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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Final Tentative ~~revised tentative~~ ORDER NO. R9-~~2024-0004~~~~2025-0005~~2026-0002-NPDES PERMIT NO. CA0107409

WASTE DISCHARGE REQUIREMENTS AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT FOR THE CITY OF SAN DIEGO E.W. BLOM POINT LOMA WASTEWATER TREATMENT PLANT DISCHARGE TO THE PACIFIC OCEAN THROUGH THE POINT LOMA OCEAN OUTFALL

The Discharger is subject to waste discharge requirements (WDRs) set forth in this Order~~/~~ and Permit:

Discharger	City of San Diego
Name of Facility	E.W. Blom Point Loma Wastewater Treatment Plant
Facility Address	1902 Gatchell Road San Diego, CA 92106 San Diego County

The United States Environmental Protection Agency, Region 9 (USEPA) and the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) have classified this discharge as follows: **Major.**

Table 1 Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Advanced primary-treated wastewater	32º 39’ 55” N	117º 19’ 25” W	Pacific Ocean

The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23 of the California Code of Regulations, no later than 180 days prior to the Order expiration date.

The Discharger shall file a new application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit in accordance with title 40 of the Code of Federal Regulations (40 CFR) section 122.21.(d), no later than 180 days prior to the Permit expiration date.

This Order was adopted by the San Diego Water Board on: _____
This Order shall become effective on: _____
This Order shall expire on: _____

I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the San Diego Water Board on the date indicated above.

_____
David W. Gibson, Executive Officer

This Permit was issued by the USEPA on: _____
This Permit shall become effective on: _____
This Permit shall expire on: _____

I, Tomás Torres, Water Division Director, do hereby certify that this Permit with all attachments is a full, true, and correct copy of the NPDES Permit issued by the USEPA on the date indicated above.

_____
Tomás Torres, Water Division Director

CONTENTS

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TABLES

(Revisions for TABLES are not shown in red-underline and red-strikeout.)

ATTACHMENTS

1 Facility Information

General information about the E.W. Blom Point Loma Wastewater Treatment Plant (Facility) is summarized on page 1 of this Order. More detailed information describing the Facility, Metro Biosolids Center (MBC), the Point Loma Ocean Outfall (PLOO), City of San Diego's (Discharger's) sewage collection system, and other associated infrastructure (collectively referred to as Facilities) is contained in sections 1 and 2 of the Fact Sheet (Attachment F). Section 1 of the Fact Sheet (Attachment F) also includes information regarding the Discharger's Order~~/~~ and Permit application.

2 Findings

The San Diego Water Board and the USEPA finds:

2.1 **Legal Authorities**. This Order~~/~~ and Permit ~~is~~ are issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (Water Code) (commencing with section 13370). Pursuant to 40 CFR section 124.4(c)(2), this Order~~/~~ and Permit ~~serves~~ serve as ~~a joint~~ consolidated State of California (State) and federal NPDES ~~permit~~ permits authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 1 subject to the WDRs in this Order~~/~~ and Permit. This Order~~/~~ and Permit also ~~serves~~ serve as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260). Although Discharge Point No. 001 is beyond the limit of State-regulated ocean waters, effluent plume migration into State-regulated Ocean waters warrants joint regulation of the discharge by the San Diego Water Board and USEPA.

2.2 **Background and Rationale for Requirements**. The San Diego Water Board and USEPA developed the requirements in this Order~~/~~ and Permit based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order~~/~~ and Permit, is hereby incorporated into and constitutes Findings for this Order~~/~~ and Permit. Attachments A through E, and G are also incorporated into this Order~~/~~ and Permit.

~~2.3 **Provisions and Requirements Implementing State Law**. The provisions/requirements in subsections 4.3, 4.4, and 5.2 are included to implement State law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.~~

2.3 ~~**CWA Section 401 Water Quality Certification.** The Discharger shall comply with all requirements set forth in the San Diego Water Board's CWA Section 401 Water Quality Certification R9-2025-145 associated with this Order. See Attachment G.~~ **Provisions and Requirements Implementing State Law**. Any

provisions or requirements that are included to implement State law only are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations, including but not limited to citizens suits under 33 U.S.C. section 1365.

2.4 **CWA Section 301(h) Tentative Decision.** USEPA drafted a CWA section 301(h) Tentative Decision Document (TDD) evaluating the Discharger's proposed improved discharge and effluent limitations for total suspended solids (TSS) and biochemical oxygen demand (5-day @ 20 degrees Celsius (°C)) (BOD_5), the 301(h)-variance-based effluent flow rate of 205 million gallons per day (MGD) (average annual daily flow), and effluent concentrations between the years 2017 and 2022 for TSS and BOD_5. The TDD concludes that the Discharger's 301(h) application satisfies CWA sections 301(h) and 301(j)(5). Based on this information, the USEPA Regional Administrator granted the Discharger's variance request for TSS and BOD_5, in accordance with the TDD and the 1984 301(h) Memorandum of Understanding between the State of California and USEPA; the San Diego Water Board and USEPA jointly issued ~~a~~ consolidated 301(h)-modified ~~permit~~ permits incorporating both federal NPDES requirements and State WDRs. The final consolidated ~~permit was~~ permits were issued without prejudice to the rights of any party to address the legal issue of the applicability of CWA section 1311(j)(5) to the Discharger's future NPDES permits for its discharges from the Facility.

2.5 **Permit Renewal Contingency.** The Discharger's Order~~/~~ and Permit renewal of the variance from federal secondary treatment standards, pursuant to CWA sections 301(h) and (j)(5), is contingent upon:

2.5.1 Determination by the California Coastal Commission that the proposed discharge is consistent with the Coastal Zone Management Act of 1972, as amended (16 United States Code (U.S.C.) section 1451 et seq.);

2.5.2 Determination by the United States Fish and Wildlife Service and the National Oceanic and Atmospheric Administration's (NOAA's) National Marine Fisheries Service that the proposed discharge is consistent with the federal Endangered Species Act of 1973, as amended (16 U.S.C. section 1531 et seq.);

2.5.3 Determination by the NOAA National Marine Fisheries Service that the proposed discharge is consistent with the Magnuson-Stevens Fishery Conservation and Management Act, as amended (16 U.S.C. section 1801 et seq.);

2.5.4 Determination by the San Diego Water Board whether ~~that~~ the discharge will ~~not~~ result in additional treatment pollution control, or other requirement, on any other point or nonpoint sources (40 CFR section 125.64);

2.5.5 Certification by the San Diego Water Board that the discharge will comply with applicable state water quality requirements, including water quality standards (CWA section 401); and concurrence by the San Diego Water Board that the

discharge will comply with water quality standards applicable to the pollutants for which the 301(h) variance is requested (40 CFR section 125.61). The issuance of this Order and Permit, which incorporates both the 301(h) variance and State WDRs, will serve as the San Diego Water Board's concurrence that the discharge will comply with the applicable water quality standards for the Pacific Ocean in the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) and *Water Quality Control Plan for the San Diego Basin* (Basin Plan), including any amendments to date. ~~. The joint issuance of a consolidated NPDES permit, which incorporates both the 301(h) variance and State WDRs, will serve as the San Diego Water Board's concurrence~~; and

2.5.6 Final decision by the USEPA Regional Administrator regarding the Discharger's CWA section 301(h) variance request.

2.6 **CWA Section 301(h) Certification, Concurrence, and Determinations.** Pursuant to CWA section 301(h) and 40 CFR section 124.54 the issuance of this Order and Permit serves as the San Diego Water Board's certification and concurrence with the Discharger's CWA section 301(h) variance. Pursuant to 40 CFR section 125.61(b)(2), the San Diego Water Board has determined that the modified discharge will comply with applicable provisions of State law, including water quality standards applicable to the pollutants for which the CWA section 301(h) variance is requested. Pursuant to 40 CFR section 125.64(b), the San Diego Water Board has determined that the discharge will not result in an additional treatment pollution control, or other requirement, on any other point or nonpoint sources.

2.7 **CWA Section 401 Water Quality Certification.** Pursuant to Clean Water Act section 401, 40 CFR section 124.53, and Water Code section 13160, the San Diego Water Board certifies that the discharge authorized by this Order and Permit will comply with applicable State water quality requirements, including water quality standards. This certification will continue in effect as long as this Order and Permit are in effect. Pursuant to California Code of Regulations, title 23, section 3860, the following three standard conditions apply to all water quality certification actions:

2.7.1 This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section13330 and California Code of Regulations, title 23, sections 3867-3869.

2.7.2 This certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to California Code of Regulations, title 23, section 3855(b) and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

2.7.3 This certification is conditioned upon total payment of any fee required under California Code of Regulations, title 23, chapter 28 and owed by the applicant.

2.~~8~~6 **Executive Officer Delegation of Authority.** The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to Water Code section 13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order~~/~~ and Permit unless such delegation is unlawful under Water Code section 13223, or this Order~~/~~ and Permit explicitly ~~states~~ state otherwise.

2.~~9~~7 **Notification of Interested Parties**. The San Diego Water Board and USEPA notified the Discharger and interested agencies and persons of its intent to consider a consolidated federal NPDES permit that incorporates State WDRs for the discharge and provided them with an opportunity to submit their written comments and recommendations. The San Diego Water Board also provided an opportunity for the Discharger and interested agencies and persons to submit oral comments and recommendations at a public meeting. Details of the notification are provided in the Fact Sheet (Attachment F).

2.10~~8~~ **Consideration of Public Comment**. The San Diego Water Board and USEPA considered all written comments pertaining to the discharge. Details of the comment period are provided in the Fact Sheet (Attachment F).

THEREFORE, IT IS HEREBY ORDERED, that this Order~~/~~ and Permit ~~supersedes~~ supersede Order No. R9-2017-0007, as amended by Order No. R9-2022-0078[1], except for enforcement purposes, and, in order 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 federal CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order~~/~~ and Permit. The Discharger is hereby authorized to discharge subject to WDRs in this Order~~/~~ and Permit at the discharge location described in Table 1 to the Pacific Ocean offshore of the coast of San Diego County. This action in no way prevents the San Diego Water Board and/or USEPA from taking enforcement action for past violations of Order No. R9-2017-0007, as amended by Order No. R9-2022-0078.

Any discharges not expressly authorized in this Order~~/~~ and Permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to USEPA, San Diego Water Board, State Water Resources Control Board (State Water Board), or local authorities after issuance of this Order~~/~~ and Permit via any means, including during an inspection.

[1] Order No. R9-2022-0078, Addendum No. 1 to Order No. R9-2017-0007, NPDES No. CA0107409, Amending Waste Discharge Requirements and National Discharge Elimination System Permit for the City of San Diego E.W. Blom Point Loma Wastewater Treatment Plant Discharge to the Pacific Ocean through the Point Loma Ocean Outfall was adopted by the San Diego Water Board on August 10, 2022, and adopted by the USEPA on August 23, 2022.

Any ~~wastestream~~ waste stream or pollutant loading greater than or different than what the Discharger has proposed to discharge is not authorized by this Order and Permit. The Discharger's proposed discharge is based on the chemical-specific data and the facility's design flow rate as described in the Discharger's Order and Permit application, as well as other information provided to the San Diego Water Board and/or USEPA during the permitting process.

To obtain authorization for a new or changed discharge, the Discharger must first submit a request to the San Diego Water Board and USEPA and the San Diego Water Board and USEPA will analyze whether additional controls or limitations are necessary. Order amendment and Permit modification or reissuance may be required before the proposed discharge would be authorized.

3 Discharge Prohibitions

3.1 The discharge of waste from the Facilities to a location other than Discharge Point No. 001, unless specifically regulated by this Order~~/~~ and Permit or separate WDRs, is prohibited.

~~3.2 The Discharger must comply with Discharge Prohibitions contained in the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan), incorporated into this Order/Permit as if fully set forth herein and summarized in Attachment G, as a condition of this Order/Permit.~~

~~3.3 The Discharger must comply with Discharge Prohibitions contained in chapter 4 of the *Water Quality Control Plan for the San Diego Basin* (Basin Plan), incorporated into this Order/Permit as if fully set forth herein and summarized in Attachment G, as a condition of this Order/Permit.~~

3.2 The unauthorized discharge of treated or untreated sewage to waters of the U.S., waters of the State, or to a stormwater conveyance system is prohibited.

3.3 The bypassing of untreated wastes containing concentrations of pollutants in excess of those of Table 2 or Table 3 of this Order and Permit to the ocean is prohibited, except as allowed in Standard Provisions 1.7 of Attachment D.

3.4 Discharge at Discharge Point No. 001 is prohibited when the discharge does not receive a minimum initial dilution of at least 204:1, with the exception of radioactivity. Compliance shall be achieved by proper operation and maintenance of the discharge outfall to ensure that it (or its replacement, in whole or part) is in good working order and is consistent with, or can achieve better mixing than, 204:1. The Discharger shall notify the San Diego Water Board and USEPA if outfall ports will be retrofitted, as the 204:1 dilution assumes all outfall ports are operational.

3.5 The discharge of waste containing trash or material that is floatable or will become floatable upon discharge is prohibited.

3.6 The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into the ocean is prohibited.

3.7 The discharge of sludge or sludge digester supernatant directly to the ocean, or into a waste stream that discharges to the ocean without further treatment, is prohibited.

4 Effluent Limitations ~~and Discharge Prohibitions~~4.1 ~~Effluent Limitations~~, Performance Goals, and Mass Emission Benchmarks ~~- Discharge Point No. 001~~

4.~~1.~~1 Effluent Limitations – Discharge Point No. 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program (MRP, Attachment E):

Table 2 Effluent Limitations, Discharge Point No. 001[1]

Parameter	Unit	Average Annual[2]	Six-month Median[3]	Average Monthly[4]	Average Weekly[5]	Maximum Daily[6]	Instantaneous Minimum[7]	Instantaneous Maximum[8]
Flow	million gallons per day (MGD)	--	--	240	--	--	--	--
TSS	milligram per liter (mg/L)	--	--	60[9]	--	--	--	--
TSS	facility percent removal (%)	--	--	75[9]	--	--	--	--
TSS	system-wide percent removal (%)	--	--	≥80[10]	--	--	--	--
TSS	metric ton per year (mt/yr)	11,999[11]	--	--	--	--	--	--
TSS	mt/yr	11,998[12]	--	--	--	--	--	--
BOD_5	system-wide percent removal (%)	≥58[10]	--	--	--	--	--	--
Oil and Grease	mg/L	--	--	25	40	--	--	75
Oil and Grease	pounds per day (lbs/day)[13]	--	--	42,743	68,388	--	--	128,228
Settleable Solids	milliliter per liter (ml/L)	--	--	1.0	1.5	--	--	3.0
Turbidity	nephelometric turbidity unit (NTU)	--	--	75	100	--	--	225
pH	standard units	--	--	--	--	--	6.0	9.0
Total Chlorine Residual	microgram per liter (µg/L)	--	4.1E+02	--	--	1.6E+03	--	1.2E+04
Total Chlorine Residual	lbs/day[13]	--	7.0E+02	--	--	2.7E+03	--	2.1E+04
Chronic Toxicity[14,15]	"Pass" / "Fail" ~~Toxic Units Chronic (TUc)~~	--	--	--	--	"Pass" ~~205~~	--	--

Notes for Table 2:

1. Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates the position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation a value of 6.1E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^{2} or 610, and 6.1E+00 represents 6.1×10^{0} or 6.1.
2. For compliance determination, see section 7.1 of this Order~~/~~ and Permit.
3. For compliance determination, see section 7.2 of this Order~~/~~ and Permit.
4. For compliance determination, see section 7.3 of this Order~~/~~ and Permit.
5. For compliance determination, see section 7.4 of this Order~~/~~ and Permit.
6. For compliance determination, see section 7.5 of this Order~~/~~ and Permit.
7. For compliance determination, see section 7.6 of this Order~~/~~ and Permit.
8. For compliance determination, see section 7.7 of this Order~~/~~ and Permit.
9. The Discharger shall, as an average monthly, remove 75 percent of suspended solids from the influent stream before discharging wastewater to the ocean, except that the effluent limitation to be met shall not be lower than 60 mg/L. This effluent limitation was derived from the Ocean Plan, Table 4.
10. The average monthly system-wide percent removal was derived from CWA sections 301(h) and (j)(5). Percent removal shall be calculated on a system-wide basis, as provided in section 7.9 of this Order~~/~~ and Permit.
11. To be achieved on the effective date of this Order~~/~~ and Permit through the end of the fourth year of this Order~~/~~ and Permit. Mass emission limits for TSS apply only to discharges from publicly-owned treatment works (POTWs) owned and operated by the Discharger and the Discharger's wastewater generated in the San Diego Metropolitan Sewerage System (Metro System) service area, excluding TSS contributions from Metro System flows treated in the City of Escondido and South Bay WRP flows discharged to the South Bay Ocean Outfall. If the Discharger is requested to accept wastewater originating in Tijuana, Mexico, treated or untreated, such acceptance would be contingent upon an agreement acceptable to the San Diego Water Board, USEPA, and Discharger. The TSS contribution from that flow would not be counted toward Discharger's mass emission limit(s).
12. To be achieved by the beginning of the fifth year of this Order~~/~~ and Permit. Mass emission limits for TSS apply only to discharges from POTWs owned and operated by the Discharger and the Discharger's wastewater generated in the Metro System service area, excluding TSS contributions from Metro System flows treated in the City of Escondido and South Bay WRP flows discharged to the South Bay Ocean Outfall. If the Discharger is requested to accept wastewater originating in Tijuana, Mexico, treated or untreated, such acceptance would be contingent upon an agreement acceptable to the San Diego Water Board, USEPA, and Discharger. The TSS contribution from that flow would not be counted toward Discharger's mass emission limit(s).
13. The mass emission rate (MER) limitation, in lbs/day, was calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the 301(h)-variance-based flow of 205 MGD and C is the concentration (in mg/L). The 301(h)-variance-based flow rate of 205 MGD was taken from the 1995 301(h) application and carried over from Orders Nos. 95-106, R9-2002-0025, R9-2009-0001, and R9-2017-0007 (see section 2.3 of the Fact Sheet (Attachment F) for more info).
14. As specified in section 7.16 of this Order~~/~~ and Permit and section 3.3 of the MRP (Attachment E).
15. The chronic toxicity final effluent limitation is protective of both the numeric acute and chronic toxicity Ocean Plan water quality objectives. The final effluent limitation will be implemented using *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995), current USEPA guidance in the *National Pollutant Discharge Elimination System Test of Significant Toxicity implementation Document* (EPA 833-R-10-003, June 2010) (https://www3.epa.gov/npdes/pubs/wet_final_tst_implementation2010.pdf) and *EPA Regions 8, 9, and 10, Toxicity Training Tool* (January 2010).

4.~~1.~~2 Performance Goals – Discharge Point No. 001

Parameters that do not have reasonable potential to cause or contribute to an exceedance of water quality objectives, or for which reasonable potential to cause or contribute to an exceedance of water quality objectives cannot be determined, are referred to as performance goal parameters and are assigned the performance goals listed in Table 3 below. Performance goal parameters shall be monitored at Monitoring Location EFF-001, as described in the MRP (Attachment E). The San Diego Water Board and USEPA will use the results for informational purposes only as an indication of the treatment efficiency of the plant, not compliance determinations. The performance goals in Table 3 below are not water quality-based effluent limitations (WQBELs) and are not enforceable, as such. However, the Discharger shall maintain, if not improve, the effluent quality to levels at or below the performance goals. The Discharger shall report all exceedances of performance goals in the cover letter of the applicable self-monitoring report (SMR). Any two consecutive exceedances of the performance goals shall trigger an investigation into the cause of the exceedance. If the exceedance persists in three successive monitoring events, the Discharger shall submit a written Performance Goal Exceedance Investigation Work Plan to the San Diego Water Board and USEPA within 30 days of the Discharger becoming aware of the third successive exceedance. The Performance Goal Exceedance Investigation Work Plan shall outline the investigative steps being taken, whether outside technical expertise is being retained to assist in the investigation, and the proposed schedule for completing a Performance Goal Exceedance Report. The Performance Goal Exceedance Report shall include a description of the nature of the exceedance(s), the results of the investigation including the cause of the exceedance(s), the corrective actions taken, any proposed corrective measures, and a schedule for implementation, if necessary. The San Diego Water Board and USEPA may reopen this Order~~/~~ and Permit to include effluent limitations for parameters that exceed performance goals.

Table 3 Performance Goals at Monitoring Location EFF-001[1]

Parameter	Unit	Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Arsenic, Total Recoverable	µg/L	1.0E+03	--	5.9E+03	1.6E+04
Arsenic, Total Recoverable	lbs/day[2]	1.8E+03	--	1.0E+04	2.7E+04
Cadmium, Total Recoverable	µg/L	2.1E+02	--	8.2E+02	2.1E+03
Cadmium, Total Recoverable	lbs/day[2]	3.5E+02	--	1.4E+03	3.5E+03
Chromium VI, Total Recoverable[3]	µg/L	4.1E+02	--	1.6E+03	4.1E+03
Chromium VI, Total Recoverable[3]	lbs/day[2]	7.0E+02	--	2.8E+03	7.0E+03
Copper, Total Recoverable	µg/L	2.1E+02	--	2.1E+03	5.7E+03
Copper, Total Recoverable	lbs/day[2]	3.5E+02	--	3.5E+03	9.8E+03
Lead, Total Recoverable	µg/L	4.1E+02	--	1.6E+03	4.1E+03
Lead, Total Recoverable	lbs/day[2]	7.0E+02	--	2.8E+03	7.0E+03
Mercury, Total Recoverable	µg/L	8.1E+00	--	3.3E+01	8.2E+01
Mercury, Total Recoverable	lbs/day[2]	1.4E+01	--	5.6E+01	1.4E+02
Nickel, Total Recoverable	µg/L	1.0E+03	--	4.1E+03	1.0E+04
Nickel, Total Recoverable	lbs/day[2]	1.8E+03	--	7.0E+03	1.8E+04
Selenium, Total Recoverable	µg/L	3.1E+03	--	1.2E+04	3.1E+04
Selenium, Total Recoverable	lbs/day[2]	5.3E+03	--	2.1E+04	5.3E+04
Silver, Total Recoverable	µg/L	1.1E+02	--	5.4E+02	1.4E+03
Silver, Total Recoverable	lbs/day[2]	1.9E+02	--	9.3E+02	2.4E+03
Zinc, Total Recoverable	µg/L	2.5E+03	--	1.5E+04	3.9E+04
Zinc, Total Recoverable	lbs/day[2]	4.2E+03	--	2.5E+04	6.7E+04
Cyanide, Total[4]	µg/L	2.1E+02	--	8.2E+02	2.1E+03
Cyanide, Total[4]	lbs/day[2]	3.5E+02	--	1.4E+03	3.5E+03
Ammonia, Total (as N)	µg/L	1.2E+05	--	4.9E+05	1.2E+06
Ammonia, Total (as N)	lbs/day[2]	2.1E+05	--	8.4E+05	2.1E+06
Phenolic Compounds (non-chlorinated)[5]	µg/L	6.2E+03	--	2.5E+04	6.2E+04
Phenolic Compounds (non-chlorinated)[5]	lbs/day[2]	1.1E+04	--	4.2E+04	1.1E+05
Chlorinated Phenolics[5]	µg/L	2.1E+02	--	8.2E+02	2.1E+03
Chlorinated Phenolics[5]	lbs/day[2]	3.5E+02	--	1.4E+03	3.5E+03
Endosulfan[5]	µg/L	1.8E+00	--	3.7E+00	5.5E+00
Endosulfan[5]	lbs/day[2]	3.2E+00	--	6.3E+00	9.5E+00
Endrin	µg/L	4.1E-01	--	8.2E-01	1.2E+00
Endrin	lbs/day[2]	7.0E-01	--	1.4E+00	2.1E+00
HCH (BHC)[5]	µg/L	8.2E-01	--	1.6E+00	2.5E+00
HCH (BHC)[5]	lbs/day[2]	1.4E+00	--	2.8E+00	4.2E+00
Radioactivity	Picocuries per Liter (pCi/L)	Note 6	--	--	--

Parameter	Unit	Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Acrolein	µg/L	--	4.5E+04	--	--
Acrolein	lbs/day[2]	--	7.7E+04	--	--
Antimony	µg/L	--	2.5E+05	--	--
Antimony	lbs/day[2]	--	4.2E+05	--	--
Bis(2-chloroethoxy) Methane	µg/L	--	9.0E+02	--	--
Bis(2-chloroethoxy) Methane	lbs/day[2]	--	1.5E+03	--	--
Bis(2-chloroisopropyl) Ether	µg/L	--	2.5E+05	--	--
Bis(2-chloroisopropyl) Ether	lbs/day[2]	--	4.2E+05	--	--
Chlorobenzene	µg/L	--	1.2E+05	--	--
Chlorobenzene	lbs/day[2]	--	2.0E+05	--	--
Chromium (III), Total Recoverable[3]	µg/L	--	3.9E+07	--	--
Chromium (III), Total Recoverable[3]	lbs/day[2]	--	6.7E+07	--	--
Di-n-butyl Phthalate	µg/L	--	7.2E+05	--	--
Di-n-butyl Phthalate	lbs/day[2]	--	1.2E+06	--	--
Dichlorobenzenes[5]	µg/L	--	1.0E+06	--	--
Dichlorobenzenes[5]	lbs/day[2]	--	1.8E+06	--	--
Diethyl Phthalate	µg/L	--	6.8E+06	--	--
Diethyl Phthalate	lbs/day[2]	--	1.2E+07	--	--
Dimethyl Phthalate	µg/L	--	1.7E+08	--	--
Dimethyl Phthalate	lbs/day[2]	--	2.9E+08	--	--
4,6-dinitro-2-methylphenol	µg/L	--	4.5E+04	--	--
4,6-dinitro-2-methylphenol	lbs/day[2]	--	7.7E+04	--	--
2,4-dinitrophenol	µg/L	--	8.2E+02	--	--
2,4-dinitrophenol	lbs/day[2]	--	1.4E+03	--	--
Ethylbenzene	µg/L	--	8.4E+05	--	--
Ethylbenzene	lbs/day[2]	--	1.4E+06	--	--
Fluoranthene	µg/L	--	3.1E+03	--	--
Fluoranthene	lbs/day[2]	--	5.3E+03	--	--
Hexachlorocyclopentadiene	µg/L	--	1.2E+04	--	--
Hexachlorocyclopentadiene	lbs/day[2]	--	2.0E+04	--	--
Nitrobenzene	µg/L	--	1.0E+03	--	--
Nitrobenzene	lbs/day[2]	--	1.7E+03	--	--
Thallium, Total Recoverable	µg/L	--	4.1E+02	--	--
Thallium, Total Recoverable	lbs/day[2]	--	7.0E+02	--	--
Toluene	µg/L	--	1.7E+07	--	--
Toluene	lbs/day[2]	--	3.0E+07	--	--
Tributyltin	µg/L	--	2.9E-01	--	--

Parameter	Unit	Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Tributyltin	lbs/day[2]	--	4.9E-01	--	--
1,1,1-trichloroethane	µg/L	--	1.1E+08	--	--
1,1,1-trichloroethane	lbs/day[2]	--	1.9E+08	--	--
Acrylonitrile	µg/L	--	2.1E+01	--	--
Acrylonitrile	lbs/day[2]	--	3.5E+01	--	--
Aldrin	µg/L	--	4.5E-03	--	--
Aldrin	lbs/day[2]	--	7.7E-03	--	--
Benzene	µg/L	--	1.2E+03	--	--
Benzene	lbs/day[2]	--	2.1E+03	--	--
Benzidine	µg/L	--	1.4E-02	--	--
Benzidine	lbs/day[2]	--	2.4E-02	--	--
Beryllium, Total Recoverable	µg/L	--	6.8E+00	--	--
Beryllium, Total Recoverable	lbs/day[2]	--	1.2E+01	--	--
Bis(2-chloroethyl) Ether	µg/L	--	9.2E+00	--	--
Bis(2-chloroethyl) Ether	lbs/day[2]	--	1.6E+01	--	--
Bis(2-ethlyhexyl) Phthalate	µg/L	--	7.2E+02	--	--
Bis(2-ethlyhexyl) Phthalate	lbs/day[2]	--	1.2E+03	--	--
Carbon Tetrachloride	µg/L	--	1.8E+02	--	--
Carbon Tetrachloride	lbs/day[2]	--	3.2E+02	--	--
Chlordane[5]	µg/L	--	4.7E-03	--	--
Chlordane[5]	lbs/day[2]	--	8.1E-03	--	--
Chlorodibromomethane (Dibromochloromethane)	µg/L	--	1.8E+03	--	--
Chlorodibromomethane (Dibromochloromethane)	lbs/day[2]	--	3.0E+03	--	--
Chloroform	µg/L	--	2.7E+04	--	--
Chloroform	lbs/day[2]	--	4.6E+04	--	--
Dichlorodiphenyltrichloroethane (DDT)[5]	µg/L	--	3.5E-02	--	--
DDT[5]	lbs/day[2]	--	6.0E-02	--	--
1,4-dichlorobenzene	µg/L	--	3.7E+03	--	--
1,4-dichlorobenzene	lbs/day[2]	--	6.3E+03	--	--
3,3'-dichlorobenzidine	µg/L	--	1.7E+00	--	--
3,3'-dichlorobenzidine	lbs/day[2]	--	2.8E+00	--	--
1,2-dichloroethane	µg/L	--	5.7E+03	--	--
1,2-dichloroethane	lbs/day[2]	--	9.8E+03	--	--
1,1-dichloroethylene	µg/L	--	1.8E+02	--	--
1,1-dichloroethylene	lbs/day[2]	--	3.2E+02	--	--
Dichlorobromomethane	µg/L	--	1.3E+03	--	--

Parameter	Unit	Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Dichlorobromomethane	lbs/day[2]	--	2.2E+03	--	--
Dichloromethane (Methylene Chloride)	µg/L	--	9.2E+04	--	--
Dichloromethane (Methylene Chloride)	lbs/day[2]	--	1.6E+05	--	--
1,3-dichloropropene (1,3-Dichloropropylenes)	µg/L	--	1.8E+03	--	--
1,3-dichloropropene (1,3-Dichloropropylenes)	lbs/day[2]	--	3.1E+03	--	--
Dieldrin	µg/L	--	8.2E-03	--	--
Dieldrin	lbs/day[2]	--	1.4E-02	--	--
2,4-dinitrotoluene	µg/L	--	5.3E+02	--	--
2,4-dinitrotoluene	lbs/day[2]	--	9.1E+02	--	--
1,2-diphenylhydrazine	µg/L	--	3.3E+01	--	--
1,2-diphenylhydrazine	lbs/day[2]	--	5.6E+01	--	--
Halomethanes[5]	µg/L	--	2.7E+04	--	--
Halomethanes[5]	lbs/day[2]	--	4.6E+04	--	--
Heptachlor	µg/L	--	1.0E-02	--	--
Heptachlor	lbs/day[2]	--	1.8E-02	--	--
Heptachlor Epoxide	µg/L	--	4.1E-03	--	--
Heptachlor Epoxide	lbs/day[2]	--	7.0E-03	--	--
Hexachlorobenzene	µg/L	--	4.3E-02	--	--
Hexachlorobenzene	lbs/day[2]	--	7.4E-02	--	--
Hexachlorobutadiene	µg/L	--	2.9E+03	--	--
Hexachlorobutadiene	lbs/day[2]	--	4.9E+03	--	--
Hexachloroethane	µg/L	--	5.1E+02	--	--
Hexachloroethane	lbs/day[2]	--	8.8E+02	--	--
Isophorone	µg/L	--	1.5E+05	--	--
Isophorone	lbs/day[2]	--	2.6E+05	--	--
N-nitrosodi-methylamine	µg/L	--	1.5E+03	--	--
N-nitrosodi-methylamine	lbs/day[2]	--	2.6E+03	--	--
N-nitrosodi-N-propylamine	µg/L	--	7.8E+01	--	--
N-nitrosodi-N-propylamine	lbs/day[2]	--	1.3E+02	--	--
N-nitrosodi-phenylamine	µg/L	--	5.1E+02	--	--
N-nitrosodi-phenylamine	lbs/day[2]	--	8.8E+02	--	--
Polynuclear Aromatic Hydrocarbons (PAHs)[5]	µg/L	--	1.8E+00	--	--
PAHs[5]	lbs/day[2]	--	3.1E+00	--	--

Parameter	Unit	Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Polychlorinated Biphenyls (PCBs)[5]	µg/L	--	3.9E-03	--	--
PCBs[5]	lbs/day[2]	--	6.7E-03	--	--
Tetrachlorodibenzodioxin (TCDD) Equivalents[5]	µg/L	--	8.0E-07	--	--
TCDD[5]	lbs/day[2]	--	1.4E-06	--	--
1,1,2,2-tetrachloroethane	µg/L	--	4.7E+02	--	--
1,1,2,2-tetrachloroethane	lbs/day[2]	--	8.1E+02	--	--
Tetrachloroethylene (Tetrachloroethene)	µg/L	--	4.1E+02	--	--
Tetrachloroethylene (Tetrachloroethene)	lbs/day[2]	--	7.0E+02	--	--
Toxaphene	µg/L	--	4.3E-02	--	--
Toxaphene	lbs/day[2]	--	7.4E-02	--	--
Trichloroethylene (Trichloroethene)	µg/L	--	5.5E+03	--	--
Trichloroethylene (Trichloroethene)	lbs/day[2]	--	9.5E+03	--	--
1,1,2-trichloroethane	µg/L	--	1.9E+03	--	--
1,1,2-trichloroethane	lbs/day[2]	--	3.3E+03	--	--
2,4,6-trichlorophenol	µg/L	--	5.9E+01	--	--
2,4,6-trichlorophenol	lbs/day[2]	--	1.0E+02	--	--
Vinyl Chloride	µg/L	--	7.4E+03	--	--
Vinyl Chloride	lbs/day[2]	--	1.3E+04	--	--

Notes for Table 3

1 The scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation, a value of 6.1E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^{2} or 610, and 6.1E+00 represents 6.1×10^{0} or 6.1.

