Cal-Am Desalination Plant brine waste flow occurred.

^[2] Instantaneous Cal-Am Desalination Plant brine waste flows between 0–5.8 MGD are permitted only during ramp up/down, for a total of at most 2 hours per day. If Cal-Am Desalination Plant brine waste flows occur between 0–5.8 MGD for more than 2 hours per day, then Dm = 97 for the day.

^[3] M1W waste ratio is defined as:

$$(\text{M1W AWP RO concentrate} + \text{hauled saline waste}) / \text{M1W total combined waste}$$

4.1.1.4.2.2. Dm for Toxicity

For acute and chronic toxicity, the Dischargers will use an in-stream waste concentration (IWC) determined from the appropriate Dm using

$$IWC = 100/(Dm+1)$$

As explained in section 4.6.2 of the MRP and as outlined below in Table 10 and Table 11, acute toxicity uses a reduced dilution in the IWC calculation, equivalent to 10% of the Dm value from Table 8 (before M1W outfall and diffuser modifications) or from Table 9 (after M1W outfall and diffuser modifications).

Table 10. IWC for Acute and Chronic Toxicity (before M1W outfall and diffuser modifications)

Dm from Table 8	Dm for Chronic Toxicity IWC	Chronic Toxicity IWC (%)	Dm for Acute Toxicity IWC	Acute Toxicity IWC (%)
453	453	0.22	45.3	2.2
368	368	0.27	36.8	2.6
248	248	0.40	24.8	3.9
145	145	0.68	14.5	6.5

Table 11. IWC for Acute and Chronic Toxicity (after M1W outfall and diffuser modifications)

Dm from Table 9	Dm for Chronic Toxicity IWC	Chronic Toxicity IWC (%)	Dm for Acute Toxicity IWC	Acute Toxicity IWC (%)
464	464	0.22	46.4	2.1
348	348	0.29	34.8	2.8
194	194	0.51	19.4	4.9
142	142	0.70	14.2	6.6
101	101	0.98	10.1	9.0

4.2. Land Discharge Specifications – Not Applicable

4.3. Recycling Specifications

4.3.1. Discharge Point 002

4.3.1.1. General Specifications

4.3.1.1.1. Water reclamation requirements in this permit allow M1W to produce disinfected tertiary recycled water. M1W is responsible for compliance with all

applicable requirements associated with the production and onsite use of recycled water as specified within this permit.

- 4.3.1.1.2. Reclamation and use of tertiary-treated wastewater shall adhere to applicable requirements of Water Code sections 13500-13577 (Water Reclamation); California Code of Regulations Title 22, sections 60301-60355 (Uniform Statewide Recycling Criteria); and the State Water Board's *Cross-Connection Control Policy Handbook*. Production and use of recycled water for nonpotable uses is currently regulated separately under Water Reclamation Requirements Order 94-082. The Central Coast Water Board intends to terminate Order 94-082 upon M1W's or Monterey County Water Resources Agency's enrollment in State Water Board Order WQ 2016-0068-DDW, *State Water Board General Water Reclamation Requirements for Recycled Water Use*, or other applicable permit.
- 4.3.1.1.3. Recycled water production shall comply with a Title 22 engineering report approved by DDW that demonstrates or defines compliance with the Uniform Statewide Recycling Criteria (and amendments). The Title 22 engineering report for M1W's disinfected tertiary recycled water production is dated September 19, 2006, and was approved by the State of California Health and Human Services Agency, Department of Health Services on November 28, 2006. On September 1, 2017, M1W submitted an addendum to the Title 22 engineering report, and this addendum was approved by DDW on September 29, 2017.
- 4.3.1.1.4. Recycled water shall be disinfected according to the requirements set forth in California Code of Regulations, Title 22, section 60301.230, which provide disinfection criteria for "filtered wastewater."
- 4.3.1.1.5. Recycled water shall be adequately oxidized, filtered, and disinfected, as defined in California Code of Regulations, Title 22.
- 4.3.1.1.6. Freeboard shall always exceed 2 feet in all recycled water storage ponds owned and operated M1W.
- 4.3.1.1.7. M1W shall discontinue delivery of recycled water to distributors and users during any period in which it has reason to believe that the Uniform Statewide Recycling Criteria specifications are not being met. The delivery of recycled water shall not be resumed until all conditions that caused the limits to be violated have been corrected.
- 4.3.1.1.8. Recycled water disinfected with chlorine shall have a CT value (product of chlorine concentration time and modal contact time) of not less than 450 milligrams per minute per liter (mg-min/L) at all times with a modal contact time of at least 90 minutes.
- 4.3.1.1.9. In lieu of section 4.3.1.1.8 above, recycled water may be disinfected by a process that, when combined with the filtration process, has been demonstrated to inactivate and/or remove 99.999 percent of the plaque-forming units of F-specific bacteriophage MS2 or polio virus in the

wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration.

- 4.3.1.1.10. Personnel involved in producing, transporting, or using recycled water shall be informed of possible health hazards that may result from contact and use of recycled water.
- 4.3.1.1.11. Spray irrigation of recycled water at the RTP or construction sites shall be accomplished at a time and in a manner to minimize ponding and contact with the public.
- 4.3.1.1.12. Delivery of recycled water shall be discontinued when these recycling specifications cannot be met.
- 4.3.1.1.13. All recycled water reservoirs and other areas with public access shall be posted with signs in English and an international symbol to warn the public that recycled wastewater is being stored or used.
- 4.3.1.1.14. Recycled water systems at the RTP site shall be properly labeled and regularly inspected to ensure proper operation, absence of leaks, and absence of illegal connections.

4.3.1.2. M1W SVRP Disinfected Tertiary Recycled Water

M1W shall maintain compliance with the effluent limitations in Table 12 below for disinfected tertiary-treated recycled wastewater, with compliance measured at Monitoring Location REC-001, as described in the MRP (Attachment E, Table E-17).

Table 12. Disinfected Tertiary Recycled Water Effluent Limitations (with compliance measured at Monitoring Location REC-001)

Parameter	Units	AMEL	MDEL
Biochemical Oxygen Demand, 5-day @ 20 Deg. C (BOD ₅)	mg/L	10	20
TSS	mg/L	10	20
Total Dissolved Solids (TDS)	mg/L		1,500

4.3.1.2.1. Bacteria

The concentration of total coliform bacteria measured at Monitoring Location REC-001 (after disinfection) shall not exceed the following limits:

- 4.3.1.2.1.1. A median MPN of 2.2 per 100 mL utilizing the bacteriological results of the last seven days for which analyses have been completed;
- 4.3.1.2.1.2. An MPN of 23 per 100 mL in more than one sample in any 30-day period; and
- 4.3.1.2.1.3. An MPN of 240 total coliform bacteria per 100 mL in any one sample.

4.3.1.3. M1W SVRP Internal Flows

M1W shall maintain compliance with the following internal effluent limitations during tertiary treatment, with compliance measured at Monitoring Locations INT-001 or INT-002, as described in the MRP (Attachment E, Table E-18).

- 4.3.1.3.1. The rate of filtration through the tertiary filters at Monitoring Location INT-001 shall not exceed 7.5 gallons per minute per square foot (gpm/ft²) of surface area.
- 4.3.1.3.2. Filtered recycled water at Monitoring Location INT-002 shall not exceed any of the following turbidity limits:
 - 4.3.1.3.2.1. An average of 2 NTU within a 24-hour period;
 - 4.3.1.3.2.2. 5 NTU more than 5 percent of the time within a 24-hour period; and
 - 4.3.1.3.2.3. 10 NTU at any time.

5. RECEIVING WATER LIMITATIONS

5.1. Surface Water – Not Applicable

5.2. Groundwater – Not Applicable

6. PROVISIONS

6.1. Standard Provisions

- 6.1.1. With the exception of those sections of this Order that apply to a particular Discharger alone, the Dischargers shall comply with all Standard Provisions included in Attachment D, both federal NPDES standard provisions from 40 CFR part 122 as well as Central Coast Water Board standard provisions.
- 6.1.2. In the event that there is any conflict, duplication, or overlap between the federal Standard Provisions or the Central Coast Water Board's standard provisions included in Attachment D and the provisions specified by this Order, the more stringent provision shall apply.
- 6.1.3. Failure to comply with provisions or requirements of this Order or violation of other applicable laws or regulations governing discharges from these Facilities may subject the Dischargers to administrative or civil liability, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Dischargers to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities. Violations of requirements specific to M1W or Cal-Am individually shall be the sole responsibility of the responsible party. Combined obligations will be joint and several for purposes of enforcement of this Order.

6.2. MRP Requirements

Pursuant to Water Code sections 13267 and 13383, the Dischargers shall comply with the MRP and future revisions thereto and all notification and general reporting

requirements throughout this Order. The Dischargers shall comply with the MRP individually if the obligation applies to a specific party, or jointly if the obligation is shared. Where notification or general reporting requirements conflict with those stated in the MRP (e.g., annual report due date), the Dischargers shall comply with the MRP requirements. All monitoring shall be conducted according to 40 CFR part 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*, or other approved alternate test methods.

6.3. Special Provisions

6.3.1. Reopener Provisions

6.3.1.1. Water Quality

This Order may be reopened for modification or revocation and reissuance to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above a water quality objective (WQO), or if modification of the Order is necessary to:

- 6.3.1.1.1. Make it consistent with any new policy, law, or regulation in accordance with NPDES regulations at 40 CFR parts 122 and 124, as necessary;
- 6.3.1.1.2. Include appropriate conditions or limits based on newly available information and/or studies; or
- 6.3.1.1.3. Implement any new state WQOs that are approved by USEPA.

As effluent is further characterized through additional monitoring, and if a need for additional effluent limitations becomes apparent after additional effluent characterization, the Order may be reopened to incorporate such limitations.

6.3.1.2. Report of Waste Discharge (ROWD)

This Order may be reopened for modification or revocation and reissuance upon submittal of a new ROWD to include additional waste streams, dischargers, or flows.

6.3.1.3. Water Code Section 13142.5(b) Determination

- 6.3.1.3.1. This Order may be reopened to modify provisions governing compliance with Water Code section 13142.5(b) and the Ocean Plan if Cal-Am fails to satisfy the requirements of the MLMP or if Cal-Am proposes a change in design or operation of the MPWSP Desalination Plant in a manner that could increase intake or mortality of marine life, consistent with the Ocean Plan definition of an expanded facility, beyond that which is approved in this Order's Water Code section 13142.5(b) determination. This Order may be reopened at any time for modification of provisions governing compliance with the receiving water limitation for salinity as set forth in Ocean Plan section III.M.3.
- 6.3.1.3.2. This Order may be reopened and a new Water Code section 13142.5(b) determination may be made to update the mitigation requirements for the

MPWSP Desalination Plant based on the results of the final MLMR required in section 6.3.2.6 of this Order.

- 6.3.1.3.3. This Order may be reopened and a new Water Code section 13142.5(b) determination may be made if any of the conditions described in section 2.4 occur.

6.3.2. Special Studies, Technical Reports and Additional Monitoring Requirements

6.3.2.1. Toxicity Reduction Requirement

This provision requires the Dischargers to investigate the causes of and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge consistently exceeds an effluent limitation for toxicity or an effluent limitation for an Ocean Plan Table 3 WQO specified in Table 6 of this Order, the Dischargers may be required to collaborate to conduct a toxicity reduction evaluation (TRE), as defined in Attachment A. The TRE shall include all reasonable steps to identify the source of toxicity. The Dischargers shall take all reasonable steps to reduce toxicity to the required level once the source of toxicity is identified.

6.3.2.1.1. Whole Effluent Toxicity

For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Dischargers to conduct chronic and acute whole effluent toxicity (WET) testing, as specified in MRP section 5.1. Furthermore, this Provision requires the Dischargers to investigate the causes of and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the numeric toxicity monitoring trigger during accelerated monitoring established in this Provision, the Dischargers are required to initiate a joint, collaborative TRE in accordance with their approved TRE Work Plans and take actions to mitigate the impact of the discharge and prevent recurrence of toxicity.

6.3.2.1.2. Toxicity Reduction Evaluation (TRE)

A TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity. This Provision includes requirements for the Dischargers to develop and submit TRE work plans and includes procedures for accelerated chronic toxicity monitoring and TRE initiation. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices.

6.3.2.1.3. Toxicity Identification Evaluation (TIE)

A toxicity identification evaluation (TIE) may be required as part of the TRE, if appropriate. A TIE is a set of procedures to identify the specific chemical or chemicals responsible for toxicity. These procedures are performed in three

phases: characterization; identification; and confirmation using aquatic organism toxicity tests. The Dischargers shall include in the TRE all reasonable steps to identify the source of toxicity. The Dischargers shall take all reasonable steps to reduce toxicity to the required level once the source of toxicity is identified.

6.3.2.1.4. TRE Work Plans

Within 90 days of the effective date of this Order, each Discharger shall submit a copy of their TRE work plan to the Central Coast Water Board for review and approval. The TRE work plans shall outline the procedures for identifying the source(s) of and reducing or eliminating effluent toxicity. The TRE work plans must be developed in accordance with USEPA guidance and be of adequate detail to allow the Dischargers to immediately initiate a TRE as required in this provision:

- *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833/B-99-022).
- *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070)
- *Toxicity Identification Evaluation, Phase I* (EPA/600/6-91/005F)
- *Methods for Aquatic Toxicity Identification Evaluations, Phase II* (EPA/600/R-92/080)
- *Methods for Aquatic Toxicity Identification Evaluations, Phase III* (EPA/600/R-92/081)

The TRE work plans shall include steps the Dischargers intend to implement if toxicity is measured above an effluent limitation and should include, at minimum:

- a. Description of the collaborative process between the two Dischargers,
- b. Description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency,
- c. Description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the Facilities, and
- d. If a TIE is necessary, indication of who would conduct the TIEs (i.e., an in-house expert or outside contractor).

6.3.2.1.5. Accelerated Monitoring and TRE Initiation

When an effluent limit for acute or chronic toxicity is exceeded during regular WET monitoring, and the testing meets all test acceptability criteria, the Dischargers shall initiate accelerated monitoring as required in the accelerated monitoring specifications in section 6.3.2.1.6 below. The

Dischargers shall initiate their TRE to address effluent toxicity if any WET test result exceeds the acute or chronic effluent limit during accelerated monitoring. The Dischargers shall take all reasonable steps to reduce toxicity once the source of toxicity is identified.

6.3.2.1.6. Accelerated Monitoring Specifications

If the chronic or acute toxicity effluent limit is exceeded during regular toxicity testing, the Dischargers shall initiate accelerated monitoring within 14 days of notification by the laboratory of the exceedance.

Accelerated monitoring shall consist of toxicity tests using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:

- 6.3.2.1.6.1. If accelerated monitoring is triggered on the basis of an acute or chronic toxicity effluent limit exceedance, accelerated WET testing shall utilize a 5-concentration plus control dilution series bracketing the discharge IWC, thus permitting an evaluation of magnitude of effect through point estimate (i.e., EC25) analysis.
- 6.3.2.1.6.2. If the acute toxicity effluent limit is exceeded during regular acute toxicity monitoring, the Discharger(s) shall immediately (as soon as practicable) resample the effluent and retest for acute toxicity.
- 6.3.2.1.6.3. If the toxicity effluent limit is exceeded and the source of toxicity is known (e.g., a temporary plant upset), the Discharger at fault shall make necessary corrections to the Facilities and shall conduct one additional toxicity test using the same species and test method that exhibited toxicity. If the additional toxicity test does not exceed the toxicity effluent limit, then the Dischargers may return to their regular testing frequency. However, notwithstanding the accelerated monitoring results, if there is evidence of a pattern of recurring effluent toxicity, the EO may require that the Dischargers initiate a TRE.
- 6.3.2.1.6.4. If the toxicity effluent limit is exceeded, and the source of toxicity is not known, the Dischargers shall conduct four additional toxicity tests conducted once every two weeks using the same species and test method that exhibited toxicity. If none of the additional toxicity tests exceed the toxicity limit, then the Dischargers may return to their regular testing frequency. However, notwithstanding the accelerated monitoring results, if there is evidence of a pattern of recurring effluent toxicity, the EO may require that the Dischargers initiate a TRE.
- 6.3.2.1.6.5. If the result of any accelerated toxicity test exceeds the acute or chronic effluent limit, the Dischargers shall cease accelerated monitoring and begin a TRE to investigate the cause(s) of and identify corrective actions to reduce or eliminate effluent toxicity. Within 30 days of notification by the laboratory of any test result exceeding the acute or chronic effluent limit during accelerated monitoring, the Dischargers shall develop and implement a TRE action plan which shall include at a minimum: a) specific actions the

Dischargers will take to investigate, identify, and correct the causes of toxicity; b) specific actions the Dischargers will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and c) a schedule for these actions. This TRE action plan and schedule are subject to approval and modification by the EO. A failure to conduct TRE-related toxicity tests or TREs within an approved period may result in the establishment of numerical effluent limitations for toxicity in a permit or appropriate enforcement action. While in a TRE, TRE-related toxicity testing conducted as part of the TRE investigation will not be subject to enforcement action.

- 6.3.2.1.6.6. Results of the initial failed test and any toxicity monitoring results subsequent to the failed test shall be reported as soon as reasonable to the Central Coast Water Board EO. The EO will determine whether it is appropriate to initiate enforcement action, require the Dischargers to implement TRE requirements of this Order, or implement other measures.

6.3.2.2. Hauled Saline Waste Disposal Study

Prior to increasing the volume of hauled saline waste from existing sources that are discharged through the M1W ocean outfall beyond 50,000 gallons maximum daily flow, M1W shall submit a hauled saline waste disposal study to the EO for approval. M1W must also send a copy of the study to the Monterey Bay National Marine Sanctuary (MBNMS) at mbnms.permits@noaa.gov. This provision does not apply to brine waste, including brine associated with the Cal-Am MPWSP Desalination Plant. The study shall include, at a minimum, the following elements:

- 6.3.2.2.1. A projection of the hauled saline waste volume and characteristics;
- 6.3.2.2.2. An assessment of the impact of the increased hauled saline waste volume on permit compliance;
- 6.4.2.2.3. An assessment of the impact of the increased volume on the minimum probable initial dilution at the point of discharge;
- 6.4.2.2.4. A detailed description of any waste disposal facilities that are proposed to accommodate the increased volume and facilitate blended secondary effluent and hauled saline wastes flow metering and sampling; and
- 6.4.2.2.5. A schedule for the design and construction of the new hauled saline waste disposal facilities.

6.3.2.3. Ocean Outfall and Diffuser Monitoring

M1W shall conduct a dye dilution study once per year for four years, followed in the fifth year by a physical outfall inspection. This five-year cycle shall repeat thereafter unless the Central Coast Regional Water Board agrees to a reduction in frequency after adequate compliance is documented after the completion of the M1W ocean outfall and diffuser modifications and the discharge of Cal-Am MPWSP Desalination Plant brine waste. The dye dilution studies shall determine whether there are leaks, potential leaks, or malfunctions along the

outfall pipe/diffuser system from landfall to its ocean terminus. The physical outfall inspection will be conducted to check the structural integrity and possible external blockage of ports by rocks or sand deposition. Results of the dye studies and outfall inspections shall be reported in the applicable annual reports.

6.3.2.4. Plume Tracking Study

Plume tracking is a single study or ongoing program designed to assess dispersion and fate of the effluent plume discharged from the ocean outfall. The Dischargers shall conduct a plume tracking study, as described in section 9.5 of the MRP (Attachment E), after the MPWSP Desalination Plant discharge commences and the intake water quality has reached a stable state. If the MPWSP Desalination Plant discharge has not commenced or the intake water quality has not stabilized during this permit term, the plume tracking study monitoring surveys may not occur during this permit term. However, the Dischargers shall still comply with requirements to submit a plume tracking monitoring plan (PTMP) work plan and PTMP as described in section 9.5 of the MRP.

6.3.2.5. Before-After Control-Impact Study

Pursuant to Ocean Plan section III.M.4.a(2), Cal-Am shall conduct a Before-After Control-Impact Study that evaluates the differences in biological communities at reference locations and at the discharge location before and after the discharge from the MPWSP Desalination Plant commences. For the purpose of determining the “before”/baseline condition (i.e., pre-construction of outfall modifications and pre-MPWSP Desalination Plant discharge) of the discharge location and reference locations, Cal-Am shall conduct the receiving water monitoring requirements contained in section 8.3 of the MRP. Cal-Am shall submit a Final Brine Discharge Monitoring Plan to serve as a Before-After Control-Impact Study Work Plan as required in section 9.6.1 of the MRP. Cal-Am shall also consider historical receiving water monitoring results when evaluating the “before” condition. The “after” condition (i.e., post-MPWSP Desalination Plant discharge) shall, at a minimum, include the same monitoring requirements defined in sections 9.6 of the MRP. Results of the study shall be submitted 180 days after the completion of the post-discharge monitoring used to evaluate the after condition.

6.3.2.6. Final Marine Life Mortality Report (MLMR)

This Order requires mitigation to compensate for the marine life mortality associated with the addition of brine discharge from the MPWSP. The mitigation requirements of this Order were based on a draft MLMR. No later than 90 days following the effective date of this Order, Cal-Am shall submit a final MLMR to Central Coast Water Board that includes the following at a minimum:

- 6.3.2.6.1. A detailed and accurate description of the methodology used to calculate the area of production foregone including assumptions and use of existing mitigation calculation framework.
- 6.3.2.6.2. A description of climatic and physical oceanographic conditions at the time of sampling (weather observations, wind and current speed and direction, swell or wave action, time of sampling, tide height, water temperature, etc.);
- 6.3.2.6.3. A description of the sample collection, preservation, and identification procedures used in the study;
- 6.3.2.6.4. A description of all targeted taxa identified within the source waterbody;
- 6.3.2.6.5. An analysis of the size of the organisms collected during the study;
- 6.3.2.6.6. An analysis of the potential for taxa to be absent or undercounted due to unfavorable monitoring conditions or due to the monitoring equipment or methods;
- 6.3.2.6.7. An analysis of whether the residence time used to calculate the area of production foregone (APF) accurately reflects or conservatively estimates the appropriate exposure period of the species present in the source waterbody;
- 6.3.2.6.8. An analysis of the habitats of the identified taxa impacted by the MPWSP throughout their lifecycle; and
- 6.3.2.6.9. An estimate of the area in which salinity exceeds 2.0 parts per thousand above background salinity. This area shall be determined by modeling and confirmed by monitoring.

6.3.2.7. Final Marine Life Mitigation Plan (MLMP)

Within 6 months of the Central Coast Water Board's approval of the Final MLMR, Cal-Am shall submit a MLMP that describes Cal-Am's proposed mitigation project that will offset marine life and habitat impacts attributable to the operation of the MPWSP Desalination Plant after minimizing intake and mortality of all forms of marine life through best available site, design and technology. The MLMP must establish the specific steps and methods necessary to provide mitigation. The discharge from MPWSP Desalination Plant shall not commence until the Central Coast Water Board has approved the MLMP. The MLMP shall include the elements listed below:

- 6.3.2.7.1. Project objectives, site selection, site protection instrument (the legal arrangement or instrument that will be used to ensure the long-term protection of the compensatory mitigation project site), baseline site conditions, a mitigation work plan, an adaptive management plan, performance standards and success criteria, monitoring requirements, and financial assurances.
- 6.3.2.7.2. Description of whether the proposed mitigation project is in-kind mitigation, out-of-kind mitigation, or a mixture of both. If some or all of the proposed mitigation project is out-of-kind mitigation, the MLMP must include a detailed analysis of the biological production of the impacted open water or soft-bottom habitat and the biological production of the proposed out-of-kind

mitigation habitat. The MLMP must propose a mitigation ratio that either increases or decreases the mitigation habitat area based on the productivity analysis. Use of out-of-kind mitigation and mitigation ratios are subject to the approval of the Central Coast Water Board.

- 6.3.2.7.3. Detailed Agency Communication Plan that describes necessary permitting actions, permitting timelines and legal authority necessary from all relative State and Federal Agencies to ensure any proposed mitigation project can proceed in perpetuity.
- 6.3.2.7.4. A schedule for implementation of the Final Marine Life Mitigation Plan which shall include a proposed mitigation project timeline including expected dates for 30%, 60% and Final 90% Design Plan.
- 6.3.2.7.5. Provisions authorizing the California Department of Fish and Wildlife, the California Coastal Commission, the California State Lands Commission, the Monterey Bay National Marine Life Sanctuary, the Central Coast Water Board and the State Water Board to perform audits or site inspections of the proposed mitigation project.
- 6.3.2.7.6. A demonstration that the Final Marine Life Mitigation Plan provides for a full mitigation for the operational lifetime of the MPWSP. If the Monterey Peninsula Water Supply Project discharge commences prior to the mitigation project meeting performance standards, the Final Marine Life Mitigation Plan must account for the temporal loss of marine life and habitat productivity during the period extending from the commencement of the Monterey Peninsula Water Supply Project discharge until the mitigation project meets performance standards.
- 6.3.2.7.7. Cal-Am shall implement the mitigation described in the Final Marine Life Mitigation Plan upon approval by the Central Coast Water Board in consultation with the State Water Board, the California Coastal Commission, Monterey Bay National Marine Sanctuary, and other State Agencies having authority to condition approval of the project and require mitigation. If the mitigation project is subject to CEQA, any review under CEQA must be completed prior to the Central Coast Water Board's approval of the mitigation described in the Final Marine Life Mitigation Plan. A mitigation project performance report shall be submitted to the Central Coast Water Board 180 days prior to the expiration date of the NPDES permit.

6.3.3. Pollutant Minimization Program

- 6.3.3.1. The Dischargers shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as "Detected, but Not Quantified" (DNQ) when the effluent limitation is less than the "Method Detection Limit" (MDL), sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a pollutant is present in the effluent above an effluent limitation and either:

- 6.3.3.1.1. The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the reported "Minimum Level" (ML); or
- 6.3.3.1.2. The concentration of the pollutant is reported as "Not Detect" (ND) and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in section 10.2.4 of the MRP (Attachment E).
- 6.3.3.2. The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Central Coast Water Board:
 - 6.3.3.2.1. An annual review and semiannual monitoring of potential sources of the reportable pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;
 - 6.3.3.2.2. Quarterly monitoring for the reportable pollutant(s) in the influent to the wastewater treatment system;
 - 6.3.3.2.3. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable pollutant(s) in the effluent at or below the effluent limitation;
 - 6.3.3.2.4. Implementation of appropriate cost-effective control measures for the reportable pollutant(s), consistent with the control strategy; and
 - 6.3.3.2.5. An annual status report that shall be sent to the Central Coast Water Board including:
 - a. All PMP monitoring results for the previous year;
 - b. A list of potential sources of the reportable pollutant(s);
 - c. A summary of all actions undertaken pursuant to the control strategy; and
 - d. A description of actions to be taken in the following year.

6.3.4. Construction, Operation and Maintenance Specifications

The Facilities shall be operated as specified under sections 1.4 and 8.2.11 of the Standard Provisions in Attachment D.

6.3.4.1. Construction Status Updates

- 6.3.4.1.1. Cal-Am shall provide quarterly updates to the Central Coast Water Board on MPWSP facilities construction status, beginning in the first quarter after the effective date of the Order.
- 6.3.4.1.2. Cal-Am shall provide updates to the public on its website for the MPWSP facilities and to the Central Coast Water Board 60 days prior to the first discharge from the Cal-Am MPWSP Desalination Plant.

6.3.5. Special Provisions for Publicly Owned Treatment Works (POTWs)

6.3.5.1. Biosolids Management

Provisions regarding sludge handling and disposal ensure that such activity will comply with all applicable regulations. Part 503 of 40 CFR sets forth the USEPA's final rule for the use and disposal of biosolids, or sewage sludge, and governs the final use or disposal of biosolids. The intent of this federal program is to ensure that sewage sludge is used or disposed of in a way that protects both human health and the environment. USEPA's regulations require that producers of sewage sludge meet certain reporting, handling, and disposal requirements. As the USEPA has not delegated the authority to implement the sludge program to the State of California, the enforcement of sludge requirements that apply to M1W remains under USEPA's jurisdiction at this time. The USEPA, not the Central Coast Water Board, will oversee compliance with 40 CFR part 503.

6.3.5.2. Pretreatment

M1W shall be responsible for the performance of all pretreatment requirements contained in 40 CFR part 403 and shall be subject to enforcement actions, penalties, fines, and other remedies by the USEPA, or other appropriate parties, as provided in the CWA, as amended (33 U.S. Code § 1351 et seq.). M1W shall implement and enforce its approved POTW Pretreatment Program. Implementation of the M1W's approved POTW Pretreatment Program is hereby made an enforceable condition of this Order. USEPA may initiate enforcement action against an industrial user for noncompliance with applicable standards and requirements as provided in the CWA.

M1W shall enforce the requirements promulgated under CWA sections 307(b), (c), and (d) and 402(b). M1W shall cause industrial users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharge. M1W shall perform the pretreatment functions as required in 40 CFR part 403, including, but not limited to:

- 6.3.5.2.1. Implement necessary legal authorities as provided in 40 CFR section 403.8 (f)(1);
- 6.3.5.2.2. Enforce the pretreatment requirements under 40 CFR sections 403.5 and 403.6;
- 6.3.5.2.3. Implement the programmatic functions as provided in 40 CFR section 403.8 (f)(2); and,
- 6.3.5.2.4. Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR section 403.8 (f)(3).

M1W shall submit annually a report to the USEPA Region 9, the Central Coast Water Board, and the State Water Board describing M1W's pretreatment activities over the previous 12 months. In the event that M1W is not in

compliance with conditions or requirements of this Order affected by the pretreatment program, it shall also include reasons for noncompliance and a statement how and when it shall comply. This annual report is due by March 1 of each year and shall contain, but not be limited to, the contents described in section 9.3 of the MRP (Attachment E).

6.3.5.3. Collection System

M1W is subject to the requirements of and must separately comply with State Water Board Order 2022-0103-DWQ, *Statewide Waste Discharge Requirements General Order for Sanitary Sewer Systems*, including monitoring and reporting requirements, and any subsequent revision to that order. This General Permit, adopted on December 6, 2022, is applicable to all “federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially-treated wastewater to a publicly owned treatment facility in the State of California.” The purpose of this General Permit is to promote the proper and efficient management, operation, and maintenance of sanitary sewer systems and to minimize the occurrences and impacts of sanitary sewer overflows.

6.3.5.4. Resource Recovery from Anaerobically Digestible Material

M1W receives hauled-in anaerobically digestible material for injection into an anaerobic digester pursuant to standard operating procedures (SOPs) developed by M1W for this activity. The SOPs shall be updated as appropriate and shall address material handling, including unloading, screening, or other processing prior to anaerobic digestion; transportation; spill prevention; and spill response. In addition, the SOPs shall address avoidance of the introduction of materials that could cause interference, pass-through, or upset of the treatment processes; avoidance of prohibited material; vector control; odor control; operation and maintenance; and the disposition of any solid waste segregated from introduction to the digester. M1W shall train its staff on the SOPs and shall maintain records for a minimum of five years for each load received, describing the hauler, waste type, and quantity received. In addition, M1W shall maintain records for a minimum of five years for the disposition, location, and quantity of cumulative pre-digestion-segregated solid waste hauled offsite.

6.3.5.5. Treatment Plant Capacity Report

Four years prior to reaching RTP design capacity, M1W shall submit a Treatment Plant Capacity Report to the Central Coast Water Board showing how flow volumes will be prevented from exceeding existing capacity or how capacity will be increased. A notification and copy of the report shall be sent to appropriate local elected officials, local permitting agencies, and the press. The required technical report shall be reviewed, approved, and jointly submitted to the Central Coast Water Board by all planning and building departments having jurisdiction in the area served by the RTP. Opportunities for public participation and involvement are required during the preparation and development of the

technical report. The report shall be accompanied by a statement outlining how interested persons were involved in the preparation of the technical report.

6.3.5.6. Asset Management Plan

M1W shall develop and submit to the Central Coast Water Board within 180 days of the effective date of this Order an Asset Management Plan to ensure proper operation and maintenance of the POTW. M1W may rely on existing documents to develop the Asset Management Plan. The Asset Management Plan shall include the following elements:

a. Rehabilitation and Replacement Plan

The Asset Management Plan shall identify and prioritize upcoming asset rehabilitation and replacement projects costing greater than \$100,000 and outline a proposed schedule for completion of each project.

b. Maintenance Plan

The Asset Management Plan shall identify individual or categories of maintenance activities and frequency with which they are performed. The Plan shall also estimate ongoing and projected cost of maintenance activities.

c. System Map

A map of the system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the wastewater treatment plant shall incorporate assets from the asset management inventory. The map shall be color-coded to identify maintenance and rehabilitation priorities.

d. Funding

The Asset Management Plan shall create an accounting of current and projected funding sources, relevant expenses and financial reserves. Expenses may include operational, administrative, interest, or capital expenses. Funding sources may include federal, State, local or private grants, loans, or bonds, as well as connection and user fees.

e. System Projections

The Asset Management Plan shall evaluate growth projections of population and service area and potential vulnerabilities resulting from climate change over the next 30 years.

M1W shall reevaluate and update the Asset Management Plan as needed and provide an updated Asset Management Plan to the Central Coast Water Board at least 180 days prior to the expiration date of this Order.

6.3.6. Other Special Provisions

6.3.6.1. Discharges of Stormwater

This Order does not authorize the discharge of stormwater. For the control of stormwater discharged from the sites of the Facilities, if applicable, M1W and Cal-Am shall separately seek authorization to discharge under and meet the requirements of State Water Board WQ Order 2014-0057- DWQ, NPDES General Permit CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities*.

6.3.6.2. Climate Change Response Hazards and Vulnerabilities Plans

With the ROWD submitted for reissuance of this Order, the Dischargers shall each separately submit a climate change response hazards and vulnerabilities plan describing their long-term approaches to identify and address climate change hazards and vulnerabilities at their respective Facilities, including all associated infrastructure (e.g., seawater intake wells, treatment facilities, conveyances to discharge points, discharge facilities). The plans shall, at minimum:

- 6.3.6.2.1. Identify current approaches being implemented at the Facilities to reduce greenhouse gas emissions and assess potential approaches to be implemented at their respective Facilities to reduce greenhouse gas emissions in the future based on effectiveness in reducing greenhouse gas emissions and feasibility of implementation.
- 6.3.6.2.2. Identify and prioritize climate change hazards at the Facilities and assess Facilities' vulnerability to climate change hazards that could cause reduction, loss, or failure of treatment processes and/or critical structures at their respective Facilities. For the anticipated life of the Facilities, accounting for forecast climatic changes, the plan shall, at a minimum, include analysis of the following:
 - 6.3.6.2.2.1. The range of potential sea-level-rise flooding scenarios at the Facilities.
 - 6.3.6.2.2.2. The range of potential temperature scenarios; and the range of potential extreme low and extreme high influent flow and loading scenarios.
- 6.3.6.2.3. Identify triggers that will initiate responses at the Facilities.
- 6.3.6.2.4. Identify and prioritize potential responses to climate change hazard triggers, accounting for a full suite of potential adaptation responses. The Dischargers shall prioritize options that achieve long-term Facilities safety and operation and minimize resource impacts to their respective facilities.
- 6.3.6.2.5. Identify the next steps the Dischargers will implement to ensure that the Facilities are safe from and resilient to climate change hazards.

7. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section 4 of this Order will be determined as specified below:

7.1. General

Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined in the MRP and Attachments A and D of this Order. For purposes of reporting and administrative enforcement by the Central Coast Water Board and State Water Board, the Dischargers shall be deemed out of compliance with effluent limitations if the concentration of the reportable pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported ML.

7.2. Multiple Sample Data

When determining compliance with a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple samples analyses and the data set contains one or more reported determinations of DNQ or ND, the Dischargers shall compute the median in place of the arithmetic mean in accordance with the following procedure:

- 7.2.1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The Order of the individual ND or DNQ determinations is unimportant.
- 7.2.2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

7.3. 6-Month Median Effluent Limitation

If the median of calculated daily average results over any 180-day period exceeds the 6-Month Median Effluent Limitation for a given parameter, an alleged violation will be flagged, and the Dischargers will be considered out of compliance for each day of that six-month period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given six-month period and the analytical result for that sample exceeds the 6-Month Median Effluent Limitation, the Dischargers will be considered out of compliance for the six-month period. For any six-month period during which no sample is taken, no compliance determination can be made for the six-month median limitation.

7.4. 30-Day Average Effluent Limitation

30-day Average Effluent Limitations are applied as Average Monthly Effluent Limitations.

7.5. Average Monthly Effluent Limitation (AMEL)

If the average of calculated daily average results over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the Dischargers will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance in a 31-day month). The average over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Dischargers will be considered out of compliance for that calendar month. For any one calendar month during which no sample is taken, no compliance determination can be made for that calendar month.

7.6. 7-Day Average Effluent Limitation

7-day Average Effluent Limitations are applied as Average Weekly Effluent Limitations.

7.7. Average Weekly Effluent Limitation (AWEL)

If the average of calculated daily average results over a calendar week exceeds the AWEL for a given parameter, an alleged violation will be flagged and the Dischargers will be considered out of compliance for each day of that week for that parameter, resulting in seven days of noncompliance. The average over the calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Dischargers will be considered out of compliance for that calendar week. For any one calendar week during which no sample is taken, no compliance determination can be made for that calendar week.

7.8. Maximum Daily Effluent Limitation (MDEL)

If a calculated daily average result exceeds the MDEL for a given parameter, an alleged violation will be flagged, and the Dischargers will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any one day during which no sample is taken, no compliance determination can be made for that day.

7.9. Instantaneous Maximum Effluent Limitation (IMAX)

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, an alleged violation will be flagged, and the Dischargers will be considered out of compliance for that parameter for that single sample. Noncompliance for each grab sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of noncompliance with the instantaneous maximum effluent limitation). Unless otherwise specified, if monitoring is conducted through continuous metering, the Dischargers shall report a corresponding instantaneous maximum calculated value

reflecting the single highest measurement of the day, leading to a maximum of one instance of noncompliance per day during continuous metering.

7.10. Instantaneous Minimum Effluent Limitation (IMIN)

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, an alleged violation will be flagged, and the Dischargers will be considered out of compliance for that parameter for that single sample. Noncompliance for each grab sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of noncompliance with the instantaneous minimum effluent limitation). Unless otherwise specified, if monitoring is conducted through continuous metering, the Dischargers shall report a corresponding instantaneous minimum calculated value reflecting the single lowest measurement of the day, leading to a maximum of one instance of noncompliance per day during continuous metering.

7.11. Acute and Chronic Toxicity

The discharge is subject to determination of “Pass” or “Fail” from an acute or chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-004, 2010), Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is:

Mean discharge IWC response $\leq 0.75 \times$ Mean control response.

A test result that rejects this null hypothesis is reported as “Pass.” A test result that does not reject this null hypothesis is reported as “Fail.” Acute and chronic WET testing is to be performed with only two test concentrations, the laboratory control and a single effluent treatment (the IWC). As discussed in Fact Sheet section 4.3.7, evaluation of concentration-response does not apply to single-concentration (IWC) tests where the TST is applied. Concentration-response is required during accelerated monitoring tests.

The MDEL for acute or chronic toxicity (in Table 6) is exceeded and a violation will be flagged when an acute or chronic toxicity test, analyzed using the TST statistical approach, results in “Fail.”

The acute and chronic toxicity MDELs are set at the IWC for the discharge and expressed in units of the TST statistical approach (“Pass” or “Fail”). The IWC will depend on the applicable Dm as provided in Table 8 and Table 9 of this Order. Where toxicity test requires sample collection on multiple days, the Dischargers shall base the IWC on the single Dm that is applicable on all days of sampling.

ATTACHMENT A – DEFINITIONS

Areas of Special Biological Significance (ASBS)

Those areas designated by the State Water Resources Control Board (State Water Board) as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All ASBS are also classified as a subset of State Water Quality Protection Areas (SWQPAs).

Average Dry Weather Flow (ADWF)

The average flow of sanitary wastewater and groundwater infiltration over a period of 7 to 14 days during extended dry weather and high groundwater season. The ADWF calculation excludes significant industrial and commercial flows, and assumes no inflow during dry weather conditions.

Average Monthly Effluent Limitation (AMEL)

The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)

The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Brine Mixing Zone (BMZ)

The area where salinity may exceed 2.0 parts per thousand above natural background salinity, or the concentration of salinity approved as part of an alternative receiving water limitation. The standard BMZ shall not exceed 100 meters (328 feet) laterally from the points of discharge and throughout the water column. An alternative BMZ, if approved as described in chapter III.M.3.d of the 2019 *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan), shall not exceed 200 meters (656 feet) laterally from the points of discharge and throughout the water column. The BMZ is an allocated impact zone where there may be toxic effects on marine life due to elevated salinity.

Brine Waste

Waste with total dissolved solids greater than seawater. For the Central Coast of California this means total dissolved solids concentrations greater than about 33,000 mg/L.

Chlordane

The sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane. Per Appendix A of 40 CFR Part 136, technical chlordane may be used when historical data has been reported as such.

Daily Discharge

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Degradation

Degradation shall be determined by comparison of the waste field and reference site(s) for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected or are not the only ones affected.

Desalination Facility

Industrial facility that processes water to remove salts and other components from the source water to produce water that is less saline than the source water.

Detected, but Not Quantified (DNQ)

Sample results that are less than the reported Minimum Level (RL), but greater than or equal to the laboratory's method detection limit (MDL). Sample results reported as DNQ are estimated concentrations.

Dichlorobenzenes

The sum of 1,2- and 1,3-dichlorobenzene.

Dichlorodiphenyltrichloroethane (DDT)

The sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

Discharger or Dischargers

This Order establishes unique requirements that apply only to M1W and unique requirements that apply only to Cal-Am. For these unique requirements that apply only to one party, this Order uses either M1W or Cal-Am individually to refer to the party responsible for compliance. However, because the waste generated from M1W's facilities and the waste generated from Cal-Am's facility will be commingled prior to discharge to the Pacific Ocean, this Order also specifies requirements that apply to both M1W and Cal-Am. In these limited situations, this Order uses the term "dischargers".

Dredged Material

Any material excavated or dredged from the navigable waters of the United States, including material otherwise referred to as "spoil."

Enclosed Bays

Indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

Endosulfan

The sum of endosulfan-alpha and -beta and endosulfan sulfate.

Estuaries and Coastal Lagoons

Waters at the mouths of streams that serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams that are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by Section 12220 of the California Water Code (Water Code), Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

Feasible

Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

Halomethanes

The sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

Hauled Saline Waste

Wastewaters hauled to the Monterey One Water (M1W) Regional Treatment Plant (RTP) by private waste haulers or water treatment facilities. The saline waste may include concentrate from reverse osmosis, softener regenerate wastes, and waste solutions from ion exchange regeneration. This waste is generally less salty than seawater desalination brine but more salty than domestic wastewater.

Hexachlorohexane (HCH)

The sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

Initial Dilution

The process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board), whichever results in the lower estimate for initial dilution.

Instantaneous Maximum Effluent Limitation (IMAX)

The highest allowable value for any single grab sample (i.e., each grab sample is independently compared to the instantaneous maximum limitation) or for the daily instantaneous maximum of continuous metered measurements (i.e., only the highest value of a day's continuous metering is compared to the IMAX).

Instantaneous Minimum Effluent Limitation (IMIN)

The lowest allowable value for any single grab sample (i.e., each grab sample is independently compared to the instantaneous minimum limitation) or for the daily instantaneous minimum of continuous metered measurements (i.e., only the lowest value of a day's continuous metering is compared to the IMIN).

In-stream Waste Concentration (IWC)

The concentration of a toxicant of effluent in the receiving water expressed as percent after mixing (the inverse of the dilution factor). A discharge of 100% effluent will be considered the IWC whenever mixing zones or dilution credits are not authorized by the applicable Water Board.

Kelp Beds

For purposes of the bacteriological standards of the Ocean Plan, kelp beds are significant aggregations of marine algae of the genera *Macrocystis* and *Nereocystis*. Kelp beds include the total foliage canopy of *Macrocystis* and *Nereocystis* plants throughout the water column.

The Zone of Initial Dilution (ZID) of wastewater outfalls is excluded from designation as kelp beds for the purposes of bacterial standards. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards.

Mariculture

The culture of plants and animals in marine waters independent of any pollution source.

Material

(a) In common usage: (1) the substance or substances of which a thing is made or composed (2) substantial; (b) For purposes of the Ocean Plan relating to waste disposal, dredging and the disposal of dredged material and fill, "material" means matter of any kind or description which is subject to regulation as waste, or any material dredged from the navigable waters of the United States.

Maximum Daily Effluent Limitation (MDEL)

The highest allowable daily discharge of a pollutant.

Method Detection Limit (MDL)

The minimum concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 CFR part 136, Attachment B.

Minimum Level (ML)

The concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mitigation

Mitigation is the replacement of all forms of marine life or habitat that is lost due to the construction and operation of a desalination facility after minimizing intake and

mortality of all forms of marine life through best available site, design and technology..

Natural Background Salinity

The salinity at a location that results from naturally occurring processes and is without apparent human influence. For purposes of determining natural background salinity, the Central Coast Water Board may approve the use of: (1) the mean monthly natural background salinity shall be determined by averaging 20 years of historical salinity data in the proximity of the proposed discharge location and at the depth of the proposed discharge when feasible. When historical data are not available, natural background salinity shall be determined by measuring salinity at depth of the proposed discharge for 3 years, on a weekly basis prior to a desalination facility discharging brine, and the mean monthly natural salinity shall be used to determine natural background salinity; or (2) the actual salinity at a reference location, or reference locations, that is representative of natural background salinity at the discharge location. The reference locations shall be without apparent human influence, including wastewater outfalls and brine discharges. Either method to establish natural background salinity may be used for the purpose of determining compliance with the receiving water limitation and the effluent limitation for salinity. If a reference location(s) is used for compliance monitoring, the permit should specify that historical data shall be used if reference location data becomes unavailable. An owner or operator shall submit to the regional water board all necessary information to establish natural background salinity.

Natural Light

The reduction of natural light may be determined by the Central Coast Water Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Central Coast Water Board.

Not Detected (ND)

Those sample results less than the laboratory's MDL.

Ocean Waters

The territorial marine waters of the state as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the state could affect the quality of the waters of the state, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

Polychlorinated Biphenyls (PCBs)

For compliance with the Ocean Plan: the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

Polynuclear Aromatic Hydrocarbons (PAHs)

The sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

Peak Wet Weather Flow (PWWF)

The highest hourly flow rate of wastewater that occurs during a significant rainstorm and exceeds the treatment capacity of a wastewater treatment plant.

Phenolic Compounds (Chlorinated)

The sum of 2,4,5-trichlorophenol; 2,4,6-trichlorophenol; 2,4-dichlorophenol; 2,6-dichlorophenol; and 2-chlorophenol pentachlorophenol.

Phenolic Compounds (Non-Chlorinated)

The sum of phenol, 2,4-dimethylphenol, 2-nitrophenol, 4-nitrophenol, 2,4-dinitrophenol, and 2-methyl-4,6-dinitrophenol.

Pollutant Minimization Program (PMP)

The PMP includes waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of Ocean Plan Table 3 pollutants through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Central Coast Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Recycled Water Producer

An entity that is permitted to produce recycled water consistent with California Code of Regulations, Title 22 at a wastewater treatment plant or water recycling treatment plant.

Reporting Level (RL)

The reported ML (also known as the reporting level or RL) is the ML (and its associated analytical method) chosen by the Dischargers for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are

selected by the Central Coast Water Board either from Appendix II of the Ocean Plan in accordance with section III.C.5.a. of the Ocean Plan or established in accordance with section III.C.5.b. of the Ocean Plan. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the reported ML.

Reverse Osmosis (RO) Concentrate

Concentrate from the RO process at the M1W Advanced Water Purification Facility (AWPF).

Salinity

A measure of the dissolved salts in a volume of water. Salinity shall be measured using a standard method approved by the Central Coast Water Board (e.g. Standard Method 2520 B, USEPA Method 120.1, USEPA Method 160.1) and reported in parts per thousand (ppt). For historical salinity data not recorded in parts per thousand, the Central Coast Water Board may accept converted data at their discretion.

Seawater

Saltwater that is in or from the ocean. For implementation of section III.M of the Ocean Plan, seawater includes tidally influenced waters in coastal estuaries and coastal lagoons and underground salt water beneath the seafloor, beach, or other contiguous land with hydrologic connectivity to the ocean.

Shellfish

Organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e., mussels, clams, and oysters).

Significant Difference

Defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

Six-Month Median Effluent Limitation

The highest allowable moving median of all daily discharges for any 180-day period.

Source Water Body

The spatial area that contains the organisms that are at risk of entrainment at a desalination facility as determined by factors that may include, but are not limited to, biological, hydrodynamic, and oceanographic data.

State Water Quality Protection Areas (SWQPA)

Non-terrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All ASBS that were previously designated by the State Water Board in Resolutions 74-28, 74-32, and 75-61 are now also classified as a subset of SWQPA and require special protections afforded by the Ocean Plan.

Subsurface Intake

For the purpose of implementing chapter III.M of the Ocean Plan, subsurface intake is an intake withdrawing seawater from the area beneath the ocean floor or beneath the surface of the earth inland from the ocean.

TCDD (2,3,7,8-tetrachlorodibenzo-p-dioxin) Equivalents

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.

Figure A-1. TCDD Toxicity Factors

Isomer Group	Toxicity Equivalence Factor
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
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

Toxicity Identification Evaluation (TIE)

A set of procedures to characterize, identify, and confirm the cause of acute and chronic toxicity effects. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.

Toxicity Reduction Evaluation (TRE)

A study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and

maintenance practices, and best management practices. A TIE may be required as part of the TRE, if appropriate.

Trash

All improperly discarded solid material from any production, manufacturing, or processing operations, including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Waste

As used in the Ocean Plan, waste includes a Discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

Waste Ratio

The ratio of M1W RO concentrate from AWPf plus M1W hauled saline waste from RO or ion exchange regeneration systems to M1W total waste (M1W AWPf RO concentrate plus M1W hauled saline waste plus M1W RTP secondary-treated wastewater).

Water Recycling

The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would otherwise occur.

ATTACHMENT B – MAPS



Figure B-1. Current Regional Map of Monterey One Water (M1W) Regional Treatment Plant (RTP) and Advanced Water Purification Facility (AWPF) Infrastructure Components



Figure B-2. Regional Map of M1W RTP and AWPf Infrastructure Components with Future California American Water Company (Cal-Am) Monterey Peninsula Water Supply Project (MPWSP) Desalination Plant Infrastructure

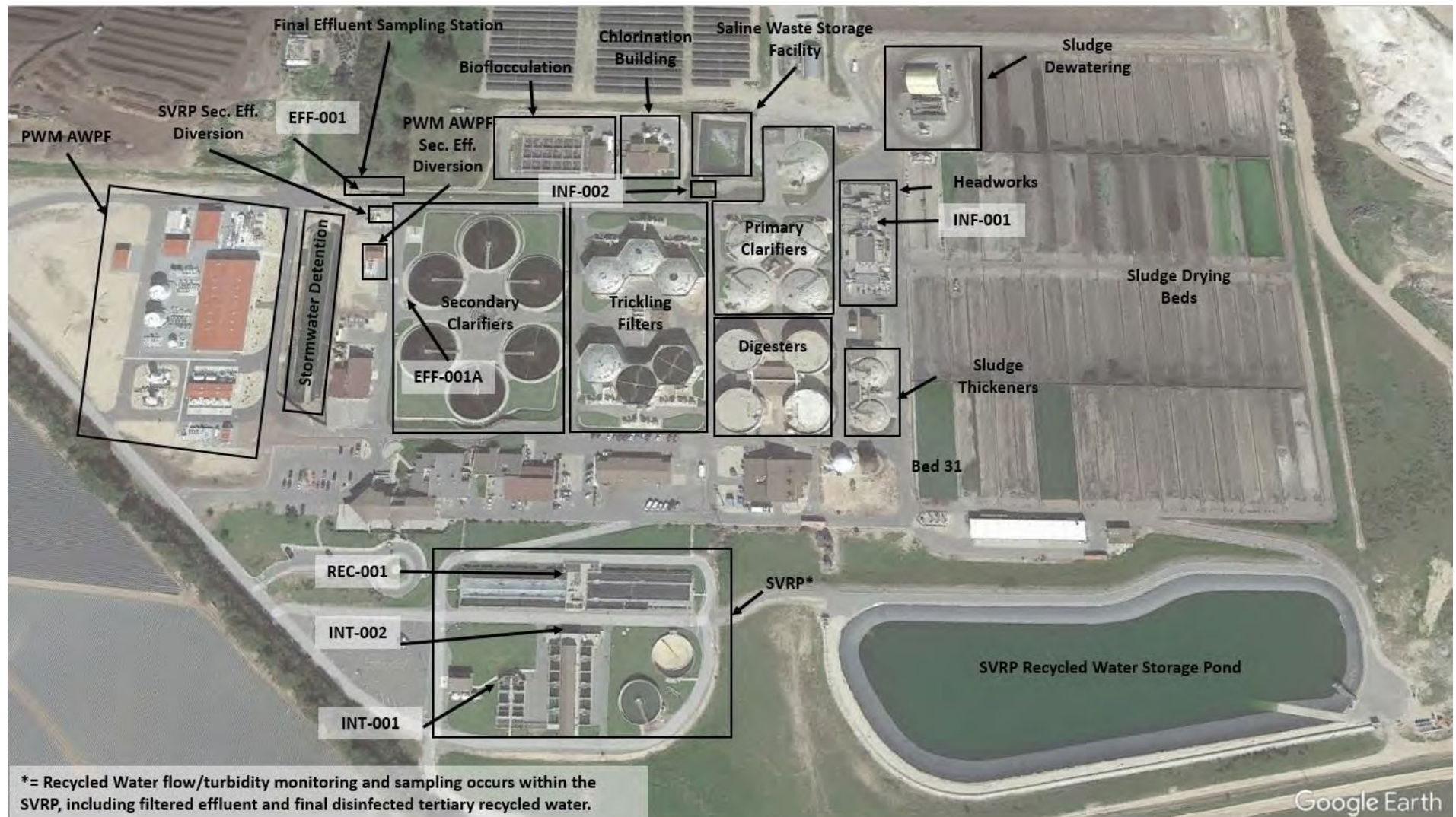


Figure B-3. Current M1W RTP and AWPf Site Map and Monitoring Locations

M1W RTP, SVRP, AND AWPf
CAL-AM MPWSP DESALINATION PLANT

DRAFT ORDER R3-2026-0057
NPDES PERMIT CA3000003

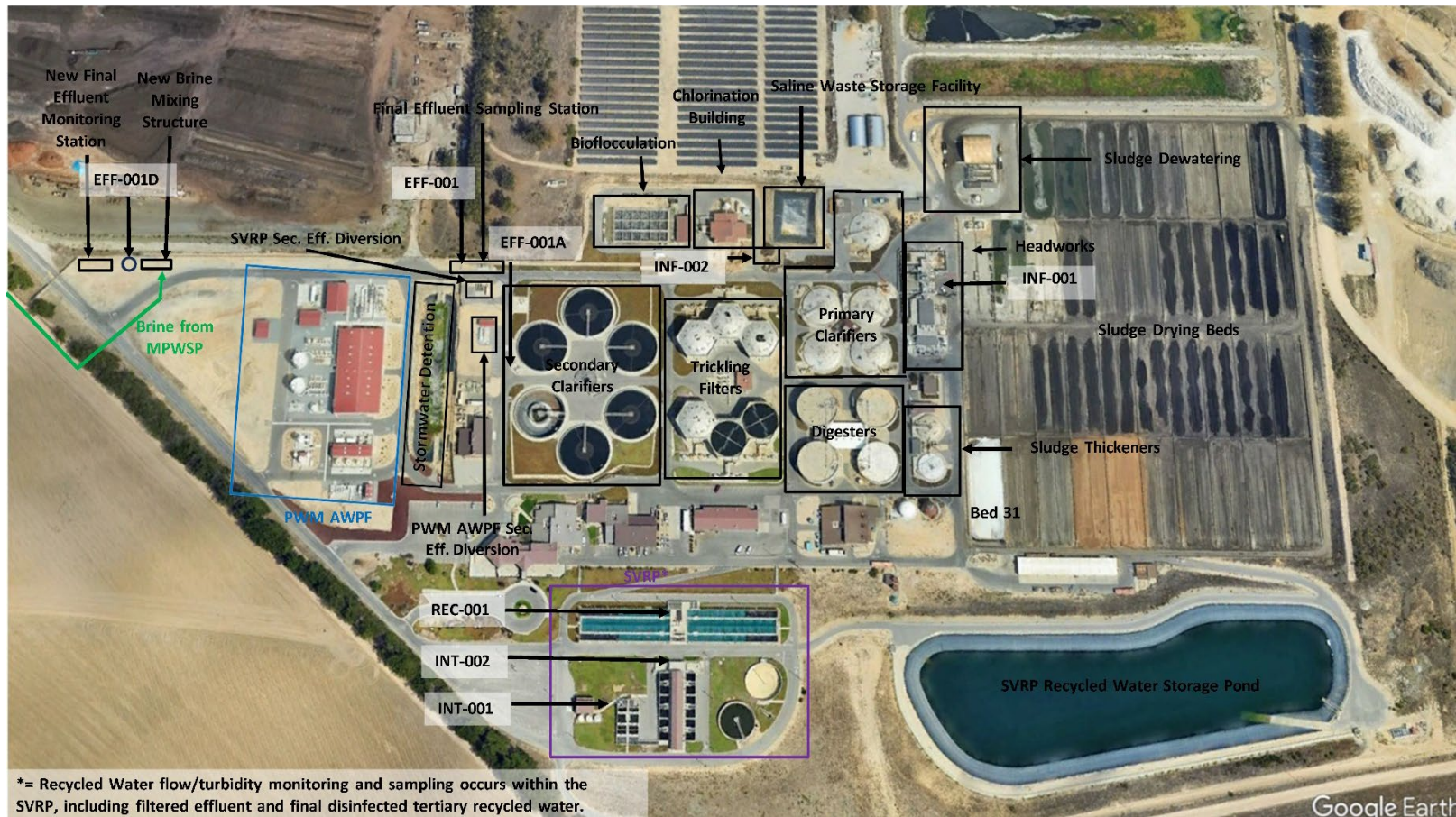


Figure B-4. Future M1W RTP and AWPf Site Map and Monitoring Locations After Commencement of Cal-Am MPWSP Desalination Plant Discharge

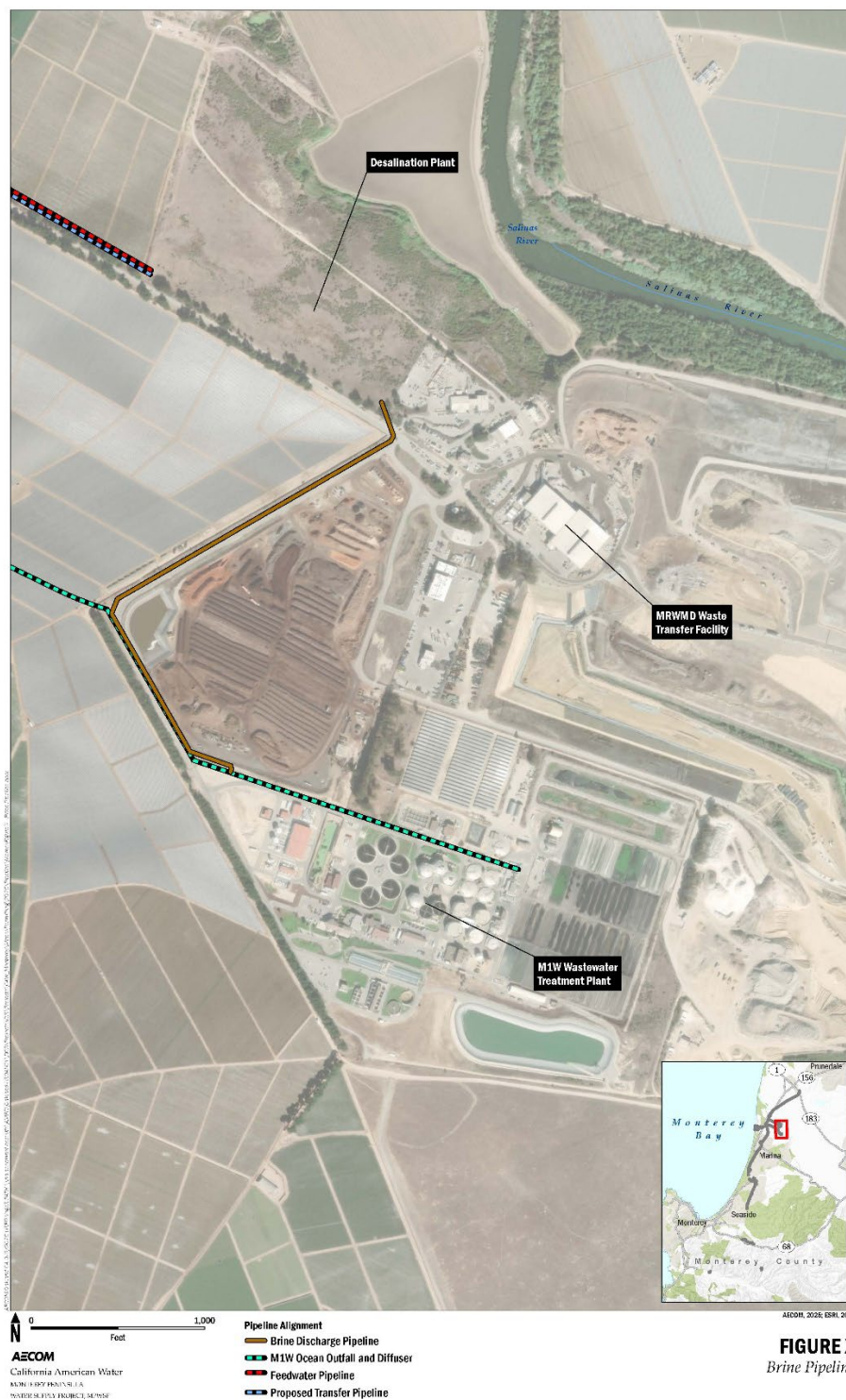


Figure B-5. M1W RTP and Future MPWSP Desalination Plant Location Map

DRAFT ORDER R3-2026-0057
NPDES PERMIT CA3000003



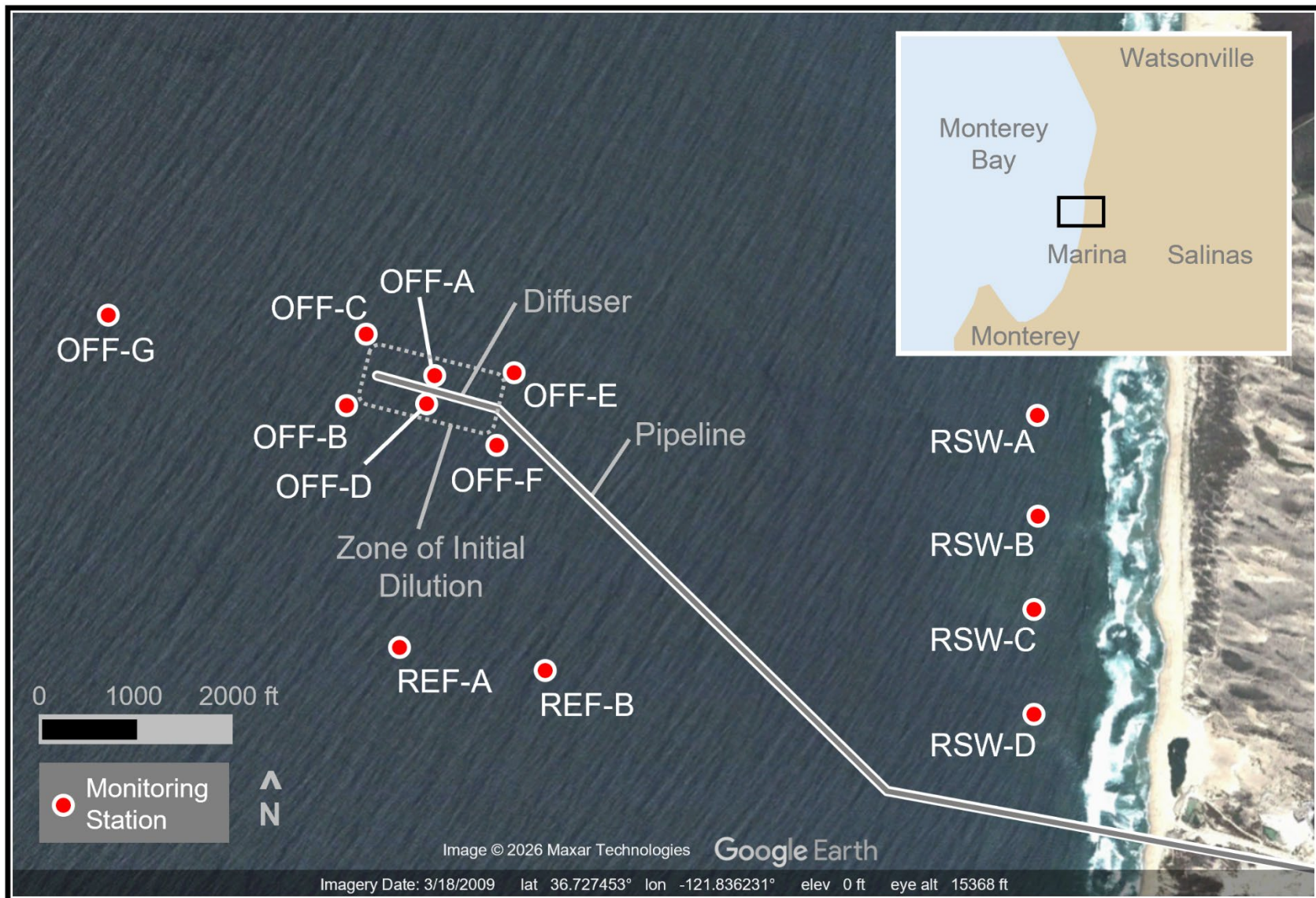


Figure B-7. Receiving Water Monitoring Locations

ATTACHMENT C – FLOW SCHEMATIC

RTP, SVRP & AWPf Treatment Process Overview

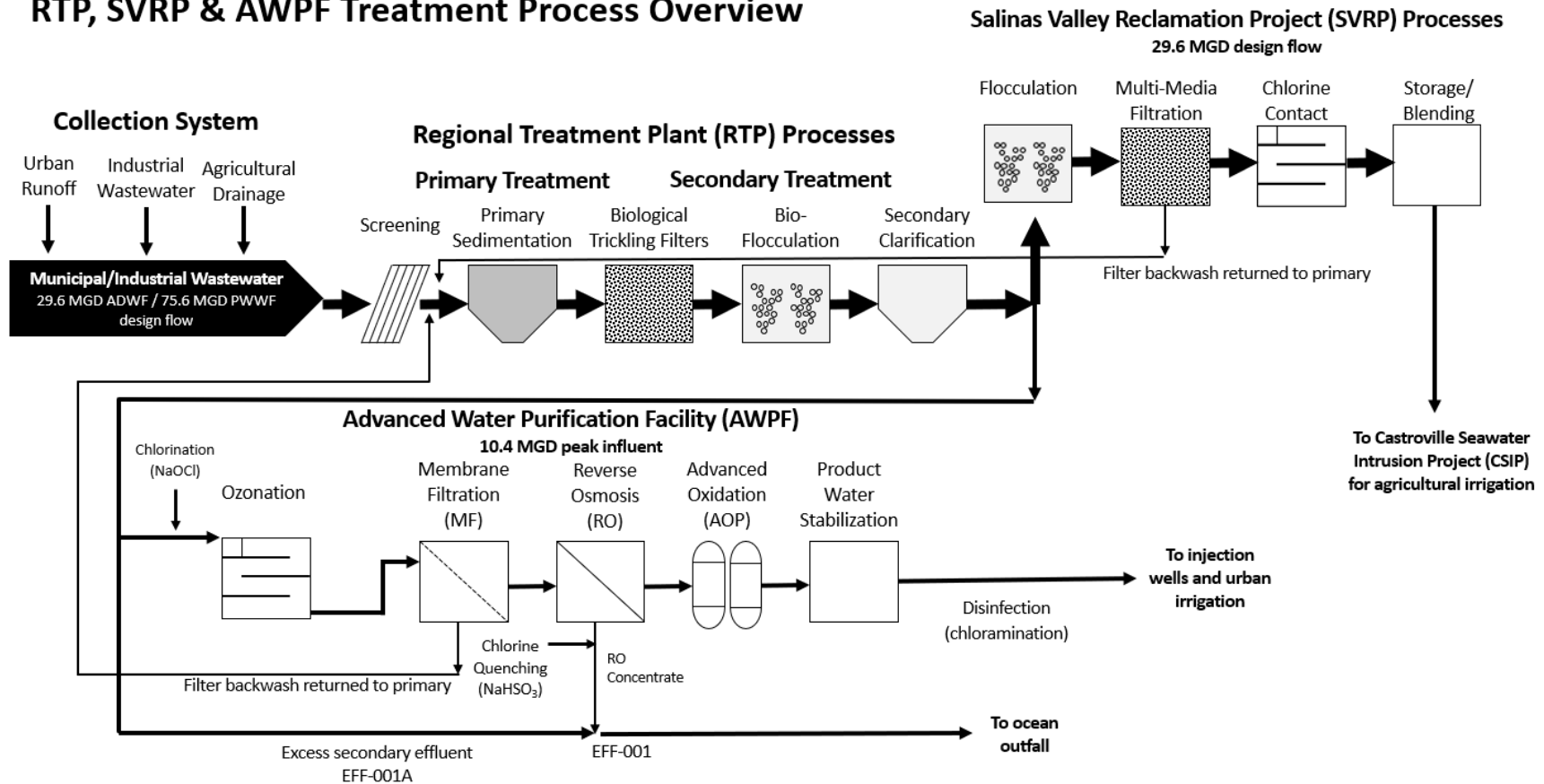


Figure C-1. Current Process Flow Schematic for the Monterey One Water (M1W) Regional Treatment Plan (RTP) and Advanced Water Purification Facility (AWPF).

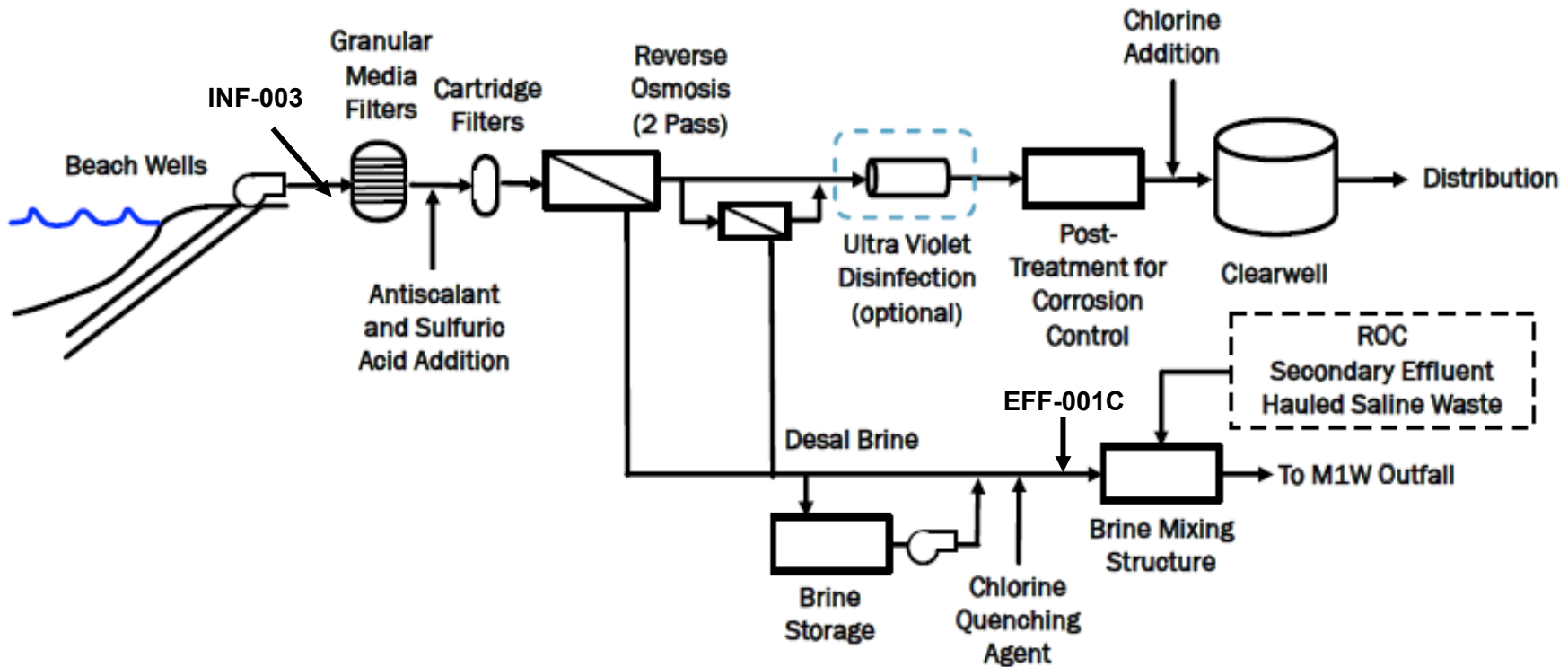


Figure C-2. Process Flow Schematic for the Future California American Water Company (Cal-Am) Monterey Peninsula Water Supply Project (MPWSP) Desalination Plant¹

¹ Cal-Am is expected to begin construction of the MPWSP Desalination Plant in October 2026, with operation start-up in October 2029.