2 The MER limitations, in lbs/day, were calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the 301(h)-variance-based flow of 205 MGD and C is the concentration (mg/L).

3 The Discharger may, at their option, apply this performance goal as a total chromium performance goal.

4 If the Discharger can demonstrate to the satisfaction of the San Diego Water Board and USEPA that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, performance goals may be evaluated with the combined measurement of free cyanide, simple alkali metals 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 amended.

5 Please see Attachment A for the definitions.

6 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 (CCR), reference to section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.

4.~~1.~~3 ~~USEPA Toxics~~ Mass Emission Benchmarks – Discharge Point No. 001

The 12-month mass emission benchmarks for toxic and carcinogenic parameters in Table 4 below apply to the undiluted effluent from the Facility discharged to the PLOO and is a 12-month rolling average calculated once each month. The 12-month mass emission benchmarks are not WQBELs and are not enforceable as such. The 12-month mass emission benchmarks may be re-evaluated and modified during this Order~~/~~ and Permit term, or this Order~~/~~ and Permit may be modified to incorporate WQBELs for the parameters in Table 4 below, in accordance with the requirements set forth at 40 CFR sections 122.62 and 124.5. The 12-month mass emission benchmark parameters shall be monitored at Monitoring Location EFF-001 as described in the MRP (Attachment E). The San Diego Water Board and USEPA will use the monitoring results for informational purposes only, not compliance determinations. However, the Discharger shall maintain, if not improve, the effluent quality to levels at or below the 12-month mass emission benchmarks. The Discharger shall report all exceedances of 12-month mass emission benchmarks in the cover letter of the applicable monthly self-monitoring report (SMR). Any two consecutive exceedances of the 12-month mass emission benchmarks shall trigger an investigation into the cause of the exceedance. If the exceedance persists in three successive monitoring events, the Discharger shall submit a written Benchmark Exceedance Investigation Work Plan to the San Diego Water Board and USEPA within 30 days of the Discharger becoming aware of the third successive exceedance. The Benchmark Exceedance Investigation Work Plan shall outline the investigative steps being taken, whether outside technical expertise is being retained to assist in the investigation, and the proposed schedule for completing a Benchmark Exceedance Report. The Benchmark Exceedance Report shall include a description of the nature of the exceedance(s), the results of the investigation including the cause of the exceedance(s), the corrective actions taken, any proposed corrective measures, and a schedule for implementation, if necessary. The San Diego Water Board and USEPA may reopen this Order~~/~~ and Permit to include effluent limitations for parameters that exceed 12-month mass emission benchmarks.

Table 4 Twelve-month Mass Emissions Benchmarks

Effluent Constituent	Units	12-Month Mass Emission Benchmark
Arsenic, Total Recoverable	mt/yr	0.88
Cadmium, Total Recoverable	mt/yr	1.4
Chromium (VI), Total Recoverable[1]	mt/yr	14.2
Copper, Total Recoverable	mt/yr	26
Lead, Total Recoverable	mt/yr	14.2
Mercury, Total Recoverable[2]	mt/yr	0.19
Nickel, Total Recoverable	mt/yr	11.3
Selenium, Total Recoverable	mt/yr	0.44
Silver, Total Recoverable	mt/yr	2.8

Effluent Constituent	Units	12-Month Mass Emission Benchmark
Zinc, Total Recoverable	mt/yr	18.3
Cyanide, Total[3]	mt/yr	1.57
Ammonia (as N)	mt/yr	8,018
Phenolic Compounds (Non-Chlorinated)	mt/yr	~~2.57~~ 33.7
Chlorinated Phenolics	mt/yr	1.73
Endosulfan	mt/yr	0.006
Endrin	mt/yr	0.008
HCH	mt/yr	0.025
Acrolein	mt/yr	17.6
Antimony, Total Recoverable	mt/yr	56.6
Bis(2-chloroethoxy) Methane	mt/yr	1.5
Bis(2-chloroisopropyl) Ether	mt/yr	1.61
Chlorobenzene	mt/yr	1.7
Di-n-butyl Phthalate	mt/yr	1.33
Dichlorobenzenes	mt/yr	2.8
Diethyl Phthalate	mt/yr	6.23
4,6-dinitro-2-methylphenol	mt/yr	6.8
2,4-dinitrophenol	mt/yr	11.9
Ethylbenzene	mt/yr	2.04
Fluoranthene	mt/yr	0.62
Nitrobenzene	mt/yr	2.07
Thallium, Total Recoverable	mt/yr	36.8
Toluene	mt/yr	3.31
Tributyltin	mt/yr	0.001
1,1,1-trichloroethane	mt/yr	2.51
Acrylonitrile	mt/yr	5.95
Aldrin	mt/yr	0.006
Benzene	mt/yr	1.25
Benzidine	mt/yr	12.5
Beryllium, Total Recoverable	mt/yr	1.42
Bis(2-chloroethyl) Ether	mt/yr	1.61
Bis(2-ethylhexyl) Phthalate	mt/yr	2.89
Carbon Tetrachloride	mt/yr	0.79
Heptachlor Epoxide	mt/yr	0.024
Hexachlorobenzene	mt/yr	0.54
Hexachlorobutadiene	mt/yr	0.54
Hexachloroethane	mt/yr	1.13
Isophorone	mt/yr	0.71
N-nitrosodimethylamine	mt/yr	0.76
N-nitrosodiphenylamine	mt/yr	1.47
PAHs	mt/yr	15.45
PCBs	mt/yr	0.275
1,1,2,2-tetrachloroethane	mt/yr	1.95

Effluent Constituent	Units	12-Month Mass Emission Benchmark
Tetrachloroethylene (Tetrachloroethene)	mt/yr	4
Toxaphene	mt/yr	0.068
Trichloroethylene (Trichloroethene)	mt/yr	1.56
1,1,2-trichloroethane	mt/yr	1.42
2,4,6-trichlorophenol	mt/yr	0.960
Vinyl Chloride	mt/yr	0.40

Notes for Table 4

1. The Discharger may, at their option, apply this 12-month mass emission benchmark as a total chromium 12-month mass emission benchmark.
2. USEPA Method 1631E, with a quantitation level of 0.5 ng/L, shall be used to analyze total mercury.
3. If the Discharger can demonstrate to the satisfaction of the San Diego Water Board and USEPA that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, the benchmark may be evaluated with the combined measurement of free cyanide, simple alkali metals 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 amended.

4.~~1.~~4 Interim Effluent Limitations – Not Applicable

~~4.2 Discharge Specifications~~

~~4.2.1 Waste management systems that discharge to the Pacific Ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.~~

~~4.2.2 Waste discharged to the ocean must be essentially free of:~~

~~4.2.2.1 Material that is floatable or will become floatable upon discharge;~~

~~4.2.2.2 Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life;~~

~~4.2.2.3 Substances which will accumulate to toxic levels in marine waters, sediments, or biota;~~

~~4.2.2.4 Substances that significantly decrease the natural light to benthic communities and other marine life; and~~

~~4.2.2.5 Materials that result in aesthetically undesirable discoloration of the ocean surface.~~

~~4.2.3 Waste effluents shall be discharged in a manner which provides sufficient initial dilution (Dm = 204) to minimize the concentrations of substances not removed in the treatment.~~

~~4.2.4 Location of waste discharges must be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that:~~

~~4.2.4.1 Pathogenic organisms and viruses are not present in areas where shellfish are harvested for human consumption or in areas used for swimming or other body-contact sports;~~

~~4.2.4.2 Natural water quality conditions are not altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater; and~~

~~4.2.4.3 Maximum protection is provided to the marine environment.~~

~~4.2.5 Waste that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing 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. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.~~

~~4.3 Land Discharge Specifications – Not Applicable~~

~~4.4 Recycling Specifications – Not Applicable~~

5 Receiving Water Limitations – Not Applicable

~~5.1 Surface Water Limitations~~

~~The receiving water limitations set forth below for ocean waters are based on water quality objectives contained in the Basin Plan and Ocean Plan and are a required part of this Order/Permit. The discharge of waste shall not cause or contribute to violation of these limitations in the Pacific Ocean. Compliance with these limitations shall be determined from samples collected at stations representative of the area outside of the zone of initial dilution (ZID).~~

~~5.1.1 **Bacterial Characteristics within State Waters**~~

~~5.1.1.1 Within a zone bounded by the shoreline and a distance of three nautical miles from the shoreline, including all kelp beds, the following bacterial objectives shall be maintained throughout the water column. The ZID for the ocean outfall is excluded.~~

~~5.1.1.1.1 **Fecal Coliform**~~

~~5.1.1.1.1.1 Thirty-day geometric mean of fecal coliform density not to exceed 200 colony forming units (CFU) per 100 milliliters (ml) calculated based on the five most recent samples from each site.~~

~~5.1.1.1.1.2 Single sample maximum not to exceed 400 CFU per 100 ml.~~

~~5.1.1.1.2. **Enterococci**~~

~~5.1.1.1.2.1 Six-week rolling geometric mean not to exceed 30 CFU per 100 ml, calculated weekly.~~

~~5.1.1.1.2.2 Statistical threshold value (STV) of 110 CFU per 100 ml not to be exceeded by more than 10 percent of samples collected in a calendar month, calculated in a static manner.~~

~~5.1.1.2 The ZID of any wastewater outfall shall be excluded from designation as kelp beds for 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.~~

~~5.1.1.3 At all areas where shellfish may be harvested for human consumption, as determined by the San Diego Water Board, the median total coliform density (CFU) shall not exceed 70 per 100 ml throughout the water column, and not more than 10 percent of the samples shall exceed 230 per 100 ml.~~

~~5.1.2 **Bacterial Characteristics for waters beyond State Waters**~~

~~Ocean waters beyond the outer limit of the territorial sea shall not exceed the following USEPA Recreational Water Quality Criteria (RWQC) for Enterococci density beyond the zone of initial dilution in areas where primary contact recreation occurs. The 2012 RWQC describes the criteria designed to protect "primary contact recreation", including swimming, bathing, surfing, water skiing, tubing, water play by children, and similar water contact activities where a high degree of bodily contact with the water, immersion and ingestion are likely (Recreational Water Quality Criteria, EPA-820-F-12-058, 2012, p.6.). Estimated illness rate of 32 per 1,000 primary contact recreators:~~

~~5.1.2.1 A 30-day geometric mean shall not exceed 30 CFU or MPN per 100 ml, which is calculated based on a statistically sufficient number of samples (generally not less than five samples equally spaced over any 30-day period).~~

~~5.1.2.2 A STV corresponding to the 90th percentile of the same water quality distribution shall not exceed 110 CFU or MPN per 100 ml in the same 30-day interval.~~

~~5.1.3 **Physical Characteristics**~~

~~5.1.3.1 Floating particulates and grease and oils shall not be visible.~~

~~5.1.3.2 The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.~~

~~5.1.3.3 Natural light shall not be significantly reduced at any point outside the ZID as a result of the discharge of waste.~~

~~5.1.3.4 The rate of deposition of inert solids and the characteristics of inert solids in the ocean sediments shall not be changed such that benthic communities are degraded.~~

~~5.1.4 **Chemical Characteristics**~~

~~5.1.4.1 The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.~~

~~5.1.4.2 The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.~~

~~5.1.4.3 The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.~~

~~5.1.4.4 The concentration of substances set forth in chapter II, Table 3 of the Ocean Plan, shall not be increased in marine sediments to levels that would degrade indigenous biota.~~

~~5.1.4.5 The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.~~

~~5.1.4.6 Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.~~

~~5.1.4.7 Numerical water quality objectives established in chapter II, Table 3 of the Ocean Plan apply to all discharges within the jurisdiction of the Ocean Plan. Unless otherwise specified, all metal concentrations are expressed as total recoverable concentrations.~~

~~5.1.5 **Biological Characteristics**~~

~~5.1.5.1 Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.~~

~~5.1.5.2 The natural taste, odor, color of fish, shellfish, or other marine resources used for human consumption shall not be altered.~~

~~5.1.5.3 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.~~

~~5.1.6 **Radioactivity**~~

~~5.1.6.1 Discharge of radioactive waste shall not degrade marine life.~~

~~5.1.6.2 The radioactivity in the receiving waters shall not exceed limits specified in title 17, division 1, chapter 5, subchapter 4, group 3, section 30253 of the CCR. Reference to section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.~~

~~**5.2 Groundwater Limitations – Not Applicable**~~

6 Provisions

6.1 Standard Provisions

6.1.1 **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order~~/~~ and Permit.

6.1.2 **San Diego Water Board Standard Provisions.** The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order~~/~~ and Permit, the more stringent provision shall apply.

6.1.2.1 The wastewater facilities shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to title 23, division 3, chapter 26 of the CCR. The wastewater facilities shall be provided with a sufficient number of qualified personnel to operate the wastewater facilities effectively so as to achieve the required level of treatment at all times.

6.1.2.2 The expiration date of this Order~~/~~ and Permit is contained on page 2 of this Order~~/~~ and Permit. After the expiration date, the terms and conditions of this Order~~/~~ and Permit are automatically continued pending issuance of a new permit, provided that all requirements of USEPA's NPDES regulations at 40 CFR section 122.6 and the State's regulations at title 23, division 3, chapter 9, article 3, section 2235.4 of the CCR regarding the continuation of expired permits and WDRs are met.

6.1.2.3 The Discharger shall maintain a copy of this Order~~/~~ and Permit for access in hard copy at a prominent on-site location at the Facility and MBC, or access in electronic format. The Order~~/~~ and Permit shall be available for access by site personnel, San Diego Water Board, ~~State Water Resources Control Board (~~State Water Board~~)~~, and USEPA or their authorized representative at all times. Electronic access to the Order~~/~~ and Permit through a device that provides on-line access on the premises of the Facility and MBC shall be considered equivalent to on-site access.

6.1.3 The Discharger shall comply with the following USEPA standard conditions:

6.1.3.1 The following condition has been established to enforce applicable requirements of the Resource Conservation and Recovery Act (RCRA). POTWs may not receive hazardous waste by truck, rail, or dedicated pipe except as provided under 40 CFR part 270. Hazardous wastes are defined at 40 CFR part 261 and include any mixture containing any waste listed under 40 CFR sections 261.31 through 261.33. The Domestic Sewage Exclusion (40 CFR section 261.4) applies only to wastes mixed with domestic sewage in a sewer leading to a POTW and not to mixtures of hazardous wastes and sewage or septage delivered to the treatment plant by truck.

6.1.3.2 **Transfers by Modification:** Except as provided in 40 CFR section 122.61(b), this Order~~/~~ and Permit may be transferred by the Discharger to a new owner or operator only if this Order~~/~~ and Permit ~~has~~ have been modified or revoked and reissued (under 40 CFR section 122.62(b)(2)), or a minor modification made (under 40 CFR section 122.63(d)), to identify the new permittee and incorporate such other requirements as may be necessary under the CWA. (40 CFR section 122.61(a).)

6.1.3.3 **Automatic Transfers:** As an alternative to transfers under 40 CFR section 122.61(b)(1), this Order~~/~~ and Permit may be automatically transferred to a new permittee if: the Discharger notifies the USEPA and San Diego Water Board at least 30 days in advance of the proposed transfer date; the notice includes a written agreement between the Discharger and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and the USEPA and San Diego Water Board do not notify the Discharger and the proposed new permittee of their intent to modify or revoke and reissue this Order~~/~~ and Permit. A modification under this paragraph may also be a minor modification under 40 CFR section 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement between the Discharger and the new permittee. (40 CFR section 122.61(b).)

6.1.3.4 **Minor Modification of Permits:** Upon the consent of the Discharger, the USEPA and San Diego Water Board may modify this Order~~/~~ and Permit to make the corrections or allowances for changes in the permitted activity listed under 40 CFR sections 122.63(a) through (g), without following the procedures of 40 CFR part 124. Any permit modification not processed as a minor modification under 40 CFR section 122.63 must be made for cause and with 40 CFR part 124 draft permit and public notice as required in 40 CFR section 122.62. (40 CFR section 122.63.)

6.1.3.5 **Termination of Permits:** The causes for terminating a permit during its term, or for denying a permit renewal application are found at 40 CFR sections 122.64(a)(1) through (4). (40 CFR section 122.64.)

6.1.3.6 **Availability of Reports:** Except for data determined to be confidential under 40 CFR part 2, all reports prepared in accordance with the terms of this Order~~/~~ and Permit shall be available for public inspection at the offices of the San Diego Water Board and USEPA. As required by the CWA, permit applications, permits, and effluent data shall not be considered confidential. (Pursuant to CWA section 308.)

6.1.3.7 **Removed Substances:** Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters. (Pursuant to CWA section 301.)

6.1.3.8 **Severability:** The provisions of this Order~~/~~ and Permit are severable, and if any provision of this Order~~/~~ and Permit or the application of any provision of this Order~~/~~ and Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Order~~/~~ and Permit shall not be affected thereby. (Pursuant to CWA section 512.)

6.1.3.9 **Civil and Criminal Liability:** Except as provided in standard conditions on Bypass and Upset, nothing in this Order~~/~~ and Permit shall be construed to

relieve the Discharger from civil or criminal penalties for noncompliance. (Pursuant to CWA section 309.)

6.1.3.10 **Oil and Hazardous Substances Liability:** Nothing in this Order~~/~~ and Permit shall be construed to preclude the institution of any legal action or relieve the Discharger from any responsibilities, liabilities, or penalties to which the Discharger is or may be subject under CWA section 311.

6.1.3.11 **State or Tribal Law:** Nothing in this Order~~/~~ and Permit shall be construed to preclude the institution of any legal action or relive the operator from any responsibilities, liabilities, or penalties established pursuant to any applicable State or Tribal law or regulation under authority preserved by CWA section 510.

6.1.3.12 **No Shield Clause:** ~~Any discharges not expressly authorized in this Order/~~The Discharger is authorized to discharge from the identified facility at the outfall location specified in this Order and Permit, in accordance with the effluent limitations, monitoring requirements, and other conditions set forth in this Order and Permit. This Order and Permit authorize the discharge of only those pollutants resulting from facility processes, waste streams, and operations that have been clearly identified in the permit application process. Any discharges not expressly authorized in this Order and Permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to San Diego Water Board, USEPA, State Water Board, or local authorities after issuance of this Order~~/~~ and Permit ~~by~~ via any means, including during an inspection.

Any pollutant loading greater than or different than the proposed discharge ~~(the "proposed discharge" is based on the chemical-specific data and the facility's design flow as described in the Discharger's Order and Permit application, or any other information provided to the San Diego Water Board and/or USEPA during the permitting process)~~ is not authorized by this Order and Permit. The "proposed discharge" is based on the chemical-specific data and the facility's design flow as described in the Discharger's Order and Permit application, or any other information provided to the San Diego Water Board and/or USEPA during the permitting process.

USEPA notes that ~~such~~ other discharges or increases may be allowable, but the Discharger must first submit a request to the San Diego Water Board and USEPA to authorize such changes ~~other discharge or increase~~. This request will allow the San Diego Water Board and USEPA to conduct an updated reasonable potential analysis to reassess whether additional WQBELs are needed for the newly proposed discharge. Order amendment and Permit modification or reissuance may be required before the proposed discharge would be authorized.

6.2 Monitoring and Reporting Program (MRP) Requirements

6.2.1 The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order~~/~~ and Permit.

6.2.2 Notifications required to be provided under this Order~~/~~ and Permit to the USEPA, Enforcement and Compliance Assurance Division and San Diego Water Board shall be made to:

USEPA, Enforcement and Compliance Assurance Division
Email – R9NPDES@epa.gov
Telephone – (415) 947-4222

San Diego Water Board
E-mail – SanDiego@waterboards.ca.gov, or
Telephone – (619) 516-1990, or
Facsimile – (619) 516-1994.

6.3 Special Provisions

6.3.1 Reopener Provisions

6.3.1.1 This Order~~/~~ and Permit may be reopened for modification 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 performance goal(s) set forth in section 4.~~1.~~2 of this Order~~/~~ and Permit or as otherwise described in Table 3 of the Ocean Plan. (40 CFR section 122.44(d)(1))

6.3.1.2 This Order~~/~~ and Permit may be reopened for modification of the monitoring and reporting requirements and/or special studies requirements, at the discretion of the San Diego Water Board and USEPA. Such modification(s) may include, but is (are) not limited to, revision(s) (i) to implement recommendations from Southern California Coastal Water Research Project (SCCWRP); (ii) to develop, refine, implement, and/or coordinate a regional monitoring program; (iii) to develop and implement improved monitoring and assessment programs in keeping with San Diego Water Board Resolution No. R9 2012-0069, *Resolution in Support of a Regional Monitoring Framework*; and/or (iv) to add provisions to require the Discharger to evaluate and provide information on cost and values of the MRP (Attachment E).

6.3.1.3 This Order~~/~~ and Permit may be modified, revoked and reissued, or terminated for cause in accordance with the provisions of 40 CFR parts 122, 124, and 125 at any time prior to its expiration under any of the following circumstances:

6.3.1.3.1 Violation of any terms or conditions of this Order~~/~~ and Permit. (Water Code section 13381(a));

6.3.1.3.2 Obtaining this Order~~/~~ and Permit by misrepresentation or failure to disclose fully all relevant facts. (Water Code section 13381(b)); and

6.3.1.3.3 A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge. (Water Code section 13381(c)).

6.3.1.4 The filing of a request by the Discharger for modifications, revocation and reissuance, or termination of this Order~~/~~ and Permit does not stay any condition of this Order~~/~~ and Permit. Notification by the Discharger of planned operational or facility changes, or anticipated noncompliance with this Order~~/~~ and Permit does not stay any condition of this Order~~/~~ and Permit. (40 CFR section 122.41(f))

6.3.1.5 If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under federal CWA section 307(a) for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order~~/~~ and Permit, the San Diego Water Board and USEPA may institute proceedings under these regulations to modify or revoke and reissue this Order~~/~~ and Permit to conform to the toxic effluent standard or prohibition. (40 CFR section 122.44(b)(1))

6.3.1.6 This Order~~/~~ and Permit may be reopened and modified for consistency with any new water quality control plan, policy, law, or regulation. (40 CFR section 122.62(a)(3))

6.3.1.7 This Order~~/~~ and Permit may be reopened and modified to revise effluent limitations as a result of future Ocean Plan, Basin Plan, and/or other statewide water quality control plan amendments; or the adoption of a total maximum daily load (TMDL) for the receiving water. (40 CFR section 122.62(a)(2))

6.3.1.8 This Order~~/~~ and Permit may be reopened upon submission by the Discharger of adequate information, as determined by the San Diego Water Board and USEPA, to provide for dilution credits or a mixing zone, as may be appropriate. (40 CFR section 122.62(a)(2))

6.3.1.9 This Order~~/~~ and Permit may also be reopened and modified, revoked and reissued, or terminated in accordance with the provisions of 40 CFR sections 122.44, 122.62 to 122.64, and 125.62. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order~~/~~ and Permit, and endangerment to human health or the environment resulting from the permitted activity.

6.3.1.10 The performance goals, contained in section 4.~~1.~~2 of this Order~~/~~ and Permit, and/or the 12-month mass emission benchmarks, contained in section 4.~~1.~~3 of this Order~~/~~ and Permit, may be re-evaluated and modified during this Order~~/~~ and Permit term, or this Order~~/~~ and Permit may be modified to incorporate WQBELs, in accordance with the requirements set forth at 40 CFR sections 122.62 and 124.5.

6.3.2 Special Studies, Technical Reports, and Additional Monitoring Requirements

6.3.2.1 Spill Prevention and Response Plans

6.3.2.1.1 A spill includes a discharge, or any other type of emission or release of treated or untreated wastewater, or other waste due to system overflow, flow stoppage, system leaks and breaks, operational failure and/or infrastructure failure from the Facilities. Please also refer to section 6.3.5.5 of this Order~~/~~ and Permit for more information regarding spills/sanitary sewer overflows upstream of the Facility headworks that are also covered under separate WDRs.

6.3.2.1.2 The Discharger shall maintain a Spill Prevention Plan (SPP) and a Spill Response Plan (SRP) for the Facilities in an up-to-date condition and shall amend the SPP/SRP whenever there is a change (e.g., in the design, construction, operation, or maintenance of the sewerage system or sewerage facilities) which materially affects the potential for spills and the response required for each potential spill. The Discharger shall review and amend the SPP/SRP as appropriate after each spill from the Facilities. The SPP/SRP and any amendments thereto shall be subject to the approval of the San Diego Water Board and USEPA and shall be modified as directed by the San Diego Water Board and USEPA. The Discharger shall submit the SPP/SRP and any amendments thereto to the San Diego Water Board and USEPA upon request of the San Diego Water Board and/or USEPA. The Discharger shall ensure that the up-to-date SPP/SRP is readily available to the facilities' personnel at all times and that the sewerage system personnel are familiar with it. The SPP/SRP may ~~include~~ reference the Discharger's existing plans (e.g., Sewer System Management Plan required by a statewide general order).

6.3.2.2 Spill Reporting Requirements

For spills that occur upstream of the headworks, please see section 6.3.5.5 for reporting requirements. The Discharger shall report spills~~, as defined in section 6.3.2.1.1 above,~~ that occur at or downstream of the headworks in accordance with the following procedures:

6.3.2.2.1 If a spill results in a discharge of treated or untreated wastewater that is equal to or exceeds 1,000 gallons, and/or results in a discharge to a drainage channel and/or surface water, or results in a discharge to a storm drain that was not fully captured and returned to the sanitary sewer system, the Discharger shall:

6.3.2.2.1.1 Report the spill to the San Diego Water Board and USEPA by email at SanDiego@waterboards.ca.gov and R9NPDES@epa.gov within 24 hours from the time the Discharger becomes aware of the spill. If email communication is not possible, report the spill by telephone (619-516-1990 and 415-947-4222) within 24 hours from the time the Discharger

becomes aware of the spill. The report shall include a description of the spill and its cause; the spill material; the duration of the spill including exact dates and times; the estimated spill volume and its destination; if the spill has not been terminated, the anticipated time it is expected to continue; and steps taken or planned to reduce and/or eliminate the spill.

6.3.2.2.1.2 Submit a written report by email at SanDiego@waterboards.ca.gov and R9NPDES@epa.gov, as well as any additional pertinent information, to the San Diego Water Board and USEPA no later than five days from the time the Discharger becomes aware of the spill. The written report must be signed and certified as required by section 5 of the Standards Provisions (Attachment D).

6.3.2.2.1.3 The San Diego Water Board and USEPA may waive the above-required written report under this provision on a case-by-case basis if the email or oral report has been received within 24 hours.

6.3.2.2.2 If a spill results in a discharge of treated or untreated wastewater less than 1,000 gallons and the discharge does not reach a drainage channel or surface waters, or results in a discharge to a storm drain that was fully captured and returned to the Facilities, the Discharger is not required to notify the San Diego Water Board and USEPA within 24 hours or provide a 5-day written report.

6.3.2.2.3 For spills of waste material other than treated or untreated wastewater, including any such spills that may endanger human health or the environment, the Discharger shall:

6.3.2.2.3.1 Notify the San Diego Water Board and USEPA by email at SanDiego@waterboards.ca.gov and R9NPDES@epa.gov within 24 hours from the time the Discharger becomes aware of the spill. If email communication is not possible, report the spill by telephone (619-516-1990 and 415-947-4222) within 24 hours from the time the Discharger becomes aware of the spill. The report shall include a description of the spill and its cause; the spill material; the duration of the spill including exact dates and times; the estimated spill volume and its destination; if the spill has not been terminated, the anticipated time it is expected to continue; and steps taken or planned to reduce and/or eliminate the spill.

6.3.2.2.3.2 Submit a written report by email at SanDiego@waterboards.ca.gov and R9NPDES@epa.gov, as well as any additional pertinent information, to the San Diego Water Board and USEPA no later than five days from the time the Discharger becomes aware of the spill. The written report must be signed and certified as required by section 5 of the Standards Provisions (Attachment D).

6.3.2.2.3.3 The San Diego Water Board and USEPA may waive the above-required written report under this provision on a case-by-case basis if the email or oral report has been received within 24 hours.

6.3.2.2.4 For all spills, the Discharger shall include a detailed summary of spills in the monthly SMR for the month in which the spill occurred. If no spills occurred during the calendar month, the Discharger shall report no spills in the monthly SMR for that calendar month.

6.3.2.2.5 The spill reporting requirements contained in this Order~~/~~ and Permit do not relieve the Discharger of responsibilities to report spills to other agencies, such as the California Office of Emergency Services and the County of San Diego Department of Environmental Health and Quality.

6.3.2.3 **~~Receiving Water~~ Special Assessment of Violation ~~Assessment~~ and Noncompliance**

In the event of either a violation of any ~~receiving water limitation established within~~ limitations or noncompliance with any permit conditions (e.g., discharge prohibitions) of this Order~~/~~ and Permit, the San Diego Water Board and USEPA may require the Discharger to perform a special assessment to investigate the nature and cause of ~~the receiving water~~ this violation~~.~~, or noncompliance. The ~~receiving water~~ assessment shall identify measures needed to ensure future compliance with ~~receiving water~~ limitations~~.~~, requirements, or conditions of this Order and Permit. The Discharger shall submit the required assessment report to the San Diego Water Board and USEPA within 90 days of receipt of the San Diego Water Board's and~~/or USEPA's notification to perform a Receiving Water Violation Assessment.~~ USEPA's notification to perform a Special Assessment of Violation and Noncompliance. The assessment report shall include a description of the nature of the violation/noncompliance; the results of the investigation, including the cause of the violation/noncompliance; the corrective actions taken; any proposed corrective measures; and a schedule for implementation, if necessary. The Discharger may submit a written request for an extension of the deadline to complete the special assessment for review and written approval by the San Diego Water Board Executive Officer and USEPA Water Division Director. The written request shall include the reason(s) for the request, a proposed schedule to complete the assessment, and proposed final deadline to submit the assessment.

6.3.2.4 **Dilution Analysis**

No later than 4 years after the effective date of this Order~~/~~ and Permit, the Discharger shall submit either an updated dilution analysis for the PLOO discharge that is reflective of current and future operations or a report demonstrating that the discharge volume changes and/or other impacts from the Pure Water San Diego project will not decrease the initial dilution below 204:1. The updated dilution analysis shall:

- Include model inputs and assumptions;
- Describe trapping levels and any boundary effects in the observed range of the ambient density stratification;

- Assume zero current, consistent with the Ocean Plan;
- Consider reasonable worst-case scenario (e.g., strongest density stratification);
- Continue to use near-field modeling to consider how the effluent plume behaves in the ZID;
- Account for a decrease in flow, an increase in pollutant concentrations, and any other impacts due to Pure Water San Diego Program and any other relevant projects in the San Diego Metropolitan Sewerage System progresses (e.g., indirect potable reuse projects, brine discharges, water conservation);
- Include whole effluent toxicity (WET) assessment using synthetic effluent to approximate future final conditions;
- Include a sensitivity analysis for how different inputs affect the initial dilution, including effluent temperature and density; and
- Assessment of compliance with applicable water quality objectives.

6.3.3 **Best Management Practices and Pollution Prevention**

Pollutant Minimization Program (PMP). The goal of the PMP shall be to reduce all potential sources of a pollutant through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the 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 San Diego Water Board and USEPA may consider cost-effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan (PPP), if required pursuant to Water Code section 13263.3(d), shall be considered as fulfilling the PMP requirements.

6.3.3.1 Reporting protocols in the MRP (Attachment E) describe sample results that are to be reported as Detected, But Not Quantified (DNQ) or Not Detected (ND). Definitions for a reported Minimum Level (ML) and Method Detection Limit (MDL) are provided in the Ocean Plan and in Abbreviations and Definitions (Attachment A). These reporting protocols and definitions are used in determining the need to conduct a PMP, as follows:

6.3.3.1.1 The Discharger shall develop and conduct a PMP as further described below if all of the following conditions are true:

6.3.3.1.1.1 The calculated effluent limitation is less than the reported ML; and

6.3.3.1.1.2 The concentration of the pollutant is reported as DNQ; and

6.3.3.1.1.3 There is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

6.3.3.1.2 Alternatively, the Discharger shall develop and conduct a PMP as further described below if all of the following conditions are true:

6.3.3.1.2.1 The calculated effluent limitation is less than the MDL; and

6.3.3.1.2.2 The concentration of the pollutant is reported as ND; and

6.3.3.1.2.3 There is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

6.3.3.2 The PMP shall include, but not be limited to, the following actions and submittals acceptable to the San Diego Water Board and USEPA:

6.3.3.2.1 An annual review and semi-annual 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 San Diego Water Board and USEPA including:

6.3.3.2.5.1 All PMP monitoring results for the previous year;

6.3.3.2.5.2 A list of potential sources of the reportable pollutant(s);

6.3.3.2.5.3 A summary of all actions undertaken pursuant to the control strategy; and

6.3.3.2.5.4 A description of actions to be taken in the following year.

6.3.4 Construction, Operation and Maintenance Specifications

6.3.4.1 **New Treatment Facilities and Expansions of Existing Treatment Facilities.** All proposed new treatment facilities and expansions of existing treatment facilities shall be completely constructed and operable prior to initiation of the discharge from the new or expanded facilities. The Discharger shall submit a certification report for each new treatment facility, expansion of an existing treatment facility, and design capacity re-ratings, prepared by the design engineer. For design capacity re-ratings, the certification report shall be prepared by the engineer who evaluated the treatment facility design capacity. The signature and engineering license number of the engineer preparing the certification report shall be affixed to the report. If reasonable, the certification report shall be submitted prior to beginning construction of new treatment facilities or expansions of existing treatment facilities.

6.3.4.1.1 The certification report shall:

6.3.4.1.1.1 Identify the design capacity of the treatment facility, including the daily and 30-day design capacity;

6.3.4.1.1.2 Certify the adequacy of each component of the treatment facility; and

6.3.4.1.1.3 Contain a requirement-by-requirement analysis, based on acceptable engineering practices, of the process and physical design of the facility to ensure compliance with this Order~~/~~ and Permit.

6.3.4.1.2 The Discharger shall not initiate a discharge from a treatment facility at a daily flow rate in excess of its previously approved design capacity until:

6.3.4.1.2.1 The certification report is received by the San Diego Water Board and USEPA;

6.3.4.1.2.2 The San Diego Water Board and USEPA have received written notification of completion of construction (new or expanded treatment facilities only);

6.3.4.1.2.3 An inspection of the facility has been made by the San Diego Water Board, USEPA, or its designated representatives (new or expanded treatment facilities only), and

6.3.4.1.2.4 The San Diego Water Board and USEPA have provided the Discharger with written authorization to initiate discharge from a new or expanded treatment facility or at a daily flow rate in excess of its previously approved design capacity.

6.3.4.2 The Facilities shall be protected against a 100-year frequency flood flows as defined by the San Diego County Flood Control District (FCD).

6.3.4.3 The Facilities and operations shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year, 24-hour storm event as defined by the National Oceanic and Atmospheric Administration Atlas 14 Point Precipitation Frequency Estimates available at https://hdsc.nws.noaa.gov/pfds/.

6.3.4.4 The Facilities and operations shall be protected against regional impacts of ~~changing climate~~ extreme weather conditions (e.g., rising sea levels, flooding, higher storm surges, wildfires, changing water chemistry, and changing hydrography, including more intense atmospheric rivers). Compliance with this requirement shall be implemented through development and implementation of applicable measures identified in the Discharger's ~~Climate Change Action~~ Asset Management Plan. Section 6.~~1~~3.5.7 of ~~the MRP (Attachment E)~~this Order and Permit requires the Discharger to review and update its ~~Climate Change Action~~ Asset Management Plan, including asset resiliency, as needed or as requested by the San Diego Water Board and USEPA.

6.3.4.5 The Discharger shall provide and maintain in good working order a sufficient alternate power source(s) to ensure that, in the event of the loss, reduction, or

failure of electrical power, each facility is in compliance with the terms and conditions of this Order~~/~~ and Permit. In addition to a sufficient alternate power source(s), backup systems may also include auxiliary power generators, retention storage capacity, emergency operation procedures, and other contingencies to ensure continuous operation of all critical devices and systems used in the conveyance, storage, treatment, recycling, or discharge of municipal wastewater in the event of the loss, reduction, or failure of electrical power. All equipment shall be located to minimize failure due to moisture, liquid spray, flooding, sea level rise, wildfires, and other physical phenomena. The alternate power source(s) shall be designed to permit inspection and maintenance and shall provide for periodic testing.

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

6.3.5.1 Point Loma Ocean Outfall Capacity Report

No later than 180 days prior to this Order~~/~~ and Permit's expiration date, the Discharger shall submit a written report to the San Diego Water Board and USEPA regarding capacity of the Point Loma Ocean Outfall (PLOO) that includes the following items:

6.3.5.1.1 The Discharger's most current report on the PLOO capacity conducted within one year of the expiration date of this Order~~/~~ and Permit;

6.3.5.1.2 The Discharger's best estimate of when the average daily flow will equal or exceed the PLOO capacity;

6.3.5.1.3 The Discharger's intended schedule for studies, design, and other steps needed to provide additional capacity for the PLOO and/or to control the flow rate before the flow rate is equal to the current outfall capacity;

6.3.5.1.4 The Discharger's most current report on the physical condition of the PLOO; and

6.3.5.1.5 A statement signed by a California Licensed Engineer certifying that the capacity of the PLOO is at least 240 MGD (or the total permitted discharge from the Facility, whichever is higher).

6.3.5.2 Ensuring Adequate Treatment Plant Capacity

Four years prior to reaching POTW design capacity, the Discharger shall submit a Treatment Plant Capacity Report to the San Diego Water Board and USEPA 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 San Diego Water Board and USEPA by all planning and building departments having jurisdiction in the area served by the POTW. 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.

If the San Diego Water Board and USEPA find that adequate steps are not being taken to address capacity concerns, the San Diego Water Board and USEPA may adopt a Time Schedule Order or other enforcement order. Such action will be preceded by public notice and a public hearing.

6.3.5.3 **Pretreatment Program**

6.3.5.3.1 The Discharger shall be responsible for the performance of all pretreatment requirements contained in 40 CFR part 403, including any subsequent revisions in 40 CFR part 403. Where 40 CFR part 403 or subsequent revisions place mandatory actions upon the Discharger but do not specify a timetable for completion, the Discharger shall complete the mandatory actions within six months of the issuance date of this Order~~/~~ and Permit, or the effective date of the revisions to 40 CFR part 403, whichever comes later. For violations of pretreatment requirements, the Discharger shall be subject to enforcement actions, penalties, fines, and other remedies imposed by the San Diego Water Board and/or the USEPA, as provided in the federal CWA and/or the Water Code.

6.3.5.3.2 The Discharger shall comply with the urban area pretreatment program requirements under CWA section 301(h) and the implementation requirements at 40 CFR part 125. The Discharger's actions to comply shall include the following:

6.3.5.3.2.1 During each calendar year, the Discharger shall maintain a rate of significant noncompliance (SNC), as defined at 40 CFR section 403.8(f)(2)(vii), for Significant Industrial Users (SIUs) of no more than 15 percent of the total number of SIUs. The 15 percent noncompliance criteria include only SIUs that are in SNC and which have not received at least a ~~second level~~ formal enforcement action from the Discharger, in accordance with the Enforcement Response Plan.[2] The second level of enforcement is the same as formal enforcement action. An example of a formal enforcement action is an Administrative Notice and Order.

6.3.5.3.2.2 By July 1 of each year, the Discharger shall submit the annual analysis regarding local limits required under 40 CFR section 125.65(c)(1)(iii) to the State Water Board's ~~California Integrated Water Quality System (~~CIWQS~~)~~ program website (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/). As a consequence of any new local limits, some SIUs may need time to come into compliance with those limits. In any such case, the Discharger shall issue a Compliance Findings of Violation and Order which is the first level

[2] The Discharger's Enforcement Response Plan was originally submitted to USEPA, Region IX in August 1993. It was subsequently revised on December 15, 1993 and December 1, 1999 and can be found at https://www.sandiego.gov/sites/default/files/legacy/mwwd/environment/iwcp/pdf/enf_resp_plan.pdf

of formal enforcement in its Enforcement Response Plan. The Order shall contain a schedule for achieving compliance with the new local limits. SIUs receiving such orders will not be included in the 15 percent noncompliance criteria.

6.3.5.3.3 The Discharger shall implement and enforce its approved pretreatment program, and all subsequent revisions, which are hereby made enforceable conditions of this Order~~/~~ and Permit. The Discharger shall enforce the requirements promulgated pursuant to sections 307(b), 307(c), 307(d), and 402(b) of the federal CWA with timely, appropriate, and effective enforcement actions. The Discharger 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.

6.3.5.3.4 The Discharger shall perform the pretreatment functions required by 40 CFR part 403, including, but not limited to:

6.3.5.3.4.1 Implement the necessary legal authorities as required by 40 CFR section 403.8(f)(1);

6.3.5.3.4.2 Enforce the pretreatment requirements under 40 CFR sections 403.5 and 403.6;

6.3.5.3.4.3 Implement the programmatic functions as required by 40 CFR section 403.8 (f)(2); and

6.3.5.3.4.4 Provide the requisite funding and personnel to implement the pretreatment program, as required by 40 CFR section 403.8(f)(3).

6.3.5.3.5 By March 1 of each year, the Discharger shall submit an annual pretreatment report to the USEPA by email (R9Pretreatment@epa.gov); San Diego Water Board via the State Water Board's CIWQS program website (https://www.waterboards.ca.gov/water_issues/programs/ciwqs/); and the San Diego County Department of Environmental Health and Quality, Hazardous Materials Division by email (deh.hmdutyeh@sdcounty.ca.gov), describing its pretreatment activities over the previous calendar year. In the event the Discharger is not in compliance with any condition or requirement of this Order~~/~~ and Permit, or any pretreatment compliance inspection/audit requirements, the Discharger shall include the reasons for noncompliance and state how and when it will comply with such conditions and requirements. The annual pretreatment report shall contain, but not be limited to, the following information:

6.3.5.3.5.1 A summary of analytical results from representative flow-proportioned 24-hour composite sampling of the Discharger's influent and effluent for those pollutants known or suspected to be discharged by industrial users that the USEPA has identified under section 307(d) of the federal CWA. This will include an annual full priority pollutant scan. Wastewater sampling and analysis shall be performed in accordance with the minimum frequency of analysis required by the MRP (Attachment E). The Discharger shall also

provide influent and effluent monitoring data for non-priority pollutants, which the Discharger believes may be causing or contributing to interference or pass through. The Discharger is not required to sample and analyze for asbestos. Sludge sampling and analysis is addressed in section 6.3.5.4 of this Order~~/~~ and Permit. Wastewater sampling and analysis shall be performed in accordance with 40 CFR part 136.

6.3.5.3.5.2 A discussion of upset, interference, or pass through, if any, at the Facilities, which the Discharger knows, or suspect were caused by nondomestic users of the POTW system. The discussion shall include the reasons why the incidents occurred, any corrective actions taken, and, if known, the name and address of the responsible nondomestic user(s). The discussion shall also include a review of the applicable local pollutant limitations to determine whether any additional limitations or changes to existing limitations are necessary to prevent pass through, interference, or noncompliance with sludge disposal requirements.

6.3.5.3.5.3 An updated list of the Discharger's SIUs including their names and addresses, and a list of deletions, additions, and SIU name changes keyed to the previously submitted list. The Discharger shall provide a brief explanation for each change. The list shall identify the SIUs subject to federal categorical standards by specifying which set(s) of standards are applicable to each SIU. The list shall also indicate which SIUs are subject to local limits.

6.3.5.3.5.4 The Discharger shall characterize the compliance status of each SIU by providing a list or table for the following:

6.3.5.3.5.4.1 Name of SIU and category, if subject to categorical standards;

6.3.5.3.5.4.2 Type of wastewater treatment or control processes in place;

6.3.5.3.5.4.3 Number of samples taken by SIU during the year;

6.3.5.3.5.4.4 Number of samples and inspections by the Discharger during the year;

6.3.5.3.5.4.5 For an SIU subject to discharge requirements for total toxic organics, whether all required certifications were provided;

6.3.5.3.5.4.6 A list of pretreatment standards (categorical or local) violated during the year, or any other violations;

6.3.5.3.4.4.7 Industries in significant non-compliance (SNC) as defined at 40 CFR section 403.12(f)(2)(vii), at any time during the year;

6.3.5.3.5.4.8 A summary of enforcement actions or any other actions taken against SIUs during the year. Describe the type of action, final compliance date, and the amount of fines and/or penalties collected, if any. Describe any proposed actions for bringing SIUs into compliance; and

6.3.5.3.5.4.9 The name(s) of any SIU(s) required to submit a baseline monitoring report and any SIUs currently discharging under a baseline monitoring report.

6.3.5.3.5.5 A brief description of any programs the Discharger implements to reduce pollutants from industrial users not classified as SIUs.

6.3.5.3.5.6 A brief description of any significant changes in operating the pretreatment program which differ from the previous year, including, but not limited to, changes in the program's administrative structure, local limits, monitoring program, legal authority, enforcement policy, funding, and staffing levels.

6.3.5.3.5.7 A summary of the annual pretreatment program budget, including the cost of pretreatment program functions and equipment purchases.

6.3.5.3.5.8 A summary of activities to involve and inform the public of the pretreatment program, including a copy of the newspaper notice, if any, required by 40 CFR section 403.8(f)(2)(vii).

6.3.5.3.5.9 A description of any changes in sludge disposal methods.

6.3.5.3.5.10 A description of the program to quantify, characterize, regulate, and treat flow from low-flow urban runoff diversion systems and "first flush" industrial ~~storm water~~ stormwater diversion systems that are routed to the sewage collection system.

6.3.5.3.5.11 A discussion of any concerns not described elsewhere in the annual pretreatment report.

6.3.5.3.6 Non-industrial Source Control Program. In accordance with CWA section 301(h)(7) and 40 CFR section 125.66(d), the Discharger shall continue to develop and implement its non-industrial source control program and public education program. The purpose of these programs is to eliminate the entrance of non-industrial toxic pollutants and pesticides into the POTW. These programs shall be periodically reviewed and addressed in the annual pretreatment report.

~~6.3.5.3.7 Pursuant to section 60320.306 of title 22 of the California Code of Regulations, the Discharger must administer an industrial pretreatment and pollutant source control program and implement an enhanced source control program that includes, at a minimum:~~

~~6.3.5.3.7.1 An assessment of the fate of Division of Drinking Water (DDW)-specified and San Diego Water Board-specified chemicals and contaminants through the North City sewershed, Morena Pump Station sewershed, North City Water Reclamation Plant, and North City Pure Water Facility.~~

~~6.3.5.3.7.1 Chemical and contaminant source investigations and monitoring that focuses on DDW-specified and San Diego Water Board-specified chemicals and contaminants that may be discharged to the North City Water Reclamation Plant.~~

~~6.3.5.3.7.1 An outreach program to industrial, commercial, and residential communities within the North City sewershed for the purpose of managing and minimizing the discharge of chemicals and contaminants at the source to the North City Water Reclamation Plant.~~

~~6.3.5.3.7.1 A current inventory of chemicals and contaminants identified and evaluated including new chemicals and contaminants resulting from new sources or changes to existing sources that may be discharged to the North City Water Reclamation Plant.~~

6.3.5.4 **Sludge (Biosolids) Disposal Requirements**

6.3.5.4.1 **General Requirements**

6.3.5.4.1.1 All biosolids generated by the Discharger during the treatment of wastewater shall be used or disposed of in compliance with applicable portions of: 40 CFR part 503-for biosolids that are land applied, placed on a surface disposal site (dedicated land disposal site, monofill, or sludge-only parcel at a municipal landfill), or incinerated; 40 CFR part 258-for biosolids disposed of in a municipal solid waste landfill (with other materials); and 40 CFR part 257-for all biosolids use and disposal practices not covered under 40 CFR parts 258 or 503. The preparer of the biosolids is required under 40 CFR section 503.7 to ensure that the applicable requirements in 40 CFR part 503 are met when the sewage sludge is applied to the land.

Requirements for biosolids that are applied for the purpose of enhancing plant growth or for land reclamation are set forth in 40 CFR part 503, subpart B (land application). Requirements for biosolids that are placed on land for the purpose of disposal are set forth in 40 CFR part 503, subpart C (surface disposal).

The Discharger shall take all reasonable steps to ensure that all biosolids produced at the Facilities are used or disposed of in accordance with these rules, whether the Discharger uses or dispose of the biosolids itself or transfers their biosolids to another party for further treatment, use, or disposal. The Discharger is responsible for informing subsequent preparers, appliers, and disposers of requirements they must meet under these rules.

6.3.5.4.1.2 The Discharger shall take all reasonable steps to prevent or minimize any biosolids use or disposal which has a likelihood of adversely affecting human health or the environment.

6.3.5.4.1.3 No biosolids shall be allowed to enter wetlands or other waters of the United States.

6.3.5.4.1.4 Biosolids treatment, storage, use, or disposal shall not contaminate groundwater.

6.3.5.4.1.5 Biosolids treatment, storage, use, or disposal shall not create a nuisance condition such as objectionable odors or flies.

6.3.5.4.1.6 The Discharger shall take all reasonable steps to ensure that haulers transporting biosolids offsite for treatment, storage, use, or disposal are contractually required to take all necessary measures to keep the biosolids contained. Trucks hauling biosolids that are not classified Class A with respect to pathogens, as defined at 40 CFR section 503.32(a), shall be cleaned as necessary after loading and after unloading, so as to have no biosolids on the exterior of the truck, or wheels. Trucks hauling biosolids that are not Class A shall be tarped. All haulers must have and implement spill clean-up procedures. Trucks hauling biosolids that are not Class A shall not be used for hauling food or feed crops after unloading the biosolids unless the Discharger submits a hauling description, to be approved by USEPA, describing how trucks will be thoroughly cleaned prior to adding food or feed.

6.3.5.4.1.7 If biosolids are stored for over two years from the time they are generated, the Discharger must ensure compliance with all requirements for surface disposal under 40 CFR part 503, subpart C, or must submit a written notification to USEPA, the State Water Board, and San Diego Water Board with the information specified under 40 CFR section 503.20(b), demonstrating the need for longer temporary storage. During storage of any length for non-Class A biosolids, whether on the Facilities' site or offsite, adequate procedures must be taken to restrict access by the public and domestic animals.

6.3.5.4.1.8 Any biosolids treatment, disposal, or storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect the site boundaries from erosion, and to prevent any conditions that would cause drainage from the materials to escape from the site. Adequate protection is defined as protection from at least a 100-year storm event as defined by the San Diego County FCD and the highest tidal stage which may occur.

6.3.5.4.1.9 If the biosolids are land applied, there shall be adequate screening at the Facility headworks and/or at the biosolids treatment units to ensure that all pieces of metal, plastic, glass, and ~~other~~ inert objects with a diameter greater than 3/8 inches are removed.

6.3.5.4.2 **Inspection and Entry**

The San Diego Water Board, USEPA, State Water Board, or an authorized representative thereof, upon the presentation of credentials, shall be allowed by the Discharger directly, or through contractual arrangements with their biosolids management contractors, to:

6.3.5.4.2.1 Enter upon all premises where biosolids produced by the Discharger are treated, stored, used, or disposed of, by either the Discharger or another

party to whom the Discharger transfer biosolids for further treatment, storage, use, or disposal;

6.3.5.4.2.2 Have access to and copy any records that must be kept by either the Discharger or another party to whom the Discharger transfer biosolids for further treatment, storage, use, or disposal, under the conditions of this Order~~/~~ and Permit or 40 CFR part 503; and

6.3.5.4.2.3 Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations used in biosolids treatment, storage, use, or disposal by either the Discharger or another party to whom the Discharger transfers biosolids for further treatment, storage, use, or disposal.

6.3.5.4.3 **Monitoring**

6.3.5.4.3.1 Biosolids shall be monitored for the following constituents, at the frequency stipulated in Table 1 of 40 CFR section 503.16:

- arsenic,
- cadmium,
- chromium,
- copper,
- lead,
- mercury,
- molybdenum,
- nickel,
- selenium,
- zinc,
- organic nitrogen
- ammonia nitrogen, and
- total solids.

If biosolids are removed for use or disposal on a routine basis, sampling should be scheduled at regular intervals throughout the year. If biosolids are stored for an extended period prior to use or disposal, sampling may occur at regular intervals, or samples of the accumulated stockpile may be collected prior to use or disposal, corresponding to the tons accumulated in the stockpile over that period.

Monitoring shall be conducted using the methods in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846), or as otherwise required under 40 CFR section 503.8(b). All results must be reported on a 100 percent dry weight basis and records of all analyses must state on each page of the analytical results whether the reported results are expressed on an "as-is" or a "100 percent dry weight" basis.

6.3.5.4.3.2 The Discharger shall sample biosolids twice per year for the pollutants listed under CWA section 307(a), using best practicable detection limits.

As required under section 6.3.5.4.8, these results shall be included in the annual biosolids report.

6.3.5.4.4 **Pathogen and Vector Control**

6.3.5.4.4.1 Prior to land application, the permittee shall demonstrate that biosolids meet Class A or Class B pathogen reduction levels by one of the methods listed under 40 CFR section 503.32.

6.3.5.4.4.2 Prior to disposal on a surface disposal site, the Discharger shall demonstrate that biosolids meet Class B pathogen reduction levels or ensure that the site is covered at the end of each operating day.

6.3.5.4.4.3 If pathogen reduction is demonstrated using a "Process to Further Reduce Pathogens" or one of the "Processes to Significantly Reduce Pathogens," the Discharger shall maintain daily records of the operating parameters used to achieve this reduction. If pathogen reduction is demonstrated by testing for fecal coliform and/or pathogens, samples must be collected at the frequency specified in Table 1 of 40 CFR section 503.16. If Class B is demonstrated using fecal coliform, at least seven grab samples must be collected during each monitoring period and a geometric mean calculated from these samples. The following holding times between sample collection and analysis shall not be exceeded: fecal coliform-24 hours when cooled to four °C; Salmonella spp. bacteria-24 hours when cooled to four °C; enteric viruses-two weeks when frozen; and helminth ova-one month when cooled to four °C.

6.3.5.4.4.4 For biosolids that are land applied or placed on a surface disposal site, the Discharger shall track and keep records of the operational parameters used to achieve the Vector Attraction Reduction requirements under 40 CFR section 503.33(b).

6.3.5.4.5 **Surface Disposal**

If biosolids are placed on 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.

6.3.5.4.6 **Landfill Disposal**

Biosolids placed in a municipal landfill shall be tested by the Paint Filter Test (Method 9095) at the frequency specified in Table 1 of 40 CFR section 503.16, or more often if necessary, to demonstrate that there are no free liquids.

6.3.5.4.7 **Notifications**

The Discharger, either directly or through contractual arrangements with their biosolids management contractors, shall comply with the following notification requirements.

6.3.5.4.71 **Notification of Noncompliance**

The Discharger shall notify USEPA, the State Water Board, and the San Diego Water Board (for both Discharger and use or disposal site) of any noncompliance with the biosolids within 24 hours if the noncompliance may endanger health or the environment. For other instances of noncompliance with the biosolids, the Discharger shall notify USEPA, the State Water Board, and the San Diego Water Board of the noncompliance in writing within five working days of becoming aware of the noncompliance. The Discharger shall require their biosolids management contractors to notify USEPA, the State Water Board, and the San Diego Water Board of any noncompliance within these same time frames.

6.3.5.4.7.2 **Interstate Notification**

If biosolids are shipped to another state or tribal land, the Discharger shall send 60 days prior notice of the shipment to the permitting authorities in the receiving state or tribal land, and the USEPA.

6.3.5.4.7.3 **Land Application Notification**

Prior to using any biosolids from the Facilities (other than composted biosolids) at a new or previously unreported site, the Discharger shall notify USEPA, the State Water Board, and the San Diego Water Board. This 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. This notification shall also include a description of the crops or vegetation to be grown, proposed loading rates, and a determination of agronomic rates.

Within a given monitoring period, if any biosolids do not meet the applicable metals concentration limits specified under 40 CFR section 503.13, then the Discharger (or its contractor) must pre-notify USEPA, the State Water Board, and the San Diego Water Board determine the cumulative metals loading at that site to date, as required by 40 CFR section 503.12.

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

6.3.5.4.7.4 **Surface Disposal Notification**

Prior to disposal at a new or previously unreported site, the Discharger shall notify USEPA, the State Water Board, and the San Diego Water Board. The notice shall include a description and topographic map of the

proposed site, depth to groundwater, whether the site is lined or unlined, site operator and site owner, and any State or local permits. The notice shall also describe procedures for ensuring grazing and public access restrictions for three years following site closure. The notice shall include a groundwater monitoring plan or description of why groundwater monitoring is not required.

6.3.5.4.8 **Reporting**

The Discharger shall submit an annual biosolids report to the State Water Board's CIWQS program website (https://www.waterboards.ca.gov/water_issues/programs/ciwqs/), the USEPA Biosolids Coordinator via USEPA's Central Data Exchange (CDX, https://cdx.epa.gov), and the Arizona Department of Environmental Quality Biosolids Program Coordinator by February 19 of each year for the period covering the previous calendar year. The report shall include:

6.3.5.4.8.1 The amount of biosolids generated that year, in dry metric tons, and the amount accumulated from previous years.

6.3.5.4.8.2 Results of all pollutant monitoring required under section 6.3.5.4.3 of this Order~~/~~ and Permit. Results must be reported on a 100 percent dry weight basis.

6.3.5.4.8.3 Demonstrations of pathogen and vector attraction reduction methods, as required under 40 CFR sections 503.17 and 503.27, and certifications.

6.3.5.4.8.4 Names, mailing addresses, and street addresses of persons who received biosolids for storage, further treatment, disposal in a municipal landfill, or other use or disposal method not covered above, and volumes delivered to each.

6.3.5.4.8.5 The following information must be submitted by the Discharger, as an attachment via USEPA's CDX, unless the Discharger requires its biosolids management contractors to report this information directly to the USEPA Biosolids Coordinator:

6.3.5.4.8.5.1 For land application sites:

- Locations of land application sites (with field names and numbers) used that calendar year, size of each field applied to, applier, and site owner;
- Volumes applied to each field (in wet tons and dry metric tons), nitrogen applied, and calculated plant available nitrogen;
- Crops planted, dates of planting and harvesting;
- For biosolids exceeding 40 CFR section 503.13 Table 3 metals concentrations, the locations of sites where the biosolids were applied and cumulative metals loading at the sites to date;
- Certifications of management practices at 40 CFR section 503.14; and
- Certifications of site restrictions at 40 CFR section 503.32(b)(5).

6.3.5.4.8.5.2 For surface disposal sites:

- Locations of sites, site operator and site owner, size of parcel on which biosolids were disposed;
- Results of any required groundwater monitoring;
- Certifications of management practices at 40 CFR section 503.24; and
- For closed sites, the date of site closure and certifications of management practices for three years following site closure.

6.3.5.4.9 **All reports shall be submitted to:**

State Water Board's CIWQS program website (https://www.waterboards.ca.gov/water_issues/programs/ciwqs/)

Regional Biosolids Coordinator
United States Environmental Protection Agency, Region 9
USEPA's Central Data Exchange (CDX, https://cdx.epa.gov)

Biosolids Program Coordinator
Arizona Department of Environmental Quality
Mail Code: 5415B-1
1110 West Washington Street
Phoenix, AZ 85007

6.3.5.5 **Sewage Collection System**

The Discharger is subject to the requirements of and must comply with State Water Board Order No. WQ 2022-0103-DWQ, *Statewide Waste Discharge Requirements General Order for Sanitary Sewer Systems* (Statewide General SSO Order), and any subsequent amendment/reissuance order. The Discharger is also subject to the requirements of and must comply with the San Diego Water Board Order No. R9-2007-0005, *Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region* (Regional General SSO Order), and any subsequent amendment/reissuance order.

Regardless of the coverage obtained under Order WQ 2022-0103-DWQ or Order No. R9-2007-0005, the Discharger's sewage collection system is part of the treatment system that is subject to this Order~~/~~ and Permit. As such, pursuant to federal regulations, the Discharger must report any noncompliance (40 CFR sections 122.~~44(1~~41(L)(6) and (7)), properly operate and maintain its sewage collection system (40 CFR section 122.41(e)), and mitigate or prevent any discharge from the sewage collection system in violation of this Order~~/~~ and Permit (40 CFR section 122.41(d)).

The Discharger is required to ensure that USEPA receives notifications and certified reports that are required under the Statewide General SSO Order for spills that:

- reach a surface water, including a surface water body that contains no flow or volume of water, or a drainage conveyance system that

discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly, and/or

- are greater than 1000 gallons.

6.3.5.6 **Resource Recovery from Anaerobically Digestible Material**

If the Discharger plans to receive hauled-in anaerobically digestible material for injection into an anaerobic digester, the Discharger shall notify the San Diego Water Board and USEPA and develop and implement Standard Operating Procedures (SOPs) for this activity. The SOPs shall be developed prior to receiving hauled-in anaerobically digestible material. The SOPs 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. The Discharger 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, the Discharger shall maintain records for a minimum of five years for the disposition, location, and quantity of cumulative pre-digestion-segregated solid waste hauled offsite.

6.3.5.7 **Asset Management Plan**

The Discharger shall develop and submit to the San Diego Water Board and USEPA within ~~180 days~~ two years of the effective date of this Order~~/~~ and Permit an Asset Management Plan (AMP) to ensure proper operation and maintenance of the Facilities. The AMP shall include the elements detailed in sections 6.3.5.7.1 through 6.3.5.7.6. The Discharger may rely on existing documents to develop or update the AMP or submit existing plans to satisfy all or some of the AMP requirements (e.g., Sewer System Management Plan required by a statewide general order). If the Discharger submits existing plans to satisfy the AMP requirements, the submittal shall include a cover letter detailing what section of the existing document meet each of the following elements for the Facilities:

6.3.5.7.1 Rehabilitation and Replacement Plan

The AMP shall identify and prioritize upcoming asset rehabilitation and replacement projects costing greater than $5,000 and outline a proposed schedule for completion of each project.

6.3.5.7.2 Maintenance Plan

The AMP shall identify individuals or categories of maintenance activities and frequency with which they are performed. The Maintenance Plan shall estimate the ongoing and projected cost of maintenance activities.

6.3.5.7.3 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.

6.3.5.7.4 Funding

The AMP 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.

6.3.5.7.5 Asset Management Software

The AMP shall incorporate software product(s) to inventory all critical assets valued over $5,000 into a single database, automate work order production and tracking, and prioritize system maintenance and rehabilitation projects. Assets may include, but are not limited to, sewer lines, manholes, outfalls, pump stations, force mains, catch basins, and wastewater treatment facility assets. Each entry shall include:

- Name and identification number,
- Location (global positioning system (GPS) coordinate or equivalent identifier),
- Current performance/condition,
- Purchase and installation date,
- Purchase price,
- Replacement cost,
- Quantitative consequence of failure, and
- Quantitative likelihood of failure.

6.3.5.7.6 ~~Vulnerability~~ Asset Resiliency Assessment ~~for climate change:~~

~~The AMP shall incorporate~~ Asset Resiliency Assessment must include the ~~Climate Change Action Plan required~~ following elements:

6.3.5.7.6.1 An analysis of potential projected extreme weather impacts and mitigation measures on the Facilities and their ability to meet requirements in this Order~~/~~ and Permit~~, Attachment E, section 6.1~~. Impacts to be analyzed include, but are not limited to, the following:

- Increasing magnitude and frequency of large storms and subsequent flooding, erosion, and inflow and infiltration;
- Longer periods and intensity of drought;
- Higher sea levels, higher tides, and bigger storm surges;
- Increasing freshwater and ocean temperatures;
- Rising air temperatures; and
- Changing influent volumes and chemical concentrations.

6.3.5.7.6.2 Impacts on process design parameters due to higher BOD_5, ammonia (as N), and TSS influent concentrations;

6.3.5.7.6.3 Impacts on the Discharger's sewage collection system, wastewater treatment operations, and effluent quality;

6.3.5.7.6.4 Any vulnerabilities and/or threats to compliance with this Order and Permit identified during the Asset Resiliency Assessment must be accompanied by suggested adjustments to NPDES permit conditions and/or to the Dischargers pollution control program;

6.3.5.7.6.5 Any vulnerabilities and/or threats to compliance with this Order and Permit must be addressed by a plan that includes schedules of on-going risk assessments, planned mitigation measures, timing of implementation of the mitigation measures and funding. Schedules must also include updates to the AMP as more information on extreme weather and its effects become more available;

6.3.5.7.6.6 Gaps and uncertainty in scientific understanding of extreme weather events and associated impacts relevant to vulnerabilities to compliance with this Order and Permit, and/or lack of available mitigation measures must be listed; and

6.3.5.7.6.7 Any other factors as appropriate.

6.3.5.7.7 The Discharger shall implement the AMP within 60 days following submission to the San Diego Water Board and USEPA, unless otherwise directed in writing by the San Diego Water Board Executive Officer and USEPA Water Division Director.

6.3.5.7.8 The Discharger shall reevaluate and update the AMP as needed at least 180 days prior to the expiration date of this Order~~/~~ and Permit. The Discharger shall timely provide each updated or revised AMP to the San Diego Water Board and USEPA.

6.3.6 **Other Special Provisions - Pure Water San Diego**

6.3.6.1 **Schedule for Pure Water San Diego Potable Reuse Tasks**

The Discharger has committed to implementing a comprehensive water reuse program called "Pure Water San Diego" (also referred to as Pure Water

Program). To demonstrate the Discharger's continued commitment to regulators and stakeholders for moving forward with Pure Water San Diego plans, the Discharger proposed that the following schedule of tasks for implementation of Pure Water San Diego be incorporated into this Order~~/~~ and Permit. These tasks and associated due dates are enforceable to the maximum extent allowed by law.