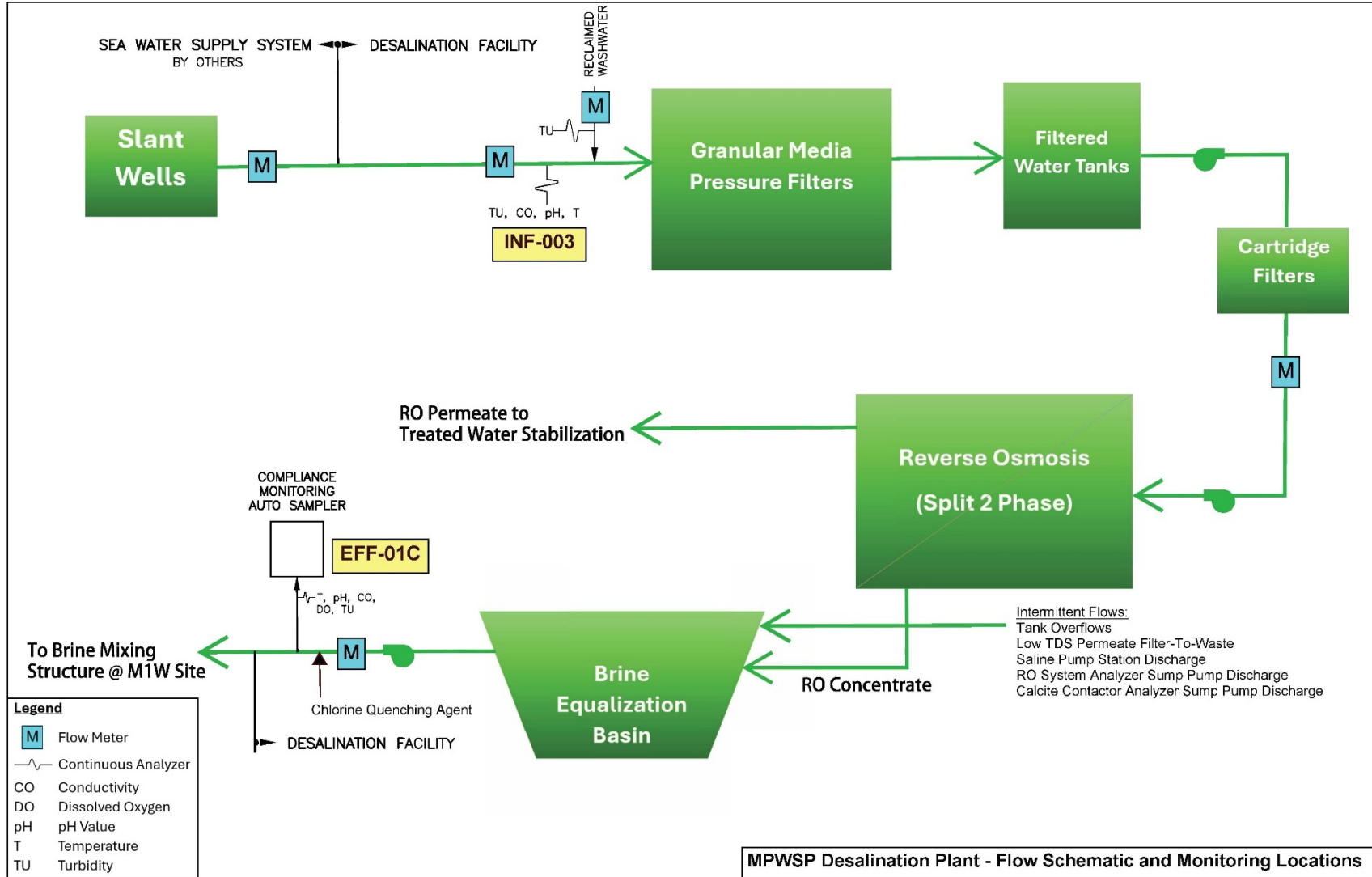


Figure C-3. Process Flow Schematic and Continuous Monitoring Locations for Future Cal-Am MPWSP Desalination Plant

ATTACHMENT D – STANDARD PROVISIONS

1. STANDARD PROVISIONS – PERMIT COMPLIANCE

1.1. Duty to Comply

- 1.1.1. With the exception of those sections of this Order that apply to a particular Discharger alone, both Dischargers must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (Water Code) and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (Title 40 of the Code of Federal Regulations [CFR] § 122.41(a); Water Code §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
- 1.1.2. The Dischargers shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR § 122.41(a)(1).)

1.2. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 CFR § 122.41(c).)

1.3. Duty to Mitigate

The Dischargers shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR § 122.41(d).)

1.4. Proper Operation and Maintenance

The Dischargers shall at all times properly operate and maintain their respective facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Dischargers to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR § 122.41(e).)

1.5. Property Rights

- 1.5.1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 122.41(g).)

- 1.5.2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR § 122.5(c).)

1.6. Inspection and Entry

The Dischargers shall allow the California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board), State Water Resources Control Board (State Water Board), U.S. Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(b); 40 CFR § 122.41(i); Water Code §§ 13267, 13383):

- 1.6.1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(i); 40 CFR § 122.41(i)(1); Water Code §§ 13267, 13383);
- 1.6.2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 CFR § 122.41(i)(2); Water Code §§ 13267, 13383);
- 1.6.3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 CFR § 122.41(i)(3); Water Code §§ 13267, 13383); and
- 1.6.4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(b); 40 CFR § 122.41(i)(4); Water Code §§ 13267, 13383.)

1.7. Bypass

1.7.1. Definitions

- 1.7.1.1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 122.41(m)(1)(i).)
- 1.7.1.2. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR § 122.41(m)(1)(ii).)

1.7.2. Bypass Not Exceeding Limitations

The Dischargers may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to

assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance 1.7.3, 1.7.4, and 1.7.5 below. (40 CFR § 122.41(m)(2).)

1.7.3. Prohibition of Bypass

Bypass is prohibited, and the Central Coast Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR § 122.41(m)(4)(i)):

- 1.7.3.1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 122.41(m)(4)(i)(A));
- 1.7.3.2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and
- 1.7.3.3. The Discharger submitted notice to the Central Coast Water Board as required under Standard Provisions – Permit Compliance 1.7.5 below. (40 CFR § 122.41(m)(4)(i)(C).)

1.7.4. Anticipated Bypass

The Central Coast Water Board may approve an anticipated bypass, after considering its adverse effects, if the Central Coast Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance 1.7.3 above. (40 CFR § 122.41(m)(4)(ii).)

1.7.5. Notice

1.7.5.1. Anticipated bypass

If a discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the date of the bypass. The notice shall be sent to the Central Coast Water Board. As of December 2023, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(i).)

1.7.5.2. Unanticipated bypass

The Dischargers shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting 5.5 below (24-hour notice). The notice shall be sent to the Central Coast Water Board. As of December 2023, all notices must be submitted electronically to the initial recipient defined in Standard Provisions

– Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(ii).)

1.8. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Dischargers. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR § 122.41(n)(1).)

1.8.1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance 1.8.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR § 122.41(n)(2).)

1.8.2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR § 122.41(n)(3)):

1.8.2.1. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));

1.8.2.2. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));

1.8.2.3. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting 5.5.2.2 below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and

1.8.2.4. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance 1.3 above. (40 CFR § 122.41(n)(3)(iv).)

1.8.3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR § 122.41(n)(4).)

2. STANDARD PROVISIONS – PERMIT ACTION

2.1. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR § 122.41(f).)

2.2. Duty to Reapply

If the Dischargers wish to continue an activity regulated by this Order after the expiration date of this Order, the Dischargers must apply for and obtain a new permit. (40 CFR § 122.41(b).)

2.3. Transfers

This Order is not transferable to any person except after notice to the Central Coast Water Board. The Central Coast Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR §§ 122.41(l)(3), 122.61.)

3. STANDARD PROVISIONS – MONITORING

- 3.1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR § 122.41(j)(1).)
- 3.2. Monitoring must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:
 - 3.2.1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
 - 3.2.2. The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter 1, subchapter N for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR part 136 or otherwise required under 40 CFR chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters.
(40 CFR §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

4. STANDARD PROVISIONS – RECORDS

- 4.1. The Dischargers shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order,

and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Central Coast Water Board Executive Officer (EO) at any time. (40 CFR § 122.41(j)(2).)

4.2. Records of monitoring information shall include:

- 4.2.1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));
 - 4.2.2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));
 - 4.2.3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));
 - 4.2.4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));
 - 4.2.5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and
 - 4.2.6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi))
- 4.3. Claims of confidentiality for the following information will be denied (40 CFR § 122.7(b)):
- 4.3.1. The name and address of any permit applicant or Discharger (40 CFR § 122.7(b)(1)); and
 - 4.3.2. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2))

5. STANDARD PROVISIONS – REPORTING

5.1. Duty to Provide Information

The Dischargers shall furnish to the Central Coast Water Board, State Water Board, or USEPA within a reasonable time, any information which the Central Coast Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Dischargers shall also furnish to the Central Coast Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); Water Code, §§ 13267, 13383.)

5.2. Signatory and Certification Requirements

- 5.2.1. All applications, reports, or information submitted to the Central Coast Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting 5.2.2, 5.2.3, 5.2.4, 5.2.5, and 5.2.6 below. (40 CFR § 122.41(k).)
- 5.2.2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-

making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 CFR § 122.22(a)(1).)

5.2.3. All reports required by this Order and other information requested by the Central Coast Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting 5.2.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

5.2.3.1. The authorization is made in writing by a person described in Standard Provisions – Reporting 5.2.2 above (40 CFR § 122.22(b)(1));

5.2.3.2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR § 122.22(b)(2).); and

5.2.3.3. The written authorization is submitted to the Central Coast Water Board and State Water Board. (40 CFR § 122.22(b)(3).)

5.2.4. If an authorization under Standard Provisions – Reporting 5.2.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting 5.2.3 above must be submitted to the Central Coast Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR § 122.22(c).)

5.2.5. Any person signing a document under Standard Provisions – Reporting 5.2.2 or 5.2.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false

information, including the possibility of fine and imprisonment for knowing violations.” (40 CFR § 122.22(d).)

- 5.2.6. Any person providing the electronic signature for documents described in Standard Provisions – 5.2.1, 5.2.2, or 5.2.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting 5.2, and shall ensure that all relevant requirements of 40 CFR part 3 (Cross-Media Electronic Reporting) and 40 CFR part 127 (National Pollutant Discharge Elimination System [NPDES] Electronic Reporting Requirements) are met for that submission. (40 CFR § 122.22(e).)

5.3. Monitoring Reports

- 5.3.1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (MRP), Attachment E in this Order. (40 CFR § 122.41(l)(4).)
- 5.3.2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Central Coast Water Board or State Water Board. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 and comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(l)(4)(i).)
- 5.3.3. If the Dischargers monitor any pollutant more frequently than required by this Order using test procedures approved under 40 CFR part 136, or another method required for an industry-specific waste stream under 40 CFR chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Central Coast Water Board or State Water Board. (40 CFR § 122.41(l)(4)(ii).)
- 5.3.4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 122.41(l)(4)(iii).)

5.4. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 CFR § 122.41(l)(5).)

5.5. Twenty-Four Hour Reporting

- 5.5.1. The Dischargers shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report shall contain a description of the noncompliance and

its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (i.e., combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.

As of December 2023, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events: must be submitted to the Central Coast Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10. The reports shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. The Central Coast Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR § 122.41(l)(6)(i).)

5.5.2. The following shall be included as information that must be reported within 24 hours:

5.5.2.1. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A).)

5.5.2.2. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)

5.5.3. The Central Coast Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR § 122.41(l)(6)(ii)(B).)

5.6. Planned Changes

The Dischargers shall give notice to the Central Coast Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR § 122.41(l)(1)):

5.6.1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 CFR § 122.41(l)(1)(i)); or

5.6.2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR § 122.41(l)(1)(ii).)

5.6.3. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are

subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels 7.1.1). (40 CFR § 122.41(l)(1)(ii).)

5.7. Anticipated Noncompliance

The Dischargers shall give advance notice to the Central Coast Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 CFR § 122.41(l)(2).)

5.8. Other Noncompliance

The Dischargers shall report all instances of noncompliance not reported under Standard Provisions – Reporting 5.3, 5.4, and 5.5 above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5.5 above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting 5.5 and the applicable required data in appendix A to 40 CFR part 127. The Central Coast Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR § 122.41(l)(7).)

5.9. Other Information

When the Dischargers become aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Central Coast Water Board, State Water Board, or USEPA, the Dischargers shall promptly submit such facts or information. (40 CFR § 122.41(l)(8).)

5.10. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 CFR part 127 to the initial recipient defined in 40 CFR section 127.2(b). USEPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 CFR section 127.2(c)]. USEPA will update and maintain this listing. (40 CFR § 122.41(l)(9).)

6. STANDARD PROVISIONS – ENFORCEMENT

6.1. The Central Coast Water Board is authorized to enforce the terms of this Order under several provisions of the Water Code, including, but not limited to, sections 13268, 13350 13385, 13386, and 13387.

7. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

7.1. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Central Coast Water Board as soon as they know or have reason to believe (40 CFR § 122.42(a)):

- 7.1.1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 CFR § 122.42(a)(1)):
 - 7.1.1.1. 100 micrograms per liter (µg/L) (40 CFR § 122.42(a)(1)(i));
 - 7.1.1.2. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4 dinitrophenol and 2 methyl 4,6 dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 CFR § 122.42(a)(1)(ii));
 - 7.1.1.3. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (ROWD) (40 CFR § 122.42(a)(1)(iii)); or
 - 7.1.1.4. The level established by the Central Coast Water Board in accordance with section 122.44(f). (40 CFR § 122.42(a)(1)(iv))
- 7.1.2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 CFR § 122.42(a)(2)):
 - 7.1.2.1. 500 µg/L (40 CFR § 122.42(a)(2)(i));
 - 7.1.2.2. 1 mg/L for antimony (40 CFR § 122.42(a)(2)(ii));
 - 7.1.2.3. Ten (10) times the maximum concentration value reported for that pollutant in the ROWD (40 CFR § 122.42(a)(2)(iii)); or
 - 7.1.2.4. The level established by the Central Coast Water Board in accordance with section 122.44(f). (40 CFR § 122.42(a)(2)(iv))

7.2. Publicly Owned Treatment Works (POTWs)

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

- 7.2.1. 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
- 7.2.2. 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))
- 7.2.3. 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))

8. CENTRAL COAST WATER BOARD STANDARD PROVISIONS

8.1. Prohibitions

- 8.1.1. Introduction of “incompatible wastes” to the treatment system is prohibited.
- 8.1.2. Discharge of high-level radiological waste and of radiological, chemical, and biological warfare agents is prohibited.
- 8.1.3. Discharge of “toxic pollutants” in violation of effluent standards and prohibitions established under section 307(a) of the CWA is prohibited.
- 8.1.4. Discharge of sludge, sludge digester or thickener supernatant, and sludge drying bed leachate to drainageways, surface waters, or the ocean is prohibited.
- 8.1.5. Introduction of pollutants into the collection, treatment, or disposal system by an “indirect discharger” that:
 - 8.1.5.1. Inhibit or disrupt the treatment process, system operation, or the eventual use or disposal of sludge; or,
 - 8.1.5.2. Flow through the system to the receiving water untreated; and,
 - 8.1.5.3. Cause or “significantly contribute” to a violation of any requirement of this Order, is prohibited.
- 8.1.6. Introduction of “pollutant free” wastewater to the collection, treatment, and disposal system in amounts that threaten compliance with this Order is prohibited.

8.2. Standard Provisions

- 8.2.1. Collection, treatment, and discharge of waste shall not create a nuisance or pollution, as defined by Water Code section 13050.
- 8.2.2. All facilities used for transport or treatment of wastes shall be adequately protected from inundation and washout as the result of a 100-year frequency flood.
- 8.2.3. Operation of collection, treatment, and disposal systems shall be in a manner that precludes public contact with wastewater.
- 8.2.4. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed in a manner approved by the EO.
- 8.2.5. Publicly owned wastewater treatment plants shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to title 23 of the California Administrative Code.
- 8.2.6. After notice and opportunity for a hearing, this Order may be terminated for cause, including, but not limited to:
 - 8.2.6.1. Violation of any term or condition contained in this Order;
 - 8.2.6.2. Obtaining this Order by misrepresentation, or by failure to disclose fully all relevant facts;

- 8.2.6.3. A change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge; and,
- 8.2.6.4. A substantial change in character, location, or volume of the discharge.
- 8.2.7. Provisions of this Order are severable. If any provision of the permit is found invalid, the remainder of the permit shall not be affected.
- 8.2.8. After notice and opportunity for hearing, this Order may be modified or revoked and reissued for cause, including:
- 8.2.8.1. Promulgation of a new or revised effluent standard or limitation;
- 8.2.8.2. A material change in character, location, or volume of the discharge;
- 8.2.8.3. Access to new information that affects the terms of the permit, including applicable schedules;
- 8.2.8.4. Correction of technical mistakes or mistaken interpretations of law; and,
- 8.2.8.5. Other causes set forth under subpart D of 40 CFR part 122.
- 8.2.9. Safeguards shall be provided to ensure maximal compliance with all terms and conditions of this Order. Safeguards shall include preventative and contingency plans and may also include alternative power sources, stand-by generators, retention capacity, operative procedures, or other precautions. Preventative and contingency plans for controlling and minimizing the effect of accidental discharges shall:
- 8.2.9.1. Identify possible situations that could cause “upset,” “overflow,” or “bypass,” or other noncompliance. (Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered).
- 8.2.9.2. Evaluate the effectiveness of present facilities and procedures and describe procedures and steps to minimize or correct any adverse environmental impact resulting from noncompliance with the permit.
- 8.2.10. Physical Facilities shall be designed and constructed according to accepted engineering practice and shall be capable of full compliance with this Order when properly operated and maintained. Proper operation and maintenance shall be described in an Operation and Maintenance Manual. Facilities shall be accessible during the wet-weather season.
- 8.2.11. The Dischargers shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Electrical and mechanical equipment shall be maintained in accordance with appropriate practices and standards, such as National Fire Protection Agency (NFPA) 70B, Recommended Practice for Electrical Equipment Maintenance; NFPA 70E, Standard for Electrical Safety in the Workplace; American National Standards Institute / International Electrical Testing

Association Maintenance Testing Specifications (ANSI/NETA MTS) Standard for Maintenance: Testing Specifications for Electrical Power Equipment and Systems, or procedures established by insurance companies or industry resources.

- 8.2.12. If the Dischargers' facilities are equipped with Supervisory Control and Data Acquisition (SCADA) or other systems that implement wireless, remote operation, the Dischargers should implement appropriate safeguards against unauthorized access to the wireless systems. Standards such as NIST SP 800-53, Recommended Security Controls for Federal Information Systems, can provide guidance.
- 8.2.13. Production and use of reclaimed water is subject to the approval of the Central Coast Water Board. Production and use of reclaimed water shall be in conformance with recycling criteria established in chapter 3, Title 22, of the California Administrative Code and chapter 7, division 7, of the Water Code. An engineering report pursuant to section 60323, Title 22, of the California Administrative Code is required and a waiver or water recycling requirements from the Central Coast Water Board is required before reclaimed water is supplied for any use, or to any user, not specifically identified and approved either in this Order or another order issued by the Central Coast Water Board.

8.3. General Monitoring Requirements

- 8.3.1. If results of monitoring a pollutant appear to violate effluent limitations based on a weekly, monthly, 30-day, or six-month period, but compliance or noncompliance cannot be validated because sampling is too infrequent, the frequency of sampling shall be increased to validate the test within the next monitoring period. The increased frequency shall be maintained until the EO agrees the original monitoring frequency may be resumed.
- 8.3.2. Water quality analyses performed in order to monitor compliance with this Order shall be by a laboratory certified by the Division of Drinking Water for the constituent(s) being analyzed. Bioassay(s) performed in order to monitor compliance with this Order shall be in accord with guidelines approved by the State Water Board and the California Department of Fish and Wildlife. If the laboratory used or proposed for use by the Discharger is not certified by the Division of Drinking Water or, where appropriate, the Department of Fish and Wildlife due to restrictions in the State's laboratory certification program, the Discharger shall be considered in compliance with this provision provided:
- 8.3.2.1. Data results remain consistent with results of samples analyzed by the Central Coast Water Board;
- 8.3.2.2. A quality assurance program is used at the laboratory, including a manual containing steps followed in this program that is available for inspections by the staff of the Central Coast Water Board; and,
- 8.3.2.3. Certification is pursued in good faith and obtained as soon as possible after the program is reinstated.

- 8.3.3. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Samples shall be taken during periods of peak loading conditions. Influent samples shall be samples collected from the combined flows of all incoming wastes, excluding recycled wastes. Effluent samples shall be samples collected downstream of the last treatment unit and tributary flow and upstream of any mixing with receiving waters.
- 8.3.4. All monitoring instruments and devices used by the Dischargers to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

8.4. General Reporting Requirements

- 8.4.1. Reports of marine monitoring surveys conducted to meet receiving water monitoring requirements of the MRP, Attachment E, shall include at least the following information:
- 8.4.1.1. A description of climatic and receiving water characteristics at the time of sampling (weather observations, floating debris, discoloration, wind speed and direction, swell or wave action, time of sampling, tide height, etc.).
 - 8.4.1.2. A description of sampling stations, including differences unique to each station (e.g., station location, grain size, rocks, shell litter, calcareous worm tubes, evident life, etc.).
 - 8.4.1.3. A description of the sampling procedures and preservation sequence used in the survey.
 - 8.4.1.4. A description of the exact method used for laboratory analysis. In general, analysis shall be conducted according to Central Coast Standard Provisions – 8.3.1 above, and Federal Standard Provision – Monitoring 3.2. However, variations in procedure are acceptable to accommodate the special requirements of sediment analysis. All such variations must be reported with the test results.
 - 8.4.1.5. A brief discussion of the results of the survey. The discussion shall compare data from the control station with data from the outfall stations. All tabulations and computations shall be explained.
- 8.4.2. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule shall be submitted within 14 days following each scheduled date unless otherwise specified within the permit. If reporting noncompliance, the report shall include a description of the reason, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance. A second report shall be submitted within 14 days of full compliance.
- 8.4.3. Depending on future circumstances, the Dischargers shall either individually or jointly file a ROWD or secure a waiver from the Executive Officer at least 180 days before making any material change or proposed change in the character, location, or plume of the discharge.

8.4.4. Within 120 days after the Dischargers discover, or are notified by the Central Coast Water Board, that monthly average daily flow will or may reach design capacity of waste treatment and/or disposal facilities within four (4) years, the Dischargers shall file a written report with the Central Coast Water Board. The report shall include:

8.4.4.1. The best estimate of when the monthly average daily dry weather flow rate will equal or exceed design capacity; and,

8.4.4.2. A schedule for studies, design, and other steps needed to provide additional capacity for waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units.

In addition to complying with Federal Standard Provision – Reporting 5.2, the required technical report shall be prepared with public participation and reviewed, approved and jointly submitted by all planning and building departments having jurisdiction in the area served by the waste collection, treatment, or disposal facilities.

8.4.5. All Dischargers shall submit reports electronically to the:

California Regional Water Quality Control Board, Central Coast Region
centralcoast@waterboards.ca.gov
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

In addition, Dischargers with designated major discharges shall submit a copy of each document to:

Regional Administrator
USEPA, Region 9
Attention: NPDES Permits Section (WTR-2-3)
R9NPDES@epa.gov
75 Hawthorne Street
San Francisco, California 94105

8.4.6. Transfer of control or ownership of a waste discharge facility must be preceded by a notice to the Central Coast Water Board at least 30 days in advance of the proposed transfer date. The notice must include a written agreement between the existing Discharger and proposed Discharger containing specific date for transfer of responsibility, coverage, and liability between them. Whether a permit may be transferred without modification or revocation and reissuance is at the discretion of the Board. If permit modification or revocation and reissuance is necessary, transfer may be delayed 180 days after the Central Coast Water Board's receipt of a complete permit application. Please also see Federal Standard Provision – Permit Action 2.3.

8.4.7. Except for data determined to be confidential under CWA section 308 (excludes effluent data and permit applications), all reports prepared in accordance with this Order shall be available for public inspection at the office of the Central Coast

Water Board or Regional Administrator of USEPA. Please also see Federal Standard Provision – Records 4.3.

8.4.8. By April 1 of each year, the Dischargers shall submit a collaborative annual report to the Central Coast Water Board with respect to their facilities' operation and the commingled discharge. The report shall contain the following:

8.4.8.1. Both tabular and graphical summaries of the monitoring data obtained during the previous year.

8.4.8.2. A discussion of the previous year's compliance record and corrective actions taken, or which may be needed, to bring the Discharger into full compliance.

8.4.8.3. An evaluation of wastewater flows with projected flow rate increases over time and the estimated date when flows will reach facility capacity.

8.4.8.4. A discussion of operator certification and a list of current operating personnel and their grades of certification.

8.4.8.5. The date of the facility's Operation and Maintenance Manual (including contingency plans as described in Provision 8.2.9), the date the manual was last reviewed, and whether the manual is complete and valid for the current facility.

8.4.8.6. A discussion of the laboratories used by the Discharger to monitor compliance with effluent limits and a summary of performance relative to section 8.3, General Monitoring Requirements.

8.4.8.7. If the facility treats industrial or domestic wastewater and there is no provision for periodic sludge monitoring in the MRP, Attachment E, the report shall include a summary of sludge quantities, analyses of its chemical and moisture content, and its ultimate destination.

8.4.8.8. If appropriate, the report shall also evaluate the effectiveness of the local source control or pretreatment program using the State Water Board's *Guidelines for Determining the Effectiveness of Local Pretreatment Program*.

8.5. General Pretreatment Provisions

8.5.1. Discharge of pollutants by "indirect dischargers" in specific industrial sub-categories (appendix C, 40 CFR part 403), where categorical pretreatment standards have been established, or are to be established, (according to 40 CFR chapter 1, subchapter N), shall comply with the appropriate pretreatment standards:

8.5.1.1. By the date specified therein;

8.5.1.2. Within three (3) years of the effective date specified therein, but in no case later than July 1, 1984; or,

8.5.1.3. If a new indirect discharger, upon commencement of discharge.

8.6. Enforcement

- 8.6.1. Any person failing to file a ROWD or other report as required by this Order shall be subject to a civil penalty not to exceed \$5,000 per day.
- 8.6.2. Upon reduction, loss, or failure of the treatment facility, the Dischargers shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided.

8.7. Definitions

- 8.7.1. A "composite sample" is a combination of no fewer than eight (8) individual samples obtained at equal time intervals (usually hourly) over the specified sampling (composite) period. The volume of each individual sample is proportional to the flow rate at the time of sampling. The period shall be specified in the MRP ordered by the EO.
- 8.7.2. "Daily Maximum" limit means the maximum acceptable concentration or mass emission rate of a pollutant measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling. It is normally compared with results based on "composite samples" except for ammonia, total chlorine, phenolic compounds, and toxicity concentration.
- 8.7.3. "Discharger", as used herein, means, as appropriate: (1) the Discharger, (2) the local sewerage entity (when the collection system is not owned and operated by the Discharger), or (3) "indirect discharger" (where "Discharger" appears in the same paragraph as "indirect discharger", it refers to the discharger.)
- 8.7.4. "Duly Authorized Representative" is one where:
 - 8.7.4.1. The authorization is made in writing by a person described in the signatory paragraph of Federal Standard Provision 5.2.;
 - 8.7.4.2. The authorization specifies either an individual or the occupant of a position having either responsibility for the overall operation of the regulated facility, such as the plant manager, or overall responsibility for environmental matters of the company; and,
 - 8.7.4.3. The written authorization was submitted to the Central Coast Water Board.
- 8.7.5. A "grab sample" is defined as any individual sample collected in less than 15 minutes. "Grab samples" shall be collected during peak loading conditions, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with daily maximum limits identified in Central Coast Standard Provision 8.7.2 and instantaneous maximum limits.
- 8.7.6. "Hazardous substance" means any substance designated under 40 CFR part 116 pursuant to section 311 of the CWA.
- 8.7.7. "Incompatible wastes" are:
 - 8.7.7.1. Wastes which create a fire or explosion hazard in the treatment works;

- 8.7.7.2. Wastes which will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0 unless the works is specifically designed to accommodate such wastes;
- 8.7.7.3. Solid or viscous wastes in amounts which cause obstruction to flow in sewers, or which cause other interference with proper operation of treatment works;
- 8.7.7.4. Any waste, including oxygen demanding pollutants (BOD, etc.), released in such volume or strength as to cause inhibition or disruption in the treatment works and subsequent treatment process upset and loss of treatment efficiency; and,
- 8.7.7.5. Heat in amounts that inhibit or disrupt biological activity in the treatment works or that raise influent temperatures above 40 degrees Celsius (°C) or 104 degrees Fahrenheit (°F) unless the treatment works is designed to accommodate such heat.
- 8.7.8. "Indirect Discharger" means a non-domestic discharger introducing pollutants into a publicly owned treatment and disposal system.
- 8.7.9. "Log Mean" is the geometric mean. Used for determining compliance of fecal or total coliform populations, it is calculated with the following equation:
- $$\text{Log Mean} = (C_1 \times C_2 \times \dots \times C_n)^{1/n},$$
- in which "n" is the number of days samples were analyzed during the period and any "C" is the concentration of bacteria in units of most probable number per 100 milliliters (MPN/100 mL) found on each day of sampling. "n" should be five or more.
- 8.7.10. "Mass emission rate" is a daily rate, typically defined by the following equations:
- $$\text{mass emission rate (lbs/day)} = 8.34 \times Q \times C; \text{ and,}$$
- $$\text{mass emission rate (kg/day)} = 3.79 \times Q \times C,$$
- where "C" (in mg/L) is a constituent concentration and "Q" in million gallons per day (MGD) is the daily average flow rate or the average of daily flow rates over the period of interest.
- 8.7.11. The "Maximum Allowable Mass Emission Rate," whether for a month, week, day, or six-month period, is a daily rate, typically determined with the formulas in paragraph 8.7.10, above, using the effluent concentration limit specified in the permit for the period and the average of measured daily flows (up to the allowable flow) over the period.
- 8.7.12. "Maximum Allowable Six-Month Median Mass Emission Rate" is a daily rate, typically determined with the formulas in Central Coast Standard Provision – Provision 8.7.10, above, using the "six-month Median" effluent limit specified in the permit, and the average of measured daily flows (up to the allowable flow) over a 180-day period.
- 8.7.13. "Median" is the value below which half the samples (ranked progressively by increasing value) fall. It may be considered the middle value, or the average of

two middle values. Special considerations may exist to determine the median of samples that include censored data (NDs or DNQs).

- 8.7.14. "Monthly Average" (or "Weekly Average", as the case may be) is the arithmetic mean of daily concentrations or of daily mass emission rates over the specified 30-day (or 7-day) period.

$$\text{Average} = (X_1 + X_2 + \dots + X_n) / n$$

in which "n" is the number of days samples were analyzed during the period and "X" is either the constituent concentration (mg/l) or mass emission rate (kg/day or lbs/day) for each sampled day.

- 8.7.15. "Municipality" means a city, town, borough, county, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial waste, or other waste.
- 8.7.16. "Overflow" means the intentional or unintentional diversion of flow from the collection and transport systems, including pumping facilities.
- 8.7.17. "Pollutant-free wastewater" means inflow and infiltration, storm waters, and cooling waters and condensates which are essentially free of pollutants.
- 8.7.18. "Primary Industry Category" means any industry category listed in 40 CFR part 122, Appendix A.
- 8.7.19. "Removal Efficiency" is the ratio of pollutants removed by the treatment unit to pollutants entering the treatment unit. Removal efficiencies of a treatment plant shall be determined using "Monthly averages" of pollutant concentrations (C, in mg/L) of influent and effluent samples collected about the same time and the following equation (or its equivalent):
- $$C_{\text{effluent}} \text{ Removal Efficiency (\%)} = 100 \times (1 - C_{\text{effluent}} / C_{\text{influent}})$$
- 8.7.20. "Severe property damage" means substantial physical damage to property, damage to treatment facilities which causes them to become inoperable, or substantial and permanent loss to natural resources which can reasonably be expected to occur in the absence of a "bypass". It does not mean economic loss caused by delays in production.
- 8.7.21. "Sludge" means the solids, residues, and precipitates separated from, or created in, wastewater by the unit processes of a treatment system.
- 8.7.22. To "significantly contribute" to a permit violation means an "indirect discharger" must:
- 8.7.22.1. Discharge a daily pollutant loading in excess of that allowed by contract with the Discharger or by federal, State, or local law;
- 8.7.22.2. Discharge wastewater which substantially differs in nature or constituents from its average discharge;
- 8.7.22.3. Discharge pollutants, either alone or in conjunction with discharges from other sources, which results in a permit violation or prevents sewage sludge use or disposal; or

8.7.22.4 Discharge pollutants, either alone or in conjunction with pollutants from other sources that increase the magnitude or duration of permit violations.

8.7.23. "Toxic Pollutant" means any pollutant listed as toxic under section 307 (a) (1) of the CWA or under 40 CFR part 122, Appendix D. Violation of maximum daily discharge limitations are subject to 24-hour reporting (Federal Standard Provisions 5.5.).

8.7.24. "Zone of Initial Dilution" means the region surrounding or adjacent to the end of an outfall pipe or diffuser ports whose boundaries are defined through calculation of a plume model verified by the State Water Board.

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

TABLE OF CONTENTS

1. GENERAL MONITORING PROVISIONS.....	E-4
2. MONITORING LOCATIONS	E-5
3. INFLUENT MONITORING REQUIREMENTS.....	E-10
3.1. Monitoring Location INF-001 – M1W RTP Influent.....	E-10
3.2. Monitoring Location INF-002 – M1W Hauled Saline Waste Influent.....	E-10
3.3. Monitoring Location INF-003 – Cal-Am MPWSP Desalination Plant Influent ..	E-11
3.4. Monitoring Location INT-003 – M1W RTP Secondary-Treated Waste Influent to AWPF.....	E-11
4. EFFLUENT MONITORING REQUIREMENTS.....	E-12
4.1. Monitoring Location EFF-001 – M1W Total Combined Waste	E-12
4.2. Monitoring Location EFF-001A – M1W RTP Secondary-Treated Waste	E-13
4.3. Monitoring Location EFF-001C – Cal-Am MPWSP Desalination Plant Brine Waste.....	E-14
4.4. Monitoring Location EFF-001E – M1W AWP RO Concentrate	E-15
4.5. Monitoring Location EFF-001D – Final Commingled Effluent (Before Considering Dilution).....	E-15
4.6. Monitoring Location EFF-001B – Final Commingled Effluent (After Dilution) ..	E-19
5. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS	E-28
5.1. Whole Effluent Toxicity (WET) Testing Requirements	E-28
5.2 Acute Toxicity.....	E-28
5.3 Chronic Toxicity.....	E-29
5.4. Quality Assurance and Additional Requirements	E-32
5.5. Toxicity Reporting	E-33
6. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE	E-33
7. RECYCLING MONITORING REQUIREMENTS	E-33
7.1. Monitoring Location REC-001	E-33
7.2. Monitoring Locations INT-001 and INT-002	E-35
8. RECEIVING WATER MONITORING REQUIREMENTS.....	E-35
8.1. Bacteria Monitoring (Applicable to M1W Only).....	E-35
8.2. Shoreline Monitoring (Applicable to M1W and Cal-Am)	E-36
8.3. Offshore Brine Discharge Monitoring (Applicable to Cal-Am Only)	E-37
8.4. General Offshore Monitoring (Applicable to M1W and Cal-Am)	E-46
9. OTHER MONITORING REQUIREMENTS.....	E-55
9.1. Central Coast Long-term Environmental Assessment Network (CCLEAN).....	E-56
9.2. Biosolids Monitoring, Notification, and Reporting (Applicable to M1W).....	E-59
9.3. Pretreatment Monitoring and Reporting (Applicable to M1W)	E-63
9.4. Dye Dilution Study and Outfall Inspection	E-66
9.5. Plume Tracking Study	E-66
9.6. Before-After Control-Impact Study	E-69
9.7. Monterey Bay National Marine Sanctuary (MBNMS) Spill Reporting	E-71
10. REPORTING REQUIREMENTS	E-71
10.1. General Monitoring and Reporting Requirements	E-71

10.2. Self-Monitoring Reports (SMRs)	E-71
10.3. Discharge Monitoring Reports (DMRs)	E-79
10.4. Other Reports.....	E-79

TABLE OF TABLES

Table E-1. Monitoring Station Locations.....	E-6
Table E-2. Monitoring Location INF-001 – M1W RTP Influent	E-10
Table E-3. Monitoring Location INF-002 – M1W Hauled Saline Waste	E-10
Table E-4. Monitoring Location INF-003 – Cal-Am MPWSP Desalination Plant Intake Influent	E-11
Table E-5. Monitoring Location INT-003 – M1W RTP Secondary Treatment Waste Influent to AWPf	E-11
Table E-6. Monitoring Location EFF-001 – M1W Total Combined Waste	E-12
Table E-7. Monitoring Location EFF-001A – M1W RTP Secondary-Treated Waste ..	E-13
Table E-8. Monitoring Location EFF-001C – Cal-Am MPWSP Desalination Plant Brine Waste	E-14
Table E-9. Monitoring Location EFF-001E – M1W AWPf RO Concentrate Effluent..	E-15
Table E-10. Monitoring Location EFF-001D – Final Commingled Effluent (Before Dilution).....	E-15
Table E-11. Priority Pollutants.....	E-18
Table E-12. Effluent Monitoring at EFF-001B – Final Commingled Effluent (After Dilution).....	E-20
Table E-13. Approved Dms and Related Discharge Scenarios Prior to M1W Outfall and Diffuser Modifications.....	E-22
Table E-14. Approved Dms and Related Discharge Scenarios After M1W Outfall and Diffuser Modifications.....	E-23
Table E-15. IWC for Acute and Chronic Toxicity (before M1W outfall and diffuser modifications).....	E-27
Table E-16. IWC for Acute and Chronic Toxicity (after M1W outfall and diffuser modifications).....	E-28
Table E-17. Approved Acute Toxicity Tests	E-29
Table E-18. Approved Chronic Toxicity Tests	E-29
Table E-19. M1W Recycled Water Monitoring Requirements	E-34
Table E-20. M1W SVRP Process Monitoring	E-35
Table E-21. M1W Nearshore Bacteria Monitoring	E-36
Table E-22. General Shoreline Monitoring Requirements.....	E-36
Table E-23. Cal-Am Offshore Water Quality Monitoring Requirements at Monitoring Locations OFF-A through OFF-G, REF-A, and REF-B.	E-38
Table E-24. Cal-Am Offshore Sediment Monitoring Requirements at Monitoring Locations OFF-A through OFF-G, REF-A, and REF-B.	E-38
Table E-25. Cal-Am Offshore Fish Trawling Liver Tissue Characterization Monitoring Requirements.....	E-42
Table E-26. Cal-Am Rig Fishing Muscle Tissue Characterization Monitoring Requirements.....	E-45
Table E-27. General Offshore Water Quality Monitoring Requirements.....	E-47
Table E-28. General Offshore Sediment Monitoring Requirements.	E-48

Table E-29. General Offshore Fish Trawling Liver Tissue Characterization Monitoring Requirements.....	E-52
Table E-30. General Rig Fishing Muscle Tissue Characterization Monitoring Requirements.....	E-54
Table E-31. CCLEAN Monitoring Requirements	E-56
Table E-32. Biosolids Monitoring Frequency	E-59
Table E-33. Biosolids Monitoring Requirements	E-62
Table E-34. Monitoring Periods and Reporting Schedule.....	E-71

Section 308 of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 CFR) require that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code (Water Code) sections 13267 and 13383 also authorize the California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board) to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This Monitoring and Reporting Program (MRP) establishes monitoring, reporting, and recordkeeping requirements that implement federal and California laws and regulations.

1. GENERAL MONITORING PROVISIONS

- 1.1. Laboratories analyzing monitoring samples shall be certified by the State Water Resources Control Board (State Water Board) in accordance with the provision of Water Code section 13176 and must include quality assurance/quality control data with their reports. Laboratories must hold a valid certificate of accreditation by the State of California Environmental Laboratory Accreditation Program (ELAP) for the analytical test method specified in 40 CFR part 136, an alternative test procedure approved by the U.S. Environmental Protection Agency (USEPA), or by the Central Coast Water Board when there are no methods specified for a pollutant at 40 CFR part 136.
- 1.2. Samples and measurements taken by the Dischargers (together Monterey One Water [M1W] and California American Water Company [Cal-Am]) shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, water body, or substance. Monitoring locations shall not be changed without notification to and approval of the Central Coast Water Board.
- 1.3. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration, and operation of acceptable flow measurement devices can be obtained from the following references.
 - 1.3.1. *A Guide to Methods and Standards for the Measurement of Water Flow*, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)
 - 1.3.2. *Water Measurement Manual*, U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S.

Government Printing Office, Washington D.C. 20402. Order by Catalog No. 172.19/2:W29/2, Stock No. S/N 24003-0027.)

- 1.3.3. *Flow Measurement in Open Channels and Closed Conduits*, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)
- 1.3.4. *NPDES Compliance Sampling Manual*, U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)
- 1.4. All monitoring instruments and devices used by the Dischargers to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- 1.5. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP.
- 1.6. Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 CFR part 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*. All analyses shall be conducted using the lowest practical quantitation limit achievable using the specified methodology. Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analysis for toxics listed at 40 CFR section 131.38, *Establishment of numeric criteria for priority toxic pollutants for the State of California* (California Toxics Rule) shall also adhere to guidance and requirements contained in the 2005 *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP). Analyses for toxics listed in Table 3 of the 2019 *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) shall adhere to guidance and requirements contained in that document.
- 1.7. The Dischargers shall ensure that the results of the Discharge Monitoring Report - Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

State Water Resources Control Board
Quality Assurance Program Officer
Office of Information Management and Analysis
1001 I Street, Sacramento, CA 95814

2. MONITORING LOCATIONS

The Dischargers shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description	Discharger Responsible	Monitoring Location Position^[1]
	INF-001	Location where representative samples can be obtained of wastewater influent to the M1W Regional Treatment Plant (RTP), following all significant inputs to the collection system and to the headworks, excluding hauled saline wastes.	M1W	
	INF-002	Location where representative samples can be obtained of hauled saline waste influent to the M1W RTP via haulers to the saline waste storage facility, prior to commingling with any other waste streams.	M1W	
	INF-003	Location where representative samples can be obtained of intake ocean water influent to the Cal-Am Monterey Peninsula Water Supply Project (MPWSP) Desalination Plant prior to treatment and commingling with M1W waste streams.	Cal-Am	
	INT-001	Location where representative samples can be obtained of influent to the M1W Salinas Valley Reclamation Project (SVRP).	M1W	
	INT-002	Location where representative samples can be obtained of filtered effluent prior to disinfection at the SVRP.	M1W	
002	REC-001	Location where representative samples can be obtained of final disinfected tertiary recycled water from the M1W SVRP, prior to storage.	M1W	

Discharge Point Name	Monitoring Location Name	Monitoring Location Description	Discharger Responsible	Monitoring Location Position^[1]
001	EFF-001	Location where representative samples can be obtained of M1W total combined waste, consisting of M1W RTP secondary-treated effluent, M1W Advanced Water Purification Facility (AWPF) reverse osmosis (RO) concentrate, and M1W hauled saline waste, before commingling with Cal-Am MPWSP Desalination Plant brine waste.	M1W	
001	EFF-001A	Location where representative samples can be obtained of M1W RTP secondary-treated waste which is not sent to the AWPf, prior to commingling with any other waste streams.	M1W	
001	EFF-001B ^[2]	Location where compliance is determined for effluent limitations on final commingled effluent, consisting of M1W total combined waste and Cal-Am MPWSP Desalination Plant brine waste, as calculated by applying minimum probable initial dilution to concentrations sampled at Monitoring Location EFF-001D. (Note: EFF-001B is a compliance point using calculated data and not a physical location.)	Both M1W and Cal-Am	
001	EFF-001C	Location where representative samples can be obtained of MPWSP Desalination Plant brine waste effluent after treatment and prior to commingling with any other waste streams.	Cal-Am	

Discharge Point Name	Monitoring Location Name	Monitoring Location Description	Discharger Responsible	Monitoring Location Position ^[1]
001	EFF-001D ^[2]	Location where representative samples may be collected of the final commingled effluent, consisting of M1W total combined waste and Cal-Am MPWSP Desalination Plant brine waste, before contact with receiving water.	Both M1W and Cal-Am	
001	EFF-001E	Location where representative samples may be collected of M1W AWP RO concentrate, prior to commingling with any other waste stream.	M1W	
	RSW-A	Location of shoreline monitoring station, 900 feet (ft) north of the outfall and 1,000 ft offshore.	Both M1W and Cal-Am	36.7265°N, 121.8119°W
	RSW-B	Location of shoreline monitoring station, east of the outfall pipe and 1,000 ft offshore.	Both M1W and Cal-Am	36.72325°N, 121.81185°W
	RSW-C	Location of shoreline monitoring station, 900 ft south of the outfall and 1,000 ft offshore.	Both M1W and Cal-Am	36.72018°N, 121.81203°W
	RSW-D	Location of shoreline monitoring station, 1,800 ft south of the outfall and 1,000 ft offshore.	Both M1W and Cal-Am	36.7168°N, 121.81203°W
	OFF-A	Location of offshore monitoring station within the brine mixing zone, 10 meters (m) north of the outfall diffuser.	Cal-Am	36.727453°N, 121.836231°W
	OFF-B	Location of offshore monitoring station within the brine mixing zone, 10 m south of the outfall diffuser.	Cal-Am	36.727277°N, 121.836278°W
	OFF-C	Location of offshore monitoring station representative of the edge of the brine mixing zone, 100 m northwest of the outfall diffuser.	Cal-Am	36.728614°N, 121.838151°W
	OFF-D	Location of offshore monitoring station representative of the edge of the brine mixing zone, 100 m southwest of the outfall diffuser.	Cal-Am	36.726856°N, 121.838639°W

Discharge Point Name	Monitoring Location Name	Monitoring Location Description	Discharger Responsible	Monitoring Location Position ^[1]
	OFF-E	Location of offshore monitoring station representative of the edge of the brine mixing zone, 100 m northeast of the outfall diffuser.	Cal-Am	36.727856°N, 121.833765°W
	OFF-F	Location of offshore monitoring station representative of the edge of the brine mixing zone, 100 m southeast of the outfall diffuser.	Cal-Am	36.726097°N, 121.834254°W
	OFF-G	Location of offshore monitoring station representative of far field background conditions, 1000 m west of the outfall diffuser.	Cal-Am	36.729781°N, 121.849277°W
	REF-A	Location of offshore control reference monitoring station representative of background receiving water conditions, 1000 m south of the outfall diffuser.	Cal-Am	36.718966°N, 121.837486°W
	REF-B	Location of offshore control reference monitoring station representative of background receiving water conditions, 1000 m south of the outfall diffuser.	Cal-Am	36.718173°N, 121.831615°W

^[1] Latitude and longitude information is approximate for administrative purposes.

^[2] The M1W outfall and hauled saline waste discharge facilities currently do not allow for aggregate flow metering of as-discharged combined secondary effluent and saline wastes at high secondary effluent flows (during wet season when recycling is not being implemented) above what is required for blending to safely meet the prescribed effluent limitations.

During the dry season, when the M1W RTP is recycling essentially 100 percent of the wastewater flow, the facility is not capable of aggregate flow metering and sampling prior to entering the M1W outfall. However, a final effluent sampling station is being constructed and a flow meter will be installed in FY 26-27. During the dry season, saline waste discharge flows and high-volume secondary effluent flows are currently metered separately and are sampled separately via grab samples that are composited based on the as-discharged flow proportions entering the outfall.

Effluent monitoring per M1W's current facility configuration and effluent monitoring protocol (at EFF-001) is acceptable until the Final Effluent Sampling Station (EFF-001D) is constructed to facilitate year-round flow metering of combined saline waste, RO concentrate, secondary effluent, and Cal-Am MPWSP brine waste.

3. INFLUENT MONITORING REQUIREMENTS

3.1. Monitoring Location INF-001 – M1W RTP Influent

3.1.1. M1W shall monitor untreated wastewater influent to the RTP at Monitoring Location INF-001 as follows:

Table E-2. Monitoring Location INF-001 – M1W RTP Influent

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	million gallons per day (MGD)	Metered or Calculated	Continuous ^[1]
Carbonaceous Biochemical Oxygen Demand, 5-day @ 20 Deg. C (CBOD ₅)	milligrams per liter (mg/L)	24-Hour Composite	1/Week ^[2]
Total Suspended Solids (TSS)	mg/L	24-Hour Composite	1/Week ^[2]
Pretreatment Requirements ^{[3], [4]}			

^[1] M1W shall report the instantaneous maximum (calculated daily), the daily average (calculated daily), and the monthly average (calculated monthly).

^[2] In addition to reporting all 24-hour composite samples, M1W shall report the daily average (calculated daily) and the monthly average (calculated monthly).

^[3] The priority pollutants identified in section 307(a) of the Clean Water Act.

^[4] See section 6.3.5.2 of the Order and section 9.3 of this MRP.

3.2. Monitoring Location INF-002 – M1W Hauled Saline Waste Influent

3.2.1. M1W shall monitor hauled saline waste delivered to the RTP at Monitoring Location INF-002 as follows:

Table E-3. Monitoring Location INF-002 – M1W Hauled Saline Waste

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow ^[1]	MGD	Metered or Calculated	Daily
Volume Routed to Emergency Storage ^[2]	gallons	Metered or Calculated	Daily
Other	M1W shall report all hauled saline waste sampling data collected as part of the hauled saline waste facility operation (i.e., analytical data used to characterize hauled saline waste and determine appropriate blending ratios for discharge).		

^[1] Volume received.

^[2] Sludge holding lagoons and drying beds or other storage as noted on the monitoring reports.

3.3. Monitoring Location INF-003 – Cal-Am MPWSP Desalination Plant Influent

3.3.1. Cal-Am shall monitor ocean water intake influent to the MPWSP Desalination Plant slant wells at Monitoring Location INF-003 as follows:

Table E-4. Monitoring Location INF-003 – Cal-Am MPWSP Desalination Plant Intake Influent

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Metered	Continuous ^[1]
pH	standard units (SU)	Metered	Continuous ^[2]
Temperature	degrees Fahrenheit (°F)	Metered or Calculated	Continuous ^[3]
Turbidity	nephelometric turbidity units (NTU)	Metered	Continuous ^[4]
Salinity	parts per thousand (ppth)	Grab	1/Week

^[1] Cal-Am shall report the instantaneous maximum (calculated daily), the daily average (calculated daily), and the monthly average (calculated monthly).

^[2] Cal-Am shall report the instantaneous maximum (calculated daily) and the instantaneous minimum (calculated daily).

^[3] Cal-Am shall report the daily average (calculated daily).

^[4] Cal-Am shall report the instantaneous maximum (calculated daily) and the daily average (calculated daily).

3.4. Monitoring Location INT-003 – M1W RTP Secondary-Treated Waste Influent to AWP

3.4.1. M1W shall monitor secondary treated waste influent to the AWP at Monitoring Location INT-003 as follows:

Table E-5. Monitoring Location INT-003 – M1W RTP Secondary Treatment Waste Influent to AWP

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Metered or Calculated	Continuous ^[1]

^[1] M1W shall report the daily average (calculated daily).

4. EFFLUENT MONITORING REQUIREMENTS

4.1. Monitoring Location EFF-001 – M1W Total Combined Waste

4.1.1. M1W shall monitor their total combined waste, including commingled M1W RTP secondary-treated effluent, M1W AWP RO concentrate, and M1W hauled saline, at Monitoring Location EFF-001 as follows:

Table E-6. Monitoring Location EFF-001 – M1W Total Combined Waste

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Metered or Calculated	Continuous ^[1]
Chlorine, Total Residual	micrograms per liter (µg/L)	Metered	Continuous ^[2]
pH	SU	Metered	Continuous ^[3]
Temperature	°F	Metered or Calculated	Continuous ^[4]
Oil and Grease	mg/L	Grab	1/Month ^[5]
Oil and Grease	pounds per day (lb/day) ^[6]	Calculated	1/Month ^[5]
Settleable Solids	milliliters per liter (mL/L)	Grab	1/Month ^[5]
Turbidity	NTU	Grab	1/Month ^[5]
TSS	mg/L	Grab	1/Month ^[7]
TSS	lb/day ^[6]	Calculated	1/Month ^[7]

^[1] M1W shall report the instantaneous maximum (calculated daily), the daily average (calculated daily), and the monthly average (calculated monthly).

^[2] M1W shall report the instantaneous maximum (calculated daily) and the daily average (calculated daily).

^[3] M1W shall report the instantaneous minimum (calculated daily) and the instantaneous maximum (calculated daily).

^[4] M1W shall report the daily average (calculated daily).

^[5] In addition to reporting all grab samples, M1W shall report the daily average (calculated daily on days when sampling occurred), the weekly average (calculated weekly), and the monthly average (calculated monthly).

^[6] M1W shall calculate mass emission rate from all grab samples using the following equation:

$$\text{lb/day} = 8.34 \times C_e \times Q,$$

where C_e is the grab sample result (mg/L) and Q is the daily average flow on the day of sampling (MGD).

[7] In addition to reporting all grab samples, M1W shall report the calculated daily average (calculated daily on days when sampling occurred) and the monthly average (calculated monthly).

4.2. Monitoring Location EFF-001A – M1W RTP Secondary-Treated Waste

4.2.1. M1W shall monitor M1W RTP secondary-treated waste at Monitoring Location EFF-001A as follows:

Table E-7. Monitoring Location EFF-001A – M1W RTP Secondary-Treated Waste

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Metered or Calculated	Continuous ^[1]
pH	SU	Metered	Continuous ^[2]
CBOD ₅	mg/L	24-Hour Composite	1/Week ^[3]
CBOD ₅	lb/day ^[4]	Calculated	1/Week ^[3]
CBOD ₅	percent (%) removal	Calculated	1/Week ^[3]
TSS	mg/L	24-Hour Composite	1/Week ^[3]
TSS	lb/day ^[4]	Calculated	1/Week ^[3]
TSS	% removal	Calculated	1/Week ^[3]

[1] M1W shall report the instantaneous maximum (calculated daily), the daily average (calculated daily), and the monthly average (calculated monthly).

[2] M1W shall report the instantaneous minimum (calculated daily) and the instantaneous maximum (calculated daily).

[3] In addition to reporting all 24-hour composite samples, M1W shall report the daily average (calculated daily on days when sampling occurred), weekly average (calculated weekly), and the monthly average on a (calculated monthly).

[4] M1W shall calculate and report the mass emission rate from all 24-hour composite samples using the following equation:

$$\text{lb/day} = 8.34 \times C_e \times Q,$$

where C_e is the 24-hr composite sample result (mg/L) and Q is the daily average combined flow rate from both Monitoring Locations EFF-001A and INT-003 on the day of sampling (MGD).

4.3. Monitoring Location EFF-001C – Cal-Am MPWSP Desalination Plant Brine Waste

4.3.1. Cal-Am shall monitor Cal-Am MPWSP Desalination Plant brine waste at Monitoring Location EFF-001C as follows:

Table E-8. Monitoring Location EFF-001C – Cal-Am MPWSP Desalination Plant Brine Waste

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Metered or Calculated	Continuous ^[1]
Chlorine, Total Residual	µg/L	Metered	Continuous ^[2]
Dissolved Oxygen	mg/L	Metered	Continuous ^[3]
pH	SU	Metered	Continuous ^[4]
Temperature	°F	Metered	Continuous ^[5]
Oil and Grease	mg/L	Grab	1/Week ^[6]
Oil and Grease	lb/day ^[7]	Calculated	1/Week ^[6]
Salinity	ppth	Grab	1/Week
Settleable Solids	mL/L	Grab	1/Week ^[6]
Total Dissolved Solids (TDS)	mg/L	Grab	1/Week
TSS	mg/L	Grab	1/Week ^[8]
TSS	lb/day ^[7]	Calculated	1/Week ^[8]
Turbidity	NTU	Grab	1/Week ^[6]

^[1] Cal-Am shall report the instantaneous minimum (calculated daily), the instantaneous maximum (calculated daily), the daily average (calculated daily), and the monthly average (calculated monthly). The daily average brine flow shall be calculated considering only times in which brine flow occurs. For example, if MPWSP Desalination Plant brine waste is only discharged for 12 hours in a 24-hour period, the daily average only considers the 12-hour period in which Cal-Am Desalination Plant brine waste flow occurred.

^[2] Cal-Am shall report the instantaneous maximum (calculated daily) and the daily average (calculated daily).

^[3] Cal-Am shall report the instantaneous minimum (calculated daily), the instantaneous maximum (calculated daily), and the daily average (calculated daily).

^[4] Cal-Am shall report the instantaneous minimum (calculated daily) and the instantaneous maximum (calculated daily).

^[5] Cal-Am shall report the daily average (calculated daily).

^[6] In addition to reporting all grab samples, Cal-Am shall also report the daily average (calculated daily on days when sampling occurred), the weekly average (calculated weekly), and the monthly average (calculated monthly).

^[7] Cal-Am shall calculate mass emission rate from all grab samples using the following equation:

$$\text{lbs/day} = 8.34 \times C_e \times Q,$$

where C_e is the grab sample result (mg/L) and Q is the daily average flow on the day of sampling (MGD).

^[8] In addition to reporting all grab samples, Cal-Am shall also report the daily average (calculated daily on days when sampling occurred) and the monthly average (calculated monthly).

4.4. Monitoring Location EFF-001E – M1W AWP RO Concentrate

4.4.1. M1W shall monitor M1W AWP RO concentrate at Monitoring Location EFF-001E as follows:

Table E-9. Monitoring Location EFF-001E – M1W AWP RO Concentrate Effluent

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Metered or Calculated	Continuous ^[1]

^[1] M1W shall report the daily average (calculated daily).

4.5. Monitoring Location EFF-001D – Final Commingled Effluent (Before Considering Dilution)

4.5.1. The Dischargers shall monitor commingled effluent (which may consist of M1W RTP secondary treated waste, M1W AWP RO concentrate, M1W hauled saline waste, and Cal-Am MPWSP Desalination Plant brine waste) downstream of the brine mixing structure at Monitoring Location EFF-001D, prior to being discharged at Discharge Point 001, as described in Table E-10. The Dischargers shall report monitoring results without dilution calculation at Monitoring Location EFF-001D. The Final Effluent Sampling Station, which is located at Monitoring Location EFF-001D, is currently being constructed to facilitate year-round sampling. Until construction is completed, the following monitoring shall occur at Monitoring Location EFF-001.

Table E-10. Monitoring Location EFF-001D – Final Commingled Effluent (Before Dilution)

Parameter	Units	Sample Type	Minimum Sampling Frequency ^[1]
Flow	MGD	Metered or Calculated	Continuous ^[2]
Dissolved Oxygen	mg/L	Metered	Continuous ^[3]
pH	SU	Metered	Continuous ^[4]
Temperature	°F	Metered	Continuous ^[5]

Parameter	Units	Sample Type	Minimum Sampling Frequency ^[1]
Electrical Conductivity @ 25 Deg. C	microsiemens per centimeter (µS/cm)	Grab	1/Month
Hardness, Total (as CaCO ₃)	mg/L	Grab	1/Month
Oil and Grease	mg/L	Grab	1/Month
Salinity	ppth	Grab	1/Month
Settleable Solids	mL/L	Grab	1/Month
Turbidity	NTU	Grab	1/Month
TSS	mg/L	Grab	1/Month
Nitrate Nitrogen, Total (as N)	mg/L	Grab	1/Month
Nitrite Plus Nitrate (as N)	mg/L	Grab	1/Month
Orthophosphate	mg/L	Grab	1/Month
Phosphorus, Total (as P)	mg/L	Grab	1/Month
Silicate	mg/L	Grab	1/Month
Total Kjeldahl Nitrogen (TKN)	mg/L	Grab	1/Month
Urea	mg/L	Grab	1/Month
Chloride	mg/L	Grab	4/Year
Iron	mg/L	Grab	4/Year
Magnesium	mg/L	Grab	4/Year
Sodium	mg/L	Grab	4/Year
Chlorine, Total Residual	µg/L	Metered	Continuous ^[6]
Ammonia, Total (as N)	µg/L	Grab	1/Month ^[7]
Cadmium, Total Recoverable	µg/L	Grab or 24-Hour Composite	4/Year
Cyanide ^[8]	µg/L	Grab or 24-Hour Composite	4/Year
Phenols, (Non-chlorinated) ^[9]	µg/L	Grab	4/Year ^[7]
Chlorinated Phenolics ^[9]	µg/L	Grab	4/Year ^[7]
Acrylonitrile	µg/L	Grab or 24-Hour Composite	4/Year
Dichlorodiphenyltrichloroethane (DDT/DDD/DDE, Sum of P,P and O,P Isomers) ^[9]	µg/L	Grab or 24-Hour Composite	4/Year
Dieldrin	µg/L	Grab or 24-Hour Composite	4/Year
Polynuclear Aromatic Hydrocarbons (PAHs) ^[9]	µg/L	Grab or 24-Hour Composite	4/Year
Toxaphene	µg/L	Grab or 24-Hour Composite	4/Year
2,4,6-Trichlorophenol	µg/L	Grab or 24-Hour Composite	4/Year

Parameter	Units	Sample Type	Minimum Sampling Frequency ^[1]
Chronic Toxicity ^[10]	pass/fail, % effect	Grab	4/Year
Acute Toxicity ^[10]	pass/fail, % effect	Grab	2/Year
Radioactivity	pCi/L	Grab or 24-Hour Composite	2/Year
Remaining Ocean Plan Table 3 Pollutants	µg/L	Grab or 24-Hour Composite	2/Year
Fecal Coliform Bacteria ^{[11], [12]}	most probable number per 100 milliliters (MPN/100 mL)	Grab	1/month ^[13]
Total Coliform Bacteria ^{[11], [12]}	MPN/100 mL	Grab	1/month ^[14]
Enterococcus ^{[11], [15]}	MPN/100 mL	Grab	1/month ^[16]
Remaining Priority Pollutants ^[17]	µg/L	Grab or 24-Hour Composite	1/Year

^[1] Sampling must occur at least once during Dms of 464, 348, 194, and 101 across each 5-year period, unless the Dm does not occur during that 5-year period.

^[2] The Dischargers shall report the instantaneous maximum (calculated daily), the daily average (calculated daily), and the monthly average (calculated monthly).

^[3] The Dischargers shall report the instantaneous minimum (calculated daily), the instantaneous maximum (calculated daily), and the daily average (calculated daily).

^[4] The Dischargers shall report the instantaneous minimum (calculated daily) and the instantaneous maximum (calculated daily).

^[5] The Dischargers shall report the daily average (calculated daily).

^[6] The Dischargers shall report the instantaneous maximum (calculated daily), the daily average (calculated daily).

^[7] In addition to reporting the analytical results of all grab samples, the Dischargers shall also report the daily average (calculated daily on days when sampling occurs).

^[8] If a discharger can demonstrate to the satisfaction of the Central Coast Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR PART 136, as revised May 14, 1999.

^[9] As defined in Appendix A.

- [10] Whole effluent toxicity (WET) testing for acute and chronic toxicity shall be conducted according to the requirements established in section 5 of this MRP. Toxicity sampling occurs at EFF-001D but results are only reported at EFF-001B after dilution is considered, as described in MRP section 4.6.2. Results are reported as both pass/fail and % effect, though only pass/fail is used to determine compliance with toxicity effluent limitations.
- [11] For all bacterial analyses, sample dilutions should be performed so the range of detectable bacterial density values at Monitoring Location EFF-001B (after accounting for initial dilution) extends from at least 10 to 10,000 MPN/100 mL. The detection methods used for each analysis shall be reported with the results of the analysis.
- [12] Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR part 136 (revised edition of May 14, 1999), unless alternate methods have been approved in advance by USEPA pursuant to 40 CFR part 136.
- [13] Monthly fecal coliform monitoring shall accelerate to weekly after an exceedance of the IMAX in Table 7. Monitoring may return to monthly after 6 weeks of weekly monitoring without an exceedance of the IMAX or the 30-day Geometric Mean Effluent Limitation.
- [14] Monthly total coliform monitoring shall accelerate to weekly, and return to monthly, at the discretion of the Executive Officer (EO), based on effluent and receiving water monitoring data.
- [15] Detection methods used for enterococcus shall be those presented in USEPA publication EPA 600/4- 85/076, *Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure*, or any improved method determined by the Central Coast Water Board to be appropriate.
- [16] Monthly enterococci monitoring shall accelerate to weekly after an exceedance of the IMAX in Table 7. Monitoring may return to monthly after 6 weeks of weekly monitoring without an exceedance of the IMAX or the 6-week Geometric Mean Effluent Limitation.
- [16] The “Remaining Priority Pollutants” in Table E-11 below consist of the priority pollutants listed in Part D of USEPA Form 3510-2A (Rev. 1-99) that currently do not have ocean criteria per Table 3 of the Ocean Plan. A complete USEPA Form 3510-2A is required for all new and renewal NPDES permit applications pursuant to 40 CFR section 122.21. Expanded Effluent Testing Data per Part D of USEPA Form 3510-2A is required for all treatment works with design flows greater than or equal to 1.0 MGD or with a pretreatment program (or required to have a pretreatment program), or otherwise required by the permitting authority to provide the data.

Table E-11. Priority Pollutants

Parameter
Volatile Organic Compounds

Parameter
Chloroethane
2-Chloroethyl Vinyl Ether
1,1-Dichloroethane
Trans-1,2-Dichloroethylene
1,2-Dichloropropane
Methyl Bromide
Methyl Chloride
Acid Extractable Compounds
P-Chloro-m-Cresol
2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2-Nitrophenol
4-Nitrophenol
Pentachlorophenol
Phenol
Base-Neutral Compounds
Acenaphthylene
4-Bromophenyl Phenyl Ether
Butyl Benzyl Phthalate
2-Chloronaphthalene
4-Chlorophenyl Phenyl Ether
Di-n-Octyl Phthalate
2,6-Dinitrotoluene
Naphthalene
1,2,4-Trichlorobenzene

4.6. Monitoring Location EFF-001B – Final Commingled Effluent (After Dilution)

4.6.1. Monitoring and Reporting Requirements

The Dischargers shall calculate and report the final commingled effluent concentration at Monitoring Location EFF-001B by applying initial dilution to effluent samples collected at Monitoring Location EFF-001 until EFF-001D is constructed and operational. As described in section 4.6.2 of this MRP, the appropriate dilution ratio (D_m) is assigned on a daily basis based on either the presence of Cal-Am MPWSP Desalination Plant brine waste in the effluent or the ratio of M1W AWP RO concentrate and hauled saline waste to total M1W combined effluent (referred to as the M1W Waste Ratio). Calculated concentrations shall be reported for Monitoring Location EFF-001B for

compliance determination with effluent limitations presented in Table 6 and Table 7 of the Order.

Table E-12. Effluent Monitoring at EFF-001B – Final Commingled Effluent (After Dilution)

Parameter	Units	Sample Type	Minimum Sampling Frequency ^{[1],[2]}
M1W Waste Ratio ^[3]		Calculated	1/Day
Dm Value ^[4]		Calculated	1/Day
Chlorine, Total Residual	µg/L	Calculated	1/Day
Chlorine, Total Residual	lb/day	Calculated	1/Day
Ammonia, Total (as N)	µg/L	Calculated	1/Month
Ammonia, Total (as N)	lb/day	Calculated	1/Month
Cadmium, Total Recoverable	µg/L	Calculated	4/Year
Cadmium, Total Recoverable	lb/day	Calculated	4/Year
Cyanide ^[5]	µg/L	Calculated	4/Year
Cyanide ^[5]	lb/day	Calculated	4/Year
Phenols, (Non-chlorinated) ^[6]	µg/L	Calculated	4/Year
Phenols, (Non-chlorinated) ^[6]	lb/day	Calculated	4/Year
Chlorinated Phenolics ^[6]	µg/L	Calculated	4/Year
Chlorinated Phenolics ^[6]	lb/day	Calculated	4/Year
Acrylonitrile	µg/L	Calculated	4/Year
Acrylonitrile	lb/day	Calculated	4/Year
DDT/DDD/DDE, Sum of P,P and O,P Isomers ^[6]	µg/L	Calculated	4/Year
DDT/DDD/DDE, Sum of P,P and O,P Isomers ^[6]	lb/day	Calculated	4/Year
Dieldrin	µg/L	Calculated	4/Year
Dieldrin	lb/day	Calculated	4/Year
PAHs ^[6]	µg/L	Calculated	4/Year
PAHs ^[6]	lb/day	Calculated	4/Year
Toxaphene	µg/L	Calculated	4/Year
Toxaphene	lb/day	Calculated	4/Year
2,4,6-Trichlorophenol	µg/L	Calculated	4/Year
2,4,6-Trichlorophenol	lb/day	Calculated	4/Year
Chronic Toxicity ^[7]	Pass/Fail, % Effect	Calculated	4/Year

Parameter	Units	Sample Type	Minimum Sampling Frequency ^{[1],[2]}
Acute Toxicity ^[7]	Pass/Fail, % Effect	Calculated	2/Year
Radioactivity	pCi/L	Calculated ^[8]	2/Year
Remaining Ocean Plan Table 3 Pollutants	µg/L	Calculated	2/Year
Remaining Ocean Plan Table 3 Pollutants	lb/day	Calculated	2/Year
Fecal Coliform Bacteria ^{[9],[10]}	MPN/100mL	Calculated	1/month ^[11]
Total Coliform Bacteria ^{[9],[10]}	MPN/100mL	Calculated	1/month ^[12]
Enterococcus ^{[9],[13]}	MPN/100mL	Calculated	1/month ^[14]

^[1] Sampling must occur at least once during Dms of 464, 348, 194, and 101 across each 5-year period, unless the Dm does not occur during that 5-year period.

^[2] Calculated and reported as described in section 4.6.2. of this MRP.

^[3] Defined as

(M1W AWP RO Concentrate + M1W Hauled Saline Waste)/M1W Total Waste

^[4] As defined in Tables E-13 and E-14.

^[5] If a discharger can demonstrate to the satisfaction of the Regional Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR PART 136, as revised May 14, 1999.

^[6] As defined in Appendix A.

^[7] WET testing for acute and chronic toxicity shall be conducted according to the requirements established in section 5 of this MRP. Toxicity sampling occurs at EFF-001D but results are only reported at EFF-001B after dilution is considered, as described in MRP section 4.6.2. Results are reported as both pass/fail and % effect, though only pass/fail is used to determine compliance with toxicity effluent limitations.

^[8] Radioactivity calculations shall not use initial dilution.

^[9] For all bacterial analyses, sample dilutions should be performed so the range of detectable bacterial density values at Monitoring Location EFF-001B (after accounting for initial dilution) extends from at least 10 to 10,000 MPN/100 mL. The detection methods used for each analysis shall be reported with the results of the analysis.

^[10] Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR part 136 (revised edition of May 14, 1999), unless alternate

methods have been approved in advance by USEPA pursuant to 40 CFR part 136.

- [11] Monthly fecal coliform monitoring shall accelerate to weekly after an exceedance of the IMAX in Table 7. Monitoring may return to monthly after 6 weeks of weekly monitoring an exceedance of the IMAX or the 30-day Geometric Mean Effluent Limitation.
- [12] Monthly total coliform monitoring shall accelerate to weekly, and return to monthly, at the discretion of the Executive Officer (EO), based on effluent and receiving water monitoring data.
- [13] Detection methods used for enterococcus shall be those presented in USEPA publication EPA 600/4- 85/076, Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure, or any improved method determined by the Central Coast Water Board to be appropriate.
- [14] Monthly enterococci monitoring shall accelerate to weekly after an exceedance of the IMAX in Table 7. Monitoring may return to monthly after 6 weeks of weekly monitoring an exceedance of the IMAX or the 6-week Geometric Mean Effluent Limitation.