Table 5 Pure Water San Diego Potable Reuse Tasks, 2022-2028

Category	Task	Implementation[1,2,3,~~4~~]
Pure Water Phase 1: North City Pure Water ~~Project~~[~~5~~]Project[4]	Complete construction for North City potable reuse facility and pipelines.	June 30, 2027
Pure Water Phase 1: North City Pure Water ~~Project~~[~~5~~]Project[4]	Produce a cumulative total of at least 30 MGD of potable reuse.	December 31, 2027
Pure Water Phase 2: Central Area ~~Project~~[~~5~~]Project[4,6,7]	Complete design of a central area small-scale facility at the Facility.	Completed
Pure Water Phase 2: Central Area ~~Project~~[~~5~~]Project[4,6,7]	Begin Central Area Small-Scale Facility Operation.	June 30, 2026
Pure Water Phase 2: Central Area ~~Project~~[~~5~~]Project[4,6,7]	Issue Notices to Proceed (NTPs) for pre-design of potable reuse facility and pipelines.	~~June 30, 2025~~Completed
Pure Water Phase 2: Central Area ~~Project~~[~~5~~]Project[4,6,7]	Issue Notice of Preparation for Central Area Project Environmental Impact Report (EIR).	December 31, 2026
Pure Water Phase 2: Central Area ~~Project~~[~~5~~]Project[4,6,7]	Issue NTPs for full design of potable reuse facility and pipelines	June 30, 2027
Pure Water Phase 1 & 2: Central Area Project[4,5,6,7]	Provide an oral interim status report on the construction and implementation progress of Phase 1 and on progress in planning and funding Phase 2 of the Pure Water San Diego at one monthly California Coastal Commission meeting.	Between February and December 2027

Note for Table 5

1. The listed milestones are those that are expected to occur during the effective period of this Order~~/~~ and Permit.
2. This schedule is based on the current progress included in the Discharger's March 24, 2022, ROWD.
3. Task completion dates may require modification in the future based on issues related to the regulatory approval schedule, environmental review issues, supply chain interruptions, legal challenges to the proposed program or projects, or other unforeseen circumstances.
4. Phase 1 Pure Water implements an ultimate annual average daily production of 30 MGD of water suitable for potable reuse.

5. Phase 2 Pure Water implements an ultimate annual average daily production ~~of~~ up to an additional 53 MGD of water suitable for potable reuse resulting in a cumulative total of 83 MGD. The tasks listed in this table represent the work necessary during the renewed permit period to allow for the ultimate production of 83 MGD of water suitable for potable reuse by December 31, 2035, and may take ~~taking~~ into account production of water suitable for potable reuse occurring at all treatment processes for wastewater upstream from and at the Facility.
6. Future permit applications prior to December 31, 2035, may also contain a schedule of tasks necessary to ensure completion and full operation of Phase 2 by December 31, 2035.
7. These tasks are dependent upon future approval by the Mayor and City Council of San Diego.

6.3.6.2 **Semiannual Progress Reports.** The Discharger shall prepare and submit Semiannual Progress Reports of efforts taken by the Discharger towards completing the tasks in Table 5 above. The reports shall summarize the following: 1) the progress to date; 2) the activities conducted during those six months; 3) the activities planned for the next six months; 4) information regarding all delays encountered or anticipated that may affect the future schedule for completion of the tasks; and 5) a description of all efforts made to mitigate those delays or anticipated delays. Each semiannual progress report shall be received by the San Diego Water Board and USEPA by the 14th day of the first month following the reporting period (January 14 and July 14). If the 14th falls on a weekend or holiday, the due date will be the following workday. The first Semiannual Progress Report shall be received by the San Diego Water Board and USEPA on the closest January 14 or July 14 following the permit effective date identified on page of this Order~~/~~ and Permit.

6.3.6.3 **Pure Water San Diego Potable Reuse Goal.** The Discharger intends to expand Pure Water San Diego capacity to achieve 83 MGD of potable reuse by December 2035. Because the Discharger has committed[3] to implementing the Pure Water San Diego program, the 2035 goal that post-dates the term of this Order~~/~~ and Permit is included, with the expectation that details associated with the 2035 goal and necessary additional or interim goals will be provided and described in subsequent Orders/Permits. The Discharger is committed to implementing the 2035 goal with the collaboration of the other members of the Metro Wastewater JPA. Achievement of the 83 MGD objective may take into account production of water suitable for potable reuse occurring at all treatment processes for wastewater upstream from and at the Facility.

6.3.7 Compliance Schedules – Not Applicable

7 Compliance Determination

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

[3] Pursuant to the 2014 Cooperative Agreement between the Discharger and San Diego Coastkeeper, San Diego County Surfrider, the Coastal Environmental Rights Foundation, and the San Diego Audubon Society.

7.1 Compliance with Average Annual Effluent Limitation (AAEL)

If the average of daily discharges over a calendar year exceeds the AAEL for a given parameter, this will represent a single violation for the purpose of assessing mandatory minimum penalties under Water Code section 13385. The Discharger will be considered out of compliance for each discharge day of that calendar year (e.g., resulting in 365 days of noncompliance in a non-leap year) for discretionary penalties. Each discharge day of the year is determined to be either in compliance or out of compliance for the AAEL only once, during that calendar year. For any one calendar year during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar year and no penalty assessed.

7.2 Compliance with Six-Month Median Effluent Limitation

If the median of daily discharges over any 180-day period exceeds the six-month median effluent limitation for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that 180-day 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 180-day period and the analytical result for that sample exceeds the six-month median, the Discharger will be considered out of compliance for the 180-day period. For any 180-day period during which no sample is taken, no compliance determination can be made for the six-month median limitation.

7.3 Compliance with Average Monthly Effluent Limitation (AMEL)

If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the Discharger 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 of daily discharges 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 Discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

7.4 Compliance with Average Weekly Effluent Limitation (AWEL)

If the average of daily discharges over a calendar week (Sunday through Saturday) exceeds the AWEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in seven days of noncompliance. The average of daily discharges 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 Discharger will be considered out of compliance

for that calendar week. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

7.5 Compliance with Maximum Daily Effluent Limitation (MDEL)

The MDEL shall apply to flow-weighted 24-hour composite samples, or grab samples, as specified in the MRP (Attachment E). If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that parameter for that one 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.

7.6 Compliance with Instantaneous Minimum Effluent Limitation

The instantaneous minimum effluent concentration limitation shall apply to grab sample determinations. 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 Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each 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).

7.7 Compliance with Instantaneous Maximum Effluent Limitation

The instantaneous maximum effluent concentration limitation shall apply to grab sample determinations. 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 Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each 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).

7.8 Mass and Concentration Limitations

Compliance with mass and concentration effluent limitations for the same parameter shall be determined separately with their respective limitations. When the concentration of a constituent in an effluent sample is determined to be ND or DNQ, the corresponding MER determined from that sample concentration shall also be reported as “ND” or “DNQ.”

7.9 Compliance with Percent Removal Limitation

Compliance with percent removal requirements for average monthly percent removals of TSS and BOD_5 shall be determined separately for each wastewater treatment facility discharging through an outfall. For each wastewater treatment facility, the monthly average percent removal is the average of the calculated

daily discharge percent removals only for days on which the constituent concentration is monitored in both the influent and effluent of the wastewater treatment facility at the location specified in the MRP (Attachment E) within a calendar month.

The Facility percent removal of TSS shall be calculated according to the following equation:

$$Daily\ discharge\ \%\ removal\ = \frac{Influent\ Concentration\ -\ Effluent\ Concentration}{Influent\ Concentration} \times 100\%$$

The system-wide percent removals of TSS and BOD_5 shall be calculated using the following equation (mass emissions in metric tons):

$$\%\ removal\ = \frac{(System\ Influents - Return\ Streams) - Outfall\ Discharge}{System\ Influents - Return\ Stream} \times 100\%$$

Where:

System Influents: Facility Influent, North City Water Reclamation Plant (NCWRP) Influent Pump Station, and NCWRP Influent from Penasquitos Pump Station and Morena Pump Station.

~~Return Streams: NCWRP Filter Backwash, NCWRP Plant Drain, NCWRP Secondary and Un-disinfected Filtered Effluent Bypass, North City Water Reclamation Plant (NCWRP) Final Effluent, NCWRP and North City Pure Water Facility (NCPWF) Combined Waste, Out of Specification Final Effluent from North City Pure Water Facility (NCPWF), and MBC Centrate.~~
Return Streams: NCWRP Final Effluent, NCWRP and North City Pure Water Facility (NCPWF) Combined Waste, and MBC Centrate.

7.10 Compliance with Single-constituent Effluent Limitations

The Discharger shall be deemed out of compliance with an effluent limitation or discharge specification if the concentration of the constituent in the monitoring sample is greater than the effluent limitation or discharge specification and greater than or equal to the ML.

7.11 Compliance with Effluent Limitations Expressed as a Sum of Several Constituents

The Discharger is out of compliance with an effluent limitation that applies to the sum of a group of chemicals (e.g., PCBs) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as ND or DNQ.

7.12 Multiple Sample Data Reduction

The concentration of the pollutant in the effluent may be estimated from the result of a single sample analysis or by a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses when all

sample results are quantifiable (i.e., greater than or equal to the reported ML). When one or more sample results are reported as ND or DNQ, the central tendency concentration of the pollutant shall be the median (middle) value of the multiple samples. If, in an even number of samples, one or both of the middle values is ND or DNQ, the median will be the lower of the two middle values.

7.13 Mass Emission Rate (MER)

The MER, in lbs/day and mt/yr, shall be obtained from the following calculation for any calendar day:

MER (lbs/day)

= (1 lb/453592mg) x (3785410 L/1 million gallons)
x Q(million gallons/day) x C(mg/L)
= 8.34 x Q x C

In which Q and C are the flow rate in MGD and the constituent concentration in mg/L, respectively, and 8.34 is a conversion factor (lbs/gallon of water). If a composite sample is taken, then C is the concentration measured in the composite sample and Q is the average flow rate occurring during the period over which the samples are composited.

MER (mt/yr)

= (1 lb/453592mg) x (3785410 L/1 million gallons)
x Q(million gallons/day) x C (mg/L)
x (365 days/year) x (1 metric ton/2204.62 lbs)
= 8.34 x Q x C x 365/2204.62
~~8.34 x Q x C x 0.9072 metric tons/ton * 365 days/year * 1/2000 lbs/tonC (µg/L/litter) x Q (million gallons/day) x (1.0E+06 gallons/million gallons) x 3.785 (liter/gallon) x 365 (days/yr) x (1 mt/1.0E+12 µg/L)~~

In which Q is the average effluent flow rate for the calendar year in MGD and C ~~are the flow rate in MGD and~~ is the average constituent concentration in mg/L~~, respectively~~.

7.14 Bacterial Standards and Analysis

7.14.1 The geometric mean used for determining compliance with bacterial standards is calculated with the following equation:

Geometric Mean = (C1 x C2 x … x Cn)1/n

Where n is the number of days samples were collected during the period and C is the concentration of bacteria (colony forming units (CFU)/100 ml) found on each day of sampling.

7.14.2 The STV used for determining compliance with bacterial standards shall not be exceeded by more than 10 percent of the samples collected in a calendar month, collected in a static manner.

7.14.3 Sample dilutions for fecal coliform bacterial analyses should be performed so the range of values extends from 2 to 16,000 CFU. Sample dilutions for enterococci bacterial analyses shall range from 1 to 10,000 CFU per 100 ml. The detection methods used for each analysis shall be reported with the results of the analysis. Detection methods used for fecal coliform shall be those listed in 40 CFR part 136 or any improved method determined by the San Diego Water Board and USEPA to be appropriate. Detection methods used for enterococci shall be those presented in USEPA publication USEPA 600/4-85/076, Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure, listed under 40 CFR part 136, USEPA Method 1600, or any equivalent method to measure culturable enterococci approved by the San Diego Water Board and USEPA.

7.15 Single Operational Upset (SOU)

A SOU that leads to simultaneous violations or more than one pollutant parameter shall be treated as a single violation and limits the Discharger's liability in accordance with the following conditions:

7.15.1 A SOU is broadly defined as a single unusual event that temporarily disrupts the usually satisfactory operation of a system in such a way that it results in violation of multiple pollutant parameters.

7.15.2 The Discharger may assert SOU to limit liability only for those violations which the Discharger submitted notice of the upset as required in section 1.8 of the Standard Provisions (Attachment D).

7.15.3 For purposes outside of Water Code sections 13385(h) and (i), determination of compliance and civil liability (including any more specific definition of SOU), the requirements for the Discharger to assert the SOU limitation of liability, and the manner of counting violations, shall be in accordance with the USEPA Memorandum Issuance of Guidance Interpreting Single Operational Upset (September 27, 1989).

7.15.4 For purposes of Water Code sections 13385(h) and (i), determination of compliance and civil liability (including any more specific definition of SOU), the requirements for the Discharger to assert the SOU limitation of liability, and the manner of counting violations shall be in accordance with Water Code section 13385(f)(2).

7.16 Chronic Toxicity

The discharge is subject to determination of "Pass" or "Fail" from a 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-10-003, 2010), Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1. The chronic toxicity WQBEL for Discharge Point 001 is expressed as a null hypothesis (H_0) and regulatory management decision (*b* value) of 0.75 for the chronic toxicity

methods in Attachment E of this Order/Permit. The null hypothesis (H_o) for the TST statistical approach is:

H_o: Mean discharge "in-stream" waste concentration (IWC) response ≤ 0.75 × 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." Percent effect shall also be reported:

"Percent Effect" (or Effect, in percent) = [(Control mean response – IWC mean response) ÷ Control mean response)] ×100

~~Chronic toxicity is used to measure the acceptability of waters for supporting a healthy marine biota until approved methods are developed to evaluate biological response. Compliance with the chronic toxicity effluent limit established in section 4.1. of this Order for Discharge Point No. 001 shall be determined using critical life stage toxicity tests in accordance with procedures prescribed by the Ocean Plan (2019) and restated in the MRP (Attachment E). Chronic toxicity shall be expressed as toxic units chronic (TUc), where:~~

~~TUc = 100 / NOEC.~~

~~NOEC is the No Observed Effect Concentration (also referred to as the No Observed Effect Level or NOEL) and is expressed as the maximum percent of effluent that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test.~~ The MDEL for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST statistical approach, results in "Fail." ~~greater than 205 TUc.~~

The chronic toxicity MDEL is set at the IWC for the discharge (0.49 percent effluent) and expressed in units of the TST statistical approach ("Pass" or "Fail"). All NPDES effluent compliance monitoring for the chronic toxicity MDEL shall be reported using the IWC effluent concentration and negative control, expressed in units of the TST. The TST hypothesis (H_o) (see above) is statistically analyzed using the IWC and a negative control. Effluent toxicity tests shall be run using *Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine Estuarine Organisms* (EPA/600/R-95/136, 1995). The San Diego Water Board's and USEPA's review of reported toxicity test results will include review of concentration-response patterns as appropriate (see section 4.3.6 of the Fact Sheet (Attachment F)).

As described in the laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Board dated August 07, 2014, and from USEPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the no-observed-effect-concentration (NOEC) and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. SOPs used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical

approach, including those that incorporate a consideration of concentration-response patterns, must be submitted to the San Diego Water Board and USEPA (40 CFR section 122.41(h)). The San Diego Water Board and USEPA will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger, USEPA, the State Water Board's Quality Assurance Officer, or the State Water Board, Division of Drinking Water (DDW) Environmental Laboratory Accreditation Program (ELAP) as needed.

ATTACHMENT A – ABBREVIATIONS AND DEFINITIONS

Part 1. – Abbreviations

For the abbreviations with an asterisk (*), see Part 2 of Attachment A (Glossary of Common Terms) for further definition.

Abbreviation	Definition
40 CFR	Title 40 of the Code of Federal Regulations
AAEL*	Average Annual Effluent Limitations
AMEL*	Average Monthly Effluent Limitation
AMP	Asset Management Plan
AQUA	Aquaculture
ASBS*	Areas of Special Biological Significance
ATP	Alternative Test Procedure
AWEL*	Average Weekly Effluent Limitation
Basin Plan	Water Quality Control Plan for the San Diego Basin
BIOL	Preservation of Biological Habitats of Special Significance
BOD_5	Biochemical Oxygen Demand (5-Day @ 20°C)
BRI	Benthic Response Index
°C	Degrees Celsius
$CaCO_3$	Calcium Carbonate
~~CCAP~~	~~Climate Change Action Plan~~
CCR	California Code of Regulations
CEC	Contaminants of Emerging Concern
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
cfs	Cubic Feet Per Second
CFU	Colony Forming Units
CIWQS	California Integrated Water Quality System
CO_2	Carbon Dioxide
COMM	Commercial and Sport Fishing
CSM	Conceptual Site Model
CTD	Conductivity-Temperature-Depth
CWA	Clean Water Act
ddPCR	Droplet Digital Polymerase Chain Reaction
DDT*	Dichlorodiphenyltrichloroethane
Discharger	City of San Diego
DMR*	Discharge Monitoring Report
DNQ*	Detected, But Not Quantified
EAB	Environmental Appeals Board
EC25	Effects Concentration at 25 Percent
EDR	Electrodialysis Reversal
ELAP	Environmental Laboratory Accreditation Program
ELGs	Effluent Limitation Guidelines

Abbreviation	Definition
eSMR	Electronic Self-Monitoring Reports
ETM	Effluent Transmission Main
°F	Degrees Fahrenheit
Facilities	E.W. Blom Point Loma Wastewater Treatment Plant (Facility), Metro Biosolids Center (MBC), the Point Loma Ocean Outfall (PLOO), City of San Diego's sewage collection system, and other associated infrastructure
Facility	E.W. Blom Point Loma Wastewater Treatment Plant
FCD	Flood Control District
GPS	Global Positioning System
HABs	Harmful Algal Blooms
HCH*	Hexachlorocyclohexane
Ho	Null Hypothesis
IND	Industrial Service Supply
IWC*	"In-Stream" Waste Concentration
lbs/day	Pounds per Day
LC	Lethal Concentration
LC 50	Percent Waste Giving 50 Percent Survival of Test Organisms
MAR	Marine Habitat
MBC	Metro Biosolids Center
MDEL*	Maximum Daily Effluent Limitation
MDL*	Method Detection Limit
MEC	Maximum Effluent Concentration
MER	Mass Emission Rate
Metro System	San Diego Metropolitan Sewerage System
MF/RO	Microfiltration/Reverse Osmosis
mg/kg	Milligram per Kilogram
mg/L	Milligram per Liter
MGD	Million Gallons per Day
MIGR	Migration of Aquatic Organisms
ML*	Minimum Level (Reported Minimum Level)
ml	Milliliter
ml/L	Milliliter per Liter
MPA	Marine Protected Area
MPN	Most Probable Number
MRP	Monitoring and Reporting Program
NAV	Navigation
NCPWF	North City Pure Water Facility
NCWRP	North City Water Reclamation Plant
ND*	Not Detected
ng/kg	Nanogram per Kilogram
ng/L	Nanograms per Liter
NMFS	National Marine Fisheries Service

Abbreviation	Definition
NOAA	National Oceanic and Atmospheric Administration
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Unit
Ocean Plan	Water Quality Control Plan for Ocean Waters of California, California Ocean Plan
PAHs*	Polynuclear Aromatic Hydrocarbons
PCBs*	Polychlorinated Biphenyls
pCi/L	Picocuries per Liter
PFAS	Per- and Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonic Acid
PMP*	Pollutant Minimization Program
PMSD	Percent Minimum Significant Difference
POTW*	Publicly-Owned Treatment Works
PPCPs	Pharmaceuticals and Personal Care Products
PPP	Pollution Prevention Plan
ppt	Parts per Thousand
psu	Practical Salinity Unit
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RARE	Rare, Threatened, or Endangered Species
REC-1	Contact Water Recreation
REC-2	Non-Contact Water Recreation
RCRA	Resource Conservation and Recovery Act
Regional General SSO Order	California Regional Water Quality Control Board Region 9, San Diego Region Order No. R9-2007-0005, Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region
RL*	Reporting Level or Reported Minimal Level (ML)
RO	Reverse Osmosis
ROTV	Remotely Operated Towed Vehicle
ROWD	Report of Waste Discharge
RPA	Reasonable Potential Analysis
RSB Model	Roberts, Snyder, Baumgartner Ocean Outfall Dilution Model
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SBWRP	South Bay Water Reclamation Plant
SCCWRP	Southern California Coastal Water Research Project
SHELL	Shellfish Harvesting
SIC	Standard Industrial Classification

Abbreviation	Definition
SIUs	Significant Industrial Users
SMR	Self-Monitoring Report
SNC	Significant Non-Compliance
SOPs	Standard Operating Procedures
SOU	Single Operational Upset
SPP	Spill Prevention Plan
SPWN	Spawning, Reproduction, and/or Early Development
SRP	Spill Response Plan
SSMPs	Sanitary Sewer Management Plans
SSO*	Sanitary Sewer Overflow
State Water Board	State Water Resources Control Board
Statewide General SSO Order	State Water Board Order WQ 2022-0103-DWQ, Statewide Waste Discharge General Order for Sanitary Sewer Systems
STV*	Statistical Threshold Value
SWQPAs*	State Water Quality Protection Areas
TAC	Test Acceptability Criteria
TBELs	Technology-Based Effluent Limitations
TCDD*	Tetrachlorodibenzodioxin
TIE*	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TRE*	Toxicity Reduction Evaluation
TSD	Technical Support Document
TSS	Total Suspended Solids
TST	Test of Significant Toxicity
~~TUc~~	~~Toxic Units Chronic~~
µg	Microgram
µg/kg	Microgram per Kilogram
µg/L	Microgram per Liter
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency, Region 9
Water Code	California Water Code
WDRs	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WILD	Wildlife Habitat
WRF	Water Reclamation Facility
WRP	Water Reclamation Plant
WQBELs	Water Quality-Based Effluent Limitations
ZID	Zone of Initial Dilution (also known as initial dilution zone)

* See Part 2 of Attachment A (Glossary of Common Terms) for further definition.

Part 2. – Definitions

30-day average

The arithmetic mean of pollutant parameter values of samples collected in a period of 30 consecutive days.

6-Month Median Effluent Limitation

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

Anaerobically Digestible Material

Inedible kitchen grease as defined in section 19216 of the Food and Agricultural Code and food material as defined in title 14, division 7, chapter 3.1, article 1, section 17582(a)(20) of the California Code of Regulations (CCR).

Antidegradation

Policies which ensure protection of water quality for a particular body where the water quality exceeds levels necessary to protect fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as outstanding natural resource waters.

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 Areas of Special Biological Significance are also classified as a subset of State Water Quality Protection Areas.

Average Annual Effluent Limitation (AAEL)

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

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.

Beneficial Uses

The uses of water necessary for the survival or wellbeing of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals. "Beneficial Uses" of the waters of the State of California that may

be protected against include, but are not limited to, domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. In the Basin Plan, existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. “Beneficial Uses” are equivalent to "Designated Uses" under federal law. (Water Code section 13050(f)).

Bioaccumulation

The accumulation of contaminants in the tissues of organisms through any route, including respiration, ingestion, or direct contact with contaminated water, sediment, food, or dredged material.

Biosolids

Nutrient-rich organic materials resulting from the treatment of sewage sludge. When treated and processed, sewage sludge becomes biosolids which can be safely recycled and applied as fertilizer to sustainably improve and maintain productive soils and stimulate plant growth.

Brine

Brine is the byproduct of desalinated water having a salinity concentration greater than a desalination facility’s intake source water.

Bypass

The intentional diversion of waste streams from any portion of a treatment facility. (40 CFR section 122.41(m)(1)(i).)

Chlordane

Shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

Chlorinated Phenolics

The sum of 4-chloro-3-methylphenol, 2-chlorophenol, pentachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol.

Chronic Toxicity

Chronic toxicity is the measure of the sub-lethal effects of a discharge or ambient water sample (e.g., reduced growth or reproduction). Certain chronic toxicity tests include an additional measurement of lethality. Compliance with the effluent limitation for chronic toxicity in this Order~~/~~ and Permit is demonstrated by conducting chronic toxicity tests for the effluent as described in section 7.16 of this Order~~/~~ and Permit and section 3.3 of the MRP (Attachment E).

Chronic Toxicity effluent limitation is ~~205 TUc. The Discharger is also required to report~~ “Pass” or “Fail” and “Percent Effect” in this Order~~/~~ and Permit~~.~~

The discharge is subject to determination of "Pass" or "Fail" and "Percent Effect" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach ~~as~~ described in *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, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is: ~~section 3.3 of the MRP (Attachment E).~~

Mean discharge "in-stream" waste concentration (IWC) response ≤0.75 × Mean control response.

Composite Sample

A composite sample is defined as a combination of at least eight sample aliquots of at least 100 ml, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. The 100 ml minimum volume of an aliquot does not apply to automatic self-purging samplers. If one 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.

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.

Degrade

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

An 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 ML, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dichlorobenzenes

Shall mean the sum of 1,2- and 1,3-dichlorobenzene.

Dichlorodiphenyltrichloroethane (DDT)

Shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

Discharge of a Pollutant

Discharge of a pollutant means: (a) Any addition of any ''pollutant'' or combination of pollutants to ''waters of the United States'' from any ''point source,'' or (b) Any addition of any pollutant or combination of pollutants to the waters of the ''contiguous zone'' or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a state, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any ''indirect discharger.'' "Discharge" when used without qualification means the "discharge of a pollutant." (40 CFR section 122.2)

Discharge Monitoring Reports (DMRs)

The DMRs means the United States Environmental Protection Agency, Region 9 (USEPA) uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by ''approved States'' as well as by USEPA. USEPA will supply DMRs to any approved state upon request. The USEPA national forms may be modified to substitute the state agency name, address, logo, and other similar information, as appropriate, in place of USEPA's.

Downstream Ocean Waters

Waters downstream with respect to ocean currents.

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

Estuaries and Coastal Lagoons are 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 Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

Facilities

E.W. Blom Point Loma Wastewater Treatment Plant (Facility), Metro Biosolids Center (MBC), the Point Loma Ocean Outfall (PLOO), City of San Diego's sewage collection system, and other associated infrastructure.

Facility

The E.W. Blom Point Loma Wastewater Treatment Plant.

Grab Sample

A grab sample is an individual sample of at least 100 ml collected at a randomly selected time over a period not exceeding 15 minutes.

Halomethanes

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

HCH (sometimes referred to as BHC)

The mean 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 San Diego Water Board, whichever results in the lower estimate for initial dilution.

Instantaneous Maximum Effluent Limitation

The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation

The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

In-stream Waste Concentration (IWC)

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

Interference

A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

(1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

(2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): section 405 of the federal CWA, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the

Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

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.

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. See also, DREDGED MATERIAL.

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.

Metro System

San Diego Metropolitan Sewerage System

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.

Natural Light

Reduction of natural light may be determined by the San Diego Water Board and USEPA by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the San Diego Water Board and USEPA.

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.

Pass Through

A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Percent Removal

A percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the monthly average values of the raw wastewater influent pollutant concentrations to the facility and the monthly average values of the effluent pollutant concentrations for a given time period. (40 CFR 133.101(j))

PAHs (polynuclear aromatic hydrocarbons)

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.

PCBs (polychlorinated biphenyls)

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.

Per- and Polyfluoroalkyl Substances (PFAS)

A family of more than 5,000 man-made chemicals that are mobile, persistent, and bioaccumulative. They are resistant to degradation in the environment and when degradation occurs, it often results in the formation of other PFAS compounds. Perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) are two types of PFAS.

Phenolic Compounds (non-chlorinated)

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

Pollutant

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand,

cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean: (a) Sewage from vessels; or (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Pollutant Minimization Program (PMP)

A program to reduce all potential sources of a pollutant through pollutant minimization (control) strategies, including pollution prevention measures, in order to maintain the effluent concentration at or below the effluent limitation.

Publicly Owned Treatment Works (POTW)

POTW means a treatment works as defined by section 212 of the federal Clean Water Act (CWA), which is owned by a State or municipality (as defined by section 502(4) of the federal CWA). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the federal CWA, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

Recycled Water

Recycled water means water which, as a result of the treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.

Reported Minimum Level (ML)

The reported ML (also known as the Reporting Level or RL) is the ML (and its associated analytical method) chosen by the Discharger 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~~/~~ and Permit by reference correspond to approved analytical methods for reporting a sample result that are selected by the San Diego Water Board and USEPA either from Appendix II of the Ocean Plan in accordance with section II.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.

Salinity

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

Sanitary Sewer Overflow (SSO)

An SSO is any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include: (i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States; (ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and (iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly-owned portion of a sanitary sewer system.

Sanitary Sewer System

Any 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 publicly owned treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be SSOs.

Severe Property Damage

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 section 122.41(m)(1)(ii))

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

See 6-Month Median above for definition of this term.

Sludge

Any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect.

State Water Quality Protection Areas (SWQPAs)

Non-terrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All Areas of Special Biological Significance (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 State Water Quality Protection Areas and require special protections afforded by the Ocean Plan.

Statistical Threshold Value (STV)

A set value that approximates the 90th percentile of the water quality distribution for a bacterial population.

Tetrachlorodibenzodioxin (TCDD) 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, ~~and bioaccumulation equivalency factor,~~ as shown in the table below:

~~$$\text{TCDD Equivalents} = \sum C_x \times TEF_x \times BEF_x$$~~

~~where:~~
~~Cx is the measured or estimated concentration of congener x~~
~~TEFx is the toxicity equivalency factor for congener x; and~~
~~BEFx is the bioaccumulation equivalency factor for congener x.~~

~~Isomer Group~~	~~Minimum Level (picogram per liter, pg/L)~~	~~2005 Toxicity Equivalency Factor (TEF)~~	~~Bioaccumulation Equivalency Factor (BEF)~~
~~2,3,7,8-tetra CDD~~	~~10~~	~~1.0~~	~~1.0~~
~~1,2,3,7,8-penta CDD~~	~~50~~	~~1.0~~	~~0.9~~
~~1,2,3,4,7,8-hexa CDDs~~	~~50~~	~~0.1~~	~~0.3~~
~~1,2,3,6,7,8-hexa CDDs~~	~~50~~	~~0.1~~	~~0.1~~
~~1,2,3,7,8,9-hexa CDDs~~	~~50~~	~~.01~~	~~0.1~~
~~1,2,3,4,6,7,8-hepta CDD~~	~~50~~	~~0.01~~	~~0.05~~
~~octa CDD~~	~~100~~	~~0.0003~~	~~0.01~~
~~2,3,7,8-tetra CDF~~	~~10~~	~~0.1~~	~~0.8~~
~~1,2,3,7,8-penta CDF~~	~~50~~	~~0.03~~	~~0.2~~
~~2,3,4,7,8-penta CDF~~	~~50~~	~~0.3~~	~~1.6~~
~~1,2,3,4,7,8-hexa CDFs~~	~~50~~	~~0.1~~	~~0.08~~
~~1,2,3,6,7,8-hexa CDFs~~	~~50~~	~~0.1~~	~~0.2~~
~~1,2,3,7,8,9-hexa CDFs~~	~~50~~	~~0.1~~	~~0.6~~
~~2,3,4,6,7,8-hexa CDFs~~	~~50~~	~~0.1~~	~~0.7~~
~~1,2,3,6,7,8-hepta CDFs~~	~~50~~	~~0.01~~	~~0.01~~
~~1,2,3,4,7,8,9-hepta CDFs~~	~~50~~	~~0.1~~	~~0.4~~
~~octa CDF~~	~~100~~	~~0.0003~~	~~0.02~~

Isomer Group	Toxicity Equivalency 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

Thirty-Day Average

See 30-day average above for definition of this term.

Toxicity Identification Evaluation (TIE)

A set of procedures conducted to identify the specific chemical(s) responsible for toxicity. 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 stepwise 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 Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate.

Trash

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

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 Discharger. 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.

Waste

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

Water Quality Control Plans

There are two types of water quality control plans - Basin Plans and Statewide Plans. Regional Boards adopt Basin Plans for each region based upon surface water hydrologic basin boundaries. The Regional Basin Plans designates or describes (1) existing and potential beneficial uses of ground and surface water; (2) water quality objectives to protect the beneficial uses; (3) implementation programs to achieve these objectives; and (4) surveillance and monitoring activities to evaluate the effectiveness of the water quality control plan. The Statewide Plans address water quality concerns for surface waters that overlap Regional Board boundaries, are statewide in scope, or are otherwise considered significant and contain the same four elements. Statewide Water Quality Control Plans include the Ocean Plan, the Enclosed Bays and Estuaries Plan, the Inland Surface Waters Plan, and the Thermal Plan. A water quality control plan consists of a designation or establishment for the waters within a specified area of (1) beneficial uses to be protected, (2) water quality objectives, and (3) a program of implementation needed for achieving water quality objectives (Water Code section 13050(j)).

Water Quality Objectives

Numerical or narrative limits on constituents or characteristics of water are designed to protect designated beneficial uses of the water. (Water Code section 13050(h)). California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans.