4.6.2. Applying Dilution Factors

4.6.2.1. Permitted Dms

The minimum initial dilution ratio (Dm; parts seawater per part wastewater) of the final commingled waste stream at the point of discharge to the Pacific Ocean at Monterey Bay shall not be less than the minimum probable initial dilution values in Table E-13 below prior to the completion of M1W outfall and diffuser modifications, and shall not be less than the minimum probable initial dilution values in Table E-14 below after the completion of M1W outfall and diffuser modifications.

Table E-13. Approved Dms and Related Discharge Scenarios Prior to M1W Outfall and Diffuser Modifications

Daily Average M1W Waste Ratio ^[1]	Daily Dm
> 0.747	453
0.416 – 0.747	368
0.129 – 0.415	248
0 – 0.128	145

[1] M1W Waste Ratio is defined as:

(M1W AWP RO concentrate + hauled saline waste)/M1W total combined waste

Table E-14. Approved Dms and Related Discharge Scenarios After M1W Outfall and Diffuser Modifications

Daily Average Cal-Am MPWSP Desalination Plant Brine Waste (MGD) ^{[1],[2]}	Daily Average M1W Total Combined Waste (MGD)	Daily Average M1W Waste Ratio ^[3]	Daily Dm
0	0 – 29.6	> 0.691	464
0.6	0 – 29.6	0.285 – 0.690	348
0	0 – 29.6	0 – 0.284	194
0	29.7 – 75.6	0 – 0.128	142
5.80 – 8.66 ^[3]	0 – 75.6	0 – 1	101

^[1] If any MPWSP Desalination Plant brine waste is discharged, the daily average flow shall be calculated considering only times in which flow occurs. For example, if MPWSP Desalination Plant brine waste is only discharged for 12 hours in a 24-hour period, the daily average only considers the 12-hour period in which Cal-Am Desalination Plant brine waste flow occurred.

^[2] Instantaneous Cal-Am Desalination Plant brine waste flows between 0–5.8 MGD are permitted only during ramp up/down, for a total of at most 2 hours per day. If Cal-Am Desalination Plant brine waste flows exist between 0–5.8 MGD for more than 2 hours per day, then Dm = 97 for the day.

^[3] M1W waste ratio is defined as:

(M1W AWP RO concentrate + hauled saline waste)/M1W total combined waste

4.6.2.2. Dm for Ocean Plan Table 3 Parameters (Except Toxicity and Radioactivity)

As shown in Table 6, some Ocean Plan Table 3 parameters have applicable Instantaneous Maximum Effluent Limitations (IMAXes), Maximum Daily Effluent Limitations (MDELs), Average Monthly Effluent Limitations (AMELs), and/or 6-Month Median Effluent Limitations. The sections below discuss how to report data for compliance determination with these limitations.

4.6.2.2.1. If IMAXes Apply

If an Ocean Plan Table 3 parameter has an applicable concentration-based IMAX with compliance determined at Monitoring Location EFF-001B, the Dischargers shall calculate an instantaneous maximum diluted concentration Czid (µg/L) for each day of sampling, using

$$C_{zid} = (C_e + D_m \times C_s) / (1 + D_m)$$

where:

Ce (µg/L) is the analytical sample concentration (for grab samples), or the instantaneous maximum concentration (for continuous monitoring), as reported at either Monitoring Location EFF-001 (prior to the M1W outfall

and diffuser modifications) or Monitoring Location EFF-001D (after the M1W outfall and diffuser modifications),

Cs (µg/L) is the background seawater concentration (either zero or a value provided in Table 5 of the 2019 Ocean Plan), and

Dm is the minimum probable initial dilution corresponding to the applicable discharge scenario from either Table E-13 (prior to the M1W outfall and diffuser modifications) or Table E-14 (after the M1W outfall and diffuser modifications).

The Dischargers shall then further calculate an instantaneous maximum mass emission rate for each day of sampling, using

$$\text{lb/day} = 0.00834 \times Q \times (C_e + D_m \times C_s) / (1 + D_m),$$

where:

Q (MGD) is the daily average flowrate of final commingled effluent on the day of monitoring at Monitoring Location EFF-001 (prior to the M1W outfall and diffuser modifications) or Monitoring Location EFF-001D (after the M1W outfall and diffuser modifications), and

Dm (for mass emission rate) is the most conservative permitted minimum initial dilution (Dm = 145 prior to M1W outfall and diffuser modifications, or Dm = 101 after M1W outfall and diffuser modifications).

The instantaneous maximum Czids and instantaneous maximum mass emission rates shall be reported at Monitoring Location EFF-001B and compared with the applicable IMAXes in Table 6.

4.6.2.2.2. If MDELs Apply

If an Ocean Plan Table 3 parameter has an applicable concentration-based MDEL with compliance determined at Monitoring Location EFF-001B, the Dischargers shall calculate a daily average Czid (µg/L) for each day of sampling, using

$$C_{zid} = (C_e + D_m \times C_s) / (1 + D_m)$$

where:

Ce (µg/L) is the analytical sample concentration (for 24-hour composite samples) or the daily average concentration (for grab samples and continuous monitoring), as reported at Monitoring Location EFF-001 (prior to the M1W outfall and diffuser modifications) or Monitoring Location EFF-001D (after the M1W outfall and diffuser modifications),

Cs (µg/L) is the background seawater concentration (either zero or a value provided in Table 5 of the 2019 Ocean Plan), and

Dm is the minimum probable initial dilution corresponding to the applicable discharge scenario from either Table E-13 (prior to the M1W outfall and diffuser modifications) or Table E-14 (after the M1W outfall and diffuser modifications) above.

The Dischargers shall then further calculate a daily average mass emission rate for each day of sampling, using

$$\text{lb/day} = 0.00834 \times Q \times (\text{Ce} + \text{Dm} \times \text{Cs}) / (1 + \text{Dm}),$$

where:

Q (MGD) is the daily average flowrate of final commingled effluent on the day of monitoring at Monitoring Location EFF-001 (prior to the M1W outfall and diffuser modifications) or Monitoring Location EFF-001D (after the M1W outfall and diffuser modifications), and

Dm (for mass emission rate) is the most conservative permitted minimum initial dilution (Dm = 145 prior to M1W outfall and diffuser modifications, or Dm = 101 after M1W outfall and diffuser modifications).

The daily average Czids and daily average mass emission rates shall be reported at Monitoring Location EFF-001B and compared with the applicable MDELs in Table 6.

4.6.2.2.3. If AMELs Apply

If a parameter has an applicable AMEL with compliance determined at Monitoring Location EFF-001B, the Dischargers shall calculate a daily average Czid (µg/L) and a daily average mass emission rate (lb/day) for each day of sampling according to MRP section 4.6.2.2.2 above. The Dischargers shall then calculate a monthly average Czid (µg/L) for each month of sampling as the average of all daily average Czids from the month, along with a monthly mass emission rate (lb/day) for each month of sampling as the average of all daily average emission rates from the month. The monthly average Czids and mass emission rates shall be reported at Monitoring Location EFF-001B and the monthly average calculated results shall be compared with the applicable AMELs in Table 6.

4.6.2.2.3. If 6-Month Median Effluent Limitations Apply

If a parameter has an applicable 6-Month Median Effluent Limitation with compliance determined at Monitoring Location EFF-001B, the Dischargers shall calculate a daily average Czid (µg/L) and a daily average mass emission rate (lb/day) for each day of sampling according to MRP section 4.6.2.2.2 above. The Dischargers shall then also calculate the 6-month median Czid (µg/L) on each day of sampling as the median of preceding 180 days of Czids, and the 6-month median mass emission rate (lb/day) on each day of sampling as the median of preceding 180 days of emission rates. The 6-month median Czids and mass emission rates shall be reported at Monitoring Location EFF-001B and the 6-month median calculated results shall be compared with the applicable 6-Month Median Effluent Limitations in Table 6.

4.6.2.3. Dm for Bacteria

4.6.2.3.1. IMAXes

As shown in Table 7, all three bacteria parameters have applicable IMAXes with compliance determined at Monitoring Location EFF-001B. The Dischargers shall thus calculate an instantaneous maximum Czid (MPN/100 mL) for each day of sampling, using

$$C_{zid} = (C_e + D_m \times C_s) / (1 + D_m)$$

where:

Ce (MPN/100 mL) is the analytical grab sample concentration reported at Monitoring Location EFF-001 (prior to the M1W outfall and diffuser modifications) or Monitoring Location EFF-001D (after the M1W outfall and diffuser modifications),

Cs (MPN/100 mL) is the background seawater concentration (taken to be zero), and

Dm is the minimum probable initial dilution corresponding to the applicable discharge scenario from either Table E-13 (prior to the M1W outfall and diffuser modifications) or Table E-14 (after the M1W outfall and diffuser modifications).

The instantaneous maximum Czids shall be reported at Monitoring Location EFF-001B and compared with the applicable IMAXes in Table 7.

4.6.2.3.2. Monthly, 30-day, and 6-week Effluent Limitations

To facilitate compliance determination with an applicable monthly, 30-day, or 6-week effluent limitation, the Dischargers shall also calculate a daily average Czid (MPN/100 mL) on each day of sampling using

$$C_{zid} = (C_e + D_m \times C_s) / (1 + D_m)$$

where:

Ce (MPN/100 mL) is the daily average concentration as reported at Monitoring Location EFF-001 (prior to the M1W outfall and diffuser modifications) or Monitoring Location EFF-001D (after the M1W outfall and diffuser modifications),

Cs (MPN/100 mL) is the background seawater concentration (taken to be zero), and

Dm is the minimum probable initial dilution corresponding to the applicable discharge scenario from either Table E-13 (prior to the M1W outfall and diffuser modifications) or Table E-14 (after the M1W outfall and diffuser modifications) above.

If a Monthly Median Effluent Limitation applies, the Dischargers shall calculate a monthly median Czid (MPN/100 mL) for each month of sampling as the median of the daily average Czids for that calendar month. The monthly

median Czids shall be reported at Monitoring Location EFF-001B, and shall be compared with the applicable Monthly Median Effluent Limitation in Table 7.

If a 30-Day Geometric Mean Effluent Limitation applies, the Dischargers shall calculate a 30-day geometric mean Czid (MPN/100 mL) for each day of sampling as the geometric mean of the most recent 5 samples. The 30-day geometric mean Czid shall be reported at Monitoring Location EFF-001B and shall be compared with the applicable 30-Day Geometric Mean Effluent Limitation in Table 7.

If a 6-Week Geometric Mean Effluent Limitation applies, the Dischargers shall calculate the 6-week geometric mean Czid (MPN/100 mL) for each week of sampling as the geometric mean of all samples in the preceding 6-week period. The 6-week geometric mean Czid shall be reported at Monitoring Location EFF-001B and compared with the applicable 6-Week Geometric Mean Effluent Limitation in Table 7.

4.6.2.4. Dm for Toxicity

For acute and chronic toxicity, the Dischargers shall collect samples at Monitoring Location EFF-001 (prior to the M1W outfall and diffuser modifications) or Monitoring Location EFF-001D (after the M1W outfall and diffuser modifications). The Dischargers shall then calculate and report “Pass” or “Fail” at Monitoring Location EFF-001B using the Instream Waste Concentration (IWC; %) determined as

$$IWC = 100/(Dm + 1),$$

where chronic toxicity uses the Dms in Tables E-13 or E-14 above and acute toxicity uses only 10% of the chronic toxicity Dms, as displayed in Tables E-15 and E-16 below.

Where the toxicity test requires sample collection on multiple days, the Dischargers shall base the IWC on the single Dm that is applicable on all days of sampling.

Table E-15. IWC for Acute and Chronic Toxicity (before M1W outfall and diffuser modifications)

Dm from Table E-13	Dm for Chronic Toxicity IWC	Chronic Toxicity IWC (%)	Dm for Acute Toxicity IWC	Acute Toxicity IWC (%)
453	453	0.22	45.3	2.2
368	368	0.27	36.8	2.6
248	248	0.40	24.8	3.9
145	145	0.68	14.5	6.5

Table E-16. IWC for Acute and Chronic Toxicity (after M1W outfall and diffuser modifications)

Dm from Table E-14	Dm for Chronic Toxicity IWC	Chronic Toxicity IWC (%)	Dm for Acute Toxicity IWC	Acute Toxicity IWC (%)
464	464	0.22	46.4	2.1
348	348	0.29	34.8	2.8
194	194	0.51	19.4	4.9
143	143	0.69	14.3	6.5
101	101	0.98	10.1	9.0

5. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

5.1. Whole Effluent Toxicity (WET) Testing Requirements

The WET refers to the overall aggregate toxic effect to aquatic organisms from all pollutants contained in a facility's wastewater (effluent). The control of WET is one approach this Order uses to control the discharge of toxic pollutants. WET tests evaluate 1) the aggregate toxic effects of all chemicals in the effluent including additive, synergistic, or antagonistic effects; 2) the effects of unmeasured chemicals in the effluent; and 3) variability in bioavailability of the chemicals in the effluent. Monitoring to assess the overall toxicity of the effluent is required to answer the following questions:

1. Does the effluent comply with permit effluent limitations for toxicity thereby ensuring that water quality standards are achieved in the receiving water?
2. If the effluent does not comply with permit effluent limitations for toxicity, is the observed toxicity causing risk to aquatic life?
3. If the effluent does not comply with permit effluent limitations, is the observed toxicity caused by one or more pollutants that are measured or unmeasured?

5.2 Acute Toxicity

5.2.1. Discharge In-stream Waste Concentration (IWC) for Acute Toxicity

The acute IWC is calculated by dividing 100 percent by the acute toxicity Dm+1. The acute toxicity Dm corresponds to the dilution ratios as described in Table E-13 or E-14 of this MRP multiplied by 0.1. The acute toxicity IWC is one of the values in Table E-15 or E-16.

5.2.2. Acute Toxicity Test Species and Methods

- 5.2.1.1. Species and short-term test methods for estimating the acute toxicity of NPDES effluents are generally found in the fifth edition of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012, 2002; Table IA, 40 CFR § 136).

- 5.2.1.2. For this Order, the Dischargers shall conduct 96-hour static renewal toxicity tests using a standard marine test species as specified in EPA-821-R-02-012 and as noted in the following table.

Table E-17. Approved Acute Toxicity Tests

Species	Scientific Name	Effect	Test Duration
Shrimp	<i>Holmesimysis costata</i>	Survival	96 hours
Shrimp	<i>Mysidopsis bahia</i>	Survival	96 hours
Silversides	<i>Menidia beryllina</i>	Survival	96 hours
Sheepshead Minnow	<i>Cyprinodon variegatus</i>	Percent Survival	96 hours

5.3 Chronic Toxicity

5.3.1. Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity

The chronic IWC is calculated by dividing 100 percent by $Dm+1$. The Dm will be based on the dilution ratios as described in Table E-13 and Table E-14 in section 4.6.2 of this MRP. The chronic toxicity IWC will be one of values in Table E-15 or E-16.

5.3.2. Chronic Marine Species and Test Methods

- 5.3.2.1. The presence of chronic toxicity shall be estimated as specified in *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, EPA-821/600/R-95/136; *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, EPA-821-R-02-104 or *Procedures Manual for Conducting Toxicity Tests developed by the Marine Bioassay Project*, SWRCB 1996, 96-1WQ; and/or *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, EPA/600/4-87-028 or subsequent editions.

- 5.3.2.2. In accordance with the Ocean Plan, Appendix III, Standard Monitoring Procedures, the Dischargers shall use the critical life stage toxicity tests specified in Table E-18 to measure chronic toxicity. Other species or protocols may be added to the list after the State Water Board review and approval.

Table E-18. Approved Chronic Toxicity Tests

Species	Effect	Tier ^[1]	Reference ^[2]
Giant Kelp, <i>Macrocystis pyrifera</i>	Percent germination; germ tube length	1	a, c
Red abalone, <i>Haliotis rufescens</i>	Abnormal shell development	1	a, c
Oyster, <i>Crassostrea gigas</i> ; Mussels, <i>Mytilus</i> spp	Abnormal shell development percent survival	1	a, c

Species	Effect	Tier ^[1]	Reference ^[2]
Urchin, <i>Strongylocentrotus purpuratus</i> ; Sand dollar, <i>Dendraster excentricus</i>	Percent normal development	1	a, c
Urchin, <i>Strongylocentrotus purpuratus</i> ; Sand dollar, <i>Dendraster excentricus</i>	percent fertilization	1	a, c
Shrimp, <i>Holmesimysis costata</i>	Percent survival; growth	1	a, c
Shrimp, <i>Mysidopsis bahia</i>	Percent survival; growth; fecundity	2	b, d
Topsmelt, <i>Atherinops affinis</i>	Larval growth rate; percent survival	1	a, c
Silversides, <i>Menidia beryllina</i>	Larval growth rate; percent survival	2	b, d

^[1] First tier methods are preferred for compliance monitoring. If first tier organisms are not available, the Dischargers can use a second-tier test method following approval by the Central Coast Water Board.

^[2] Protocol References:

- a. Chapman, G.A., D.L. Denton, and J.M. Lazochak. 1995. *Short-term methods for estimating the chronic toxicity of effluents and receiving waters to west coast marine and estuarine organisms*. USEPA Report No. EPA/600/R-95/136.
- b. Klemm, D.J., G.E. Morrison, T.J. Norberg-King, W.J. Peltier, and M.A. Heber. 1994. *Short-term methods for estimating the chronic toxicity of effluents and receiving waters to marine and estuarine organisms*. U.S. EPA Report No. EPA-600-4-91-003.
- c. SWRCB 1996. *Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project*. 96-1WQ.
- d. Weber, C.I., W.B. Horning, I.I., D.J. Klemm, T.W. Neiheisel, P.A. Lewis, E.L. Robinson, J. Menkedick and F. Kessler (eds). 1988. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*. EPA/600/4-87/028. National Information Service, Springfield, VA.

5.3.3. Species Sensitivity Screening for Chronic Toxicity

5.3.3.1. Frequency

5.3.3.1.1. M1W completed a species sensitivity screening in February and July 2023 and *Macrocystis pyrifera* was identified as the most sensitive species using the low Dm (145) and high Dm (473) values implemented by R3-2018-0017. M1W initiated another species sensitivity screening in 2026. Once the 2026 screening is finalized, the species identified as the most sensitive through that screening will be used for routine toxicity monitoring.

5.3.3.1.2. Within 6 months of introduction of Cal-Am MPWSP Desalination Plant brine waste into the discharge, and every 24 months thereafter, the Dischargers must complete an additional species sensitivity screening when the effluent Dm of 101 applies.

5.3.3.1.3. Species sensitivity screenings for low and high M1W waste ratio, brine-free discharges shall also be performed every five years (Dm = 453 and 145 if species sensitivity screening occurs before M1W outfall and diffuser modifications, and Dm = 464 and 194 if species sensitivity screening occurs after M1W outfall and diffuser modifications).

5.3.3.2. Species

5.3.3.2.1. The Dischargers shall perform the species sensitivity screening using a marine vertebrate species, a marine invertebrate species, and an alga species, to be selected from the list of approved tests referenced in Table E-18 above.

5.3.3.3. Sampling

5.3.3.3.1. The Dischargers shall conduct three toxicity tests using the fish, an invertebrate, and the alga species, respectively.

5.3.3.3.2. For those tests that require collection of additional renewal samples (as specified in the listed test method protocols), two more samples shall be collected. If necessary, the second and third samples used as renewal water may be used to initiate the test for the invertebrate or algae species.

5.3.3.3.3. Samples used for a species sensitivity screening must be taken during the same month and under the same Dm conditions.

5.3.3.4. Results

5.3.3.4.1. After completing species sensitivity screening, the Dischargers shall use the most sensitive species for all future routine chronic toxicity monitoring.

5.3.3.4.2. If the results of all three species for all dilution scenarios are "Pass" then the species that exhibited the highest "Percent Effect" regardless of dilution scenario shall be used for routine monitoring.

5.3.3.4.3. If the results of all three species for all dilution scenarios results in a single species with a "Fail" then that species resulting in the Fail shall be used for routine monitoring.

5.3.3.4.4. If the results of all three species for all dilution scenarios results in two or more species with a "Fail" then the species that exhibits the highest "Percent Effect" shall be used for routine monitoring.

5.3.3.4.5. The species used to conduct routine chronic toxicity effluent monitoring shall be the most sensitive species from the most recent species sensitivity screening.

- 5.3.3.4.6. Toxicity results obtained during the species sensitivity screening shall be used to evaluate compliance with the chronic toxicity MDELs. During the calendar month, toxicity tests used to determine the most sensitive test species shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL.

5.4. Quality Assurance and Additional Requirements

Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manuals previously referenced. Additional requirements are specified below.

- 5.4.1. The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. Sufficient sample volume shall also be collected during accelerated monitoring for subsequent toxicity reduction studies, if necessary.
- 5.4.2. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.
- 5.4.3. The Dischargers shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized by the EO.
- 5.4.4. If the effluent is to be discharged to a marine or estuarine system (e.g., salinity values in excess of 1,000 mg/L) and originates from a freshwater or brine supply, salinity of the effluent must be modified with dry ocean salts (e.g., FORTY FATHOMS®) or seawater obtained from an unaffected area of the receiving waters. This modified effluent shall then be tested using marine species.
- 5.4.5. Dilution water, including salinity controls, and lab control water shall be uncontaminated natural water, as specified in the test methods manual. If the diluted sample and the lab control water are different salinities, then the lab control water shall also be used to determine test acceptability and the salinity control shall be used for the Test of Significant Toxicity (TST) analyses.
- 5.4.6. Reference toxicant test results shall be submitted with the effluent sample test results. Both tests must satisfy the test acceptability criteria specified in EPA-821-R-02-012. If the test acceptability criteria are not achieved, the sample shall be retaken and retested within 14 days of the failed sampling event. The retest results shall be reported in accordance with EPA-821-R-02-012 (chapter on report preparation) and the results shall be attached to the next monitoring report.
- 5.4.7. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method manuals (Tables E-17 and E-18), the test should be declared invalid, then the Dischargers must resample and re-test within 14 days of test termination.
- 5.4.8. Monthly reference toxicant testing is sufficient.

- 5.4.9. When an effluent limitation for acute or chronic toxicity is exceeded during regular WET monitoring, the Dischargers shall initiate accelerated monitoring. The Dischargers shall notify the Central Coast Water Board and USEPA Region 9 and initiate accelerated monitoring within 14 days of notification by the laboratory of the exceedance. The Dischargers shall initiate their Toxicity Reduction Evaluation (TRE) according to their TRE Work Plans to address effluent toxicity if any WET test result exceeds the acute or chronic effluent limit during accelerated monitoring. Accelerated monitoring and TRE specifications are described in section 6.3.2.1 of the Order.

5.5. Toxicity Reporting

The Dischargers shall include a full report of toxicity test results with their regular quarterly monitoring reports and include the following information:

- 5.5.1. Toxicity test results, dates of sample collection and initiation of each toxicity test; and toxicity discharge limitations.
- 5.5.1.1. Toxicity test results shall be reported according to the appropriate guidance – *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, USEPA Office of Water, EPA-821-R-01-012 (2002) or the latest edition or *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, EPA-821-R-02-012 (2002) or subsequent editions.
- 5.5.1.2. If the TRE is used to determine that additional (accelerated) toxicity testing is unnecessary, these results shall be submitted with the monitoring report for the time period in which the investigation conducted under the TRE occurred.
- 5.5.2. Summary water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).
- 5.5.3. Statistical program (e.g., TST calculator, CETIS, etc.) output results, including graphical plots, for each toxicity test.
- 5.5.4. Graphical plots and tables clearly showing the laboratory's performance for the reference toxicant for the previous 20 tests.
- 5.5.5. Any additional quality assurance/quality control (QA/QC) documentation or any additional chronic toxicity-related information, upon written request from the Central Coast Water Board and/or USEPA, Region 9.

6. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

7. RECYCLING MONITORING REQUIREMENTS

7.1. Monitoring Location REC-001

- 7.1.1. M1W shall comply with applicable State and local requirements regarding the production of disinfected tertiary recycled wastewater, including requirements of Water Code sections 13500-13577 (Water Reclamation) and regulations at Title

22, sections 60301-60357 of the California Code of Regulations (Water Recycling Criteria).

- 7.1.2. When producing recycled water, M1W shall monitor recycled water at Monitoring Location REC-001 as specified in Table E-19 below.

Table E-19. M1W Recycled Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Metered or Calculated	Continuous ^[1]
Total Coliform Bacteria	MPN/100mL	Grab	1/Day
Biochemical Oxygen Demand, 5-day at 20 Deg. C (BOD ₅)	mg/L	24-Hour Composite	1/Month
TSS	mg/L	24-Hour Composite	1/Month
TDS	mg/L	24-Hour Composite	1/Week
pH	SU	Metered	Continuous ^[2]
Chlorine, Total Residual	mg/L	Metered	Continuous ^[3]
Product of Modal Contact Time and Total Chlorine Residual (CT)	milligram minutes per liter (mg-min/L)	Metered	Continuous ^[3]

^[1] M1W shall report the daily average (calculated daily) and the monthly average (calculated monthly).

^[2] M1W shall report the instantaneous minimum (calculated daily) and the instantaneous maximum (calculated daily).

^[3] M1W shall report the instantaneous minimum (calculated daily), the instantaneous maximum (calculated daily), and the daily average (calculated daily).

- 7.1.3. In the event M1W is unable to comply with the conditions of the water recycling requirements and prohibitions, M1W shall immediately notify the Central Coast Water Board by telephone and submit a written follow-up report with two weeks of the noncompliance. The written report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps are being taken to prevent the problems from recurring.

- 7.1.4. M1W shall submit an annual self-monitoring report to the Central Coast Water Board by April 1 of the following year. The report shall include:

- 7.1.4.1. A transmittal letter that includes a discussion of violations found during the reporting period and actions taken or planned for correcting noted violations, such as operation or facility modifications. If M1W has previously submitted a report describing corrective actions or a time schedule for implementing corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain a statement by M1W or its authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate, and complete.

7.1.4.2. Tabulations of the results of each required analysis by M1W specified in Table E-19 by date, time, type of sample, and station.

7.2. Monitoring Locations INT-001 and INT-002

7.2.1. M1W shall monitor water at the SVRP as specified in Table E-20 below.

Table E-20. M1W SVRP Process Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Location
Influent Loading Rate	gallons per minute per square foot (gpm/ft ²)	Metered	Continuous ^[1]	INT-001
Turbidity	NTU	Metered	Continuous ^[2]	INT-002
Percent of Time within 24-hr period of 5 NTU Exceedance	%	Calculated	1/Day	INT-002

^[1] M1W shall report the instantaneous maximum (calculated daily). Influent loading rate to filters shall be measured.

^[2] M1W shall report the instantaneous maximum (calculated daily) and the daily average (calculated daily). Turbidity samples shall be obtained after filtration, but prior to disinfection.

8. RECEIVING WATER MONITORING REQUIREMENTS

Receiving water monitoring shall be conducted as specified below. This program is intended to document conditions within the brine mixing zone (BMZ), zone of initial dilution (ZID), within the waste field where initial dilution is completed, and at other areas beyond the ZID where discharge impacts might be reasonably expected, including at reference stations and in the nearshore regions. Station location, sampling, sample preservation, and analyses, when not specified, shall be by methods approved by the Central Coast Water Board.

The Dischargers may also submit a list of proposed changes with supporting rationale to these monitoring requirements that it considers to be appropriate to the Central Coast Water Board for approval. The monitoring program may be modified by the Central Coast Water Board at any time. For example, the Central Coast Water Board may add additional monitoring if the Cal-Am MPWSP Desalination Plant begins discharging before the end of the permit term.

8.1. Bacteria Monitoring (Applicable to M1W Only)

8.1.1. Nearshore Bacteria Monitoring

M1W shall monitor bacteria in the surface water of the nearshore regions (at Monitoring Locations RSW-A, RSW-B, RSW-C, and RSW-D) as listed below in

Table E-21. To the extent practicable, this monitoring shall be conducted at times when the monitoring locations are most likely affected by the discharge.

Table E-21. M1W Nearshore Bacteria Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Enterococcus Bacteria	MPN/100 mL	Grab ^[1]	1/Month ^[2]
Fecal Coliform Bacteria	MPN/100 mL	Grab ^[1]	1/Month ^[2]
Total Coliform Bacteria	MPN/100 mL	Grab ^[1]	1/Month ^[2]

^[1] Sample dilutions shall be performed so the range of values extends from 2 to 16,000 MPN/100 mL. The detection methods used for each analysis shall be reported with the results of the analysis.

^[2] If a single sample exceeds any of the bacteriological effluent IMAXes contained within Table 7 of the Order, repeat sampling at that location shall be conducted to determine the extent and persistence of the exceedance. Repeat sampling shall be conducted within 24 hours of receiving analytical results and continued daily until the sample result is less than the IMAX.

8.2. Shoreline Monitoring (Applicable to M1W and Cal-Am)

The Dischargers shall monitor water quality in the surface water of the nearshore regions (at Monitoring Locations RSW-A, RSW-B, RSW-C, and RSW-D) as listed below in Table E-22. To the extent practicable, this monitoring shall be conducted at times when the monitoring locations are most likely affected by the discharge.

Table E-22. General Shoreline Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Visual Observations ^[1]	narrative	Visual	1/Month
Depth	m	Metered	4/Year
Temperature	°C	Metered	4/Year
Dissolved Oxygen	mg/L	Metered	4/Year
Turbidity	NTU	Metered	4/Year
pH	SU	Metered	4/Year
Salinity	ppth	Metered	4/Year

Parameter	Units	Sample Type	Minimum Sampling Frequency
Colored Dissolved Organic Matter (CDOM)	parts per billion (ppb)	Grab or Metered	4/Year
Alkalinity (Total as CaCO ₃)	mg/L	Grab	4/Year

^[1] Visual observations of the surface water conditions at the designated receiving water stations shall be conducted in such a manner as to enable the observer to describe and report the presence, if any, of floatables of sewage origin. Observations of wind (direction and speed), weather (cloudy, sunny, or rainy), direction of current, tidal conditions (high or low), water color, oil and grease, turbidity, and odor shall be recorded. The proximity of recreational and commercial vessels to monitoring locations shall also be recorded. These observations shall also be taken whenever a nearshore sample is collected.

8.3. Offshore Brine Discharge Monitoring (Applicable to Cal-Am Only)

In accordance with the desalination-specific Monitoring and Reporting Program requirements in Ocean Plan III.M.4.a, Cal-Am must perform facility-specific monitoring consistent with Ocean Plan Appendix III to demonstrate compliance with the receiving water limitation for salinity and evaluate the potential effects of the discharge within the water column, bottom sediments, and the benthic community. These requirements coincide with Cal-Am's draft *Monitoring and Reporting Plan for the California Water Company Desalination Plant Brine Discharge Monitoring Program* (Applied Marine Sciences, December 10, 2024) are implemented here in MRP section 8.3.

In order to also satisfy the Ocean Plan III.M.4.a(2) requirement to conduct a Before-After Control-Impact study, this monitoring must be completed prior to the commencement of brine waste discharge from the Cal-Am MPWSP Desalination Plant. The Central Coast Regional Water Board may then also require additional post-discharge monitoring depending on the timing of commencement of Cal-Am MPWSP Desalination Plant brine waste discharge. Because of the facility-specific nature of these requirements, they cannot be satisfied via participation in regional monitoring programs such as CCLEAN. These requirements may, however, be used to satisfy similar, non-facility-specific requirements listed in MRP sections 8.4.

8.3.1. Offshore Water Quality Monitoring

Cal-Am shall conduct offshore water quality monitoring at the offshore stations listed in Table E-1 (Monitoring Locations OFF-A, OFF-B, OFF-C, OFF-D, OFF-E, OFF-F, OFF-G, REF-A, and REF-B) monitored as described in Table E-23 below. Sampling shall begin at least one year prior to the start of Cal-Am MPWSP Desalination Plant brine waste discharge. Results shall be submitted as quarterly reports.

Table E-23. Cal-Am Offshore Water Quality Monitoring Requirements at Monitoring Locations OFF-A through OFF-G, REF-A, and REF-B.

Parameter	Units	Sample Type	Minimum Sampling Frequency
Temperature	°C	Metered ^[1]	Hourly ^[2] and Quarterly ^[3]
Dissolved Oxygen	mg/L	Metered ^[1]	Hourly ^[2] and Quarterly ^[3]
pH	SU	Metered ^[1]	Hourly ^[2] and Quarterly ^[3]
Salinity	ppth	Metered ^[1]	Hourly ^[2] and Quarterly ^[3]

^[1] Metered via conductivity-temperature-depth sensors.

^[2] At the sea floor.

^[3] As full water column conductivity-temperature-depth (CTD) profiles.

8.3.2. Offshore Sediment and Benthic Monitoring

Cal-Am shall collect sediment and benthic samples at Monitoring Locations OFF-A through OFF-G, REF-A, and REF-B twice in one 10-month period, representing both wet (January – April) and dry (July – October) seasons, and beginning at least one year prior to Cal-Am MPWSP Desalination Plant brine waste discharge. Sediment and benthic community samples shall be taken concurrently and adjacently (as practicable). Samples shall be taken using a 0.1-m² modified Van Veen grab sampler from the top two cm of the surface sediment. Results are due within 3 months after sampling ends.

8.3.2.1. Sediment Monitoring

Sediment toxicity tests shall utilize alternative amphipod species (*Eohaustorius estuaries*, *Leptocheirus plumulosus*, *Rhepoxynius abronius*) and be conducted in accordance with EPA 600/R-94/0925 (USEPA, 1994), Methods for Assessing the Toxicity of Sediment-Associated Contaminants with Estuarine and Marine Amphipods. Response criteria shall include mortality, emergence from sediment during exposure, and ability to rebury in clean sediment at the end of the 10-day exposure period. Analysis of sediment toxicity shall include a calculation of the mean control normalized response.

Bulk sediment chemical analysis shall include at a minimum the set of parameters listed in Table E-24 using USEPA-approved methods, methods developed by the National Oceanic and Atmospheric Administration's National Status and Trends for Marine Environmental Quality. For chemical analysis of sediment, samples shall be reported on a dry weight basis unless noted otherwise.

Table E-24. Cal-Am Offshore Sediment Monitoring Requirements at Monitoring Locations OFF-A through OFF-G, REF-A, and REF-B.

Parameter	Units	Sample Type	Minimum Sampling Frequency
Sediment Grain Size	µm	Grab	Twice ^[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency
TOC	% (dry weight)	Grab	Twice ^[1]
Total Nitrogen	% (dry weight)	Grab	Twice ^[1]
Acid Volatile Sulfides	mg/kg	Grab	Twice ^[1]
Dissolved Sulfide	mg/kg	Grab	Twice ^[1]
Aluminum	mg/kg	Grab	Twice ^[1]
Antimony	mg/kg	Grab	Twice ^[1]
Arsenic	mg/kg	Grab	Twice ^[1]
Cadmium	mg/kg	Grab	Twice ^[1]
Total Chromium	mg/kg	Grab	Twice ^[1]
Copper	mg/kg	Grab	Twice ^[1]
Total Cyanide	mg/kg	Grab	Twice ^[1]
Iron	mg/kg	Grab	Twice ^[1]
Lead	mg/kg	Grab	Twice ^[1]
Manganese	mg/kg	Grab	Twice ^[1]
Mercury	mg/kg	Grab	Twice ^[1]
Nickel	mg/kg	Grab	Twice ^[1]
Selenium	mg/kg	Grab	Twice ^[1]
Silver	mg/kg	Grab	Twice ^[1]
Tin	mg/kg	Grab	Twice ^[1]
Zinc	mg/kg	Grab	Twice ^[1]
PCBs	ng/kg	Grab	Twice ^[1]
2,4-DDD	ng/kg	Grab	Twice ^[1]
4,4-DDD	ng/kg	Grab	Twice ^[1]
2,4-DDE	ng/kg	Grab	Twice ^[1]
4,4-DDE	ng/kg	Grab	Twice ^[1]
2,4-DDT	ng/kg	Grab	Twice ^[1]
4,4-DDT	ng/kg	Grab	Twice ^[1]
Aldrin	ng/kg	Grab	Twice ^[1]
Chlordane (Alpha)	ng/kg	Grab	Twice ^[1]
Chlordane (Gamma)	ng/kg	Grab	Twice ^[1]
Chlordane (Oxy)	ng/kg	Grab	Twice ^[1]
Dieldrin	ng/kg	Grab	Twice ^[1]
Endosulfan (Alpha)	ng/kg	Grab	Twice ^[1]
Endosulfan (Beta)	ng/kg	Grab	Twice ^[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency
Endosulfan Sulphate	ng/kg	Grab	Twice ^[1]
Endrin	ng/kg	Grab	Twice ^[1]
Heptachlor	ng/kg	Grab	Twice ^[1]
Heptachlor Epoxide	ng/kg	Grab	Twice ^[1]
Hexachlorobenzene	ng/kg	Grab	Twice ^[1]
Mirex	ng/kg	Grab	Twice ^[1]
Trans-Nonachlor	ng/kg	Grab	Twice ^[1]
Acenaphthene	µg/kg	Grab	Twice ^[1]
Acenaphthylene	µg/kg	Grab	Twice ^[1]
Anthracene	µg/kg	Grab	Twice ^[1]
Benzo(a)anthracene	µg/kg	Grab	Twice ^[1]
Benzo(b)fluoranthene	µg/kg	Grab	Twice ^[1]
Benzo(k)fluoranthene	µg/kg	Grab	Twice ^[1]
Benzo(ghi)perylene	µg/kg	Grab	Twice ^[1]
Benzo(a)pyrene	µg/kg	Grab	Twice ^[1]
Benzo(e)pyrene	µg/kg	Grab	Twice ^[1]
Biphenyl	µg/kg	Grab	Twice ^[1]
Chrysene	µg/kg	Grab	Twice ^[1]
Dacthal	µg/kg	Grab	Twice ^[1]
Dibenzo(a,h)anthracene	µg/kg	Grab	Twice ^[1]
Fluoranthene	µg/kg	Grab	Twice ^[1]
Fluorene	µg/kg	Grab	Twice ^[1]
HCH, alpha	µg/kg	Grab	Twice ^[1]
HCH, beta	µg/kg	Grab	Twice ^[1]
HCH, delta	µg/kg	Grab	Twice ^[1]
HCH, gamma	µg/kg	Grab	Twice ^[1]
Hexachlorobutadiene	µg/kg	Grab	Twice ^[1]
Indeno(1,2,3-cd)pyrene	µg/kg	Grab	Twice ^[1]
Naphthalene	µg/kg	Grab	Twice ^[1]
1-Methylnaphthalene	µg/kg	Grab	Twice ^[1]
2-Methylnaphthalene	µg/kg	Grab	Twice ^[1]
2,6-Dimethylnaphthalene	µg/kg	Grab	Twice ^[1]
2,3,5-Trimethylnaphthalene	µg/kg	Grab	Twice ^[1]
Perylene	µg/kg	Grab	Twice ^[1]
Phenanthrene	µg/kg	Grab	Twice ^[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency
Nonachlor, trans	µg/kg	Grab	Twice ^[1]
Nonachlor, cis	µg/kg	Grab	Twice ^[1]
Oxadiazon	µg/kg	Grab	Twice ^[1]
1-Methylphenanthrene	µg/kg	Grab	Twice ^[1]
Pyrene	µg/kg	Grab	Twice ^[1]
Taxophene	ug/kg	Grab	Twice ^[1]

^[1] Twice in one 10-month period, representing both wet (January – April) and dry (July – October) seasons

8.3.2.2. Offshore Benthic Community Condition Monitoring

Samples shall be sieved for benthic organisms using a 0.5-mm nylon sieve. The benthic organisms retained on the sieve shall be fixed in 10% buffered formalin and transferred to at least 70% ethanol within two to seven days of storage. All benthic invertebrates in the screened sample shall be identified to the lowest possible taxon, and the following parameters or metrics shall be calculated for each 0.1-m² grab sample and summarized by station, as appropriate:

- a. Number of species;
- b. Total numerical abundance;
- c. Benthic Response Index (BRI);
- d. Swartz's 75% dominance index;
- e. Shannon-Weiner's diversity index (H);
- f. Multivariate pattern analyses (e.g., ordination and classification analyses); and
- g. Pielou evenness index (J).

8.3.3. Fish Monitoring

Cal-Am shall conduct the following fish and invertebrate trawls and rig fishing surveys prior to the commencement of Cal-Am MPWSP Desalination Plant brine waste discharge. Fishing shall be conducted at three stations: two stations within the brine mixing zone near Monitoring Locations OFF-A to OFF-F (10 m to 100 m from the outfall diffuser, with one station to the north and one station to the south of the diffuser) and one station 1000 m south of the discharge location near Monitoring Locations REF-A and REF-B.

8.3.3.1. Fish Trawling

Fish and invertebrates trawl surveys shall be conducted at least once (but no more than five times) at each of the three fishing stations. Trawls shall last no longer than 10 minutes (bottom time). Cal-Am shall notify the Central Coast

Water Board of the intent to initiate the fish and invertebrate trawls no later than 30 days before the survey. Results from the fish and invertebrate trawls are due no later than 180 days prior to the expiration date of this Order.

Trawls shall be conducted using a Marinovich 7.62-m (25-ft) head rope otter trawl. Captured organisms shall be identified at all stations. In order to minimize negative impacts that may occur due to unsuccessful trawling efforts associated with unusual environmental conditions, the requirement to conduct trawls during any given period may be postponed or waived at the discretion of the EO of the Central Coast Water Board upon receipt of written justification provided by Cal-Am. Examples of such unusual events include the presence of large populations of red tuna crabs (*Pleuroncodes planipes*) associated with El Niño and the occurrence of large squid egg masses that prevent hauling in the trawl nets.

Fish liver tissues shall be analyzed from each trawl survey. If sufficient numbers of trawl zone target species cannot be, or are unlikely to be, captured by trawling, fish for tissue analysis from these areas may be collected using alternative methods such as Rig Fishing (MRP section 8.3.3.2 below). Three replicate composite samples shall be prepared from each trawl zone, with each composite consisting of tissues from at least 3 individual fish of the same species. Each individual fish that will be used for fish tissue analysis shall be aged using otoliths or scales. The liver tissue shall be analyzed for the constituents listed in the Table E-25 below.

The species of fish targeted for tissue analysis from the trawl sites shall be primarily flatfish including, but not limited to, Pacific sanddab (*Citharichthys sordidus*), longfin sanddab (*Citharichthys xanthostigma*), bigmouth sole (*Hippoglossina stomata*), and hornyhead turbot (*Pleuronichthys verticalis*). If sufficient numbers of these primary flatfish species are not present in a zone, secondary target species such as the longspine combfish (*Zaniolepis latipinnis*), California scorpionfish (*Scorpaena guttata*), or California lizardfish (*Synodus lucioceps*) may be collected as necessary.

Table E-25. Cal-Am Offshore Fish Trawling Liver Tissue Characterization Monitoring Requirements.

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Lipids	%	Composite	Once
Aluminum	mg/kg	Composite	Once
Antimony	mg/kg	Composite	Once
Arsenic	mg/kg	Composite	Once
Cadmium	mg/kg	Composite	Once
Chromium	mg/kg	Composite	Once
Copper	mg/kg	Composite	Once

Parameter	Units	Sample Type	Minimum Sampling Frequency
Iron	mg/kg	Composite	Once
Lead	mg/kg	Composite	Once
Manganese	mg/kg	Composite	Once
Mercury	mg/kg	Composite	Once
Nickel	mg/kg	Composite	Once
Selenium	mg/kg	Composite	Once
Silver	mg/kg	Composite	Once
Tin	mg/kg	Composite	Once
Zinc	mg/kg	Composite	Once
PCBs	ng/kg	Composite	Once
2,4-DDD	ng/kg	Composite	Once
4,4-DDD	ng/kg	Composite	Once
2,4-DDE	ng/kg	Composite	Once
4,4-DDE	ng/kg	Composite	Once
2,4-DDT	ng/kg	Composite	Once
4,4-DDT	ng/kg	Composite	Once
Aldrin	ng/kg	Composite	Once
Alpha-Chlordane	ng/kg	Composite	Once
Dieldrin	ng/kg	Composite	Once
Endosulfan	ng/kg	Composite	Once
Endrin	ng/kg	Composite	Once
Gamma-Benzene Hexachloride (BHC)	ng/kg	Composite	Once
Heptachlor	ng/kg	Composite	Once
Heptachlor Epoxide	ng/kg	Composite	Once
Hexachlorobenzene	ng/kg	Composite	Once
Mirex	ng/kg	Composite	Once
Trans-Nonachlor	ng/kg	Composite	Once
Acenaphthene	µg/kg	Composite	Once
Acenaphthylene	µg/kg	Composite	Once
Anthracene	µg/kg	Composite	Once
Benzo(a)anthracene	µg/kg	Composite	Once
Benzo(b)fluoranthene	µg/kg	Composite	Once
Benzo(k)fluoranthene	µg/kg	Composite	Once
Benzo(ghi)perylene	µg/kg	Composite	Once

Parameter	Units	Sample Type	Minimum Sampling Frequency
Benzo(a)pyrene	µg/kg	Composite	Once
Benzo(e)pyrene	µg/kg	Composite	Once
Biphenyl	µg/kg	Composite	Once
Chrysene	µg/kg	Composite	Once
Dibenzo(ah)anthracene	µg/kg	Composite	Once
Fluoranthene	µg/kg	Composite	Once
Fluorene	µg/kg	Composite	Once
Indeno(123cd)pyrene	µg/kg	Composite	Once
Naphthalene	µg/kg	Composite	Once
1-Methylnaphthalene	µg/kg	Composite	Once
2-Methylnaphthalene	µg/kg	Composite	Once
2,6-Dimethylnaphthalene	µg/kg	Composite	Once
2,3,5-Trimethylnaphthalene	µg/kg	Composite	Once
Perylene	µg/kg	Composite	Once
Phenanthrene	µg/kg	Composite	Once
1-Methylphenanthrene	µg/kg	Composite	Once
Pyrene	µg/kg	Composite	Once

8.3.3.2. Rig Fishing

Cal-Am shall analyze fish muscle tissues, where fish shall be collected by hook and line or by setting baited lines from within zones surrounding the three fishing stations. Fish samples shall be identified by species, with number of individuals per species, standard length and wet weight recorded. Each individual fish used for fish tissue analysis shall be aged using otoliths or scales. Physical abnormalities and disease symptoms shall be also recorded and itemized (e.g., fin rot, lesions, and tumors).

The species of fish targeted for tissue analysis by Cal-Am from the rig fishing stations shall be representative of those caught by recreational and/or commercial fishery activities in the region. The species targeted for muscle tissue analysis shall be primarily rockfish (*Sebastes spp.*), excluding species restricted by the California Department of Fish and Wildlife. If sufficient numbers of rockfish are not present or cannot be caught in a particular zone, secondary target species (e.g., scorpionfish and lingcod) may be collected and analyzed as necessary.

Three replicate composite samples of the target species shall be obtained from each zone, with each composite consisting of a minimum of 3 individual fish. Muscle tissue shall be chemically analyzed for the constituents specified in Table E-26 below.

Table E-26. Cal-Am Rig Fishing Muscle Tissue Characterization Monitoring Requirements.

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Lipids	%	Composite	Once
Aluminum	mg/kg	Composite	Once
Antimony	mg/kg	Composite	Once
Arsenic	mg/kg	Composite	Once
Cadmium	mg/kg	Composite	Once
Chromium	mg/kg	Composite	Once
Copper	mg/kg	Composite	Once
Iron	mg/kg	Composite	Once
Lead	mg/kg	Composite	Once
Manganese	mg/kg	Composite	Once
Mercury	mg/kg	Composite	Once
Nickel	mg/kg	Composite	Once
Selenium	mg/kg	Composite	Once
Silver	mg/kg	Composite	Once
Tin	mg/kg	Composite	Once
Zinc	mg/kg	Composite	Once
PCBs	ng/kg	Composite	Once
2,4-DDD	ng/kg	Composite	Once
4,4-DDD	ng/kg	Composite	Once
2,4-DDE	ng/kg	Composite	Once
4,4-DDE	ng/kg	Composite	Once
2,4-DDT	ng/kg	Composite	Once
4,4-DDT	ng/kg	Composite	Once
Aldrin	ng/kg	Composite	Once
Chlordane (Alpha)	ng/kg	Composite	Once
Dieldrin	ng/kg	Composite	Once
Endosulfan	ng/kg	Composite	Once
Endrin	ng/kg	Composite	Once
Gamma-BHC	ng/kg	Composite	Once
Heptachlor	ng/kg	Composite	Once
Heptachlor Epoxide	ng/kg	Composite	Once
Hexachlorobenzene	ng/kg	Composite	Once
Mirex	ng/kg	Composite	Once

Parameter	Units	Sample Type	Minimum Sampling Frequency
Trans-Nonachlor	ng/kg	Composite	Once
Acenaphthene	µg/kg	Composite	Once
Acenaphthylene	µg/kg	Composite	Once
Anthracene	µg/kg	Composite	Once
Benzo(a)anthracene	µg/kg	Composite	Once
Benzo(b)fluoranthene	µg/kg	Composite	Once
Benzo(k)fluoranthene	µg/kg	Composite	Once
Benzo(ghi)perylene	µg/kg	Composite	Once
Benzo(a)pyrene	µg/kg	Composite	Once
Benzo(e)pyrene	µg/kg	Composite	Once
Biphenyl	µg/kg	Composite	Once
Chrysene	µg/kg	Composite	Once
Dibenzo(ah)anthracene	µg/kg	Composite	Once
Fluoranthene	µg/kg	Composite	Once
Fluorene	µg/kg	Composite	Once
Indeno(123cd)pyrene	µg/kg	Composite	Once
Naphthalene	µg/kg	Composite	Once
1-Methylnaphthalene	µg/kg	Composite	Once
2-Methylnaphthalene	µg/kg	Composite	Once
2,6-Dimethylnaphthalene	µg/kg	Composite	Once
2,3,5-Trimethylnaphthale	µg/kg	Composite	Once
Perylene	µg/kg	Composite	Once
Phenanthrene	µg/kg	Composite	Once
1-Methylphenanthrene	µg/kg	Composite	Once
Pyrene	µg/kg	Composite	Once

8.4. General Offshore Monitoring (Applicable to M1W and Cal-Am)

In accordance with Ocean Plan Appendix III requirements for discharges greater than 10 MGD, the dischargers must still perform offshore monitoring, even if the Cal-Am MPWSP Desalination Plant brine waste is not discharged during the term of this permit. The following receiving water monitoring requirements shall be completed at least once during the permit term, though the requirements exhibit parallels with section 8.3 above such that portions of the general requirements in section 8.4 here may be satisfied by the monitoring in section 8.3. Furthermore, monitoring requirements here in section 8.4 may be satisfied by participation in a regional monitoring program, such as CCLEAN. Satisfaction of section 8.4 requirements by section 8.3 monitoring or by participation in regional monitoring

shall be described in the Receiving Water Monitoring Plan (Section 10.4.1 of this MRP) and approved by the EO.

8.4.1. Offshore Water Quality Monitoring

The Dischargers shall conduct offshore water quality monitoring offshore stations as described in Table E-27 below. Sampling shall be completed at least once per permit term and results are due within 180 days of the expiration date of this Order.

Table E-27. General Offshore Water Quality Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Visual Observations ^[1]	narrative	Visual	Quarterly
Temperature	°C	Metered	Quarterly
Dissolved Oxygen	mg/L	Metered	Quarterly
pH	SU	Metered	Quarterly
Salinity	ppth	Metered	Quarterly
Light Transmittance	%	Metered	Quarterly
CDOM	ppb	Grab or Metered	Quarterly
Alkalinity (Total as CaCO ₃)	mg/L	Grab	Quarterly

^[1] Visual observations of the surface water conditions at the designated receiving water stations shall be conducted in such a manner as to enable the observer to describe and report the presence, if any, of floatables of sewage origin. Observations of wind (direction and speed), weather (cloudy, sunny, or rainy), direction of current, tidal conditions (high or low), water color, oil and grease, turbidity, and odor shall be recorded. The proximity of recreational and commercial vessels to monitoring locations shall also be recorded. These observations shall also be taken whenever a nearshore sample is collected.

8.4.2. Offshore Sediment and Benthic Monitoring

The Dischargers shall collect sediment and benthic samples at least once during the permit term, and results are due within 180 days of the expiration date of this Order. Sediment and benthic community samples shall be taken concurrently and adjacently (as practicable). Samples shall be taken using a 0.1-m² modified Van Veen grab sampler from the top two cm of the surface sediment. Results are due within 3 months after sampling ends.

8.4.2.1. Sediment Monitoring

Sediment toxicity tests shall utilize alternative amphipod species (*Eohaustorius estuaries*, *Leptocheirus plumulosus*, *Rhepoxynius abronius*) and be conducted in accordance with EPA 600/R-94/0925 (USEPA, 1994), Methods for Assessing

the Toxicity of Sediment-Associated Contaminants with Estuarine and Marine Amphipods Response criteria shall include mortality, emergence from sediment during exposure, and ability to rebury in clean sediment at the end of the 10-day exposure period. Analysis of sediment toxicity shall include a calculation of the mean control normalized response.

Bulk sediment chemical analysis shall include at a minimum the set of parameters listed in Table E-28 using USEPA-approved methods, methods developed by the National Oceanic and Atmospheric Administration's National Status and Trends for Marine Environmental Quality. For chemical analysis of sediment, samples shall be reported on a dry weight basis unless noted otherwise.

Table E-28. General Offshore Sediment Monitoring Requirements.

Parameter	Units	Sample Type	Minimum Sampling Frequency
Sediment Grain Size	µm	Grab	Once
TOC	% (dry weight)	Grab	Once
Total Nitrogen	% (dry weight)	Grab	Once
Acid Volatile Sulfides	mg/kg	Grab	Once
Dissolved Sulfide	mg/kg	Grab	Once
Aluminum	mg/kg	Grab	Once
Antimony	mg/kg	Grab	Once
Arsenic	mg/kg	Grab	Once
Cadmium	mg/kg	Grab	Once
Total Chromium	mg/kg	Grab	Once
Copper	mg/kg	Grab	Once
Total Cyanide	mg/kg	Grab	Once
Iron	mg/kg	Grab	Once
Lead	mg/kg	Grab	Once
Manganese	mg/kg	Grab	Once
Mercury	mg/kg	Grab	Once
Nickel	mg/kg	Grab	Once
Selenium	mg/kg	Grab	Once
Silver	mg/kg	Grab	Once
Tin	mg/kg	Grab	Once
Zinc	mg/kg	Grab	Once
PCBs	ng/kg	Grab	Once
2,4-DDD	ng/kg	Grab	Once

Parameter	Units	Sample Type	Minimum Sampling Frequency
4,4-DDD	ng/kg	Grab	Once
2,4-DDE	ng/kg	Grab	Once
4,4-DDE	ng/kg	Grab	Once
2,4-DDT	ng/kg	Grab	Once
4,4-DDT	ng/kg	Grab	Once
Aldrin	ng/kg	Grab	Once
Chlordane (Alpha)	ng/kg	Grab	Once
Chlordane (Gamma)	ng/kg	Grab	Once
Chlordane (Oxy)	ng/kg	Grab	Once
Dieldrin	ng/kg	Grab	Once
Endosulfan (Alpha)	ng/kg	Grab	Once
Endosulfan (Beta)	ng/kg	Grab	Once
Endosulfan Sulphate	ng/kg	Grab	Once
Endrin	ng/kg	Grab	Once
Heptachlor	ng/kg	Grab	Once
Heptachlor Epoxide	ng/kg	Grab	Once
Hexachlorobenzene	ng/kg	Grab	Once
Mirex	ng/kg	Grab	Once
Trans-Nonachlor	ng/kg	Grab	Once
Acenaphthene	µg/kg	Grab	Once
Acenaphthylene	µg/kg	Grab	Once
Anthracene	µg/kg	Grab	Once
Benzo(a)anthracene	µg/kg	Grab	Once
Benzo(b)fluoranthene	µg/kg	Grab	Once
Benzo(k)fluoranthene	µg/kg	Grab	Once
Benzo(ghi)perylene	µg/kg	Grab	Once
Benzo(a)pyrene	µg/kg	Grab	Once
Benzo(e)pyrene	µg/kg	Grab	Once
Biphenyl	µg/kg	Grab	Once
Chrysene	µg/kg	Grab	Once
Dacthal	µg/kg	Grab	Once
Dibenzo(a,h)anthracene	µg/kg	Grab	Once
Fluoranthene	µg/kg	Grab	Once
Fluorene	µg/kg	Grab	Once
HCH, alpha	µg/kg	Grab	Once

Parameter	Units	Sample Type	Minimum Sampling Frequency
HCH, beta	µg/kg	Grab	Once
HCH, delta	µg/kg	Grab	Once
HCH, gamma	µg/kg	Grab	Once
Hexachlorobutadiene	µg/kg	Grab	Once
Indeno(1,2,3-cd)pyrene	µg/kg	Grab	Once
Naphthalene	µg/kg	Grab	Once
1-Methylnaphthalene	µg/kg	Grab	Once
2-Methylnaphthalene	µg/kg	Grab	Once
2,6-Dimethylnaphthalene	µg/kg	Grab	Once
2,3,5-Trimethylnaphthalene	µg/kg	Grab	Once
Perylene	µg/kg	Grab	Once
Phenanthrene	µg/kg	Grab	Once
Nonachlor, trans	µg/kg	Grab	Once
Nonachlor, cis	µg/kg	Grab	Once
Oxadiazon	µg/kg	Grab	Once
1-Methylphenanthrene	µg/kg	Grab	Once
Pyrene	µg/kg	Grab	Once
Taxophene	ug/kg	Grab	Once

8.4.2.2. Offshore Benthic Community Condition Monitoring

Samples shall be sieved for benthic organisms using a 0.5-mm nylon sieve. The benthic organisms retained on the sieve shall be fixed in 10% buffered formalin and transferred to at least 70% ethanol within two to seven days of storage. All benthic invertebrates in the screened sample shall be identified to the lowest possible taxon, and the following parameters or metrics shall be calculated for each 0.1-m² grab sample and summarized by station, as appropriate:

- a. Number of species;
- b. Total numerical abundance;
- c. Benthic Response Index (BRI);
- d. Swartz's 75% dominance index;
- e. Shannon-Weiner's diversity index (H);
- f. Multivariate pattern analyses (e.g., ordination and classification analyses);
and
- g. Pielou evenness index (J).

8.4.3. Fish Monitoring

The Dischargers shall conduct the following fish and invertebrate trawls and rig fishing surveys at least once during the permit term. Fishing shall be conducted at three stations.

8.4.3.1. Fish Trawling

Fish and invertebrates trawl surveys shall be conducted at least once (but no more than five times) at each of the three fishing stations. Trawls shall last no longer than 10 minutes (bottom time). Dischargers shall notify the Central Coast Water Board of the intent to initiate the fish and invertebrate trawls no later than 30 days before the survey. Results from the fish and invertebrate trawls are due no later than 180 days prior to the expiration date of this Order.

Trawls shall be conducted using a Marinovich 7.62-m (25-ft) head rope otter trawl. Captured organisms shall be identified at all stations. In order to minimize negative impacts that may occur due to unsuccessful trawling efforts associated with unusual environmental conditions, the requirement to conduct trawls during any given period may be postponed or waived at the discretion of the EO of the Central Coast Water Board upon receipt of written justification provided by Cal-Am. Examples of such unusual events include the presence of large populations of red tuna crabs (*Pleuroncodes planipes*) associated with El Niño and the occurrence of large squid egg masses that prevent hauling in the trawl nets.

Fish liver tissues shall be analyzed from each trawl survey. If sufficient numbers of trawl zone target species cannot be, or are unlikely to be, captured by trawling, fish for tissue analysis from these areas may be collected using alternative methods such as Rig Fishing (MRP section 8.4.3.2 below). Three replicate composite samples shall be prepared from each trawl zone, with each composite consisting of tissues from at least 3 individual fish of the same species. Each individual fish that will be used for fish tissue analysis shall be aged using otoliths or scales. The liver tissue shall be analyzed for the constituents listed in the Table E-29 below.

The species of fish targeted for tissue analysis from the trawl sites shall be primarily flatfish including, but not limited to, Pacific sanddab (*Citharichthys sordidus*), longfin sanddab (*Citharichthys xanthostigma*), bigmouth sole (*Hippoglossina stomata*), and hornyhead turbot (*Pleuronichthys verticalis*). If sufficient numbers of these primary flatfish species are not present in a zone, secondary target species such as the longspine combfish (*Zaniolepis latipinnis*), California scorpionfish (*Scorpaena guttata*), or California lizardfish (*Synodus lucioceps*) may be collected as necessary.

**Table E-29. General Offshore Fish Trawling Liver Tissue Characterization
Monitoring Requirements.**

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Lipids	%	Composite	Once
Aluminum	mg/kg	Composite	Once
Antimony	mg/kg	Composite	Once
Arsenic	mg/kg	Composite	Once
Cadmium	mg/kg	Composite	Once
Chromium	mg/kg	Composite	Once
Copper	mg/kg	Composite	Once
Iron	mg/kg	Composite	Once
Lead	mg/kg	Composite	Once
Manganese	mg/kg	Composite	Once
Mercury	mg/kg	Composite	Once
Nickel	mg/kg	Composite	Once
Selenium	mg/kg	Composite	Once
Silver	mg/kg	Composite	Once
Tin	mg/kg	Composite	Once
Zinc	mg/kg	Composite	Once
PCBs	ng/kg	Composite	Once
2,4-DDD	ng/kg	Composite	Once
4,4-DDD	ng/kg	Composite	Once
2,4-DDE	ng/kg	Composite	Once
4,4-DDE	ng/kg	Composite	Once
2,4-DDT	ng/kg	Composite	Once
4,4-DDT	ng/kg	Composite	Once
Aldrin	ng/kg	Composite	Once
Alpha-Chlordane	ng/kg	Composite	Once
Dieldrin	ng/kg	Composite	Once
Endosulfan	ng/kg	Composite	Once
Endrin	ng/kg	Composite	Once
Gamma-Benzene Hexachloride (BHC)	ng/kg	Composite	Once
Heptachlor	ng/kg	Composite	Once
Heptachlor Epoxide	ng/kg	Composite	Once
Hexachlorobenzene	ng/kg	Composite	Once

Parameter	Units	Sample Type	Minimum Sampling Frequency
Mirex	ng/kg	Composite	Once
Trans-Nonachlor	ng/kg	Composite	Once
Acenaphthene	µg/kg	Composite	Once
Acenaphthylene	µg/kg	Composite	Once
Anthracene	µg/kg	Composite	Once
Benzo(a)anthracene	µg/kg	Composite	Once
Benzo(b)fluoranthene	µg/kg	Composite	Once
Benzo(k)fluoranthene	µg/kg	Composite	Once
Benzo(ghi)perylene	µg/kg	Composite	Once
Benzo(a)pyrene	µg/kg	Composite	Once
Benzo(e)pyrene	µg/kg	Composite	Once
Biphenyl	µg/kg	Composite	Once
Chrysene	µg/kg	Composite	Once
Dibenzo(ah)anthracene	µg/kg	Composite	Once
Fluoranthene	µg/kg	Composite	Once
Fluorene	µg/kg	Composite	Once
Indeno(123cd)pyrene	µg/kg	Composite	Once
Naphthalene	µg/kg	Composite	Once
1-Methylnaphthalene	µg/kg	Composite	Once
2-Methylnaphthalene	µg/kg	Composite	Once
2,6-Dimethylnaphthalene	µg/kg	Composite	Once
2,3,5-Trimethylnaphthalene	µg/kg	Composite	Once
Perylene	µg/kg	Composite	Once
Phenanthrene	µg/kg	Composite	Once
1-Methylphenanthrene	µg/kg	Composite	Once
Pyrene	µg/kg	Composite	Once

8.4.3.2. Rig Fishing

The Dischargers shall analyze fish muscle tissues, where fish shall be collected by hook and line or by setting baited lines from within zones surrounding the three fishing stations. Fish samples shall be identified by species, with number of individuals per species, standard length and wet weight recorded. Each individual fish used for fish tissue analysis shall be aged using otoliths or scales. Physical abnormalities and disease symptoms shall be also recorded and itemized (e.g., fin rot, lesions, and tumors).

The species of fish targeted for tissue analysis from the rig fishing stations shall be representative of those caught by recreational and/or commercial fishery

activities in the region. The species targeted for muscle tissue analysis shall be primarily rockfish (*Sebastes spp.*), excluding species restricted by the California Department of Fish and Wildlife. If sufficient numbers of rockfish are not present or cannot be caught in a particular zone, secondary target species (e.g., scorpionfish and lingcod) may be collected and analyzed as necessary.

Three replicate composite samples of the target species shall be obtained from each zone, with each composite consisting of a minimum of 3 individual fish. Muscle tissue shall be chemically analyzed for the constituents specified in Table E-30 below.

Table E-30. General Rig Fishing Muscle Tissue Characterization Monitoring Requirements.

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Lipids	%	Composite	Once
Aluminum	mg/kg	Composite	Once
Antimony	mg/kg	Composite	Once
Arsenic	mg/kg	Composite	Once
Cadmium	mg/kg	Composite	Once
Chromium	mg/kg	Composite	Once
Copper	mg/kg	Composite	Once
Iron	mg/kg	Composite	Once
Lead	mg/kg	Composite	Once
Manganese	mg/kg	Composite	Once
Mercury	mg/kg	Composite	Once
Nickel	mg/kg	Composite	Once
Selenium	mg/kg	Composite	Once
Silver	mg/kg	Composite	Once
Tin	mg/kg	Composite	Once
Zinc	mg/kg	Composite	Once
PCBs	ng/kg	Composite	Once
2,4-DDD	ng/kg	Composite	Once
4,4-DDD	ng/kg	Composite	Once
2,4-DDE	ng/kg	Composite	Once
4,4-DDE	ng/kg	Composite	Once
2,4-DDT	ng/kg	Composite	Once
4,4-DDT	ng/kg	Composite	Once
Aldrin	ng/kg	Composite	Once
Chlordane (Alpha)	ng/kg	Composite	Once

Parameter	Units	Sample Type	Minimum Sampling Frequency
Dieldrin	ng/kg	Composite	Once
Endosulfan	ng/kg	Composite	Once
Endrin	ng/kg	Composite	Once
Gamma-BHC	ng/kg	Composite	Once
Heptachlor	ng/kg	Composite	Once
Heptachlor Epoxide	ng/kg	Composite	Once
Hexachlorobenzene	ng/kg	Composite	Once
Mirex	ng/kg	Composite	Once
Trans-Nonachlor	ng/kg	Composite	Once
Acenaphthene	µg/kg	Composite	Once
Acenaphthylene	µg/kg	Composite	Once
Anthracene	µg/kg	Composite	Once
Benzo(a)anthracene	µg/kg	Composite	Once
Benzo(b)fluoranthene	µg/kg	Composite	Once
Benzo(k)fluoranthene	µg/kg	Composite	Once
Benzo(ghi)perylene	µg/kg	Composite	Once
Benzo(a)pyrene	µg/kg	Composite	Once
Benzo(e)pyrene	µg/kg	Composite	Once
Biphenyl	µg/kg	Composite	Once
Chrysene	µg/kg	Composite	Once
Dibenzo(ah)anthracene	µg/kg	Composite	Once
Fluoranthene	µg/kg	Composite	Once
Fluorene	µg/kg	Composite	Once
Indeno(123cd)pyrene	µg/kg	Composite	Once
Naphthalene	µg/kg	Composite	Once
1-Methylnaphthalene	µg/kg	Composite	Once
2-Methylnaphthalene	µg/kg	Composite	Once
2,6-Dimethylnaphthalene	µg/kg	Composite	Once
2,3,5-Trimethylnaphthalene	µg/kg	Composite	Once
Perylene	µg/kg	Composite	Once
Phenanthrene	µg/kg	Composite	Once
1-Methylphenanthrene	µg/kg	Composite	Once
Pyrene	µg/kg	Composite	Once

9. OTHER MONITORING REQUIREMENTS

9.1. Central Coast Long-term Environmental Assessment Network (CCLEAN)

9.1.1. The Dischargers may participate in the implementation of the CCLEAN Regional Monitoring Program in order to fulfill receiving water compliance monitoring requirements and support the following CCLEAN Program objectives.

9.1.1.1. Obtain high-quality data describing the status and long-term trends in the quality of nearshore waters, sediments, and associated beneficial uses.

9.1.1.2. Determine whether nearshore waters and sediments are in compliance with the Ocean Plan.

9.1.1.3. Determine sources of contaminants to nearshore waters.

9.1.1.4. Provide legally defensible data on the effects of wastewater discharges in nearshore waters.

9.1.1.6. Develop a long-term database on trends in the quality of nearshore waters, sediments, and associated beneficial uses.

9.1.1.7. Ensure that the nearshore component database is compatible with other regional monitoring efforts and regulatory requirements.

9.1.1.8. Ensure that nearshore component data are presented in ways that are understandable and relevant to the needs of stakeholders.

9.1.2. Monitoring requirements are pursuant to the current CCLEAN Quality Assurance Project Plan (QAPP), which must be submitted for staff approval annually and prior to initiation of CCLEAN sampling. A detailed technical study design description, including specific location of sampling sites and a description of the specific contents of the CCLEAN Annual Report, shall be provided as a component of the CCLEAN QAPP. Any year-to-year modifications to the program (including implementation of subsequent program phases) shall be identified in the QAPP and/or Annual Report.

Monitoring requirements of the CCLEAN Program in place at the writing of this Order are found in Table E-31. Future monitoring requirements must be in accordance with the most current and approved QAPP.

Table E-31. CCLEAN Monitoring Requirements

Sample Matrix	Sampling Frequency	Sampling Technique	Parameter Sampled	Applicable Water Quality Stressors and Program Objectives
Effluent – Santa Cruz, Watsonville, Monterey One Water, Carmel Area	2/Year (wet and dry season)	30-day flow proportioned samples using automated pumping and solid-phase-	PAHs	Sources, loads, trends, effects and permit compliance for
			DDTs	
			Dieldrin	
			Chlordanes	
			PCBs	
			Dioxins/Furans	

Sample Matrix	Sampling Frequency	Sampling Technique	Parameter Sampled	Applicable Water Quality Stressors and Program Objectives	
Wastewater District) in effluent		extraction (particle filter + XAD resin)	Polybrominated Diphenyl Ethers (PBDEs)	persistent organic pollutants (POPs)	
		2-day, 5-L composites	Pyrethroids	Trends of emerging contaminants of concern	
			Fipronils		
			Neonicotinoids		
	1/Month	Grab	Ammonia	Sources, loads, trends and permit compliance for: Nutrients	
			Nitrate		
			Silica		
			Ortho-Phosphate		
			Urea		
	Influent – Watsonville	1/Year (dry season)	Same as effluent	Same as effluent	Efficiency of: POP removal
Rivers – San Lorenzo	2/Year (wet and dry season)	30-day flow proportioned samples using automated pumping and solid-phase-extraction (particle filter + XAD resin)	PAHs	Sources, loads, trends, effects and permit compliance for: POPs	
			DDTs		
			Dieldrin		
			Chlordanes		
			PCBs		
		PBDEs			
Rivers – San Lorenzo Pajaro Salinas Carmel			2-day, 4-liter composites	Pyrethroids	Trends of emerging contaminants of concern
				Fipronils	
				Neonicotinoids	
			Grab	Ammonia	Effects of nutrients
	Nitrate				
	Silicate				
Monterey Bay –	1/Month or 1/Week, as	Grab	Total coliform	Sources, trends, effects	
			Fecal coliform		

Sample Matrix	Sampling Frequency	Sampling Technique	Parameter Sampled	Applicable Water Quality Stressors and Program Objectives
(Receiving water) Santa Cruz Watsonville Monterey One Water	required by each NPDES permit		Enterococcus	and permit compliance for fecal indicator bacteria (FIB) pathogen indicators
Monterey Bay – (Open water) North South	2/Year (wet and dry season)	30-day flow proportioned samples using automated pumping and solid-phase-extraction (particle filter + XAD resin)	PAHs	Sources, loads, trends, effects and permit compliance for POPs
			DDTs	
			Dieldrin	
			Chlordanes	
			PCBs	
		PBDEs	Effects of nutrients and FIBs	
		Grab		TSS
	FIBs			
	Ammonia			
	Nitrate			
	Silica			
	Ortho-Phosphate			
	Urea			
1/Five Years	Database satellite ocean color imagery	Chlorophyll a		
Sediments – Six sites along the 80-m contour in Monterey Bay, Santa Cruz Inner Harbor, Moss Landing Harbor	1/Year in the fall	Sediment Grab	DDTs	Status, effects and alert level comparisons for POPs
			Dieldrin	
			Chlordanes	
			PCBs	
			PBDEs	
			Grain size	
	TOC			
Six sites along the 80-m contour in Monterey Bay	1/Five Years in the fall		Benthic infauna	Status and trends of benthic communities
Mussels –	1/Year in the wet season	1 composite of 30-40 mussels	Lipid content	Status, trends, effects and
			DDTs	

Sample Matrix	Sampling Frequency	Sampling Technique	Parameter Sampled	Applicable Water Quality Stressors and Program Objectives
Five rocky intertidal sites in Monterey Bay			Dieldrin	alert level comparisons for POPs and pathogen indicators
			Chlordanes	
			PCBs	
			PBDEs	
		1 composite of 30-40 mussels	Fecal indicator bacteria	

9.2. Biosolids Monitoring, Notification, and Reporting (Applicable to M1W)

9.2.1. Biosolids Monitoring

M1W shall test biosolids for the metals required in 40 CFR sections 503.16 (for land application) or 503.26 (for surface disposal), using the methods in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846), as required in section 503.8(b)(4), at the following minimum frequencies:

Table E-32. Biosolids Monitoring Frequency

Volume (dry metric tons) ^[1]	Sampling and Analysis Frequency ^[2]
0-290	1/Year
290-1,500	1/Quarter
1,200-15,000	1/60 Days
>15,000	1/Month

^[1] For accumulated, previously untested biosolids, M1W shall develop a representative sampling plan, including number and location of sampling points, and collect representative samples.

^[2] Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis. Biosolids to be land applied shall be tested for organic-N, ammonium-N, and nitrate-N at the frequencies required above.

9.2.1.1. Prior to land application, M1W shall demonstrate that the biosolids meet Class A or Class B pathogen reduction levels by one of the methods listed in 40 CFR section 503.32. Prior to disposal in a surface disposal site, M1W shall demonstrate that the biosolids meet Class B levels or shall ensure that the site is covered at the end of each operating day. If pathogen reduction is demonstrated using a "Process to Significantly/Further Reduce Pathogens," M1W shall maintain daily records of the operating parameters used to achieve this reduction. If pathogen reduction is demonstrated by testing for fecal coliforms and/or pathogens, samples must be drawn at the frequency in Table E-20 above. For fecal coliform, at least 7 grab samples must be drawn during each monitoring event and a geometric mean calculated from these 7 samples.

- 9.2.1.2. For biosolids that are land applied or placed in a surface disposal site, M1W shall track and keep records of the operational parameters used to achieve Vector Attraction Reduction requirements in 40 CFR section 503.33(b).
- 9.2.1.3. Class 1 facilities (facilities with pretreatment programs or others designated as Class 1 by the Regional Administrator) and federal facilities with greater than 5 MGD influent flow shall sample biosolids for pollutants listed under section 307(a) of the CWA (as required in the pretreatment section of the permit for publicly-owned treatment works [POTWs] with pretreatment programs). Class 1 facilities and federal facilities greater than 5 MGD shall test dioxins/dibenzofurans using a detection limit of less than one picogram per gram (pg/g) at the time of their next priority pollutant scan if they have not done so within the past 5 years, and once per 5 years thereafter.
- 9.2.1.4. The biosolids shall be tested annually, or more frequently if necessary, to determine hazardousness in accordance 40 CFR part 261.
- 9.2.1.5. If biosolids are placed in a surface disposal site (dedicated land disposal site or monofill), a qualified groundwater scientist shall develop a groundwater monitoring program for the site, or shall certify that the placement of biosolids on the site will not contaminate an aquifer.
- 9.2.1.6. Biosolids placed in a municipal landfill shall be tested by the Paint Filter Liquids Test (EPA Method 9095) at the frequency in Table E-32 above or more often if necessary to demonstrate that there are no free liquids.

9.2.2. Biosolids Notification

M1W, either directly or through contractual arrangements with their biosolids management contractors, shall comply with the following notification requirements:

- 9.2.2.1. Notification of noncompliance: M1W shall notify USEPA Region 9, the Central Coast Water Board, and the regional board located in the region where the biosolids are used or disposed, of any noncompliance within 24 hours if the noncompliance may seriously endanger health or the environment. For other instances of noncompliance, M1W shall notify USEPA Region 9 and the affected regional boards of the noncompliance in writing within five working days of becoming aware of the noncompliance. M1W shall require their biosolids management contractors to notify USEPA Region 9 and the affected regional boards of any noncompliance within the same timeframes. See Attachment F for Central Coast Water Board contact information.
- 9.2.2.2. If biosolids are shipped to another State or to Indian Lands, M1W must send 60 days prior notice of the shipment to the permitting authorities in the receiving State or Indian Land (the USEPA Regional Office for that area and the State/Indian authorities).
- 9.2.2.3. For land application: Prior to reuse of any biosolids from the M1W RTP to a new or previously unreported site, M1W shall notify USEPA and the Central Coast Water Board. The notification shall include a description and topographic map

of the proposed site(s), names and addresses of the applier, and site owner and a listing of any state or local permits which must be obtained. The plan shall include a description of the crops or vegetation to be grown, proposed loading rates and determination of agronomic rates. If any biosolids within a given monitoring period do not meet 40 CFR section 503.13 metals concentration limits, M1W (or its contractor) must pre-notify the USEPA, and determine the cumulative metals loading at that site to date, as required in 40 CFR section 503.12.

9.2.2.4. M1W shall notify the applier of all the applier's requirements under 40 CFR part 503, including the requirement that the applier certify that the management practices, site restrictions, and any applicable vector attraction reduction requirements have been met. M1W shall require the applier to certify at the end of 38 months following application of Class B biosolids that the harvesting restrictions in effect for up to 38 months have been met.

9.2.2.5. For surface disposal: Prior to disposal to a new or previously unreported site, M1W shall notify the USEPA and the Central Coast Water Board. The notice shall include description and topographic map of the proposed site, depth to groundwater, whether the site is lined or unlined, site operator, site owner, and any State or local permits. The notice shall describe procedures for ensuring public access and grazing restrictions for three years following site closure. The notice shall include a groundwater monitoring plan or description of why groundwater monitoring is not required.

9.2.3. Biosolids Reporting

The following information shall be submitted by M1W with the annual biosolids report due February 19 each year. Adequate detail shall be included to characterize biosolids in accordance with 40 CFR part 503.

9.2.3.1. Annual biosolids production in dry metric tons and percent solids.

9.2.3.2. A schematic drawing showing biosolids handling facilities (e.g., digesters, lagoons, drying beds, incinerators) and a solids flow diagram.

9.2.3.3. A narrative description of biosolids dewatering and other treatment processes, including process parameters. For example, if biosolids are digested, report average temperature and retention time of the digesters. If drying beds are used, report depth of application and drying time. If composting is used, report the temperature achieved and duration.

9.2.3.4. A description of disposal methods, including the following information as applicable related to the disposal methods used at the Facility. If more than one method is used, include the percentage and tonnage of annual biosolids production disposed by each method.

9.2.3.4.1. For landfill disposal include:

9.2.3.4.1.1. The Central Coast Water Board WDR numbers that regulate the landfills used;

- 9.2.3.4.1.2. The present classifications of the landfills used; and
- 9.2.3.4.1.3. The names and locations of the facilities receiving biosolids.
- 9.2.3.4.2. For land application include:
- 9.2.3.4.2.1. The location of the site(s);
- 9.2.3.4.2.2. The Central Coast Water Board's WDR numbers that regulate the site(s);
- 9.2.3.4.2.3. The application rate in lbs/acre/year (specify wet or dry); and
- 9.2.3.4.2.4. Subsequent uses of the land.
- 9.2.3.4.3. For offsite application by a licensed hauler and composter include:
- 9.2.3.4.3.1. The name, address and USEPA license number of the hauler and composter.
- 9.2.3.4.3.2. Copies of analytical data required by other agencies (i.e., USEPA or County Health Department) and licensed disposal facilities (i.e., landfill, land application, or composting facility) for the previous year.
- 9.2.3.5. A representative sample of residual solids (biosolids) shall be obtained from the last point in the handling process (i.e., in the dumpster just prior to removal) and shall be analyzed for total concentrations for comparison with Total Threshold Limit Concentration (TTL) criteria. The Waste Extraction Test shall be performed on any constituent when the total concentration of the waste exceeds ten times the Soluble Threshold Limit Concentration (STLC) limit for that substance. Twelve (12) discrete representative samples shall be collected at separate locations in the biosolids ready for disposal. These 12 samples shall be composited to form one (1) sample for constituent analysis. For accumulated, previously untested biosolids, M1W shall develop a representative sampling plan including number and location of sampling points and collect representative samples.
- 9.2.3.6. All reports must be submitted annually, by February 19 to cover the previous calendar year reporting period, through the NeT e-reporting system (see <https://www.cdx.epa.gov/> and <https://www.epa.gov/biosolids> for more information).

Table E-33. Biosolids Monitoring Requirements

Parameter	Units ^[1]	Sample Type	Minimum Sampling Frequency ^[2]
Quantity Removed	dry metric tons or yards	Measured	During Removal
Location of Reuse/Disposal	Site		During Removal
Moisture Content	%	Grab	1/Year
Ammonia, Total as N	mg/kg	Grab	1/Year
Nitrate, Total as N	mg/kg	Grab	1/Year

Parameter	Units ^[1]	Sample Type	Minimum Sampling Frequency ^[2]
Total Phosphorus	mg/kg	Grab	1/Year
pH	SU	Grab	1/Year
Oil and Grease	mg/kg	Grab	1/Year
Arsenic	mg/kg	Grab	1/Year
Boron	mg/kg	Grab	1/Year
Cadmium	mg/kg	Grab	1/Year
Chromium (VI)	mg/kg	Grab	1/Year
Copper	mg/kg	Grab	1/Year
Lead	mg/kg	Grab	1/Year
Mercury	mg/kg	Grab	1/Year
Molybdenum	mg/kg	Grab	1/Year
Nickel	mg/kg	Grab	1/Year
Selenium	mg/kg	Grab	1/Year
Silver	mg/kg	Grab	1/Year
Zinc	mg/kg	Grab	1/Year
Priority Pollutants (excluding asbestos)	mg/kg	Grab	1/Year

^[1] Total sample (including solids and any liquid portion) to be analyzed and results reported as mg/kg based on the dry weight of the sample.

^[2] In compliance with 40 CFR part 503.

9.3. Pretreatment Monitoring and Reporting (Applicable to M1W)

At least once per year, RTP influent (Monitoring Location INF-001), secondary-treated effluent (Monitoring Location EFF-001A), and biosolids shall be sampled and analyzed by M1W for the priority pollutants identified under section 307(a) of the CWA. By March 1st of each year, M1W shall submit an annual report to the Central Coast Water Board, State Board, and USEPA describing M1W's pretreatment activities over the previous calendar year. In the event that M1W is not in compliance with any conditions or requirements of this Order affected by the pretreatment program, including any noncompliance with pretreatment audit or compliance inspection requirements, then M1W shall also include the reasons for noncompliance and state how and when M1W shall comply with such conditions and requirements. This report shall contain, but not be limited to, the following information:

- 9.3.1. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the RTP influent (Monitoring Location INF-001) and secondary-treated effluent (Monitoring Location EFF-001A) for those pollutants USEPA has identified under section 307(a) of the CWA which are known or suspected to be discharged by industrial users. M1W is not required to sample

and analyze for asbestos until the USEPA promulgates an applicable analytical technique under 40 CFR part 136.

- 9.3.2. Biosolids shall be sampled during the same 24-hour period and analyzed for the same pollutants as the RTP influent and secondary-treated effluent sampling and analysis. The biosolids analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and biosolids sampling and analysis shall be performed at a minimum of annually and not less than the frequency specified in the required monitoring program for the MW1 RTP. M1W shall also provide any RTP influent, secondary-treated effluent, or biosolids monitoring data for nonpriority pollutants that M1W believes may be causing or contributing to interference, pass-through, or adversely impacting biosolids quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR part 136 and amendments thereto. Biosolids samples shall be collected from the last point in solids handling before disposal. If biosolids are dried on-site, samples shall be composited from at least 12 discrete samples from 12 representative locations.
- 9.3.3. A discussion of upset, interference, or pass-through incidents, if any, at the POTW which M1W knows or suspects were caused by industrial users of the POTW system. The discussion shall include the reasons why the incidents occurred, corrective actions taken and, if known, the name and address of the industrial user(s) responsible. Discussions shall also include a review of applicable pollutant limitations to determine whether any additional limitations or changes to existing requirements may be necessary to prevent pass-through, interference, or noncompliance with sludge disposal requirements.
- 9.3.4. The cumulative number of industrial users that M1W has notified regarding Baseline Monitoring Reports, and the cumulative number of industrial user responses.
- 9.3.5. An updated list of M1W's industrial users, including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. M1W shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to Federal Categorical Standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the Federal Categorical Standards. M1W shall also list the non-categorical industrial users that are subject only to local discharge limitations. M1W shall characterize the compliance status of each industrial user by employing the following descriptions:
- 9.3.5.1. In compliance with Baseline Monitoring Report requirements (where applicable);
- 9.3.5.2. Consistently achieving compliance;
- 9.2.5.3. Inconsistently achieving compliance;
- 9.3.5.4. Significantly violated applicable pretreatment requirements as defined by 40 CFR section 403.8(f)(2)(vii);

- 9.3.5.5. On a schedule to achieve compliance (include the date final compliance is required);
- 9.3.5.6. Not achieving compliance and not on a compliance schedule; or
- 9.3.5.7. M1W does not know the industrial user's compliance status.
- 9.3.6. A summary of inspection and sampling activities conducted by M1W during the past year to gather information and data regarding industrial users. The summary shall include:
 - 9.3.6.1. Names and addresses of the industrial users subject to surveillance by M1W and an explanation of whether they were inspected, sampled, or both, and the frequency of these activities at each user; and
 - 9.3.6.2. Conclusions or results from the inspection or sampling of each industrial user.
- 9.3.7. A summary of compliance and enforcement activities during the past year. The summary shall include names and addresses of the industrial users affected by the following actions:
 - 9.3.7.1. Warning letters or notices of violation regarding the industrial users' apparent noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the Federal Categorical Standards or local discharge limitations;
 - 9.3.7.2. Administrative Orders regarding the industrial users' noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the violation concerned the Federal Categorical Standards or local discharge limitations;
 - 9.3.7.3. Civil actions regarding the industrial users' noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the violation concerned the Federal Categorical Standards or local discharge limitations;
 - 9.3.7.4. Criminal actions regarding the industrial user's noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the violation concerned Federal Categorical Standards or local discharge limitations;
 - 9.3.7.5. Assessment of monetary penalties. For each industrial user, identify the amount of the penalties;
 - 9.3.7.6. Restriction of flow to the POTW; or
 - 9.3.7.7. Disconnection from discharge to the POTW.
- 9.3.8. Description of any significant changes in operating the pretreatment program which differ from the information in M1W's approved POTW Pretreatment Program, including but not limited to changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority or enforcement policy; funding mechanisms; resource requirements; or staffing levels.

- 9.3.9. A summary of the annual pretreatment budget, including the costs of pretreatment program functions and equipment purchases.
- 9.3.10. A summary of public participation activities to involve and inform the public.
- 9.3.11. A description of any changes in biosolids disposal methods and a discussion of any concerns not described elsewhere in the report.
- 9.3.12. Reports shall be signed by a principal executive officer, ranking elected official, or other duly authorized employee if such employee is responsible for overall operation of the POTW. Signed copies of these reports shall be submitted to the USEPA and the State at the following addresses:

CIWQS database: <http://ciwqs.waterboards.ca.gov/>

State Water Resources Control Board

Regulation Unit

P.O. Box 100

Sacramento, CA 95812-0100

USEPA, Region 9

R9Pretreatment@epa.gov

9.4. Dye Dilution Study and Outfall Inspection

M1W shall conduct a dye dilution study once per year for 4 years, followed in the fifth year by a physical (dive) outfall inspection. This 5-year cycle shall repeat thereafter unless the Central Coast Regional Water Board agrees to a reduction in frequency after adequate compliance is documented after the completion of the M1W ocean outfall and diffuser modifications and the discharge of Cal-Am MPWSP Desalination Plant brine waste. The dye study and visual inspection results shall summarize the M1W outfall's physical integrity and be included in the applicable report.

9.5. Plume Tracking Study

Plume tracking is a single study or ongoing program designed to assess dispersion and fate of the wastewater plume discharged from the M1W ocean outfall. The Plume Tracking Study consists of a conceptual site model, a Plume Tracking Monitoring Plan (PTMP) work plan, the PTMP, PTMP progress reports, final Plume Tracking Study results, and a Receiving Water Monitoring Recommendations Report, as described below.

The monitoring surveys for the Plume Tracking Study shall be implemented after the MPWSP Desalination Plant discharge commences and the intake water quality has reached a stable state. If the MPWSP Desalination Plant discharge has not commenced or the intake water quality has not stabilized during the permit term, the Plume Tracking Study monitoring surveys may not occur during this permit term. However, the Dischargers shall still comply with requirements to submit a CSM, PTMP work plan, and PTMP, as described in MRP sections 9.5.1 through 9.5.3 below.

9.5.1. Conceptual Site Model (CSM)

The Dischargers shall construct a CSM based on available site-specific data such as the effluent quality at the M1W ocean outfall, occurrence of waste constituents in the receiving water and sediment, and direction and magnitude of surface and subsurface currents.

An initial CSM shall be submitted within 180 days of the effective date of this Order, and shall include, but is not limited to:

- 9.5.1.1. Three-dimensional spatial extent and temporal variability of the waste constituents in the receiving water,
- 9.5.1.2. The location and exposure points of actual and potential receptors (humans and marine life),
- 9.5.1.3. Discussion of the level of uncertainty of conclusions, including data gaps in the CSM, and
- 9.5.1.4. Description of the additional work needed to complete the CSM.

The CSM shall be refined and updated as data becomes available. Updates to the CSM shall be included in the semiannual progress reports required in section 9.5.4 of this MRP.

9.5.2. PTMP Work Plan

The Dischargers shall develop a PTMP work plan, designed to guide the collection of information to produce the final PTMP described in section 9.5.3 of this MRP.

The PTMP Work Plan shall be submitted to the Central Coast Water Board within 180 days of the effective date of this Order, and shall include, but is not limited to, the following:

- 9.5.2.1. Evaluation of available technology that may assist with the Plume Tracking Study,
- 9.5.2.2. Specific questions that will be answered with the Plume Tracking Study,
- 9.5.2.4. The approach to be taken for conducting a feasibility analysis (within the PTMP; MRP section 9.5.3 below) for:
 - 9.5.2.4.1. Installation and operation by the Dischargers of a permanent, real-time oceanographic mooring system located near the terminal diffuser structure of the M1W ocean outfall,
 - 9.5.2.4.2. Utilizing advanced oceanographic sampling technologies such as an autonomous underwater vehicle (AUV) or remotely operated vehicle (ROV) either alone or in conjunction with an ocean outfall real-time mooring, and
 - 9.5.2.4.3. Any alternative methods identified during the evaluation of available technologies that may assist with the PTMP.
- 9.5.2.5. A schedule for completion of all PTMP activities and submission of a final PTMP report.

The Dischargers shall implement the PTMP Work Plan to develop the final PTMP as directed by the Central Coast Water Board 60 days after Board approval of the PTMP Work Plan. The Dischargers shall notify the Central Coast Water Board of the intent to initiate the proposed actions included in the PTMP Work Plan; and comply with any conditions set by the Central Coast Water Board.

9.5.3. PTMP

The Dischargers shall, in consultation with the Central Coast Water Board, prepare and submit a PTMP, prepared in accordance with the approved PTMP Work Plan, to evaluate dispersion and fate of the wastewater plume discharged from the M1W ocean outfall.

The PTMP shall be submitted in accordance with the timeframe outlined in the approved PTMP Work Plan (MRP section 9.5.2 above) and shall include, but is not limited to, the following elements:

- 9.5.3.1. A feasibility analysis, including an assessment of advantages, disadvantages, cost, usefulness, and effectiveness of the following:
 - 9.5.3.1.1. Installation and operation by the Dischargers of a permanent, real-time oceanographic mooring system located near the terminal diffuser structure of the ocean outfall. The mooring system shall be designed to measure, at minimum, direction and velocity of subsurface currents, and ocean stratification. If determined to be feasible, this element shall also include:
 - 9.5.3.1.2. Utilizing advanced oceanographic sampling technologies such as an AUV or ROTV either alone or in conjunction with an ocean outfall real-time mooring system.
 - 9.5.3.1.3. Any alternative approach proposed by the Dischargers to answer the questions posed above for the Plume Tracking Study, if applicable.
- 9.5.3.2. A detailed description of recommended actions;
- 9.5.3.3. A monitoring plan to implement the recommended actions;
- 9.5.3.4. A detailed description and schedule for completion of all activities planned to implement the recommendations in the PTMP; and
- 9.5.3.5. A schedule for submission of the final results of the Plume Tracking Study as described in MRP section 9.5.5 below.

The Dischargers shall initiate implementation of the PTMP within 60 days after submission in accordance with the schedule contained in the PTMP, unless otherwise directed by the Central Coast Water Board. The Dischargers shall notify the Central Coast Water Board of the intent to initiate the proposed actions included in the PTMP and comply with any conditions set by the Central Coast Water Board.

9.5.4. PTMP Progress Reports

The Dischargers shall submit semiannual progress reports on implementation of the PTMP to the Central Coast Water Board by February 1 and August 1 of each year.

9.5.5. Final Plume Tracking Study Results

The final results of the Plume Tracking Study shall be submitted no later than 180 days after the completion of the Plume Tracking Study, unless an extension is granted by the Central Coast Water Board. The results shall include in-depth discussion, evaluation, interpretation, and tabulation of the project data. Report interpretations and conclusions shall include the state of the receiving waters around the M1W ocean outfall and the estimated locations of the outfall plume during the study.

9.5.6. Receiving Water Monitoring Recommendations Report

The Dischargers shall also submit a Receiving Water Monitoring Recommendations Report no later than 180 days after the completion of the Plume Tracking Study, unless an extension is granted by the Central Coast Water Board. The Receiving Water Monitoring Recommendations Report shall include, but is not limited to:

- 9.5.6.1 Recommendations for future nearshore and offshore monitoring, including potential modifications to the locations of monitoring stations to better assess the impact of the discharge through the ocean outfall;
- 9.5.6.2. Evaluation of the feasibility of event-based monitoring, including collecting samples during certain oceanographic conditions at locations where the plume is most likely to occur.

9.6. Before-After Control-Impact Study

Pursuant to Ocean Plan section III.M.4.a(2) of the, Cal-Am shall conduct a Before-After Control-Impact Study that evaluates the differences in biological communities at reference locations and at the discharge location before and after the MPWSP Desalination Plant brine waste discharge commences. For purpose of determining the “before” or “baseline” condition (i.e., pre-MPWSP Desalination Plant brine waste discharge) of the discharge location and reference locations, Cal-Am shall conduct the receiving water monitoring requirements contained in section 8.4 of this MRP. Cal-Am shall also consider historical receiving water monitoring results when evaluating the before condition. The “after” condition (i.e., post-MPWSP Desalination Plant brine waste discharge) shall, at a minimum, include the same monitoring requirements defined in section 8.4 of this MRP. However, the MPWSP Desalination Plant brine waste discharge may not commence before the last year of the term of this Order and the results may not be available for inclusion in the submittal of the ROWD for reissuance of this Order. Therefore, this Order does not specify the post- discharge monitoring to evaluate the “after” condition of the biological communities at reference locations and at the discharge location.

Instead, the post-discharge monitoring shall be based on the Before-After Control-Impact Study Report discussed below in section 9.6.1 of this MRP.

9.6.1. Brine Discharge Monitoring Plan

Cal-Am shall revise and submit a Final Monitoring and Reporting Plan for the California-American Water Company Desalination Project Brine Discharge Monitoring Program (Brine Discharge Monitoring Plan) to the Central Coast Water Board for concurrence no later than 90 days after the adoption of this Order. The final Brine Discharge Monitoring Plan shall include the following:

- 9.6.1.1. A QAPP describing the project objectives and organization, functional activities, and quality assurance/quality control protocols;
- 9.6.1.2. The types of biological monitoring that will be conducted and included in the Before-After Control-Impact Study. At minimum, the Dischargers shall monitor sediment chemistry and toxicity, benthic communities (i.e., sediment infauna and demersal fish and macroinvertebrates), and bioaccumulation in fish tissue;
- 9.6.1.3. The monitoring locations that will be used in the Before-After Control-Impact Study; and
- 9.6.1.4. A schedule for initiating pre- and post-discharge monitoring and submission of the Before-After Control-Impact Study Report.

9.6.2. Brine Discharge Monitoring Plan Implementation

Cal-Am shall implement the Brine Discharge Monitoring Plan 90 days after Central Coast approval of the submitted Brine Discharge Monitoring Plan, unless otherwise directed in writing by the Central Coast Water Board. Cal-Am shall notify the Central Coast Water Board of the intent to initiate the proposed actions included in the Before-After Control-Impact Study Work Plan and comply with any conditions set by the Central Coast Water Board.

9.6.3. Before-After Control-Impact Study Report

Cal-Am shall submit a Before-After Control-Impact Study Report 180 days after completion of the post-discharge monitoring used to evaluate the after condition. The Before-After Control-Impact Study Report shall include, at minimum, the following:

- 9.6.3.1. A description of climatic and oceanographic conditions at the time of sampling (weather observations, wind speed and direction, swell or wave action, time of sampling, tide height, water temperature, etc.);
- 9.6.3.2. A description of the sample collection preservation procedures, and laboratory analysis methods;
- 9.6.3.3. A narrative summary of general observations, including any abnormal conditions; and
- 9.6.3.4. An in-depth discussion, evaluation (e.g., detailed statistical analyses), interpretation, and tabulation of the data including interpretations and

conclusions as to whether the biological communities in the vicinity of the M1W ocean outfall have changed or have been impacted as a result of the MPWSP Desalination Plant brine waste discharge.

9.7. Monterey Bay National Marine Sanctuary (MBNMS) Spill Reporting

In accordance with Standard Provision 5.5 (Attachment D), within 24 hours, M1W shall report all sewage spills under its control that are likely to enter ocean waters, directly to the MBNMS office at 831-236-6797. A report shall also be provided to the Central Coast Water Board within five days of the time M1W becomes aware of the circumstances.

10. REPORTING REQUIREMENTS

10.1. General Monitoring and Reporting Requirements

10.1.1. The Dischargers shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

10.2. Self-Monitoring Reports (SMRs)

10.2.1. The Dischargers shall electronically submit SMRs using the State Water Board's [California Integrated Water Quality System \(CIWQS\) Program website](http://www.waterboards.ca.gov/water_issues/programs/ciwqs/) (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/). The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.

10.2.2. The Dischargers shall report in their SMRs the results for all monitoring specified in this MRP under sections 3 through 9. The Dischargers shall submit monthly, quarterly, semiannual, and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Dischargers monitor any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

10.2.3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-34. Monitoring Periods and Reporting Schedule

Report(s)	Permit Section(s)	Report Frequency	Due Date(s)	Responsibility
Monthly SMR (INF-001, INF-002, INT-003, EFF-001, EFF-001A, REC-001, INT-001, INT-002, RSW-A,	MRP sections 3.1, 3.2, 3.4, 4.1, 4.2, 4.4, 7.1, 7.2, and 8.8.1	1/Month	First day of second calendar month following the month of sampling	M1W

Report(s)	Permit Section(s)	Report Frequency	Due Date(s)	Responsibility
RSW-B, RSW-C, and RSW-D)				
Monthly SMR (INF-002 and EFF-001C)	MRP sections 3.3 and 4.3	1/Month	First day of second calendar month following the month of sampling	Cal-Am
Monthly SMR (EFF-001D and EFF-001B)	MRP sections 4.5, and 4.6	1/Month	First day of second calendar month following the month of sampling	M1W and Cal-Am
Quarterly SMR (OFF-A, OFF-B, OFF-C, OFF-D, OFF-E, OFF-F, OFF-G, REF-A, and REF-B)	MRP section 8.8.2	4/Year	First day of second calendar month following the quarter of sampling	M1W
Quarterly SMR (EFF-001D, EFF-001B, RSW-A, RSW-B, RSW-C, and RSW-D)	MRP sections 4.5, 4.6, and 8.2	4/Year	First day of second calendar month following the quarter of sampling	M1W and Cal-Am
Semi-Annual SMR (EFF-001D and EFF-001B)	MRP sections 4.5, and 4.6	2/Year	First day of second calendar month following 6-month sampling period	M1W and Cal-Am
Annual SMR (EFF-001D and EFF-001B)	MRP sections 4.5 and 4.6	1/Year	February 1 st , annually	M1W and Cal-Am
Offshore Water Quality Monitoring	MRP section 8.3.1	4/Year	First day of second calendar month following the quarter of sampling	Cal-Am
Offshore Water Quality Monitoring	MRP section 8.4.1	4/Year	First day of second calendar month following the quarter of sampling	M1W and Cal-Am

Report(s)	Permit Section(s)	Report Frequency	Due Date(s)	Responsibility
Offshore Sediment and Benthic Monitoring	MRP section 8.3.2	Once	3 months after sampling ends, where sampling ends prior to MPWSP brine waste discharge	Cal-Am
Offshore Sediment and Benthic Monitoring	MRP section 8.4.2	Once	180 days prior to Order expiration date	M1W and Cal-Am
Fish Monitoring	MRP section 8.3.3	Once	180 days prior to Order expiration date	Cal-Am
Fish Monitoring	MPR section 8.4.3	Once	180 days prior to Order expiration date	M1W and Cal-Am
Receiving Water Monitoring Plan	MRP section 10.4	Once	180 days after Order effective date	M1W and Cal-Am
TRE Work Plan	Order section 6.3.2.1	Once	90 days after Order effective date	M1W
TRE Work Plan	Order section 6.3.2.1	Once	90 days after Order effective date	Cal-Am
TRE	Order section 6.3.2.1	If the discharge consistently exceeds a Table 6 Effluent Limitation for an Ocean Plan Table 3 parameter, or if toxicity limitations are exceeded during accelerated monitoring.	As directed by the EO	M1W and Cal-Am
Species Sensitivity Screening for	MRP section 5.3.3	Once, and then 1/Two Years	6 months after introduction of Cal-Am MPWSP Desalination	M1W and Cal-Am

Report(s)	Permit Section(s)	Report Frequency	Due Date(s)	Responsibility
Chronic Toxicity during Dm = 101			Plant brine waste into the discharge, and every 24 months thereafter	
Species Sensitivity Screening for Chronic Toxicity during low and high M1W waste ratio	MRP section 5.3.3	1/Five Years	Every 5 years after Order effective date	M1W and Cal-Am
Hauled Saline Waste Disposal Study	Order section 6.3.2.2	When M1W hauled saline waste increases beyond 0.05 MGD	Prior to increasing M1W hauled saline waste beyond 0.05 MGD	M1W
Dye Dilution Study and Outfall Inspection	Order section 6.3.2.3 and MRP section 9.4	Repeating 5 year cycle - dye study 1/Year for 4 years, followed in the fifth year by a physical outfall inspection	April 1 st , annually	M1W
Plume Tracking CSM	MRP section 9.5.1	Once	Initial report due with PTMP Work Plan, and updates due with PTMP progress reports.	M1W and Cal-Am
PTMP Work Plan	Order section 6.3.2.4 and MRP section 9.5.2	Once	180 days after Order effective date	M1W and Cal-Am
PTMP	Order section 6.3.2.4 and MRP section 9.5.3	Once	According to approved PTMP Work Plan	M1W and Cal-Am
PTMP Progress Reports	MRP section 9.5.4	2/Year, beginning 6 months after submission of PTMP Work Plan	February 1 st and August 1 st , annually	M1W and Cal-Am

Report(s)	Permit Section(s)	Report Frequency	Due Date(s)	Responsibility
Final Plume Tracking Study Results	Order section 6.3.2.4 and MRP section 9.5.5	Once	180 days after completion of the Plume Tracking Study	M1W and Cal-Am
PTMP Receiving Water Monitoring Recommendations Report	MRP section 9.5.6	Once	180 days after completion of Plume Tracking Study	M1W and Cal-Am
Brine Discharge Monitoring Plan	Order section 6.3.2.5 and MRP section 9.6.1	Once	90 days after Order adoption date	Cal-Am
Before-After Control-Impact Study Report	Order section 6.3.2.5 and MRP section 9.6.3	Once	180 days after completion of Before-After Control-Impact Study Monitoring	Cal-Am
MLMR	Order section 6.3.2.6	Once	90 days after Order adoption date	Cal-Am
MLMP	Order section 6.3.2.7	Once	6 months after the approval of final MLMR	Cal-Am
PMP	Order section 6.3.3	When there is evidence that a pollutant is present in the effluent above an effluent limitation and either: 1) the concentration of the pollutant is reported as DNQ and the effluent limitation is less than the reported ML, or 2) the concentration of the pollutant is reported as ND and the effluent limitation is less than the MDL	With the following Monthly SMR	M1W and Cal-Am

Report(s)	Permit Section(s)	Report Frequency	Due Date(s)	Responsibility
Construction Status Updates	Order section 6.3.4.1	4/Year until, and once 60 days prior to, the first Cal-Am MPWSP brine waste discharge	January 1 st , April 1 st , July 1 st , and October 1 st , annually, until, and once 60 days prior to, the first Cal-Am MPWSP brine waste discharge	Cal-Am
Pretreatment Annual Report	MRP section 9.3	1/Year	March 1 st , annually	M1W
Biosolids Annual Report	MRP section 9.2	1/Year	February 19 th , annually	M1W
Treatment Plant Capacity Report	Order section 6.3.5.5	When M1W RTP reaches design capacity	4 years prior to reaching RTP design capacity	M1W
Asset Management Plan	Order section 6.3.5.6	Once	180 days after Order effective date	M1W
Climate Change Response Hazards and Vulnerabilities Plans	Order section 6.3.6.2	Once	With ROWD	M1W and Cal-Am
MBNMS Spill Reports	MRP section 9.7	After any M1W sewage spill	24 hr after sewage spill	M1W
Mitigation Project Performance Report	MRP section 10.4	Once	180 days before expiration of the Order	Cal-Am
Facility Summary Report	Attachment D section 8.4.8	1/Year	April 1 st , annually	M1W and Cal-Am
ROWD	Order page 2, Attachment D section 8.4.3	Once	6 months prior to permit expiration, or 180 days before making any material change in the character, location, or plume of the discharge,	M1W and Cal-Am

Report(s)	Permit Section(s)	Report Frequency	Due Date(s)	Responsibility
			whichever comes first	

10.2.4. Section 3.2 of the Standard Provisions (Attachment D) includes the standard provisions for test procedures. The USEPA published regulations for the Sufficiently Sensitive Methods Rule (SSM Rule) which became effective September 18, 2015. For the purposes of the NPDES program, when more than one test procedure is approved under 40 CFR part 136 for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 CFR sections 122.21(e)(3) and 122.44(i)(1)(iv). Both 40 CFR sections 122.21(e)(3) and 122.44(i)(1)(iv) apply to the selection of a sufficiently sensitive analytical method for the purposes of monitoring and reporting under NPDES permits, including review of permit applications. A USEPA-approved analytical method is sufficiently sensitive where:

10.2.4.1. The Minimum Level (reported ML, also known as the Reporting Level, or RL) is at or below both the level of the applicable water quality criterion/objective and this Order limitation for the measured pollutant or pollutant parameter; or

10.2.4.2. In permit applications, the ML is above the applicable water quality criterion/objective, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

10.2.4.3. The method has the lowest ML of the USEPA-approved analytical methods where none of the USEPA-approved analytical methods for a pollutant can achieve the MLs necessary to assess the need for effluent limitations or to monitor compliance with a permit limitation. The MLs in Ocean Plan Appendix II remain applicable. However, there may be situations when analytical methods are published with MLs that are more sensitive than the MLs for analytical methods listed in the Ocean Plan. For instance, USEPA Method 1631E for mercury is not currently listed in Ocean Plan Appendix II, but it is published with an ML of 0.5 nanograms per liter (ng/L) that makes it a sufficiently sensitive analytical method. Similarly, USEPA Method 245.7 for mercury is published with an ML of 5 ng/L.

10.2.5. The Dischargers shall report with each sample result the applicable reported Minimum Level (reported ML, also known as the Reporting Level, or RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR part 136.

The Dischargers shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

10.2.5.1. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

10.2.5.2. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy ($\pm$ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

10.2.5.3. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

10.2.5.4. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time are the Dischargers to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

10.2.6. Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined above and Attachment A for purposes of reporting and administrative enforcement by the Central Coast Water Board and State Water Board, the Dischargers shall be deemed out of compliance with effluent limitations if the concentration of the reportable pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported ML.

10.2.7. When determining compliance with a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses and the data set contains one or more reported determinations of DNQ or ND, the Dischargers shall compute the median in place of the arithmetic mean in accordance with the following procedure:

10.2.7.1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

10.2.7.2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

10.2.8. The Dischargers shall submit SMRs in accordance with the following requirements:

10.2.8.1. The Dischargers shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Dischargers are not required to duplicate the submittal of data that is entered in a tabular

format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Dischargers shall electronically submit the data in a tabular format as an attachment.

- 10.2.8.2. The Dischargers shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

10.3. Discharge Monitoring Reports (DMRs)

- 10.3.1. DMRs are USEPA reporting requirements. The Dischargers shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the [DMR website](http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring): (http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring).

10.4. Other Reports

10.4.1. Receiving Water Monitoring Plan

As detailed in Section 8 of this MRP, receiving water monitoring requirements are established in this MRP to monitor the discharge's impacts to receiving water. These requirements stem from the Ocean Plan Appendix III, Standard Monitoring Procedures, are established to meet the minimum default monitoring requirements for the receiving water. Appendix III of the Ocean Plan allows the participation of a regional monitoring program to satisfy some of these monitoring requirements at the discretion of the Regional Board. As specified in Section 9.1 the Dischargers may participate in the Central Coast Long-term Environmental Assessment Network Monitoring (CCLEAN) which conducts, in whole or in part, the same or similar receiving water monitoring that may satisfy requirements in Section 8.4 of this MRP. The Dischargers must submit within 180 days after the Order effective date a detailed Receiving Water Monitoring Plan that describes how the discharger will comply with the receiving water monitoring requirements described in this permit, for the approval of the Executive Officer. This should include at a minimum:

- 10.4.1.1. A comparison of the receiving water requirements in section 8.4 of this MRP and any applicable CCLEAN monitoring that can satisfy these requirements,
- 10.4.1.2. For portions of section 8.4 of this MRP that are not explicitly covered by any applicable CCLEAN monitoring, the dischargers must prepare rationale based on site specific conditions, historical monitoring, or other details that demonstrate why the CCLEAN monitoring alone is sufficient, and,

- 10.4.1.3. Development of proposed monitoring locations, monitoring schedule, and sample analysis plan for complying with the default monitoring requirements described in section 8.4.
- 10.4.2. The Dischargers shall report the results of any special monitoring, TREs, or other data or information that results from the Special Provisions – section 6.3 of the Order. The Dischargers shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.

10.4.1. Mitigation Project Performance Report

Upon approval and implementation of a Marine Life Mitigation Plan, Cal -Am must submit a Mitigation Project Performance report to the Central Coast Water Board 180 days prior to the expiration date of the NPDES Permit. The content and format of the performance report shall be consistent with the performance standards, metrics, and success criteria established in the approved MLMP as described in section 6.3.2.7. of the Order.

ATTACHMENT F – FACT SHEET

TABLE OF CONTENTS

1. PERMIT INFORMATION.....	F-4
2. FACILITY DESCRIPTION	F-7
2.1. Description of Wastewater and Biosolids Treatment and Controls.....	F-7
2.2. Dilution Factors	F-13
2.3. Discharge Points and Receiving Waters	F-17
2.4. Summary of Existing Requirements and Self Monitoring Report (SMR) Data.....	F-18
2.5. Compliance Summary.....	F-28
2.6. Planned Changes.....	F-28
3. APPLICABLE PLANS, POLICIES, AND REGULATIONS	F-28
3.1. Legal Authorities	F-29
3.2. California Environmental Quality Act (CEQA)	F-29
3.3. State and Federal Laws, Regulations, Policies, and Plans	F-30
3.4. Impaired Water Bodies on the CWA section 303(d) List	F-33
3.5. Other Plans, Policies and Regulations.....	F-33
4. RATIONALE FOR EFFLUENT LIMITS AND DISCHARGE SPECIFICATIONS	F-38
4.1. Discharge Prohibitions	F-38
4.2. Technology-Based Effluent Limitations (TBELs).....	F-41
4.3. Water-Quality-Based Effluent Limitations (WQBELs).....	F-44
4.4. Final Effluent Limitation Considerations	F-72
4.5. Interim Effluent Limitations – Not Applicable	F-83
4.6. Land Discharge Specifications- Not Applicable.....	F-83
4.7. Recycling Specifications	F-83
4.8. Discharge Specifications	F-83
5. RATIONALE FOR RECEIVING WATER LIMITATIONS	F-84
5.1. Surface Water	F-85
5.2. Groundwater – Not Applicable	F-103
6. RATIONALE FOR PROVISIONS	F-103
6.1. Standard Provisions	F-103
6.2. Special Provisions.....	F-103
7. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS.....	F-110
7.1. Influent Monitoring.....	F-111
7.2. Effluent Monitoring	F-111
7.3. Whole Effluent Toxicity Testing Requirements.....	F-112
7.4. Recycled Water Monitoring	F-113
7.5. Receiving Water Monitoring Requirements.....	F-113
7.6. Other Monitoring Requirements	F-116
8. CONSIDERATION OF NEED TO PREVENT NUISANCE AND WATER CODE SECTION 13241 FACTORS	F-118
8.1. Need to Prevent Pollution or Nuisance	F-119
8.2. Past, Present, and Probable Future Beneficial Uses of Water	F-119
8.3. Environmental Characteristics of the Hydrographic Unit Under Consideration, Including the Quality of Water Available Thereto	F-120

8.4. Water Quality Conditions That Could Reasonably Be Achieved Through the Coordinated Control of all Factors Which Affect Water Quality in the Area...	F-120
8.5. The Need for Developing Housing within the Region.....	F-120
8.6. Need to Develop and Use Recycled Water	F-121
8.7. Economic Considerations	F-121
9. PUBLIC PARTICIPATION.....	F-121
9.1. Notification of Interested Parties	F-121
9.2. Written Comments	F-122
9.3. Public Hearing.....	F-122
9.4. Reconsideration of Waste Discharge Requirements.....	F-123
9.5. Information and Copying	F-123
9.6. Register of Interested Persons.....	F-123
9.7. Additional Information	F-123

TABLE OF TABLES

Table F-1. Facility Information.....	F-4
Table F-2 Flows Contributing to Discharge Point 001	F-13
Table F-3. Approved Dms and Related Discharge Scenarios Prior to M1W Outfall and Diffuser Modifications.....	F-15
Table F-4. Approved Dms and Related Discharge Scenarios After M1W Ocean Outfall and Diffuser Modifications	F-17
Table F-5. M1W Total Combined Waste Historic Effluent Limitations and Corresponding Monitoring Data ^[1] (with compliance measured at EFF-001).....	F-19
Table F-6. M1W RTP Secondary-Treated Waste Historic Effluent Limitations and Monitoring Data ^[1] (with compliance measured at Monitoring Location EFF-001A)	F-20
Table F-7. M1W Total Waste Stream Historic Effluent Limitations and Monitoring Data ^[1] for Marine Aquatic Life WQOs (with compliance measured at Monitoring Location EFF-001B).....	F-21
Table F-8. M1W Total Waste Stream Historic Effluent Limitations and Monitoring Data ^[1] for Human Health WQOs (with compliance measured at Monitoring Location EFF- 001B)	F-23
Table F-9. Compliance Summary.....	F-28
Table F-10. Basin Plan Beneficial Uses	F-31
Table F-11. Ocean Plan Beneficial Uses.....	F-32
Table F-12. Secondary Treatment Requirements at 40 CFR Part 133.....	F-43
Table F-13. Summary of M1W RTP Secondary-Treated Waste TBELs (with compliance measured at Monitoring Location EFF-001A).....	F-44
Table F-14. Ocean Plan Table 4 WQBELs.....	F-45
Table F-15. Summary of Statistical RPA Results for Discharge Point 001	F-51
Table F-16. Background Concentrations (Cs) – Ocean Plan (Table 5)	F-54
Table F-17. All applicable bacteria WQOs	F-59
Table F-18. Bacteria Effluent Limitations.....	F-61
Table F-19. Summary of M1W Total Combined Waste WQBELs (with compliance measured at Monitoring Location EFF-001).....	F-63
Table F-20. Summary of Cal-Am MPWSP Desalination Plant Brine Waste WQBELs (with compliance measured at Monitoring Location EFF-001C).....	F-64
Table F-21. Summary of Final Commingled Waste (After Dilution) Ocean Plan Table 3 WQBELs (with compliance measured at Monitoring Location EFF-001B)	F-65
Table F-22. Summary of Final Commingled Waste (After Dilution) Bacteria WQBELs (with compliance measured at Monitoring Location EFF-001B)	F-71
Table F-23. Ocean Plan General Requirements for Management of Waste Discharge to the Ocean.....	F-84
Table F-24. Surface Water Receiving Water Limitation Analysis	F-86

As described in section 2.2 of the Order, the California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board) incorporates this Attachment F (Fact Sheet) as findings of the Central Coast Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that are the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to these Dischargers. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to these Dischargers.

1. PERMIT INFORMATION

The following table summarizes administrative information related to the Facilities.

Table F-1. Facility Information

Waste Discharge Identification Number (WDID) – Monterey One Water (M1W)	3 270118002
WDID – California American Water Company (Cal-Am)	3 270726034
Dischargers	M1W and Cal-Am
Facility Name and Address – M1W	Regional Treatment Plant (RTP), Advanced Water Purification Facility (AWPF), and Salinas Valley Recovery Project (SVRP) 14811 Del Monte Boulevard Marina, California 93933 Monterey County
Facility Name and Address – Cal-Am	Monterey Peninsula Water Supply Project (MPWSP) Desalination Plant Charles Benson Road northeast of City of Marina, northwest of ReGen Marina, California 93933 Monterey County
Facility Contact, Title and Phone – M1W	Jose Guzman, Operations Manager, (831) 883-6183
Facility Contact, Title and Phone – Cal-Am	Spencer Vartanian, Director of Operations, (831) 646-3241
Authorized Person to Sign and Submit Reports – M1W	Jose Guzman, Operations Manager, (831) 883-6183

Authorized Person to Sign and Submit Reports – Cal-Am	Spencer Vartanian, Director of Operations, (831) 646-3241 Christina Baril, Director of Water Quality and Environmental Compliance, (916) 568-4212
Mailing Address – M1W	5 Harris Court, Building D Monterey, California 93940
Mailing Address – Cal-Am	PO Box 951 Monterey, California 93942
Billing Address – M1W	5 Harris Court, Building D Monterey, California 93940
Billing Address – Cal-Am	PO Box 951 Monterey, California 93942
Type of Facility – M1W	Publicly Owned Treatment Works (POTW) (SIC 4952)
Type of Facility – Cal-Am	Desalination Facility (SIC 4941)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Yes (applicable to M1W only)
Recycling Requirements	Recycled Water Producer (applicable to M1W only)
Facilities Design Flows	- M1W RTP – 29.6 million gallons per day (MGD) average dry weather flow (ADWF) and 75.6 MGD peak wet weather flow (PWWF) - M1W Ocean Outfall – 81.2 MGD PWWF before diffuser and outfall modifications and 75.6 MGD PWWF after diffuser and outfall modifications

Facilities Permitted Flow	• M1W RTP influent (at Monitoring Location INF-001) – 29.6 MGD ADWF and 75.6 PWWF • M1W RTP secondary-treated waste (EFF-001A) – 29.6 MGD instantaneous maximum effluent limitation (IMAX) during dry weather and 75.6 MGD IMAX during wet weather • M1W AWPf reverse osmosis (RO) concentrate (EFF-001E) – 1.78 MGD IMAX • M1W hauled saline waste (INF-002) – 0.050 MGD IMAX • M1W total combined waste (EFF-001) – 29.6 MGD IMAX in dry weather and 75.6 MGD IMAX in wet weather • Cal-Am MPWSP Desalination Plant brine waste (EFF-001C) – either equal to 0 MGD or between 5.80 MGD instantaneous minimum effluent limitation (IMIN) and 8.66 MGD IMAX^[1] • Final commingled effluent (EFF-001D) – 38.26 MGD IMAX in dry weather and 75.6 MGD IMAX in wet weather
Watershed	Lower Salinas Valley Hydrologic Area (309.10)
Receiving Water	Pacific Ocean at Monterey Bay (Monterey Bay National Marine Sanctuary [MBNMS]), Salinas River to Pt. Piños
Receiving Water Type	Ocean waters

^[1] Cal-Am MPWSP Desalination Plant brine waste flow may exist between 0 and 5.80 MGD during periods of ramp up/ramp down, not exceeding a total duration of 2 hours per day.

1.1. M1W is the owner and operator of the ocean outfall, the RTP, the Pure Water Monterey (PWM) AWPf, and the SVRP. Together, the M1W RTP, AWPf, and SBRP are a POTW. Cal-Am owns and will operate the MPWSP Desalination Plant. M1W and Cal-Am are collectively referred to as the Dischargers. The M1W RTP, M1W AWPf, M1W SVRP, and Cal-Am MPWSP Desalination Plant are collectively referred to as the Facilities.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Dischargers herein.

1.2. The Facilities discharge domestic wastewater, RO concentrate, hauled saline waste, and desalination brine waste to the Pacific Ocean, a water of the United States. Attachment B provides maps of the Facilities. Attachment C provides flow schematics of the Facilities.

- 1.3. M1W was previously regulated by Order R3-2024-0045, National Pollutant Discharge Elimination System (NPDES) Permit CA0048551 (2024 Order), which is terminated upon the effective date of this Order. The 2024 Order was issued solely to M1W. The new NPDES permit issuance herein again authorizes the M1W discharge, while also authorizing discharges of the future MPWSP Desalination Plant brine waste stream to the existing M1W ocean outfall via establishing M1W and Cal-Am as co-permittees.
- 1.4. The Dischargers filed a report of waste discharge (ROWD) for the issuance of waste discharge requirements (WDRs) and NPDES permit on October 1, 2024. Supplemental information was requested by the Central Coast Water Board on January 31, 2025, and was received from M1W and Cal-Am on July 1, 2025.
- 1.5. Regulations in section 122.46 of title 40 of the Code of Federal Regulations (40 CFR) limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, this Order limits the duration of the discharge authorization. However, pursuant to California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Dischargers comply with all federal NPDES requirements for continuation of expired permits.
- 1.6. California Water Code (Water Code) section 13142.5(b) requires that for each new or expanded coastal power plant 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. Section III.M of the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) provides the implementation provisions for desalination facilities to comply with Water Code section 13142.5(b).
- 1.7. The Central Coast Water Board has evaluated a range of feasible alternatives for the best available site, design, technology, and mitigation measures for the MPWSP Desalination Plant to minimize the intake and mortality of all forms of marine life and has determined the best combination of feasible alternatives to minimize intake and mortality of all forms of marine life (Ocean Plan section III.M.2.a(2)). Attachment G summarizes the Central Coast Water Board's findings in support of its Water Code section 13142.5(b) determination. This Water Code section 13142.5(b) determination is based upon available information.

2. FACILITY DESCRIPTION

2.1. Description of Wastewater and Biosolids Treatment and Controls

This Order addresses the M1W discharges of RTP secondary-treated effluent, SVRP disinfected tertiary recycled water, AWPf RO concentrate, and hauled saline waste, along with the future Cal-Am discharges of MPWSP Desalination Plant brine waste, from the facilities described below.

2.1.1. M1W Facilities

The M1W outfall, RTP, SVRP, and AWPf are regional wastewater treatment, disposal, and reclamation services facilities for the cities of Monterey, Pacific Grove, Del Rey Oaks, Sand City, Marina, and Salinas; the Seaside County Sanitation District; the Castroville and Boronda community services districts; and areas within unincorporated portions of Monterey County. Each member entity retains ownership and operating and maintenance responsibility for wastewater collection and transport systems up to the point of connection with interceptors owned and operated by M1W. M1W implements an approved pretreatment program.

Figure B-3 in Attachment B provides a site map of the M1W facilities. Figure C-1 in Attachment C provides a process flow schematic for the M1W facilities.

2.1.1.1. M1W Outfall

The Basin Plan adopted by the Central Coast Water Board in 1975 established the Monterey Bay Prohibition Zone, recommended consolidation of the Monterey Peninsula, Castroville, and Salinas treatment plants into a regional treatment plant, and water recycling for crop irrigation. The Monterey Regional Water Pollution Control Agency (now M1W) was formed in this time frame. The Basin Plan resulted in M1W deciding to site the Regional Treatment plant and Ocean Outfall as close to the Salinas River as possible to be close to farmland and with a shorter outfall length to exit the Prohibition Zone. The already disturbed Lonestar Sand Plant (currently CEMEX) became the access point for the ocean outfall as a permit to dig through or to tunnel under the dunes south of the Salinas River was not obtained.

The Land Outfall was built from the RTP Headworks to the Beach Junction Structure. It was completed in 1984 and is about 2.4 miles long and consists of 60-inch internal diameter (ID) reinforced concrete pipe (RCP). The Ocean Outfall was completed in 1984 and extends about 2.1 miles offshore. It has two turns with the diffuser starting in the second turn at the Prohibition Zone boundary. The pipe from the Beach Junction Structure is 60-inch ID RCP and contains 60 two-inch diffuser ports. A pipe joint with three diffuser ports reduces the pipeline down to 48-inch ID RCP and extends to the End Gate Structure. There are 48-feet of 48-inch ID RCP pipe offshore of the End Gate Structure. The end of the pipe is about 110 feet below mean sea level. There are 168 two-inch diameter diffuser ports. 129 of those ports have been open since it was placed into operation. The Land and Ocean Outfalls began discharging undisinfected secondary effluent into Monterey Bay in 1990.

In 1989, the close to shore portion of the Ocean Outfall was damaged by the Loma Prieta Earthquake as identified by dye testing. Internal gasket seals were installed in 1990 and 1992 to repair the damage. In 1998, four-inch rubber horizontal duckbill check valve diffusers were installed over the 129 open ports as part of the SVRP construction to minimize introduction of organisms into the

outfall during the low flow periods expected during the summer while producing/distributing tertiary recycled water.

As part of this permit, the 129 horizontal duckbill diffusers will be replaced with 60-degree angled duckbill check valve diffusers. 29 of the 39 currently plugged diffuser ports will have new 60-degree four-inch angled duckbill check valve diffusers installed. Ten diffuser ports will remain plugged.

2.1.1.2. M1W RTP

M1W owns and operates the RTP, which became operational in 1990, and currently serves a population of approximately 279,000. The RTP has a design capacity of 29.6 MGD ADWF and 75.6 PWWF. The RTP receives residential, commercial, and industrial wastewater for treatment and beneficial reuse. In addition, as part of the PWM Project (see Section 2.1.1.4), additional sources of water were introduced to the RTP to meet recycled water demands, including agricultural wash water from the City of Salinas, stormwater flows from the City of Salinas, stormwater and agricultural runoff from Blanco Drain, and stormwater and agricultural runoff from the Reclamation Ditch. Blanco Drain and the Reclamation Ditch drain a series of natural lakes through lateral ditches and pumps. These additional sources of water are mixed with existing domestic sewage from M1W's member entities and receive primary and secondary treatment before becoming available as influent to the AWP or SVRP.

M1W also implements a Liquid Waste Hauler program which screens, permits, and approves certain waste types for discharge to approved locations at the RTP including septic tanks; chemical toilets; fats, oils and grease (FOG); compatible industrial and commercial liquid wastes, and hauled saline waste (see Section 2.1.1.5).

Wastewater treatment at the RTP includes screening, aerated grit removal, primary sedimentation, secondary treatment through trickling filters, solids contact (i.e., bio-flocculation), and secondary clarification. Undisinfected secondary clarifier effluent produced by the RTP that is not sent for beneficial reuse by the AWP or SVRP is discharged to the Pacific Ocean at Monterey Bay through Discharge Point 001.

Biosolids are anaerobically digested and sent to two screw presses for dewatering. Holding lagoons and drying beds located on site are utilized to dry sludge. Dried solids are primarily hauled by a third-party contractor for composting and land application. Remaining dried solids are hauled to the ReGen Monterey (formerly Monterey Regional Waste Management District) landfill in Marina, located adjacent to the RTP, where they are mixed with refuse and buried each day. Land application of biosolids is not currently allowed in Monterey County.

In 2025, M1W completed construction of modifications to the anaerobic digesters and installed the Food Waste Receiving Facility. This Facility can receive up to 51,000 Tons Per Year (TPY) of hauled food waste slurry for co-digestion with FOG and wastewater sludge. The goal of the improvements is

threefold: (1) to meet Senate Bill (SB) 1383 organics diversion targets to address short-lived climate pollutants; (2) to increase renewable energy production; and (3) to reduce M1W's import of natural gas. As required by previous Order No. R3-2018-0017, Special Provisions VI.C.5.d., M1W notified the Regional Water Board of this program within the Report of Waste Discharge (ROWD) filed September 15, 2023, and developed Standard Operating Procedures (SOPs) prior to receiving the first delivery of hauled food waste slurry on August 29, 2025. The SOPs are implemented to prevent upset or passthrough of the solids treatment system which could adversely affect biosolids reuse and disposal.

2.1.1.3. M1W SVRP

In 1998, the SVRP became operational, producing Title 22 disinfected tertiary recycled water from a portion of the secondary-treated effluent from the RTP. Tertiary treatment processes include coagulation, flocculation, filtration, and disinfection. The facility has a design capacity to produce up to 29.6 MGD of tertiary-treated effluent for irrigation of farmland in the northern Salinas Valley.

Production of disinfected tertiary recycled water by the SVRP is governed by this Order. The distribution and use of recycled water for irrigation is regulated via separate water recycling requirements (WRRs) and is supplied to the Castroville Seawater Improvement Project (CSIP) from the Monterey County Water Resource Agency's Salinas Valley Water Project (SVWP). The SVWP also includes a seasonal Salinas River Diversion Facility, which screens and disinfects river water prior to combination with tertiary recycled water flow to an 80-acre-foot (AF) recycled water pond.

2.1.1.4. M1W AWPf

Another portion of the secondary-treated effluent from the RTP undergoes full advanced treatment at the AWPf. The AWPf commenced operation in 2020 as part of the PWM Project. The PWM Project entails full advanced treatment of secondary effluent and injection of the purified recycled water into the Seaside groundwater basin for indirect potable reuse, with subsequent withdrawal for use as a municipal water supply. The AWPf also produces purified recycled water that is used for landscape irrigation by Marina Coast Water District, which also owns most of the Pure Water Monterey recycled water conveyance system.

Full advanced treatment processes at the AWPf include ozone addition, membrane filtration, RO, advanced oxidation via ultraviolet (UV) light and hydrogen peroxide, and finished water stabilization. The AWPf has a design capacity to produce up to 7.6 MGD of full advanced-treated water for injection in the Seaside groundwater basin and landscape irrigation by Marina Coast Water District.

This Order regulates the discharge of RO concentrate from the AWPf to Discharge Point 001. As part of the AWPf treatment process, AWPf influent (secondary effluent from the RTP) is chloraminated by the addition of sodium

hypochlorite upstream of the ozone system prior to MF and RO treatment. Chlorine in the RO concentrate is subsequently quenched with the addition of sodium bisulfite prior to discharge to the M1W ocean outfall.

Membrane filter backwash and other internal flows produced by the AWPf are sent to the RTP headworks for treatment. The production and subsequent groundwater injection of full advanced-treated recycled water is governed by separate WDRs/WRRs in Order R3-2025-0008 (and any subsequent revisions to that order).

2.1.1.5. M1W Hauled Saline Waste

M1W also continues to be permitted to accept approved liquid wastes at the RTP by truck from business entities. Hauled saline waste that would otherwise be discharged to the sanitary sewer collection systems tributary to the RTP are accepted at the RTP at two locations: (1) the saline waste storage facility for ocean discharge (Monitoring Location INF-002) or (2) a dedicated drying bed. M1W authorizes hauled saline waste to prevent it from entering the sewer collection system which improves the quality of recycled water for agricultural irrigation in the northern Salinas valley. These saline wastes have historically consisted of by-products from commercial water treatment entities (e.g., Culligan) and seawater brine from the Monterey Bay Aquarium. Although M1W has historically accepted up to 50,000 gallons per day of hauled saline waste, more recently the RTP currently accepts negligible amounts of hauled saline waste. The M1W RTP has not received hauled saline waste for outfall discharge since March 2023 due to increased disposal fees and enhanced saline waste analytical requirements restricting acceptability. M1W maintains the capability to hold and monitor hauled saline wastes in an approximately 375,000-gallon lined pond prior to blending with secondary-treated effluent for discharge. M1W has requested to retain the option of discharging hauled saline waste in this Order.

2.1.2. Cal-Am MPWSP Desalination Plant

Cal-Am's MPWSP Desalination Plant is a seawater desalination facility that will be located in unincorporated Monterey County on approximately 25 acres of a 46-acre vacant parcel on Charles Benson Road. Once constructed and operational, the facility will take in up to 11.6 MGD of seawater for treatment to produce up to 4.8 MGD of drinking water, with a potential future expansion of up to 6.4 MGD of drinking water. The facility infrastructure will consist of subsurface slant intake wells, a desalination facility, source water and product water pipelines, and brine disposal facilities. The MPWSP Desalination Plant treatment process will consist of granular media pressure filters, cartridge filters, a two-pass RO membrane system, RO product water stabilization (for corrosion control), disinfection, and dechlorination of backwash supply and filtered water equalization tanks, desalinated product water storage and conveyance facilities, brine storage and disposal facilities, and an administration building and laboratory facility. The RO process is expected to recover 42.5 percent (%) of the intake seawater as product

water. The remaining concentrated brine waste will either be stored in two 3-million gallon (MG) storage ponds or will be conveyed via the brine disposal pipeline for commingling with the M1W effluent for discharge at Discharge Point 001. The MPWSP Desalination Plant will have the ability to temporarily increase production to make up for lost production during downtimes, resulting in a maximum flow rate of 8.66 MGD of brine waste. Brine waste flows between 5.80 MGD and 8.66 MGD will be conveyed to Discharge Point 001 over a 24-hour (hr) sustained discharge rate to maintain compliance with the Ocean Plan water quality objectives (WQOs). Brine waste flows below 5.80 MGD will be stored in two 3-MG brine waste ponds at the MPWSP Desalination Plant.

Figure B-5 in Attachment B provides a site map of the MPWSP Desalination Plant. Figures C-2 and C-3 in Attachment C provide a process flow schematic for the MPWSP Desalination Plant.

2.1.3. Brine Mixing Structure

In order to accept the new brine waste stream from the MPWSP Desalination Plant for discharge through the M1W ocean outfall, a brine mixing structure (BMS), which M1W will own and operate, will be constructed for commingling the M1W total waste stream (which may consist of RTP secondary effluent, AWP RO concentrate, and hauled saline waste) with the Cal-Am MPWSP Desalination Plant brine waste prior to conveyance to Discharge Point 001. The BMS will be a cast-in-place concrete structure constructed over the existing M1W ocean outfall on approximately 0.5 acres of previously developed land at the RTP. Secondary-treated effluent and hauled saline waste currently pass through the Effluent Junction Structure where it commingles with AWP RO concentrate. The BMS will be located approximately 1,000 feet (ft) downstream of the existing Effluent Junction Structure and approximately 160 ft upstream of the current Flow Monitoring Station. MPWSP Desalination Plant brine waste will flow from the desalination pipeline at the top of the BMS and flow into outfall pipeline mixing with the flow from the M1W Effluent Junction Structure. To ensure that the discharge is in compliance with the Ocean Plan WQOs after addition of the MPWSP Desalination Plant brine waste stream, the existing M1W ocean outfall will be modified as described in section 2.2 of this Fact Sheet. Although M1W and Cal-Am are individually responsible for their waste streams prior to the BMS, unless otherwise set forth herein, they are jointly and severally responsible for the commingled waste produced from the BMS as provided in this Order.

2.1.4. Source Waters and Effluent Flows

In 2020, as part of the PWM Project, new sources of urban and agricultural runoff were directed to the M1W RTP headworks to increase the supply of recycled water. These source waters are composed of Salinas industrial wastewater (non-domestic wastewater primarily from produce processing), stormwater flows from Salinas, and stormwater and agricultural runoff from the Blanco Drain and the Salinas Reclamation Ditch, all of which are mixed with domestic sewage (including stormwater, dry season urban runoff, and industrial wastewater) from

the member agencies at the RTP headworks. Due to lower than anticipated municipal wastewater flows and increased demand for recycled water, more water will be diverted from these same sources in the future to meet recycled water influent needs. The M1W RTP is permitted to receive influent and produce secondary effluent up to 29.6 MGD ADWF and up to 75.6 MGD PWWF.

At peak operating capacity, the AWPf receives approximately 10.4 MGD of RTP secondary-treated waste as source water (of that, approximately 0.68 MGD is returned to the RTP headworks as filter backwash) and achieves approximately 73% overall recovery to produce 7.6 MGD of recycled water for irrigation and groundwater injection. A maximum of 1.78 MGD of RO concentrate from the AWPf is discharged to the ocean from Discharge Point 001.

In addition, a maximum of 0.050 MGD of hauled saline waste is accepted at the M1W RTP from permitted haulers subject to review and approval by M1W's Source Control and Operations Departments.

Finally, at peak capacity, the MPWSP Desalination Plant will take in approximately 11.6 MGD of seawater and will achieve approximately 42.5% overall recovery to produce 4.8 MGD of product water for distribution.

The total discharge flow through the M1W ocean outfall at Discharge Point 001 will not exceed 75.6 MGD PWWF. Table F-2 lists the predicted flows from the RTP, AWPf, and MPWSP Desalination Plant.

Table F-2 Flows Contributing to Discharge Point 001

Wastewater Sources	Effluent Flow^[1] (MGD)
M1W RTP Secondary-Treated Effluent ^[2]	0 to 29.6 (dry weather) or 0 to 75.6 (wet weather)
M1W AWPf RO Concentrate ^[2]	0 to 1.78
M1W Hauled Saline Waste ^[2]	0 to 0.050
Cal-Am MPWSP Desalination Brine Waste ^[3]	0 or 5.80 to 8.66

^[1] All flows in this table are instantaneous.

^[2] Secondary-treated effluent, RO Concentrate, and hauled saline waste are combined as M1W total waste flow (up to 29.6 MGD in dry weather or 75.6 MGD in wet weather) before commingling with Cal-Am Desalination Plant brine waste prior to discharge.

^[3] Cal-Am MPWSP Desalination Plant brine waste flow may occur between 0 and 5.80 MGD during periods of ramp up/ramp down, not exceeding a total duration of 2 hours per day.

2.2. Dilution Factors

Secondary-treated waste from the M1W RTP will be either (1) treated through the AWPf to produce purified water for groundwater recharge or urban landscape irrigation, (2) treated through the SVRP to produce disinfected tertiary recycled

water for agricultural irrigation by CSIP, or (3) discharged to the ocean after blending with varying amounts of M1W AWPf RO concentrate, M1W hauled saline waste, and Cal-Am MPWSP Desalination Plant brine waste. The amounts of M1W RTP secondary effluent, M1W AWPf RO concentrate, M1W hauled saline waste, and Cal-Am MPWSP Desalination Plant brine waste discharged through the M1W ocean outfall will vary throughout the year, with summer months having very little M1W RTP secondary-treated waste when demand for recycled water is highest. The addition of M1W AWPf RO concentrate, M1W hauled saline waste, and Cal-Am MPWSP Desalination Plant brine waste to the M1W RTP secondary-treated waste changes mixing characteristics of the effluent discharged to the Pacific Ocean. Because of the variability in composition and flow of the effluent, this Order implements multiple minimum probable initial dilution ratios (Dms).

Dms are expressed as parts seawater per part wastewater and correspond to specific flow scenarios. A higher Dm means that the discharge is subject to increased mixing and dilution. For example, as recycled water production increases (i.e., as M1W RTP secondary-treated waste is diverted to the AWPf or SVRP), less M1W RTP secondary-treated waste is discharged through the M1W ocean outfall. Lower flows through the M1W outfall experience greater mixing, which is therefore represented by larger Dm values. Dms are used to calculate representative pollutant concentrations at the edge of the zone of initial dilution (ZID) to determine compliance with effluent limitations for Ocean Plan Table 3 pollutants per section 4 of the Order. A specific Dm is selected to represent the discharge conditions on a daily basis, based on that day's average of each relevant flow rate (M1W RTP secondary waste, M1W AWPf RO concentrate, M1W hauled saline waste, and the presence or absence of Cal-Am MPWSP Desalination Plant brine waste).

2.2.1. Dilution Factors Prior to M1W Ocean Outfall and Diffuser Modifications

To inform development of the 2018 Order (R3-2018-0017), M1W submitted a near-field mixing zone analysis,² which determined available dilution for discharges through the M1W outfall diffuser based on an AWPf production rate of 5 MGD of purified water. On September 15, 2023, M1W submitted an update to the near-field mixing zone analysis³ to reflect the 2025 AWPf expansion, which included an updated water quality dataset. In both analyses, M1W used conservative assumptions and inputs for temperature and density profiles (highly stratified) and zero velocity for ambient current. In addition, M1W ran the model under three separate oceanic conditions: upwelling, ocean, and Davidson. Of the three oceanic conditions, the upwelling conditions produced the lowest (most conservative) dilution results. Using the upwelling model results, M1W developed

² Larry Walker Associates (2017), *Near-field Mixing Zone and Dilution Analysis for Monterey One Water*. Technical memorandum to Bob Holden and Alison Imamura at Monterey One Water and Elaine Howe and Brie Walker at Trussell Technologies. November 15, 2017.

³ Larry Walker Associates (2023), *Near-Field Mixing Zone and Dilution Analysis for M1W and the Expanded PWM Project*. Technical memorandum to Alison Imamura at Monterey One Water and Brie Post at Trussell Technologies. September 6, 2023.

dilution estimates for 36 scenarios of RO concentrate and secondary-treated effluent flow rates. Of the 36 scenarios, M1W proposed 4 minimum probable initial dilution factors for use in implementing effluent limitations.

The four DMs established by R3-2018-0017 were used to perform a reasonable potential analysis to reflect expanded AWP RO concentrate flows (to a maximum of 1.78 MGD) regulated through Order R3-2024-0045. The reasonable potential analysis performed for Order R3-2024-0045 is considered to be representative of M1W’s discharge prior to the addition of Cal-Am MPWSP Desalination Plant brine waste and modifications to the M1W outfall and diffuser. The reasonable potential analysis resulted in updated Dms in Order R3-2024-0045. The four Dms, displayed below in Table F-3, thus remain in place during the term of this 2026 Order until M1W outfall and diffuser modifications are completed.

Table F-3. Approved Dms and Related Discharge Scenarios Prior to M1W Outfall and Diffuser Modifications

Daily Average M1W Waste Ratio ^[1]	Daily Dm
> 0.747	453
0.416 – 0.747	368
0.129 – 0.415	248
0 – 0.128	145

^[1] M1W waste ratio is defined as:

(M1W AWP RO concentrate + hauled saline waste)/M1W total combined waste

2.2.2. Dilution Factors After M1W Ocean Outfall and Diffuser Modifications

The Dischargers submitted an additional near-field mixing zone analysis⁴ as part of their ROWD and during permit development,⁵ which reflected the addition of the Cal-Am MPWSP Desalination Plant brine waste to the M1W total combined waste, alongside an analysis of modifications to the discharge ports on the diffuser section of the ocean discharge pipeline. Based on the analyses, neither the flowrate nor total dissolved solids from the comparatively small (0.05 MGD) addition of hauled saline waste had a significant impact on the modeled ocean

⁴ Larry Walker Associates (2025), *Near-Field Mixing Zone and Dilution Analysis for M1W Discharge Commingled with MPWSP Desal Brine*. Technical memorandum to Alison Imamura and Bob Holden at M1W, Tim O’Halloran at Cal-Am, Denise Connors at Larry Walker Associates, and Brie Post at Trussell Technologies. May 2025.

⁵ Larry Walker Associates (2026), *Non-Standard Flows Addendum to Near-field Mixing Zone and Dilution Analysis for M1W Discharge Commingled with MPWSP Desal Brine*. Technical Memorandum to Alison Imamura and Bob Holden at M1W, Tim O’Halloran at Cal-Am, Denise Connors at Larry Walker Associates, and Brie Post at Trussell Technologies. May 2026.

dilution, so these were excluded from the mixing model, but the hauled saline waste pollutant loading was included as a conservative assumption.