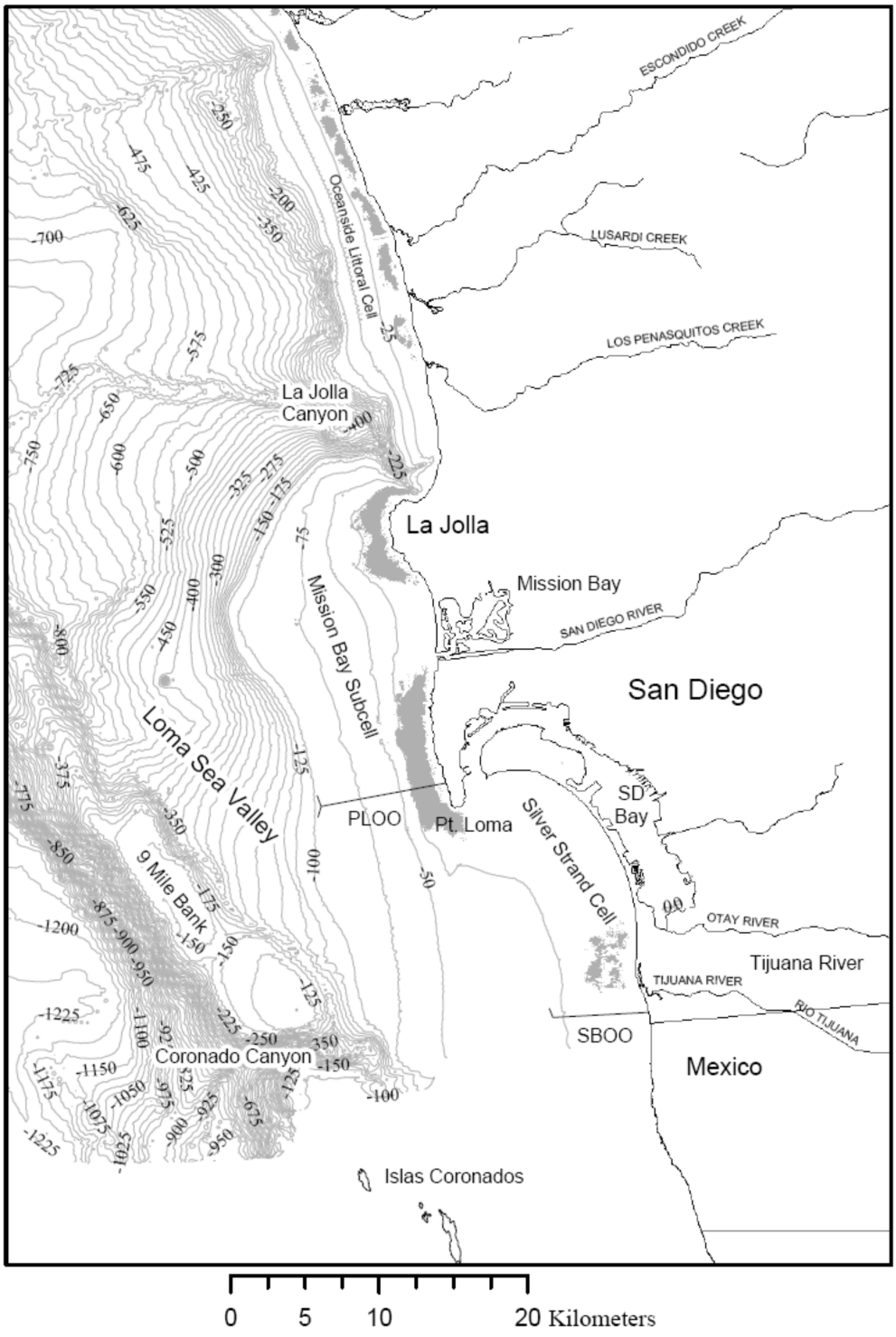
Water Quality Standards

Provisions of State or federal law which consist of a designated use or uses for waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (40 CFR section 131.3(i)). Under State law, the Water Boards establish beneficial uses and water quality objectives in their water quality control plans or basin plans. Together with an antidegradation policy, these beneficial uses and water quality objectives serve as water quality standards under the Clean Water Act. In Clean Water Act parlance, state beneficial uses are called "designated uses" and state water quality objectives are called "criteria." Throughout this Order, the relevant term is used depending on the statutory scheme.

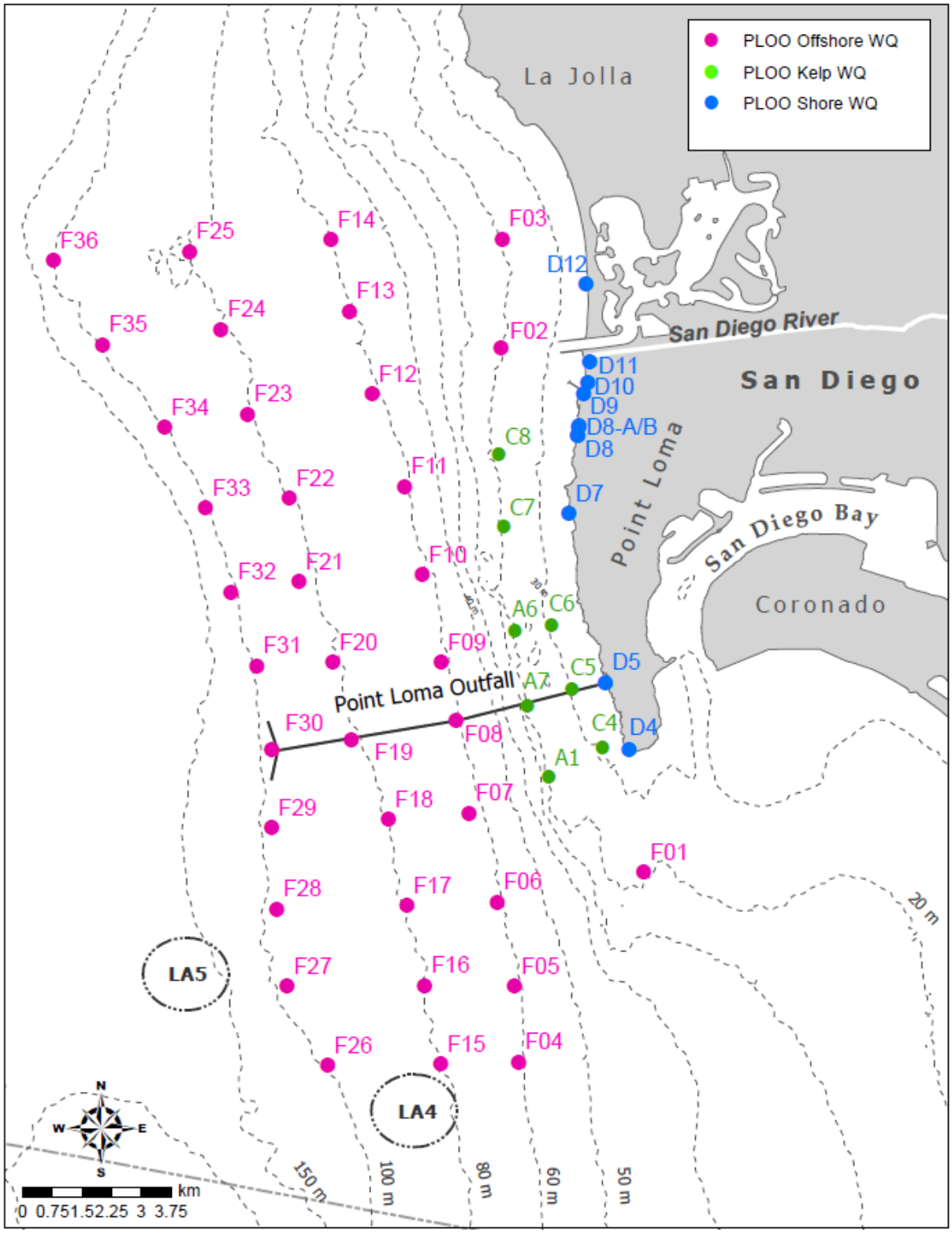
ATTACHMENT B – MAP

Map 1 - San Diego Metropolitan Sewerage System (Metro System)

Map 2 – Location of the Point Loma Ocean Outfall

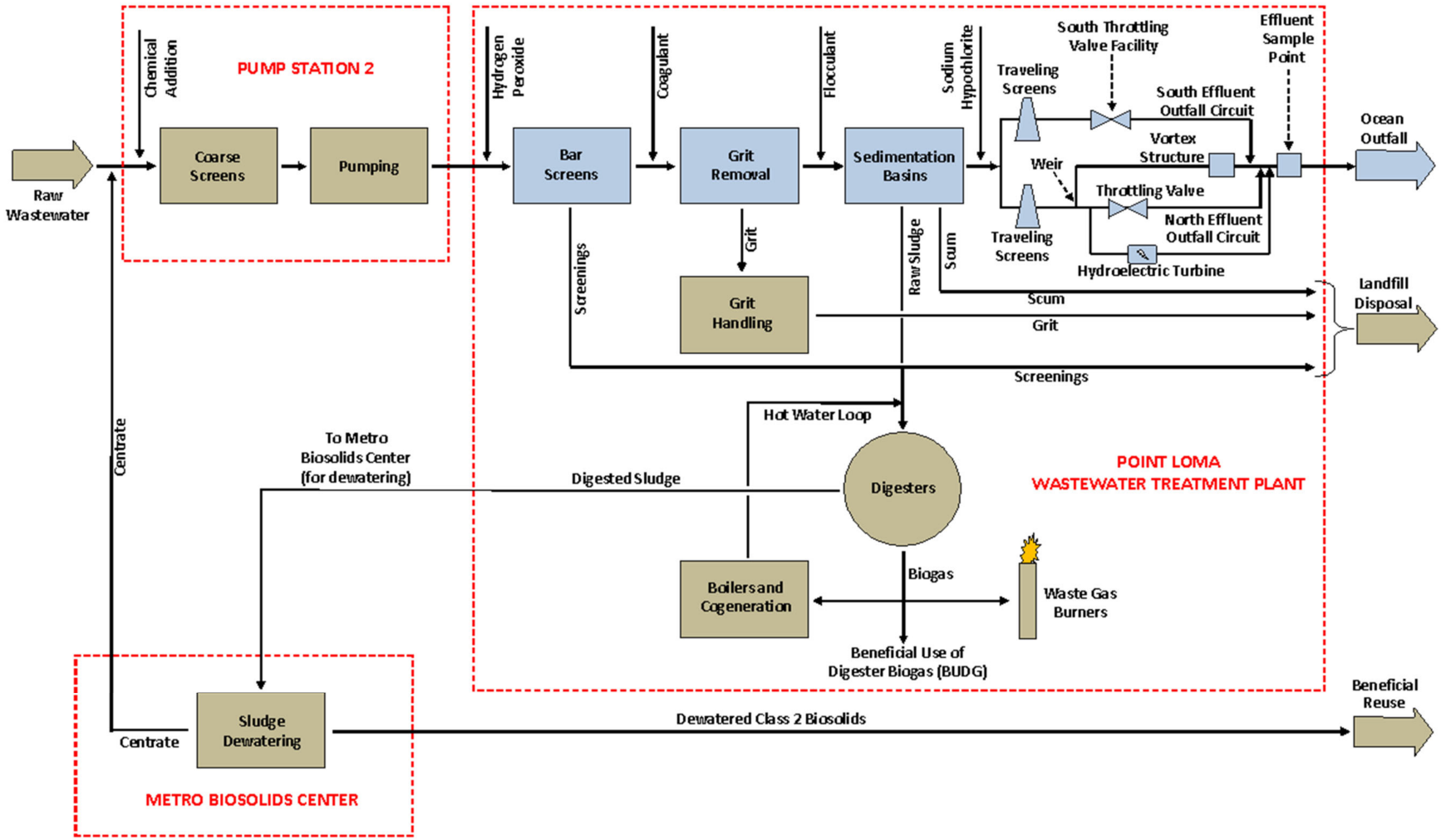


Map 3 – Water Quality Monitoring Stations

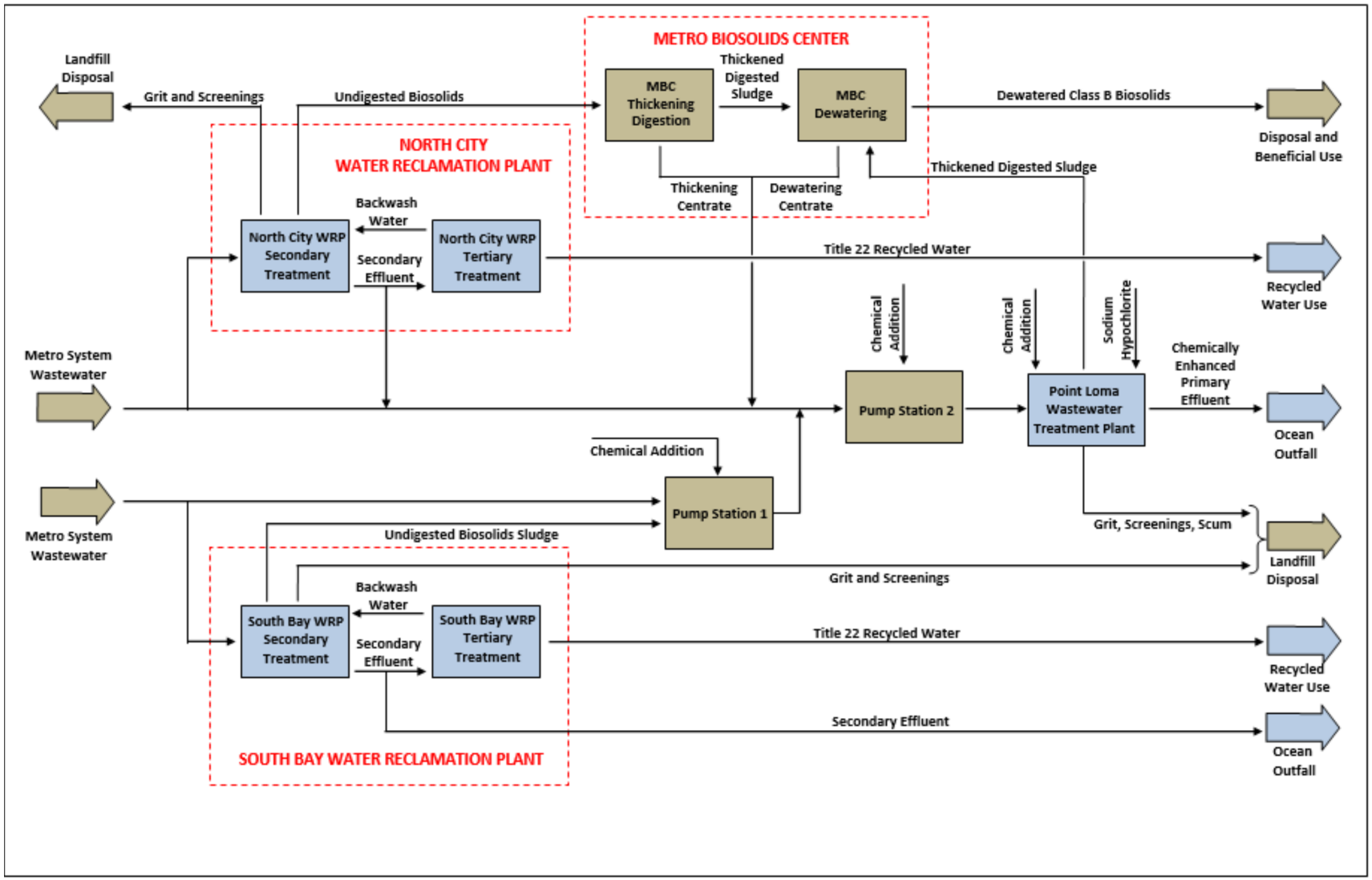


ATTACHMENT C – FLOW SCHEMATICS

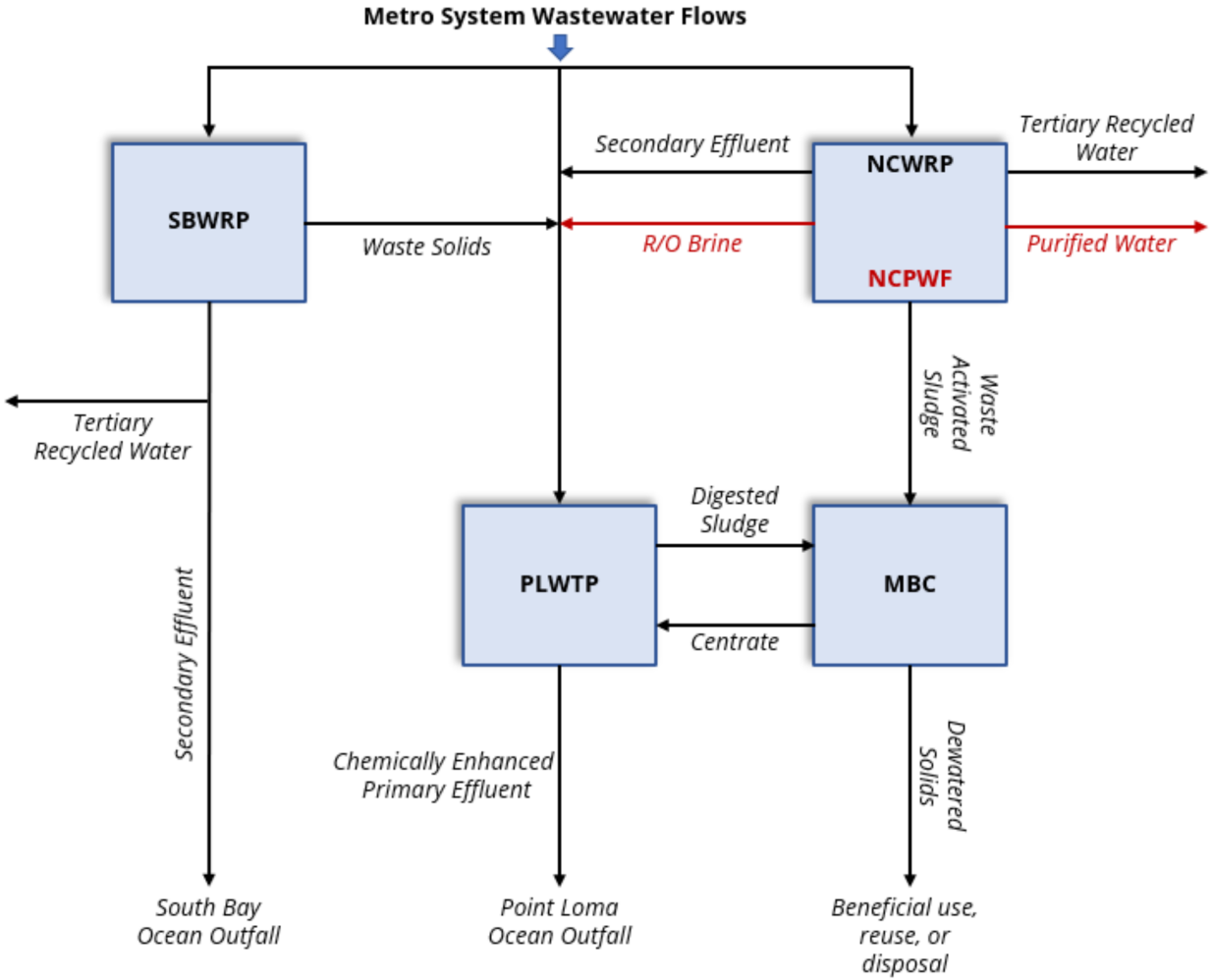
Flow Schematic 1 – Point Loma Wastewater Treatment Plant



Flow Schematic 2 – Overview of San Diego Metropolitan Sewerage System Processes



Flow Schematic 3 – San Diego Metropolitan Sewerage System Operations



Note: Red indicates facilities under construction and flows associated with the Phase 1 NCPWF, expected to be in operation by the end of calendar year 2027.

ATTACHMENT D – STANDARD PROVISIONS

1 Standard Provisions – Permit Compliance

1.1 Duty to Comply

1.1.1 The Discharger must comply with all of the terms, requirements, and conditions of this Order~~/~~ and Permit. Any noncompliance constitutes a violation of the federal 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 (40 CFR) section 122.41(a); Water Code, sections 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

1.1.2 The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the federal CWA for toxic pollutants and with standards for sewage sludge use and disposal established under CWA section 405(d) within the time provided in the regulations that establish these standards or prohibitions or standards of sewages sludge use or disposal, even if this Order~~/~~ and Permit ~~has~~ have not yet been modified to incorporate the requirement. (40 CFR section 122.41(a)(1).)

1.1.3 The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation, as adjusted annually for inflation pursuant to the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015, and as currently set forth in 40 CFR section 19.4. The CWA provides that any person who negligently violates section 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both.
Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that

they thereby place another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions. (40 CFR section 122.41(a)(2).)

1.1.4 Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000. The civil and administrative penalty amounts are adjusted annually for inflation pursuant to the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015, and the current penalty amounts are set forth in 40 CFR section 19.4.

1.2 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the 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~~/~~ and Permit. (40 CFR section 122.41(c).)

1.3 Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order~~/~~ and Permit that ~~has~~ have a reasonable likelihood of adversely affecting human health or the environment. (40 CFR section 122.41(d).)

1.4 Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order~~/~~ and Permit. Proper operation and maintenance also ~~includes~~ include 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 the Discharger only when necessary to achieve compliance with the conditions of this Order~~/~~ and Permit. (40 CFR section 122.41(e).)

1.5 Property Rights

1.5.1 This Order~~/~~ and Permit ~~does~~ do not convey any property rights of any sort or any exclusive privileges. (40 CFR section 122.41(g).)

1.5.2 The issuance of this Order~~/~~ and Permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State of California (State) or local law or regulations. (40 CFR section 122.5(c).)

1.6 Inspection and Entry

The Discharger shall allow the San Diego Water Board, State Water Resources Control Board (State Water Board), 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. section 1318(a)(4)(b); 40 CFR section 122.41(i); Water Code, sections 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~~/~~ and Permit (33 U.S.C. section 1318(a)(4)(b)(i); 40 CFR section 122.41(i)(1); Water Code, sections 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~~/~~ and Permit (33 U.S.C. section 1318(a)(4)(b)(ii); 40 CFR section 122.41(i)(2); Water Code, sections 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~~/~~ and Permit (33 U.S.C. section 1318(a)(4)(b)(ii); 40 CFR section 122.41(i)(3); Water Code, sections 13267, 13383); and

1.6.4 Sample or monitor, at reasonable times, for the purposes of assuring Order~~/~~ and Permit compliance or as otherwise authorized by the federal CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. section 1318(a)(4)(b); 40 CFR section 122.41(i)(4); Water Code, sections 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 section 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 section 122.41(m)(1)(ii).)

1.7.2 **Bypass not exceeding limitations.** The Discharger 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 section 122.41(m)(2).)

1.7.3 **Prohibition of bypass.** Bypass is prohibited, and the San Diego Water Board and USEPA may take enforcement action against the Discharger for bypass, unless
(40 CFR section 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 section 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 section 122.41(m)(4)(i)(B)); and

1.7.3.3 The Discharger submitted notice to the San Diego Water Board and USEPA as required under Standard Provisions – Permit Compliance 1.7.5 below. (40 CFR section 122.41(m)(4)(i)(C).)

1.7.4 The San Diego Water Board and USEPA may approve an anticipated bypass, after considering its adverse effects, if the San Diego Water Board and USEPA determine that it will meet the three conditions listed in Standard Provisions – Permit Compliance 1.7.3 above. (40 CFR section 122.41(m)(4)(ii).)

1.7.5 **Notice**

1.7.5.1 Anticipated bypass. If the 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 San Diego Water Board and USEPA. As of December 21, 202~~5~~8 all notices submitted in compliance with this section must be submitted electronically by the Discharger to the San Diego Water Board and USEPA or initial recipient, as defined in 40 CFR section 127.2(b), in compliance with this section and 40 CFR part 3 (including, in all cases, subpart D to part 3), 40 CFR section 122.22, and 40 CFR part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular ~~Order/Permit~~ permit or if required to do so by State law. (40 CFR section 122.41(m)(3)(i).)

1.7.5.2 Unanticipated bypass. The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). As of December 21, 202~~5~~8 all notices submitted in

compliance with this section must be submitted electronically by the Discharger to the San Diego Water Board and USEPA or initial recipient, as defined in 40 CFR section 127.2(b), in compliance with this section and 40 CFR part 3 (including, in all cases, subpart D to part 3), 40 CFR section 122.22, and 40 CFR part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular ~~Order/Permit~~ permit or if required to do so by State law. (40 CFR section 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 Discharger. 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 section 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 section 122.41(n)(2).)

1.8.2 **Conditions necessary for a demonstration of upset.** The 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 section 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 section 122.41(n)(3)(i));

1.8.2.2 The permitted facility was, at the time, being properly operated (40 CFR section 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 section 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 section 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 have the burden of proof. (40 CFR section 122.41(n)(4).)

2 Standard Provisions – Permit Action

2.1 General

This Order~~/~~ and Permit 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~~/~~ and Permit condition. (40 CFR section 122.41(f).)

2.2 Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order~~/~~ and Permit after the expiration date of this Order~~/~~ and Permit, the Discharger must apply for and obtain a new permit. (40 CFR section 122.41(b).)

2.3 Transfers

This Order~~/~~ and Permit is not transferable to any person except after notice to the San Diego Water Board and USEPA. The San Diego Water Board and USEPA may require modification or revocation and reissuance of the Order~~/~~ and Permit to change the name of the Discharger and incorporate such other requirements as may be necessary under the federal CWA and the Water Code. (40 CFR sections 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 section 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 or O. 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 or O. 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~~/~~ and Permit for such pollutants or pollutant parameters. (40 CFR sections 122.21(e)(3),122.41(j)(4), 122.44(i)(1)(iv).)

4 Standard Provisions – Records

4.1 The Discharger 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 Permit, and records of all data used to complete the application for this Order~~/~~ and Permit, 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 San Diego Water Board Executive Officer and USEPA Water Division Director at any time. (40 CFR section 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 section 122.41(j)(3)(i));

4.2.2 The individual(s) who performed the sampling or measurements (40 CFR section 122.41(j)(3)(ii));

4.2.3 The date(s) analyses were performed (40 CFR section 122.41(j)(3)(iii));

4.2.4 The individual(s) who performed the analyses (40 CFR section 122.41(j)(3)(iv));

4.2.5 The analytical techniques or methods used (40 CFR section 122.41(j)(3)(v)); and

4.2.6 The results of such analyses. (40 CFR section 122.41(j)(3)(vi).)

4.3 Claims of confidentiality for the following information will be denied (40 CFR section 122.7(b)):

4.3.1 The name and address of any permit applicant or Discharger (40 CFR section 122.7(b)(1)); and

4.3.2 Permit applications and attachments, permits and effluent data. (40 CFR section 122.7(b)(2).)

5 Standard Provisions – Reporting

5.1 Duty to Provide Information

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

5.2 Signatory and Certification Requirements

5.2.1 All applications, reports, or information submitted to the San Diego Water Board, State Water Board, and 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 section 122.41(k).)

5.2.2 The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order~~/~~ and Permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both. (40 CFR section 122.41(k)(2).)

5.2.3 For a municipality, State, federal, or other public agency. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR section 122.22(a)(3).).

5.2.4 All reports required by this Order~~/~~ and Permit and other information requested by the San Diego 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:

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

5.2.4.2 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 section 122.22(b)(2)); and

5.2.4.3 The written authorization is submitted to the San Diego Water Board, USEPA, and State Water Board. (40 CFR section 122.22(b)(3).)

5.2.5 Changes to authorization. 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 San Diego Water Board, USEPA, and State Water Board prior to or together with any reports, information, or

applications, to be signed by an authorized representative. (40 CFR section 122.22(c).)

5.2.6 Certification. 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 section 122.22(d).)

5.2.7 Electronic Reporting. 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 (NPDES Electronic Reporting Requirements) are met for that submission. (40 CFR section 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 (Attachment E) in this Order~~/~~ and Permit. (40 CFR section 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 San Diego Water Board, USEPA, 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 section 122.41(l)(4)(i).)

5.3.3 If the Discharger monitors any pollutant more frequently than required by this Order~~/~~ and Permit 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 San Diego Water Board, USEPA, or State Water Board. (40 CFR section 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~~/~~ and Permit. (40 CFR section 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~~/~~ and Permit, shall be submitted no later than 14 days following each schedule date. (40 CFR section 122.41(l)(5).)

5.5 Twenty-Four Hour Reporting

5.5.1 The Discharger 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 21, 202~~5~~8, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the San Diego Water Board and USEPA 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 San Diego Water Board and USEPA 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 section 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~~/~~ and Permit. (40 CFR section 122.41(l)(6)(ii)(A).)

5.5.2.2 Any upset that exceeds any effluent limitation in this Order~~/~~ and Permit. (40 CFR section 122.41(l)(6)(ii)(B).)

5.5.2.3 Violation of a maximum daily discharge limitation for any of the pollutants listed by the San Diego Water Board/USEPA in the Order~~/~~ and Permit to be

reporting within 24 hours. (See 40 CFR section 122.44(g).) (40 CFR section 122.41(l)(6)(ii)(c).)

5.5.3 The San Diego Water Board and USEPA 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 section 122.41(l)(6)(iii).)

5.6 Planned Changes

The Discharger shall give notice to the San Diego Water Board and USEPA 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 section 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 40 CFR section 122.29(b) (40 CFR section 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~~/~~ and Permit. (40 CFR section 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~~/~~ and Permit nor to notification requirements under 40 CFR section 122.42(a)(1) (see Additional Provisions—Notification Levels 7.1.1). (40 CFR section 122.41(l)(1)(iii).)

5.7 Anticipated Noncompliance

The Discharger shall give advance notice to the San Diego Water Board and USEPA of any planned changes in the permitted facility or activity that may result in noncompliance with this Order~~/~~ and Permit's requirements. (40 CFR section 122.41(l)(2).)

5.8 Other Noncompliance

The Discharger 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 San Diego Water Board and USEPA 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 section 122.41(l)(7).)

5.9 Other Information

When the Discharger becomes 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 San Diego Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR section 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 section 122.41(l)(9).)

6 Standard Provisions – Enforcement

The San Diego Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.

7 Additional Provisions – Notification Levels

Publicly Owned Treatment Works (POTWs) - All POTWs shall provide adequate notice to the San Diego Water Board and USEPA of the following (40 CFR section 122.42(b)):

7.1 Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the federal CWA if it were directly discharging those pollutants (40 CFR section 122.42(b)(1)); and

7.2 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~~/~~ and Permit. (40 CFR section 122.42(b)(2).)

7.3 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 section 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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) section 13383 also authorizes the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. Pursuant to this authority, this MRP establishes conditions for the City of San Diego (Discharger) to conduct routine or episodic self-monitoring of the discharges regulated under this Order~~/~~ and Permit at specified effluent and receiving water monitoring locations. This MRP requires the Discharger to report the results to the San Diego Water Board and United States Environmental Protection Agency, Region 9 (USEPA) with information necessary to evaluate discharge characteristics and compliance status. While the San Diego Water Board and USEPA are not required to consider MRP costs, it recognizes that monitoring and reporting costs can be a significant burden. The San Diego Water Board and USEPA estimate that the burden and cost of compliance with this MRP may cost around $3,400,000 per year. The San Diego Water Board and USEPA have assessed this MRP to reduce and eliminate unnecessary or overlapping monitoring and reporting requirements where appropriate. The cost of implementing this MRP is reasonable given the needs and benefits of the reports.

The purpose of this MRP is to determine and ensure compliance with effluent limitations and other requirements established in this Order~~/~~ and Permit, assess treatment efficiency, characterize effluents, and characterize the receiving water and the effects of the discharge on the receiving water. This MRP also specifies requirements concerning the proper use, maintenance, and installation of monitoring equipment and methods, and the monitoring type intervals and frequency necessary to yield data that are representative of the activities and discharges regulated under this Order~~/~~ and Permit.

Each monitoring section contains an introductory paragraph summarizing why the monitoring is needed and the key management questions the monitoring is designed to answer. In developing the list of key management questions, the San Diego Water Board and USEPA considered four basic types of information for each question:

- Management Information Need – Why do the San Diego Water Board and USEPA need to know the answer?
- Monitoring Criteria – What monitoring will be conducted for deriving an answer to the question?
- Expected Product – How should the answer be expressed and reported?
- Possible Management Actions – What actions will be potentially influenced by the answer?

The framework for this monitoring program has three components that comprise a range of spatial and temporal scales: 1) core monitoring, 2) regional monitoring, and 3) special studies:

- Core monitoring consists of the basic site-specific monitoring necessary to measure compliance with individual effluent limits and/or impacts to receiving water quality. Core monitoring is typically conducted in the immediate vicinity of the discharge by examining local scale spatial effects.
- Regional monitoring provides information necessary to make assessments over large areas and serves to evaluate cumulative effects of all anthropogenic inputs. Regional monitoring data also assists in the interpretation of core monitoring studies. In the event that a regional monitoring effort takes place during the permit cycle in which this MRP does not specifically address regional monitoring, the San Diego Water Board and USEPA may allow relief from aspects of core monitoring components in order to encourage participation pursuant to section 5 of this MRP.
- Special studies are directed monitoring efforts designed in response to specific management or research questions identified through either core or regional monitoring programs. Often, they are used to help understand core or regional monitoring results where a specific environmental process is not well understood, or to address unique issues of local importance.

1 General Monitoring Provisions

1.1 Samples and measurements taken as required herein shall be representative of the volume and nature of the monitoring discharge. All samples shall be taken at the monitoring points specified in section 2, Table E-1 and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the San Diego Water Board and USEPA.

1.2 All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. 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 flow measurement devices shall be installed, calibrated at least once per year (i.e., no more than 12 months between calibrations) or more frequently, and maintained to ensure that the accuracy of the measurement is consistent with the accepted capability of that type of device. The flow measurement devices selected shall be capable of measuring flows with a maximum deviation of less than ±5 percent from true discharge rates throughout the range of expected discharge volumes. Annually on July 1, the Discharger shall submit to the San Diego Water Board and USEPA a written statement signed by a registered professional engineer certifying that all flow measurement devices have been calibrated and will reliably achieve an accuracy with a maximum deviation of less than ±5 percent from true discharge rates throughout the range of expected discharge volumes.

.1.3 Monitoring must be conducted according to USEPA test procedures approved at 40 CFR part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the CWA* as amended, or an alternative test procedure (ATP) approved by the San Diego Water Board and USEPA when there are no methods specified for a pollutant at 40 CFR part 136.