The modeling approach used by the Dischargers depended on whether the discharge plume resulting from the flow scenario was positively buoyant or negatively buoyant. For positively buoyant plumes, initial dilution was computed using the United States Environmental Protection Agency (USEPA)-approved Visual Plumes UM3 Model. For negatively buoyant plumes, initial dilution was based on the Abessi and Roberts (2014)⁶ methods and empirical equations contained in Roberts (2018).⁷ In conducting modeling, the Dischargers again used conservative assumptions and inputs for temperature and density profile (highly stratified) and zero velocity for ambient current. In addition, the Dischargers ran the model under three oceanic seasons defined in Monterey Bay: upwelling (March to September), oceanic (September to November), and Davidson (November to March). Of the three oceanic conditions, the upwelling conditions produced the lowest (most conservative) results. Using the upwelling model results, the Dischargers developed dilution estimates for hundreds of discharge scenarios, resulting in the proposed Dms⁸ for use in calculating effluent limitations.

This Order uses three minimum probable initial dilution values ($D_m = 464, 348, \text{ or } 194$) to implement water quality standards in dry weather when Cal-Am MPWSP Desalination Plant brine waste is not present, corresponding to the daily average M1W waste ratio (defined as the ratio of M1W AWP RO concentrate plus M1W hauled saline waste to M1W total combined waste). A fourth D_m (101) is included to account for the presence of Cal-Am MPWSP Desalination Plant brine waste under all M1W waste discharge scenarios. These four new Dms were used to perform a new reasonable potential analysis (discussed in Fact Sheet section 4.3.3) to determine the need for WQBELs. A fifth D_m (142) was then included to account for rare scenarios in which M1W discharges waste in wet weather (M1W RTP secondary-treated waste flow between 29.6 MGD and 75.6 MGD) without the presence of Cal-Am Desalination Plant brine waste. The five new Dms applicable after M1W ocean outfall and diffuser modifications are displayed below in Table F-4.

⁶ Abessi, O., and Roberts, P. J. W. (2014). "Multiport Diffusers for Dense Discharges." *J. Hydraul. Eng.*, 140(8) [http://dx.doi.org/10.1061/\(ASCE\)HY.1943-7900.0000882](http://dx.doi.org/10.1061/(ASCE)HY.1943-7900.0000882)

⁷ Roberts, P.J.W. 2018. *Brine Diffusers and Shear Mortality*. Final Report. Prepared for Eastern Research Group. April 18, 2018.

⁸ In the dilution study, the Dischargers indicate that the UM3 model overestimates dilution levels and the reported UM3-reported average dilution level is likely to be more consistent with true measures of centerline dilution. The simulation in Roberts (2018) shows that UM3 average dilution results were approximately similar to NRFIELD centerline dilution results; therefore, the Central Coast Water Board agrees with the Dischargers' use of the average dilution as representative of the centerline dilution of the discharge.

Table F-4. Approved Dms and Related Discharge Scenarios After M1W Ocean Outfall and Diffuser Modifications

Daily Average Cal-Am MPWSP Desalination Plant Brine Waste (MGD) ^{[1],[2]}	Daily Average M1W Total Combined Waste (MGD)	Daily Average M1W Waste Ratio ^[3]	Daily Dm
0	0 – 29.6	> 0.691	464
0	0 – 29.6	0.285 – 0.690	348
0	0 – 29.6	0 – 0.284	194
0	29.7 – 75.6	0 – 0.128	142
5.80 – 8.66 ^[3]	0 – 75.6	0 – 1	101

^[1] If any MPWSP Desalination Plant brine waste is discharged, the daily average flow shall be calculated considering only times in which flow occurs. For example, if MPWSP Desalination Plant brine waste is only discharged for 12 hr in a 24-hr period, the daily average only considers the 12-hr period in which Cal-Am Desalination Plant brine waste flow occurred.

^[2] Instantaneous Cal-Am Desalination Plant brine waste flows between 0–5.80 MGD are permitted only during ramp up/down, for a total of at most 2 hr per day. If Cal-Am Desalination Plant brine waste flows exist between 0–5.80 MGD for more than 2 hr per day, then Dm = 97 for the day.

^[3] M1W waste ratio is defined as:

(M1W AWP RO concentrate + hauled saline waste)/M1W total combined waste

2.3. Discharge Points and Receiving Waters

Commingle discharges of M1W RTP secondary-treated waste, M1W AWP RO concentrate, M1W hauled saline waste, and/or Cal-Am MPWSP Desalination Plant brine waste at Discharge Point 001 occur through M1W’s 11,260-ft outfall/diffuser system that terminates at a depth of approximately 100 ft in the Pacific Ocean (Monterey Bay) at 36.72778 degrees (°) north latitude and 121.83750° west longitude. The receiving water is part of the Monterey Bay National Marine Sanctuary (MBNMS), designated as such on September 15, 1992. The purpose of the National Marine Sanctuaries Program is to protect areas of the marine environment that possess conservation, recreational, ecological, historical, research, educational, or aesthetic qualities of special national significance.

The priority of the program is the long-term protection of resources within designated sanctuaries. The MBNMS has been recognized for its unique and diverse biological and physical characteristics. MBNMS includes a variety of habitats that support extensive marine life, including 36 species of marine mammals, over 180 species of seabirds and shorebirds, at least 525 fish species, 4 sea turtle species, 31 different invertebrate phyla, and over 450 species of marine algae.⁹ Its natural resources include central California’s largest contiguous kelp

⁹ MBNMS website, <https://montereybay.noaa.gov/intro/>

forest, one of North America's largest underwater canyons, and the closest-to-shore deep ocean environment off the continental United States. Its highly productive biological communities host one of the highest levels of marine biodiversity in the world, including 27 federally listed threatened and endangered species.¹⁰

M1W's outfall/diffuser system for the Facilities is located outside of the Monterey Bay Prohibition Zones as described in section 5.4.3 of the *Water Quality Control Plan for the Central Coastal Basin* (Basin Plan). The discharge location is located approximately 1 mile (mi) south of the mouth of the Salinas River, within 3 mi of the coastline (approximately 9,000 ft from shore). The receiving waters (Pacific Ocean coastal waters, Salinas River to Pt. Piños) are not listed as impaired on the 2024 303(d) list,¹¹ although the offshore waters outside the 3-mi contour are listed as impaired for chlordane, dieldrin, polychlorinated biphenyls (PCBs), toxaphene, and dichlorodiphenyltrichloroethane (DDT).

2.3.1. Planned Outfall Diffuser Modifications

To enhance dilution of the MPWSP Desalination Plant brine waste and ensure compliance with the Ocean Plan WQOs during all discharge scenarios, the Dischargers will modify M1W's ocean outfall as follows: (1) temporarily removing the diffuser end gate to clear sediment from the ocean outfall; (2) replacing 129 existing horizontally oriented HC61 diffuser ports with stiffer HC24 diffuser ports angled upward at 60°; (3) opening 29 currently closed diffuser ports for a total of 158 open ports; and (4) installing stiffer (HC24) diffuser ports angled upward at 60° at those 29 ports. Additionally, the end gate will be fitted with a neoprene seal to prevent future sediment accumulation. To address structural integrity of the M1W outfall, the modifications will include (1) replacing internal joint seals with corrosion resistant WEKO seals in the nearshore portion of the M1W ocean outfall and (2) installing protective slip lining along the inland portion of the M1W outfall, generally consistent with outfall improvements described in the Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the MPWSP Desalination Plant.¹²

2.4. Summary of Existing Requirements and Self Monitoring Report (SMR) Data

Effluent limitations contained in M1W's existing 2024 NPDES permit and corresponding monitoring data from February 2021 through January 2026 are presented in Tables F-5 through F-8 below.

¹⁰ Monterey Bay National Marine Sanctuary, Final Management Plan, <http://montereybay.noaa.gov/intro/mp/mp.html>, October 2008

¹¹ Data from the 2024 California Integrated Report Map, available at https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/

¹² *CalAm Monterey Peninsula Water Supply Project Final Environmental Impact Report/Environmental Impact Statement SCH# 2006101004*. March 2018. Available at: <https://www.watersupplyproject.org/eir>

Table F-5. M1W Total Combined Waste Historic Effluent Limitations and Corresponding Monitoring Data^[1] (with compliance measured at EFF-001)

Parameter	Units	AMEL ^[2]	AWEL ^[3]	MDEL ^[4]	IMIN	IMAX	Max. Monthly Avg. ^[5]	Max. Weekly Avg. ^[6]	Max. Daily Avg. ^[7]	Min. Instant. ^[8]	Max. Instant. ^[8]
Oil and Grease	mg/L ^[9]	25	40	75			5.8	10	10		
Oil and Grease	lb/day ^[10]	6,200	10,000	19,000			230 or DNQ (<660)	920	920		
pH	SU ^[11]				6.0	9.0				3.3 ^[12]	8.2 ^[12]
Settleable Solids	mL/L ^[13]	1.0	1.5			3.0	0.20	0.30			0.30
Turbidity	NTU ^[14]	75	100			230	5.1	7.8			5.8

^[1] If an inconclusive value, including qualifier = “ND” (not detected), “DNQ” (detected but not quantified), “<” (less than), or “>” (greater than), was reported that was potentially larger than the largest conclusive value, both values are provided. Inconclusive data with improper Method Detection Limit/Minimum Level/Reporting Level (MDL/ML/RL) were omitted:

- a. “ND” qualifier with: no MDL or MDL = 0, or
- b. “DNQ” or “<” qualifier with: no ML or ML = 0, and no RL or RL = 0

^[2] Average Monthly Effluent Limitation.

^[3] Average Weekly Effluent Limitation.

^[4] Maximum Daily Effluent Limitation.

^[5] Only considers data reported with Calculated Method = “30-Day Average”, “Monthly Average (Mean)”, “Monthly Average of Daily Averages”, “Monthly Discharge”, “Monthly Mean”, “Percent Reduction”, or “Percent Removal”.

^[6] Only considers data reported with Calculated Method = “Weekly Average (Mean)” or “Weekly Discharge”.

^[7] Only considers data reported with Calculated Method = “Daily Discharge”, “Daily Maximum”, or “Daily Minimum”.

^[8] Only considers analytical data (no Calculated Method reported) and data reported with Calculated Method = “Instantaneous Maximum (IMAX)”, “Instantaneous Minimum (IMIN)”, or “Single Sample Maximum”.

^[9] Milligrams per liter.

[10] Pounds per day.

[11] Standard units.

[12] Also considers data reported with Calculated Method = “Daily Maximum” or “Daily Minimum”.

[13] Milliliters per liter.

[14] Nephelometric turbidity units.

Table F-6. M1W RTP Secondary-Treated Waste Historic Effluent Limitations and Monitoring Data^[1] (with compliance measured at Monitoring Location EFF-001A)

Parameter	Units	AMEL	AWEL	MDEL	IMIN	IMAX	Max. Monthly Avg. ^[2]	Max. Weekly Avg. ^[3]	Max. Daily Avg. ^[4]	Min. Instant. ^[5]	Max. Instant. ^[5]
Carbonaceous Biochemical Oxygen Demand, 5-day at 20 °C (CBOD ₅)	mg/L	25	40	85			15	25	49		
CBOD ₅	lb/day	6,200	10,000	21,000			4,100	1,600	2,000		
CBOD ₅	% removal	85					90 ^[6]				
pH	SU				6.0	9.0				6.0 ^[7]	8.8 ^[7]
Total Suspended Solids (TSS)	mg/L	30	45	90			12	15	29		
TSS	lb/day	7,400	11,000	22,000			1,000	1,600	2,100		
TSS	% removal	85					96 ^[6]				

[1] If an inconclusive value (qualifier = “ND”, “DNQ”, “>”, or “<”) was reported that was potentially larger than the largest conclusive value, both values are provided. Inconclusive data with improper MDL/ML/RL were omitted:

a. “ND” qualifier with: no MDL or MDL = 0, or

b. “DNQ” or “<” qualifier with: no ML or ML = 0, and no RL or RL = 0

[2] Only considers data reported with Calculated Method = “30-Day Average”, “Monthly Average (Mean)”, “Monthly Average of Daily Averages”, “Monthly Discharge”, “Monthly Mean”, “Percent Reduction”, or “Percent Removal”.

[3] Only considers data reported with Calculated Method = “Weekly Average (Mean)” or “Weekly Discharge”.

[4] Only considers data reported with Calculated Method = “Daily Discharge”, “Daily Maximum”, or “Daily Minimum”.

[5] Only considers analytical data (no Calculated Method reported) and data reported with Calculated Method = “Instantaneous Maximum (IMAX)”, “Instantaneous Minimum (IMIN)”, or “Single Sample Maximum”.

[6] Minimum monthly average.

[7] Also considers data reported with Calculated Method = “Daily Maximum” or “Daily Minimum”.

Table F-7. M1W Total Waste Stream Historic Effluent Limitations and Monitoring Data^[1] for Marine Aquatic Life WQOs (with compliance measured at Monitoring Location EFF-001B)

Parameter	Units	6-Month Median	MDEL	IMAX ^[3]	Max. 6-Month Median ^[4]	Max. Daily Avg. ^[5]	Max. Instant. ^[6]
Cadmium, Total Recoverable	µg/L ^[2]	1.0	4.0	10	DNQ (<0.10)	DNQ (<0.10)	DNQ (<0.00044)
Cadmium, Total Recoverable	lb/day	36	140	360	DNQ (<5.7E-05)	DNQ (<5.7E-05)	
Lead, Total Recoverable	µg/L	2.0	8.0	20	0.0010 or DNQ (<0.0034)	0.0021 or DNQ (<0.10)	DNQ (<0.10)
Lead, Total Recoverable	lb/day	72	290	720	DNQ (<0.0066)	DNQ (<5.7E-05)	
Silver, Total Recoverable	µg/L	0.7	2.8	7.0	0.16 or DNQ (<0.17)	0.17	0.16
Silver, Total Recoverable	lb/day	20	95	250	DNQ (<0.013)	0.004 or DNQ (<0.020)	
Cyanide, Total (as CN)	µg/L	1.0	4.0	10	0.060 or DNQ (<0.10)	0.11	0.056
Cyanide, Total (as CN)	lb/day	36	140	360	0.0038	0.01 or DNQ (<0.10)	
Chlorine, Total Residual	µg/L	2.0	8.0	60	5.0	8.0	10.2

Parameter	Units	6-Month Median	MDEL	IMAX ^[3]	Max. 6-Month Median ^[4]	Max. Daily Avg. ^[5]	Max. Instant. ^[6]
Chlorine, Total Residual	lb/day	72	290	2,200	5.0	0.02 or DNQ (<2,200)	0.22
Ammonia, Total (as N)	µg/L	600	2,400	6,000	410	540 or DNQ (<1,000)	830 or DNQ (<1,000)
Ammonia, Total (as N)	lb/day	22,000	87,000	220,000	28	55	
Acute Toxicity	Pass/Fail		Pass			Pass	
Chronic Toxicity	Pass/Fail		Pass			Pass	
Endosulfans, Sum	µg/L	0.009	0.018	0.027	0.00040 or DNQ (<0.00042)	0.00050	DNQ (<0.00011)
Endosulfans, Sum	lb/day	0.32	0.65	0.97	8.0E-06 or DNQ (<0.00010)	0.00040	
Endrin	µg/L	0.002	0.004	0.006	DNQ (<0.00012)	DNQ (<0.00012)	DNQ (<0.00024)
Endrin	lb/day	0.071	0.14	0.21	DNQ (<5.0E-06)	DNQ (<5.0E-06)	
BHC, Sum ^[7]	µg/L	0.004	0.008	0.012	0.00016 or DNQ (<0.00026)	0.00016 or DNQ (<0.00024)	DNQ (<0.00020)
BHC, Sum ^[7]	lb/day	0.14	0.29	0.43	DNQ (<2.0E-05)	DNQ (<2.0E-05)	

^[1] If an inconclusive value (qualifier = “ND”, “DNQ”, “>”, or “<”) was reported that was potentially larger than the largest conclusive value, both values are provided.

Inconclusive data with improper MDL/ML/RL were omitted:

- a. “ND” qualifier with: no MDL or MDL = 0, or
- b. “DNQ” or “<” qualifier with: no ML or ML = 0, and no RL or RL = 0

^[2] Micrograms per liter.

^[3] IMAX limits did not apply to 24-hr composite samples.

^[4] Only considers data reported with Calculated Method = “Six Month Median”.

- [5] Only considers data reported with Calculated Method = “Daily Discharge”, “Daily Maximum”, or “Daily Minimum”.
- [6] Only considers analytical data (no Calculated Method reported) and data reported with Calculated Method = “Instantaneous Maximum (IMAX)”, “Instantaneous Minimum (IMIN)”, or “Single Sample Maximum”.
- [7] BHC (benzene hexachloride) is equivalent to HCH (hexachlorocyclohexane) in the Ocean Plan.

Table F-8. M1W Total Waste Stream Historic Effluent Limitations and Monitoring Data^[1] for Human Health WQOs (with compliance measured at Monitoring Location EFF-001B)

Parameter	Units	AMEL	Max. Monthly Avg. ^[2]
Acrolein	µg/L	220	DNQ (<0.01)
Acrolein	lb/day	7,900	DNQ (<0.0082)
Antimony, Total Recoverable	µg/L	1,200	0.012
Antimony, Total Recoverable	lb/day	43,000	0.0010
Bis (2-Chloroethoxy) Methane	µg/L	4.4	DNQ (<0.19)
Bis (2-Chloroethoxy) Methane	lb/day	160	DNQ (<0.0021)
Bis (2-Chloroisopropyl) Ether	µg/L	1,200	0.00010 or DNQ (<0.10)
Bis (2-Chloroisopropyl) Ether	lb/day	43,000	DNQ (<0.00020)
Chlorobenzene	µg/L	570	0.0003 or DNQ (<0.10)
Chlorobenzene	lb/day	21,000	DNQ (<0.0010)
Di-n-Butyl Phthalate	µg/L	3,500	0.0023 or DNQ (<0.10)
Di-n-Butyl Phthalate	lb/day	130,000	0.0002 or DNQ (<0.00030)
Dichlorobenzenes, Sum	µg/L	5,100	0.00049 or DNQ (<0.10)
Dichlorobenzenes, Sum	lb/day	180,000	DNQ (<0.00010)
Diethyl Phthalate	µg/L	33,000	0.019 or DNQ (<0.10)
Diethyl Phthalate	lb/day	1,200,000	0.0016
Dimethyl Phthalate	µg/L	820,000	DNQ (<0.10)
Dimethyl Phthalate	lb/day	30,000,000	DNQ (<5E-05)
4,6-Dinitro-2-methylphenol ^[3]	µg/L	220	0.46 or DNQ (<0.96)
4,6-Dinitro-2-methylphenol ^[3]	lb/day	7,900	DNQ (<0.023)

Parameter	Units	AMEL	Max. Monthly Avg. ^[2]
2,4-Dinitrophenol	µg/L	4.0	DNQ (<0.10)
2,4-Dinitrophenol	lb/day	140	DNQ (<0.0070)
Ethylbenzene	µg/L	4,100	0.00040 or DNQ (<0.10)
Ethylbenzene	lb/day	150,000	DNQ (<0.00010)
Fluoranthene	µg/L	15	2.3E-05 or DNQ (<0.10)
Fluoranthene	lb/day	540	DNQ (<6.0E-06)
Hexachlorocyclopentadiene	µg/L	58	0.42 or DNQ (<0.96)
Hexachlorocyclopentadiene	lb/day	2,100	DNQ (<0.023)
Nitrobenzene	µg/L	4.9	DNQ (<0.19)
Nitrobenzene	lb/day	180	DNQ (<0.0031)
Thallium, Total Recoverable	µg/L	2.0	DNQ (<0.0034)
Thallium, Total Recoverable	lb/day	72	DNQ (<5.7E-05)
Toluene	µg/L	85,000	DNQ (<0.0019)
Toluene	lb/day	3,100,000	DNQ (<0.00010)
Tributyltin (TBT)	µg/L	0.0014	DNQ (<0.0025)
TBT	lb/day	0.050	DNQ (8.0E-06)
1,1,1-Trichloroethane	µg/L	540,000	0.52
1,1,1-Trichloroethane	lb/day	19,000,000	DNQ (<0.00010)
Acrylonitrile	µg/L	0.1	0.0010 or DNQ (<0.10)
Acrylonitrile	lb/day	3.6	DNQ (<0.00030)
Aldrin	µg/L	0.000022	DNQ (<0.00017)
Aldrin	lb/day	0.00079	DNQ (<8.0E-06)
Benzene	µg/L	5.9	0.00036 or DNQ (<0.10)
Benzene	lb/day	210	DNQ (<0.00010)
Benzidine	µg/L	6.9E-05	DNQ (<0.96)
Benzidine	lb/day	0.0025	DNQ (<0.020)
Beryllium, Total Recoverable	µg/L	0.033	0.00066 or DNQ (<0.1)
Beryllium, Total Recoverable	lb/day	1.2	DNQ (<0.00030)
Bis (2-Chloroethyl) Ether	µg/L	0.045	DNQ (<0.10)
Bis (2-Chloroethyl) Ether	lb/day	1.6	DNQ (<3.0E-05)

Parameter	Units	AMEL	Max. Monthly Avg. ^[2]
Bis (2-Ethylhexyl) Phthalate	µg/L	3.5	0.0056 or DNQ (<0.10)
Bis (2-Ethylhexyl) Phthalate	lb/day	130	0.00040 or DNQ (<0.00070)
Carbon Tetrachloride	µg/L	0.90	0.00018 or DNQ (<0.10)
Carbon Tetrachloride	lb/day	32	DNQ (<1.6E-05)
Chlordane	µg/L	2.3E-05	0.00060 or DNQ (<0.0031)
Chlordane	lb/day	0.00083	DNQ (<0.00010)
Dibromochloromethane ^[4]	µg/L	8.6	0.00050 or DNQ (<0.10)
Dibromochloromethane ^[4]	lb/day	310	DNQ (<0.00010)
DDT/DDD/DDE, Sum of P,P & O,P Isomers ^[5]	µg/L	0.00017	0.00030 or DNQ (<0.00040)
DDT/DDD/DDE, Sum of P,P & O,P Isomers	lb/day	0.006	DNQ (<5.0E-06)
Chloroform	µg/L	130	0.0054 or DNQ (<0.10)
Chloroform	lb/day	4,700	0.00020 or DNQ (<0.10)
1,4-Dichlorobenzene	µg/L	18	DNQ (<0.10)
1,4-Dichlorobenzene	lb/day	650	DNQ (<0.00080)
3,3-Dichlorobenzidine	µg/L	0.0081	DNQ (<0.0038)
3,3-Dichlorobenzidine	lb/day	0.29	DNQ (<3.0E-05)
1,2-Dichloroethane	µg/L	28	DNQ (<0.10)
1,2-Dichloroethane	lb/day	1,000	DNQ (<6.0E-06)
1,1-Dichloroethylene	µg/L	0.9	9.0E-06 or DNQ (<0.10)
1,1-Dichloroethylene	lb/day	32	DNQ (<5.0E-06)
Dichlorobromomethane	µg/L	6.2	0.00046 or DNQ (<0.10)
Dichlorobromomethane	lb/day	220	1.2E-05 or DNQ (<1.4E-05)
Methylene Chloride ^[6]	µg/L	450	DNQ (<0.1)
Methylene Chloride ^[6]	lb/day	16,000	DNQ (<0.0010)
Dieldrin	µg/L	4.0E-05	3.7E-05 or DNQ 0.00019)

Parameter	Units	AMEL	Max. Monthly Avg. ^[2]
Dieldrin	lb/day	0.0014	DNQ (<4.0E-06)
2,4-Dinitrotoluene	µg/L	2.6	0.00010 or DNQ (<0.10)
2,4-Dinitrotoluene	lb/day	94	DNQ (<0.00020)
1,2-Diphenylhydrazine	µg/L	0.16	DNQ (<0.19)
1,2-Diphenylhydrazine	lb/day	5.8	DNQ (<0.0017)
Halomethanes, Sum	µg/L	130	0.0015 or DNQ (<0.10)
Halomethanes, Sum	lb/day	4,700	DNQ (<0.00020)
Heptachlor	µg/L	5.0E-05	0.0003
Heptachlor	lb/day	0.0018	DNQ (<1.1E-05)
Heptachlor Epoxide	µg/L	2.0E-05	0.00010 or DNQ (<0.00029)
Heptachlor Epoxide	lb/day	0.00072	DNQ (<7.0E-06)
Hexachlorobenzene	µg/L	0.00021	DNQ (<0.10)
Hexachlorobenzene	lb/day	0.0076	DNQ (<7.0E-06)
Hexachlorobutadiene	µg/L	14	DNQ (<0.10)
Hexachlorobutadiene	lb/day	500	DNQ (<9.0E-06)
Hexachloroethane	µg/L	2.5	0.00010 or DNQ (<0.10)
Hexachloroethane	lb/day	90	DNQ (<0.0014)
Isophorone	µg/L	730	0.0093 or DNQ (<0.38)
Isophorone	lb/day	26,000	DNQ (<0.010)
N-Nitrosodimethylamine	µg/L	7.3	DNQ (<0.96)
N-Nitrosodimethylamine	lb/day	260	DNQ (<0.016)
N-Nitrosodi-n-Propylamine	µg/L	0.38	DNQ (<0.19)
N-Nitrosodi-n-Propylamine	lb/day	14	DNQ (<0.0033)
N-Nitrosodiphenylamine	µg/L	2.5	DNQ (<0.19)
N-Nitrosodiphenylamine	lb/day	90	DNQ (<0.0019)
PCBs, Sum	µg/L	1.9E-05	DNQ (<0.011)
PCBs, Sum	lb/day	0.00068	DNQ (<0.00060)
TCDD ^[7] Equivalents	µg/L	3.9E-09	DNQ (<0.41)
TCDD Equivalents	lb/day	1.4E-07	2.1E-12 or DNQ (<5.0E-07)
1,1,2,2-Tetrachloroethane	µg/L	2.3	0.060 or DNQ (<0.10)

Parameter	Units	AMEL	Max. Monthly Avg. ^[2]
1,1,2,2-Tetrachloroethane	lb/day	83	DNQ (<7.0E-06)
Tetrachloroethene	µg/L	2.0	0.00010 or DNQ (<0.0019)
Tetrachloroethene	lb/day	72	DNQ (<0.00010)
Toxaphene	µg/L	0.00021	0.00010 or DNQ (<0.0044)
Toxaphene	lb/day	0.0076	DNQ (<0.00010)
Trichloroethene	µg/L	27	0.00010 or DNQ (<0.0019)
Trichloroethene	lb/day	970	DNQ (<0.00010)
1,1,2-Trichloroethane	µg/L	9.4	0.00030 or DNQ (<0.10)
1,1,2-Trichloroethane	lb/day	340	DNQ (<0.00010)
2,4,6-Trichlorophenol	µg/L	0.29	0.00044 or DNQ (<0.10)
2,4,6-Trichlorophenol	lb/day	10	3.0E-05 or DNQ (<0.10)
Vinyl Chloride	µg/L	36	9.6E-05 or DNQ (<0.0019)
Vinyl Chloride	lb/day	1,300	DNQ (<1.0E-05)

^[1] If an inconclusive value (qualifier = “ND”, “DNQ”, “>”, or “<”) was reported that was potentially larger than the largest conclusive value, both values are provided.

Inconclusive data with improper MDL/ML/RL were omitted:

- a. “ND” qualifier with: no MDL or MDL = 0, or
- b. “DNQ” or “<” qualifier with: no ML or ML = 0, and no RL or RL = 0.

^[2] Only considers data reported with Calculated Method = “30-Day Average”, “Monthly Average (Mean)”, “Monthly Average of Daily Averages”, “Monthly Discharge”, “Monthly Mean”, “Percent Reduction”, or “Percent Removal”.

^[3] Equivalent to 2-methyl-4,6-dinitrophenol in the Ocean Plan.

^[4] Equivalent to chlorodibromomethane in the Ocean Plan.

^[5] DDD = dichlorodiphenyldichloroethane and DDE = dichlorodiphenyldichloroethylene.

^[6] Equivalent to dichloromethane in the Ocean Plan.

^[7] TCDD = 2,3,7,8-tetrachlorodibenzo-p-dioxin.

2.5. Compliance Summary

A summary of violations that occurred during the existing (R3-2024-0045) and previous (R3-2018-0017) M1W permit terms at Discharge Point 001 from February 2021 through January 2026 is included in Table F-9 below.

Table F-9. Compliance Summary

Date	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
2/13/2023	Category 2	Heptachlor	0.000171	0.00004	µg/L

Although M1W states it cannot identify the specific cause of the heptachlor exceedance, the violation occurred during extreme flood conditions that inundated the community of Pajaro's wastewater collection system in 2023. To prevent contamination of homes and businesses, M1W accepted trucked wastewater with significant inflow and infiltration of flood water for treatment at the RTP. In addition, as requested by the city of Salinas, M1W accepted Salinas River flood water that was commingled with treated industrial wastewater effluent from the city's industrial wastewater treatment facility to prevent its ponds from overflowing.

2.6. Planned Changes

Cal-Am plans to construct the MPWSP Desalination Plant and associated infrastructure during the term of this permit. Construction is expected to begin in October 2026, with operation commencing in October 2029. The MPWSP Desalination Plant project is described in section 2.1.2 of this Fact Sheet.

In order to accept Cal-Am MPWSP Desalination Plant brine waste at the M1W ocean outfall and maintain compliance with the applicable WQOs, the Dischargers plan to modify the M1W outfall and diffuser, including construction of the BMS, during the term of this permit as described in sections 2.1 and 2.2 of this Fact Sheet.

Acceptance of MPWSP Desalination Plant brine waste requires modifications to the M1W outfall and diffuser will result in a new sampling location (Monitoring Location EFF-001D) and new Dms (Fact Sheet section 2.2).

M1W has received multiple inquiries regarding future use of M1W's Outfall for discharge of saline waste from water supply and sustainability projects in the region including Marina Coast Water District and the Salinas Valley Groundwater Sustainability Agency. Future permitting approaches may be restructured to accommodate additional discharges beyond those contemplated by this Order.

3. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

3.1. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit authorizing the Dischargers to discharge into waters of the United States at the discharge location described in Table 1, subject to the WDRs in this Order.

3.2. California Environmental Quality Act (CEQA)

Adoption of NPDES permits is exempt from CEQA pursuant to Water Code section 13389. However, the Central Coast Water Board's determination that the MPWSP Desalination Plant complies with Water Code section 13142.5(b) is subject to CEQA.

3.2.1. Water Code section 13142.5(b) Determination

A final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS) analyzing the potential environmental impacts of the Monterey Peninsula Water Supply Project (MPWSP or proposed project) proposed by Cal AM was prepared by the California Public Utilities Commission (California PUC) and the Monterey Bay National Marine Sanctuary (MBNMS) in March 2018. On September 18, 2018, the California PUC issued Decision 18-09-017, *Decision Approving a Modified Monterey Water Supply Project, Adopting Settlement Agreements, Issuing Certificate of Public Convenience and Necessity and Certifying Combined Environmental Report*, and certified the Final EIR/EIS for the MPWSP (State Clearinghouse No. 2006101004) (Final EIR).

In preparing this Order, the Central Coast Water Board caused to be prepared and considered an addendum (Addendum) to the Final EIR/EIS, in order to account for changes made to the planned MPWSP Desalination Plant project, including the following modifications to the existing M1W ocean outfall: installing a protective liner for portions of the existing outfall pipe, replacing existing horizontal outfall diffuser port nozzles with stiffer and angled diffuser port nozzles, adding to the total number of outfall diffuser ports and modifying the outfall endgate. These modifications were already described and evaluated in the Final EIR/EIS as possible mitigation measures, and the changes to these modifications described in the Addendum represent a refinement in final engineering and design for the final proposed outfall modification construction. As explained below, the modifications as described in the Addendum to the Final EIR/EIS do not result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects that would require the preparation of a subsequent or supplemental environmental impact report under CEQA Guidelines sections 15162 or 15163.

The changes to the outfall modifications relevant to the Water Code section 13142.5(b) determination that are described in the Addendum primarily concern impacts to both surface water quality and marine biological resources.

Modifications to the outfall are required to maintain the necessary dilution of the proposed brine with comingled wastewater to meet water quality standards and ocean plan receiving water salinity requirements while maintaining sufficient operational head pressure over a variety of different flow combination regimes. The modifications to the number and type outfall diffuser nozzles slightly increase the size of the overall discharge plume including the overall area of impact where increased salinity occurs from what is described in the Final EIR/EIS, however, as the Addendum explains, this increase in size is found to remain insignificant when compared to the overall habitat area it affects. These proposed modifications were not found to cause significant environmental effects or have severe impacts in the Final EIR/EIS and the changes to these modifications described in the Addendum do not add significant environmental effects or increase the severity of a previously identified significant impact to surface water quality or marine resource impacts.

The Final EIR/EIS concluded that potential impacts associated with marine life mortality and brine discharge would remain less than significant through compliance with the Ocean Plan and associated NPDES permit requirements. The Addendum reaffirms this conclusion.^{13, 14}

3.3. State and Federal Laws, Regulations, Policies, and Plans

3.3.1. Basin Plan

The Basin Plan was adopted by the Central Coast Water Board in 1975 and most recently amended on June 21, 2024. The Basin Plan designates beneficial uses, establishes WQOs, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean. Beneficial uses applicable to the Pacific Ocean at the discharge location are as follows in Table F-10. Requirements in this Order implement the Basin Plan.

¹³See also Attachment G.

¹⁴ The Addendum also evaluated the impacts of other environmental areas potentially affected by the proposed outfall modifications, but unrelated to water quality, including: terrestrial biological resources, air quality, greenhouse gas emissions, aesthetic resources, cultural and paleontological resources and agricultural resources. The Addendum concluded that the proposed modifications would not result in any additional significant environmental effects or increase the severity of a previously identified significant impacts and concluded that no additional mitigation measures were necessary for these areas of environmental concern.

Table F-10. Basin Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001	Pacific Ocean, Salinas River to Pt. Piños	Water Contact Recreation (REC-1) Non-Contact Recreation (REC-2) Industrial Service Supply (IND) Navigation (NAV) Marine Habitat (MAR) Shellfish Harvesting (SHELL) Commercial and Sport Fishing (COMM) Wildlife Habitat (WILD)

3.3.2. Thermal Plan

The State Water Resources Control Board (State Water Board) adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on January 7, 1971, and amended this plan on September 18, 1975. This plan contains temperature objectives for coastal waters and lists receiving water limitations for new and existing discharges of elevated temperature wastes, defined as “liquid, solid, or gaseous material discharged at a temperature higher than the natural temperature of receiving water.” Requirements of this Order implement the Thermal Plan.

3.3.3. Ocean Plan

The State Water Board adopted the Ocean Plan in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, 2012, 2015, and 2018. The State Water Board adopted the latest amendment on August 7, 2018, and it became effective on February 4, 2019. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The beneficial uses of ocean waters of the state to be protected and which apply to these discharges are set forth in Table F-11 below. To protect beneficial uses, the Ocean Plan establishes WQOs and a program of implementation. Requirements of this Order implement the Ocean Plan.

Table F-11. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001	Pacific Ocean	Industrial Water Supply Water Contact Recreation Non-Contact Recreation, Including Aesthetic Enjoyment Navigation Commercial and Sport Fishing Mariculture Rare and Endangered Species Marine Habitat Preservation and Enhancement of Designated Areas of Special Biological Significance (ASBS) Fish Spawning and Shellfish Harvesting

3.3.4. Antidegradation Policy

Federal regulations at 40 CFR section 131.12 require that state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified by specific findings. The Central Coast Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. This Order ensures that the permitted discharge is consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution 68-16.

3.3.5. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) restrict backsliding in NPDES permits. The anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

3.3.6. Endangered Species Act Requirements

This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state,

including protecting rare and endangered species. The Dischargers are responsible for meeting all requirements of the endangered species acts.

3.3.7. Sewage Sludge and Biosolids

This Order does not authorize any act that results in violation of requirements administered by USEPA to implement 40 CFR part 503, *Standards for the Use or Disposal of Sewage Sludge*. These standards regulate the final use or disposal of sewage sludge that is generated during the treatment of domestic sewage in a municipal wastewater treatment facility. M1W is responsible for meeting all applicable requirements of 40 CFR part 503 that are under USEPA's enforcement authority.

3.4. Impaired Water Bodies on the CWA section 303(d) List

CWA section 303(d) requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d)-listed water bodies and pollutants, the Central Coast Water Board must develop and implement total maximum daily loads (TMDLs) that will specify waste load allocations for point sources and load allocations for non-point sources.

The *2024 Integrated Report for Clean Water Act 303(d) List and 305(b) Report*¹⁵ was approved by USEPA on December 13, 2024, and is the most recent integrated report. The area of Monterey Bay where the discharge occurs, identified in the 2024 Integrated Report as the Pacific Ocean (Salinas River to Point Piños), is not identified in the 2024 303(d) list as impaired. The 2024 303(d) list identifies the Pacific Ocean, Monterey Bay (excluding the inner 3 mi nearshore) as impaired for chlordane, dieldrin, PCBs, toxaphene, and DDT; however, as described in section 2.2 of this Fact Sheet, the area where the discharge occurs at the termination of the diffuser is less than 3 mi offshore.

3.5. Other Plans, Policies and Regulations

3.5.1. Industrial Stormwater General Permit

For the control of stormwater discharged from the site of the M1W and Cal-Am facilities, the Order requires, if applicable, that the Dischargers separately seek authorization to discharge under and meet the requirements of the State Water Board's Water Quality Order 2014-0057-DWQ, NPDES General Permit CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities* (Industrial General Permit).

¹⁵ The 2024 California Integrated Report for 303(d) List and 305(b) Report can be accessed online at:
https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2024-integrated-report.html

3.5.2. Sanitary Sewer Systems General Order

M1W is subject to the requirements of and must separately comply with State Water Board Order 2022-0103-DWQ, *Statewide Waste Discharge Requirements General Order for Sanitary Sewer Systems* (Sanitary Sewer Systems General Order), including monitoring and reporting requirements, and any subsequent revision to that order. The Sanitary Sewer Systems General Order, adopted on December 6, 2022, is applicable to all “federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially-treated wastewater to a publicly owned treatment facility in the State of California.” The purpose of the Sanitary Sewer Systems General Order is to promote the proper and efficient management, operation, and maintenance of sanitary sewer systems and to minimize the occurrences and impacts of sanitary sewer overflows.

3.5.3. Recycled Water Policy

The State Water Board adopted the *Water Quality Control Policy for Recycled Water* (Recycled Water Policy) on December 11, 2018, and it became effective on April 8, 2019. The purpose of the Recycled Water Policy is to encourage the safe use of recycled water in a manner that is protective of public health and the environment. This Order implements the Recycled Water Policy by supporting the production of recycled water and requiring volumetric reporting of wastewater and recycled water to the State Water Board.

3.5.4. Water Reclamation Requirements for Recycled Water Use

State Water Board Order WQ 2016-0068-DDW, *Water Reclamation Requirements for Recycled Water Use*, adopted on June 7, 2016, is applicable to recycled water projects where recycled water is used or transported for non-potable uses. Recycled water production and onsite use is subject to requirements in this Order. Distribution and offsite reuse of recycled water produced by the M1W AWPf for groundwater replenishment of the Seaside basin is controlled by M1W as authorized by WDR/WRR Order No. R3-2025-0008 and subsequent revisions thereto. Distribution and offsite reuse of disinfected tertiary recycled water is controlled by Monterey County Water Resources Agency, which is in the process of transferring its recycled water operations from Order 97-52 to State Water Board Order WQ 2016-0068-DDW, or other applicable permit, dependent on final use. Some additional distribution and offsite reuse of disinfected tertiary recycled water is controlled by Marina Coast Water District under Order WQ 2016-0068-DDW.

3.5.5. Environmental Justice

When issuing or reissuing individual waste discharge requirements or waivers of waste discharge requirements that regulate an activity or a facility that may impact a disadvantaged or tribal community and that includes a time schedule in accordance with subdivision (c) of Water Code section 13263 for achieving an

applicable water quality objective, an alternative compliance path that allows time to come into compliance with WQOs, or a water quality variance, the Central Coast Water Board shall make a finding on potential environmental justice, tribal impact, and racial equity considerations. (Water Code § 13149.2, effective Jan. 1, 2023). Water Code section 189.7 requires the Central Coast Water Board to conduct outreach in disadvantaged and/or tribal communities when adopting individual waste discharge requirements. In accordance with the Water Boards' efforts to advance racial equity, the Central Coast Water Board is also committed to developing and implementing policies and programs to advance racial equity and environmental justice so that race can no longer be used to predict life outcomes and outcomes for all groups are improved.

In support of environmental principles, including but limited to Water Code sections 189.7 and 13149.2 requirements, Central Coast Water Board staff used the California Office of Environmental Health Hazard Assessment CalEnviroScreen tool to develop a relative score of the Facilities' and nearby community's environmental effects, exposure, sensitivity of the population, and socioeconomic factors. Using this tool, staff determined that overall score of the census tract that includes a northeastern portion of the city of Marina as well as the location of existing and proposed Facilities described in this permit scored in the 62nd percentile, with nearby tracts ranging between 24th and 82nd percentiles, when compared to other census tracts in California. Expanding upon the 62nd percentile score, the census tract scored 69th in pollution burden and 51st in population characteristics. The most significant factors influencing the pollution burdens in this census tract include the environmental effects of nearby cleanup sites, solid waste sites and facilities, impaired water bodies and other groundwater threats. The discharges authorized under this permit do not directly contribute to the pollution burden associated with this census tract or other nearby census tracts.

Upon review of readily available information, the Central Coast Water Board finds that this Order regulates a discharge that does not disproportionately impact the water quality of an economically disadvantaged community or a tribal community. Nevertheless, the Central Coast Water Board has conducted outreach consistent with Water Code section 189.7 by reaching out to surrounding communities and tribal communities about this Order. Additionally, the Board has considered any environmental justice concerns within the Board's authority, in accordance with the Water Boards' efforts to advance racial equity. This Order requires the Dischargers to meet water quality standards to protect public health and the environment, thereby benefiting all persons and communities within the Central Coast Region.

3.5.6. Response to Climate Change

Climate change refers to observed changes in regional weather patterns such as temperature, precipitation, and storm frequency and size. At the local scale, within urbanized areas, climate change may directly impact groundwater and surface water supply; drainage, flooding, and erosion patterns; and ecosystems and

habitat. This shift in climate, combined with California's growing population, has increased reliance on pumping, conveying, treating, and heating water, increasing the water sector's greenhouse gas emissions. State Water Board Resolution 2017-0012, *Comprehensive Response to Climate Change*, requires a proactive response to climate change in all California Water Board actions, with the intent to embed climate change consideration into all programs and activities.

Aligning with Resolution 2017-0012, this Order permits the discharge of M1W RTP secondary-treated waste, M1W AWP RO concentrate, M1W hauled saline waste, and Cal-Am MPWSP Desalination Plant brine waste to allow the Facilities to provide an alternative water supply source to meet the State of California's current and future water needs. This Order also requires the Dischargers to each prepare a climate change response hazards and vulnerabilities plan to address climate change impacts and hazards associated with the continued operation of their respective Facilities. The Dischargers may use existing data and evaluations for compliance with this requirement.

3.5.7. Human Right to Water

Water Code section 106.3 established the policy that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. On January 26, 2017, the Central Coast Water Board adopted Resolution R3-2017-0004, *Environmental Justice and the Human Right to Water*, which adopts the human right to water as a core value and affirms the realization of the human right to water and protecting human health as the Central Coast Water Board's top priorities. Consistent with the Water Code and Resolution R3-2017-0004, this Order promotes actions that advance the human right to water and discourages actions that delay or impede opportunities for communities to secure safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.

This Order incorporates requirements to support M1W in providing recycled water for potable and non-potable beneficial reuse and supports the further diversification of the Monterey Peninsula's water supply portfolio by incorporating requirements for the discharge of Cal-Am MPWSP Desalination Plant brine waste.

This Order authorizes the discharge, finding that the Pacific Ocean is not considered a primary source of drinking water or waters designated with municipal or domestic water supply beneficial uses as described in the Basin Plan.

This Order incorporates the best practical treatment or control for the production of recycled water; however, the discharges of recycled water to receiving groundwaters, which serve as primary sources of drinking water, are authorized under Waste Discharge Requirement Order 97-52, *Recycled Water User Requirements for Monterey County Water Resources Agency Castroville Seawater Intrusion Project*, and Order R3-2025-0008, *Waste Discharge and Water Reclamation Requirements for the Pure Water Monterey Advanced Water*

Purification Facility and Groundwater Replenishment Reuse Project. Therefore, this Order is consistent with the Water Code and Resolution R3-2017-0004.

3.5.8. Disadvantaged Community Status

Environmental Justice principles call for the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income in the development, adoption, implementation, and enforcement of all environmental laws, regulations, and policies that affect every community's natural resources and the places people live, work, play, and learn. The Central Coast Water Board implements regulatory activities and water quality projects in a manner that ensures the fair treatment of all people, including underrepresented communities. Underrepresented communities include but are not limited to disadvantaged communities (DACs), severely disadvantaged communities (SDACs), economically distressed areas, tribes, environmentally disadvantaged communities, and members of fringe communities. Furthermore, the Central Coast Water Board is committed to providing all stakeholders the opportunity to participate in the public process and provide meaningful input to decisions that affect communities. To meet environmental justice principles, staff has evaluated the disadvantaged community status for the Dischargers.

Using the California Department of Water Resources Disadvantage Community Mapping Tool, staff reviewed 2023 census data and finds that the area in the vicinity of Discharge Point 001 as not disadvantaged. Within the communities served, 36 block groups, or approximately 21 percent of the population, are DACs and 14 block groups, or approximately 8 percent of the population, are SDACs. The tool defines a DAC as a census block with a median household income between \$57,800 and \$77,067 and a SDAC as a census block with a median household income below \$57,800. The DAC census blocks in the community served have median household income between \$57,857 and \$76,917. The SDAC census blocks in the community served have median household incomes between \$38,472 and \$56,964

3.5.9. Water Code Section 13142.5(b) Determination

Water Code section 13142.5(b) requires that each new or expanded coastal power plant or other industrial installation using seawater for cooling, heating, or industrial processing shall use best available site, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life. Chapter III.M.2 of the Ocean Plan provides the implementation provisions for desalination facilities to comply with Water Code section 13142.5(b).

The Central Coast Water Board has analyzed, separately as independent considerations and in combination, a range of intake design alternatives proposed by Cal-Am and has determined that the MPWSP Desalination Plant will use the best available site, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life. Attachment G to this

Order summarizes the considerations and basis for this Water Code section 13142.5(b) determination.

Any proposed changes in the design or operation of the MPWSP Desalination Plant that could increase the intake or mortality of any form of marine life beyond that which is approved by this Order or the Water Code section 13142.5(b) determination described in Attachment G would meet the definition of an expanded facility within the meaning of the Ocean Plan (see Ocean Plan section III.M.1(b)(2)). Any such expansion or a reduction in the volume of wastewater available for dilution of brine will require a new Water Code section 13142.5(b) determination in accordance with section III.M.2(a)(5) of the Ocean Plan.

4. RATIONALE FOR EFFLUENT LIMITS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 CFR section 122.44(a) requires that permits include applicable technology-based effluent limitations (TBELs) and standards and 40 CFR section 122.44(d) requires that permits include water quality based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

4.1. Discharge Prohibitions

This Order implements discharge prohibitions that are applicable under federal and state statutes and regulations, including the Basin Plan and the Ocean Plan, as described below. These discharge prohibitions apply to M1W and Cal-Am separately for their specific discharges and jointly for their commingled obligations, unless otherwise specified.

4.1.1. Standard Discharge Prohibitions

4.1.1.1. Discharge Prohibition 3.1.1

Discharges in a manner, except as described by this Order, are prohibited. The WDRs in this Order are based on specific information provided by the Dischargers in the ROWD and do not adequately address waste streams not contemplated during drafting of this Order. To prevent the discharge of such waste streams that may be inadequately regulated, this Order prohibits the discharge of any waste that was not described by the Central Coast Water Board during the process of permit issuance. This prohibition is based on 40 CFR section 122.21(a), duty to apply, and Water Code section 13260, which requires filing a ROWD before discharges can occur.

4.1.1.2. Discharge Prohibition 3.1.2

Discharge of waste not specifically authorized by this Order or other orders in which the Dischargers are enrolled, such as the Industrial General Permit, is

prohibited. Because limitations and conditions of this Order have been prepared using specific information provided by the Discharger, the limitations and conditions of this Order do not adequately address waste streams not contemplated during drafting of this Order. To prevent the discharge of unanticipated waste streams, this Order prohibits the discharge of any waste that was not described by the Central Coast Water Board during the process of permit issuance. This prohibition is based on 40 CFR section 122.21(a), duty to apply, and Water Code section 13260, which requires filing a ROWD before discharges can occur.

4.1.1.3. Discharge Prohibition 3.1.3

Discharges of radiological, chemical, or biological warfare agent or high-level radioactive waste to the Ocean is prohibited. This prohibition is based on the discharge prohibition in section III.I.1 of the Ocean Plan.

4.1.1.4. Discharge Prohibition 3.1.4

Federal law prohibits the discharge of sludge by pipeline to the Ocean. The discharge of municipal or industrial waste sludge directly to the Ocean, or into a waste stream that discharges to the Ocean, is prohibited. The discharge of sludge digester supernatant, without further treatment, directly to the Ocean or to a waste stream that discharges to the Ocean, is prohibited. This prohibition implements the discharge prohibition in section III.I.3 of the Ocean Plan.

4.1.1.5. Discharge Prohibition 3.1.5

Overflows and bypasses are prohibited. The discharge of untreated or partially treated wastewater from the Dischargers' collection, treatment, or disposal facilities represents an unauthorized bypass pursuant to 40 CFR section 122.41(m) or an unauthorized discharge, which poses a threat to human health and/or aquatic life and therefore is explicitly prohibited by this Order.

4.1.1.6. Discharge Prohibition 3.1.6

Discharges of trash or the deposition of trash where it may be discharged to surface waters of the State is prohibited. This prohibition implements the discharge prohibition in section III.I.6 of the Ocean Plan.

4.1.1.7. Discharge Prohibition 3.1.7

The discharge of material that is floatable, or will become floatable upon discharge, is prohibited. This prohibition is based on the receiving water limitation in section II.C.1 of the Ocean Plan.

4.1.1.8. Discharge Prohibition 3.1.8

The discharge of oil or any residual products of petroleum products to waters of the State, except in accordance with waste discharge requirements or other provisions of division 7 of the Water Code, is prohibited. This implements the discharge prohibition in section 5.4.1 of the Basin Plan.

4.1.2. Facility-Specific Discharge Prohibitions

4.1.2.1. Discharge Prohibition 3.2.1

The influent flow to the M1W RTP secondary treatment system shall not exceed 29.6 MGD ADWF or 75.6 MGD PWWF. This prohibition reflects the design capacity of the M1W RTP secondary treatment system and is intended to limit influent wastewater flows to that of the treatment facility design flows.

4.1.2.2. Discharge Prohibition 3.2.2

The flow of M1W RTP secondary-treated waste (not including flow to the M1W AWPf or M1W SVRP) shall not exceed an instantaneous maximum of 29.6 MGD in dry weather or an instantaneous maximum of 75.6 MGD in wet weather. This prohibition reflects the range of secondary-treated waste discharge flow rates necessary to maintain the approved Dms.

4.1.2.3. Discharge Prohibition 3.2.3

The effluent flow of M1W AWPf RO concentrate shall not exceed an instantaneous maximum of 1.78 MGD. This prohibition reflects the range of RO discharge flow rates necessary to maintain the approved Dms.

4.1.2.4. Discharge Prohibition 3.2.4

The effluent flow M1W hauled saline waste shall not exceed an instantaneous maximum of 0.05 MGD. This prohibition reflects the range of hauled saline waste flow rates necessary to maintain the approved Dms.

4.1.2.5. Discharge Prohibition 3.2.5

The effluent flow of M1W total combined waste (which may include M1W RTP secondary-treated waste, M1W AWPf RO concentrate, and M1W hauled saline waste) shall not exceed an instantaneous maximum of 29.6 MGD in dry weather or an instantaneous maximum of 75.6 MGD in wet weather. This prohibition reflects the range of combined secondary-treated waste, RO concentrate, and hauled saline waste discharge flow rates necessary to maintain the approved Dms.

4.1.2.6. Discharge Prohibition 3.2.6

The effluent flow of Cal-Am MPWSP Desalination Plant brine waste shall either be 0 MGD, or be between 5.80 and 8.66 MGD. Cal-Am MPWSP Desalination Plant brine waste flow shall never exceed an instantaneous maximum of 8.66 MGD, and shall only fall between 0 and 5.80 MGD during ramp up and ramp down, for a total time of no more than 2 hours per day. This prohibition reflects the range of Cal-Am MPWSP Desalination Plant brine waste discharge flow rates necessary to maintain the approved Dms.

4.1.2.7. Discharge Prohibition 3.2.7

The effluent flow of final commingled waste (which may include M1W RTP secondary-treated waste, M1W AWPf RO concentrate, M1W hauled saline waste, and/or Cal-Am MPWSP Desalination Plant brine waste) through the M1W ocean outfall to the Pacific Ocean at Monterey Bay shall not exceed an instantaneous maximum of 38.26 MGD in dry weather or an instantaneous maximum of 75.6 MGD in wet weather. This prohibition allows the discharge of blended M1W RTP secondary-treated waste, M1W RTP RO concentrate, M1W hauled saline waste, and Cal-Am MPWSP Desalination Plant brine waste above the design flow capacity of the M1W RTP alone (29.6 MGD ADWF and 75.6 MGD PWWF) while also reflecting the design capacity of the modified M1W ocean outfall (75.6 MGD PWWF).

4.1.2.8. Discharge Prohibition 3.2.8

The discharge of MPWSP Desalination Plant brine waste to Discharge Point 001 is prohibited unless and until (1) the Central Coast Water Board has approved the Cal-Am's MLMP; (2) Cal-Am has obtained all permits and other governmental approvals necessary to implement all components of the approved MLMP; (3) all MPWSP improvements to the M1W outfall and diffuser have been built. This prohibition is consistent with section III.M.2.e of the Ocean Plan, which requires Cal-Am to fully mitigate for intake and mortality of marine life for the operational lifetime of the MPWSP Desalination Plant. This prohibition ensures that Cal-Am will begin implementation of mitigation concurrent with the operation of the MPWSP Desalination Plant and thus avoids unmitigated operational impacts.

4.2. Technology-Based Effluent Limitations (TBELs)

4.2.1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards.

The CWA requires that TBELs be established based on several levels of controls:

- 4.2.1.1. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
- 4.2.1.2. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- 4.2.1.3. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including

biological oxygen demand (BOD), TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from POTWs to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.

- 4.2.1.4. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires the USEPA to develop effluent limitation guidelines (ELGs) and standards representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR section 125.3 authorize the use of best professional judgment (BPJ) to derive TBELs on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Central Coast Water Board must consider specific factors outlined in 40 CFR section 125.3.

4.2.2. Applicable TBELs

4.2.2.1. Applicable TBELs based on 40 CFR Part 133

Regulations promulgated in 40 CFR section 125.3(a)(1) require TBELs for municipal dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTWs [defined in section 304(d)(1)]. Section 301(b)(1)(B) of the CWA requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment as defined by the USEPA Administrator.

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in 40 CFR part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD, TSS, and pH.

M1W's RTP is a POTW that discharges secondary-treated municipal wastewater at Discharge Point 001. Therefore, the secondary treatment standards at 40 CFR part 133, shown in Table F-12 below, are applicable to the RTP secondary-treated effluent and are applied at Monitoring Location EFF-001A.

Furthermore, 40 CFR 401.17 specifies that, during continuous pH monitoring, a discharger is permitted short-term excursions from the pH ELGs in Table F-12 subject to the following limitations:

- a. The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and
- b. No individual excursion from the range of pH values shall exceed 60 minutes.

Table F-12. Secondary Treatment Requirements at 40 CFR Part 133

Parameter	Units	Max. 30-day Avg. ^[1]	Max. 7-day Avg. ^[2]	IMIN	IMAX
BOD ^[3]	mg/L	30	45		
TSS ^[3]	mg/L	30	45		
pH	SU			6.0	9.0

^[1] Applied as an AMEL.

^[2] Applied as an AWEL.

^[3] The average monthly percent removal shall not be less than 85%.

4.2.3. Summary of TBELs

4.2.3.1. Monitoring Location EFF-001A – M1W RTP Secondary-Treated Waste

Although 40 CFR part 133 establishes secondary-treatment standards for BOD, TSS, and pH, 40 CFR section 133.102(a)(4) allows the permitting authority to substitute effluent limitations for carbonaceous biochemical oxygen demand (CBOD) instead of BOD. USEPA has determined that a 30-day average of 25 mg/L and a 7-day average of 40 mg/L for CBOD are effectively equivalent to the secondary treatment standards for BOD. The Central Coast Water Board previously approved a substitution of effluent limitations for CBOD instead of BOD for the M1W RTP secondary-treated waste discharge.

Maximum daily TBELs for CBOD and TSS of 85 mg/L and 90 mg/L, respectively, were retained from the 2024 Order R3-2024-0045.

Sections 122.45(f)(1) and 423.15 of 40 CFR require mass-based limitations be established for conventional, nonconventional, and toxic pollutants, with some exceptions. Mass-based effluent limitations are also established in the Order for CBOD and TSS based on the federal regulations. In addition, pursuant to the exceptions to mass-based limitations provided in 40 CFR section 122.45(f)(1), effluent limitations are not expressed in terms of mass for pH. For Monitoring Location EFF-001, the mass-based effluent limitations were calculated using

$$\text{lb/day} = 8.34 \times \text{Ce} \times \text{Q},$$

where Ce is the concentration-based effluent limit (mg/L) and Q = 29.6 MGD is the dry weather instantaneous maximum permitted flow for M1W RTP secondary-treated waste.

Therefore, the TBELs in Table F-13 below are established in the Order at Discharge Point 001 with compliance measured at Monitoring Location EFF-001A, as described in the Monitoring and Reporting Program (MRP; Attachment E; Table E-7).

Table F-13. Summary of M1W RTP Secondary-Treated Waste TBELs (with compliance measured at Monitoring Location EFF-001A)

Parameter	Units	AMEL	AWEL	MDEL	IMIN	IMAX
CBOD ₅	mg/L	25	40	85		
CBOD ₅	lb/day	6,200	9,900	21,000		
CBOD ₅	% removal	Not less than 85				
pH ^[1]	SU				6.0	9.0
TSS	mg/L	30	45	90		
TSS	lb/day	7,400	11,000	22,000		
TSS	% removal	Not less than 85				

^[1] Excursions from the effluent limit range are permitted subject to the following limitations (40 CFR § 401.17):

- a. The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and
- b. No individual excursion from the range of pH values shall exceed 60 minutes.

Note: 40 CFR section 401.17(2)(c) notes that, for the purposes of 40 CFR section 401.17, “excursion” is defined as “an unintentional and temporary incident in which the pH value of discharge wastewater exceeds the range set forth in the applicable effluent limitations guidelines.” The State Water Board may adjust the requirements set forth in paragraph 40 CFR section 401.17(a) with respect to the length of individual excursions from the range of pH values, if a different period of time is appropriate based upon the treatment system, plant configuration, or other technical factors.

4.3. Water-Quality-Based Effluent Limitations (WQBELs)

4.3.1. Scope and Authority

CWA section 301(b) and 40 CFR section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 CFR requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA

criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state’s narrative criterion, supplemented with other relevant information, as provided in 40 CFR section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary, termed a reasonable potential analysis (RPA), is intended to protect the designated uses of the receiving water as specified in the Basin Plan and achieve applicable WQOs and criteria that are contained in other state plans and policies and any applicable water quality criteria contained in the Ocean Plan.

4.3.2. Applicable Beneficial Uses, Water Quality Objectives, and WQBELs

Beneficial uses for ocean waters of the Central Coast Region are established by the plans described in section 3.3 of this Fact Sheet. The narrative WQOs from the Ocean Plan, Basin Plan, and Thermal Plan are incorporated in this Order on a case-by-case basis, as described in section 5.1 of this Fact Sheet. WQBELs are included in this Order to protect WQOs applicable to ocean waters of the Central Coast Region, including objectives for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity.

4.3.2.1. Ocean Plan Table 4 WQBELs

The USEPA has not promulgated ELGs for desalination facilities. Therefore, the effluent limitations in Table 4 of the Ocean Plan, shown in Table F-14 below, are applicable to both the M1W total waste effluent at Monitoring Location EFF-001 and the Cal-Am MPWSP Desalination Plant effluent at Monitoring Location EFF-001C.

The Ocean Plan requires that pH level be kept within the limit of 6.0 to 9.0 “at all times” and does not explicitly allow for short-term excursions from the pH limitations specified in Table E-13.

Table F-14. Ocean Plan Table 4 WQBELs

Parameter	Unit	Max. 30-day Avg. ^[1]	Max. 7-day Avg. ^[2]	IMIN	IMAX
Oil and Grease	mg/L	25	40		75
TSS	mg/L	60 ^[3]			
Settleable Solids	mL/L	1.0	1.5		3.0
Turbidity	NTU	75	100		225
pH	SU			6.0	9.0

^[1] Applied as an AMEL.

^[2] Applied as an AWEL.

[3] Table 4 of the Ocean Plan requires that applicable dischargers shall, as a monthly average, remove 75% of suspended solids from the influent stream before discharging wastewater to the Pacific Ocean, except that the effluent limitation to be met shall not be less than 60 mg/L.

4.3.2.2. Ocean Plan Table 3 WQBELs

Table 3 of the Ocean Plan contains numeric WQOs for 83 toxic pollutants for the protection of marine aquatic life and human health. Pursuant to NPDES regulations at 40 CFR section 122.44(d)(1) and in accordance with procedures established by the Ocean Plan, the Central Coast Water Board has performed an RPA to determine the need for effluent limitations for the Ocean Plan Table 3 toxic pollutants.

Procedures for performing an RPA for ocean dischargers are described in section III.C and Appendix VI of the Ocean Plan. In determining the need for an effluent limitation, the Regional Water Boards must use all representative information to characterize the pollutant discharge using a scientifically defensible statistical method that accounts for the averaging period of the WQO, accounts for and captures the long-term variability of the pollutant in the effluent, accounts for limitations associated with sparse data sets, accounts for uncertainty associated with censored data sets, and (unless otherwise demonstrated) assumes a lognormal distribution of the facility-specific effluent data. The Ocean Plan identifies a multi-step procedure for the Regional Water Boards to follow in this regard. However, pursuant to this procedure, if information about the receiving water or discharger support an RPA based on alternative criteria other than facility-specific effluent data, such as facility type, discharge type, potential toxic impact of discharge, and water quality and beneficial uses of the receiving water, the Regional Water Board may conduct an RPA based on BPJ, as described in Ocean Plan Appendix VI, Steps 2 and 13. The RPA for this Order included both the statistical approach and BPJ.

The statistical approach projects an effluent data set while taking into account the averaging period of WQOs, the long-term variability of pollutants in the effluent, limitations associated with sparse data sets, and uncertainty associated with censored data sets. The procedure assumes a lognormal distribution of the effluent data set and compares the 95th percentile concentration at 95th percent confidence of each Ocean Plan Table 3 pollutant, accounting for dilution, to the applicable water quality criterion.

4.3.2.2.1. RPA Endpoints

The RPA results in one of three following endpoints:

4.3.2.2.1.1. Endpoint 1

There is “reasonable potential” (RP). An effluent limitation must be developed for the pollutant. Effluent monitoring for the pollutant, consistent with the monitoring frequency in Ocean Plan Appendix III is required.

4.3.2.2.1.2. Endpoint 2

There is no RP. An effluent limitation is not required for the pollutant. Ocean Plan Appendix III effluent monitoring is not required for the pollutant; the Regional Water Board, however, may require occasional monitoring for the pollutant or for whole effluent toxicity (WET) as appropriate.

4.3.2.2.1.3. Endpoint 3

The RPA is inconclusive. Monitoring for the pollutant or WET testing, consistent with the monitoring frequency in Appendix III of the Ocean Plan, is required. An existing effluent limitation for the pollutant shall remain in the permit, otherwise the permit shall include a reopener clause to allow for subsequent modification of the permit to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contribute to an excursion above an Ocean Plan Table 3 WQO.

4.3.2.2.2. State Water Board RPA Calculator

The State Water Board has developed a reasonable potential calculator, which is available at:

http://www.waterboards.ca.gov/water_issues/programs/ocean/docs/trirev/stakeholder050505/rpcalc22_setup.zip

The calculator (RPcalc 2.2) was used in the development of this Order and considers several pathways in the determination of reasonable potential.

4.3.2.2.2.1. First Path

If available information about the receiving water or the discharge supports a finding of reasonable potential without analysis of effluent data, the Central Coast Water Board may decide that WQBELs are necessary after a review of such information. Such information may include: the facility or discharge type, solids loading, lack of dilution, history of compliance problems, potential toxic effects, fish tissue data, 303(d) status of the receiving water, the presence of threatened or endangered species or their critical habitat, or other information.

4.3.2.2.2.2. Second Path

If any pollutant concentration, adjusted to account for dilution, is greater than the most stringent applicable WQO, there is reasonable potential for that pollutant.

4.3.2.2.2.3. Third Path

If the effluent data contains three or more detected and quantified values (i.e., values that are at or above the ML, and all values in the data set are at or above the ML, a parametric RPA is conducted to project the range of possible effluent values. The 95th percentile concentration is determined at

95% confidence for each pollutant and compared to the most stringent applicable WQO to determine reasonable potential. A parametric analysis assumes that the range of possible effluent values is distributed log-normally. If the 95th percentile value is greater than the most stringent applicable WQO, there is reasonable potential for that pollutant.

4.3.2.2.4. Fourth Path

If the effluent data contains three or more detected and quantified values (i.e., values that are at or above the ML), but at least one value in the data set is less than the ML, a parametric RPA is conducted according to the following steps:

If the number of censored values (those expressed as a “less than” value) account for less than 80% of the total number of effluent values, calculate the mean of the natural log of transformed data and the standard deviation of the natural log of transformed data and conduct a parametric RPA, as described above for the third path.

If the total number of censored values account for 80% of the total number of effluent values, conduct a non-parametric RPA, as described below for the fifth path. (A non-parametric analysis becomes necessary when the effluent data is limited, and no assumptions can be made regarding its possible distribution).

4.3.2.2.5. Fifth Path

A non-parametric RPA is conducted when the effluent data set contains fewer than three detected and quantified values, or when the effluent data set contains three or more detected and quantified values but the number of censored values accounts for 80% or more of the total of effluent values. A non-parametric analysis is conducted by ordering the data, comparing each result to the applicable WQO, and accounting for ties. The sample number is reduced by one for each tie, when the dilution-adjusted MDL is greater than the WQO. If the adjusted sample number, after accounting for ties, is greater than 15, the pollutant has no reasonable potential to exceed the WQO. If the sample number is 15 or less, the RPA is inconclusive, monitoring is required, and any existing effluent limits in the expiring permit are retained.

4.3.2.2.3. RPA Results

Under the BPJ approach as described in Step 13 of Ocean Plan Appendix VI, Central Coast Water Board staff must review all available information to determine if a WQBEL is required to protect beneficial uses, notwithstanding the statistical analysis described above. Information that may be considered includes the facility type, the discharge type, solids loading analysis, lack of dilution, history of compliance, potential toxic impact of discharge, fish tissue residue data, water quality and beneficial uses of the receiving water, CWA

section 303(d) listing for the pollutant, the presence of endangered or threatened species or critical habitat, and other information.

A statistical RPA was conducted using effluent data reported with the Dischargers' ROWD. Because the amount of M1W RTP secondary-treated waste relative to M1W AWPf RO concentrate, M1W hauled saline waste, and Cal-Am MPWSP Desalination Plant brine waste influences the buoyancy of the effluent plume and the boundary interactions with the ambient receiving water (as described in section 2.2 of this Fact Sheet), the Dischargers conducted modeling to determine dilution ratios under various effluent blend scenarios. From these modeling results, three minimum probable initial dilution values ($D_m = 464, 348, \text{ or } 194$) are included to implement water quality standards in dry weather when Cal-Am MPWSP Desalination Plant brine waste is not present, and a fourth D_m (101) is included to account for the presence of Cal-Am MPWSP Desalination Plant brine waste. These four new D_m s were used to perform the RPA. The new D_m s and their corresponding flow scenarios can be found in Table F-4. As part of the ROWD submission, the Dischargers compiled data to conduct an Ocean Plan WQO compliance analysis for the discharge with the new Cal-Am MPWSP Desalination Plant brine waste stream. "Worst-case" concentrations were listed for Cal-Am MPWSP Desalination Plant brine, M1W RTP secondary-treated effluent, M1W RTP hauled saline waste, and M1W AWPf RO concentrate. The data used for the analysis included M1W SMR data, projected effluent data for the 2025 M1W AWPf expansion, and data from Cal-Am's temporary test subsurface slant well sampling.

The data were conservatively combined according to the four aforementioned dilution scenarios ($D_m = 464, 348, 194, \text{ or } 101$), and the four diluted results were compared to find a maximum effluent concentration (MEC). The $D_m = 101$ scenario was consistently the source of the MEC, particularly when considering minimum Cal-AM MPWSP Desalination Plan brine waste (5.8 MGD), minimum M1W RTP secondary-treated waste (0 MGD), minimum M1W hauled saline waste (0 MGD), and maximum M1W AWPf RO concentrate (1.78 MGD). The MEC for 80 of the Ocean Plan Table 3 parameters (not including acute toxicity, chronic toxicity, or radioactivity) was compared to the corresponding most stringent Ocean Plan WQO, and the resulting statistical RPA results are provided in Table F-15. The statistical RPA indicated that there were 12 pollutants where there was RP (Endpoint 1; cadmium, cyanide, total residual chlorine, ammonia, non-chlorinated phenolic compounds, chlorinated phenolic compounds, acrylonitrile, DDT, dieldrin, polynuclear aromatic hydrocarbons (PAHs), toxaphene, and 2,4,6-trichlorophenol), 33 pollutants where there was no reasonable potential (Endpoint 2) and 35 pollutants where the RPA was inconclusive (Endpoint 3).

However, in addition to the statistical process described above, and in accordance with Step 13 of Ocean Plan Appendix VI, Central Coast Water Board staff reviewed additional information to determine if a WQBEL is required for these pollutants to protect beneficial uses, despite a statistical

Endpoint 2 or Endpoint 3. As noted above, the receiving water is part of the MBNMS. The purpose of the MBNMS is to protect areas of the marine environment that possess conservation, recreational, ecological, historical, research, educational, or aesthetic qualities of special national significance. There are “kelp forests and one of North America’s largest underwater canyons,” beaches and estuaries, and the area “harbors an incredible variety of marine life, including 36 species of marine mammals, more than 180 species of seabirds and shorebirds, at least 525 species of fishes, and an abundance of invertebrates and algae.”¹⁶

In addition, the Dischargers’ ROWD indicates that flow conditions and effluent quality at Discharge Point 001 can change over a matter of days, particularly during weeks when recycled water production is ramping up and down, and, as a result, precisely characterizing water quality conditions and the resulting impact to aquatic life at a given moment can be challenging. The variable conditions related to blend ratios of M1W RTP secondary-treated waste, M1W AWP RO concentrate, M1W hauled saline waste, and Cal-Am Desalination Plant brine waste will continue to be studied, although cumulative impacts of new waste streams on aquatic toxicity are unknown at this time.

Due to the variability of flow conditions, increasing complexity and changing composition of the discharge, and sensitivity of the receiving water,¹⁷ the Central Coast Water Board determined that using BPJ, in accordance with Step 13 of Ocean Plan Appendix VI, was appropriate. Applying this analysis, the Central Coast Water Board found that WQBELs are required for all 68 pollutants where the statistical approach to the RPA otherwise concluded effluent limits were not required (Endpoint 2 or 3), along with radioactivity and acute and chronic toxicity. The Central Coast Water Board may revisit this determination during future permit renewals when the variable conditions related to blend ratios of M1W RTP secondary-treated waste, M1W AWP RO concentrate, M1W hauled saline waste, and Cal-Am MPWSP Desalination Plant brine sources are better characterized. A summary of the RPA determination for Ocean Plan Table 3 pollutants is detailed in Table F-15 below.

¹⁶ Overview of the MBNMS can be accessed online at: <https://montereybay.noaa.gov/>

¹⁷ MBNMS Management Plan (2021). The MBNMS includes a variety of habitats that support extensive marine life, including 34 species of marine mammals, over 180 species of seabirds and shorebirds, at least 525 fish species, 4 sea turtle species, 31 different invertebrate phyla, and over 450 species of marine algae. Its highly productive biological communities host one of the highest levels of marine biodiversity in the world, including 27 federally listed threatened and endangered species. The MBNMS Management Plan can be accessed online at: <https://montereybay.noaa.gov/intro/mp/>

Table F-15. Summary of Statistical RPA Results for Discharge Point 001

Parameter	Units	n ^[1]	MEC ^{[2],[3]}	Most Stringent Criterion ^[4]	RPA Endpoint ^[5]
Arsenic	µg/L	4	3.3	8	2 ^[5]
Cadmium	µg/L	4	0.046	1	1
Chromium	µg/L	4	0.047	2	2 ^[5]
Copper	µg/L	4	2.4	3	3 ^[5]
Lead	µg/L	4	0.012	2	2 ^[5]
Mercury	µg/L	4	0.0049	0.04	2 ^[5]
Nickel	µg/L	4	0.47	5	2 ^[5]
Selenium	µg/L	4	0.32	15	2
Silver	µg/L	4	0.17	0.7	3
Zinc	µg/L	4	8.9	20	2
Cyanide	µg/L	4	0.75	1	1
Total Chlorine Residual	µg/L	4	6.7	2	1
Ammonia	µg/L	4	560	600	1
Non-Chlorinated Phenolic Compounds	µg/L	4	0.77	30	1
Chlorinated Phenolic Compounds	µg/L	4	0.28	1	1
Endosulfan ^[6]	µg/L	4	<0.00039	0.009	3
Endrin	µg/L	4	0.00075	0.002	2
HCH ^[7]	µg/L	4	0.0012	0.004	2
Acrolein	µg/L	4	0.11	220	2
Antimony	µg/L	4	0.031	1200	2
Bis(2-Chloroethoxyl) Methane	µg/L	4	<0.20	4.4	3
Bis(2-Chloroisopropyl) Ether	µg/L	4	<0.0098	1200	3
Chlorobenzene	µg/L	4	<0.0049	570	3
Chromium (III)	µg/L	4	0.23	190000	2
Di-n-butyl Phthalate	µg/L	4	0.15	3500	2
Dichlorobenzenes ^[6]	µg/L	4	<0.0049	5100	3
Diethyl Phthalate	µg/L	4	0.040	33000	2
Dimethyl Phthalate	µg/L	4	<0.0020	820000	3
4,6-Dinitro-2-Methylphenol	µg/L	4	<0.98	220	3
2,4-Dinitrophenol	µg/L	4	<0.11	4.0	3
Ethylbenzene	µg/L	4	<0.0049	4100	3

Parameter	Units	n ^[1]	MEC ^{[2],[3]}	Most Stringent Criterion ^[4]	RPA Endpoint ^[5]
Fluoranthene	µg/L	4	0.0041	15	2
Hexachlorocyclopentadiene	µg/L	4	<0.98	58	3
Nitrobenzene	µg/L	4	<0.20	4.9	3
Thallium	µg/L	4	<0.0049	2	3
Toluene	µg/L	4	<0.0049	85000	3
TBT	µg/L	4	<0.012	0.0014	3
1,1,1-Trichloroethane	µg/L	4	<0.0049	540000	3
Acrylonitrile	µg/L	4	0.062	0.10	1
Aldrin	µg/L	4	1.1E-06	0.000022	2
Benzene	µg/L	4	<0.0049	5.9	3
Benzidine	µg/L	4	<0.98	0.000069	3
Beryllium	µg/L	4	<0.0049	0.033	3
Bis(2-Chloroethyl) Ether	µg/L	4	<0.0020	0.045	3
Bis(2-Ethylhexyl) Phthalate	µg/L	4	0.068	3.5	2
Carbon Tetrachloride	µg/L	4	0.0086	0.90	2
Chlordane ^[6]	µg/L	4	4.5E-06	0.000023	2
Chlorodibromomethane	µg/L	4	0.032	8.6	2
Chloroform	µg/L	4	0.48	130	2
DDT ^[6]	µg/L	4	0.000017	0.00017	1
1,4-Dichlorobenzene	µg/L	4	<0.0032	18	3
3,3'-Dichlorobenzidine	µg/L	4	<0.0039	0.0081	3
1,2-Dichloroethane	µg/L	4	<0.0049	28	3
1,1-Dichloroethylene	µg/L	4	<0.0049	0.9	3
Dichlorobromomethane	µg/L	4	0.078	6.2	2
Dichloromethane	µg/L	4	0.016	450	2
1,3-Dichloropropene	µg/L	4	0.012	8.9	2
Dieldrin	µg/L	4	6.1E-06	0.00004	1
2,4-Dinitrotoluene	µg/L	4	<0.0098	2.6	3
1,2-Diphenylhydrazine	µg/L	4	<0.20	0.16	3
Halomethanes ^[6]	µg/L	4	0.20	130	2
Heptachlor	µg/L	4	4.6E-07	0.00005	2
Heptachlor Epoxide	µg/L	4	7.4E-07	0.00002	2
Hexachlorobenzene	µg/L	4	9.8E-07	0.00021	2
Hexachlorobutadiene	µg/L	4	4.5E-07	14	2
Hexachloroethane	µg/L	4	<0.0098	2.5	3

Parameter	Units	n ^[1]	MEC ^{[2],[3]}	Most Stringent Criterion ^[4]	RPA Endpoint ^[5]
Isophorone	µg/L	4	<0.20	730	3
N-Nitrosodimethylamine	µg/L	4	0.044	7.3	2
N-Nitrosodi-n-Propylamine	µg/L	4	<0.20	0.38	3
N-Nitrosodiphenylamine	µg/L	4	<0.20	2.5	3
PAHs ^[6]	µg/L	4	0.0057	0.0088	1
PCBs ^[6]	µg/L	4	7.7E-06	0.000019	2
TCDD Equivalents ^[6]	µg/L	4	3.0E-10	3.9E-09	2
1,1,2,2-Tetrachloroethane	µg/L	4	<0.0049	2.3	3
Tetrachloroethylene	µg/L	4	<0.0049	2.0	3
Toxaphene	µg/L	4	0.0035	0.00021	1
Trichloroethylene	µg/L	4	<0.0049	27	3
1,1,2-Trichloroethane	µg/L	4	<0.0049	9.4	3
2,4,6-Trichlorophenol	µg/L	4	0.15	0.29	1
Vinyl Chloride	µg/L	4	0.0051	36	2

^[1] Number of data points available for the RPA.

^[2] The reported MEC here is the effluent concentration at the ZID (Czid) that was used for the RPA.

^[3] If there is a detected value, the highest reported value is summarized in the table. If there are no detected values, the highest MDL is used and indicated with a "<" qualifier.

^[4] The most stringent criteria are WQOs listed in Table 3 of the Ocean Plan.

^[5] Parameters with statistical RPA endpoints 2 or 3 were determined to have RP based on BPJ, thus requiring effluent limitations.

^[6] As defined in Attachment A.

4.3.2.2.4. Ocean Plan Table 3 WQBEL Calculations

Using the results of the RPA, the Central Coast Water Board established WQBELs for all 83 Ocean Plan Table 3 pollutants, where WQBELs are established for cadmium, cyanide, total chlorine residual, ammonia, non-chlorinated phenolic compounds, chlorinated phenolic compounds, acrylonitrile, DDT, dieldrin, PAHs, toxaphene, and 2,4,6-trichlorophenol based on a conclusion of statistical RPA Endpoint 1.

The Central Coast Water Board staff reviewed additional information to determine if WQBELs are required to protect beneficial uses. Because of the variability of flow conditions, increasing complexity of the discharge, and sensitivity of the receiving water, staff concluded using BPJ that WQBELs must be established for all other Ocean Plan Table 3 parameters, including an

additional 68 pollutants where the statistical RPA would have otherwise concluded Endpoint 2 or 3.

4.3.2.2.4.1. Using WQOs as Effluent Limitations and Using Czid for Compliance Determination

As described by section III.C of the Ocean Plan, concentration-based effluent limitations for Table 3 pollutants are typically calculated according to the following equation:

$$C_e = C_o + D_m (C_o - C_s)$$

where C_e is the effluent limitation ($\mu\text{g/L}$), C_o is the concentration (the WQO) to be met at the completion of initial dilution ($\mu\text{g/L}$), C_s is the background seawater concentration ($\mu\text{g/L}$), and D_m is minimum probable initial dilution expressed as parts seawater per part wastewater (here $D_m = 145, 248, 368$, or 453 before M1W diffuser and ocean outfall modifications, and $D_m = 97, 101, 142, 194, 348$, or 464 after M1W diffuser and ocean outfall modifications).

However, the multiple distinct D_m s would result in multiple distinct C_e s based on the equation above. Thus, to facilitate reporting and compliance determination, effluent limitations in this Order are instead set equal to the WQOs (C_o), and the Dischargers shall use the appropriate D_m to calculate the concentrations that would result after dilution (C_{zid}), following

$$C_{zid} = (C_e + D_m \times C_s) / (1 + D_m)$$

where C_e is now the measured concentration prior to dilution. Compliance is then determined by comparing the calculated concentration after dilution (C_{zid}) to the Ocean Plan objective (C_o).

4.3.2.2.4.2. Background Water Quality

In accordance with Ocean Plan implementing procedures, C_s equals zero for all Ocean Plan Table 3 pollutants, except the following parameters from Ocean Plan Table 5.

Table F-16. Background Concentrations (C_s) - Ocean Plan (Table 5)

Pollutant	Background Seawater Concentration
Arsenic	3 $\mu\text{g/L}$
Copper	2 $\mu\text{g/L}$
Mercury	0.0005 $\mu\text{g/L}$
Silver	0.16 $\mu\text{g/L}$
Zinc	8 $\mu\text{g/L}$

Furthermore, the background conditions for fecal coliform, total coliform, and enterococcus are assumed to be zero.

4.3.2.2.4.3. Mass-based Effluent Limitations

Section 122.45(f)(1) of 40 CFR requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR section 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. In addition, section III.C.4.j of the Ocean Plan requires that mass limitations be established for all parameters in Table 3 of the Ocean Plan. Therefore, this Order includes effluent limitations expressed in terms of mass and concentration for Ocean Plan Table 3 parameters. Pursuant to the exceptions to mass limitations provided in 40 CFR section 122.45(f)(1), mass-based limits are not established for radioactivity or acute and chronic toxicity.

Concentration-based effluent limitations (after accounting for dilution) were established as the WQOs (Co) as described above in Fact Sheet section 4.3.4.1. These concentration-based effluent limitations were then converted from µg/L to pounds per day (lb/day) using the permitted dry weather discharge flow of the final commingled effluent of 38.26 MGD (29.6 MGD of M1W total combined waste and 8.66 MGD of Cal-Am MPWSP Desalination Plant brine waste) according to the following equation:

$$\text{lbs/day} = 0.00834 \times \text{Co} \times \text{Q}$$

where Co is the effluent concentration limit (WQO; µg/L) and Q = 38.26 MGD is the flow rate.

For compliance determination, the Dischargers will calculate and report a mass-based discharge values from the diluted concentration-based results. However, to avoid backsliding, the Dms used in this calculation must be held at the lowest permitted dilution scenario (Dm = 145 prior to M1W ocean outfall and diffuser modifications and Dm = 101 after M1W ocean outfall and diffuser modifications) regardless of M1W or Cal-Am discharge flows.

The reported mass-based values shall thus be calculated following

$$\text{lb/day} = 0.00834 \times \text{Q} \times (\text{Ce} + \text{Dm} \times \text{Cs}) / (1 + \text{Dm})$$

where Ce is the measured concentration prior to dilution, Cs is the background concentration as described in Fact Sheet section 4.3.4.2, Q is the daily average measured flow rate, and Dm = 145 prior to M1W ocean outfall and diffuser modifications or Dm = 101 after M1W ocean outfall and diffuser modifications.

4.3.2.3. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) limitations protect receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing numeric criteria for toxicity. There are two types of WET tests - acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity

test is conducted over a longer period of time and may measure mortality, reproduction, and growth. The Basin Plan requires that all waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life. Survival of aquatic organisms in surface waters subjected to a waste discharge or other controllable water quality conditions shall not be less than that for the same water body in areas unaffected by the waste discharge or for another control water.

4.3.2.3.1. Test of Significant Toxicity (TST)

The approach to acute and chronic toxicity WQBELs in the Ocean Plan is based on a “toxic unit” derived from one multi-concentration toxicity test. The Ocean Plan prescribes the no observed effect level (NOEL) method to measure the acceptability of waters for supporting a healthy marine biota.

In 2010, USEPA endorsed the TST statistical approach in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) to address concerns regarding the use of the NOEL method. Whereas both the TST and NOEL methods use statistical hypothesis testing, the TST “flips” the hypothesis testing question in that it utilizes a null hypothesis that assumes toxicity, thereby placing the responsibility on the discharger to prove otherwise. Further, the TST statistical method includes implications for “within test” variability such that if test variability is high, it is possible to meet the target percent-based effect threshold but still “fail” the TST. As such, the TST statistical method incentivizes higher quality data (e.g., increased number of test replicates and stringent quality assurance and controls) and more consistently identifies truly toxic samples than the NOEL analysis.

Compliance with toxicity effluent limitations shall be evaluated using the TST statistical approach at the discharge “in-stream” waste concentration (IWC), as described in section 7.10 of the Order and section 5 of the MRP (Attachment E). The TST statistical approach is described in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1. The TST null hypothesis shall be “mean discharge IWC response $\leq 0.75 \times$ mean control response.” A test that rejects this null hypothesis shall be reported as “Pass.” A test that does not reject this null hypothesis shall be reported as “Fail.” The Dischargers shall also report the “Percent Effect” as part of chronic toxicity result.

Section III.F of the Ocean Plan provides for more stringent requirements if necessary to protect the designated beneficial uses of ocean waters. Diamond et al. (2013) examined the side-by-side comparison of NOEL and TST statistical approach results using chronic toxicity test data (including data from POTWs) from the State of California for the west coast marine methods and test species required under this Order. [see Table 1 (method types 1 through 5) on page 1103 in Diamond D, Denton D, Roberts, J, Zheng L. 2013.

Evaluation of the Test of Significant Toxicity for Determining the Toxicity of Effluents and Ambient Water Samples. Environ Toxicol Chem 32:1101-1108]. This comparison shows that while the TST and NOEL statistical approaches perform similarly most of the time, the TST statistical approach performs better in identifying toxic and non-toxic samples, a desirable characteristic for chronic toxicity testing conducted under this Order. This examination also signals that the test methods' false positive rate (β no higher than 0.05 at a mean effect of 10%) and false negative rate (α no higher than 0.05 (0.25 for topmelt) at a mean effect of 25%) are indeed low.

This highlights that using the TST statistical approach in this Order—in conjunction with other Ocean Plan requirements (West Coast WET method/test species for monitoring and limiting chronic toxicity, the IWC representing the critical condition for water quality protection, the initial dilution procedure, and a single test for compliance)—provides increased assurance that statistical error rates are more directly addressed and accounted for in decisions regarding chronic toxicity in the discharge. Because the TST statistical approach more consistently identifies truly toxic samples as compared to the NOEL method, the TST statistical approach provides increased assurance that the discharge is protective of beneficial uses in Monterey Bay. As a result, and in accordance with Ocean Plan section III.F, the Central Coast Water Board is exercising its discretion to use the TST statistical approach for this discharge. The USEPA has previously agreed with the Central Coast Water Board's determination.

For the reasons set forth above, the Central Coast Water Board finds that the TST statistical approach is protective of beneficial uses in the receiving waters at issue. By incorporating the toxicity limit using the TST statistical approach, toxicity monitoring and reporting is simplified, as the test has to be run at only one concentration and the control, as opposed to multiple dilutions required to measure the LC50. In light of multiple Dm conditions and the sensitive species/etc., the simplified tests may reduce the potential for error associated with dilutions used in tests.

4.3.2.3.2. Acute and Chronic Toxicity Effluent Limits

Aquatic toxicity occurs when the effects of pollutants in surface water negatively impact aquatic life beneficial uses. When the effects originate from the cumulation of toxicity in treated wastewater effluent discharge and are not directly linked to one or more specified toxic pollutants, these effects are typically referred to as whole effluent toxicity, or WET. Toxicity tests of the effluent are used to estimate the effects of effluent discharges to surface waters on the aquatic species in the receiving water and can be necessary to understand cumulative toxic effects of multiple waste streams.

The Ocean Plan requires consideration of all available information, including the "potential toxic impact of the discharge" to determine if WQBELs are necessary, notwithstanding the statistical procedure with which the RPA is conducted for most pollutants. Due to the multiple residential, commercial,

and industrial contributors to the influent flow of the RTP, and because the cumulative effects of various pollutants present at low levels in the discharge are unknown, acute and chronic toxicity limitations and monitoring requirements are established in this Order. The acute and chronic toxicity limitations are also established in this Order to be protective of potential toxicity that may result from the introduction of brine waste to the total effluent waste stream.

The Ocean Plan establishes WQOs for protection of marine aquatic life in Table 3, including an objective for chronic toxicity that is currently expressed in terms of toxicity units based on the NOEL statistical approach. However, the Ocean Plan expressly allows the Regional Water Boards to “establish more restrictive”¹⁸ objectives and effluent limitations than set forth in the Ocean Plan as necessary for the protection of beneficial uses of ocean waters including recreation, aesthetic enjoyment, navigation, commercial and sport fishing, mariculture, preservation and enhancement of designated ASBS, rare and endangered species, marine habitat, fish spawning and shellfish harvesting. Furthermore, M1W has historically utilized the TST statistical approach, not the NOEL statistical approach, and has been able to comply with the toxicity requirements. From February 2021 through January 2026, M1W conducted 19 tests for acute toxicity and 25 tests for chronic toxicity. All tests resulted in “Pass.”

Due to the variable nature of the discharge, sensitivity of the receiving water,¹⁹ and increasing complexity of the effluent as brine discharges are introduced from the MPWSP Desalination Plant, the Central Coast Water Board establishes the TST statistical approach in this Order rather than the NOEL statistical approach. The Dischargers shall conduct WET testing in accordance with section 5 of the MRP (Attachment E).

Compliance with acute and chronic toxicity requirements contained in this Order shall be determined in accordance with section 7.11 of the Order. Nevertheless, this Order contains a reopener to require the Central Coast Water Board and the USEPA to modify this Order, if necessary, to make it consistent with any new policy, law, or regulation.

¹⁸ The higher level of confidence in toxicity testing due to the use of the TST statistical approach instead of the NOEL statistical approach can result in more certain protection of beneficial uses. This is equivalent to a more “restrictive” requirement within the meaning of section III.F.1 of the Ocean Plan.

¹⁹ *MBNMS Final Management Plan* (2021). The MBNMS includes a variety of habitats that support extensive marine life, including 34 species of marine mammals, over 180 species of seabirds and shorebirds, at least 525 fish species, 4 sea turtle species, 31 different invertebrate phyla, and over 450 species of marine algae. Its highly productive biological communities host one of the highest levels of marine biodiversity in the world, including 27 federally listed threatened and endangered species. The MBNMS Management Plan can be accessed online at: <https://montereybay.noaa.gov/intro/mp/>.

4.3.2.4. Bacteria

4.3.2.4.1. Bacteria Water Quality Objectives

Water quality objectives for fecal coliform have been present continuously since the 1970s in the Ocean Plan (relating to water contact recreation) and in the Basin Plan (relating to non-contact recreation). Enterococci WQOs are newer, resulting from the 2018 State Water Board Resolution 2018-0038. Among other things, Resolution 2018-0038 amended the Ocean Plan to establish new enterococci WQOs to protect ocean waters designated with the REC-1 beneficial use. These enterococci bacteria WQOs were incorporated into the 2019 Ocean Plan, and subsequently, into the 2024 Basin Plan.

Section 3.3.2.2 of the 2024 Basin Plan (REC-1, REC-2, and SHELL) and Section II.B of the 2019 Ocean Plan (Water-Contact Standards and Shellfish Harvesting Standards) thus include applicable numeric WQOs for bacteria, summarized below in Table F-17:

Table F-17. All applicable bacteria WQOs

Parameter	WQO Source	Units	Single Sample Max. (SSM)	Statistical Threshold Value (STV)	Max. Monthly Median	Max. 30-Day Geomean	Max. 6-Week Geomean
Enterococci	Basin Plan REC-1 and Ocean Plan Water-Contact Standards	MPN/100 mL		110			30
Fecal Coliform	Basin Plan REC-2	MPN/100 mL		4,000		2,000	
Fecal Coliform	Ocean Plan Water-Contact Standards	MPN/100 mL	400			200	
Total Coliform	Basin Plan SHELL and Ocean Plan Shellfish Harvesting Standards	MPN/100 mL		230	70		

4.3.2.4.2. Reasonable Potential Analysis

Pathogens are a characteristic of municipal wastewater, which is a component of the effluent from Discharge Point 001. Furthermore, while M1W

does discharge oxidized RO concentrate which is chloraminated and subsequently quenched with sodium bisulfite, the M1W RTP currently does not disinfect secondary-treated waste which bypasses the AWPf.

Prior to the implementation of the Expanded PWM Project, M1W's discharge consisted of higher levels of secondary effluent. However, the expanded AWPf, operational since October 2025, reduces secondary effluent flows discharged to the M1W ocean outfall, as it is operated as a "peaking" plant. During summer months, secondary effluent discharges are at or near zero due to maximized recycled water demands, and therefore, M1W discharges are primarily AWPf RO concentrate which contains little to no bacteria.

However, when secondary effluent discharge is high, M1W may still at times discharge high concentrations of bacteria into the receiving waters (including MBNMS). A review of historic M1W bacteria effluent data (three effluent samples for each bacteria across the preceding 10 years) indicates maximum effluent concentrations (after initial dilution) of at least 62 MPN/100 mL enterococci, 8,900 MPN/100 mL fecal coliform, and 12,000 MPN/100 mL total coliform. These values exceed the most stringent WQOs in Table F-17.

Therefore, due to the nature of the discharge and the sensitivity of the Monterey Bay waters, the Central Coast Water Board determined that the Facilities have the reasonable potential to cause or contribute to an exceedance of the WQOs for all three of the bacteria.

4.3.2.4.3. Applying WQOs as Effluent Limitations

In response to the U.S. Supreme Court's 2025 decision in *City and County of San Francisco, California v. Environmental Protection Agency* (discussed further in MRP section 5), the WQOs in Table F-17 above are applied as numeric end-of-pipe effluent limitations.

- 4.3.2.4.3.1. Bacteria are expected to dilute between the discharge point and the edge of the zone of initial dilution due to the momentum of the discharge and/or its initial buoyancy. The bacteria WQOs are thus applied as effluent limitations at Monitoring Location EFF-001B in order to account for initial dilution, where the background bacteria concentrations in the receiving water are assumed to be zero.

Bacteria effluent limitations are provided below in Table F-18. Limitations based on REC-2 fecal coliform objectives were not included as they are less stringent than the limitations derived from Ocean Plan water-contact standards.

Table F-18. Bacteria Effluent Limitations

Parameter	Units	IMAX	Maximum Monthly Median	Maximum 30-Day Geometric Mean ^{[1],[2]}	Maximum 6-Week Geometric Mean ^{[2],[3]}
Enterococci	MPN/100 mL	110 ^[4]			30
Fecal Coliform	MPN/100 mL	400		200	
Total Coliform	MPN/100 mL	230 ^[4]	70		

^[1] Compliance is determined from the five most recent samples.

^[2] Geometric mean effluent limits shall be applied based on a statistically sufficient number of samples, which is not less than five samples distributed over a six-week period. If a statistically significant number of samples is not available to calculate the geometric mean, then attainment of the WQO shall be determined based only on the IMAX.

^[3] Compliance is determined as a rolling 6-week geomean, calculated weekly.

^[4] Not to be exceeded by more than 10 percent of the samples collected in a calendar month.

4.3.2.4.4. Existing Effluent Limitations

M1W's previous Order R3-2024-0045 contained the following bacteria effluent limitations for the M1W total combined waste flow. Equivalent effluent limitations have been retained in the current Order, avoiding backsliding.

4.3.2.4.4.1. The daily maximum fecal coliform density shall not exceed 400 per 100 mL.

4.3.2.4.4.2. The STV enterococcus density shall not exceed 110 cfu/100 mL. The STV shall not be exceeded by more than 10% of the samples collected in a calendar month, calculated in a static manner.

4.3.2.5. Salinity

Section III.M.3.b.(1) of the Ocean Plan requires the inclusion of a receiving water limitation for salinity for all desalination facilities discharging brine into ocean waters, regardless of whether the facilities commingle brine and wastewater. The Ocean Plan states, "Discharges shall not exceed a daily maximum of 2.0 ppth above natural background salinity measured no further than 100 meters (m), or 328 ft, horizontally from each discharge point. There is no vertical limit to this zone."

This Order establishes an effluent limitation for salinity, with compliance measured at Monitoring Location EFF-001C, based on the following formula from section III.M.3.b.(2) of the Ocean Plan:

$$C_e = C_o + D_m \text{ (2.0 ppth)}$$

Where:

C_e = effluent limitation for salinity (ppth)

C_o = salinity concentration to be met at the completion of initial dilution. ($C_o = 2.0 \text{ ppth} + C_s$)

C_s = natural background salinity (ppth)

D_m = minimum initial dilution of 101

The natural background salinity, calculated using conductivity-temperature-depth profiles collected at four monitoring stations around the ocean outfall from 2014 through 2023, ranged from 33.9 through 34.2 practical salinity units (psu). The unit psu is nearly equivalent to ppth. Using the lowest background salinity (representative of the most conservative limitation) and the D_m applicable when discharging brine waste, the salinity effluent limitation was calculated as follows:

$$C_e = (2.0 \text{ ppth} + 33.9 \text{ ppth}) + 101 \times (2.0 \text{ ppth}) = 238 \text{ ppth}$$

The Dischargers have confirmed that the diluted effluent will not exceed 238 ppth, and the supporting studies submitted with the Dischargers' ROWD report that the maximum salinity of the Cal-Am MPWSP Desalination Plant brine waste will be 60 psu. Based on this information, the proposed Cal-Am MPWSP Desalination Plant brine waste is expected to meet the salinity effluent limitation calculated above to ensure compliance with the receiving water limitation for salinity.

4.3.3. Summary of WQBELs

4.3.3.1. Monitoring Location EFF-001 – M1W Total Combined Waste

Section III.B.2 of the Ocean Plan specifies that Ocean Plan Table 4 effluent limitations apply to a discharger's total effluent of whatever origin (i.e., gross, not net, discharge). Therefore, compliance with Ocean Plan Table 4 limitations is required for the M1W total combined waste, which may include the M1W RTP secondary-treated waste, M1W AWP RO concentrate, and/or M1W hauled saline waste.

The Ocean Plan Table 4 effluent limitations do not allow for the temporary exceedances of pH which are permitted elsewhere under 40 CFR part 133 ELGs.

Sections 122.45(f)(1) and 423.15 of 40 CFR require mass emission rate-based (or simply "mass-based") limitations be established for conventional, nonconventional, and toxic pollutants, with some exceptions. Mass-based effluent limitations are established at EFF-001 for oil and grease and TSS based on the federal regulations. In addition, pursuant to the exceptions to mass-based limitations provided in 40 CFR section 122.45(f)(1), effluent limitations are not expressed in terms of mass emission rate for settleable solids, turbidity, and pH. For Monitoring Location EFF-001, the mass-based effluent limitations were calculated using

$$\text{lb/day} = 8.34 \times C_e \times Q,$$

where C_e is the concentration-based effluent limit (mg/L) and $Q = 29.6$ MGD is the permitted dry weather instantaneous maximum permitted flow for M1W total combined waste.

Therefore, the WQBELs in Table F-19 below are established for the M1W total combined waste upstream of the BMS, prior to commingling with the Cal-Am Desalination Plant brine waste, with compliance measured at Monitoring Location EFF-001, as described in the Monitoring and Reporting Program (MRP; Attachment E; Table E-6).

Table F-19. Summary of M1W Total Combined Waste WQBELs (with compliance measured at Monitoring Location EFF-001)

Parameter	Units	AMEL	AWEL	IMIN	IMAX
Oil and Grease	mg/L	25	40		75 ^[1]
Oil and Grease	lb/day	6,200	9,900		19,000 ^[1]
pH	SU			6.0	9.0
Settleable Solids	mL/L	1.0	1.5		3.0
TSS	mg/L	60 ^[2]			
TSS	lb/day	15,000 ^[2]			
Turbidity	NTU	75	100		230 ^[3]

^[1] The oil and grease IMAX was applied in the 2024 Order as a MDEL and is applied as an IMAX for the new Order in accordance with Ocean Plan Table 4.

^[2] The TSS AMEL limit was not applied in the 2024 Order and is reintroduced in accordance with Ocean Plan Table 4.

^[3] The turbidity IMAX is rounded to two significant figures, matching the methods of the 2024 Order.

4.3.3.2. Monitoring Location EFF-001C – Cal-Am MPWSP Desalination Plant Brine Waste

Ocean Plan Table 4 limitations are also applicable to industrial discharges for which no ELGs have been developed. Since no ELGs have been developed for desalination facilities, Ocean Plan Table 4 limitations are also applicable to the Cal-Am MPWSP Desalination Plant brine waste.

The Ocean Plan Table 4 effluent limitations do not allow for the temporary exceedances of pH which are permitted elsewhere under 40 CFR part 133 ELGs.

Finally, a salinity effluent limitation is included based on Ocean Plan section III.M.3.b.(1).

Sections 122.45(f)(1) and 423.15 of 40 CFR require mass-based limitations be established for conventional, nonconventional, and toxic pollutants, with some exceptions. Mass-based effluent limitations are established for oil and grease and TSS based on the federal regulations. In addition, pursuant to the

exceptions to mass-based limitations provided in 40 CFR section 122.45(f)(1), effluent limitations are not expressed in terms of mass for pH, settleable solids, turbidity, or salinity. For Monitoring Location EFF-001C, the mass-based effluent limitations were calculated using

$$\text{lb/day} = 8.34 \times C_e \times Q,$$

where C_e is the concentration-based effluent limit (mg/L) and $Q = 8.66$ MGD is the instantaneous maximum permitted flow for Cal-Am MPWSP Desalination Plant brine waste.

Therefore, the WQBELs in Table F-20 below are established for the Cal-Am Desalination Plant waste stream upstream of the BMS prior to commingling the M1W waste stream, with compliance measured at Monitoring Location EFF-001C.

Table F-20. Summary of Cal-Am MPWSP Desalination Plant Brine Waste WQBELs (with compliance measured at Monitoring Location EFF-001C)

Parameter	Units	AMEL	AWEL	IMIN	IMAX
Oil and Grease	mg/L	25	40		75
Oil and Grease	lb/day	1,800	2,900		5,400
pH	SU			6.0	9.0
Settleable Solids	mL/L	1.0	1.5		3.0
TSS	mg/L	60			
TSS	lb/day	4,000			
Turbidity	NTU	75	100		230 ^[1]

^[1] The turbidity IMAX is rounded to two significant figures, matching the EFF-001 limitation.

4.3.3.3. Monitoring Location EFF-001B – Final Commingled Waste (After Dilution)

Table 3 of the Ocean Plan contains numeric WQOs for 83 toxic pollutants for the protection of marine aquatic life and human health. Pursuant to NPDES regulations at 40 CFR section 122.44(d)(1) and in accordance with procedures established by the Ocean Plan, the Central Coast Water Board has performed an RPA to determine the need for effluent limitations for the Ocean Plan Table 3 toxic pollutants.

The statistical RPA indicated that there were 14 pollutants where there was reasonable potential (Endpoint 1: cadmium, cyanide, total residual chlorine, ammonia, acute toxicity, chronic toxicity, non-chlorinated phenolic compounds, chlorinated phenolic compounds, acrylonitrile, DDT, dieldrin, PAHs, toxaphene, and 2,4,6-trichlorophenol), 33 pollutants where there was no reasonable potential (Endpoint 2) and 35 pollutants where the RPA was inconclusive (Endpoint 3).

Due to the variability of flow conditions, increasing complexity and changing composition of the discharge, and sensitivity of the receiving water,²⁰ the Central Coast Water Board determined that using BPJ, in accordance with Step 13 of Ocean Plan Appendix VI, was appropriate. Applying this analysis, the Central Coast Water Board found that WQBELs are required for the 68 pollutants where the statistical approach to the RPA otherwise concluded effluent limits were not required (Endpoint 2 or 3). A summary of the resulting effluent limitations for Ocean Plan Table 3 pollutants is detailed in Table F-21 below.

Furthermore, in response to the U.S. Supreme Court's 2025 decision in *City and County of San Francisco, California v. Environmental Protection Agency*, the applicable enterococci, fecal coliform, and total coliform bacteria WQOs from section 3.3.2.2 of the 2024 Basin Plan (REC-1, REC-2, and SHELL) and section II.B of the 2019 Ocean Plan (Water-Contact Standards and Shellfish Harvesting Standards) are applied as end-of-pipe effluent limitations (allowing for initial dilution). A summary of the resulting effluent limitations for bacteria is detailed in Table F-22 below.

Table F-21. Summary of Final Commingled Waste (After Dilution) Ocean Plan Table 3 WQBELs (with compliance measured at Monitoring Location EFF-001B)

Parameter	Units	6-Month Median	AMEL	MDEL ^[1]	IMAX ^[2]
Marine Aquatic Life					
Arsenic, Total Recoverable	µg/L	8.0		32	80
Arsenic, Total Recoverable	lb/day ^[3]	2.6		10	26
Cadmium, Total Recoverable	µg/L	1.0		4.0	10
Cadmium, Total Recoverable	lb/day ^[3]	0.32		1.3	3.2
Chromium (VI), Total Recoverable ^[4]	µg/L	2.0		8.0	20
Chromium (VI), Total Recoverable ^[4]	lb/day ^[3]	0.64		2.6	6.4
Copper, Total Recoverable	µg/L	3.0		12	30
Copper, Total Recoverable	lb/day ^[3]	0.96		3.8	9.6
Lead, Total Recoverable	µg/L	2.0		8.0	20
Lead, Total Recoverable	lb/day ^[3]	0.64		2.6	6.4
Mercury, Total Recoverable	µg/L	0.040		0.16	0.40

²⁰ MBNMS Management Plan (2021). The MBNMS includes a variety of habitats that support extensive marine life, including 34 species of marine mammals, over 180 species of seabirds and shorebirds, at least 525 fish species, 4 sea turtle species, 31 different invertebrate phyla, and over 450 species of marine algae. Its highly productive biological communities host one of the highest levels of marine biodiversity in the world, including 27 federally listed threatened and endangered species. The MBNMS Management Plan can be accessed online at: <https://montereybay.noaa.gov/intro/mp/>

Parameter	Units	6-Month Median	AMEL	MDEL ^[1]	IMAX ^[2]
Mercury, Total Recoverable	lb/day ^[3]	0.013		0.051	0.13
Nickel, Total Recoverable	µg/L	5.0		20	50
Nickel, Total Recoverable	lb/day ^[3]	1.6		6.4	16
Selenium, Total Recoverable	µg/L	15		60	150
Selenium, Total Recoverable	lb/day ^[3]	4.8		19	48
Silver, Total Recoverable	µg/L	0.70		2.8	7.0
Silver, Total Recoverable	lb/day ^[3]	0.22		0.89	2.2
Zinc, Total Recoverable	µg/L	20		80	200
Zinc, Total Recoverable	lb/day ^[3]	6.4		26	64
Cyanide, Total ^[5]	µg/L	1.0		4.0	10
Cyanide, Total ^[5]	lb/day ^[3]	0.32		1.3	3.2
Chlorine, Total Residual ^[6]	µg/L	2.0		8.0	60
Chlorine, Total Residual ^[6]	lb/day ^[3]	0.64		2.6	19
Ammonia, Total (as N)	µg/L	600		2,400	6,000
Ammonia, Total (as N)	lb/day ^[4]	190		770	1,900
Acute Toxicity ^[7]	Pass/Fail			Pass	
Chronic Toxicity ^[7]	Pass/Fail			Pass	
Phenols, (Non-chlorinated) ^[8]	µg/L	30		120	300
Phenols, (Non-chlorinated) ^[8]	lb/day ^[3]	9.6		38	96
Phenols, (Chlorinated) ^[8]	µg/L	1.0		4.0	10
Phenols, (Chlorinated) ^[8]	lb/day ^[3]	0.32		1.3	0.33
Endosulfan ^[8]	µg/L	0.0090		0.018	0.027
Endosulfan ^[8]	lb/day ^[3]	0.0029		0.0057	0.0086
Endrin	µg/L	0.0020		0.0040	0.0060
Endrin	lb/day ^[3]	0.00064		0.0013	0.0019
Hexachlorocyclohexane (HCH) ^[8]	µg/L	0.0040		0.0080	0.012
HCH ^[8]	lb/day ^[3]	0.0013		0.0026	0.0038

Parameter	Units	6-Month Median	AMEL	MDEL ^[1]	IMAX ^[2]
Radioactivity	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, section 30253 of the California Code of Regulations. Reference to section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.				
Human Health (Non-carcinogens)					
Acrolein	µg/L		220		
Acrolein	lb/day ^[3]		70		
Antimony, Total Recoverable	µg/L		1,200		
Antimony, Total Recoverable	lb/day ^[3]		380		
Bis (2-Chloroethoxy) Methane	µg/L		4.4		
Bis (2-Chloroethoxy) Methane	lb/day ^[3]		1.4		
Bis (2-Chloroisopropyl) Ether	µg/L		1,200		
Bis (2-Chloroisopropyl) Ether	lb/day ^[3]		380		
Chlorobenzene	µg/L		570		
Chlorobenzene	lb/day ^[3]		180		
Chromium (III) Total Recoverable	µg/L		190,000		
Chromium (III) Total Recoverable	lb/day ^[3]		61,000		
Di-n-butyl Phthalate	µg/L		3,500		
Di-n-butyl Phthalate	lb/day ^[3]		1,100		
Dichlorobenzenes, Sum ^[8]	µg/L		5,100		
Dichlorobenzenes, Sum ^[8]	lb/day ^[3]		1,600		
Diethyl Phthalate	µg/L		33,000		
Diethyl Phthalate	lb/day ^[3]		11,000		
Dimethyl Phthalate	µg/L		820,000		
Dimethyl Phthalate	lb/day ^[3]		260,000		
4,6-Dinitro-2-Methylphenol	µg/L		220		
4,6-Dinitro-2-Methylphenol	lb/day ^[3]		70		
2,4-Dinitrophenol	µg/L		4.0		
2,4-Dinitrophenol	lb/day ^[3]		1.3		
Ethylbenzene	µg/L		4,100		
Ethylbenzene	lb/day ^[3]		1,300		
Fluoranthene	µg/L		15		
Fluoranthene	lb/day ^[3]		4.8		

Parameter	Units	6-Month Median	AMEL	MDEL ^[1]	IMAX ^[2]
Hexachlorocyclopentadiene	µg/L		58		
Hexachlorocyclopentadiene	lb/day ^[3]		19		
Nitrobenzene	µg/L		4.9		
Nitrobenzene	lb/day ^[3]		1.6		
Thallium, Total Recoverable	µg/L		2.0		
Thallium, Total Recoverable	lb/day ^[3]		0.64		
Toluene	µg/L		85,000		
Toluene	lb/day ^[3]		27,000		
Tributyltin (TBT)	µg/L		0.0014		
TBT	lb/day ^[3]		0.0045		
1,1,1-Trichloroethane	µg/L		540,000		
1,1,1-Trichloroethane	lb/day ^[3]		170,000		
Human Health (Carcinogens)					
Acrylonitrile	µg/L		0.10		
Acrylonitrile	lb/day ^[3]		0.032		
Aldrin	µg/L		0.000022		
Aldrin	lb/day ^[3]		0.0000070		
Benzene	µg/L		5.9		
Benzene	lb/day ^[3]		1.9		
Benzidine	µg/L		0.000069		
Benzidine	lb/day ^[3]		0.000022		
Beryllium, Total Recoverable	µg/L		0.033		
Beryllium, Total Recoverable	lb/day ^[3]		0.011		
Bis (2-Chloroethyl) Ether	µg/L		0.045		
Bis (2-Chloroethyl) Ether	lb/day ^[3]		0.014		
Bis (2-Ethylhexyl) Phthalate	µg/L		3.5		
Bis (2-Ethylhexyl) Phthalate	lb/day ^[3]		1.1		
Carbon Tetrachloride	µg/L		0.90		
Carbon Tetrachloride	lb/day ^[3]		0.29		
Chlordane ^[8]	µg/L		0.000023		
Chlordane ^[8]	lb/day ^[3]		0.0000073		
Dibromochloromethane	µg/L		8.6		
Dibromochloromethane	lb/day ^[3]		2.7		
Chloroform	µg/L		130		
Chloroform	lb/day ^[3]		41		

Parameter	Units	6-Month Median	AMEL	MDEL ^[1]	IMAX ^[2]
DDT/DDD/DDE, Sum of P,P and O,P Isomers ^[8]	µg/L		0.00017		
DDT/DDD/DDE, Sum of P,P and O,P Isomers ^[8]	lb/day ^[3]		0.000054		
1,4-Dichlorobenzene	µg/L		18		
1,4-Dichlorobenzene	lb/day ^[3]		5.7		
3,3'-Dichlorobenzidine	µg/L		0.0081		
3,3'-Dichlorobenzidine	lb/day ^[3]		0.0026		
1,2-Dichloroethane	µg/L		28		
1,2-Dichloroethane	lb/day ^[3]		8.9		
1,1-Dichloroethylene	µg/L		0.90		
1,1-Dichloroethylene	lb/day ^[3]		0.29		
Dichlorobromomethane	µg/L		6.2		
Dichlorobromomethane	lb/day ^[3]		2.0		
Methylene Chloride	µg/L		450		
Methylene Chloride	lb/day ^[3]		140		
1,3-Dichloropropylenes, Sum	µg/L		8.9		
1,3-Dichloropropylenes, Sum	lb/day ^[3]		2.8		
Dieldrin	µg/L		0.000040		
Dieldrin	lb/day ^[3]		0.000013		
2,4-Dinitrotoluene	µg/L		2.6		
2,4-Dinitrotoluene	lb/day ^[3]		0.83		
1,2-Diphenylhydrazine	µg/L		0.16		
1,2-Diphenylhydrazine	lb/day ^[3]		0.051		
Halomethanes, Sum ^[8]	µg/L		130		
Halomethanes, Sum ^[8]	lb/day ^[3]		41		
Heptachlor	µg/L		0.000050		
Heptachlor	lb/day ^[3]		0.000016		
Heptachlor Epoxide	µg/L		0.000020		
Heptachlor Epoxide	lb/day ^[3]		0.0000064		
Hexachlorobenzene	µg/L		0.00021		
Hexachlorobenzene	lb/day ^[3]		0.000067		
Hexachlorobutadiene	µg/L		14		
Hexachlorobutadiene	lb/day ^[3]		4.5		
Hexachloroethane	µg/L		2.5		
Hexachloroethane	lb/day ^[3]		0.80		

Parameter	Units	6-Month Median	AMEL	MDEL ^[1]	IMAX ^[2]
Isophorone	µg/L		730		
Isophorone	lb/day ^[3]		230		
N-Nitrosodimethylamine	µg/L		7.3		
N-Nitrosodimethylamine	lb/day ^[3]		2.3		
N-Nitrosodi-N-Propylamine	µg/L		0.38		
N-Nitrosodi-N-Propylamine	lb/day ^[3]		0.12		
N-Nitrosodiphenylamine	µg/L		2.5		
N-Nitrosodiphenylamine	lb/day ^[3]		0.80		
PAHs ^[8]	µg/L		0.0088		
PAHs ^[8]	lb/day ^[3]		0.0028		
PCBs, Sum ^[9]	µg/L		0.000019		
PCBs, Sum ^[9]	lb/day ^[3]		0.0000061		
TCDD Equivalents ^[8]	µg/L		3.9E-09		
TCDD Equivalents ^[8]	lb/day ^[3]		1.2E-09		
1,1,2,2-Tetrachloroethane	µg/L		2.3		
1,1,2,2-Tetrachloroethane	lb/day ^[3]		0.73		
Tetrachloroethene	µg/L		2.0		
Tetrachloroethene	lb/day ^[3]		0.64		
Toxaphene	µg/L		0.00021		
Toxaphene	lb/day ^[3]		0.000067		
Trichloroethene	µg/L		27		
Trichloroethene	lb/day ^[3]		8.6		
1,1,2-Trichloroethane	µg/L		9.4		
1,1,2-Trichloroethane	lb/day ^[3]		3.0		
2,4,6-Trichlorophenol	µg/L		0.29		
2,4,6-Trichlorophenol	lb/day ^[3]		0.093		
Vinyl Chloride	µg/L		36		
Vinyl Chloride	lb/day ^[3]		11		

^[1] The MDEL shall apply to 24-hour composite samples, and also grab samples of ammonia, total chlorine, phenolic compounds, and toxicity. The MDEL shall also apply to continuous monitoring.

^[2] The IMAX shall apply to grab samples other than ammonia, total chlorine, phenolics, and toxicity. The IMAX shall also apply to continuous monitoring.

^[3] The mass-based effluent limitations in Table 6 were calculated using Equation 3 of the Ocean Plan as follows:

$$\text{lb/day} = 0.00834 \times C_e \times Q,$$

where C_e is the concentration-based effluent limit ($\mu\text{g/L}$) and $Q = 38.26$ MGD is the permitted dry weather flow rate for final commingled effluent (including 29.6 MGD of permitted total M1W RTP effluent and 8.66 MGD of permitted Cal-AM desalination plant brine waste).

- [4] Dischargers may at their option meet this objective as a total chromium objective.
- [5] If the Dischargers can demonstrate to the satisfaction of the Central Coast Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR part 136, as revised May 14, 1999.
- [6] Limitations for total chlorine residual applying to intermittent discharges not exceeding two hours shall be recalculated using the following equation:
- $$\log y = -0.43 (\log x) + 1.8$$
- where y is the concentration limitation in Table 6 above and x is the duration of uninterrupted chlorine discharge in minutes.
- [7] As specified in section 7.11 of this Order and section 5 of the MRP.
- [8] As defined in Attachment A.
- [9] For compliance with the Ocean Plan PCBs, as defined in Attachment A.

Table F-22. Summary of Final Commingled Waste (After Dilution) Bacteria WQBELs (with compliance measured at Monitoring Location EFF-001B)

Parameter	Units	Instantaneous Maximum (IMAX)	Maximum Monthly Median	Maximum 30-Day Geometric Mean ^{[1],[2]}	Maximum 6-Week Geometric Mean ^{[2],[3]}
Enterococci	MPN/100 mL	110 ^[4]			30
Fecal Coliform	MPN/100 mL	400		200	
Total Coliform	MPN/100 mL	230 ^[4]	70		

- [1] Compliance is determined from the five most recent samples.
- [2] Geometric mean effluent limits shall be applied based on a statistically sufficient number of samples, which is not less than five samples distributed over a six-week period. If a statistically significant number of samples is not available to calculate the geometric mean, then attainment of the WQO shall be determined based only on the IMAX.
- [3] Compliance is determined as a rolling 6-week geomean, calculated weekly.
- [4] Not to be exceeded by more than 10 percent of the samples collected in a calendar month.

4.4. Final Effluent Limitation Considerations

4.4.1. Anti-Backsliding Requirements

As set forth above, sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) restrict backsliding in NPDES permits. Sections 402(o)(2) and 303(d)(4) of the CWA provide statutory exceptions to the general prohibition of backsliding contained in CWA sections 402(o)(1) and 303(d)(4). Although this is technically a new permit issuance, all existing concentration-based effluent limits from the existing M1W permit have been retained in this Order due to the dynamic conditions of effluent flow conditions, potential cumulative effects of various pollutants present at low levels in the discharge, and the sensitivity of the receiving water. This is consistent with anti-backsliding requirements. Furthermore, all effluent limitations established for the MPWSP Desalination Plant are new, and therefore not subject to anti-backsliding requirements.

4.4.2. Antidegradation Requirements

4.4.2.1. Regulatory Background

Federal regulations at 40 CFR section 131.12 require that state water quality standards include an antidegradation policy consistent with federal requirements. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. Where the federal antidegradation policy is applicable, the State Water Board has interpreted Resolution 68-16 to incorporate the federal antidegradation policy.²¹

The permitted discharge must be consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution 68-16. Section 131.12 of 40 CFR and Resolution 68-16 require that high quality waters be maintained unless degradation is justified by specific findings. The Central Coast Water Board finds that the permitted discharges authorized by this Order are consistent with the antidegradation provisions of 40 CFR section 131.12 and Resolution 68-16, as set forth herein.

Since this Order is an NPDES permit, compliance with the federal antidegradation policy requires consideration of two water quality tiers. Under the first tier, the Central Coast Water Board must ensure that "existing instream uses and the level of water quality necessary to protect the existing uses" are maintained and protected (40 CFR § 131.12(a)(1)). This provision has been interpreted to mean that "[i]f baseline water quality is equal to or less than the

²¹ See State Water Board Order WQ 86-17 (*In the Matter of the Petition of Rimmon C. Fay*), pp. 16-19. Available online at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/1986/wq1986_17.pdf.

quality as defined by the water quality objective, water quality shall be maintained or improved to a level that achieves the objectives.”²²

Under the second tier, if the baseline quality of a water body “exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected” through the requirements of the Order unless the Central Coast Water Board makes findings that: (1) any lowering of the water quality is “necessary to accommodate important economic or social development in the area in which the waters are located,” (2) “water quality adequate to protect existing uses fully” is ensured, and (3) “the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control” are achieved (40 CFR § 131.12(a)(2)). Under this second-tier review, the Central Coast Water Board may identify the waters for protection through the public process of a permitting action. Before allowing any lowering of high-quality water, the Central Coast Water Board must conduct an analysis of alternatives that evaluates practicable alternatives that would prevent or lessen the degradation associated with the discharges permitted. In the context of 40 CFR section 131.12(a)(2)(ii), practicable means “technologically possible, able to be put into practice, and economically viable.” (40 CFR § 131.3(n)).

This Order must also comply with any requirements of Resolution 68-16 beyond those imposed through incorporation of the federal antidegradation policy (State Water Board Order WQ 86-17 (*Fay*), p. 23, fn. 11). Resolution 68-16 requires findings that any lowering of water quality is (a) “consistent with the maximum benefit to the people of the State,” that it (b) “will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies,” and (c) that the discharge is subject to “waste discharge requirements which will result in the best practicable treatment or control of the discharge.”²³

²² See State Water Board, Administrative Procedures Update 90-004, *Antidegradation Policy Implementation for NPDES Permitting* (APU 90-004), p. 4. Available online at: https://www.waterboards.ca.gov/water_issues/programs/npdes/docs/apu_90_004.pdf

²³ State Water Board Resolution 68-16, Resolve 2. Best practicable treatment or control (BPTC) is not defined in Resolution 68-16; however, the State Water Board has evaluated what level of treatment or control is technically achievable using “best efforts.” (See State Water Board Orders WQ 81-5 (City of Lompoc), WQ 82-5 (Chino Basin Municipal Water District), WQ 90-6 (Environmental Resources Protection Council)). A State Water Board questions and answers document on Resolution 68-16 states that “(t)o evaluate the best practicable treatment or control method, the discharger should compare the proposed method to existing proven technology; evaluate performance data, e.g. through treatability studies; compare alternative methods of treatment or control; and/or consider the method currently used by the discharger or similarly situated dischargers... The costs of the treatment or control should also be

4.4.2.2. Determining the Need for an Antidegradation Analysis

As an initial matter, the Central Coast Water Board must determine whether an antidegradation analysis is necessary when issuing or reissuing an NPDES permit (APU 90-004, p. 1). According to APU 90-004, a key policy and guidance document for implementation of the antidegradation policies, if a “Regional Board has no reason to believe that existing water quality will be reduced due to the proposed action, no antidegradation analysis is required.” (APU 90-004, p. 2).

In this case, there are two waste streams that could potentially degrade water quality: The first is the M1W total combined waste stream (commingled M1W RTP secondary-treated waste, M1W APWF RO concentrate, and/or M1W hauled saline waste), which was the subject of the 2024 NPDES Permit in Order R3-2024-0045. The second is the new Cal-Am MPWSP Desalination Plant brine waste stream.

Based on the available information, the Central Coast Water Board finds that existing receiving water quality will not be significantly reduced due to the discharge from the M1W RTP and M1W APWF. The M1W RTP has been discharging, and has continuously held an NPDES permit for that discharge, since 1990. This finding is in agreement with that of Order R3-2024-0045, which considered an expansion of the M1W APWF to treat additional agricultural and stormwater runoff source water and which found that there was no significant change to water quality and that antidegradation policies were satisfied. Considering decades of water quality data and the fact that the quality of the M1W discharge has not changed substantially from the first time the discharge occurred, it is reasonable to conclude that the existing effluent water quality from the total M1W waste stream will continue to remain substantively the same. Modifications will also be made to the M1W diffuser and outfall during the term of this Order, which will increase the initial dilution of the effluent and thus improve the quality of the discharge. Thus, the receiving water quality will not be reduced as a result the continued combined RTP discharge.

With respect to the new MPWSP Desalination Plant brine waste stream, the submitted technical analyses and data indicate that the addition of commingled MPWSP Desalination Plant brine waste will likely not degrade the water quality with the proposed mixing scenarios and outfall modifications. However, because the MPWSP Desalination Plant brine waste stream is a new discharge that will be combined with the existing waste streams, the Central Coast Water Board finds that an antidegradation analysis is appropriate to include in this Order.

considered....” (State Water Board, *Questions and Answers: Resolution 68-16, Statement of Policy with Respect to Maintaining High Quality Waters in California* (February 16, 1995), pp. 5-6. Available online at: https://www.waterboards.ca.gov/water_issues/programs/dept_of_defense/docs/5g.pdf).

4.4.2.3. Simple Antidegradation Analysis

APU 90-004 indicates that a waterbody-by-waterbody and pollutant-by-pollutant analysis is only required when conducting a “complete” antidegradation analysis; a complete analysis, in turn, is not required where a “Regional Board determines that the reduction of water quality will be spatially localized or limited with respect to the waterbody; e.g., confined to the mixing zone” (APU 90-004, p. 2).

APU 90-004 does not provide guidance on the scope and content of a simple antidegradation analysis. APU 90-004 fails to define the terms “temporally limited”, “long term”, or “spatially localized”, but it does give an example of a spatially localized discharge that is relevant to this case. Each of those terms must be interpreted in the context of the types of discharges being permitted, the characteristics of the water body itself, and with deference to the BPJ of the Central Coast Water Board.

In this case, the Central Coast Water Board finds that a simple antidegradation analysis is appropriate because any potential reduction in water quality that may occur as a result of the discharge will be confined to the mixing zone and therefore spatially localized. Modeled ocean mixing due to the discharge of Cal-Am MPWSP Desalination Plant brine found the maximum size of the brine mixing zone to be at most 175 ft from the Dischargers’ diffuser, well below the 100-m (328-ft) limit for brine discharges in the Ocean Plan. In addition, the brine waste stream is not a continuous discharge and therefore is temporally limited.

4.4.2.3.1. Baseline Receiving Water Quality

The first step in any antidegradation analysis is to determine what year to use for the baseline water quality. The baseline water quality considered in making the appropriate findings is the best quality of the water since 1968, the year of adoption of Resolution 68-16, or a lower level if that lower level was allowed through a permitting or other regulatory action, such as establishing a WQO, that was consistent with the federal and state antidegradation policies.²⁴

Here, the appropriate baseline is not 1968, but rather 1990 for every pollutant except salinity. There are several reasons for this. First, the appropriate baseline is determined by the date on which a policy establishing the level of water quality to protect was effective (Resolution 68-16, Resolve 1). The Central Coast Water Board’s Basin Plan has been updated and amended several times since 1971, when it was first adopted, to include new or revised

²⁴ APU 90-004, p.4; see also *Asociacion de Gente Unida por el Agua (AGUA) v. Central Valley Water Board* (2012) 210 Cal.App.4th 1255,1270. The baseline for the application of the state antidegradation policy is generally the highest water quality achieved since 1968, the year the policy was adopted. The baseline for application of the federal antidegradation policy is 1975, which is the date used in 40 CFR section 131.3(e) to define existing uses of a water body.

WQOs. The Ocean Plan was also updated to include new WQOs applicable to this discharge in 1990. Therefore, the appropriate baseline is 1990, which is the same year that discharge commenced from the RTP for almost every pollutant.

The new Cal-Am MPWSP Desalination Plant will add desalination brine waste to the discharge, therefore, additional salinity will be added to the waste stream and could potentially influence receiving water quality. For the MPWSP Desalination Plant brine waste stream, the numeric WQO for salinity for discharges from desalination plants was established in the Ocean Plan in 2019. Prior to that time, there was no numeric WQO for salinity. Therefore, for the purpose of this analysis, the Central Coast Water Board uses 2019 as the baseline for salinity to assess the MPWSP Desalination Plant brine waste.

4.4.2.3.2. Tier Analysis

As previously discussed, the federal antidegradation policy sets forth two tier designations to describe water quality in the receiving water:

Tier 1 Designation: Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected (40 CFR § 131.12(a)(1)).

Tier 2 Designation: Where the quality of waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the state finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the state's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the state shall ensure water quality adequate to protect existing uses fully. Further, the state shall ensure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control (40 CFR § 131.12(a)(2)).

The WQOs applicable to the receiving water are set forth in the Ocean Plan, the Basin Plan, and the Thermal Plan. The tier designation is assigned on a pollutant-by-pollutant basis.²⁵ Information in the MPWSP Final EIR/EIS,²⁶ the

²⁵ Baseline water quality is pollutant specific, not waterbody specific. (APU 90-004, p. 4; see, also, State Water Board Order WQ 91-10 and State Water Board, *Questions and Answers: Resolution 68-16, Statement of Policy with Respect to Maintaining High Quality Waters in California*, February 16, 1995).

²⁶ California Public Utilities Commission and MBNMS. *Cal-Am Monterey Peninsula Water Supply Project Final Environmental Impact Report/Environmental Impact Statement for the Monterey Peninsula Water Supply Project SCH# 2006101004*. (March 2018). Available online at: <https://www.watersupplyproject.org/eir>

Dischargers' ROWD, and the results of the RPA indicate that there are only certain pollutants that could potentially affect the receiving water. These include salinity (a primary component of the new Cal-Am MPWSP Desalination Plant brine waste), and cadmium, cyanide, total residual chlorine, ammonia, non-chlorinated phenolic compounds, chlorinated phenolic compounds, acrylonitrile, DDT, dieldrin, PAHs, toxaphene, and 2,4,6-trichlorophenol (Endpoint 1 results in the statistical RPA discussed in Fact Sheet section 4.3.2.2).²⁷

The Central Coast Water Board finds that the receiving waters of Monterey Bay in the area of the discharge are high-quality waters for all relevant parameters. Here, the M1W outfall/diffuser system for the Facilities, and therefore the discharge, is located outside of the Basin Plan's Monterey Bay prohibition zone.²⁸ However, the receiving water is part of the MBNMS, which has been recognized for its unique and diverse biological and physical characteristics and which contains a variety of habitats that support extensive marine life. Oceanographic conditions in the area of the discharge include strong currents, seasonal upwelling, and wave-driven mixing that promote dispersion of discharged effluent. The receiving water supports numerous beneficial uses designated in the Ocean Plan and Basin Plan, including but not limited to marine habitat, water contact and non-contact recreation, commercial and sport fishing, and rare and endangered species habitat. The receiving waters are not listed as impaired on the CWA section 303(d) list for any of the pollutants of concern. These waters are therefore considered high-quality waters for purposes of antidegradation review. Accordingly, the receiving water is subject to Tier 2 antidegradation protection. The Central Coast Water Board's conclusion that the terms and conditions of the Order are consistent with the antidegradation policies is based on the analysis discussed in section 4.4.2.3.3 below.

4.4.2.3.3. Pollutants of Concern That Could Potentially Affect Water Quality

4.4.2.3.3.1. Salinity

Salinity is the primary water quality pollutant associated with desalination brine discharges. The 2019 Ocean Plan limits the increase in salinity to no more than 2 ppt above natural background at the edge of the brine mixing zone, defined as no more than 100 m horizontally from the discharge point. As explained in Fact Sheet section 4.3.2.5, the lower range of the natural background salinity is 33.9 psu, so the salinity effluent limitation was calculated to be 35.9 ppt. The MPWSP EIR/EIS and associated technical studies evaluated potential salinity impacts using hydrodynamic plume modeling of the combined discharge. The modeling indicates that when the

²⁷ The WQOs for each of these pollutants are listed in Table 3 of the Ocean Plan.

²⁸ Effluent from the Facilities will discharge through the ocean outfall at Discharge Point 001 to the coastal waters of Pacific Ocean at Monterey Bay less than three miles offshore.

desalination brine is blended with the total M1W waste stream, the commingled discharge plume becomes less dense than the receiving water and rises through the water column, resulting in considerable dilution within the ZID.

Brine plume modeling conducted for the MPWSP EIR/EIS and an addendum to the ROWD evaluated salinity concentrations within the diffuser region, the ZID, and the brine mixing zone extending approximately 175 ft (53 m) from the diffuser. Modeling was conducted across multiple oceanographic conditions to evaluate plume behavior under varying currents and stratification conditions. The study concluded that the proposed modifications to the diffuser and the blending configuration will provide sufficient dilution (at least 101:1 seawater:effluent) to achieve salinity concentrations that approach ambient ocean conditions within a relatively short distance from the diffuser. Modeled chronic salinity increases were approximately 0.19 to 0.20 ppt for the blended discharge, while peak salinity increases ranged from 0.33 to 0.35 ppt above ambient. Operational monitoring requirements, salinity effluent limitations for the brine waste stream, and plume tracking requirements were incorporated into this Order to verify plume behavior and compliance with Ocean Plan salinity requirements after operations commence at the Cal-Am MPWSP Desalination Plant.

Considering the modeling results and review of the available materials, the Central Coast Water Board finds that the commingled discharge is expected to achieve adequate dilution to comply with applicable Ocean Plan section III.M salinity requirements at the edge of the mixing zone.

4.4.2.3.3.2. Ocean Plan Table 3 Parameters

Effluent plume modeling was carried out to determine the expected dilution ratios under a variety of discharge scenarios, resulting in permitted Dms between 101 and 464, as described in Fact Sheet section 2.1.5. These modeling scenarios were executed with ammonia as the tracer, which was considered to be the pollutant of highest concern. As described in Fact Sheet section 4.3.3.1, these Dms were used in a reasonable potential analysis, which resulted in effluent limitations for all of the Ocean Plan Table 3 pollutants, including 12 pollutants with reasonable potential determined from a statistical analysis of effluent data submitted with the ROWD (cadmium, cyanide, total residual chlorine, ammonia, non-chlorinated phenolic compounds, chlorinated phenolic compounds, acrylonitrile, DDT, dieldrin, PAHs, toxaphene, and 2,4,6-trichlorophenol).

Due to the variability of flow conditions, increasing complexity and changing composition of the discharge, and sensitivity of the receiving water, the Central Coast Water Board determined via BPJ that WQBELs were required for all Ocean Plan Table 3 parameters. As a result, effluent limitations were established for all pollutants, along with appropriate monitoring and reporting to confirm compliance. The most restrictive Dm in this Order (101)

was used to inform the mass-based effluent limitations, which is more restrictive than the lowest Dm from the 2024 Order R3-2024-0045. This results in a decrease in permitted mass discharge of each Ocean Plan Table 3 pollutant, despite the inclusion of a new waste stream (Cal-Am Desalination Plant brine waste). The controls in place in this Order thus ensure that water quality is preserved and that beneficial uses are protected.

4.4.2.4. Antidegradation Findings – Federal Antidegradation Policy

As discussed in Fact Sheet section 4.4.2.3.2 above, the receiving waters of Monterey Bay in the area of the discharge exceed the levels necessary to support beneficial uses and therefore qualify as Tier 2 high-quality waters under 40 CFR section 131.12(a)(2).

For high quality, Tier 2 waters, the Central Coast Water Board has determined that issuance of an NPDES permit for the commingled discharge will not result in unacceptable degradation of water quality. This determination is based on the following: (1) modeling and technical analyses have demonstrated that salinity and Ocean Plan Table 3 pollutants will meet applicable WQOs at the edge of the mixing zone; (2) any water quality changes will occur within a limited mixing zone associated with the ocean outfall diffuser, which has been modified to maintain compliance with Ocean Plan objectives under multiple discharge scenarios; (3) this Order establishes effluent limitations, prohibitions, special studies, and monitoring requirements to ensure continued compliance with Ocean Plan and Basin Plan requirements; and (4) this Order requires Cal-Am to submit for Central Coast Water Board approval and comply with a Marine Life Mitigation Plan to mitigate any potential impacts related to the addition of the MPWSP Desalination Plant brine waste stream.

However, the federal antidegradation policy requires that before any lowering of water quality pursuant to 40 CFR section 131.2(a)(2) the state must find, “after an analysis of alternatives,²⁹ that such lowering is necessary to accommodate important economic or social development in the area in which the waters are located.” (40 CFR § 131.2(a)(2)(ii)).

4.4.2.4.1 Alternatives Analysis

The Central Coast Water Board has considered the feasibility of alternative strategies that might reduce, eliminate, or compensate for the negative impacts of the proposed discharge, as follows.

A possible alternative is the disallowance of Cal-Am MPWSP Desalination Plant potable water production, which would eliminate the need to discharge

²⁹ “The analysis of alternatives shall evaluate a range of practicable alternatives that would prevent or lessen the degradation associated with the proposed activity. When the analysis of alternatives identifies one or more practicable alternatives, the State shall only find that a lowering is necessary if one such alternative is selected for implementation.” (40 CFR § 131.12(a)(2)(ii)).

desalination brine waste. However, because the Monterey Peninsula currently faces a strict legal cap on use of its traditional water sources, including the Carmel River and Seaside groundwater basin, the Cal-Am MPWSP Desalination Plant water supply is necessary, as determined by the CPUC approval.

Similarly, a discontinuation of secondary treatment at the M1W RTP is not an acceptable alternative either. While this would alleviate the need for the discharge of secondary treated wastewater, it would also require the disallowance of Cal-Am MPWSP Desalination Plant brine waste discharge, which depends on the M1W RTP secondary effluent to undergo the required initial dilution. Furthermore, the M1W facilities are critical in their own right, providing wastewater treatment for northern Monterey County, preventing pollution of Monterey Bay, and providing the influent flows to the Pure Water Monterey recycled water project (via the AWP).

The Central Coast Water Board has also considered altering the discharge location. Discharges into the nearby Salinas River would result in higher environmental impacts, with lower WQOs requiring the implementation of higher levels of treatment at the M1W RTP, and likely disallowing Cal-Am Desalination Plant brine waste discharge. The Salinas River is also unlikely to support the initial dilution allowances permitted in this Order. Finally, disposal of treatment byproducts to other facilities by truck is not an acceptable alternative considering the high volumetric flow rates permitted (e.g., up to 8.66 MGD of MPWSP Desalination Plant brine waste), let alone the economic feasibility of such an endeavor.

The Central Coast Water Board thus finds that the permitted discharge to the Pacific Ocean, considering initial dilution and effluent limitations that are expected to result in compliance with applicable WQOs, is the most appropriate and feasible alternative strategy.

Based on the above findings, the Central Coast Water Board concludes that the proposed discharge will not cause or contribute to an exceedance of WQOs and will not result in degradation inconsistent with the Tier 2 antidegradation requirements of 40 CFR section 131.12(a)(2).

4.4.2.5. Antidegradation Findings – State Water Board Resolution 68-16

4.4.2.5.1. Any Lowering of Water Quality Is Consistent with the Maximum Benefit to the People of the State

The Central Coast Water Board performed a socioeconomic analysis to evaluate whether potential degradation of the receiving water due to the proposed discharge is of the maximum benefit to the people of the state. As stated in the MPWSP EIR/EIS, the MPWSP Desalination Plant is intended to provide a reliable and drought-resilient water supply for the Monterey Peninsula, which currently faces regulatory constraints and reductions in its primary water sources, including the Carmel River and the Seaside groundwater basin. State and court orders require reductions in water

withdrawals from these sources to protect environmental resources and prevent groundwater depletion. Addition of the desalinated water supply from the MPWSP Desalination Plant will diversify available water resources, reduce reliance on environmentally sensitive water sources, and improve long-term water supply reliability for communities and businesses on the Monterey Peninsula. The MPWSP has undergone extensive federal and state environmental review, and the discharge will be subject to these NPDES permit conditions ensuring protection of receiving water quality and beneficial uses.

Accordingly, the Central Coast Water Board finds that the proposed discharge is consistent with maximum benefit to the people of the state, as required by Resolution 68-16.

4.4.2.5.2. Any Lowering of Water Quality Will Not Unreasonably Affect Present and Anticipated Beneficial Uses of Waters and Will Not Result in Water Quality Less Than That Described in Applicable Policies

As previously discussed, it is not anticipated that the proposed discharge will significantly affect water quality. The conditions of this Order ensure that all applicable WQOs will be met and that beneficial uses will be protected. Any potential changes in salinity of the receiving water are expected to be temporary and limited to the mixing zone.

4.4.2.5.3. The Discharge Is Subject to BPT

Best practicable treatment or control (BPT) is not defined in Resolution 68-16; however, the State Water Board has evaluated what level of treatment or control is technically achievable using “best efforts.” (State Water Board Orders WQ 81-5 (City of Lompoc), WQ 82-5 (Chino Basin Municipal Water District), WQ 90-6 (Environmental Resources Protection Council)). A State Water Board questions and answers document on Resolution 68-16 states as follows: “To evaluate the best practicable treatment or control method, the discharger should compare the proposed method to existing proven technology; evaluate performance data, e.g. through treatability studies; compare alternative methods of treatment or control; and/or consider the method currently used by the discharger or similarly situated dischargers.... The costs of the treatment or control should also be considered...”³⁰

Here, the Central Coast Water Board finds that the Order requires BPT for all pollutants. The M1W facilities employ secondary treatment, tertiary treatment, and source control programs. In addition, the MPWSP Desalination Plant will employ the Ocean Plan-preferred subsurface intake technology and treatment processes, including RO and pretreatment. Comingling of the effluent through

³⁰ State Water Board, *Questions and Answers: Resolution 68-16, Statement of Policy with Respect to Maintaining High Quality Waters in California* (February 16, 1995), pp. 5-6. Available online at: https://www.waterboards.ca.gov/water_issues/programs/dept_of_defense/docs/5q.pdf).

the modified multiport diffuser will provide optimized dilution and dispersion of the effluent. This Order also includes applicable TBELs, WQBELs for all Ocean Plan Table 3 pollutants, effluent limitations and provisions related to Ocean Plan section III.M desalination requirements, additional special provisions, and a robust MRP. Therefore, the Facilities' infrastructure and the conditions established in this Order meet the BPT requirement.

4.4.2.6. Final Antidegradation Analysis Determination

Considering the analysis above, the Central Coast Water Board concludes that issuance of this NPDES permit authorizing the commingled discharge of the MPWSP Desalination Plant brine waste and the M1W waste streams through the modified ocean outfall diffuser is consistent with the federal antidegradation policy (40 CFR §131.12) and State Water Board Resolution 68-16. The Central Coast Water Board has determined that the discharge will maintain and protect existing beneficial uses of Monterey Bay, comply with the applicable WQOs, and will result in only limited and controlled mixing of the discharge with the receiving water, consistent with Ocean Plan requirements. Therefore, issuance of the NPDES permit is consistent with applicable federal and state antidegradation requirements.

4.4.3. No Unreasonable Degradation of Marine Environment

Section 403 of the CWA and its implementing regulations, specifically 40 CFR part 125, subpart M (Ocean Discharge Criteria), establish guidelines for issuance of NPDES permits for the discharge of pollutants from a point source into the territorial seas, the contiguous zone, and the oceans (40 CFR § 125.120). 40 CFR section 125.122 requires a determination of whether a discharge will cause unreasonable degradation of the marine environment. The Central Coast Water Board is treating the discharge as subject to the criteria set forth therein.

Pursuant to 40 CFR section 125.122 (b), discharges in compliance with state water quality standards shall be presumed not to cause unreasonable degradation of the marine environment. For the reasons set forth in section 4.4.2 of this Fact Sheet, the Central Coast Water Board finds this presumption applies and that the discharge does not cause unreasonable degradation of the marine environment.

4.4.4. Stringency of Requirements for Individual Pollutants

This Order contains both TBELs and WQBELs for individual pollutants. The TBELs consist of restrictions on CBOD₅, TSS, and pH. Restrictions on these pollutants are discussed in section 4.2 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements.