1.4 Data produced and reports submitted pursuant to this Order~~/~~ and Permit shall be generated by a laboratory accredited by the State of California Environmental Laboratory Accreditation Program (ELAP). The laboratory must hold a valid certificate of accreditation for the analytical test method specified in 40 CFR part 136, an ATP approved by the San Diego Water Board and USEPA when there are no methods specified for a pollutant at 40 CFR part 136. The laboratory must include quality assurance/quality control (QA/QC) data in all data reports required by this Order~~/~~ and Permit and submit electronic data as required by the San Diego Water Board and USEPA. Data generated using field tests is exempt pursuant to Water Code section 13176. Additional information on ELAP can be accessed at: https://www.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml.

1.5 Records of monitoring information shall include information required under Standard Provision, Attachment D, section 4 of this Order~~/~~ and Permit.

1.6 The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Annually on April 1, the Discharger shall submit to the San Diego Water Board and USEPA a report which summarizes the QA activities for the previous calendar year. Duplicate chemical analyses must be conducted on a minimum of 10 percent of the samples or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. The Discharger shall have a success rate equal to or greater than 80 percent.

1.7 Analysis for toxic pollutants, including chronic toxicity, with effluent limitations or performance goals based on water quality objectives and criteria of the *Water Quality Control Plan for the San Diego Basin* (Basin Plan) or the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) shall be conducted in accordance with procedures described in the Ocean Plan and as restated in this MRP.

1.8 The Discharger shall ensure that analytical procedures used to evaluate compliance with effluent limitations or performance goals established in this Order~~/~~ and Permit use minimum levels (MLs) no greater than the applicable effluent limitations or performance goals and are consistent with the requirements of the Ocean Plan and 40 CFR part 136, or otherwise approved and authorized by the San Diego Water Board and USEPA. If no authorized ML value is below the effluent limitation or performance goal, then the method must achieve an ML no greater than the lowest ML value provided in the Ocean Plan and/or 40 CFR part 136.

1.9 The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to Water Code section 13223. The Executive Officer is authorized to modify the provisions of

this MRP in accordance with applicable law. Unless otherwise indicated by this MRP, if the Discharger wishes to modify any monitoring requirements specified in this MRP, then the Discharger shall submit a written request to the San Diego Water Board Executive Officer and USEPA Water Division Director for review and approval. The Executive Officer and USEPA Water Division Director may approve the request to modify this MRP in accordance with applicable law.

1.10 Section 3.2 of the Standard Provisions (Attachment D) includes the standard provisions for test procedures. 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:

1.10.1 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~~/~~ and Permit limitation for the measured pollutant or pollutant parameter; or

1.10.2 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

1.10.3 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 Table 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.

2 Monitoring Locations

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order~~/~~ and Permit. The north latitude and west longitude information in Table E-1 are approximate for administrative purposes.

Table E-1 Monitoring Station Locations

~~Discharge Point Name~~	Monitoring Location Name	Monitoring Location Description	Depth (meter, m)
~~--~~	INF-001	At a location where all influent ~~wastestream~~ waste stream flows[1] to E.W. Blom Point Loma Wastewater Treatment Plant (Facility) are accounted for in monitoring events; upstream of any in-plant return flows; and where representative samples of influent can be collected before any process or treatment that could alter the properties of the influent.	--
~~001~~	EFF-001	Discharge Point 001: A location where a representative sample of the effluent can be obtained.	--
~~--~~	EMG-001	A location where a representative sample of the Tijuana Cross-Border Emergency Connection can be obtained.	--
~~--~~	RS-001	A location where a representative sample of a return stream can be obtained; for multiple return streams, the return streams shall be sampled and composited based on each return stream contributing flow (flow weighted). Return Streams includes ~~NCWRP Filter Backwash, NCWRP Plant Drain, NCWRP Secondary and Un-disinfected Filtered Effluent Bypass, North City Water Reclamation Plant (NCWRP) Final Effluent, NCWRP and North City Pure Water Facility (NCPWF) Combined Waste, Out of Specification Final Effluent from North City Pure Water Facility (NCPWF), and MBC Centrate.~~ Return Streams: NCWRP Final Effluent, NCWRP and North City Pure Water Facility (NCPWF) Combined Waste, and MBC Centrate.	--
~~--~~	F-001	Offshore Station: Latitude: 32° 38.261' ~~15.659"~~N, Longitude: 117° 14.419' ~~25.138"~~W	18[2]
~~--~~	F-002	Offshore Station: Latitude: 32° 45.418' ~~25.077"~~N, Longitude: 117° 16.364' ~~21.838"~~W	18[2]
~~--~~	F-003	Offshore Station: Latitude: 32° 46.910' ~~54.598"~~N, Longitude: 117° 16.345' ~~20.698"~~W	18[2]
~~--~~	F-004	Offshore Station: Latitude: 32° 35.672' ~~40.318"~~N, Longitude: 117° 16.125' ~~7.500"~~W	60[3]
~~--~~	F-005	Offshore Station: Latitude: 32° 36.701' ~~42.058"~~N, Longitude: 117° 16.179' ~~10.739"~~W	60[3]
~~--~~	F-006	Offshore Station: Latitude: 32° 37.850' ~~50.999"~~N, Longitude: 117° 16.416' ~~24.96"~~W	60[3]
~~--~~	F-007	Offshore Station: Latitude: 32° 39.06809' ~~4.082"~~N, Longitude: 117° 16' 47.79968' ~~978"~~W	60[3]
~~--~~	F-008	Offshore Station: Latitude: 32° 40.329' ~~19.740"~~N, Longitude: 117° 16.979' ~~58.8"~~W	60[3]
~~--~~	F-009	Offshore Station: Latitude: 32° 41.133' ~~7.979"~~N, Longitude: 117° 17.179' ~~10.737"~~W	60[3]
~~--~~	F-010	Offshore Station: Latitude: 32° 42.3252' ~~19.508"~~N, Longitude: 117° 17.43951' ~~26.368"~~W	60[3]
~~--~~	F-011	Offshore Station: Latitude: 32° 43.53267' ~~31.958"~~N, Longitude: 117° 17.67793' ~~40.675"~~W	60[3]
~~--~~	F-012	Offshore Station: Latitude: 32° 44.795' ~~47.699"~~N, Longitude: 117° 18.124' ~~7.437"~~W	60[3]
~~--~~	F-013	Offshore Station: Latitude: 32° 45.923' ~~55.378"~~N, Longitude: 117° 18.432' ~~25.919""~~W	60[3]
~~--~~	F-014	Offshore Station: Latitude: 32° 46.89359' ~~53.612"~~N, Longitude: 117° 18.68543' ~~41.123"~~W	60[3]
~~--~~	F-015	Offshore Station: Latitude: 32° 35.646' ~~38.759"~~N, Longitude: 117° 17.187' ~~11.22"~~W	80[4]
~~--~~	F-016	Offshore Station: Latitude: 32° 36.71' ~~42.598"~~N, Longitude: 117° 17.404' ~~24.237"~~W	80[4]
~~--~~	F-017	Offshore Station: Latitude: 32° 37.801' ~~48.057"~~N, Longitude: 117° 17.65' ~~38.998"~~W	80[4]
~~--~~	F-018	Offshore Station: Latitude: 32° 38.986' ~~59.157"~~N, Longitude: 117° 17.9' ~~53.998"~~W	80[4]
~~--~~	F-019	Offshore Station: Latitude: 32° 40.071' ~~4.26"~~N, Longitude: 117° 18.41' ~~24.598"~~W	80[4]
~~--~~	F-020	Offshore Station: Latitude: 32° 41.125' ~~7.497"~~N, Longitude: 117° 18.658' ~~39.477"~~W	80[4]
~~--~~	F-021	Offshore Station: Latitude: 32° 42.22802' ~~13.68"~~N, Longitude: 117° 19.12123' ~~7.273"~~W	80[4]
~~--~~	F-022	Offshore Station: Latitude: 32° 43.36384' ~~21.827"~~N, Longitude: 117° 19.25415' ~~15.247"~~W	80[4]
~~--~~	F-023	Offshore Station: Latitude: 32° 44.513' ~~30.779"~~N, Longitude: 117° 19.825' ~~49.497"~~W	80[4]
~~--~~	F-024	Offshore Station: Latitude: 32° 45.673' ~~40.377"~~N, Longitude: 117° 20.187' ~~11.219"~~W	80[4]

~~Discharge Point Name~~	Monitoring Location Name	Monitoring Location Description	Depth (meter, m)
--	F-025	Offshore Station: Latitude: 32° 46.737' ~~44.22"~~N, Longitude: 117° 20.615' ~~36.898"~~W	80[4]
--	F-026	Offshore Station: Latitude: 32° 35.626' ~~37.558"~~N, Longitude: 117° 18.732' ~~43.92~~"W	98[5]
--	F-027	Offshore Station: Latitude: 32° 36.707' ~~42.419"~~N, Longitude: 117° 19.283' ~~16.978"~~W	98[5]
--	F-028	Offshore Station: Latitude: 32° 37.75727' ~~45.433"~~N, Longitude: 117° 19.42331' ~~25.391"~~W	98[5]
--	F-029	Offshore Station: Latitude: 32° 38.86892' ~~52.134"~~N, Longitude: 117° 19.49581' ~~29.747"~~W	98[5]
--	F-030	Offshore Station: Latitude: 32° 39.9402' ~~56.411"~~N, Longitude: 117° 19.4898' ~~29.388"~~W	98[5]
--	F-031	Offshore Station: Latitude: 32° 41.08013' ~~4.805"~~N, Longitude: 117° 19.70122' ~~42.071"~~W	98[5]
--	F-032	Offshore Station: Latitude: 32° 42.085' ~~5.098"~~N, Longitude: 117° 20.05' ~~2.997"~~W	98[5]
--	F-033	Offshore Station: Latitude: 32° 43.225' ~~13.678"~~N, Longitude: 117° 20.395' ~~23.698"~~W	98[5]
--	F-034	Offshore Station: Latitude: 32° 44.335' ~~20.04"~~N, Longitude: 117° 20.962' ~~57.718"~~W	98[5]
--	F-035	Offshore Station: Latitude: 32° 45.462' ~~27.719"~~N, Longitude: 117° 21.803' ~~48.178"~~W	98[5]
--	F-036	Offshore Station: Latitude: 32° 46.607' ~~36.419"~~N, Longitude: 117° 22.474' ~~28.438"~~W	98[5]
--	A-001	Kelp Station: Latitude: 32° 39.55998' ~~33.6"~~N, Longitude: 117° 15.72' ~~43.2"~~W	18[2]
--	A-006	Kelp Station: Latitude: 32° 41.56002' ~~33.6"~~N, Longitude: 117° 16.18002' ~~10.8"~~W	18[2]
--	A-007	Kelp Station: Latitude: 32° 40.53' ~~31.8"~~N, Longitude: 117° 16.00998' ~~0.60"~~W	18[2]
--	C-004	Kelp Station: Latitude: 32° 39.94998' ~~57.0"~~N, Longitude: 117° 14.98002' ~~58.8"~~W	9[6]
--	C-005	Kelp Station: Latitude: 32° 40.75002' ~~45.0"~~N, Longitude: 117° 15.40002' ~~24.0"~~W	9[6]
--	C-006	Kelp Station: Latitude: 32° 41.62002' ~~37.19~~"N, Longitude: 117° 15.67998' ~~40.8"~~W	9[6]
--	C-007	Kelp Station: Latitude: 32° 42.97998' ~~58.8"~~N, Longitude: 117° 16.33002' ~~19.8"~~W	18[2]
--	C-008	Kelp Station: Latitude: 32° 43.96002' ~~57.6"~~N, Longitude: 117° 16.39998' ~~24.0"~~W	18[2]
--	D-004	Shoreline Station: At the southernmost tip of Point Loma just north of the lighthouse. Latitude: 32° 39.9398' ~~56.39"~~N, Longitude: 117° 14.6200' ~~37.2"~~W	--
--	D-005	Shoreline Station: Directly in front of the E.W. Blom Point ~~Lama~~ Loma Wastewater Treatment Plant where the outfall enters the ocean. Latitude: 32° 40.8500' ~~51.0"~~N, Longitude: 117° 14.9400' ~~56.4"~~W	--
--	D-007	Shoreline Station: Sunset Cliffs at the foot of the stairs seaward of Ladera Street. Latitude: 32° 43.1598' ~~9.59"~~N, Longitude: 117° 15.3000' ~~26.4"~~W	--
--	D-008~~B~~	Shoreline Station: Ocean Beach at the foot of the stairs seaward of Bermuda Street. Latitude: 32° 44.2200' ~~22.02"~~N, Longitude: 117° 15.200' ~~18.0"~~W	--
--	D-009	Shoreline Station: Just south of the Ocean Beach pier at the foot of the stairs seaward of Narragansett. Latitude: 32° 44.8000' ~~48.0"~~N, Longitude: 117° 15.2400' ~~14.4"~~W	--
--	D-010	Shoreline Station: Ocean Beach just north of west end of Newport Avenue, directly west of main lifeguard station. Latitude: 32° 44.9500' ~~57.0"~~N, Longitude: 117° 15.1800' ~~10.8"~~W	--
--	D-011	Shoreline Station: North Ocean Beach, directly west of south end of Dog Beach parking area at Voltaire St terminus, south of stub jetty. Latitude: 32° 45.2400' ~~14.4"~~N, Longitude: 117° 15.1600' ~~9.6"~~W	--
--	D-012	Shoreline Station: Mission Beach, directly west of main lifeguard station in Belmont Park located at the west end of Mission Bay Drive. Latitude: 32° 46.2800' ~~16.8"~~N, Longitude: 117° 15.2100' ~~12.6 "~~W	--
--	B-009	Offshore Benthic Station, Primary Core Station: Latitude: 32° 45.33' ~~19.8"~~N, Longitude: 117° 21.7' ~~42.0"~~W	98

~~Discharge Point Name~~	Monitoring Location Name	Monitoring Location Description	Depth (meter, m)
--	B-012	Offshore Benthic Station, Primary Core Station: Latitude: 32° 46.36' ~~21.6"~~N, Longitude: 117° 22.3' ~~18.0"~~W	98
--	E-002	Offshore Benthic Station, Primary Core Station: Latitude: 32° 37.45' ~~27.0"~~N, Longitude: 117° 19.09' ~~5.40"~~W	98
--	E-005	Offshore Benthic Station, Primary Core Station: Latitude: 32° 38.38' ~~22.8"~~N, Longitude: 117° 19.28' ~~16.8"~~W	98
--	E-008	Offshore Benthic Station, Primary Core Station: Latitude: 32° 38.91' ~~54.6~~"N, Longitude: 117° 19.34' ~~20.4"~~W	98
--	E-011	Offshore Benthic Station, Primary Core Station: Latitude: 32° 39.4' ~~24.0"~~N, Longitude: 117° 19.42' ~~25.2"~~W	98
--	E-014	Offshore Benthic Station, Primary Core Station: Latitude: 32° 39.94' ~~56.4"~~N, Longitude: 117° 19.49' ~~29.4"~~W	98
--	E-017	Offshore Benthic Station, Primary Core Station: Latitude: 32° 40.48' ~~28.8"~~N, Longitude: 117° 19.54' ~~32.4"~~W	98
--	E-020	Offshore Benthic Station, Primary Core Station: Latitude: 32° 40.96' ~~57.6"~~N, Longitude: 117° 19.67' ~~40.2"~~W	98
--	E-023	Offshore Benthic Station, Primary Core Station: Latitude: 32° 41.47' ~~28.2"~~N, Longitude: 117° 19.77' ~~46.2"~~W	98
--	E-025	Offshore Benthic Station, Primary Core Station: Latitude: 32° 42.38' ~~22.8"~~N, Longitude: 117° 20.07' ~~4.20"~~W	98
--	E-026	Offshore Benthic Station, Primary Core Station: Latitude: 32° 43.82' ~~49.2"~~N, Longitude: 117° 20.57' ~~34.2"~~W	98
--	B-008	Offshore Benthic Station, Secondary Core Station: Latitude: 32° 45.5' ~~30.0"~~N, Longitude: 117° 20.77' ~~46.2"~~W	88
--	B-011	Offshore Benthic Station, Secondary Core Station: Latitude: 32° 46.57' ~~34.2"~~N, Longitude: 117° 21.35' ~~21.0"~~W	88
--	E-001	Offshore Benthic Station, Secondary Core Station: Latitude: 32° 37.53' ~~31.8"~~N, Longitude: 117° 18.35' ~~21.0"~~W	88
--	E-007	Offshore Benthic Station, Secondary Core Station: Latitude: 32° 39' ~~0.0"~~N, Longitude: 117° 18.65' ~~39.0"~~W	88
--	E-019	Offshore Benthic Station, Secondary Core Station: Latitude: 32° 41.04' ~~2.40"~~N, Longitude: 117° 19.18' ~~10.8"~~W	88
--	B-010	Offshore Benthic Station, Secondary Core Station: Latitude: 32° 45.22' ~~13.19"~~N, Longitude: 117° 22.16' ~~9.60"~~W	116
--	E-003	Offshore Benthic Station, Secondary Core Station: Latitude: 32° 37.29' ~~17.39"~~N, Longitude: 117° 20.09' ~~5.39"~~W	116
--	E-009	Offshore Benthic Station, Secondary Core Station: Latitude: 32° 38.75' ~~45"~~N, Longitude: 117° 20.06' ~~3.59"~~W	116
--	E-015	Offshore Benthic Station, Secondary Core Station: Latitude: 32° 39.88' ~~52.8'"~~N, Longitude: 117° 19.91' ~~54.6"~~W	116
--	E-021	Offshore Benthic Station, Secondary Core Station: Latitude: 32° 40.89' ~~53.4"~~N, Longitude: 117° 20' ~~0.0"~~W	116
--	SD-007 (Zone 4)	Offshore Benthic Secondary Core Station, Trawl Station: Latitude: 32° 35.06' ~~3.6"~~N, Longitude: 117° 18.39' ~~23.4"~~W	100

~~Discharge Point Name~~	Monitoring Location Name	Monitoring Location Description	Depth (meter, m)
~~--~~	SD-008 (Zone 3)	Offshore Benthic Station, Trawl Station: Latitude: 32° 37.54' ~~32.4"~~N, Longitude: 117° 19.37' ~~22.2"~~W	100
~~--~~	SD-010 (Zone 1)	Offshore Benthic Station, Trawl Station: Latitude: 32° 39.16' ~~9.60"~~N, Longitude: 117° 19.5' ~~30"~~W	100
~~--~~	SD-012 (Zone 1)	Offshore Benthic Station, Trawl Station: Latitude: 32° 40.65' ~~39.0"~~N, Longitude: 117° 19.81' ~~48.6"~~W	100
~~--~~	SD-013 (Zone 2)	Offshore Benthic Station, Trawl Station: Latitude: 32° 42.83' ~~49.8"~~N, Longitude: 117° 20.25' ~~15"~~W	100
~~--~~	SD-014 (Zone 2)	Offshore Benthic Station, Trawl Station: Latitude: 32° 44.3' ~~18.0"~~N, Longitude: 117° 20.96' ~~57.6"~~W	100
~~--~~	RF-001	Offshore Benthic Station, Rig Fishing Station: Latitude: 32° 40.32' ~~19.2"~~N, Longitude: 117° 19.78' ~~46.8"~~W	107
~~--~~	RF-002	Offshore Benthic Station, Rig Fishing Station: Latitude: 32° 45.67' ~~40.2"~~N, Longitude: 117° 22.02' ~~1.19"~~W	96

Notes for Table E-1

1 All influent ~~wastestream~~ waste stream flows with the exception of the ~~storm water~~ stormwater flows that are diverted from Facility premises to the Facility headworks, downstream of the INF-001.

2 Discrete depths for bacteria samples include: 1m, 12m, and 18m.

3 Discrete depths for bacteria samples include: 1m, 25m, and 60m.

4 Discrete depths for bacteria samples include: 1m, 25m, 60m, and 80m.

5 Discrete depths for bacteria samples include: 1m, 25m, 60m, 80m, and 98m.

6 Discrete depths for bacteria samples include: 1m, 3m, and 9m.

3 Core Monitoring Requirements

3.1 Influent, Emergency Connection, and Return Stream Monitoring Requirements

Influent monitoring is the collection and analysis of samples or measurements of wastewater prior to the treatment processes.

3.1.1 Influent Monitoring Requirements

Influent monitoring in this section is necessary to address the following questions:

(1) Is the pretreatment program effectively controlling pollutant loads from industrial facilities?
(2) What is the frequency of unexpected industrial discharges (or pollutants loads) which can cause or contribute to an upset in the wastewater process?
(3) Is the influent inhibiting or disrupting the plant, its treatment processes or operations, or its sludge processes, use, or disposal?
(4) Is the Facility complying with permit conditions including, but not limited to, biochemical oxygen demand (5-day @ 20 degrees Celsius (°C)) (BOD_5) and total suspended solids (TSS) percent removal limitations?
(5) Is the nonindustrial source control program adequately minimizing the entrance

of nonindustrial toxic pollutants and pesticides into the sewage collection system?

The Discharger shall monitor the influent at Monitoring Locations INF-001 and EMG-001 (when flow is present) as described in Table E-2 below.

Table E-2 Influent and Emergency Connection Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	million gallons per day (MGD)	Recorder/ Totalizer	Continuous	--
BOD_5	milligram per liter (mg/L)	24-hr Composite	1/Day at INF-001 1/Week at EMG-001	As required under 40 CFR part 136.
TSS	mg/L	24-hr Composite	1/Day at INF-001 1/Week at EMG-001	As required under 40 CFR part 136.
Volatile Suspended Solids	mg/L	24-hr Composite	1/Day at INF-001 1/Week at EMG-001	As required under 40 CFR part 136.
Total Dissolved Solids (TDS)	mg/L	24-hr Composite	1/Day at INF-001 1/Week at EMG-001	As required under 40 CFR part 136.
Temperature	°C	Grab	1/Day at INF-001 1/Week at EMG-001	As required under 40 CFR part 136.
Floating Particulates	mg/L	24-hr Composite	1/Day at INF-001 1/Week at EMG-001	As required under 40 CFR part 136.
Grease and Oil	mg/L	Grab	1/Day at INF-001 1/Week at EMG-001	As required under 40 CFR part 136.
Settleable Solids	milliliter per liter (ml/L)	Grab	1/Day at INF-001 1/Week at EMG-001	As required under 40 CFR part 136.
Turbidity	nephelometric turbidity unit (NTU)	Grab	1/Day at INF-001 1/Week at EMG-001	As required under 40 CFR part 136.
pH	standard units	Grab	1/Day at INF-001 1/Week at EMG-001	As required under 40 CFR part 136.
Arsenic, Total Recoverable	microgram per liter (µg/L)	24-hr Composite	1/Week	As required under 40 CFR part 136.
Cadmium, Total Recoverable	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Chromium (VI), Total Recoverable[1]	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Copper, Total Recoverable	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Lead, Total Recoverable	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Mercury, Total Recoverable[2]	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Nickel, Total Recoverable	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Selenium, Total Recoverable	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Silver, Total Recoverable	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Zinc, Total Recoverable	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Cyanide, Total[3]	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Ammonia (as N)	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Phenolic Compounds (nonchlorinated)[4]	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Phenolic Compounds (chlorinated)[4]	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Endosulfan[4]	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Endrin	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Hexachlorocyclohexane (HCH)[4]	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Radioactivity	pico-curies per liter (pCi/L)	24-hr Composite	1/Month	As required under 40 CFR part 136.
Acrolein	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Antimony, Total Recoverable	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Bis (2-chloroethoxy) Methane	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Bis (2-chloroisopropyl) Ether	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Chlorobenzene	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Chromium (III), Total Recoverable[1]	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Di-n-butyl Phthalate	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Dichlorobenzenes[4]	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Diethyl Phthalate	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Dimethyl Phthalate	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
4,6-dinitro-2-methylphenol	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
2,4-dinitrophenol	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Ethylbenzene	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Fluoranthene	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Hexachlorocyclopentadiene	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Nitrobenzene	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Thallium, Total Recoverable	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Toluene	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Tributyltin	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
1,1,1-trichloroethane	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Acrylonitrile	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Aldrin	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Benzene	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Benzidine	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Beryllium, Total Recoverable	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Bis(2-chloroethyl) ether	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Bis(2-ethylhexyl) phthalate	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Carbon tetrachloride	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Chlordane[4]	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Chlorodibromomethane (dibromochloromethane)	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Chloroform	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Dichlorodiphenyltrichloroethane (DDT)[4]	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
1,4-Dichlorobenzene	µg/L	Grab	1/Month	As required under 40 CFR part 136.
3,3'-Dichlorobenzidine	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
1,2-Dichloroethane	µg/L	Grab	1/Month	As required under 40 CFR part 136.
1,1-Dichloroethylene	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Dichlorobromomethane	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Dichloromethane (Methylene Chloride)	µg/L	Grab	1/Month	As required under 40 CFR part 136.
1,3-Dichloropropene (1,3-Dichloropropylene)	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Dieldrin	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
2,4-Dinitrotoluene	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
1,2-Diphenylhydrazine	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Halomethanes[4]	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Heptachlor	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Heptachlor Epoxide	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Hexachlorobenzene	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Hexachlorobutadiene	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Hexachloroethane	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Isophorone	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
N-nitrosodimethylamine	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
N-nitrosodi-N-propylamine	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
N-nitrosodiphenylamine	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Polynuclear Aromatic Hydrocarbons (PAHs) [4]	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Polychlorinated Biphenyls (PCBs) [4]	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Tetrachlorodibenzodioxin (TCDD) Equivalents[4]	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
1,1,2,2-Tetrachoroethane	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Tetrachloroethylene (Tetrachloroethene)	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Toxaphene	µg/L	24-hr Composite	1/Week	As required under 40 CFR part 136.
Trichloroethylene (Trichloroethene)	µg/L	Grab	1/Month	As required under 40 CFR part 136.
1,1,2-Trichloroethane	µg/L	Grab	1/Month	As required under 40 CFR part 136.
2,4,6-Trichlorophenol	µg/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Vinyl Chloride	µg/L	Grab	1/Month	As required under 40 CFR part 136.
Remaining priority pollutants[5]	µg/L	24-hr Composite[6]	1/Month	As required under 40 CFR part 136.

Notes for Table E-2

1 The Discharger may, at their option, monitor for total chromium.

2 USEPA Method 1631E, with a quantitation level of 0.5 nanogram per liter (ng/L), shall be used to analyze total mercury.

3 If a Discharger can demonstrate to the satisfaction of the San Diego Water Board and USEPA that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent

limitations for cyanide may be met by (or performance goals may be evaluated with) the combined measurement of free cyanide, simple alkali metals 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 amended.

4 See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order~~/~~ and Permit.

5 Also including the 301(h) pesticides listed at 40 CFR section 125.58(p).

6 Sample type shall be "Grab" if the pollutant is classified as volatile organic compound.

3.1.2 Additional Influent Monitoring Requirements

Influent monitoring in this section is necessary to address the following question:

(1) What is the current percent removal of nutrients achieved by the Facility?

The Discharger shall monitor the influent at Monitoring Locations INF-001 and EMG-001 (when flow is present) as described in Table E-3 below.

Table E-3 Influent and Emergency Connection Monitoring for Nutrients and Other Modeling Parameters

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Ammonium	mg/L	24-hr Composite	1/Quarter[1]	As required under 40 CFR part 136.
Nitrogen, Total	mg/L	24-hr Composite	1/Quarter[1]	As required under 40 CFR part 136.
Nitrogen, Total Organic	mg/L	24-hr Composite	1/Quarter[1]	As required under 40 CFR part 136.
Nitrate (as N)	mg/L	24-hr Composite	1/Quarter[1]	As required under 40 CFR part 136.
Nitrite (as N)	mg/L	24-hr Composite	1/Quarter[1]	As required under 40 CFR part 136.
Phosphorus, Total (as P)	mg/L	24-hr Composite	1/Quarter[1]	As required under 40 CFR part 136.
Orthophosphate (as P)[2]	mg/L	24-hr Composite	1/Quarter[1]	As required under 40 CFR part 136.[8]

Notes for Table E-3

1 The Discharger shall calculate and report the MER, pounds per day (lb/day) and metric ton per year (mt/yr) of the constituent for each sample taken. The MER shall be calculated in accordance with section 7.13 of this Order~~/~~ and Permit.

2 The laboratory may use the anions analysis under EPA Method 300.0 using an ion chromatograph to obtain this result.

3.1.3 Return Stream Monitoring Requirements

The Discharger shall monitor return streams at Monitoring Location RS-001 as described in Table E-4 below:

Table E-4 Return Stream Monitoring

Parameter	Units[1]	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Recorder/Totalizer	Continuous	--
BOD_5	mg/L	24-hr Composite	1/Day	As required under 40 CFR part 136.
TSS	mg/L	24-hr Composite	1/Day	As required under 40 CFR part 136.

3.2 Effluent Monitoring Requirements

Effluent monitoring is the collection and analysis of samples or measurements of effluents, after all treatment processes, to determine and quantify contaminants and to demonstrate compliance with applicable effluent limitations, standards, and other requirements of this Order~~/~~ and Permit.

3.2.1 Effluent Monitoring Requirements

Effluent monitoring in this section is necessary to address the following questions:

(1) Does the effluent comply with permit effluent limitations, performance goals, and other requirements of this Order~~/Permit, thereby ensuring that water quality standards are achieved in the receiving water~~ and Permit?
(2) What is the mass of constituents that are discharged daily, monthly, or annually?
(3) Is the effluent concentration or mass changing over time?
(4) Are the Facilities being properly operated and maintained to ensure compliance with the conditions of this Order~~/~~ and Permit?

The Discharger shall monitor the effluent at Monitoring Location EFF-001 as described in Table E-5 below:

Table E-5 Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Recorder/Totalizer	Continuous[1]	--
TSS	mg/L	24-hr Composite	1/Day[2]	As required under 40 CFR part 136.
TSS	facility and system-wide percent removal (%)	Calculate[3]	1/Day	N/A
BOD_5	mg/L	24-hr Composite	1/Day	As required under 40 CFR part 136.
BOD_5	system-wide percent removal (%)	Calculate[3]	1/Day	N/A
Grease and Oil	mg/L	Grab	1/Day[4]	As required under 40 CFR part 136.
Settleable Solids	ml/L	Grab	1/Day	As required under 40 CFR part 136.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Turbidity	NTU	Grab	1/Day	As required under 40 CFR part 136.
pH	pH Units	Grab	1/Day	As required under 40 CFR part 136.
Volatile Suspended Solids	mg/L	24-hr Composite	1/Day	As required under 40 CFR part 136.
TDS	mg/L	24-hr Composite	1/Day	As required under 40 CFR part 136.
Temperature	°C	Grab	1/Day	As required under 40 CFR part 136.
Floating Particles	mg/L	24-hr Composite	1/Day	As required under 40 CFR part 136.
Total Coliform	colony forming units (CFU)/100 milliliters (ml)[14]	Grab	1/Week	As required under 40 CFR part 136.
Fecal Coliform	CFU/100 ml[14]	Grab	1/Week	As required under 40 CFR part 136.
Enterococci	CFU/100 ml[14]	Grab	1/Week	As required under 40 CFR part 136.
Arsenic, Total Recoverable	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Cadmium, Total Recoverable	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Chromium (VI), Total Recoverable[5]	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Copper, Total Recoverable	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Lead, Total Recoverable	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Mercury, Total Recoverable	µg/L	24-hr Composite	1/Week[2,4]	[6]
Nickel, Total Recoverable	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Selenium, Total Recoverable	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Silver, Total Recoverable	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Zinc, Total Recoverable	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Cyanide, Total	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.[7]
Total Chlorine Residual	µg/L	Continuous	Continuous[4,8]	As required under 40 CFR part 136.
Ammonia Nitrogen, Total (as N)	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Chronic Toxicity	"Pass" / "Fail"[9] ~~TUc~~[9]	24-hr Composite	1/Month	[10]
Phenolic Compounds (nonchlorinated)[11]	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Phenolic Compounds (chlorinated)[11]	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Endosulfan[11]	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Endrin	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
HCH (BHC)[11]	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Radioactivity	pCi/L	24-hr Composite	1/Month	As required under 40 CFR part 136.
Acrolein	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.
Antimony, Total Recoverable	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Bis (2-chloroethoxy) Methane	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Bis (2-chloroisopropyl) Ether	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Chlorobenzene	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.
Chromium (III), Total Recoverable[5]	µg/L	24-hr Composite	1/Month[4]	As required under 40 CFR part 136.
Di-n-butyl Phthalate	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Dichlorobenzenes[11]	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.
Diethyl Phthalate	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Dimethyl Phthalate	µg/L	24-hr Composite	1/Month[4]	As required under 40 CFR part 136.
4,6-dinitro-2-methylphenol	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
2,4-dinitrophenol	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Ethylbenzene	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.
Fluoranthene	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Hexachlorocyclopentadiene	µg/L	24-hr Composite	1/Month[4]	As required under 40 CFR part 136.
Nitrobenzene	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Thallium, Total Recoverable	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Toluene	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.
Tributyltin	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
1,1,1-trichloroethane	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Acrylonitrile	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.
Aldrin	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Benzene	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.
Benzidine	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Beryllium, Total Recoverable	µg/L	24-hr composite	1/Month[2,4]	As required under 40 CFR part 136.
Bis (2-chloroethyl) Ether	µg/L	24-hr composite	1/Month[2,4]	As required under 40 CFR part 136.
Bis (2-ethlyhexyl) Phthalate	µg/L	24-hr composite	1/Month[2,4]	As required under 40 CFR part 136.
Carbon Tetrachloride	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.
Chlordane[11]	µg/L	24-hr Composite	1/Week[4]	As required under 40 CFR part 136.
Chlorodibromomethane (dibromochloromethane)	µg/L	Grab	1/Month[4]	As required under 40 CFR part 136.
Chloroform	µg/L	Grab	1/Month[4]	As required under 40 CFR part 136.
DDT[11]	µg/L	24-hr Composite	1/Week[4]	As required under 40 CFR part 136.
1,4-dichlorobenzene	µg/L	Grab	1/Month[4]	As required under 40 CFR part 136.
3,3'-dichlorobenzidine	µg/L	24-hr Composite	1/Month[4]	As required under 40 CFR part 136.
1,2-dichloroethane	µg/L	Grab	1/Month[4]	As required under 40 CFR part 136.
1,1-dichloroethylene	µg/L	Grab	1/Month[4]	As required under 40 CFR part 136.
Dichlorobromomethane	µg/L	24-hr Composite	1/Month[4]	As required under 40 CFR part 136.
Dichloromethane (Methylene Chloride)	µg/L	Grab	1/Month[4]	As required under 40 CFR part 136.
1,3-dichloropropene (1,3-Dichloropropylene)	µg/L	Grab	1/Month[4]	As required under 40 CFR part 136.
Dieldrin	µg/L	24-hr Composite	1/Week[4]	As required under 40 CFR part 136.
2,4-dinitrotoluene	µg/L	24-hr Composite	1/Month[4]	As required under 40 CFR part 136.
1,2-diphenylhydrazine	µg/L	24-hr Composite	1/Month[4]	As required under 40 CFR part 136.
Halomethanes[11]	µg/L	Grab	1/Month[4]	As required under 40 CFR part 136.
Heptachlor	µg/L	24-hr Composite	1/Month[4]	As required under 40 CFR part 136.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Heptachlor Epoxide	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Hexachlorobenzene	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Hexachlorobutadiene	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Hexachloroethane	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Isophorone	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
N-nitrosodimethylamine	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
N-nitrosodi-N-propylamine	µg/L	24-hr Composite	1/Month[4]	As required under 40 CFR part 136.
N-nitrosodiphenylamine	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
PAHs[11]	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
PCBs[11]	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
TCDD equivalents[11]	µg/L	24-hr Composite	1/Month[4]	As required under 40 CFR part 136.
1,1,2,2-tetrachloroethane	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.
Tetrachloroethylene (Tetrachloroethene)	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.
Toxaphene	µg/L	24-hr Composite	1/Week[2,4]	As required under 40 CFR part 136.
Trichloroethylene (Trichloroethene)	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.
1,1,2-trichloroethane	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.
2,4,6-trichlorophenol	µg/L	24-hr Composite	1/Month[2,4]	As required under 40 CFR part 136.
Vinyl Chloride	µg/L	Grab	1/Month[2,4]	As required under 40 CFR part 136.
Remaining priority pollutants[12]	µg/L	24-hr Composite[13]	1/Month	As required under 40 CFR part 136.