WQBELs have been derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law and are the applicable federal water quality standards. The procedures for calculating the individual WQBELs are based on the 2019 version of the Ocean

Plan. Certain beneficial uses and WQOs contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless “applicable water quality standards for purposes of the CWA” pursuant to 40 CFR section 131.21(c)(1). Restrictions on these pollutants are discussed in section 4.3 of this Fact Sheet.

4.5. Interim Effluent Limitations – Not Applicable

4.6. Land Discharge Specifications- Not Applicable

4.7. Recycling Specifications

This Order allows the production of disinfected tertiary recycled water in compliance with applicable state and local requirements regarding the production and use of recycled wastewater, including those requirements established by the State Water Board Division of Drinking Water at title 22, sections 60301-60355 of the California Code of Regulations (Water Recycling Criteria).

4.8. Discharge Specifications

Section III.A.2 of the Ocean Plan lists general requirements for waste discharges to the ocean. Some of these requirements may be considered “end-result” provisions that are affected by the 2025 U.S. Supreme Court decision described below in Fact Sheet section 5. To ensure that these Ocean Plan general discharge requirements are met, the Central Coast Water Board analyzed these narrative requirements as follows in Table F-23:

Table F-23. Ocean Plan General Requirements for Management of Waste Discharge to the Ocean

Item	Source Ocean Plan Section	Requirement	Determination
1	III.A.2.b(1)	Waste discharged to the ocean must be essentially free of material that is floatable or will become floatable upon discharge.	See determination for Item 2 in Table F-24
2	III.A.2.b(2)	Waste discharged to the ocean must be essentially free of settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.	See determination for Item 5 in Table F-24
3	III.A.2.b(3)	Waste discharged to the ocean must be essentially free of substances which will accumulate to toxic levels in marine waters, sediments or biota.	See determination for Item 10 in Table F-24
4	III.A.2.b(4)	Waste discharged to the ocean must be essentially free of substances that significantly decrease the natural light to benthic communities and other marine life.	See determination for Item 4 in Table F-24
5	III.A.2.b(5)	Waste discharged to the ocean must be essentially free of materials that result in aesthetically undesirable discoloration of the ocean surface.	See determination for Item 3 in Table F-24

5. RATIONALE FOR RECEIVING WATER LIMITATIONS

This Order removes generalized receiving water limitations contained in M1W's prior waste discharge requirements that made M1W responsible for the quality of the water in the body of water into which the permittee discharges pollutants, without specifying specific requirements (e.g., effluent limitations) or other actions M1W must take that apply at or before the discharge point. The Central Coast Water Board took this action to address the U.S. Supreme Court's decision in *City and County of San Francisco, California v. Environmental Protection Agency* (2025) 145 S.Ct. 704 (CCSF), holding that NPDES permits issued by the U.S. EPA may not include end result requirements—provisions that do not spell out what a permittee must do or refrain from doing; rather, they make a permittee responsible for the quality of the water in the body of water into which the permittee discharges pollutants.³¹

Following the removal of the generalized receiving water limitations, the Central Coast Water Board reviewed the remaining permit requirements and concluded that

³¹ While the Central Coast Water Board removed generalized receiving water limitations in furtherance of the U.S. Supreme Court's decision interpreting the Clean Water Act's NPDES requirements, the board may decide in the future to include similar requirements as a matter of state authority.

additional requirements were necessary to ensure the discharge satisfies the requirements of Clean Water Act section 301(b)(1)(C) (33 U.S.C. § 1311(b)(1)(C)) that the permit include any more stringent limitation, including those necessary to meet water quality standards. Should monitoring data or the special studies indicate the need for additional pollutant controls or provisions, prohibitions, and/or effluent limitations, this NPDES permit contains a general re-opener provision that allows the Central Coast Water Board to amend the permit to include them to ensure water quality objectives are met.

5.1. Surface Water

Below in Table F-24 is a summary of the specific considerations for the removal of receiving water limitations pursuant to the decision in *CCSF* and any additional monitoring requirements and/or prohibitions or effluent limitations that were added to ensure the protection of water quality in light of removal of certain receiving water limitations.

Furthermore, Table F-24 includes other applicable water quality objectives in the Ocean Plan and the Basin Plan that apply to the discharge and a discussion of whether and why those objectives were translated to WQBELs or whether additional monitoring or prohibitions were added to ensure that water quality and beneficial uses are protected following the *CCSF* decision.

Table F-24. Surface Water Receiving Water Limitation Analysis

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
1	Ocean Plan Sections II.B.1. and II.B.2.; Basin Plan Section 3.3.2.2.	Receiving water limitations related to bacteria and pathogens.	A portion of the effluent discharged to the receiving water at Discharge Point 001 is undisinfected secondary-treated domestic wastewater from the RTP. Domestic wastewater may be a contributor of bacteria if not treated properly at the Facility. The nature of the discharge means that it may contribute bacteria in exceedance of the WQOs associated with the REC-1, REC-2 and SHELL beneficial uses and section II.B.1.a of the Ocean Plan. This Order contains Bacteria effluent limitations at the end of pipe of the discharge. In addition, effluent and receiving water monitoring requirements are established in the MRP for bacteria. As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case and to ensure water quality is protected, additional monitoring has been required.	Bacteria effluent monitoring frequency has been increased from a minimum of 3 per permit term to once per month to better assess the maximum and mean concentrations of bacteria with the discharge. If necessary, the Central Coast Water Board may reopen the Order to require additional effluent limitations based on the results of bacteria monitoring.
2	Ocean Plan Section II.C.1.	Floating particulates and oil and grease shall not be visible.	Effluent limitations for oil and grease and suspended solids are established in the Order based on Ocean Plan Table 4.	Effluent and receiving water monitoring requirements are established in the MRP

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
			The Order also establishes a prohibition on the discharge of trash and floating material. As a result, this water quality objective will likely be achieved without additional requirements.	for oil and grease, suspended solids, and visual monitoring.
3	Ocean Plan Section II.C.2.	The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.	The color of water can be influenced by suspended and dissolved particles. Water body coloration can be attributed to several natural and artificial causes, including elevated organic activity with algal growth and the presence of soluble minerals.³² A prohibition on trash and effluent limits for substances that may cause or contribute discoloration of the surface of the receiving water has been established in the Order. Limited pollutants include metals for which reasonable potential has been determined, organic compounds, and oil and grease. As a result, this water quality objective will likely be achieved without additional requirements.	Receiving water monitoring requirements have been established in the MRP for color, suspended solids, and other pollutants that may cause or contribute to aesthetic discoloration in the receiving water.

³² State Water Board. *Color of Water Fact Sheet*. Fact Sheet 3.1.5.9. Available at: https://www.waterboards.ca.gov/water_issues/programs/swamp/docs/cwt/guidance/3159.pdf

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
			To ensure this is the case and to ensure water quality is protected, additional monitoring has been required.	
4	Ocean Plan Section II.C.3.	Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.	The reduction of light in water bodies can often be attributed to the diffusion of light from suspended particles in the water, often measured as turbidity.³³ A variety of factors may contribute to the reduction of natural light in the receiving water at the location of the discharge, including turbulence of the discharge, foam, suspension of sediment from the intake, oceanic conditions, and pollutants associated with industrial activities. However, these factors may not necessarily contribute to natural light reduction outside of the zone of initial dilution. Effluent limits for oil and grease, suspended solids, turbidity, and other pollutants that may cause or contribute to a reduction of natural light in the receiving water have been established in the Order.	Effluent and receiving water monitoring requirements for oil and grease, suspended solids, turbidity, and other pollutants that may cause or contribute to reduction in natural light in the receiving water have also been established in the MRP, as well as receiving water monitoring requirements for light transmittance.

³³ State Water Board. *Turbidity Fact Sheet*. Fact Sheet 3.1.5.0. Available at: https://www.waterboards.ca.gov/water_issues/programs/swamp/docs/cwt/guidance/3150en.pdf

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
			As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case and to ensure water quality is protected, additional monitoring has been required.	
5	Ocean Plan Section II.C.4.	The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.	Sources of inert solids are likely to be associated with non-reactive sediments and can be measured as a combination of suspended solids, settleable solids, and turbidity.³⁴ The activities associated with the Facilities are not likely to contribute inert solids or sediments in the ocean; however, the suspension of solids from intake wells and or discharge turbulence may be a factor in the rate of deposition of solids. In addition, the M1W ocean outfall terminates in a diffuser that allows for rapid mixing and dispersal of the discharge in the receiving water, reducing the risk of sediment settling in high volumes in one location.	Receiving water monitoring has been established in the MRP for sediments and benthic communities. In addition, a special provision has been established in the Order requiring Cal-Am to conduct a Before-After Control-Impact Study. As part of the study, Cal-Am will conduct biological monitoring before and after the commencement of brine waste discharge from the MPWSP Desalination Plant to determine the extent of the effect the discharge will have on the receiving water aquatic communities.

³⁴ State Water Board. *Sediment Fact Sheet*. Fact Sheet 3.6.1.0. Available at: https://www.waterboards.ca.gov/water_issues/programs/swamp/docs/cwt/guidance/3610.pdf

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
			As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case and that water quality is protected, additional monitoring has been required.	
6	Ocean Plan Section II.C.5.	Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.	See the determination for Item 2 in this Table.	
7	Ocean Plan Section II.D.1. and Basin Plan Sections 3.3.1., and 3.2.2.2.	The dissolved oxygen concentration shall not at any time be depressed more than 10% from that which occurs naturally, as the result of the discharge of oxygen-demanding waste materials.	The most common causes of dissolved oxygen depression in water include increases in water temperature, algal blooms, and organic waste.³⁵ Although the discharge is not likely to contain elevated temperatures, one of the waste streams contributing to the discharge is secondary-treated wastewater from the RTP. The nature of this type of effluent makes it likely to contain organic and/or nutrient materials. Effluent limits for BOD, and other pollutants that may cause or contribute to a decrease in dissolved oxygen in the receiving water have been established in the Order.	Effluent and Receiving water monitoring has been established in the MRP for sources of oxygen depression including: temperature, dissolved oxygen, BOD and nutrients (ammonia, nitrate, nitrate, phosphorus).

³⁵ State Water Board. *Dissolved Oxygen Fact Sheet*. Fact Sheet 3.1.1.0. Available at: https://www.waterboards.ca.gov/water_issues/programs/swamp/docs/cwt/guidance/3110en.pdf

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
			As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case and that water quality is protected, additional monitoring has been required.	
8	Ocean Plan Section II.D.2. and Basin Plan Sections 3.3.1., and 3.2.2.2.	pH shall not be changed at any time more than 0.2 units from that which occurs naturally.	The pH in water bodies is primarily affected by the buffering capacity and the input of basic or acidic substances.³⁶ TBELs for pH have been established in the Order based on secondary treatment standards (at EFF-001A) and WQBELs have been established for pH (at EFF-001 and EFF-001C) based on Ocean Plan Table 4 effluent limitations. As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case and that water quality is protected, additional monitoring has been required.	In addition, continuous effluent monitoring requirements and receiving water monitoring requirements have been established for pH in the MRP.
9	Ocean Plan Section II.D.3.	Dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.	With respect to the MPWSP, desalination brine waste is derived from seawater and consists primarily of concentrated salts. According to information submitted with the Dischargers' ROWD, the MPWSP Desalination Plant will occasionally use	Cal-Am is required to conduct a Before-After Control-Impact study to assess the impact that the introduction of MPWSP Desalination Plant brine waste to the discharge will have on the receiving waters, including sediment and biological communities. Sediment monitoring

³⁶ State Water Board. *pH Fact Sheet*. Fact Sheet 3.1.4.0. Available at:
https://www.waterboards.ca.gov/water_issues/programs/swamp/docs/cwt/guidance/3140en.pdf

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
			sulfuric acid to assist with calcite dissolution and cleaning of the RO membranes. Sulfuric acid dissociates to sulfate in water, which is already abundant in marine environments. In addition, sulfate is the fully oxidized form of sulfur and does not constitute dissolved sulfide. With respect to M1W's secondary-treated wastewater, this treated wastewater is a combination of trickling filter and activated sludge, resulting in oxidation of any influent sulfide to sulfate prior to discharge. As part of the secondary-treatment process at the RTP, wastewater passes through biological oxidation processes that substantially reduce BOD, degradable organic material, and reduced sulfur compounds. Under proper operation, influent sulfide is oxidized to sulfate during aeration. As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case and that water quality is protected, additional monitoring has been required.	requirements in the MRP (Attachment E) also include the sampling for acid volatile sulfides and dissolved sulfides at least once during the permit term, with the Central Coast Water Board retaining the authority to require Cal-Am to conduct a second sediment sampling after commencement of MPWSP Desalination Plant brine waste discharge.
10	Ocean Plan Section II.D.4.	The concentration of substances set forth in Table	As part of the development of this Order, the Central Coast Water Board	Effluent monitoring for Ocean Plan Table 3 pollutants, and receiving water

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
		3 of the Ocean Plan in marine sediments shall not be increased to levels which would degrade indigenous biota.	conducted an RPA for Ocean Plan Table 3 pollutants to determine if there was reasonable potential for the discharge to cause or contribute to an exceedance of the WQO. WQBELs have been established in section 4.3 of the Order for pollutants that the Central Coast Water Board determined had reasonable potential based on the statistical analysis and BPJ to protect indigenous biota. As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case and that water quality is protected, additional monitoring has been required.	monitoring for sediments and benthic communities have been established in the MRP. In addition, a special provision has been established in the Order requiring Cal-Am to conduct a Before-After Control-Impact Study. As part of the study, Cal-Am will conduct certain receiving water monitoring before and after the commencement of brine waste discharge from the Cal-Am MPWSP Desalination Plant to determine the extent of the effect the discharge will have on the receiving water aquatic communities.
11	Ocean Plan Section II.D.5.	The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.	A portion of the effluent discharged to the receiving water at Discharge Point 001 is secondary-treated wastewater from the RTP. The nature of this type of effluent makes it likely to contain organic materials; however, secondary treatment processes at the M1W RTP are designed to remove the majority of BOD and suspended solids, thereby limiting the amount of labile organic carbon available to settle and accumulate in marine sediments. In addition, the M1W ocean outfall terminates in a diffuser that allows for rapid mixing and dispersal of the discharge in the receiving water,	Monitoring requirements in are also established in the MRP for influent, effluent, and/or receiving water monitoring for dissolved oxygen, temperature, organic pollutants, and biological communities. Receiving water monitoring requirements for sediments and benthic communities have also been established in the MRP (Attachment E), as well as the requirement for Cal-Am to conduct a Before-After Control-Impact Study, as described in the determination for Item 5.

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
			reducing the risk of organic materials settling in high volumes in one location. TBELs applicable to M1W's secondary-treated effluent waste stream have been established in the Order for CBOD₅, which is a measure of organic strength of wastewater or rate of oxygen consumed during the decomposition of organic material by bacteria.³⁷ As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case and that water quality is protected, additional monitoring has been required.	
12	Ocean Plan Section II.D.6.	Objectionable aquatic growths or degrade indigenous marine life.	Objectionable aquatic growths are typically attributed to nutrients, a combination of phosphorus, organic nitrogen, ammonia, nitrate, and nitrite. Nutrients in water bodies can be found naturally but are usually the result of anthropogenic sources and are commonly present in domestic wastewater effluent.³⁸	The MRP includes requirements for effluent monitoring of nutrients and visual observation of the receiving water.

³⁷ State Water Board. *Dissolved Oxygen Fact Sheet*. Fact Sheet 3.1.1.0. Available at: https://www.waterboards.ca.gov/water_issues/programs/swamp/docs/cwt/guidance/3110en.pdf

³⁸ USEPA. *Nutrient Pollution Sources and Solutions: Wastewater*. Accessed March 2, 2026. <https://www.epa.gov/nutrientpollution/sources-and-solutions-wastewater>

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
			A portion of the effluent discharged to the receiving water at Discharge Point 001 is secondary-treated wastewater from the M1W RTP. This type of effluent may be a source of nutrient materials that could contribute to aquatic growths or degrade marine life in the receiving water. Although nitrate and nitrite are often found in wastewater treatment plant effluent undergoing nitrification/denitrification processes,³⁹ the RTP is not designed and operated to nitrify/denitrify, and therefore it is unlikely that nitrate and nitrite are present in quantities that contribute to aquatic growths or degrade marine life. As discussed in section 4.3.3.1 of this Fact Sheet, reasonable potential was determined for ammonia to cause or contribute to an exceedance of the WQO and WQBELs have been established for ammonia in the Order. The Central Coast Water Board has determined that the requirements established in this permit are reasonably adequate to ensure and determine compliance with the narrative WQO, and	

³⁹ USEPA. *Nitrification and Denitrification Facilities Wastewater Treatment*. EPA-625/4-73-004a. August 1973.
<https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=20008RFG.txt>

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
			additional requirements and narrative receiving water limitations are not necessary at this time. As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case and that water quality is protected, additional monitoring has been required.	
13	Ocean Plan Section II.E.1.	Marine communities, including vertebrate, invertebrate, algae, and plant species, shall not be degraded.	The Central Coast Water Board has established effluent limits in this Order, including TBELs, WQBELs, as well as prohibitions, special provisions, and monitoring requirements, based on the data and information available at the time of permit development. WQBELs established in the permit include those pollutants for which the discharge has a reasonable potential to cause or contribute to an exceedance of the WQOs in the Ocean Plan for the protection of aquatic life. WQBELs were established for cadmium, cyanide, total residual chlorine, ammonia, non-chlorinated phenolic compounds, chlorinated phenolic compounds, acrylonitrile, DDT, dieldrin, PAHs, toxaphene, and 2,4,6-trichlorophenol based on the results of a statistical RPA, while WQBELs were	The MRP establishes Ocean Plan Table 3 pollutant monitoring within the effluent and receiving water sediment. This also includes toxicity testing through WET monitoring and sediment toxicity testing. The MRP also establishes receiving water monitoring requirements for Ocean Plan Table 3 in for sediments, benthic communities, and fish. As discussed in Item 5, a special provision has also been established in the Order requiring Cal-Am to conduct a Before-After Control-Impact Study, and if necessary, the Central Coast Water Board may reopen the Order to require additional effluent limitations based on the results of the study.

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
			established for all other Ocean Plan Table 3 parameters based on BPJ. As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case and that water quality is protected, additional monitoring has been required.	
14	Ocean Plan Section II.E.2	The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.	Changes to natural organoleptic qualities (taste, odor and color) of marine resources such as fish and shellfish can be caused changes in feed source type and quality⁴⁰ among other natural or anthropogenic environmental stressors. Some discharged pollutants have the potential to bioaccumulate and biomagnify through trophic levels of a marine ecosystem⁴¹. Therefore, the best control to prevent discharge related organoleptic quality changes in marine resources is appropriate regulation of those pollutants known to bioaccumulate such as heavy metals and persistent organic pollutants.	The MRP establishes Ocean Plan Table 3 pollutant monitoring within the effluent and receiving water sediment. This also includes toxicity testing through WET monitoring and sediment toxicity testing. The MRP also establishes receiving water monitoring requirements for Ocean Plan Table 3 in for sediments, benthic communities, and fish. As discussed in Item 5, a special provision has also been established in the Order requiring Cal-Am to conduct a Before-After Control-Impact Study, and if necessary, the Central Coast Water Board may reopen the Order to require additional effluent limitations based on the results of the study.

⁴⁰ MA, et al. (2020). Comparative study on the organoleptic quality of wild and farmed large yellow croaker *Larimichthys crocea*. *Journal of oceanology and limnology*, 2020-01 vol.38, p.260-274.

⁴¹ Pei, D., & Junaid, M. (Eds.). (2019). *Marine pollution : Current status, impacts and remedies*. Bentham Science Publishers.

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
			The Central Coast Water Board has established effluent limits in this Order, including TBELs, WQBELs, as well as prohibitions, special provisions, and monitoring requirements, based on the data and information available at the time of permit development. WQBELs established in the permit include those pollutants for which the discharge has a reasonable potential to cause or contribute to an exceedance of the WQO in the Ocean Plan for the protection of aquatic life and potential to cause changes in the organoleptic qualities in marine resources. WQBELs were established for cadmium, cyanide, total residual chlorine, ammonia, non-chlorinated phenolic compounds, chlorinated phenolic compounds, acrylonitrile, DDT, dieldrin, PAHs, toxaphene, and 2,4,6-trichlorophenol based on the results of a statistical RPA, while WQBELs were established for all other Ocean Plan Table 3 parameters based on BPJ. As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case	

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
			and that water quality is protected, additional monitoring has been required.	
15	Ocean Plan Section II.E.3.	The concentration of organic materials in fish, shellfish or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.	See the determination for Items 11 and 13. As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case and that water quality is protected, additional monitoring has been required.	As part of the receiving water monitoring requirements established in the MRP, the Dischargers are also required to conduct fish tissue sampling to assess bioaccumulation of pollutants in indigenous fish species.
16	Ocean Plan Section II.F.1 Radioactivity, Ocean Plan Section III.I.1.a., Discharge Prohibitions, and Basin Plan Sections 3.3.1,, and 3.2.2.2.	Discharge of radioactive waste shall not degrade marine life.	Discharge from the Facilities at Discharge Point 001 will consist of commingled RTP secondary-treated wastewater, AWP RO concentrate, hauled saline waste, and MPWSP Desalination Plant desalination brine waste. Radioactive waste is not an expected component of these types of waste streams; however, the Order establishes a discharge prohibition of radiological waste in accordance with Ocean Plan section III.I.1.a. As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case and that water quality is protected, additional monitoring has been required.	The MRP includes regular effluent monitoring for Ocean Plan Table 3 pollutants, which includes radioactive pollutants.
17	Thermal Plan		Commingled effluent discharged to the receiving water at Discharge Point 001 will consist of secondary-treated	Temperature monitoring requirements are established in the MRP for desalination plant brine waste, influent

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
			wastewater, AWP RO concentrate, hauled saline waste, and/or MPWSP Desalination Plant brine waste. These waste streams are not expected to come into contact with treatment processes that can cause or contribute to temperature changes in the discharge and thus receiving water. In addition, the effluent undergoes rapid mixing with the receiving water through the ocean outfall. As a result, this water quality objective will likely be achieved without additional requirements. To ensure that is the case and that water quality is protected, additional monitoring has been required.	and effluent, and receiving waters locations.
18	Ocean Plan Section III.A.2.b(1)	Waste discharged to the ocean must essentially be free of material that is floatable or will become floatable upon discharge.	See the determination for Item 2.	
19	Ocean Plan Section III.A.2.b(2)	Waste discharged to the ocean must essentially be free of settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.	See the determination for Item 5.	

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
20	Ocean Plan Section III.A.2.b(3) and Basin Plan Sections 5.4 and 5.4.1.1.	Waste discharged to the ocean must essentially be free of (hazardous) substances which will accumulate to toxic levels in marine waters, sediments or biota.	The requirements established in this permit include TBELs; WQBELs (based on RPA determination); monitoring requirements for influent, effluent, receiving water; as well as multiple special study requirements to ensure the Facilities are operating as expected and beneficial uses are being maintained. WQBELs were established for cadmium, cyanide, total residual chlorine, ammonia, non-chlorinated phenolic compounds, chlorinated phenolic compounds, acrylonitrile, DDT, dieldrin, PAHs, toxaphene, and 2,4,6-trichlorophenol based on the results of a statistical RPA, while WQBELs were established for all other Ocean Plan Table 3 parameters based on BPJ. For additional information, see the determination for Items 13 and 15. As a result, this water quality objective will likely be achieved without additional requirements. To ensure this is the case and that water quality is protected, additional monitoring has been required.	The MRP establishes Ocean Plan Table 3 pollutant monitoring within the effluent this also includes toxicity testing through WET monitoring. The MRP also establishes receiving water monitoring requirements for Ocean Plan Table 3, to monitor for accumulation of these pollutants in sediments, and fish tissue in addition to overall benthic community health. As discussed in Item 5, a special provision has also been established in the Order requiring Cal-Am to conduct a Before-After Control-Impact Study, and if necessary, the Central Coast Water Board may reopen the Order to require additional effluent limitations based on the results of the study.
21	Ocean Plan Section III.A.2.b(4)	Waste discharged to the ocean must essentially be free of substances that	See the determination for Item 4.	

Item	Source	Receiving Water Limitation/WQO	Action Taken and Rationale	Additional Monitoring
		significantly decrease the natural light to benthic communities and other marine life.		
22	Ocean Plan Section III.A.2.b(5)	Waste discharged to the ocean must essentially be free of materials that result in aesthetically undesirable discoloration of the ocean surface.	See the determination for Item 3.	
23	Ocean Plan Section III.A.2.e	Waste that contains pathogenic organisms or viruses should be discharged a sufficient distance from shell fishing and water-contact sports areas to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided.	See the determination for Item 1.	

5.2. Groundwater – Not Applicable

6. RATIONALE FOR PROVISIONS

6.1. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR section 122.42, are provided in Attachment D to the Order.

Sections 122.41(a)(1) and (b) through (n) of 40 CFR establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 CFR allows a state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

6.2. Special Provisions

6.2.1. Reopener Provisions

This Order may be reopened and modified in accordance with NPDES regulations at 40 CFR parts 122 through 125, as necessary, to include appropriate conditions or limits based on newly available information, or to implement any new state WQOs that are approved by USEPA. As effluent is further characterized through additional monitoring, and if a need for additional effluent limitations becomes apparent after additional effluent characterization, the Order may be reopened to incorporate such limitations.

The Central Coast Water Board may modify or revoke and reissue the Order if the Dischargers, jointly or individually, submit an ROWD for changed effluent volume or quality or if present or future investigations or monitoring results demonstrate that the discharges governed by this Order have or will have a reasonable potential to cause or contribute to adverse impacts on water quality or beneficial uses of receiving waters.

This Order may also be reopened to modify provisions governing compliance with Water Code section 13142.5(b) and the Ocean Plan if the Dischargers propose a change in design or operation of the MPWSP Desalination Plant in a manner that could increase intake or mortality of all forms of marine life, consistent with the Ocean Plan definition of a new or expanded facility, beyond that which is approved in this Order's Water Code section 13142.5(b) determination.

Causes for modifications to the MPWSP Desalination Plant operations that are expected to result in an increased intake or mortality of all forms of marine life will

require a new Water Code section 13142.5(b) determination by the Central Coast Water Board. This Order may also be reopened to modify the mitigation requirements based on the final marine life mortality plan. or for modification of provisions governing compliance with the receiving water limitation for salinity as set forth in Ocean Plan section III.M.3.

6.2.2. Special Studies and Additional Monitoring Requirements

6.2.2.1. Toxicity Reduction Requirements

The requirements in section 6.3.2.1 of this Order address requirements necessary to ensure compliance with Ocean Plan objectives for toxicity. Ocean Plan section III.C.10 requires that if a discharge consistently exceeds an effluent limitation based on an Ocean Plan Table 3 objective, a toxicity reduction evaluation (TRE) is required. The requirement to submit TRE work plans is necessary to prevent delays in initiating a TRE, so that a discharger can diagnose and remedy toxicity in the shortest time practicable. Accelerated monitoring is required to determine if an exceedance of a toxicity limitation is consistent versus sporadic and would provide information for the Central Coast Water Board to determine if a TRE is necessary.

6.2.2.2. Hauled Saline Waste Disposal Study

The limitations and conditions in this Order are based on the discharge of secondary effluent, AWP RO concentrate, hauled saline waste, and MPWSP Desalination Plant brine waste as described in the ROWD. Prior to discharging additional hauled saline waste beyond what is described in this Order, M1W must provide information to the Central Coast Water Board that is necessary to determine if the permit adequately regulates the discharge or if additional requirements and/or permit modification is necessary. This requirement, established in section 6.3.2.2 of the Order, is necessary to ensure that permit conditions and controls are adequate for the type and volume of discharge.

6.2.2.3. Ocean Outfall and Diffuser Monitoring

As discussed in section 2.1.2 of this Fact Sheet, the addition of the MPWSP Desalination Plant brine waste to the total effluent requires that the M1W ocean outfall be modified to ensure that the effluent complies with WQOs in the Ocean Plan. Section 6.3.2.3 of the Order requires M1W to conduct periodic dye studies and inspections of their outfall to verify integrity of the outfall pipes and modified ocean outfall.

6.2.2.4. Plume Tracking Study.

The addition of the brine waste discharge from the MPWSP Desalination Plant is expected to significantly change the dynamics of the wastewater plume discharged through the M1W ocean outfall. Section 6.3.2.5 of the Order requires Cal-Am to develop a plume tracking study. Plume tracking is necessary to determine if the plume is moving towards the shore or surface

where it may encroach upon water recreation areas. Additionally, plume direction and mixing have a direct effect on sediment loading as the direction of the plume determines where the discharged particles will eventually settle. While nearshore and offshore monitoring can identify if the plume is encroaching upon the water recreation area during typical oceanographic conditions, infrequent sampling at preset intervals is unable to capture atypical oceanographic conditions that may lead to abnormal plume behavior. The plume tracking study will be used to evaluate whether the monitoring methods and locations established in the Order are appropriate and applicable. Since the MPWSP Desalination Plant is expected to commence operation in October 2029 and the intake water quality will take time to stabilize, the plume tracking surveys may not occur during this permit term. Therefore, at minimum, this Order requires Cal-Am submit a plume tracking monitoring plan work plan and plume tracking monitoring plan.

6.2.2.5. Before-After Control-Impact Study

Pursuant to section III.M.4.a(2) of the Ocean Plan, section 6.3.2.6 of this Order requires Cal-Am to conduct a Before-After Control-Impact Study that will evaluate the differences between biological communities at a reference site and at the discharge location before and after the brine waste discharge from the MPWSP Desalination Plant commences. Section 8 of the MRP includes the core receiving water monitoring requirements to evaluate the “before” or “baseline” condition (i.e., the M1W outfall modification construction and pre-MPWSP Desalination Plant brine waste discharge condition). In addition, M1W has been conducting receiving water monitoring in the vicinity of the M1W ocean outfall for more than a decade. Cal-Am is required to consider the historical receiving water monitoring data in the analysis of the “before” condition. The receiving water monitoring requirements for the “after” condition (i.e., post-MPWSP Desalination Plant brine waste discharge) will be guided by the Before-After Control-Impact Study Work Plan. The MPWSP Desalination Plant is not expected to commence discharging until October 2029, and the salinity of the intake water is expected to take time to stabilize. Therefore, results of the post-discharge monitoring for the Before-After Control-Impact Study may not be available prior to the reissuance of next NPDES permit or the submittal of the ROWD. The Before-After Control-Impact Study work plan requires Cal-Am to provide the types of biological monitoring that will be included in the Before-After Control-Impact Study and a schedule for the pre- and post-discharge monitoring and submittal of the Before-After Control-Impact Study Report.

6.2.2.6. Final Marine Life Mortality Report (MLMR)

Water Code section 13142.5(b) requires that the best available mitigation measures feasible shall be used to minimize the intake and mortality of all forms of marine life. Section III.M.2.e.(1) of the Ocean Plan requires the owner or operator of a facility to submit a report to the regional water board estimating the Marine Life Mortality resulting from construction and operation of the facility

after implementation of the facility's required site, design, and technology measures. Cal-Am submitted a draft Marine Life Mortality Report on May 27, 2026. The Central Coast Water Board determined that the draft Marine Life Mortality Report was incomplete.

Therefore, section 6.3.2.6 of the Order requires Cal-Am to submit a final MLMR that will include the final two months of plankton monitoring data that were not yet incorporated into the draft and will include additional information and methodology descriptions requested by the Central Coast Water Board ensure adequate mitigation acreage that is fully compensatory for the loss of all marine life is calculated in compliance with the Ocean Plan and Water Code section 13142.5(b), and to provide additional details on the specific restoration activities to take place. Additionally, if Cal-Am proposes any updates to the MLMR calculations or methodology, the updates must be described in the final MLMR.

6.2.2.7. Marine Life Mitigation Plan (MLMP)

Water Code section 13142.5(b) requires that the best available mitigation measures feasible shall be used to minimize the intake and mortality of all forms of marine life. Section III.M.2.e of the Ocean Plan provides requirements to implement mitigation measures in compliance with Water Code section 13142.5(b). The Ocean Plan provisions require that the discharger estimate the marine life mortality resulting from construction and operation of the desalination facility that would occur following implementation of the best available site, design, and technology measures.

Cal-Am submitted a draft MLMR as described in the preceding section 6.2.2.6. Cal-Am is also required to submit a MLMP that outlines the steps needed to provide mitigation to fully compensate for the mortality associated with the operation of the MPWSP Desalination Plant.

Therefore, section 6.3.2.7 of the Order requires Cal-Am to submit an MLMP to ensure adequate mitigation is provided in compliance with the Ocean Plan and Water Code section 13142.5(b), and to provide additional details on the specific restoration activities to take place. If some or all of the proposed mitigation project is considered out-of-kind mitigation, then Cal-Am must also perform a productivity study as part of the MLMP that will be used to determine an appropriate mitigation ratio for out-of-kind mitigation.

6.2.3. Best Management Practices and Pollution Prevention

6.2.3.1. Pollutant Minimization Program

Section III.C.9 of the Ocean Plan establishes guidelines for the Pollutant Minimization Program (PMP). Section 6.3.3.1 of the Order outlines the conditions that would require the Dischargers to conduct a PMP and the requirements of the PMP. At the time of the adoption of this Order no known evidence was available that would require the Dischargers to immediately develop and conduct a PMP. The Central Coast Water Board will notify the Dischargers in writing if such a program becomes necessary.

6.2.4. Construction, Operation, and Maintenance Specifications

Section 6.3.4 of the Order requires the Dischargers to operate the Facilities as specified under sections 1.4 and 8.2.11 of the Standard Provisions in Attachment D to comply with federal and state regulations and policies.

6.2.5. Special Provisions for Publicly Owned Treatment Works (POTWs)

6.2.5.1. Biosolids Management

Provisions regarding sludge handling and disposal ensure that such activity will comply with all applicable regulations.

Part 503 of 40 CFR sets forth USEPA's final rule for the use and disposal of biosolids, or sewage sludge, and governs the final use or disposal of biosolids. The intent of this federal program is to ensure that sewage sludge is used or disposed of in a way that protects both human health and the environment.

USEPA's regulations require that producers of sewage sludge meet certain reporting, handling, and disposal requirements. As the USEPA has not delegated the authority to implement the sludge program to the State of California, the enforcement of sludge requirements that apply to M1W remains under USEPA's jurisdiction at this time. USEPA, not the Central Coast Water Board, will oversee compliance with 40 CFR part 503. 40 CFR section 503.4 (Relationship to other regulations) states that the disposal of sewage sludge in a municipal solid waste landfill unit, as defined in 40 CFR section 258.2, that complies with the requirements in 40 CFR part 258 constitutes compliance with section 405 (d) of the CWA. Any person who prepares sewage sludge that is disposed of in a municipal solid waste landfill unit must ensure that the sewage sludge meets the applicable requirements of 40 CFR part 503.

6.2.5.2. Pretreatment

Pretreatment requirements for POTWs are contained within 40 CFR part 403. Per 40 CFR section 403.8, any POTW (or combination of POTWs operated by the same authority) with a total design flow greater than 5 MGD and receiving, from industrial users, pollutants which pass through or interfere with the operation of the POTW or are otherwise subject to pretreatment standards will be required to establish a POTW pretreatment program unless the NPDES state exercises its option to assume local responsibilities as provided for in 40 CFR section 403.10(e). The EO may require that a POTW with a design flow of 5 MGD or less develop a POTW pretreatment program if he or she finds that the nature or volume of the industrial influent, treatment process upsets, violations of POTW effluent limitations, contamination of municipal sludge, or other circumstances warrant in order to prevent interference with the POTW or pass through as defined in 40 CFR section 403.3(a).

The Order establishes pretreatment requirements for the M1W RTP as the RTP has total effluent flows in excess of 5 MGD. Additional pretreatment reporting

requirements are included in sections 9.3.3 through 12 of the MRP that reflect federal pretreatment requirements under 40 CFR section 403.3(a).

6.2.5.3. Collection System

The State Water Board issued *General Waste Discharge Requirements for Sanitary Sewer Systems*, Water Quality Order 2022-0103-DWQ (Sanitary Sewer Systems General Order) on December 6, 2022. The purpose of the Sanitary Sewer Systems General Order is to promote the proper and efficient management, operation, and maintenance of sanitary sewer systems and to minimize the occurrences and impacts of sanitary sewer overflows. The Sanitary Sewer Systems General Order requires public agencies that own or operate sanitary sewer systems with sewer lines of one mile of pipe or greater to enroll for coverage and comply with the Sanitary Sewer Systems General Order. The Sanitary Sewer Systems General Order requires agencies to develop sanitary sewer management plans and report all sanitary sewer overflows, among other requirements and prohibitions. The requirement at section 6.3.5.3 of the Order for M1W to enroll under the Sanitary Sewer Systems General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows that are more extensive, and therefore, more stringent than the requirements under federal standard provisions.

6.2.5.4. Resource Recovery from Anaerobically Digestible Material

Some POTWs choose to accept organic material such as food waste, fats, oils, and grease into their anaerobic digesters for co-digestion to increase production of methane and other biogases for energy production and to prevent such materials from being discharged into the collection system, which could cause sanitary sewer overflows. The California Department of Resources Recycling and Recovery has proposed an exemption from requiring Process Facility/Transfer Station permits where this activity is regulated under waste discharge requirements or NPDES permits. The proposed exemption is restricted to anaerobically digestible material that has been prescreened, slurried, and processed/conveyed in a closed system to be co-digested with regular POTW sludge. The proposed exemption requires that a POTW develop standard operating procedures (SOPs) for the proper handling, processing, tracking, and management of the anaerobically digestible material before it is received by the POTW.

Therefore, section 6.3.5.4 of the Order requires M1W to develop and implement SOPs if they accept hauled food waste, fats, oil, and grease for injection into anaerobic digesters. The development and implementation of SOPs for management of these materials is intended to allow the California Department of Resources Recycling and Recovery to exempt this activity from separate and redundant permitting programs. If the POTW does not accept food waste, fats, oil, or grease for resource recovery purposes, it is not required to develop and implement SOPs.

6.2.5.5. Ensuring Adequate Capacity

Title 23, division 3, chapter 9, article 2, sections 2232 and 2235.3 of the California Code of Regulations requires Regional Water Boards to notify dischargers when a POTW is projected to reach capacity within four years. The regulations also require the discharger to submit a report within 120 days of notification detailed plans to prevent exceeding capacity or increasing it. Requirements established in section 6.3.5.5 of the Order are based on the regulations to ensure adequate capacity at the RTP.

6.2.5.6. Asset Management Plan

Standard Provision 1.4 in Attachment D of this Order is based on the requirements of 40 CFR section 122.41(e) and requires the Dischargers to properly operate and maintain all facilities and systems of treatment and control which are installed or used by the Dischargers to achieve compliance with the conditions of this Order. Section 6.3.5.6 of the Order requires M1W to develop and implement an Asset Management Plan. Asset management is the practice of managing infrastructure capital assets to minimize the total cost of owning and operating these assets while delivering the desired service levels. Many utilities use asset management to pursue and achieve sustainable infrastructure. A high-performing asset management program includes detailed asset inventories, operation and maintenance tasks, and long-range financial planning. Asset management planning provides a framework for setting and operating quality assurance procedures and ensuring that dischargers have sufficient financial and technical resources to continually maintain a targeted level of service and the operational integrity of POTWs. Asset management requirements have been established in the Order to ensure compliance with Standard Provision 1.4 in Attachment D and the requirements of 40 CFR section 122.41(e).

6.2.6. Other Special Provisions

6.2.6.1. Discharges of Stormwater

The Order does not authorize discharges of stormwater from the treatment and disposal site. Such discharges require coverage under and compliance with applicable provisions of General Permit CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities* (Industrial General Permit), if necessary.

6.2.6.2. Climate Change Response Hazards and Vulnerabilities Plan

Climate change refers to observed changes in regional weather patterns such as temperature, precipitation, and storm frequency and size. At the local scale, within urbanized areas, climate change may directly impact groundwater and surface water supply; drainage, flooding, and erosion patterns; and ecosystems and habitat. This shift in climate, combined with California's growing population, has increased reliance on pumping, conveying, treating, and heating water,

increasing the water sector's greenhouse gas emissions. State Water Board Resolution 2017-0012 requires a proactive response to climate change in all Regional Water Board actions, with the intent to embed climate change consideration into all programs and activities. In accordance with Resolution 2017-0012, section 6.3.6.2 of this Order requires each Discharger to prepare a climate change response hazards and vulnerabilities plan to address climate change impacts and hazards associated with the continued and future operation of its respective facility.

6.2.7. Compliance Schedules – Not Applicable

7. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 CFR sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Central Coast Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. However, the State Water Board has determined that Water Code section 13383 alone “provides all of the authority necessary for a regional water board to establish monitoring and reporting requirements for ... discharges to the Pacific Ocean.” (*In the Matter of the Petitions of the City of Oceanside, Fallbrook Public Utilities Dist. and the Southern Cal. Alliance of Publicly Owned Treatment Works*, State Water Board Order WQ 2021-0005 at p. 12-13, footnote 31. (*Fallbrook*).)

Although there is no explicit legal requirement in Water Code section 13383 to consider the cost of and need for monitoring and reporting, the Central Coast Water Board has considered the costs incurred to comply with the monitoring and reporting requirements in this Order and finds that the burdens, including costs, of the MRP required by this Order bear a reasonable relationship to the need for and benefits to be obtained from the MRP in the particularly sensitive marine environment to which the Facilities discharge. The MRP establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The reports required by the MRP are needed to ensure compliance with the Order and “result in appropriate data needed to evaluate water quality and other impacts of the discharges and ensure that beneficial uses are protected.” (*Fallbrook, supra*, at p. 13.) The purpose of the MRP is to determine and ensure compliance with effluent limitations and other requirements established in the Order, assess treatment efficiency, characterize effluents, and characterize the receiving water and the effects of the discharge on the receiving water. The MRP also specifies requirements concerning the proper use, maintenance, and installation of monitoring equipment and methods and the monitoring types, intervals, and frequency necessary to yield data that are representative of the activities and discharges regulated under the Order. The following sections provide the specific rationale for the monitoring and reporting requirements contained in the MRP for the Facilities.

7.1. Influent Monitoring

Influent monitoring is required to determine the effectiveness of the source control program, to assess the performance of treatment facilities, and to evaluate compliance with effluent limitations.

7.2. Effluent Monitoring

7.2.1. Monitoring Location EFF-001

Monitoring requirements have been established for Ocean Plan Table 4 pollutants at Monitoring Location EFF-001 to determine compliance with the effluent limitations established for the total M1W RTP waste stream (commingled secondary-treated effluent, AWP RO concentrate, and/or hauled saline waste) for Ocean Plan Table 4 pollutants.

7.2.2. Monitoring Location EFF-001A

Secondary effluent standards reflect the minimum level of treatment to be achieved through municipal wastewater treatment. The point of compliance determination must therefore be located prior to commingling with other waste streams. This Order establishes monitoring requirements for the M1W secondary-treated effluent at Monitoring Location EFF-001A for compliance determination with TBELs for CBOD₅, TSS, and pH.

7.2.3. Monitoring Location EFF-001B

As described in section 4.1.1.5 of the Order, the Dischargers are required to calculate and report concentrations C_{zid} at edge of the ZID at Monitoring Location EFF-001B. The procedures for calculating C_{zid} are established in section 4.6.2.1 of the MRP. This monitoring is necessary to determine compliance with effluent limitations established at Monitoring Location EFF-001B.

7.2.4. Monitoring Location EFF-001C

Monitoring requirements have been established for the Cal-Am Desalination Plant brine waste stream at Monitoring Location EFF-001C to determine compliance with the effluent limitation for salinity and effluent limitations established for Ocean Plan Table 4. Monitoring requirements for temperature and dissolved oxygen have also been established for informational purposes.

7.2.5. Monitoring Location EFF-001D

Monitoring requirements have been established for the commingled effluent at Monitoring Location EFF-001D for Ocean Plan Table 3 pollutants to determine compliance with effluent limitations established in the Order and inform future permit renewals. Although M1W does not disinfect whole effluent prior to discharge, disinfection is part of the treatment process at MPWSP Desalination Plant. While disinfection is expected to occur after the RO process, the facility process flow diagram indicates that a chlorine quenching agent will be added to a portion of the brine waste prior to discharge. This indicates that chlorine may be

present in the brine waste. Therefore, to assess compliance with the WQBELs established in the Order and ensure protection of the beneficial uses, daily monitoring for total residual chlorine is required when the MPWSP Desalination Plant is discharging to the M1W ocean outfall.

7.3. Whole Effluent Toxicity Testing Requirements

Table 6 of the Order contains acute and chronic toxicity effluent limitations for final commingled waste at Monitoring Location EF-001, as described in section 4.3.2.3 of this Fact Sheet, and corresponding regular toxicity monitoring as described in MRP Tables E-10 and E-12, and MRP section 5.

The Order also requires the Dischargers to conduct additional toxicity testing in response to exceedances of the toxicity effluent limitations, as described in Order section 6.3.2.1. If the additional tests demonstrate toxicity, the Dischargers are required to collaborate to execute a TRE, in accordance with their submitted TRE work plans and USEPA guidance, which shall include the following: further steps taken by the Dischargers to investigate, identify, and correct the causes of toxicity; actions the Dischargers will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for these actions. Section III.C.10 of the Ocean Plan requires a TRE if a discharge consistently exceeds an effluent limitation based on a toxicity objective in Table 3 of the Ocean Plan. Consistent with the requirements of the Ocean Plan, section 10.2.3 of the MRP requires the Dischargers to develop initial investigation TRE work plans and submit the initial investigation TRE work plans within 90 days of the effective date of this Order. The work plans must describe steps the Dischargers intend to follow if the effluent limitation for chronic toxicity is exceeded.

If the effluent limitation for acute or chronic toxicity is exceeded in any one test, the Dischargers must conduct their TRE if the toxicity is exceeded in any of the succeeding accelerated monitoring tests and notify the Central Coast Water Board and the USEPA. The requirement for four succeeding tests performed at 14-day intervals is based on the probability of encountering at least one toxicity exceedance assuming a true, but unknown, level of occurrence. After the toxicity exceedance, the Dischargers must continue to conduct the routine monthly monitoring for acute and chronic toxicity as required in the MRP. The TRE shall be conducted in accordance with the approved TRE work plans and available USEPA guidance documents. The Dischargers must also implement a toxicity identification evaluation (TIE), as necessary, based upon the magnitude and persistence of toxicity effluent limitation exceedances. Once the source of toxicity is identified, the Dischargers must take all reasonable steps to reduce the toxicity to meet the effluent limitations identified in section 4 of the Order. Within 30 days of completion of the TRE, the Dischargers must submit the results of the TRE, including a summary of the findings, data generated, a list of corrective actions taken or planned to achieve consistent compliance with all the toxicity limitations of this Order and prevent recurrence of exceedances of those limitations, and a time schedule for implementation of any planned corrective actions. The Dischargers must implement any planned corrective actions in the TRE final report in

accordance with the specified time schedule, unless otherwise directed in writing by the Central Coast Water Board and/or USEPA. The corrective actions and time schedule must be modified at the direction of the Central Coast Water Board and/or USEPA. Refer to section 5 of the MRP. This subsection discusses the rationale for the required WET testing requirements such as the selected test species, endpoint, frequency of testing, etc. The rationale for WET limitations is discussed above in section 4.3.2.3 of this Fact Sheet.

7.4. Recycled Water Monitoring

M1W is required to comply with applicable state and local requirements regarding the production and use of recycled wastewater, including those requirements established by the State Water Board Division of Drinking Water at title 22, sections 60301-60355 of the California Code of Regulations (Water Recycling Criteria). The requirement in section 4.3 of the Order is included to clarify that the Order does not permit the discharge of recycled water.

7.5. Receiving Water Monitoring Requirements

The receiving water and sediment monitoring requirements established in the MRP are designed to measure the effects of the discharge on the receiving water and are based on the requirements in Ocean Plan section III.M.3, III.M.4, and Appendix III.

7.5.1. Shoreline Monitoring

Shoreline monitoring is required for indicator bacteria based on the requirements of Ocean Plan Appendix III section 4. for treated sewage discharge. Other monitoring requirements are implemented to evaluate the discharge's impacts to receiving waters and ensure water quality objectives from the Ocean Plan are met. As described in sections 7.6.1. and 7.6.7. of the Fact Sheet, the Ocean Plan allows these requirements to be satisfied through participation of a regional monitoring program at the discretion of the Regional Board.

7.5.3. Benthic Community and Sediment Monitoring

Sediments integrate pollutants that are discharged to the ocean. Most particles that come from the discharge, and any associated contaminants, will eventually settle to the seafloor where they are incorporated into the existing sediments. Sediments can accumulate these particles over the years until the point where sediment quality is degraded and beneficial uses are impaired. Consistent with Ocean Plan Appendix III section 6, section 8.4 of the MRP requires periodic assessment of sediment quality to evaluate potential effects of the discharge and compliance with narrative water quality standards specified in the Ocean Plan.

The benthic community is strongly affected by sediment composition (e.g., sand, silt, and clay distributions), sediment quality (e.g., chemistry, toxicity), and water quality. Because benthic macroinvertebrates (e.g., infauna) are dependent on their surroundings, they often serve as important biological indicators that reflect the overall conditions of the marine environment. Therefore, benthic community

monitoring requirements are established in section 8.4 of the MRP, consistent with the Ocean Plan Appendix III section 6 (for discharges greater than 10 MGD). As described in sections 7.6.1. and 7.6.7. of the Fact Sheet, the Ocean Plan allows these requirements to be satisfied through participation of a regional monitoring program at the discretion of the Regional Board.

This Order also requires sediment toxicity analyses at each offshore station. Sediment toxicity is a measure of the response of invertebrates exposed to surficial sediments under controlled laboratory conditions. The sediment toxicity line of evidence is used to assess both pollutant-related biological effects and exposure and provides a measure of exposure to all pollutants present, including non-traditional or unmeasured chemicals.

7.5.4. Bioaccumulation Monitoring

Marine aquatic invertebrates are excellent indicators of ecosystem health because they are ubiquitous, abundant, diverse, and typically sedentary. The growth, survival, and reproduction of aquatic invertebrates are all sensitive to declines in environmental health, making analysis of assemblage structure a good ecosystem monitoring tool. Additionally, many pollutants discharged into receiving waters have the potential to bioaccumulate and persist in the tissues of aquatic organisms, including marine fishes. Chemical pollutants that bioaccumulate tend to magnify in concentration as they pass through the aquatic food chain. Fish monitoring data is required to assess the human health risks for individuals who may consume fish and to assess trends of contaminants levels in the receiving water over time.

Consistent with Ocean Plan Appendix III section 9, this Order establishes fish and invertebrate trawls, fish rigging, and analyses of fish tissue samples as the default bioaccumulation monitoring method to be conducted at least once per five years. to the commencement of the MPWSP Desalination Plant discharge to determine if concentrations of pollutants are bioaccumulating to levels that are harmful to human health or degrade marine communities. The Dischargers may be required to conduct a second fish tissue sampling event after the commencement of the MPWSP Desalination Plant discharge. Given the schedule for the commencement of the MPWSP Desalination Plant discharge, the timing of the second fish tissue sampling event, if needed, will be determined in the Before-After Control-Impact Study Work Plan described in section 6.3.2.5 of the Order and section 9.6 of the MRP. As described in sections 7.6.1. and 7.6.7. of the Fact Sheet, the Ocean Plan allows these requirements to be satisfied through participation of a regional monitoring program at the discretion of the Regional Board.

7.5.2. Brine Discharge Offshore Monitoring

Pursuant to section III.M.4.a(1) of the Ocean Plan, the owner or operator of a desalination facility must perform facility specific monitoring to demonstrate compliance with receiving water limitations for Salinity. Offshore water quality monitoring established in this Section 8.4.1 of the MRP is required to determine if

the effluent is causing or contributing to exceedances of the water quality standards outside of the ZID, to determine the fate of the effluent plume, to gather data for future permit reissuances, and incorporate the requirements of Ocean Plan. Monitoring requirements established also serve as a requirement under the Brine Discharge Settlement, Appendix I of the CPUC Decision D.18-09-017. These proposed locations, monitoring constituents and frequency coincide with the draft *Monitoring and Reporting Plan for the California Water Company Desalination Brine Discharge Monitoring Program* Applied Marine Sciences, December 10, 2024.

7.5.3. Brine Discharge Benthic Community, Toxicity Sediment, Fish and Invertebrate Monitoring

Pursuant to section III.M.4.a(1) and (2) of the Ocean Plan, the owner or operator of a desalination facility must perform facility specific monitoring to evaluate the potential effects of the discharge within the water column, bottom sediments and benthic communities. These biological baseline conditions shall be established at the discharge location at a reference location prior to the commencement of construction.

Sediments integrate pollutants that are discharged to the ocean. Most particles that come from the discharge, and any associated contaminants, will eventually settle to the seafloor where they are incorporated into the existing sediments. Sediments can accumulate these particles over the years until the point where sediment quality is degraded and beneficial uses are impaired. Consistent with Ocean Plan Appendix III sections 6, section 8.3 of the MRP requires periodic assessment of sediment quality to evaluate potential effects of the discharge and compliance with narrative water quality standards specified in the Ocean Plan.

The benthic community is strongly affected by sediment composition (e.g., sand, silt, and clay distributions), sediment quality (e.g., chemistry, toxicity), and water quality. Because benthic macroinvertebrates (e.g., infauna) are dependent on their surroundings, they often serve as important biological indicators that reflect the overall conditions of the marine environment. Therefore, benthic community monitoring requirements are also established in section 8.3 of the MRP, consistent with Ocean Plan Appendix section 8.

This Order also requires sediment toxicity analyses at each offshore station. Sediment toxicity is a measure of the response of invertebrates exposed to surficial sediments under controlled laboratory conditions. The sediment toxicity line of evidence is used to assess both pollutant-related biological effects and exposure and provides a measure of exposure to all pollutants present, including non-traditional or unmeasured chemicals.

Results from the benthic monitoring described in section 8.3 of the MRP will be used for the Before-After Control-Impact analysis to evaluate the impact of the MPWSP Desalination Plant brine waste discharge on biological communities, pursuant to section III.M.4.a(2) of the Ocean Plan.

This Order establishes facility specific fish and invertebrate trawls, fish rigging, and analyses of fish tissue samples to be conducted at least once per five years at the offshore monitoring locations, prior to the commencement of the MPWSP Desalination Plant discharge to determine baseline biological conditions of the receiving water near the outfall diffuser. Cal-Am may be required to conduct a second fish tissue sampling event after the commencement of the MPWSP Desalination Plant discharge. Given the schedule for the commencement of the MPWSP Desalination Plant discharge, the timing of the second fish tissue sampling event, if needed, will be determined in the Before-After Control-Impact Study Work Plan described in section 6.3.2.5 of the Order and section 9.6 of the MRP. As described in section 7.6.6. of the Fact Sheet.

Results from the Fish and Invertebrate monitoring described in section 8.3 of the MRP will be used for the Before-After Control-Impact analysis to evaluate the impact of the MPWSP Desalination Plant brine waste discharge on biological communities, pursuant to section III.M.4.a(2) of the Ocean Plan.

7.6. Other Monitoring Requirements

7.6.1. CCLEAN

Section 9.1 of the MRP discusses the Dischargers' participation in CCLEAN monitoring. CCLEAN is a coordinated monitoring effort to address receiving water in Monterey Bay and is necessary to assess whether beneficial uses are affected by discharges. The CCLEAN requirements specified in this Order are updated to reflect current program methods and pollutants of concern, and to align with requirements for other permittees participating in the program.

7.6.2. Biosolids Monitoring

The use and disposal of biosolids within the United States is regulated under state and federal laws and regulations, including permitting requirements and technical standards included in 40 CFR part 503. M1W is required to comply with the standards and time schedules contained in 40 CFR part 503 for biosolids used or disposed of within the United States

Title 27, division 2, subdivision 1, section 20005 of the California Code of Regulations establishes approved methods for the disposal of collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes. Requirements to ensure the M1W disposes of solids in compliance with state and federal regulations have been included in this Order.

7.6.3. Pretreatment Monitoring

The federal CWA section 307(b), and federal regulations 40 CFR part 403 require POTWs to develop an acceptable industrial pretreatment program. A pretreatment program is required to prevent the introduction of pollutants that could potentially interfere with treatment plant operations or sludge disposal and prevent pass through of pollutants that exceed water quality objectives,

standards, or permit limitations. Pretreatment requirements are imposed pursuant to 40 CFR part 403.

M1W's implementation and enforcement of its approved pretreatment program is an enforceable condition of this Order. If M1W fails to perform the pretreatment functions, the Central Coast Water Board, the State Water Board, or USEPA may take enforcement actions against M1W as authorized by the federal CWA and Water Code.

7.6.4. Outfall Inspection

As part of the ROWD, M1W has indicated that it will be modifying the existing M1W ocean outfall, including the diffuser, to maintain compliance with Ocean Plan WQOs after commencement of the MPWSP Desalination Plant brine waste discharge. Regular outfall and diffuser inspection monitoring is established in this Order to ensure that the integrity of the outfall and diffuser are maintained after modification to the ocean outfall.

7.6.5. Plume Tracking Study

This Order includes a requirement for the Dischargers to develop a plume tracking study. At minimum, this Order requires the dischargers to submit a plume tracking monitoring plan work plan and plume tracking monitoring plan to the Central Coast Water Board. Plume tracking is necessary to determine if the plume is moving towards the shore or surface where it may encroach upon water recreation areas. Additionally, plume direction and mixing have a direct effect on sediment loading as the direction of the plume determines where the discharged particles will eventually settle. While nearshore and offshore monitoring requirements in section 8 of the MRP can identify if the plume is encroaching upon the water recreation area during typical oceanographic conditions, infrequent sampling at preset intervals is unable to capture atypical oceanographic conditions that may lead to abnormal plume behavior. The plume tracking study will be used to evaluate whether the monitoring methods and locations established this Order are appropriate and applicable. Monitoring requirements for the plume tracking study are included in section 9.5 of the MRP.

7.6.6. Before-After Control-Impact Study

Pursuant to Ocean Plan section III.M.4.a(2), this Order requires Cal-Am to conduct a Before-After Control-Impact Study that will evaluate the differences between biological communities at a reference site and at the discharge location before and after the brine waste discharge from the MPWSP Desalination Plant. This study will assist the Central Coast Water Board in determining if the limits and conditions established in this Order are adequate and will inform conditions of the permit reissuance. Monitoring requirements for the Before-After Control-Impact Study are included in section 9.6 of the MRP.

7.6.7. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program

Under the authority of section 308 of the CWA (33 U.S.C. § 1318), USEPA requires major and selected minor dischargers under the NPDES Program to participate in the annual Discharge Monitoring Report Quality Assurance (DMR-QA) Study Program. The DMR-QA study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Dischargers can obtain and analyze DMR-QA samples as part of the DMR-QA study or (2) Per the waiver issued by USEPA to the State Water Board, the Dischargers can submit the results of the most recent water pollution performance evaluation studies from their own laboratories or contract laboratories. A water pollution performance evaluation study is similar to a DMR-QA study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Dischargers shall ensure that the results of a DMR-QA study or the results of the most recent water pollution performance evaluation studies are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA study results or the results of the most recent water pollution performance evaluation studies to USEPA's DMR-QA coordinator and quality assurance manager.

7.6.7. Receiving Water Monitoring Plan

Pursuant to the Ocean Plan Appendix III, Standard Monitoring Procedures, receiving water monitoring requirements described in section 8 of the MRP are required to monitor the discharge's impacts to receiving water and these requirements are intended to serve as the minimum default monitoring requirements for the receiving water. Appendix III of the Ocean Plan allows the participation of a regional monitoring program to satisfy several receiving water monitoring requirements, at the discretion of the Regional Board. As specified in section 9.1 of the MRP, the Central Coast Long-term Environmental Assessment Network Monitoring (CCLEAN) conducts, in whole or in part, the same or similar receiving water monitoring that may satisfy some receiving water monitoring requirements in Section 8 of this MRP. The Dischargers must submit within 180 days a detailed Receiving Water Monitoring Plan that describes how they will comply with the receiving water monitoring requirements described in this permit, and explain how participation in a regional monitoring program satisfies applicable receiving water monitoring requirements described in the MRP. Approval of use of the regional monitoring program in lieu of certain receiving water monitoring requirements will be at the discretion of the EO.

8. CONSIDERATION OF NEED TO PREVENT NUISANCE AND WATER CODE SECTION 13241 FACTORS

As noted in subsection 2.3 of the Order, certain provisions herein are included to implement state law only. These requirements are not required or authorized under the federal CWA; consequently, violations of these requirements are not subject to

the enforcement remedies that are available for NPDES violations. As required by Water Code section 13263, the Central Coast Water Board has considered the need to prevent nuisance and the factors listed in Water Code section 13241 in establishing the state law provisions and requirements. The Central Coast Water Board finds, on balance, that the state law requirements in this Order are reasonably necessary to prevent nuisance and to protect beneficial uses identified in the Basin Plan and the Ocean Plan and that the section 13241 factors are not sufficient to justify failing to protect those beneficial uses.

8.1. Need to Prevent Pollution or Nuisance

In establishing effluent limitations in the Order, the Central Coast Water Board has considered state law requirements to prevent pollution or nuisance as defined in section 13050, subdivisions (l) and (m), of the Water Code. For example, one of the requirements in the Order that is based on state law is a study to investigate the hazards to, and vulnerabilities of, the Facilities related to climate change. These reports will allow the Central Coast Water Board to determine if and how to prevent pollution from any spills or excursions of water quality that may result from extreme weather patterns resulting from climate change. Another requirement in the Order that is based on state law is a hauled saline waste disposal study if M1W plans to increase the volume of hauled saline wastes beyond what is authorized in this Order. This study will allow the Central Coast Water Board to determine if and how to prevent nuisance or pollution from any expansion to M1W's hauled saline waste program that might be implemented in the future.

8.2. Past, Present, and Probable Future Beneficial Uses of Water

Chapter 2 of the Basin Plan identifies designated beneficial uses for waterbodies in the Central Coast Region. Beneficial uses of water relevant to the Order are also identified above in sections 3.3.1 and 3.3.3 of this Fact Sheet. The Central Coast Water Board has taken this factor into account in establishing effluent limitations in the Order, including those set forth in sections 2.2, 4, and 6.3.6.2 of the Order. Recycled water produced by the M1W RTP and AWPf meets all necessary requirements of Title 22 and will replace the use of other sources of water and recharge groundwater. Similarly, the desalinated water produced by Cal-Am will replace the use of other water and provide needed drinking water supplies to the area.⁴² Further, the M1W RTP, SVRP, and AWPf send recycled water to other distributors to further augment and protect the present and probable future beneficial uses of water on the Monterey Peninsula and Salinas valley. The climate change response hazards and vulnerabilities plans required by this Order will describe M1W's and Cal-Am's long-term approaches to identify and address climate change hazards and vulnerabilities at the M1W RTP and AWPf and at the MPWSP Desalination Plant, including all associated infrastructure (e.g., treatment facilities, conveyances to discharge points, discharge facilities, outfall and

⁴² See, Cal. Pub. Util. Comm. Phase 2 Decision Approving Demand and Supply Estimates for the Monterey Peninsula Water Supply Project, Application 21-11-024, [576519917.PDF](#).

diffusers). Finally, the controls in this permit allow for the continued and future use of the Pacific Ocean and Monterey Bay for REC-1 and REC-2 uses. Accordingly, the requirements herein protect and augment the past, present, and probable future beneficial uses of the water.

8.3. Environmental Characteristics of the Hydrographic Unit Under Consideration, Including the Quality of Water Available Thereto

The environmental characteristics of this watershed are discussed in the Basin Plan. Further, the receiving water is within the Monterey Bay National Marine Sanctuary (MBNMS) and as such is designated to protect areas of the marine environment that possess conservation, recreational, ecological, historical, research, educational, or aesthetic qualities of special national significance. The MBNMS has been recognized for its unique and diverse biological and physical characteristics.

The Central Coast Water Board has considered this factor and finds that the environmental characteristics of the hydrographic unit, including the quality of available recycled water, will be improved by compliance with the requirements of the Order.

8.4. Water Quality Conditions That Could Reasonably Be Achieved Through the Coordinated Control of all Factors Which Affect Water Quality in the Area

The water quality standards necessary to protect beneficial uses of receiving waterbodies can reasonably be achieved through the coordinated control of all factors that affect water quality in the area, including the conservation of water, production of recycled water, and production of desalinated water authorized by the Order. For example, water quality in the watershed and groundwater basin will be improved through use of recycled water authorized by the Order, which meets Title 22 standards. The Order also authorizes discharge of wastes produced by desalination of ocean water. This new water source will enable water purveyors to reduce extractions of fresh surface water, improving water quality and habitat of Carmel River. The Central Coast Water Board has taken this factor into account in establishing effluent limitations in the Order.

8.5. The Need for Developing Housing within the Region

The Central Coast Water Board does not anticipate that these state law requirements will adversely impact the need for housing in the area. To the contrary, this Order helps address the need for housing by controlling pollutants in discharges and by allowing the production of recycled water and desalinated water for use in the area. Both of these water sources will improve the quality of local surface water and groundwater, as well as water supply generally. This may in turn increase the region's capacity to support continued housing development. Therefore, the potential for developing housing in the area will be facilitated by the

conservation of water, reuse and production of recycled water, and augmentation of drinking water supplies through desalination under this Order.⁴³

8.6. Need to Develop and Use Recycled Water

The State Water Board's Recycled Water Policy requires the Central Coast Water Board to encourage the use of recycled water. In addition, as discussed immediately above, a need to develop and use recycled water exists within the state, especially during times of drought, and particularly in the Central Coast Region, where 90 percent of drinking water comes from groundwater. The Order supports wastewater recycling (as well as the production of desalinated water) to maximize the beneficial reuse of advanced and tertiary treated effluent and further support water supply needs in the Region.

8.7. Economic Considerations

The Central Coast Water Board has considered the economic impact of requiring certain provisions pursuant to state law. Costs incurred due to state law requirements of this Order include the costs of producing climate change response hazards and vulnerabilities plans and, if needed, a hauled saline waste disposal study. Any additional costs associated with producing the studies are reasonably necessary to prevent nuisance and protect beneficial uses identified in the Basin Plan. In addition, Cal-Am has incurred and will incur costs to comply with Water Code section 13142.5(b), which requires Cal-Am to use the best available site, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life through operation of its desalination facility. The failure to consider conservation or recycled water could result in the loss of, or impacts to, beneficial uses that would have a detrimental economic impact, particularly given the effects on beneficial uses and supplies of water from drought and climate change. Economic considerations related to costs of compliance are therefore not sufficient, in the Central Coast Water Board's determination, to justify failing to prevent nuisance and protect beneficial uses.

9. PUBLIC PARTICIPATION

The Central Coast Water Board is considering the issuance of WDRs that will serve as an NPDES permit for the M1W RTP and AWPf and the Cal-Am MPWSP Desalination Plant. As a step in the WDR adoption process, the Central Coast Water Board staff has developed draft WDRs and encourages public participation in the WDR adoption process.

9.1. Notification of Interested Parties

The Central Coast Water Board notified the Dischargers and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was

⁴³ See, *ibid.*

provided through direct emails to known interested persons and through posting on the Central Coast Water Board's website.

The public had access to the agenda and any changes in dates and locations through the Central Coast Water Board's website at:

<http://www.waterboards.ca.gov/centralcoast/>

Although the Facilities regulated by this Order are not expected to impact a disadvantaged or tribal community, the Central Coast Water Board has satisfied the outreach requirements set forth in Water Code section 189.7 by conducting outreach to potentially interested groups representing disadvantaged communities and tribal communities. Through the development of an outreach plan, Central Coast Water Board staff identified interested groups representing disadvantaged communities and included them in the distribution list (i.e., interested parties list) for notifications related to development and consideration of this Order for adoption. In addition, outreach letters that provided general information about the Facilities and an invitation to provide input and participate in the permit development process were distributed to tribal communities.

9.2. Written Comments

Interested persons are invited to submit written comments concerning the draft WDRs as provided through the notification process. Comments are due by email, in person, or by mail to the Central Coast Water Board at

Central Coast Water Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

RB3-NPDES@waterboards.ca.gov

To be fully responded to by staff and considered by the Central Coast Water Board, the written comments are due at the Central Coast Water Board office by 12:00 p.m., 30 days after this draft is posted for public comment.

9.3. Public Hearing

The Central Coast Water Board will hold a public hearing on the draft WDRs during its regular Board meeting on the following date and time and at the following location:

Date: December 10th, 2026
Time: 8:00 a.m.
Location: Central Coast Water Board Office
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

Interested persons are invited to attend. At the public hearing, the Central Coast Water Board will hear testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony is requested in writing.

9.4. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Central Coast 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 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

Or by email at waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a petition for review, see the

[Water Quality Petitions Website](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)

9.5. Information and Copying

The ROWD, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:00 a.m. and 5:00 p.m., Monday through Friday. Copying of documents may be arranged through the Central Coast Water Board by calling (805) 549-3147.

9.6. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Central Coast Water Board, reference the Facilities, and provide a name, address, and phone number.

9.7. Additional Information

Requests for additional information or questions regarding this Order should be directed to Drew Friedrichs at (805) 549-3333 or drew.friedrichs@waterboards.ca.gov.

ATTACHMENT G – CONDITIONAL WATER CODE SECTION 13142.5(b) DETERMINATION

The California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board), in consultation with the State Water Resources Control Board (State Water Board), has determined that the California American Water (Cal-Am) Monterey Peninsula Water Supply Project (MPWSP) Desalination Plant, as proposed, provides the best available site, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life while considering construction, operation, and maintenance costs, consistent with the requirements of California Water Code (Water Code) section 13142.5(b).

Cal-Am proposes to construct and operate the MPWSP Desalination Plant, a new desalination plant designed to withdraw up to 11.6 million gallons per day (MGD) of seawater and brackish groundwater (reverse osmosis (RO) Feed) from the Pacific Ocean using subsurface intake wells to produce up to 4.8 MGD of potable drinking water, with the potential to increase production to 6.4 MGD of potable drinking water in the future (with a corresponding increase in withdrawal of source water). Wastewater from the MPWSP Desalination Plant, including waste brine from the desalination process, will commingle with other wastewater in the Monterey One Water (M1W) Ocean Outfall before discharge to the Pacific Ocean.

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.”

On May 6, 2015, the State Water Board adopted the *Amendment to the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) Addressing Desalination Facility Intakes, Brine Discharges, and the Incorporation of Other Non-substantive Changes* (Desalination Amendment). The State Water Board also approved the supporting *Final Staff Report Including the Final Substitute Environmental Documentation* (Desalination Amendment Final Staff Report) on May 6, 2015. The Desalination Amendment provides specific direction to regional water boards for making Water Code section 13142.5(b) determinations when permitting new or expanded seawater desalination facilities to ensure a consistent Statewide approach for minimizing intake and mortality of marine life and protecting water quality and related beneficial uses of ocean waters at and near desalination facilities. The Central Coast Water Board’s role in making a Water Code section 13142.5(b) determination is to evaluate a range of feasible¹ alternatives for the best available site, design, technology, and mitigation measures to minimize intake and mortality of all forms of marine life, and then

¹ The Ocean Plan provides in Appendix I that “feasible” for the purposes of section III.M of the Ocean Plan means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

to determine the best combination of feasible alternatives to minimize intake and mortality of all forms of marine life [Ocean Plan section III.M.2.a(2)].

On February 10, 2017, Cal-Am submitted a request for a Water Code section 13142.5(b) determination for the MPWSP Desalination Plant. Central Coast Water Board staff and State Water Board staff performed a preliminary analysis of the submittal for consistency with the Ocean Plan's requirements for desalination plant siting and intake technology. In a letter from the Central Coast Water Board to the California Coastal Commission dated January 15, 2019, the Central Coast Water Board provided an overview of the preliminary analysis and found that Cal-Am's proposal to use slant wells for its intake constituted the use of subsurface intakes. The Central Coast Water Board found that the project's proposed site and subsurface intake technology were the best site and intake technology feasible to minimize the intake and mortality of all forms of marine life. The letter described that an evaluation of the proposed discharge technology and mitigation measures would occur at a future date, pending the submittal of an NPDES permit application.²

On May 27, 2026, Cal-Am submitted a renewed request for a Water Code section 13142.5(b) determination for the MPWSP Desalination Plant. Thereafter, the Central Coast Water Board conducted a full Water Code section 13142.5(b) analysis of the proposed operations at the MPWSP Desalination Plant in accordance with Ocean Plan section III.M. In conducting the analysis, the Central Coast Water Board independently reviewed the record for development of this Order, including the Report of Waste Discharge (ROWD), supplemental documents, and the Draft and Final Environmental Impact Report/Environmental Impact Statements (EIR/EIS), the California Coastal Commission's staff report, the State Lands Commission's Environmental Memorandum, and the Central Coast Water Board's CEQA Addendum to the EIR/EIS (CEQA Addendum). Table G-1 below sets forth the Central Coast Water Board's preliminary analysis of the proposed MPWSP Desalination Plant that will provide the best available site, design, technology, and mitigation measures to minimize intake and mortality of all forms of marine life.