Notes for Table E-5

1 Report the total daily effluent flow and the monthly average effluent flow.

2 The Discharger shall calculate and report the MER (mt/yr) of the constituent for each calendar year for TSS and for each month for parameters with 12-month mass emission benchmarks. The MER shall be calculated in accordance with section 7.13 of this Order~~/~~ and Permit.

3 The facility and system-wide percent removal shall be calculated in accordance with section 7.9 of this Order~~/~~ and Permit.

4 The Discharger shall calculate and report the MER (lb/day) of the constituent for each sample taken. The MER shall be calculated in accordance with section 7.13 of this Order~~/~~ and Permit.

5 The Discharger may, at their option, monitor for total chromium.

6 USEPA Method 1631E, with a quantitation level of 0.5 ng/L, shall be used to analyze total mercury.

7 If a Discharger can demonstrate to the satisfaction of the USEPA and the State Water Board 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 metals 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 amended.

8 For total chlorine residual, until a reliable method for continuous monitoring is available, the Discharger may meet this requirement with at least four grab samples per day, representative of the daily discharge, that is collected immediately prior to entering the PLOO and analyzed for total chlorine residual.

9 For compliance determination, chronic toxicity results shall be ~~expressed as toxic units chronic (TUc) = 100/No Observed Effect Concentration (NOEC, also referred to as the No Observed Effect Level or NOEL).~~reported as "Pass" or "Fail." For monitoring ~~informational reporting~~ purpose~~s~~ only, chronic toxicity results shall also include ~~be reported as "Pass" or "Fail", along with the~~ "Percent Effect." ~~as described in section 3.3 of this MRP.~~

10 As specified in section 7.16 of this Order~~/~~ and Permit and section 3.3 of this MRP.

11 See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order~~/~~ and Permit.

12 Also including the 301(h) pesticides listed at 40 CFR section 125.58(p).

13 Sample type shall be "Grab" if the pollutant is classified as volatile organic compound.

14 Results may be reported as either Most Probable Number (MPN)/100 mL if the laboratory method used provides results in MPN/100 mL or CFU/100 mL if the laboratory method used provides results in CFU/100 ml.

3.2.2 Additional Effluent Monitoring Requirements

The Discharger shall submit the additional effluent monitoring results required in this section and the additional influent monitoring results required in section 3.1.2 of this MRP annually no later than June 30 of the year following sampling as a standalone report to:

- State Water Board's CIWQS program website (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/),
- USEPA Region 9, Water Division, NPDES Permits Section, Electronically: R9NPDES@epa.gov and song.julie@epa.gov, and
- NMFS WCR Protected Resources Division's Long Beach Office Branch Chief: Electronically: dan.lawson@noaa.gov
  By mail: Dan Lawson, Long Beach Office Branch Chief, National Marine Fisheries Service West Coast Region, 501 West Ocean Boulevard, Suite 4200, Long Beach, California 90802.

3.2.2.1 Additional Effluent Monitoring for Nutrients

Effluent monitoring in this section is necessary to address the following questions:

(1) What are the concentrations and mass of nutrients discharged through the Point Loma Ocean Outfall (PLOO) and how do they vary temporally?
(2) What is the nutrient ratio in the effluent?

(3) What is the current percent removal of nutrients achieved by the Facility?

The Discharger shall monitor the effluent at Monitoring Location EFF-001 as described in Table E-6 below:

Table E-6 Additional Effluent Monitoring for Nutrients and Other Modeling Parameters

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Ammonium	mg/L	24-hr Composite	1/Month[1]	As required under 40 CFR part 136.
Nitrogen, Total	mg/L	24-hr Composite	1/Month[1,]	As required under 40 CFR part 136.
Nitrogen, Total Organic	mg/L	24-hr Composite	1/Month[1]	As required under 40 CFR part 136.
Nitrate (as N)	mg/L	24-hr Composite	1/Month[1,]	As required under 40 CFR part 136.
Nitrite (as N)	mg/L	24-hr Composite	1/Month[1,]	As required under 40 CFR part 136.
Phosphorus, Total (as P)	mg/L	24-hr Composite	1/Month[1,]	As required under 40 CFR part 136.
Orthophosphate (as P)[2]	mg/L	24-hr Composite	1/Month[1,]	As required under 40 CFR part 136.[18]
Carbon, Total Organic	mg/L	24-hr Composite	1/Month[1,]	As required under 40 CFR part 136.
Carbon, Dissolved Inorganic	mg/L	24-hr Composite	1/Month[1]	As required under 40 CFR part 136.
Iron, Total	mg/L	24-hr Composite	1/Month[1]	As required under 40 CFR part 136.
Iron, Dissolved	mg/L	24-hr Composite	1/Permit Term[3]	As required under 40 CFR part 136.
Alkalinity	mg/L $CaCO_3$	24-hr Composite	1/Month[1]	As required under 40 CFR part 136.
Salinity	parts per thousand (ppt)	24-hr Composite	1/Month	As required under 40 CFR part 136.

Notes for Table E-6

1 The Discharger shall calculate and report the MER (lb/day) of the constituent for each sample taken. The MER shall be calculated in accordance with section 7.13 of this Order~~/~~ and Permit.

2 The laboratory may use the anions analysis under EPA Method 300.0 using an ion chromatograph to obtain this result.

3 Dissolved iron shall be collected once during the permit term concurrently with a sample collected for total iron to determine the proportion of dissolved iron in total iron.

3.2.2.2 Additional Effluent Monitoring for Flame Retardants and Per- and Polyfluoroalkyl Substances (PFAS)

Effluent monitoring in this section is necessary to address the following questions:

(1) What are the concentrations of flame retardants and PFAS in the effluent?
(2) What is the mass of flame retardants and PFAS that are annually discharged to the receiving water?
(3) Are the concentrations of flame retardants and PFAS in the effluent changing over time?

The Discharger shall monitor the effluent at Monitoring Location EFF-001 as described in Table E-7 below:

Table E-7 Additional Effluent Monitoring for Flame Retardants and PFAS

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
BDE 47; 2,2',4,4'-tetrabromodiphenyl ether Chemical Abstracts Services Number: Not Available	Nanograms per Liter (ng/L)	24-hr Composite	1/year in wet weather and 1/year in dry weather[1,2]	[3,4]
BDE 99; 2,2',4,4',5-Pentabromodiphenyl ether Chemical Abstracts Services Number: Not Available	ng/L	24-hr Composite	1/year in wet weather and 1/year in dry weather[1,2]	[3,4]
BDE 100; 2,2',4,4',6-Pentabromodiphenyl ether Chemical Abstracts Services Number: Not Available	ng/L	24-hr Composite	1/year in wet weather and 1/year in dry weather[1,2]	[3,4]
BDE 183; 2,2',3,4,4',5',6-heptabromodiphenyl ether Chemical Abstracts Services Number: Not Available	ng/L	24-hr Composite	1/year in wet weather and 1/year in dry weather[1,2]	[3,4]
TDCPP; tris(1,3-dichloro-2-propyl)phosphate Chemical Abstracts Services Number: 13674-87-8	ng/L	24-hr Composite	1/year in wet weather and 1/year in dry weather[4,13,14]	[3]
TCEP; tris(2-chloroethyl)phosphate Chemical Abstracts Services Number: 115-96-8	ng/L	24-hr Composite	1/year in wet weather and 1/year in dry weather[1,2]	[3]
TCPP; tris(1-chloro-2-propyl)phosphate Chemical Abstracts Services Number: 13674-84-5	ng/L	24-hr Composite	1/year in wet weather and 1/year in dry weather[1,2]	[3]
PFAS	ng/L	24-hr Composite	1/year in wet weather and 1/year in dry weather[1,2]	[5]

Notes for Table E-7

1 The Discharger shall calculate and report the MER in both lb/day and mt/yr of the constituent for each sample taken. The MER shall be calculated in accordance with section 7.13 of this Order~~/~~ and Permit.

2 The Discharger shall monitor once during dry weather and once during wet weather annually from the effective date of this Order. Wet weather is defined as a storm event producing greater than 0.1 inches of precipitation within a 24-hour period based on the rain gauge at the San Diego International Airport. In the event that a wet weather sample is not able to be collected, analyzed, and reported by June 30, 2023, the Discharger shall submit a written request to the San Diego Water Board and USEPA to collect a sample in dry weather in lieu of collecting the sample in wet weather.

3 USEPA Methods 1694 Modified or 1698 Modified; ASTM Methods D7065 or D7485; or other methodologies utilized by the United States Geological Survey, State Water Board Division of Drinking Water, or other federal or State agencies.

4 USEPA Methods 1614A Modified using GC/MS SIM or other methodologies utilized by the United States Geological Survey, State Water Board Division of Drinking Water, or other federal or State agencies.

5 Department of Defense's Quality System Manual (DOD QSM (version 5.1 or higher)) or other ELAP-accredited methodologies for the analysis of PFAS in wastewaters shall be used to meet the required reporting limit of 50 ng/L. The ELAP accredited method for each group of compounds will specify which specific analytes shall be measured. All analytes that can be measured using the selected ELAP-accredited method shall be analyzed.

3.3 Whole Effluent Toxicity (WET) Testing Requirements

The WET refers to the overall aggregate toxic effect of an effluent measured directly by an aquatic toxicity test(s). The control of WET is one approach this Order~~/~~ and Permit uses to control the discharge of toxic pollutants. WET tests evaluate the 1) aggregate toxic effects of all chemicals in the effluent including additive, synergistic, or antagonistic toxicity effects; 2) the toxicity 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 effluent limitations for toxicity thereby ensuring that water quality standards are achieved in the receiving water?
(2) If the effluent does not comply with effluent limitations for toxicity, are unmeasured pollutants causing risk to aquatic life?
(3) If the effluent does not comply with effluent limitations for toxicity, are pollutants in combinations causing risk to aquatic life?

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

The chronic IWC is calculated by dividing 100 percent by the dilution ratio. The chronic toxicity IWC is 0.49 percent effluent.

3.3.2 Sample Volume and Holding Time

The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume of the effluent shall be collected to perform the required toxicity test. Sufficient sample volume shall also be collected during accelerated monitoring for subsequent Toxicity Identification Evaluation (TIE) studies, if necessary, at each sampling event. 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.

3.3.~~3~~2 Chronic Marine Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity greater than one part per thousand (ppt), the ~~The~~ Discharger shall conduct the following chronic toxicity tests on effluent samples, at the Discharge IWC (0.49 percent effluent), in accordance with species and test methods in *Short-Term*

Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine Estuarine Organisms (EPA/600/R-95/136, 1995). Artificial sea salts or hypersaline brine shall be used to increase sample salinity if needed. In no case shall these species be substituted with another test species unless written authorization from the San Diego Water Board and USEPA is received.

3.3.~~3~~2.1 A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01). If laboratory-held cultures of the topsmelt, *Atherinops affinis*, are not available for testing, then the Discharger shall conduct a static renewal toxicity test with the inland silverside, *Menidia beryllina* (Larval Survival and Growth Test Method 1006.01), found in the third edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA-821-R-02-014, 2002; Table IA, 40 CFR part 136). Additional species may be used by the Discharger if approved by the San Diego Water Board and USEPA.

3.3.~~3~~2.2 A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*/sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0 or Larval Development Test Method); or a static non-renewal toxicity test with the red abalone, *Haliotis rufescens* (Larval Shell Development Test Method).

3.3.~~3~~2.3 A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).

3.3.~~4~~3 **Species Sensitivity Screening**

Species sensitivity screening shall be conducted during this Order~~/~~ and Permit's first required sample collection, or within 24 months of the most recent screening, whichever is later.

For each suite during the species sensitivity screening, the Discharger shall collect a single effluent sample to initiate and concurrently conduct three toxicity tests using the fish, an invertebrate, and the alga species previously referenced. This sample shall also be analyzed for the parameters required on a monthly frequency for the discharge, during that given month. As allowed under the test method for the *Atherinops affinis*, a second and third sample shall be collected for use as test solution renewal water as the seven-day toxicity test progresses. If the result of all three species is "Pass," then the species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during this Order/Permit cycle. If only one species fails, then that species shall be used for routine monitoring during this Order/Permit cycle. Likewise, if two or more species result in "Fail," then the species that exhibits the highest "Percent Effect" at the discharge IWC during the suite of species sensitivity screening shall be used for routine monitoring during this Order/Permit cycle, until such time as a rescreening is required ~~The species exhibiting the highest TUc is considered the most sensitive species for that suite~~.

If the first suite of rescreening tests demonstrates that the same species is the most sensitive, then the rescreening does not need to include more than one suite of

tests. If a different species is the most sensitive or if there is ambiguity, then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

Species sensitivity rescreening is required every 24 months. The Discharger shall rescreen with the marine vertebrate species, a marine invertebrate species, and the alga species previously referenced, and continue to monitor with the most sensitive species.

The species used during routine monitoring shall be the most sensitive species from the most recent species sensitivity screening.

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 maximum daily effluent limitation (MDEL).

3.3.~~5~~4 **Quality Assurance (QA) and Additional Requirements**

The QA measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.

3.3.~~5~~4.1 The discharge is subject to determination ~~an MDEL for chronic toxicity based on toxic units chronic (TUc) using the No Observed Effect Concentration (NOEC; also referred to as the No Observed Effect Level or NOEL) approach described 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. TUc is calculated by the following equation:~~

~~TUc = 100 / NOEC~~

~~For information reporting purpose only, chronic toxicity results shall also be reported as~~ "Pass" or "Fail" from a chronic toxicity test~~", along with the "Percent Effect,"~~ 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-10-003, 2010), Appendix A, Figure A-1 and Table A-1 and Appendix B, Table B-1.[4] ~~The discharge in-stream waste concentration (IWC) for chronic toxicity under the TST statistical t-test approach is calculated by dividing 100 percent by the dilution ratio (1/204 = 0.0049 = 0.49 percent effluent).~~ The null hypothesis (Ho) for the TST statistical approach is: Mean discharge IWC response ≤0.75 × 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." This is a t-test (formally Student's t-test), a statistical analysis comparing two sets of replicate observations—in the case of WET, only two test concentrations (i.e., a control and

~~[4] Water Code section 13383 authorizes the San Diego Water Board to establish monitoring requirements for discharges to navigable waters from publicly-owned treatment works. TST results will not be used to determine regulatory compliance or to determine reasonable potential of the exceedance of water quality objectives for toxicity.~~

IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is "Pass" or "Fail"). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances. The relative "Percent Effect" at the discharge IWC is defined and reported as: ((Mean control response - Mean discharge IWC response) ÷ Mean control response) × 100.

~~For the NOEC statistical approach, the Discharger shall use the following specific dilution series: 0.1225%, 0.245%, 0.49% (IWC), 0.98%, and 1.96%.~~

3.3.~~5~~4.2 If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995), the test should be declared invalid, then the Discharger must resample and re-test within 14 days of test termination.

3.3.~~5~~4.3 Dilution water and control water, including brine controls, shall be 1-mircrometer-filtered uncontaminated natural seawater, hypersaline brine prepared using uncontaminated natural seawater, or laboratory water prepared and used as specified in the test methods manual. Dilution water and control water, including brine controls, shall be uncontaminated natural water, as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.

3.3.~~5~~4.4 Reference toxicant testing shall be conducted in accordance with *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.). All reference toxicant test results should be reviewed and reported using the effects concentration at 25 percent (EC25).

3.3.~~5~~4.5 The Discharger 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 under this section of this MRP and the rationale is explained in the Fact Sheet (Attachment F).

3.3.~~6~~5 **Reporting**

The self-monitoring Report (SMR) shall include a full laboratory report for each toxicity test. This report shall be prepared using the format and content of the test methods manual chapter called *Report Preparation*[5] and shall include:

[5] Section 10 of *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to the West Coast Marine and Estuarine Organisms*, August 1995, EPA/600/R-95-136, https://cfpub.epa.gov/si/si_public_file_download.cfm?p_download_id=524691

3.3.~~6~~5.1 The valid toxicity test results for the ~~NOEC approach, reported in TUc and, for informational reporting purposes only,~~ TST statistical approach, reported as "Pass" or "Fail" and "Percent Effect" at the chronic toxicity IWC for the discharge. All toxicity test results (whether identified as valid or otherwise) conducted during the calendar month shall be reported on the SMR due date specified in Table E-12.

3.3.~~6~~5.2 Summary water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).

3.3.~~6~~5.3 The ~~statistical methods used to calculate the endpoints. For informational reporting purposes only, the~~ statistical analysis used in *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, and Appendix B, Table B-1.

3.3.~~6~~5.4 Statistical program output results, including graphical plots, for each toxicity test.

3.3.~~6~~5.5 Graphical plots clearly showing the laboratory's performance for the reference toxicant for the previous 20 tests and the laboratory's performance for the control mean, control standard deviation, and control coefficient of variation for the previous 12-month period.

3.3.~~6~~5.6 Any QA/QC documentation or any additional chronic toxicity-related information, upon written request from the San Diego Water Board and USEPA.

3.3.~~7~~6 **Preparation of an Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan**

Within 90 days of the effective date of this Order~~/~~ and Permit, the Discharger shall prepare and submit a copy of the Discharger's Initial Investigation TRE Work Plan to the San Diego Water Board and USEPA for approval. If the San Diego Water Board and USEPA do not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use USEPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/ 833/B-99/002, 1999) , or most current version, as guidance. The TRE Work Plan shall describe the steps that the Discharger intends to follow if toxicity is measured above a chronic toxicity permit limit, and shall include, at a minimum:

- A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency in removing toxic substances. This shall include a description of an accelerated chronic toxicity testing program;
- A description of the Discharger's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the Facilities;
- A description of the evaluation process to be used to determine if implementation of a more detailed Toxicity Reduction Evaluation and Toxicity Identification Evaluation (TRE/TIE) is necessary; and

- If a TIE is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).

3.3.~~8~~7 **Accelerated Monitoring Schedule for Maximum Daily Single Result**: "Fail"

When a Maximum Daily limitation is exceeded during regular toxicity monitoring and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required below.

Once the Discharger becomes aware of this result, the Discharger shall notify the San Diego Water Board and USEPA and implement an accelerated monitoring schedule within five calendar days of the receipt of the result. However, if the sample is contracted out to a commercial laboratory, the Discharger shall ensure that the San Diego Water Board and USEPA are notified, and the first of six accelerated monitoring tests is initiated within seven calendar days of the Discharger becoming aware of the result. The accelerated monitoring schedule shall consist of six toxicity tests (including the discharge IWC), conducted at approximately two-week intervals, over a twelve-week period; in preparation for the TRE process and associated reporting, these results shall also be reported using the EC25. If each of the accelerated toxicity tests results in "Pass," ~~are less than the effluent limitation,~~ the Discharger shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results in "Fail," ~~are greater than the effluent limitation,~~ the Discharger shall immediately implement the TRE Process conditions set forth below. During accelerated monitoring schedules, only TST results ("Pass" or "Fail") for chronic toxicity tests ~~TUc~~ shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL ~~and TST results ("Pass" or "Fail" and percent effect) shall be reported for reporting purpose only~~.

3.3.~~9~~8 **TRE Process**

During the TRE Process, minimum effluent monitoring shall resume and TST results ("Pass" or "Fail") for chronic toxicity shall be reported as effluent compliance monitoring results for chronic toxicity MDEL, ~~and TST results ("Pass" or "Fail" and percent effect) shall be reported for informational reporting purposes only.~~

3.3.~~9~~8.1 Preparation and Implementation of Detailed TRE Work Plan. The Discharger shall immediately initiate a TRE using, according to the type of treatment facility, USEPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833/B-99/002, 1999) and, within 15 days of receiving validated results, submit to the San Diego Water Board and USEPA a Detailed TRE Work Plan, which shall follow the Initial Investigation TRE Work Plan revised as appropriate for this toxicity event. The TRE Work Plan shall include the following information, and comply with additional conditions set by the San Diego Water Board and USEPA:

- Further actions by the Discharger to investigate, identify, and correct the causes of toxicity;
- Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and

- A schedule for these actions, progress reports, and the final report.

3.3.~~9~~8.2 TIE Implementation. The Discharger may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test method and, as guidance, USEPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005, 1991); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.

3.3.~~9~~8.3 Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and ~~storm water~~ stormwater control programs. Whenever possible, TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.

3.3.~~9~~8.4 The Discharger shall continue to conduct the minimum effluent monitoring while the TRE and/or TIE process is taking place. Additional accelerated monitoring and TRE Work Plans are not required once a TRE has begun.

3.3.~~9~~8.5 The San Diego Water Board and USEPA recognize that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be successful in all cases. Upon approval from the San Diego Water Board and USEPA, the TRE may be ended at any stage if routine monitoring finds there is no longer toxicity.

3.3.~~9~~8.6 TRE/TIE results. The San Diego Water Board and USEPA shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. Prior to the completion of the final TRE/TIE report, the Discharger shall provide status updates in the monthly SMRs, indicating which TRE/TIE steps are underway, which steps have been completed, and the estimated time to completion of the final TRE/TIE report.

3.3.~~9~~8.7 TRE/TIE Final Report. The final TRE/TIE report shall be submitted to the San Diego Water Board and USEPA within 30 days of report completion. At minimum, the TRE/TIE Final Report should include the following:

- A description of the probable source and cause of the toxicity effluent limitation exceedances (if known);

- A summary of the findings including a tabulation, evaluation, and interpretation of the data generated;
- A list of corrective actions taken or planned by the Discharger to reduce toxicity so that the Discharger can achieve consistent compliance with the toxicity effluent limitation of this Order~~/~~ and Permit and prevent recurrence of exceedances of the limitation; and
- If the exceedances of the toxicity effluent limitation have not been corrected, the anticipated time it is expected to continue and a time schedule for the steps planned to reduce, eliminate, and prevent recurrence of the exceedances.

3.3.~~9~~8.8 The San Diego Water Board and USEPA may consider the results of any TRE/TIE studies in an enforcement action.

~~**3.4 Land Discharge Monitoring Requirements – Not Applicable**~~

~~**3.5 Recycling Monitoring Requirements – Not Applicable**~~

4 Receiving Water Monitoring Requirements

The receiving water monitoring requirements set forth below are designed to measure the effects of the Facility discharge on the receiving ocean waters, including effects on coastal water quality, seafloor sediments, and marine life. The overall receiving water monitoring program is intended to answer the following questions:

(1) Does the receiving water meet water quality standards?
(2) Are the receiving water conditions getting better or worse over time?
(3) What is the relative contribution of the Facility's discharge to pollution in the receiving water?
(4) What are the effects of the discharge on the receiving waters?

Receiving water in the vicinity of the Point Loma Ocean Outfall (PLOO) shall be conducted as specified below. This program is intended to document conditions, within the zone of initial dilution (ZID), within the waste field where initial dilution is completed, at reference stations, and at other areas beyond the ZID where discharge impacts might be reasonably expected. Station location, sampling, sample preservation, and analyses, when not specified, shall be by methods approved by the San Diego Water Board and USEPA. The monitoring program may be modified by the San Diego Water Board and USEPA at any time. The Discharger may also submit a list of proposed changes with supporting rationale to these monitoring requirements that it considers to be appropriate to the San Diego Water Board and USEPA for approval.

All receiving water monitoring shall be conducted in accordance with restrictions and requirements established by the State of California Department of Fish and Wildlife and this Order~~/~~ and Permit. During monitoring events, sample stations shall be located using a land-based microwave positioning system or a satellite positioning system such as global positioning system (GPS).

In the event that the Discharger is unable to obtain a sample from a monitoring station(s) due to safety, legal, or other reasons, collection of samples at such station(s) can be omitted. If safe, the visual observations listed in the footnotes to Tables E-8 and E-9

below shall still be recorded and reported in the monthly SMR to the San Diego Water Board and USEPA for these stations at the time of the sample collection. If practicable, an effort should be made to return to the sampling station that was omitted and collect the sample during safer conditions within the same reporting period. In the event that a monitoring location is omitted, the Discharger shall submit a statement to the San Diego Water Board and USEPA containing, at a minimum, the following information:

- The monitoring station(s) that was omitted;
- The date the monitoring station was omitted; and
- A description of the circumstances for omitting the collection of data at the monitoring station.

4.1 Shoreline Water Quality Monitoring Requirements

As ocean surface waves come closer to shore they break, forming the foamy, bubbly surface called surf. The region of breaking waves defines the shoreline.

Monitoring of the shoreline is intended to answer the following questions:

(1) Does the effluent cause or contribute to an exceedance of the water quality standards in the receiving water?
(2) Does the effluent reach water contact zones or commercial shellfish beds?
(3) Are densities of bacteria in water contact areas below levels protective of public health?

All shoreline stations listed in Table E-1 (D-004, D-005, D-007, D-008B, D-009 through D-012) shall be monitored as follows:

Table E-8. Shoreline Water Quality Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Visual Observations	--	Visual	[1]
Temperature	°C	Grab	1/week
Total Coliform	CFU/100 ml[2]	Grab	1/week[3]
Fecal Coliform	CFU/100 ml[2]	Grab	1/week[3,4]
Enterococci	CFU/100 ml[2]	Grab	1/week[3]

Notes for Table E-8

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, discoloration, oil and grease, turbidity, trash, and odor shall be recorded.
2. The Discharger may report in most probable number (MPN) in lieu of CFU~~; however, the receiving water limitations for these parameters will be the same regardless of the reporting units~~.
3. Sampling shall be spaced equally throughout the month to the extent possible.
4. ~~The~~ For each shoreline station, the Discharger shall ensure a minimum of five samples are collected and analyzed within a rolling 30-day period, which may require more than one sample per week depending on the sampling schedule.

4.2 Offshore Water Quality and Kelp Monitoring Requirements

Offshore water quality and kelp monitoring is necessary to answer the following questions:

(1) Is natural light significantly reduced at any point outside the ZID as a result of the discharge?
(2) Does the discharge cause a discoloration of the ocean surface?
(3) Does the discharge of oxygen demanding waste cause the dissolved oxygen concentration to be depressed at any time more than 10 percent from that which occurs naturally outside the ZID?
(4) Does the discharge of waste cause the pH to change at any time more than 0.2 units from that which occurs naturally outside the ZID?
(5) Does the discharge of waste cause the salinity to become elevated in the receiving water?
(6) Is the wastewater plume encroaching upon receiving water areas used for swimming, surfing, diving, and shellfish harvesting?
(7) What is the fate of the discharge plume?
(8) Are fecal indicator bacteria present outside the ZID? If so, do the bacteria come from a human source(s)?

4.2.1 Offshore stations (F-001 through F-036) and Kelp Stations (A-001, A-006, A-007, and C-004 through C-008) listed in Table E-1 shall be monitored as described in Table E-9 below:

Table E-9. Offshore Water Quality and Kelp Monitoring Requirements

Parameter	Units	Sample Type	Offshore Station Sampling Frequency[1]	Kelp Station Sampling Frequency[1]
Visual Observations	--	Visual[2]	--	--
~~Total Coliform~~	~~CFU/100 ml~~	~~Grab[3]~~	~~--~~	~~1/Week~~
Fecal Coliform	CFU/100 ml	Grab[3]	--	1/Week[6]
Enterococci	CFU/100 ml	Grab[3]	1/Quarter	1/Week
Temperature and Depth	˚C, meters	Profile[4]	1/Quarter	1/Week
Dissolved Oxygen	mg/L	Profile[4]	1/Quarter	1/Week
Light Transmittance	percent	Profile[4]	1/Quarter	1/Week
pH	standard units	Profile[4]	1/Quarter	1/Week
Salinity	ppt	Profile[4]	1/Quarter	1/Week
Chlorophyll a	µg/L	Profile[4]	1/Quarter	1/Week
Colored Dissolved Organic Matter (CDOM)	ppb	Profile[4]	1/Quarter	1/Quarter
~~HF183~~	~~Number of copies (molecules)/100 ml~~	~~Grab[5]~~	~~1/Quarter[6]~~	~~1/Quarter[6]~~
Spectrophotometric pH ~~7~~5	standard units	Grab	1/Quarter	~~1/Quarter~~
Alkalinity, Total ~~7~~5	mg/L $CaCO_3$	Grab	1/Quarter	~~1/Quarter~~

Notes for Table E-9

1. Quarterly receiving water monitoring results shall be submitted within the monthly SMR for the month in which the monitoring was conducted.
2. 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, trash, and odor shall be recorded. The proximity of recreational and commercial vessels to monitoring locations shall also be recorded.
   These observations shall be taken whenever a sample is collected.
3. Shall be monitored at all applicable discrete depths specified for bacterial monitoring in Table E-1 of this MRP.
4. Temperature, depth, dissolved oxygen, light transmittance, pH, salinity, chlorophyll a, and CDOM profile data shall be measured throughout the entire water column using a conductivity-temperature-depth (CTD) profiler during the quarterly and weekly sampling events. Depth profile measurements shall be obtained using multiple sensors to measure parameters through the entire water column (from the surface to as close to the bottom as practicable).
~~5. If required, samples shall be collected at the surface and mid-depth at offshore stations and analyzed in accordance with section 4.2.2 of this MRP.~~
~~6. HF183 monitoring is required only if the overall compliance rate with the receiving water limitations for bacterial characteristics at sections 5.1.1 and 5.1.2 of this Order/Permit is below 90 percent within a rolling one-year period or a single monitoring location exceeds the bacteria receiving water limitations more than 50 percent of the time within a rolling one-year period at the offshore stations near the PLOO, excluding offshore station F-030.~~
~~7~~5. Spectrophotometric analysis, in accordance with section 4.2.2 of this MRP, shall be used to ~~calibrate the pH results and~~ validate pH measurements on any unattended real-time oceanographic mooring systems (RTOMS). ~~Samples for pH and total alkalinity shall be used to calculate aragonite saturation state. Monitoring alkalinity and spectrophotometric pH shall be conducted as described in section 4.2.3 of this MRP.~~
6. For each kelp station, the Discharger shall ensure a minimum of five samples are collected and analyzed within a rolling 30-day period, which may require more than one sample per week depending on the sampling schedule.