The Dischargers' ROWD and the addendum to the ROWD (ROWD Addendum), Cal-Am's request for a Water Code section 13142.5(b) determination, and other information submitted by the Dischargers (or their contractors) in support of this request are available upon request. All documents, data, correspondence, and other materials that are identified in this attachment are incorporated herein by this reference and made part of the record hereto.

² Letter from Central Coast Water Board to the California Coastal Commission (Jan 15, 2019).

Table G-1: Water Code Section 13142.5(b) Determination

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
1	2.a	Water Code section 13142.5(b) Determinations for New and Expanded Facilities: Site, Design, Technology, and Mitigation Measures Feasibility Considerations. General Considerations:	N/A. See findings below for subsections under Ocean Plan section III.M.2.a.
2	2.a.(1)	The owner or operator shall submit a request for a Water Code section 13142.5(b) determination to the appropriate regional water board as early as practicable. This request shall include sufficient information for the regional water board to conduct the analyses described below. The regional water board in consultation with the State Water Board staff may require an owner or operator to provide additional studies or information if needed, including any information necessary to identify and assess other potential sources of mortality to all forms of marine life. All studies and models are subject to the approval of the regional water board in consultation with State Water Board staff. The regional water board may require an owner or operator to hire a neutral third-party entity to review studies and models and make recommendations to the	On May 27, 2026, Cal-Am submitted a request to the Central Coast Water Board for a Water Code section 13142.5(b) determination for the MPWSP Desalination Plant to operate as a new facility. The Central Coast Water Board, in consultation with the State Water Board, reviewed the request and all supporting submittals. Cal-Am’s letter of request for a determination included a summary of the project to date, a description of the means and methods by which the project purports to comply with the Water Code, and the draft Marine Life Mortality Report (MLMR) as an attachment. This document is the Central Coast Water Board’s conditional determination. The conditions of this determination are described in the Order and below in finding 6. The Central Coast Water Board developed its conditional determination based on the determination request letter, the draft MLMR, the Final EIR/EIS, the California Coastal Commission’s staff report, the CEQA Addendum, the Monitoring and Reporting Program Plan, the submitted ROWD and associated ROWD Addendum, and the other documents in the Central Coast Water Board’s record.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		regional water board.	The Central Coast Water Board required Cal-Am to hire a neutral third-party consultant to review studies and models and make recommendations to the Central Coast Water Board for NPDES permitting actions related to the MPWSP Desalination Plant. The Central Coast Water Board retained Dr. Peter Raimondi, Professor and Chair of the Department of Ecology and Evolutionary Biology at the University of California, Santa Cruz, who is an expert in Empirical Transport Model (ETM)/Area of Production Foregone (APF) analyses to serve as the neutral third-party reviewer. Subsequently, Cal-Am modified its approach and instead proceeded with a volumetric adaptation of the ETM/APF approach. Under this approach, Cal-Am conducted biological monitoring near the discharge location but did not monitor for species composition within the broader source water body. As a result, the APF acreage calculated through this approach is largely independent of the species present in the source water body. Dr. Raimondi reviewed this volumetric ETM/APF approach — including the monitoring plan and results and the APF calculations — and determined that the approach is acceptable for this application, and the Central Coast Water Board agreed. The Order includes a requirement for Cal-Am to submit a final MLMR that describes the volumetric ETM/APF approach and finalizes the APF calculation.
3	2.a.(2)	The regional water board shall conduct a Water Code section 13142.5(b) analysis of all new and expanded desalination facilities. A Water Code section	The Central Coast Water Board conducted a Water Code section 13142.5(b) analysis of Cal-Am’s proposed, new MPWSP Desalination Plant. The Central Coast Water Board analyzed separately as independent considerations a range of

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		13142.5(b) analysis may include future expansions at the facility. The regional water board shall first analyze separately as independent considerations a range of feasible alternatives for the best available site, the best available design, the best available technology, and the best available mitigation measures to minimize intake and mortality of all forms of marine life. Then, the regional water board shall consider all four factors collectively and determine the best combination of feasible alternatives to minimize intake and mortality of all forms of marine life. The best combination of alternatives may not always include the best alternative under each individual factor because some alternatives may be mutually exclusive, redundant, or not feasible in combination.	feasible alternatives for the best available site, the best available design, the best available technology, and the best available mitigation measures to minimize intake and mortality of all forms of marine life. The Central Coast Water Board analyzed and considered all four factors collectively to determine the best combination of feasible alternatives to minimize intake and mortality of all forms of marine life. Below, this Attachment summarizes the Central Coast Water Board’s analysis and findings for the separate and combined considerations of various feasible alternatives for the Water Code section 13142.5(b) determination.
4	2.a.(3)	The regional water board’s Water Code section 13142.5(b) analysis for expanded facilities may be limited to those expansions or other changes that result in the increased intake or mortality of all forms of marine life, unless the regional water board determines that additional measures that minimize intake and mortality of all forms of marine life are	Not Applicable (N/A). The MPWSP Desalination Plant is a new facility, not an expanded facility.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		feasible for the existing portions of the facility.	
5	2.a.(4)	In conducting the Water Code section 13142.5(b) determination, the regional water boards shall consult with other state agencies involved in the permitting of that facility, including, but not limited to: California Coastal Commission, California State Lands Commission, and California Department of Fish and Wildlife. The regional water board shall consider project-specific decisions made by other state agencies; however, the regional water board is not limited to project-specific requirements set forth by other agencies and may include additional requirements in a Water Code section 13142.5(b) determination.	In conducting the Water Code section 13142.5(b) determination, the Central Coast Water Board consulted with the State Water Board, California Coastal Commission, California State Lands Commission, California Department of Fish and Wildlife, and the California Public Utilities Commission.
6	2.a.(5)	A regional water board may expressly condition a Water Code section 13142.5(b) determination based on the expectation of the occurrence of a future event. Such future events may include, but are not limited to, the permanent shutdown of a co-located power plant with intake structures shared with the desalination facility, or a reduction in the volume of wastewater available for the dilution of brine. The regional water board	This Water Code section 13142.5(b) determination is conditioned on several future or potential future occurrences, described in section 2.4 of the Order. A new Water Code section 13142.5(b) determination will be required if any of the following occur: 1. Cal-Am fails to submit the final Marine Life Mortality Report (final MLMR) as required in section 6.3.2.6 of the Order to the Central Coast Water Board for review and approval.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		must make a new Water Code section 13142.5(b) determination if the foreseeable future event occurs.	2. Cal-Am fails to submit the Marine Life Mitigation Plan (MLMP) as required in section 6.3.2.7 of the Order to the Central Coast Water Board for review and approval. 3. The Central Coast Water Board does not approve the final MLMR or the MLMP. 4. Cal-Am fails to implement some or all of the approved MLMP. 5. The final MLMR demonstrates that the mitigation requirements of the Order are insufficient to fully compensate for the mortality of all forms of marine life associated with the MPWSP Desalination Plant. If the final MLMR demonstrates that the mitigation requirements of this Order are insufficient to fully compensate for the mortality of all forms of marine life associated with the MPWSP Desalination Plant, then Cal-Am shall apply for a new Water Code section 13142.5(b) determination. If the final MLMR demonstrates that the mitigation requirements of this Order are excessive to fully compensate for the mortality of all forms of marine life associated with the MPWSP Desalination Plant, then Cal-Am may apply for a new Water Code section 13142.5(b) determination. 6. The volume of municipal wastewater discharged through the M1W ocean outfall is reduced below the

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			flow rate required for a positively buoyant plume significantly more frequently than modeled based on the average daily salinity at Monitoring Location EFF-001D. 7. The MPWSP Desalination Plant drinking water production flow rate increases above an average monthly flow rate of 4.8 MGD. If Cal-Am increases the MPWSP Desalination Plant drinking water production rate above an average monthly flow rate of 4.8 MGD, then Cal-Am shall apply for a new Water Code section 13142.5(b) determination. 8. The brine discharge flow rate from the MPWSP Desalination Plant increases above a maximum flow rate of 8.66 MGD. If Cal-Am increases the brine discharge flow rate from the MPWSP Desalination Plant above a maximum instantaneous flow rate of 8.66 MGD, then Cal-Am shall apply for a new Water Code section 13142.5(b) determination. 9. The reverse osmosis (RO) recovery rate for the MPWSP Desalination Plant is greater than 42.5 percent, as determined by the final design plans for the MPWSP Desalination Plant. If the final design plans for the MPWSP Desalination Plant result in a RO recovery rate greater than 42.5 percent, then Cal-Am shall apply for a new Water Code section 13142.5(b)

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			determination. In addition, Cal-Am is required to apply for a new Water Code section 13142.5(b) determination in accordance with the Ocean Plan requirements if any potential future expansion of the facility occurs, including any design change or operational change to the MPWSP Desalination Plant that could increase the intake or mortality of any form of marine life beyond that which is approved under the Order. The Central Coast Water Board’s Water Code section 13142.5(b) analysis for the expanded facility may be limited to those expansions or other changes that result in the increased intake or mortality of all forms of marine life, unless the Central Coast Water Board determines that additional measures that minimize intake and mortality of all forms of marine life are feasible for the existing portions of the facility.
7	2.a.(5)(a)	The owner or operator shall provide notice to the regional water board as soon as it becomes aware that the expected future event will occur and shall submit a new request for a Water Code section 13142.5(b) determination to the regional water board at least one year prior to the event occurring. If the owner or operator does not become aware that the event will occur at least one year prior to the event occurring, the owner or	See finding 6.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		operator shall submit the request as soon as possible.	
8	2.a.(5)(b)	The regional water board may allow up to five years from the date of the event for the owner or operator to make modifications to the facility required by a new Water Code section 13142.5(b) determination, provided that the regional water board finds that 1) any water supply interruption resulting from the facility modifications requires additional time for water users to obtain a temporary replacement supply, or 2) such a compliance period is otherwise in the public interest and reasonably required for modification of the facility to comply with the determination.	See finding 6.
9	2.a.(5)(c)	If the regional water board makes a Water Code section 13142.5(b) determination for a desalination facility that will be co-located with a power plant, the regional water board shall condition its determination on the power plant remaining in compliance with the <i>Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling</i> .	N/A. The Cal-Am MPWSP Desalination Plant is not co-located with a power plant. As such, the Water Code section 13142.5(b) determination does not require a condition that the power plant remain in compliance with the <i>Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling</i> .
10	2.b	Site Location: Site is the general onshore and offshore location of a new or	The Central Coast Water Board finds the proposed site for the MPWSP Desalination Plant is the best available site feasible

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		expanded facility. There may be multiple potential facility design configurations within any given site. The regional water board shall require that the owner or operator evaluate a reasonable range of nearby sites, including sites that would likely support subsurface intakes. For each potential site, in order to determine whether a proposed facility site is the best available site feasible to minimize intake and mortality of all forms of marine life, the regional water board shall require the owner or operator to:	to minimize intake and mortality for all forms of marine life. See detailed findings below for subsections under Ocean Plan section III.M.2.b.
11	2.b.(1)	Consider whether subsurface intakes are feasible.	Subsurface intakes are feasible at the site location and are the technology that Cal-Am will use for the MPWSP Desalination Plant intake. Cal-Am plans to construct subsurface slant wells at the site location to extract seawater from beneath the seafloor of Monterey Bay. The Final EIR/EIS evaluated 13 potential intake locations and 12 years of hydrogeologic data collected from Cal-Am's test slant well located at the proposed site for the MPWSP Desalination Plant. The Final EIR/EIS determined subsurface intakes are feasible to install and operate at the proposed site and the Central Coast Water Board concurs.
12	2.b.(2)	Consider whether the identified need for desalinated water is consistent with an applicable adopted urban water management plan prepared in accordance with Water Code section	In June 2026, Cal-Am adopted the <i>California American Water Central Division – Monterey County District 2025 Urban Water Management Plan</i> (2025 UWMP), as required by the California Urban Water Management Planning Act. Cal-Am coordinated the preparation of its 2025 UWMP with the cities

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		10631, or if no urban water management plan is available, other water planning documents such as a county general plan or integrated regional water management plan.	in its service area, Monterey County, nearby water agencies, and community members. The 2025 UWMP projected water demand between 2030 and 2050 and determined the MPWSP would be necessary for meeting projected future demands, particularly under single and multiple dry year conditions. The Central Coast Water Board finds that the identified need for desalinated water associated with the Cal-Am MPWSP Desalination Plant is consistent with the applicable adopted UWMP.
13	2.b.(3)	Analyze the feasibility of placing intake, discharge, and other facility infrastructure in a location that avoids impacts to sensitive habitats and sensitive species.	Intake: see finding 11. The MPWSP Desalination Plant will use subsurface slant well intakes that extend 190 to 210 feet beyond the mean high tide line beneath the ocean floor of Monterey Bay (for a total length of at least 1,000 feet from the well heads for the new subsurface slant wells). Subsurface intakes are the Ocean Plan’s preferred intake technology because, along with a slower draw rate, they eliminate impingement and entrainment of marine organisms associated with screened open-water intakes, and construction-related impacts to marine life are minimal. The Final EIR/EIS concluded that impacts to marine biological resources from these subsurface intakes would be less than significant (Final EIR/EIS, p. 4.5-67), and the Central Coast Water Board concurs with this finding, consistent with its preliminary determination in 2019 that the MPWSP Desalination Plant’s proposed site and intake technology are the best site and intake technology feasible to minimize the

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			intake and mortality of all forms of marine life. The intake wells are sited outside any marine protected area or state water quality protection area and are more than six miles from the nearest marine protected area (Moro Cojo Slough State Marine Reserve). Discharge: The MPWSP Desalination Plant will discharge brine commingled with treated municipal wastewater and other existing M1W waste streams, when available, through the existing M1W ocean outfall and multiport diffuser. When M1W waste streams are not available for commingling, the desalination brine will still be discharged through the multiport diffuser system, which is the preferred discharge technology. This approach avoids constructing new outfall infrastructure in sensitive habitat areas and implements the Ocean Plan's preferred method of commingling brine with wastewater to maximize dilution and minimize the occurrence of negatively buoyant plumes. To ensure that, even in discharge scenarios with minimal or no wastewater available for commingling, a negatively buoyant plume does not result in adverse effects due to elevated salinity or hypoxic conditions upon reaching the seafloor, the Dischargers identified and will implement certain modifications to the outfall diffuser system. The diffusers will be retrofitted with stiffer valves angled upward at 60 degrees from horizontal and set to a smaller diameter opening. Additionally, 29 diffuser ports are currently closed and will be opened, resulting in 158 open ports. These changes will increase the velocity of the discharge and allow for increased mixing of the brine, which will allow for the

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			negatively buoyant plume to disperse and for salinity to fall below 2.0 parts per thousand over background before it reaches the seafloor, to prevent impact to benthic sediment. Modeling shows that under worst-case stratification and flow scenarios, the plume will achieve a minimum initial dilution (Dm) for water quality objectives of 101:1 within approximately 53 meters of the diffuser. The 2.0 parts per thousand salinity receiving water objective will be met before 53-meters, in compliance with the Ocean Plan’s maximum 100-meter brine mixing zone (BMZ). Other facility infrastructure: As described in the Final EIR/EIS, Coastal Commission staff report, and the CEQA Addendum, associated pipelines, monitoring stations, brine storage and handling facilities, and support structures will be sited primarily within existing developed or previously disturbed areas—including M1W-owned property and established rights-of-way—to avoid new impacts to sensitive habitats. Any new trenching or installation work will follow best management practices for erosion control, turbidity reduction, and noise minimization, and whenever possible will be timed to coincide with routine maintenance activities to limit incremental disturbance. This siting reduces potential impacts to sensitive species and environmentally sensitive habitat areas.
14	2.b.(4)	Analyze the direct and indirect effects on all forms of marine life resulting from facility construction and operation, individually and in combination with potential anthropogenic effects on all	The Central Coast Water Board evaluated the direct and indirect effects of the MPWSP Desalination Plant on marine life, individually and cumulatively, and finds that the Final EIR/EIS determined foreseeable impacts on marine life from construction and operation would be less than significant at

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		forms of marine life resulting from other past, present, and reasonably foreseeable future activities within the area affected by the facility.	the population level. The project uses subsurface slant-well intakes, will discharge through M1W's existing multiport diffuser that will be modified to improve dilution, and will commingle desalination brine with M1W waste streams when available. Modeling demonstrates that, even under critical conditions, the discharge will meet all Ocean Plan water quality objectives at or within 53-meters from the diffuser system. Additionally, an effluent limit for salinity has been established in the Order for the MPWSP Desalination Plant discharge before commingling with other waste streams. The draft MLMR analyzed the operational mortality associated with shear stress associated with the discharge of desalination brine and calculated mitigation acreage necessary to mitigate for mortality to all forms of marine life associated with the brine discharge. See finding 46 for details on the draft MLMR findings.
15	2.b.(5)	Analyze oceanographic geologic, hydrogeologic, and seafloor topographic conditions at the site, so that the siting of a facility, including the intakes and discharges, minimizes the intake and mortality of all forms of marine life.	The Central Coast Water Board finds that the selected site, in conjunction with the proposed subsurface intakes, will minimize the intake and mortality of all forms of marine life. For the purposes of slant well site location and design, a test slant well was constructed at the CEMEX property in Marina to collect geologic and hydrogeologic data (see Final EIR/EIS chapter 5). Cal-Am's testing demonstrated that subsurface slant wells are feasible at this location. In addition, this site allows the MPWSP Desalination Plant to utilize the existing M1W ocean outfall with a multiport diffuser and discharge brine waste commingled with municipal wastewater and other

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			industrial waste streams, when available, consistent with the preferred disposal approach in the Ocean Plan for minimizing impacts on marine life.
16	2.b.(6)	Analyze the presence of existing discharge infrastructure, and the availability of wastewater to dilute the facility's brine discharge.	The MPWSP Desalination Plant was sited to make use of existing discharge disposal infrastructure associated with the M1W ocean outfall. Brine waste from the Desalination Plant will be commingled with the M1W waste streams currently discharging at the existing ocean outfall, when available, and will be discharged through the existing multiport diffuser. The multiport diffuser will be modified to improve dilution and ensure compliance with effluent limitations under all discharge scenarios.
17	2.b.(7)	Ensure that the intake and discharge structures are not located within a Marine Protected Area (MPA) or State Water Quality Protection Areas (SWQPA) with the exception of intake structures that do not have marine life mortality associated with the construction, operation, and maintenance of the intake structures (e.g., slant wells). Discharges shall be sited at a sufficient distance from an MPA or SWQPA so that the salinity within the boundaries of an MPA or SWQPA does not exceed natural background salinity. To the extent feasible, surface intakes shall be sited so as to maximize the distance from an MPA or SWQPA.	The proposed MPWSP Desalination Plant subsurface slant-well intakes will be installed beneath the seafloor in Monterey Bay within the Monterey Bay National Marine Sanctuary. Subsurface intakes (slant wells) do not cause impingement or entrainment of marine organisms. The construction, operation, and maintenance of the proposed slant wells will not result in marine life mortality. The nearest state MPA (Moro Cojo Slough State Marine Reserve) is approximately six miles northeast of the proposed slant-well location, and no MPA or SWQPA will receive salinity above natural background as a result of the proposed discharge. The MPWSP Desalination Plant will discharge desalination brine through the existing M1W ocean outfall and modified multiport diffuser avoiding construction of a new offshore outfall that could affect sensitive habitats. The desalination brine will be commingled with M1W waste streams when they

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			are available for commingling. ROWD modeling and the ROWD Addendum demonstrate that, with the proposed diffuser modifications and operational controls, under worst-case conditions, the plume will meet the Ocean Plan’s salinity limit of no more than 2.0 ppt over background less than 53 meters of the outfall (which is also less than the Ocean Plan’s maximum of 100 meters) and not near any MPAs or SWQPs. The Order also includes an effluent salinity limitation based on the modeled dilution credit. Accordingly, the Central Coast Water Board finds that the siting of the intake and discharge structures, together with the selected intake technology (subsurface slant wells), use of an existing outfall structure, diffuser modifications to ensure adequate mixing under all discharge scenarios, and associated operational and monitoring conditions, is consistent with Ocean Plan section III.M.2.b.(7) and will avoid or minimize potential impacts to MPAs, SWQPs, and other sensitive habitats and species.
18	2.c	Design: Design is the size, layout, form, and function of a facility, including the intake capacity and the configuration and type of infrastructure, including intake and outfall structures. The regional water board shall require that the owner or operator perform the following in determining whether a proposed facility design is the best available design	N/A. See findings below for subsections under Ocean Plan section III.M.2.c.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		feasible to minimize intake and mortality of all forms of marine life:	
19	2.c.(1)	For each potential site, analyze the potential design configurations of the intake, discharge, and other facility infrastructure to avoid impacts to sensitive habitats and sensitive species.	See finding 28 below.
20	2.c.(2)	If the regional water board determines that subsurface intakes are not feasible and surface water intakes are proposed instead, analyze potential designs for those intakes in order to minimize the intake and mortality of all forms of marine life.	N/A. Subsurface intakes are feasible as demonstrated by the MPWSP test slant well (see findings 11 and 26). Cal-Am plans to construct subsurface slant wells to extract seawater from beneath the seafloor of Monterey Bay.
21	2.c.(3)	Design the outfall so that the BMZ does not encompass or otherwise adversely affect existing sensitive habitat.	See findings 17 and 28. Based on modeling, the BMZ will be less than 53 meters from the outfall under the worst-case discharge scenario. It does not encompass or otherwise adversely affect existing sensitive habitat.
22	2.c.(4)	Design the outfall so that discharges do not result in dense, negatively buoyant plumes that result in adverse effects due to elevated salinity or hypoxic conditions occurring outside the BMZ. An owner or operator must demonstrate that the outfall meets this requirement through plume modeling and/or field studies. Modeling and field studies shall be approved by the regional water board in consultation with State Water Board staff.	MPWSP Desalination Plant brine will be commingled with existing M1W waste streams, including secondary-treated municipal wastewater, AWP reverse osmosis concentrate, and hauled saline waste, when these waste streams are available. The waste streams will be commingled in the brine mixing structure prior to discharge through the M1W outfall. Commingling reduces the overall density of the combined effluent, producing a positively buoyant plume under many anticipated operating conditions; however, under some discharge scenarios, the discharge may remain negatively buoyant.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			To maximize dilution under both positively and negatively buoyant conditions and prevent a negatively buoyant plume from impacting benthic sediment upon reaching the seafloor, the existing M1W multiport diffuser will be modified by replacing 129 existing horizontal ports with stiffer ports angled upward at 60 degrees from horizontal and increasing the number of open ports from 129 to 158 open ports. The modifications ensure that there is sufficient dilution for the salinity of the plume to drop below 2.0 ppt over background before reaching the seafloor. The Dischargers submitted dilution modeling demonstrating that, under reasonable worst-case ambient stratification and flow conditions, the discharge achieves a minimum probable initial dilution necessary to meet water quality objectives (Dm) of 101:1 within approximately 53 meters of the diffuser. Positively buoyant scenarios were modeled using Visual Plumes (UM3) and negatively buoyant scenarios were modeled using the Abessi and Roberts (2014)³ methodology. At the modeled dilution, the discharge will not result in elevated salinity (more than 2.0 ppt over background) outside the BMZ. With respect to hypoxia, the Final EIR/EIS found that dissolved oxygen in receiving waters would not be depressed

³ Abessi, O., and Roberts, P. J. W. (2014). "Multiport Diffusers for Dense Discharges." J. Hydraul. Eng., 140(8)
[http://dx.doi.org/10.1061/\(ASCE\)HY.1943-7900.0000882](http://dx.doi.org/10.1061/(ASCE)HY.1943-7900.0000882)

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			by more than 10 percent from naturally occurring levels – consistent with the Ocean Plan standard. The proposed outfall modifications achieve substantially greater dilution (Dm of 101:1) than the scenarios evaluated in the Final EIR/EIS (Dms of approximately 15:1 to 59:1) and the CEQA Addendum confirmed that the proposed modifications do not result in any new or more severe significant impacts compared to the Final EIR/EIS’s analysis, which confirmed impacts would be less than significant. Accordingly, the discharge will not result in hypoxic conditions outside the BMZ. The Central Coast Water Board, in consultation with the State Water Board, has reviewed the plume modeling submitted with the ROWD Addendum. Compliance will be verified through the monitoring and reporting program, which includes salinity and dissolved oxygen monitoring at and beyond the BMZ boundary.
23	2.c.(5)	Design outfall structures to minimize the suspension of benthic sediments.	The Dischargers are not designing and constructing a new outfall structure but are modifying the existing M1W outfall structure. Cal-Am proposes to discharge MPWSP Desalination Plant brine through the existing M1W ocean outfall multiport diffuser after commingling the brine with other existing M1W waste streams, when available. As discussed in finding 22, Cal-Am’s modeling shows that diluting the brine waste with M1W waste streams prior to discharge will decrease the density of the effluent such that the resulting discharge plume is positively buoyant under many operating conditions. A positively buoyant plume rises

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			through the water column rather than sinking toward the seafloor, thereby avoiding direct contact with benthic sediment and avoiding the potential for sediment disturbance under those conditions. During periods when operating conditions produce a negatively buoyant plume, Cal-Am’s modeling demonstrates that the Dischargers will minimize benthic sediment suspension and will not exceed 2.0 ppt salinity over background when the plume reaches the seafloor through modifications to the existing outfall. Specifically, new valves will be installed on the multiport diffuser ports and will be angled upward at 60 degrees from horizontal. This upward angle maximizes the vertical trajectory and mixing of the discharge plume, increasing dilution and reducing the plume’s velocity and density differential before contact with the seafloor. This combination of measures – commingling to reduce brine density and promote positive buoyancy under many operating conditions, and upward-angled stiffer diffuser ports to maximize mixing and minimize seafloor impact during negatively buoyant conditions – will minimize the suspension of benthic sediments consistent with the Ocean Plan requirement.
24	2.d	Technology: Technology is the type of equipment, materials, and methods that are used to construct and operate the design components of the desalination	N/A. See findings below for subsections under Ocean Plan section III.M.2.d.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		facility. The regional water board shall apply the following considerations in determining whether a proposed technology is the best available technology feasible to minimize intake and mortality of all forms of marine life:	
25	2.d.(1)(a)	Subject to chapter M.2.a.(2), the regional water board in consultation with State Water Board staff shall require subsurface intakes unless it determines that subsurface intakes are not feasible based upon a comparative analysis of the factors listed below for surface and subsurface intakes. A design capacity in excess of the need for desalinated water as identified in chapter III.M.2.b.(2) shall not be used by itself to declare subsurface intakes as not feasible.	The Central Coast Water Board, in consultation with the State Water Board, finds that subsurface intakes are feasible based on Cal-Am's proposal to construct subsurface slant wells at the site (see findings 11 and 26). Cal-Am plans to construct subsurface slant wells to extract seawater from beneath the seafloor of Monterey Bay.
26	2.d.(1)(a)(i)	The regional water board shall consider the following factors in determining feasibility of subsurface intakes: geotechnical data, hydrogeology, benthic topography, oceanographic conditions, presence of sensitive habitats, presence of sensitive species, energy use for the entire facility; design constraints (engineering, constructability), and project life cycle cost. Project life cycle cost shall be determined by evaluating the total cost	In 2015, the Central Coast Water Board approved coverage for Cal-Am's operation of test slant well intakes under its <i>General Permit for Discharges with Low Threat to Water Quality</i> (Order R3-2011-0223). Cal-Am undertook testing over an approximately 24-month period to obtain data regarding the geologic, hydrogeologic, and water quality characteristics of aquifers underlying Monterey Bay. Based on the results of the test, the Final EIR/EIS determined that subsurface slant well intakes were feasible to implement at the proposed site, and Cal-Am has proposed their use at the MPWSP Desalination Plant. The Central Coast Water Board concurs

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		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. Subsurface intakes shall not be determined to be economically infeasible solely because subsurface intakes may be more expensive than surface intakes. Subsurface intakes may be determined to be economically infeasible if the additional costs or lost profitability associated with subsurface intakes, as compared to surface intakes, would render the desalination facility not economically viable. In addition, the regional water board may evaluate other site- and facility-specific factors.	and finds that subsurface intakes are feasible. Cal-Am will install subsurface slant wells to extract seawater from beneath the seafloor of Monterey Bay. The Central Coast Water Board also considered energy use, design constraints, project life cycle cost, benthic topography, oceanographic conditions, and the presence of sensitive habitats and species at the intake location. Because Cal-Am is proposing subsurface intakes – the Ocean Plan's preferred intake technology – and the test well data confirmed feasibility, these factors do not present barriers to the use of subsurface intakes at the proposed site. Further, Cal-am has not indicated that the use of subsurface intakes would be economically infeasible.
27	2.d.(1)(a)(ii)	If the regional water board determines that subsurface intakes are not feasible for the proposed intake design capacity, it shall determine whether subsurface intakes are feasible for a reasonable range of alternative intake design capacities. The regional water board may find that a combination of subsurface and surface intakes is the best feasible alternative to minimize intake and mortality of marine life and meet the	N/A. Subsurface intakes are feasible and are the selected intake technology for the project (see findings 11 and 26).

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		identified need for desalinated water as described in chapter III.M.2.b.(2).	
28	2.d.(1)(b)	Installation and maintenance of a subsurface intake shall avoid, to the maximum extent feasible, the disturbance of sensitive habitats and sensitive species.	Cal-Am proposes to install subsurface slant wells at the former CEMEX site in Marina. The wells will be drilled from onshore locations, with bore paths extending beneath the coastal dunes and beach to reach seawater aquifers below the seafloor of Monterey Bay. Because all drilling will occur from land and the wells terminate deep beneath the ocean floor, no construction activity takes place on the seafloor or within the offshore water column, avoiding direct disturbance to the marine environment during installation and maintenance of the slant wells. The Final EIR/EIS identified western snowy plover (<i>Charadrius alexandrinus nivosus</i>), a federally threatened species, is known to forage and nest on beaches in the vicinity of the slant well sites. To avoid disturbance to snowy plover and other sensitive species and habitats during construction, the California Coastal Commission imposed special conditions on the project's coastal development permit, requiring avoidance and minimization measures for Environmentally Sensitive Habitat Areas (see CCC Final Adopted Findings, Application No. 9-20-0603). The CPUC also imposed mitigation measures in the Final EIR/EIS to protect terrestrial biological resources during construction. Routine maintenance of the slant wells is expected to occur at the onshore well pad locations and would not require work on the seafloor or within sensitive marine habitat. Any future

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			maintenance activities that could affect sensitive habitats or species would be subject to the applicable CDP conditions and mitigation measures. Based on the above, the Central Coast Water Board finds that the installation and maintenance of the MPWSP subsurface intakes will avoid, to the maximum extent feasible, the disturbance of sensitive habitats and sensitive species, consistent with Ocean Plan requirement.
29	2.d.(1)(c)	If subsurface intakes are not feasible, the regional water board may approve a surface water intake subject to the following conditions:	N/A. Subsurface intakes are feasible. See findings 11 and 26.
30	2.d.(1)(c)i	The regional water board shall require that surface water intakes be screened. Screens must be functional while the facility is withdrawing seawater.	N/A. See findings 11 and 26.
31	2.d.(1)(c)ii	In order to reduce entrainment, all surface water intakes must be screened with a 1.0 mm (0.04 in) or smaller slot size screen when the desalination facility is withdrawing seawater.	N/A. See findings 11 and 26.
32	2.d.(1)(c)iii	An owner or operator may use an alternative method of preventing entrainment so long as the alternative method results in intake and mortality of eggs, larvae, and juvenile organisms that is less than or equivalent to a 1.0 mm	N/A. See findings 11 and 26.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		(0.04 in) slot size screen. The owner or operator must demonstrate the effectiveness of the alternative method to the regional water board. The owner or operator must conduct a study to demonstrate the effectiveness of the alternative method, and use an Empirical Transport Model (ETM)/ Area of Production Forgone (APF) approach to estimate entrainment. The study period shall be at least 12 consecutive months. Sampling for environmental studies shall be designed to account for variation in oceanographic or hydrologic conditions and larval abundance and diversity such that abundance estimates are reasonably accurate. Samples must be collected using a mesh size no larger than 335 microns and individuals collected shall be identified to the lowest taxonomical level practicable. The ETM/APF analysis shall evaluate entrainment for a broad range of species, species morphologies, and sizes under the environmental and operational conditions that are representative of the entrained species and the conditions at the full-scale desalination facility. At their discretion, the regional water boards may permit the use of existing entrainment	

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		data to meet this requirement.	
33	2.d.(1)(c)iv	In order to minimize impingement, through-screen velocity at the surface water intake shall not exceed 0.15 meters per second (0.5 feet per second, ft/sec).	N/A. See findings 11 and 26.
34	2.d.(2)	Considerations for Brine* Discharge Technology:	N/A. See findings below for subsections under Ocean Plan section III.M.2.d.(2).
35	2.d.(2)(a)	The preferred technology for minimizing intake and mortality of all forms of marine life resulting from brine discharge disposal is to commingle brine with wastewater (e.g., agricultural, municipal, industrial, power plant cooling water, etc.) that would otherwise be discharged to the ocean. The wastewater must provide adequate dilution to ensure salinity of the commingled discharge meets the receiving water limitation for salinity in chapter III.M.3. Nothing in this section shall preclude future recycling of the wastewater.	Cal-Am proposes to use the Ocean Plan's preferred brine disposal technology. MPWSP Desalination Plant brine will be commingled with M1W waste streams, including RTP secondary effluent, AWPf reverse osmosis concentrate, and hauled saline waste, when available. The degree of commingling will vary depending on M1W operational conditions, and there may be periods when brine is discharged without commingling. To ensure Ocean Plan compliance under all operating conditions, the Dischargers evaluated hundreds of discharge scenarios spanning the full range of waste stream flow combinations across three ocean density profiles. The diffuser will be modified with stiffer angled ports oriented upward at 60 degrees to maximize dilution under all modeled scenarios. The Order establishes an effluent limitation for salinity applicable to the MPWSP Desalination Plant brine at Monitoring Location EFF-001C to ensure the salinity receiving water limitation in Ocean Plan section III.M.3 is met under all discharge conditions. Finally, it should be noted that the recycling of wastewater is

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			not precluded by these operations. Indeed, this Order permits recycling of wastewater and M1W does in fact recycle significant amounts of wastewater.
36	2.d(2)(b)	Multiport diffusers are the next best method for disposing of brine when the brine cannot be diluted by wastewater and when there are no live organisms in the discharge. Multiport diffusers shall be engineered to maximize dilution, minimize the size of the BMZ, minimize the suspension of benthic sediments, and minimize mortality of all forms of marine life.	All discharges – whether commingled with wastewater or brine-only – will be made through the M1W ocean outfall multiport diffuser. As described in finding 22, the multiport diffuser system will be modified with stiffer angled ports oriented upwards at 60 degrees, a configuration identified through the ROWD Addendum alternatives analysis as the optimal design for maximizing dilution while minimizing marine life mortality from shear stress and preventing a negatively buoyant plume from impacting benthic sediments when it reaches the seafloor. Under all scenarios, the discharge will meet the Ocean Plan’s salinity requirement of no more than 2.0 ppt over background within the the Ocean Plan’s 100-meter maximum, minimizing the area in which marine life may be exposed to elevated salinity.
37	2.d(2)(c)	Brine discharge disposal technologies other than wastewater dilution and multiport diffusers, may be used if an owner or operator can demonstrate to the regional water board that the technology provides a comparable level of intake and mortality of all forms of marine life as wastewater dilution if wastewater is available, or multiport diffusers if wastewater is unavailable. The owner or operator must evaluate all of the	N/A. See findings 35 and 36. Cal-Am proposes to use the Ocean Plan’s preferred brine disposal technology, so the empirical studies or modeling associated with Ocean Plan III.M.2.d(2)(c)(i) through III.M.2.d(2)(c)(v) (findings 38 through 42) are not required.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		individual and cumulative effects of the proposed alternative discharge method on the intake and mortality of all forms of marine life, including (where applicable); intake-related entrainment, osmotic stress, turbulence that occurs during water conveyance and mixing, and shearing stress at the point of discharge. When determining the intake and mortality associated with a brine discharge disposal technology or combination of technologies, the regional water board shall require the owner or operator to use empirical studies or modeling to:	
38	2.d(2)(c)i	Estimate intake entrainment impacts using an ETM/APF approach.	N/A. See finding 37.
39	2.d(2)(c)ii	Estimate degradation of all forms of marine life from elevated salinity within the BMZ, including osmotic stresses, the size of impacted area, and the duration that all forms of marine life are exposed to the toxic conditions. Considerations shall be given to the most sensitive species, and community structure and function.	N/A. See finding 37.
40	2.d(2)(c)iii	Estimate the intake and mortality of all forms of marine life that occurs as a result of water conveyance, in-plant turbulence	N/A. See finding 37.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		or mixing, and waste discharge.	
41	2.d(2)(c)iv	Within 18 months of beginning operation, submit to the regional water board an empirical study that evaluates intake and mortality of all forms of marine life associated with the alternative brine discharge technology. The study must evaluate impacts caused by any augmented intake volume, intake and pump technology, water conveyance, waste brine mixing, and effluent discharge. Unless demonstrated otherwise, organisms entrained by the alternative brine discharge technology are assumed to have a mortality rate of 100 percent. The study period shall be at least 12 consecutive months. If the regional water board requires a study period longer than 12 months, the final report must be submitted to the regional water board within 6 months of the completion of the empirical study.	N/A. See finding 37.
42	2.d(2)(c)v	If the empirical study shows that flow augmentation, the alternative brine discharge disposal technology, results in more intake and mortality of all forms of marine life than a facility using wastewater dilution or multiport diffusers, then the facility must either (1) cease	N/A. See finding 37.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		using flow augmentation the alternative brine discharge technology and install and use wastewater dilution or multiport diffusers to discharge brine waste, or (2) re-design the flow augmentation the alternative brine discharge technology system to minimize intake and mortality of all forms of marine life to a level that is comparable with wastewater dilution if wastewater is available, or multiport diffusers if wastewater is unavailable, subject to regional water board approval.	
43	2.d(2)(d)(i)	[Flow Augmentation as an alternative brine discharge technology is prohibited with the following exceptions:] At facilities that use subsurface intakes* to supply augmented flow water for dilution. Facilities that use subsurface intakes* to supply augmented flow water for dilution are exempt from the requirements of chapter III.M.2.d.(2)(c) if the facility meets the receiving water limitation for salinity* in chapter III.M.3.	N/A. Cal-Am has not proposed to use flow augmentation.
44	2.d(2)(d)(ii)	[Flow Augmentation as an alternative brine discharge technology is prohibited with the following exceptions:]At a facility that has received a conditional Water Code section 13142.5(b) determination and is over 80 percent constructed by	N/A. Cal-Am has not proposed to use flow augmentation.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		January 28, 2016. If the owner or operator of the facility proposes to use flow augmentation as an alternative brine discharge technology, the facility must: use low turbulence intakes (e.g., screw centrifugal pumps or axial flow pumps) and conveyance pipes; convey and mix dilution water in a manner that limits thermal stress, osmotic stress, turbulent shear stress, and other factors that could cause intake and mortality of all forms of marine life; comply with chapter III.M.2.d(1); and not discharge through multiport diffusers.	
45	2.e	Mitigation: for the purposes of this section mitigation is the replacement of all forms of marine life or habitat that is lost due to the construction and operation of a desalination facility after minimizing intake and mortality of all forms of marine life through best available site, design, and technology. The regional water board shall ensure an owner or operator fully mitigates for the operational lifetime of the facility and uses the best available mitigation measures feasible to minimize intake and mortality of all forms of marine life. The owner or operator may choose whether to satisfy a facility's mitigation	N/A. See findings below for subsections under Ocean Plan section III.M.2.e.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		measures pursuant to chapter III.M.2.e.(3), or if available, M.2.e.(4), or a combination of the two.	
46	2.e(1)	Marine Life Mortality Report. The owner or operator of a facility shall submit a report to the regional water board estimating the marine life mortality resulting from construction and operation of the facility after implementation of the facility's required site, design, and technology measures.	Cal-Am submitted a draft MLMR to the Central Coast Water Board on May 27, 2026 that estimated marine life mortality related to incremental turbulent shear stress from multiport diffuser discharges at the marine outfall. Operational mortality – shear stress: The draft MLMR evaluated mortality from shear stress associated with discharge through the modified multiport diffuser using an adapted ETM/APF framework to estimate proportional mortality for all zooplankton taxa present in source-water samples. The draft MLMR found that the discharge would result in localized plankton mortality from shear stress but would not cause population-level reductions in any zooplankton taxonomic group. This is consistent with the Final EIR/EIS's conclusion that the MPWSP Desalination Plant is not expected to cause measurable population-level reductions in marine resources (p. 4.5-67). The draft MLMR determined that the APF due to incremental discharge-related shear stress mortality is expected to be a maximum of 35 acres of open water pelagic production. Upon approval of the final MLMR by the Central Coast Water Board, in consultation with State Water Board staff, the calculated marine life mortality APF will form the basis for the mitigation that will be described in the MLMP. Finding 53 discusses the MLMP requirements. Operational mortality – salinity: The Final EIR/EIS evaluated

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			the potential for salinity-related impacts to marine biological resources and concluded that, for all discharge scenarios, salinity levels would meet Ocean Plan requirements at the edge of the BMZ and would not result in significant impacts to marine life. In all modeled scenarios, including the worst-case scenario, the BMZ is less than the Ocean Plan's 100-meter maximum distance from the outfall. The proposed outfall modifications achieve substantially greater dilution than the scenarios evaluated in the Final EIR/EIS, and the CEQA Addendum confirmed that the proposed modifications do not result in new or more severe significant impacts. The Order requires the final MLMR to estimate the area of the BMZ where salinity is modeled to exceed 2.0 parts per thousand above background. Construction-related mortality: Construction of the subsurface slant well intakes will occur entirely from onshore locations and is not expected to result in marine life mortality (see finding 28). Modifications to the existing outfall diffuser will be performed by divers and are consistent with routine maintenance activities regularly performed by M1W. In addition, installation of the proposed water quality monitoring buoys, which would be installed within soft sandy substrate, would cause minor, localized, and temporary disturbance to benthic communities, consistent with other offshore work around the diffuser. As discussed in the CEQA Addendum, the presence of any listed sensitive species on or around the outfall was not identified and the Addendum concluded that installation of the outfall modifications and monitoring buoys

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			would not result in impacts to marine organisms beyond those identified in the Final EIR/EIS. Any incidental disturbance associated with diver activity would be temporary, localized, and minimized through implementation of standard best management practices.
47	2.e(1)(a)	For operational mortality related to intakes, the report shall include a detailed entrainment study. The entrainment study period shall be at least 12 consecutive months and sampling shall be designed to account for variation in oceanographic or hydrologic conditions and larval abundance and diversity such that abundance estimates are reasonably accurate. At their discretion, the regional water boards may permit the use of existing entrainment data from the facility to meet this requirement. Samples must be collected using a mesh size no larger than 335 microns and individuals collected shall be identified to the lowest taxonomical level practicable. The ETM/APF analysis shall be representative of the entrained species collected using the 335 micron net. The APF shall be calculated using a one-sided, upper 95 percent confidence bound for the 95th percentile of the APF distribution. An	N/A. Cal-Am has proposed to use subsurface intakes which is the preferred technology for minimizing intake-related mortality in the Ocean Plan.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		owner or operator with subsurface intakes is not required to do an ETM/APF analysis for their intakes and is not required to mitigate for intake-related operational mortality. The regional water board may apply a one percent reduction to the APF acreage calculated in the Marine Life Mortality Report to account for the reduction in entrainment of all forms of marine life when using a 1.0 mm slot size screen.	
48	2.e(1)(b)	For operational mortality related to discharges, the report shall estimate the area in which salinity exceeds 2.0 parts per thousand above natural background salinity or a facility-specific alternative receiving water limitation (see chapter III.M.3). The area in excess of the receiving water limitation for salinity shall be determined by modeling and confirmed with monitoring. The report shall use any acceptable approach approved by the regional water board for evaluating mortality that occurs due to shearing stress resulting from the facility's discharge, including any incremental increase in mortality resulting from a commingled discharge.	<u>Salinity</u>: The Final EIR/EIS evaluated the potential for salinity-related impacts to marine biological resources and concluded that, for the discharge scenarios evaluated at that time, salinity levels would meet Ocean Plan requirements at the edge of the BMZ. Updated dilution modeling submitted with the ROWD Addendum demonstrates that the Ocean Plan salinity receiving water objective will be met within less than 53 meters of the diffuser under worst-case conditions. The Order requires the final MLMR to calculate the area of the BMZ that exceeds 2.0 ppt above natural background. The area of elevated salinity will be confirmed through receiving water monitoring as specified in the Order's monitoring and reporting program. <u>Shear stress</u>: The proposed diffuser modifications of stiffer angled ports oriented upward at 60 degrees will produce higher per-port jet exit velocities and longer jet trajectories than the existing horizontal ports. As a result, the modified

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			diffuser will entrain a greater volume of ambient seawater into the discharge plume under all operating conditions compared to the existing diffuser, increasing the volume of water exposed to potentially lethal shear stress. Entrainment, for purposes of this shear stress mortality analysis, refers to the drawing of ambient seawater – and the planktonic organisms within it – into the turbulent discharge jets as effluent exits the diffuser ports. Organisms entrained into the jets are exposed to shear stress from turbulent eddies that can cause injury or mortality, particularly to small planktonic organisms. When brine is included in the commingled discharge or discharged without commingling, the increased density of the effluent reduces plume buoyancy and shortens the plume trajectory, which partially offsets this increase in entrained volume. To conservatively isolate the mortality attributable to the MPWSP Desalination Plant, Cal-Am used the worst-case condition: the incremental increase in entrainment volume under the modified diffuser with no brine discharge and only discharge from M1W waste streams, compared to the existing diffuser configuration prior to modification with discharge only from M1W waste streams. Cal-Am used the Visual Plumes UM3 model to compute entrainment volumes for both the existing and modified diffuser configurations across the full range of flow rates and three seasonal ocean density profiles. To estimate shear stress-related mortality, Cal-Am applied a mortality rate of 50 percent to organisms 5 millimeters and smaller that are

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			entrained into the discharge plume. These parameters are more conservative than those recommended in the underlying scientific literature. Roberts (2018) ⁴ established the methodology for identifying zones of potentially lethal shear stress within diffuser jets, and Preston et al. (2021) ⁵ refined the mortality estimation framework based on a synthesis of published turbulence-mortality studies. Preston et al. found that organisms near 1-mm in size face the greatest risk of shear mortality, and that experimental mortalities for turbulence exposures of less than five minutes (comparable to the seconds-scale exposure organisms are expected to experience in a diffuser jet) did not exceed 50 percent. By expanding the organism size threshold to 5 millimeters – thereby capturing a broader range of zooplankton taxa that face reduced but non-zero shear mortality risk – and applying a 50 percent mortality rate as a conservative upper bound, the analysis provides a conservative estimate of shear-induced mortality.
49	2.e(1)(c)	For construction-related mortality, the report shall use any acceptable approach approved by the regional water board for evaluating the mortality that occurs within the area disturbed by the facility's	Construction-related disturbance associated with the MPWSP Desalination Plant does not require mitigation because the disturbance is temporary and the habitat is expected to be naturally restored. Construction of the subsurface slant well intakes will occur entirely from onshore locations and is not

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		construction. The regional water board may determine that the construction-related disturbance does not require mitigation because the disturbance is temporary and the habitat is naturally restored.	expected to result in marine life mortality (see finding 28). The Final EIR/EIS concluded that potential construction-related impacts on marine biological resources — including underwater noise from drilling, discharge of clarified water during well development, and potential accidental release of drilling fluids — would be less than significant, and the Central Coast Water Board concurs. Modifications to the existing outfall diffuser will be performed by divers and are consistent with routine maintenance activities regularly performed by M1W. The CEQA Addendum concluded that installation of the modifications would not result in impacts to marine organisms beyond those identified in the Final EIR/EIS, and any incidental disturbance associated with diver activity would be temporary, localized, and minimized through implementation of standard best management practices (see finding 46). The Central Coast Water Board concurs with the CEQA Addendum’s conclusion.
50	2.e(1)(d)	Upon approval of the report by the regional water board in consultation with State Water Board staff, the calculated marine life mortality shall form the basis for the mitigation provided pursuant to this section.	Cal-Am submitted a draft MLMR on May 27, 2026. The draft MLMR used an adapted ETM/APF framework using a volumetric relationship to estimate proportional mortality and area of production forgone (APF) for zooplankton taxa present in the MPWSP source water body. The source water body was determined by back-tracking particle trajectories based on a 10-day duration that supported a single bay-wide source water body. The analysis concluded the source water body area was 639.68 km ² (158,078 acres) and the APF due to incremental discharge-related shear stress-related mortality is expected to be a maximum of 35 acres of open water pelagic

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			production. Upon approval of the final MLMR by the Central Coast Water Board, in consultation with State Water Board staff, the calculated marine life mortality APF will form the basis for the mitigation that will be described in the MLMP. Finding 53 discusses the MLMP requirements.
51	2.e(2)	The owner or operator shall mitigate for the mortality of all forms of marine life determined in the report above by choosing to either complete a mitigation project as described in chapter III.M.2.e.(3) or, if an appropriate fee-based mitigation program is available, provide funding for the program as described in chapter III.M.2.e.(4). The mitigation project or the use of a fee-based mitigation program and the amount of the fee that the owner or operator must pay is subject to regional water board approval.	Cal-Am is required to mitigate for the incremental mortality of all forms of marine life associated with the MPWSP Desalination Plant by completing a mitigation project. This Order requires 35 acres of mitigation based on the draft MLMR; however, the mitigation acreage may be revised based on the results of the final MLMR. The mitigation project is subject to Central Coast Water Board approval as described in finding 53. If it is determined that the mitigation requirements of the Order are insufficient to fully compensate for the mortality of all forms of marine life associated with the MPWSP Desalination Plant, then Cal-Am is required to apply for a new Water Code section 13142.5(b) determination. See findings 46-50. Additionally, the mitigation acreage may be modified using a mitigation ratio. If some or all of the mitigation project is considered out-of-kind mitigation, then Cal-Am must perform a productivity study as part of the MLMP. The MLMP, productivity study, and proposed mitigation ratio will be subject to Central Coast Water Board review and approval. Depending on the results of the productivity study and the proposed mitigation project, the mitigation ratio has the potential to either decrease or increase the mitigation project

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			acreage.
52	2.e(3)	Mitigation Option 1: Complete a Mitigation Project. The mitigation project must satisfy the following provisions:	See finding 53 below.
53	2.e(3)(a)	The owner or operator shall submit a Mitigation Plan. Mitigation Plans shall include: project objectives, site selection, site protection instrument (the legal arrangement or instrument that will be used to ensure the long-term protection of the compensatory mitigation project site), baseline site conditions, a mitigation work plan, a maintenance plan, a long-term management plan, an adaptive management plan, performance standards and success criteria, monitoring requirements, and financial assurances.	Cal-Am’s draft MLMR included a general description of several potential mitigation projects. Cal-Am will submit a final MLMR that will finalize the mitigation acreage calculated as the APF. The Order requires Cal-Am to submit an MLMP that will detail the proposed mitigation project for Central Coast Water Board consideration. The MLMP must be designed to fully mitigate for the marine life mortality calculated in the final MLMR (see finding 50). The MLMP will include, at a minimum: project objectives, site selection, site protection instrument, baseline site conditions, a mitigation work plan, a maintenance plan, a long-term management plan, an adaptive management plan, performance standards, metrics and success criteria, monitoring, and financial assurances. If Cal-Am proposes any out-of-kind mitigation, then the MLMP must also include a study of biological productivity that the Central Coast Water Board will use to assess an appropriate mitigation ratio for the project. Additional details on the MLMP are included in section 6.3.2.7 of the Order and in Attachment E. The MLMP will be subject to approval by the Central Coast Water Board in consultation with State Water Board staff, the California Coastal Commission, other State agencies involved in the permitting of the MPWSP Desalination Plant, and must

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			undergo any environmental review required under CEQA prior to the Central Coast Water Board’s final approval.
54	2.e(3)(b)i	Mitigation shall be accomplished through expansion, restoration or creation of one or more of the following: kelp beds, estuaries, coastal wetlands, natural reefs, MPAs, or other projects approved by the regional water board that will mitigate for intake and mortality of all forms of marine life associated with the facility.	No mitigation project has been selected to date; see finding 53 above.
55	2.e(3)(b)ii	The owner or operator shall demonstrate that the project fully mitigates for intake-related marine life mortality by including expansion, restoration, or creation of habitat based on the APF acreage calculated in the Marine Life Mortality Report above. The owner or operator using surface water intakes shall do modeling to evaluate the areal extent of the mitigation project’s production area to confirm that it overlaps the facility’s source water body. Impacts on the mitigation project due to entrainment by the facility must be offset by adding compensatory acreage to the mitigation project.	N/A. The MPWSP Desalination Plant will use subsurface intakes underneath the ocean floor. Cal-Am is not required to mitigate for intake-related operational mortality. See finding 46.
56	2.e(3)(b)iii	The owner or operator shall demonstrate that the project also fully mitigates for the	No mitigation project has been selected to date; see finding 53 above.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		discharge-related marine life mortality projected in the Marine Life Mortality Report above.	
57	2.e(3)(b)iv	The owner or operator shall demonstrate that the project also fully mitigates for the construction-related marine life mortality identified in the Marine Life Mortality Report above.	As discussed in finding 49, construction-related disturbance associated with the MPWSP Desalination Plant does not require mitigation because the disturbance is temporary and the habitat is expected to be naturally restored. Accordingly, the mitigation project is not required to mitigate for construction-related marine life mortality.
58	2.e(3)(b)v	The regional water board may permit out-of-kind mitigation for mitigation of open water or soft-bottom species. In-kind mitigation shall be done for all other species whenever feasible.	The Ocean Plan permits out-of-kind mitigation for open water or soft-bottom species and requires in-kind mitigation for all other species whenever feasible. The draft MLMR calculated the APF based on discharge-related shear stress mortality to zooplankton taxa identified through monitoring near the outfall location. However, many of the taxa identified in the monitoring are meroplankton – organisms with a planktonic larval phase but benthic adult life stages associated with hard-bottom, estuarine, or wetland habitats (e.g., barnacle larvae, bivalve larvae, bryozoan larvae, decapod larvae). The classification of impacted taxa as "open water or soft-bottom species" versus other species depends on whether taxa are classified based on their sampling context or their full life history, which has direct implications for whether out-of-kind mitigation is permissible and the applicable mitigation ratio (see findings 59 and 60). The Central Coast Water Board will evaluate these classifications as part of its review of the final MLMR and MLMP. Cal-Am shall provide sufficient information in the final MLMR and MLMP to support this evaluation.
59	2.e(3)(b)vi	For out-of-kind mitigation, an owner or	If Cal-Am proposes an out-of-kind mitigation project, the

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		operator shall evaluate the biological productivity of the impacted open water or soft-bottom habitat calculated in the Marine Life Mortality Report and the proposed mitigation habitat. If the mitigation habitat is a more biologically productive habitat (e.g., wetlands, estuaries, rocky reefs, kelp beds, eelgrass beds, surfgrass beds), the regional water boards may apply a mitigation ratio based on the relative biological productivity of the impacted open water or soft-bottom habitat and the mitigation habitat. The mitigation ratio shall not be less than one acre of mitigation habitat for every ten acres of impacted open water or soft-bottom habitat.	MLMP must include an evaluation of the biological productivity of the impacted habitat and the proposed mitigation habitat (see finding 53). If the proposed mitigation habitat is more biologically productive than the impacted habitat, the Central Coast Water Board may apply a reduced mitigation ratio based on the relative biological productivity of the two habitats. The mitigation ratio shall not be less than one acre of mitigation habitat for every ten acres of impacted open water or soft-bottom habitat. The Central Coast Water Board will determine the applicable mitigation ratio as part of its review and approval of the MLMP, taking into account the taxonomic classification considerations discussed in finding 58.
60	2.e(3)(b)vii	For in-kind mitigation, the mitigation ratio shall not be less than one acre of mitigation habitat for every one acre of impacted habitat.	The applicable in-kind mitigation acreage required for Ocean Plan compliance will be determined based on the final MLMR, the MLMP, and the Central Coast Water Board's evaluation of taxonomic classifications discussed in finding 58. The Central Coast Water Board may increase the in-kind mitigation ratio above 1:1 to account for imprecisions associated with mitigation, including the likelihood of success, temporal delays in productivity, and the difficulty of restoring or establishing desired productivity functions (see finding 61).
61	2.e(3)(b)viii	For both in-kind and out-of-kind mitigation, the regional water boards may	The Central Coast Water Board reserves the authority to increase the required mitigation ratio above the applicable

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		increase the required mitigation ratio for any species and impacted natural habitat calculated in the Marine Life Mortality Report when appropriate to account for imprecisions associated with mitigation, including but not limited to, the likelihood of success, temporal delays in productivity, and the difficulty of restoring or establishing the desired productivity functions.	minimum for any species or impacted natural habitat to account for imprecisions associated with mitigation required for Ocean Plan compliance. The Central Coast Water Board will determine whether a ratio increase is warranted as part of its review and approval of the MLMP (see finding 53).
62	2.e(3)(b)ix	The rationale for the mitigation ratios must be documented in the administrative record for the permit action.	The Central Coast Water Board will document the rationale for the mitigation ratios used to ensure Ocean Plan compliance in the administrative record upon approval of the MLMP (see finding 53).
63	2.e(3)(c)	The Mitigation Plan is subject to approval by the regional water board in consultation with State Water Board staff and with other agencies having authority to condition approval of the project and require mitigation.	See finding 53.
64	2.e(4)	Mitigation Option 2: Fee-based Mitigation Program. If the regional water board determines that an appropriate fee-based mitigation program has been established by a public agency, and that payment of a fee to the mitigation program will result in the creation and ongoing implementation of a mitigation project that meets the requirements of chapter M.2.e.(3), the	No appropriate fee-based mitigation program meeting the requirements of Ocean Plan section III.M.2.e.(4) has been established for the MPWSP Desalination Plant to date. Accordingly, unless a fee-based mitigation program is identified by Cal-Am and confirmed by the Central Coast Water Board to be appropriate and meet the requirements of the Ocean Plan, Cal-Am is required to complete a mitigation project pursuant to Ocean Plan section III.M.2.e.(3) (see findings 51 and 53).

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		owner or operator may pay a fee to the mitigation program in lieu of completing a mitigation project.	
65	2.e(4)(a)	The agency that manages the fee-based mitigation program must have legal and budgetary authority to accept and spend mitigation funds, a history of successful mitigation projects documented by having set and met performance standards for past projects, and stable financial backing in order to manage mitigation sites for the operational life of the facility.	No appropriate fee-based mitigation program has been identified to date. See finding 64.
66	2.e(4)(b)	The amount of the fee shall be based on the cost of the mitigation project, or if the project is designed to mitigate cumulative impacts from multiple desalination facilities or other development projects, the amount of the fee shall be based on the desalination facility's fair share of the cost of the mitigation project.	No appropriate fee-based mitigation program has been identified to date. See finding 64.
67	2.e(4)(c)	The manager of the fee-based mitigation program must consult with the California Department of Fish and Wildlife, Ocean Protection Council, Coastal Commission, State Lands Commission, and State and regional water boards to develop mitigation projects that will best compensate for intake and mortality of all forms of marine life caused by the	No appropriate fee-based mitigation program has been identified to date. See finding 64.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		desalination facility. Mitigation projects that increase or enhance the viability and sustainability of all forms of marine life in Marine Protected Areas are preferred, if feasible.	
68	2.e(5)	California Department of Fish and Wildlife, the regional water board, and State Water Board may perform audits or site inspections of any mitigation project.	This requirement will be implemented upon approval and implementation of the MLMP (see finding 53).
69	2.e(6)	An owner or operator, or a manager of a fee-based mitigation program, must submit a mitigation project performance report to the regional water board 180 days prior to the expiration date of their NPDES permit.	The Order requires Cal-Am to submit a mitigation project performance report to the Central Coast Water Board 180 days prior to the expiration date of the NPDES permit. The content and format of the performance report shall be consistent with the performance standards, metrics, and success criteria established in the approved MLMP (see finding 53).
70	2.e(7)(a)	For conditionally permitted facilities or expanded facilities, the regional water boards may: Account for previously-approved mitigation projects associated with a facility when making a new Water Code section 13142.5(b) determination.	N/A. The MPWSP Desalination Plant is a new facility. There are no previously-approved mitigation projects associated with the facility to account for in this Water Code section 13142.5(b) determination.
71	2.e(7)(b)	For conditionally permitted facilities or expanded facilities, the regional water boards may: Require additional mitigation when making a new Water Code section 13142.5(b) determination for any additional mortality of all forms of marine life resulting from the occurrence of the	This Water Code section 13142.5(b) determination is conditional (see finding 6). If the occurrence of a conditional event triggers a new Water Code section 13142.5(b) determination and results in the identification of additional marine life mortality, the Central Coast Water Board may require additional mitigation to compensate for any additional

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		conditional event or the expansion of the facility. The additional mitigation must be to compensate for any additional construction, discharge, or other increases in intake or impacts or an increase in intake and mortality of all forms of marine life.	construction, discharge, or other increases in intake or mortality. The Central Coast Water Board may also account for previously approved mitigation at that time (see finding 70).
72	3	Receiving Water Limitations for Salinity	N/A. See findings below for subsections under Ocean Plan section III.M.3.
73	3.b(1)	Discharges shall not exceed a daily maximum of 2.0 ppt above natural background salinity measured no further than 100 meters (328 ft) horizontally from each discharge point. There is no vertical limit to this zone.	The Ocean Plan section III.M Desalination Amendment establishes a receiving water limitation for salinity which provides that the discharge shall not cause an exceedance of 2.0 ppth above natural background salinity measured no further than 100 meters (328 feet) horizontally from the end of the discharge. Ocean Plan section III.M requires that the standard BMZ not exceed 100 meters (328 feet) laterally from the points of discharge and throughout the water column. As discussed in finding 22, Cal-Am’s modeling of the discharge demonstrates the discharge will achieve a dilution ratio for water quality objectives of 101:1 (parts seawater to parts effluent) within 53 meters of the ocean outfall and will meet the maximum 2.0 ppth incremental increase in salinity above background within less than 53 meters of the ocean outfall under a reasonable worst-case scenario for ambient stratification and flow conditions. Section 4.1.1.5.1 of the Order conditions the authorization to discharge the MPWSP Desalination Plant’s brine waste to the receiving water on achieving a minimum initial dilution of 101:1 (parts seawater to

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
			parts commingled effluent). In addition, section 4.1.1.3 of the Order establishes an effluent limitation for salinity applicable to the MPWSP Desalination Plant discharge prior to commingling with other waste streams at Discharge Point 001C. The salinity effluent limitation was calculated based on the formula in Ocean Plan section III.C.4.
74	3.b(2)	In determining an effluent limit necessary to meet this receiving water limitation, permit writers shall use the formula in chapter III.C.4 that has been modified for brine discharges as follows: Equation 1: $C_e = C_o + D_m(2.0 \text{ ppt})$ $C_e = (2.0 \text{ ppt} + C_s) + D_m(2.0 \text{ ppt})$ Where: C_e = the effluent concentration limit, ppt C_o = the salinity concentration to be met at the completion of initial dilution= $2.0 \text{ ppt} + C_s$ C_s = the natural background salinity, ppt D_m = minimum probable initial dilution expressed as parts seawater per part brine discharge.	See finding 73. The salinity effluent limitation established in section 4.1.1.3 of the Order was calculated using the formula specified in Ocean Plan section III.C.4, as modified for brine discharges, with C_s based on natural background salinity in Monterey Bay and D_m based on the minimum probable initial dilution of 101:1 for the commingled discharge.
75	3.b(2)(a)	The fixed distance referenced in the initial dilution definition shall be no more than 100 meters (328 ft.).	See findings 22 and 73. The Order establishes an effluent limitation for salinity applicable to the MPWSP Desalination Plant discharge prior to commingling with other waste streams at Discharge Point 001C based on a dilution credit corresponding to a BMZ of 53 meters and a D_m of 101.
76	3.b(2)(b)	In addition, the owner or operator shall develop a dilution factor (D_m) based on the distance of 100 meters (328 ft.) or	See findings 22 and 73. The Order establishes an effluent limitation for salinity applicable to the MPWSP Desalination Plant discharge prior to commingling with other waste streams

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		initial dilution, whichever is smaller. The dilution factor (Dm) shall be developed within the BMZ using applicable water quality models that have been approved by the regional water boards in consultation with State Water Board staff.	at Discharge Point 001C based on a dilution ratio for water quality objectives of 101:1 (parts seawater to parts effluent). Consistent with the permitting approach utilized in the previous order for M1W (NPDES Order R3-2024-0045), the Dischargers developed tiered modeling scenarios based on different levels of flow from the various source effluents that contribute to the total commingled discharge. A new tier was added to account for periods when the MPWSP Desalination Plant contributes brine waste to the discharge. The modeling approach used by the Dischargers varied based on whether the discharge plume resulting from the flow scenario was positively buoyant or negatively buoyant. For positively buoyant plumes, initial dilution was computed using Visual Plumes UM3 model. For negatively buoyant plumes, initial dilution was based on the methods and empirical equations contained in the report, <i>Brine Diffusers and Shear Mortality</i> (Roberts, 2018), which was developed under contract with the State Water Board to propose methods and procedures to model dilution, mixing zones, and shear stress to marine life from brine discharges from diffusers. The Central Coast Water Board, in consultation with the State Water Board, has approved these models.
77	3.c	An owner or operator may submit a proposal to the regional water board for approval of an alternative (other than 2 ppt) salinity* receiving water limitation to be met no further than 100 meters	N/A. Cal-Am has not submitted a request for an alternative salinity receiving water limitation.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		horizontally from the discharge. There is no vertical limit to this zone.	
78	3.d	The owner or operator of a facility that has received a conditional Water Code section 13142.5(b) determination and is over 80 percent constructed by [the effective date of this plan] that proposes flow augmentation using a surface water intake may submit a proposal to the regional water board in consultation with the State Water Board staff for approval of an alternative BMZ not to exceed 200 meters laterally from the discharge point and throughout the water column. The owner or operator of such a facility must demonstrate, in accordance with chapter III.M.2.d.(2)(c), that the combination of the alternative BMZ and flow augmentation using a surface water intake provide a comparable level of intake and mortality of all forms of marine life as the combination of the standard BMZ and wastewater dilution if wastewater is available, or multiport diffusers if wastewater is unavailable. In addition to the analysis of the effects required by chapter III.M.2.d.(2)(c), the owner or operator must also evaluate the individual and cumulative effects of the	N/A. Cal-Am has not proposed to Central Coast Water Board to use flow augmentation using a surface water intake.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		alternative BMZ on the intake and mortality of all forms of marine life. In no case may the discharge result in hypoxic conditions outside of the alternative BMZ. If an alternative BMZ is approved, the alternative distance and the areal extent of the alternative BMZ shall be used in lieu of the standard BMZ for all purposes, including establishing an effluent limitation and a receiving water limitation for salinity, in chapter III.M.	
79	3.e	Existing facilities that do not meet the receiving water limitation at the edge of the BMZ and throughout the water column by January 28, 2016 must either: 1) establish a facility-specific alternative receiving water limitation for salinity as described in chapter III.M.3.c; or, 2) upgrade the facility's brine discharge method in order to meet the receiving water limitation in chapter III.M.3.b in accordance with the State Water Board's Compliance Schedule Policy, as set forth in chapter III.M.3.f below. An owner or operator that chooses to upgrade the facility's method of brine discharge disposal:	N/A. The MPWSP Desalination Plant is not an existing facility.
80	3.f	The regional water board may grant compliance schedules for the	N/A. Cal-Am has not requested a compliance schedule for the brine discharges from the MPWSP Desalination Plant.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		requirements for brine waste discharges for desalination facilities. All compliance schedules shall be in accordance with the State Water Board's Compliance Schedule Policy, except that the salinity receiving water limitation set forth in chapters III.M.3.b and III.M.3.c. shall be considered to be a "new water quality objective" as used in the Compliance Schedule Policy.	
81	3.g	The regional water board in consultation with the State Water Board staff may require an owner or operator to provide additional studies or information if needed. All studies and models are subject to the approval of the regional water board in consultation with State Water Board staff. The regional water board may require an owner or operator to hire a neutral third-party entity to review studies and models and make recommendations to the regional water board.	The Central Coast Water Board, in consultation with State Water Board staff, reserves the authority to require Cal-Am to provide additional studies or information as needed, including but not limited to studies necessary to support approval of the final MLMR and the MLMP. All studies and models are subject to approval by the Central Coast Water Board in consultation with State Water Board staff. See finding 2 for discussion of the neutral third-party review requirement.
82	4	Monitoring and Reporting Program	N/A. See findings below for subsections under Ocean Plan section III.M.4.
83	4.a	The owner or operator of a desalination facility must submit a Monitoring and Reporting Plan to the regional water board for approval. The Monitoring and	Cal-Am submitted a draft <i>Monitoring and Reporting Plan for the California American Water Company Desalination Brine Discharge Monitoring Program</i> (Brine Discharge Monitoring Plan) on December 10, 2024, that proposed facility specific

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		Reporting Plan shall include monitoring of effluent and receiving water characteristics and impacts to all forms of marine life. The Monitoring and Reporting Plan shall, at a minimum, include monitoring for benthic community health, aquatic life toxicity, hypoxia, and receiving water characteristics consistent with Appendix III of this Plan and for compliance with the receiving water limitation in chapter III.M.3. Receiving water monitoring for salinity shall be conducted at times when the monitoring locations are most likely affected by the discharge. For new or expanded facilities, the following additional requirements apply:	receiving water monitoring to comply with Ocean Plan section III.M.4.a.(1) and (2) for desalination facility discharges. The Order establishes a monitoring and reporting program (MRP) that includes monitoring of effluent and receiving water characteristics and impacts to all forms of marine life, including monitoring for benthic community health, aquatic life toxicity, hypoxia, and receiving water characteristics consistent with Appendix III of the Ocean Plan (see finding 84 for details). Receiving water monitoring for salinity will be conducted at times when the monitoring locations are most likely affected by the discharge. The Order requires a final Brine Discharge Monitoring Plan to be submitted before carrying out the necessary monitoring for the Before-After Control-Impact study (see finding 85).
84	4.a(1)	An owner or operator must perform facility-specific monitoring to demonstrate compliance with the receiving water limitation for salinity and evaluate the potential effects of the discharge within the water column, bottom sediments, and the benthic communities. Facility specific monitoring is required until the regional water board determines that a regional monitoring program is adequate to ensure compliance with the receiving water limitation. The monitoring and reporting	The Order establishes effluent monitoring requirements for salinity at monitoring location EFF-001C to demonstrate compliance with the effluent limitation for salinity. In addition, the MRP includes hourly monitoring at seven water column monitoring locations near the discharge point for salinity, dissolved oxygen, and pH to evaluate the potential effects of the discharge within the water column. The MRP also includes two benthic monitoring locations for toxic pollutant and organic carbon monitoring, as well as benthic infauna surveys, to evaluate potential effects of the discharge on bottom sediments and benthic communities.

Finding	Ocean Plan Chapter III.M Reference	Ocean Plan Requirements	Finding
		plan shall be reviewed, and revised if necessary, upon NPDES permit renewal.	
85	4.a(2)	Baseline biological conditions shall be established at the discharge location and at a reference location prior to commencement of construction. The owner or operator is required to conduct biological surveys (e.g., Before-After Control-Impact study), that will evaluate the differences between biological communities at a reference site and at the discharge location before and after the discharge commences. The regional water board will use the data and results from the surveys and any other applicable data for evaluating and renewing the requirements set forth in a facility's NPDES permit.	The Order requires that baseline biological conditions be established at the discharge location and at a reference location prior to commencement of construction. Hourly salinity and dissolved oxygen monitoring will begin at least one year prior to the commencement of brine discharge to confirm baseline conditions. The Order also establishes sediment and benthic community sampling that will occur during wet (January to April) and dry (July to October) seasons (i.e. two events per year) under baseline conditions to capture the variability between seasons. In addition, the Order also establishes fish and invertebrate trawling and fish rigging monitoring prior to commencement of the brine discharge from MPWSP Desalination Plant. Pursuant to the Ocean Plan, Cal-Am is required to conduct a Before-After Control-Impact study that will evaluate the differences between biological communities at the reference site and at the discharge location before and after brine discharge commences. The Central Coast Water Board will use the data and results from the study and any other applicable data for evaluating and renewing the requirements set forth in the facility's NPDES permit.