~~4.2.2 **Human Associated HF183 Genetic Marker (HF183) Monitoring Requirements.**~~

~~The HF183 monitoring requirement specified below is required if the overall compliance rate with the receiving water limitations for bacterial characteristics at sections 5.1.1 and 5.1.2 of this Order/Permit is below 90 percent within a rolling one-year period or a single monitoring location exceeds the bacteria receiving water limitations more than 50 percent of the time within a rolling one-year period for offshore and within a rolling quarterly period for kelp monitoring locations, and the source of the exceedances is unknown. If the source of where the fecal contamination causing the bacteria receiving water limitation exceedances originated is known (e.g., the discharge through the PLOO or some other known source), the Discharger shall submit a written report to the San Diego Water Board and USEPA describing the specific cause and source of the exceedances and if human fecal waste is the cause, a strategy for prioritizing the bacterial receiving water sites for remediation. The written report shall be submitted to the San Diego Water Board and USEPA within 90 days of becoming aware of the cause and source of the exceedances. If the San Diego Water Board and USEPA concur with the conclusions of the report, HF183 monitoring is not required. If HF183 monitoring is required, the San Diego Water Board and USEPA will~~

~~direct the Discharger in writing to implement the HF183 monitoring and development of a strategy for remediating the bacterial receiving water sites based on measured human fecal waste levels. The San Diego Water Board and USEPA will provide the Discharger with a written explanation regarding the need for the information and the evidence that supports requiring the Discharger to provide the information. HF183 monitoring may be terminated once both the source of the bacteria exceedances is determined and the basis for the remediation strategy is determined to the satisfaction of the San Diego Water Board and USEPA.~~

~~4.2.2.1 **Sample Collection.** If required, the Discharger shall collect samples for HF183 concurrently with samples collected for fecal coliform at the offshore and kelp stations experiencing the bacteria receiving water limitation exceedances and other monitoring locations necessary to determine the source(s) of the elevated bacteria levels. Potential monitoring locations that may require concurrent HF183 monitoring include, but is not limited to, monitoring locations F-001 through F-036, A-001, A-006, A-007, and C-004 through C-008 at the discrete depths specified for bacteria monitoring listed in Table E-1 of this MRP. Samples shall be collected in accordance with EPA method 1696, or an alternative method proposed by the Discharger with comparable accuracy, unless the alternative method is not accepted by the San Diego Water Board and USEPA. Samples shall be filtered through a membrane filter as soon as possible, but sample filtration shall be initiated no later than 6 hours after sample collection. Following filtration, the membrane filter shall be stored at -80 ºC for later analysis.~~

~~4.2.2.2 **Sample Analysis.** If a result for fecal coliform exceeds the single sample maximum receiving water limitation of 400 CFU per 100 ml (section 5.1.1.1.1.2 of this Order/Permit), the Discharger shall analyze the HF183 sample that was collected concurrently with the fecal coliform sample that exceeded the receiving water limitation. Samples shall be analyzed in accordance with EPA method 1696, the droplet digital polymerase chain reaction (ddPCR) method developed by the Southern California Coastal Waters Research Project (SCCWRP), or an alternative method proposed by the Discharger with comparable accuracy, unless the alternative method is not accepted by the San Diego Water Board and USEPA. If the Discharger propose to use the ddPCR method, the Discharger shall submit a QA/QC procedure for acceptance by the San Diego Water Board and USEPA. The Discharger shall follow all quality control and quality assurance procedures outlined in the method or as approved by the San Diego Water Board and USEPA. If the results for fecal coliform are below receiving water limitations, the Discharger may discard the HF183 sample.~~

~~4.2.2.3 **Sample Results (if applicable).** Sample results for HF183 shall be submitted with the monthly SMR to the State Water Board's CIWQS as an attachment in PDF format.~~

~~4.2.3~~4.2.2 **Total Alkalinity and Spectrophotometric pH Monitoring Requirements.** Results for pH measured by spectrophotometric analysis shall be used to ~~calibrate the pH results and~~ validate pH measurements on any unattended real-time oceanographic

mooring systems (RTOMS).~~measured by the CTD profiler~~. Samples for pH and total alkalinity shall be used to calculate aragonite saturation state.

4.2.~~3~~2.1 **Monitoring Locations and Sample Collection.** Monitoring for spectrophotometric pH and total alkalinity shall be consistent with the methods described in *An evaluation of potentiometric pH sensors in coastal monitoring applications* (McLaughlin et al. 2017). Grab samples for spectrophotometric pH and alkalinity shall be collected quarterly at depths corresponding to pH and/or oxygen sensors deployed on the Real-Time Oceanographic Mooring located adjacent to the Point Loma Ocean Outfall terminus. These depths shall include, at a minimum, the surface, mid-water, and near bottom depths. The Discharger shall collect at least one field duplicate sample at the bottom during each sampling event. ~~the surface, thermocline, and bottom at two offshore stations (one near discharge point and one background station). A duplicate sample at the bottom of the offshore station near the discharge point shall be collected during each sampling event. For both stations, g~~ Grab samples shall be collected by Niskin bottles ~~attached to the same device as the CTD used to collect profile samples~~. Water from the Niskin bottles shall be transferred to 500 ml Pyrex bottles and overfilled by a minimum of 250 ml leaving approximately 1 percent headspace. All bottles shall be fixed with approximately 120 µL of saturated mercury (II) chloride solution and stored at room temperature until analysis.

4.2.~~3~~2.2 **Sample Analysis.** Samples for pH shall be measured using the spectrophotometric technique described in *An automated system for spectrophotometric seawater pH measurements* (Carter et al. 2013), estimating pH at 25 degrees Celsius on the total hydrogen ion scale using m-cresol purple dye indicator and pH calibration equations based on *Purification and characterization of meta-cresol purple for spectrophotometric seawater pH measurements* (Liu et al. 2011). Grab samples for total alkalinity shall be measured by a two-stage, potentiometric, and open-celled titration using coulometrically analyzed hydrochloric acid as described in *Reference material for oceanic CO_2 analysis: A method for the certification of total alkalinity* (Dickson et al. 2003). The Discharger shall use the spectrophotometric pH and total alkalinity results to ~~calibrate and~~ adjust the pH samples collected quarterly ~~by the CTD~~on the RTOMS and to calculate the aragonite saturation state. ~~Calibration of pH and calculation of aragonite saturation state is only required for the kelp/nearshore monitoring locations once per quarter.~~ Results for alkalinity, the calibrated pH, and aragonite saturation state shall be reported in the interim and biennial receiving water monitoring reports described in section 4.6 of this MRP. Due to laboratory delays, the results for the last quarter in the monitoring period may be excluded from the interim and/or biennial receiving water monitoring reports if the data are not available. If the results are not included in the interim and/or biennial receiving water monitoring report, the Discharger shall submit the results by email to SanDiego@waterboards.ca.gov and R9NPDES@epa.gov.

4.3 Benthic Monitoring Requirements

Seafloor sediments integrate constituents that are discharged to the ocean. Most particles that come from the PLOO 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.

Benthic organisms are strongly affected by sediment contaminant exposure because these organisms often live in continual direct contact with sediment/pore water, and many species ingest significant quantities of sediment as a source of nutrition. Because the benthos is dependent on their surroundings, they serve as a biological indicator that reflects the overall conditions of the aquatic environment.

The assessment of sediment quality with respect to sediment chemistry, sediment toxicity and benthic community condition is necessary to answer the following questions:

(1) Is the dissolved sulfide concentration of waters in sediments significantly increased above that present under natural conditions?
(2) Is the concentration of substances set forth in Table 3 of the Ocean Plan for protection of marine aquatic life in marine sediments at levels which would degrade the benthic community?
(3) Is the concentration of organic pollutants in marine sediments at levels that would degrade the benthic community?
(4) Are benthic communities degraded as a result of the discharge?
(5) Is the sediment quality changing over time?

The assessment of sediment quality to evaluate potential effects of the PLOO discharge and compliance with narrative water quality standards specified in the Ocean Plan consist of the measurement and integration of three lines of evidence: 1) physical and chemical properties of seafloor sediments, 2) seafloor sediment toxicity to assess bioavailability and toxicity of sediment contaminants, and 3) ecological status of the biological communities (benthos) that live in or on the seafloor sediments.

4.3.1 Sediment Assessment for Physical and Chemical Properties

4.3.1.1 **Sediment Sampling Stations and Monitoring Frequency.** The core sediment monitoring program is designed to assess spatial and temporal trends at 22 offshore benthic stations listed in Table E-1, including 12 primary core stations located along the outfall discharge depth contour and 10 secondary core stations located at other depths. At the discretion of the San Diego Water Board and USEPA, the requirement for sampling the secondary stations may be relaxed to allow Discharger participation in Southern California Bight Regional Monitoring efforts, or to reallocate resources to accommodate approved Strategic Process Studies. Sediment samples shall be collected twice per year during the winter (e.g., January) and summer (e.g., July) at each of the above referenced benthic stations in order to assess benthic habitat condition in terms of physical and chemical composition (e.g., grain-size distribution, sediment chemistry).

4.3.1.2 **Sediment Sample Collection Methods.** Sediment samples shall be taken using a 0.1-square meter modified Van Veen grab sampler. Samples for grain-size and chemical analyses shall be taken from the top two centimeters of the surface sediment. Sediment samples for physical and chemical properties shall be taken concurrently with and adjacent to (as much as possible) the sediment samples for toxicity and benthic community condition. Bulk sediment chemical analysis shall include at a minimum the set of constituents listed in Table E-10.

4.3.1.3 **Sediment Chemistry.** Sediment chemistry is the measurement of the concentration of chemicals of concern in sediments. The chemistry line of evidence is used to assess the potential overall exposure risk to benthic organisms from pollutants in surficial sediments. Chemical analysis of sediment shall be conducted using USEPA-approved methods, methods developed by the National Oceanic and Atmospheric Administration's National Status and Trends for Marine Environmental Quality, or methods developed in conjunction with the Southern California Bight Regional Monitoring Program. For chemical analysis of sediment, samples shall be reported on a dry weight basis.

Sediment monitoring for physical and chemical properties shall be conducted at the offshore benthic primary core stations (B-009, B-012, E-002, E-005, E-008, E-011, E-014, E-017, E-20, E-023, E-025, and E-026) and offshore benthic secondary core stations (B-008, B-010, B-011, E-001, E-003, E-007, E-009, E-015, E-019 ,and E-021) listed in Table E-1 for the parameters identified in Table E-10:

Table E-10. Parameter List for Sediment Monitoring Requirements

Parameter	Units	Type of Sample	Minimum Frequency
Sediment Grain Size	micrometer (µm)	Grab	2/Year
Total Organic Carbon	Percent	Grab	2/Year
Total Nitrogen	Percent	Grab	2/Year
Acid Volatile Sulfides	milligram/kilogram (mg/kg)	Grab	2/Year
Dissolved Sulfide	~~mg/kg~~ mg/L	Grab[1]	2/Year
Aluminum	mg/kg	Grab	2/Year
Antimony	mg/kg	Grab	2/Year
Arsenic	mg/kg	Grab	2/Year
Cadmium	mg/kg	Grab	2/Year
Total Chromium	mg/kg	Grab	2/Year
Copper	mg/kg	Grab	2/Year
Iron	mg/kg	Grab	2/Year
Lead	mg/kg	Grab	2/Year
Manganese	mg/kg	Grab	2/Year
Mercury	mg/kg	Grab	2/Year
Nickel	mg/kg	Grab	2/Year
Selenium	mg/kg	Grab	2/Year
Silver	mg/kg	Grab	2/Year
Tin	mg/kg	Grab	2/Year

Parameter	Units	Type of Sample	Minimum Frequency
Zinc	mg/kg	Grab	2/Year
PCBs	nanogram/kilogram (ng/kg)	Grab	2/Year
2,4-DDD	ng/kg	Grab	2/Year
4,4-DDD	ng/kg	Grab	2/Year
2,4-DDE	ng/kg	Grab	2/Year
4,4-DDE	ng/kg	Grab	2/Year
2,4-DDT	ng/kg	Grab	2/Year
4,4-DDT	ng/kg	Grab	2/Year
Aldrin	ng/kg	Grab	2/Year
Alpha-Chlordane	ng/kg	Grab	2/Year
Dieldrin	ng/kg	Grab	2/Year
Endosulfan	ng/kg	Grab	2/Year
Endrin	ng/kg	Grab	2/Year
Gamma-BHC	ng/kg	Grab	2/Year
Heptachlor	ng/kg	Grab	2/Year
Heptachlor Epoxide	ng/kg	Grab	2/Year
Hexachlorobenzene	ng/kg	Grab	2/Year
Mirex	ng/kg	Grab	2/Year
Trans-Nonachlor	ng/kg	Grab	2/Year
Acenaphthene	microgram/ kilogram (µg/kg)	Grab	2/Year
Acenaphthylene	µg/kg	Grab	2/Year
Anthracene	µg/kg	Grab	2/Year
Benzo(a)anthracene	µg/kg	Grab	2/Year
Benzo(b)fluoranthene	µg/kg	Grab	2/Year
Benzo(k)fluoranthene	µg/kg	Grab	2/Year
Benzo(ghi)perylene	µg/kg	Grab	2/Year
Benzo(a)pyrene	µg/kg	Grab	2/Year
Benzo(e)pyrene	µg/kg	Grab	2/Year
Biphenyl	µg/kg	Grab	2/Year
Chrysene	µg/kg	Grab	2/Year
Dibenzo(ah)anthracene	µg/kg	Grab	2/Year
Fluoranthene	µg/kg	Grab	2/Year
Fluorene	µg/kg	Grab	2/Year
Indeno(123cd)pyrene	µg/kg	Grab	2/Year
Naphthalene	µg/kg	Grab	2/Year
1-Methylnaphthalene	µg/kg	Grab	2/Year
2-Methylnaphthalene	µg/kg	Grab	2/Year
2,6-Dimethylnaphthalene	µg/kg	Grab	2/Year
2,3,5-Trimethylnaphthale	µg/kg	Grab	2/Year
Perylene	µg/kg	Grab	2/Year
Phenanthrene	µg/kg	Grab	2/Year

Parameter	Units	Type of Sample	Minimum Frequency
1-Methylphenanthene	µg/kg	Grab	2/Year
Pyrene	µg/kg	Grab	2/Year

Notes for Table E-10

1. The concentration of dissolved sulfide shall be measured in the sediment porewater from the sediment grab sample.

4.3.2 **Sediment Toxicity**

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. The Discharger shall continue to implement the *Sediment Toxicity Monitoring Plan for the South Bay Ocean Outfall and Point Loma Ocean Outfall Monitoring Regions, San Diego, California, Submitted by City of San Diego Public Utilities Department Environmental Monitoring & Technical Services Division*, revised in April 2024 and approved by the San Diego Water Board on January 29, 2025~~August 28, 2015~~ (Sediment Toxicity Plan) in accordance with the schedule contained in the Sediment Toxicity Plan unless otherwise directed in writing by the San Diego Water Board and USEPA. Before beginning sample collection activities, the Discharger shall comply with any conditions set by the San Diego Water Board and USEPA.

4.3.3 **Benthic Community Condition**

4.3.3.1 **Benthic Community Sampling Stations and Frequency.** Sediment samples for assessment of benthic community structure shall be collected twice per year during winter (e.g., January) and summer (e.g., July) at each of the 22 offshore benthic stations listed in Table E-1. One sample per station shall be collected for analysis of benthic community structure.

4.3.3.2 **Benthic Community Sample Collection Methods.** Benthic community samples shall be collected using the guidance specified in the most recent field manual developed for the Southern California Bight Regional Monitoring Program (current field operations manual is available at: https://sccwrp.org. The benthic samples shall be collected using a 0.1-square meter modified Van Veen grab sampler. These grab samples shall be taken concurrently with and adjacent to (as much as possible) samples collected for sediment physical and chemical properties, and toxicity. The samples shall be sieved using a 1.0-millimeter mesh screen. The benthic organisms retained on the sieve shall be fixed in 10 percent buffered formalin and transferred to at least 70 percent ethanol within two to seven days of storage. All benthic invertebrates in the screened sample shall be identified to the lowest possible taxon and enumerated (counted).

4.3.3.3 **Benthic Community Analysis.** Analysis of benthic community structure shall include determination of the number of species, number of individuals per species, and total numerical abundance present. The following parameters or metrics shall be calculated for each 0.1-square meter grab sample and summarized by station, as appropriate:

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

4.3.3.4 **Benthic Random Sampling.** This MRP and the MRPs for the South Bay Ocean Outfall (SBOO)[6] require United States Section of the International Boundary and Water Commission (USIBWC) and the Discharger to sample and analyze annually for sediment chemistry and benthic community conditions at an additional array of 40 randomly selected stations. The same sampling and processing procedures must be followed as outlined above for core benthic sediment and benthic community condition monitoring. These 40 randomly selected stations shall be reselected each year by San Diego Water Board and USEPA, or their designee to meet the requirements for both this MRP and the MRPs for the SBOO, using the USEPA probability-based Environmental Monitoring and Assessment Program (EMAP) design.

The random benthic sampling requirement may be suspended as part of a resource exchange agreement to allow for participation in the Southern California Bight Regional Monitoring Surveys at the discretion of the San Diego Water Board and USEPA.

4.4 Fish and Invertebrates Monitoring Requirements

Many pollutants discharged into receiving waters have the potential to bioaccumulate and persist in tissues of aquatic organisms, including marine fishes. Chemical pollutants that bioaccumulate tend to biomagnify as they pass through the aquatic food chain. Therefore, 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 fish tissue over time.

Aquatic benthic macroinvertebrates are excellent indicators of ecosystem health because they are ubiquitous, abundant, diverse, and typically sedentary. The growth, survival, and reproduction of many species of aquatic invertebrates are all sensitive to changes in environmental health, making analysis of assemblage structure a good ecosystem monitoring tool.

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[6] Order No. R9-2021-0011, NPDES No. CA0109045, *Waste Discharge Requirements for the City of San Diego South Bay Water Reclamation Plant Discharge to the Pacific Ocean Through the South Bay Ocean Outfall* was adopted by the San Diego Water Board on May 12, 2021.
Order No. R9-2021-0001, as amended by Order No. R9-2023-0009, NPDES No. CA0108928, *Waste Discharge Requirements for the United States Section of the International Boundary and Water Commission South Bay International Wastewater Treatment Plant Discharge to the Pacific Ocean Through the South Bay Ocean Outfall* was adopted by the San Diego Water Board on May 12, 2021, and amended on March 8, 2023.

Fish and invertebrate monitoring is necessary to answer the following questions:

(1) Does the concentration of pollutants in fish, shellfish, or other marine organisms used for human consumption bioaccumulate to levels that are harmful to human health?
(2) Does the concentration of pollutants in marine life bioaccumulate to levels that degrade marine communities?
(3) Are the concentrations of pollutants in fish and other marine organisms changing over time?
(4) Is the health of fish changing over time?
(5) Are the populations of selected species of fish and invertebrates changing over time?

4.4.1 Fish and Invertebrate Trawls

4.4.1.1 **Fish and Invertebrate Trawl Frequency and Monitoring Stations.** Epibenthic trawls shall be conducted to assess the structure of demersal fish and megabenthic invertebrate communities, while the presence of priority pollutants in fish will be analyzed from species captured using both trawling and rig fishing techniques. Single community trawls for fish and invertebrates shall be conducted semi-annually in the winter (e.g., January) and summer (e.g., July) at six trawl stations at the locations listed in Table E-1. These stations represent two areas near Discharge Point No. 001 (SD-010 and SD-012), two areas up coast of Discharge Point No. 001 (SD-013 and SD-014), and two areas down coast of Discharge Point No. 001 (SD-007 and SD-008).

4.4.1.2 **Fish and Invertebrate Trawl Method.** Trawls shall be conducted using a Marinovich 7.62 m (25 feet) head rope otter trawl, using the guidance specified in the most recent field manual developed for the Southern California Bight Regional Monitoring Program. 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 Executive Officer of the San Diego Water Board and Water Division Director of the USEPA, upon receipt of written justification provided by the Discharger. Examples of such unusual events include the presence of large populations of red tuna crabs (*Pleuroncodes planipes*, also known as *Grimothea* ~~*planipe*~~ *planipes*) associated with El Niño and the occurrence of large squid egg masses that prevent hauling in the trawl nets.

4.4.1.3 **Fish and Invertebrate Community Structure Analysis.** All demersal fishes and megabenthic invertebrates collected by trawls should be identified to species if possible. For fish, community structure analysis shall consist of determining the standard length and total wet weight, total number of individuals per species, the total numerical abundance of all fish, species richness, species diversity (H'), and multivariate pattern analyses (e.g., ordination and classification analyses). The presence of any physical abnormalities or disease symptoms (e.g., fin erosion,

external lesions, and tumors) or external parasites shall also be recorded. For invertebrates, community structure shall be summarized as the total number of individuals per species, the total numerical abundance of all invertebrates, species richness, and species diversity (H').

4.4.1.4 **Fish Tissue Chemical Analysis.** Chemical analyses of fish tissues shall be performed annually (e.g., during October) on target species collected at or near the trawl stations. The six stations are classified into four zones for the purpose of collecting sufficient numbers of fish for tissue analyses. Trawl Zone 1 represents the nearfield zone, defined as the area within a 1-km radius of stations SD-010 and/or SD-012; Trawl Zone 2 is considered the northern farfield zone, defined as the area within a 1-km radius of stations SD-013 and/or SD-014; Trawl Zone 3 represents the LA-5 disposal site zone, and is defined as the area centered within a 1-km radius of station SD-008; and Trawl Zone 4 is considered the southern farfield zone, and is defined as the area centered within a 1-km radius of station SD-007.

Liver tissues shall be analyzed during each survey from fishes collected in each of the above four trawl zones. No more than a maximum of five 10-minute (bottom time) trawls shall be required per zone in order to acquire sufficient numbers of fish for composite samples; these trawls may occur anywhere within a defined zone. 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 those described below under Rig Fishing in section 4.4.2 of this MRP (e.g., hook and line, baited lines).Three replicate composite samples shall be prepared from each trawl zone, with each composite consisting of tissues from at least three individual fish of the same species. These liver tissues shall be analyzed for the constituents listed in Table E-11.

4.4.1.5 **Fish Targeted for Analysis.** 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 candidate species such as the California scorpionfish (*Scorpaena guttata*) and halfbanded rockfish (*Sebastes semicinctus*) may be collected as necessary.

4.4.2 **Rig Fishing**

4.4.2.1 **Rig Fishing Frequency.** Muscle tissues shall be analyzed annually (e.g., during October) from fishes collected in each of the two rig fishing zones described below in order to monitor the uptake of pollutants in species and tissues that are consumed by humans.

4.4.2.2 **Rig Fishing Method and Location.** The fish shall be collected by hook and line or by setting baited lines from within zones surrounding rig fishing stations RF-001 and RF-002 listed in Table E-1. Rig Fishing Zone 1 is the nearfield area centered

within a 1-km radius of station RF-001; and Rig Fishing Zone 2 is considered the farfield area centered within a 1-km radius of station RF-002. There are no depth requirements for these two rig fishing zones with regards to the collection of fishes for tissue analysis. The species targeted for muscle tissue analysis in 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, which may include, but are not limited to, the vermilion rockfish (*Sebastes miniatus*) and the copper rockfish (*Sebastes caurinus*). If sufficient numbers of these primary species are not present or cannot be caught in a particular zone, secondary target species (e.g., other rockfish, scorpionfish) may be collected and analyzed as necessary. Fish samples shall be identified to species, with number of individuals per species, standard length and wet weight recorded. Physical abnormalities and disease symptoms shall be recorded and itemized (e.g., fin rot, lesions, and tumors).

4.4.2.3 **Rig Fishing Collection.** Three replicate composite samples of the target species shall be obtained from each zone, with each composite consisting of a minimum of three individual fish. Muscle tissue shall be chemically analyzed for the same set of constituents as trawl-caught fish specified in Table E-11.

Table E-11. Parameter List for Fish Tissue Monitoring Requirements

Parameter	Units	Type of Sample	Minimum Frequency
Total Lipids	Percent	Composite	Annual
Aluminum	mg/kg	Composite	Annual
Antimony	mg/kg	Composite	Annual
Arsenic	mg/kg	Composite	Annual
Cadmium	mg/kg	Composite	Annual
Chromium	mg/kg	Composite	Annual
Copper	mg/kg	Composite	Annual
Iron	mg/kg	Composite	Annual
Lead	mg/kg	Composite	Annual
Manganese	mg/kg	Composite	Annual
Mercury	mg/kg	Composite	Annual
Nickel	mg/kg	Composite	Annual
Selenium	mg/kg	Composite	Annual
Silver	mg/kg	Composite	Annual
Tin	mg/kg	Composite	Annual
Zinc	mg/kg	Composite	Annual
PCBs	µg/kg	Composite	Annual
2,4-DDD	µg/kg	Composite	Annual
4,4-DDD	µg/kg	Composite	Annual
2,4-DDE	µg/kg	Composite	Annual
4,4-DDE	µg/kg	Composite	Annual
2,4-DDT	µg/kg	Composite	Annual
4,4-DDT	µg/kg	Composite	Annual
Aldrin	µg/kg	Composite	Annual
Alpha-Chlordane	µg/kg	Composite	Annual

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

4.5 California Environmental Data Exchange Network

In addition to submitting SMRs, the Discharger shall also ensure that all the receiving water monitoring results are submitted to the California Environmental Data Exchange Network (CEDEN) or an equivalent database that is linked to CEDEN no later than 120 days after analyses have been completed or reports are received if analyses are conducted by an outside laboratory. Any data not accepted by CEDEN is not required to be submitted. A statement certifying that all applicable monitoring results have been timely uploaded into CEDEN or an equivalent database shall be submitted annually by March 1 of each year. Only monitoring results from the following requirements shall be reported in CEDEN:

- Shoreline water quality and offshore water quality and kelp (sections 4.1 and 4.2 of this MRP);
- Sediment assessment for physical and chemistry properties (section 4.3.1 of this MRP);
- Sediment toxicity (section 4.3.2 of this MRP);
- Benthic community condition (section 4.3.3 of this MRP);
- Fish and invertebrate trawls, when CEDEN is updated to accept the data (section 4.4.1 of this MRP); and
- Rig fishing (section 4.4.2 of this MRP).

4.6 Receiving Water Monitoring Reports

4.6.1 The Discharger shall submit Interim and Biennial Receiving Water Monitoring Reports to the San Diego Water Board and USEPA. The Interim Receiving Water Monitoring Reports will cover only one year of receiving water monitoring (e.g., separate reports for calendar years 2024, 2026, and 2028) and shall be submitted every other year. The Biennial Receiving Water Monitoring Reports will provide a more thorough discussion, evaluation (e.g., detailed statistical analyses), and interpretation than the Interim Receiving Water Monitoring Reports, will cover two years of receiving water monitoring (e.g., biennial reports for calendar years 2024-2025, 2026-2027, and 2028-2029), and shall be submitted the opposite years as the Interim Receiving Water Monitoring Reports. These reports are described below under sections 4.6.2 and 4.6.3 and cover the following monitoring requirements:

- Shoreline water quality (section 4.1 of this MRP);
- Offshore water quality and kelp (section 4.2.1 of this MRP);
- ~~HF183, if applicable (section 4.2.2 of this MRP);~~
- Total alkalinity and spectrophotometric pH (section 4.2.2~~3~~ of this MRP);
- Sediment assessment for physical and chemistry properties (section 4.3.1 of this MRP);
- Sediment toxicity (section 4.3.2 of this MRP);
- Benthic community condition (section 4.3.3 of this MRP);
- Fish and invertebrate trawls (section 4.4.1 of this MRP);
- Rig fishing (section 4.4.2 of this MRP);
- Plume tracking (section 6.3 of this MRP); and
- Coastal Remote Sensing Study (section 6.4 of this MRP).

4.6.2 The Discharger shall submit Interim Receiving Water Monitoring Reports (Interim Reports, executive summary) as specified in Table E-12. The Interim Reports will cover the “even” year in each biennial reporting cycle (e.g., separate reports for calendar years 2024, 2026, and 2028). The Interim Reports may be submitted as an integrated report covering both the receiving water monitoring required in this MRP and the receiving water monitoring for the SBOO (as required under separate waste discharge requirements (WDRs)). The Interim Reports shall include, as a minimum, the following information:

- 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.);
- A description of sampling stations, including, if such information is available, differences unique to each station (e.g., station location, sediment grain size, distribution of bottom sediments, rocks, shell litter, calcareous worm tubes, etc.);
- A description of the sample collection and preservation procedures used in the survey;
- A description of the specific method used for laboratory analysis;
- A tabulation of the data; and
- A narrative summary of general observations, including any abnormal conditions.

4.6.3 The Discharger shall submit Biennial Receiving Water Monitoring and Assessment Reports (Biennial Reports, full assessment) as specified in Table E-12. The Biennial Reports will each cover a full 2-year monitoring cycle (e.g., biennial reports for calendar years 2024-2025, 2026-2027, and 2028-2029). The Biennial Reports may be submitted as an integrated report covering both the receiving water monitoring required in this MRP and the receiving water monitoring for the SBOO (as required under separate WDRs). The Biennial Reports shall include, as a minimum, the following information:

- 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.);
- A description of sampling stations, including, if such information is available, differences unique to each station (e.g., station location, sediment grain size, distribution of bottom sediments, rocks, shell litter, calcareous worm tubes, etc.);
- A description of the sample collection and preservation procedures used in the survey;
- A description of the specific method used for laboratory analysis; and
- An in-depth discussion, evaluation (e.g., detailed statistical analyses), interpretation and tabulation of the data including interpretations and conclusions as to whether applicable ~~receiving water limitations~~ requirements in this Order~~/~~ and Permit have been attained at each station.
- An analysis of changing ocean chemistry (pH, dissolved oxygen and nutrients) and how the Discharger's effluent affects these parameters.

4.6.4 During the same year that the Biennial Reports are submitted, the Discharger shall provide a Biennial State of the Ocean Report (an oral report) to the San Diego Water Board and USEPA at a San Diego Water Board meeting summarizing the conclusions of the Biennial Report over the 2-year monitoring period. If an oral report cannot be scheduled for a San Diego Water Board meeting, the San Diego Water Board Executive Officer and USEPA Water Division Director may approve submission of a written Biennial State of the Ocean Report instead. The Biennial State of the Ocean Report shall include, as a minimum, a description of the monitoring effort completed during the past two years, the status and trends of

receiving waters quality conditions, and plans for future monitoring efforts.

5 Regional Monitoring Requirements

Regional ocean water monitoring provides information about the sources, fates, and effects of anthropogenic contaminants in the coastal marine environment necessary to make assessments over large areas. The large-scale assessments provided by regional monitoring describe and evaluate cumulative effects of all anthropogenic inputs and enable better decision-making regarding protection of beneficial uses of ocean waters. Regional monitoring data assists in the interpretation of core monitoring studies by providing a more accurate and complete characterization of reference conditions and natural variability. Regional monitoring also leads to methods standardization and improved quality control through inter-calibration exercise. The coalitions implementing regional monitoring enable sharing of technical resources, trained personnel, and associated costs. Focusing these resources on regional issues and developing a broader understanding of pollutants effects in ocean waters enables the development of more rapid and effective response strategies. Based on all of these considerations the San Diego Water Board supports regional approaches to monitoring ocean waters.

The Discharger shall, as directed by the San Diego Water Board and USEPA, participate with other regulated entities, other interested parties, San Diego Water Board, and USEPA in development and implementation of new and improved monitoring and assessment programs for ocean waters in the San Diego Region and discharges to those waters. These programs shall be developed and implemented to answer the following questions:

(1) What are the status and trends of conditions in ocean waters in the San Diego Region regarding beneficial uses? For example:
   i. Are fish and shellfish safe to eat?
   ii. Is water quality safe for swimming?
   iii. Are ecosystems healthy?
(2) What are the primary stressors causing or contributing to conditions of concern?
(3) What are the major sources of the stressors causing or contributing to conditions of concern?
(4) Are the actions taken to address such stressors and sources effective (i.e., environmental outcomes)?

Development and implementation of new and improved monitoring and assessment programs for ocean waters will be guided by the following:

- The Ocean Plan;
- San Diego Water Board Resolution No. R9-2012-0069, *Resolution in Support of a Regional Monitoring Framework*;
- San Diego Water Board staff report entitled *A Framework for Monitoring and Assessment in the San Diego Region*; and
- Other guidance materials, as appropriate.

5.1 Kelp Bed Canopy Monitoring Requirements

Kelp consists of several species of brown algae. Along the central and southern California coast, giant kelp (*Macrocystis pyrifera*) is the largest species colonizing rocky, and in some cases sandy, subtidal habitats. Giant kelp is an important component of coastal and island communities in southern California, providing food and habitat for numerous animals. Monitoring of the kelp beds is necessary to answer the following questions:

(1) What is the maximum areal extent of the coastal kelp bed canopies each year?
(2) What is the variability of the coastal kelp bed canopy over time?
(3) Are coastal kelp beds disappearing? If yes, what are factors that could contribute to the disappearance?
(4) Are new coastal kelp beds forming?

The Discharger shall continue to participate with other Southern California ocean dischargers in an ongoing regional survey of coastal kelp beds in the Southern California Bight. The intent of these surveys is to provide an indication of the health of these kelp beds, recognizing that the extent of kelp bed canopies may change due to a variety of influences.

Kelp beds shall be monitored by means of vertical aerial infrared photography, satellite imagery, or an alternative method approved by the Executive Officer to determine the maximum areal extent of the canopies of coastal kelp beds each year. Surveys shall be conducted as close as possible to when kelp bed canopies are at their greatest extent during the year. The entire San Diego Region coastline, from the international boundary to the San Diego Region/Santa Ana Region boundary shall be photographed on the same day.

~~Annually by October 1, t~~ The Discharger shall submit Interim and Biennial Kelp Bed Canopy Reports to the San Diego Water Board and USEPA ~~a report which summarizes the data, analyses, assessment, and images produced by the surveys~~. The reports are ~~report is~~ a joint collaboration among multiple ocean dischargers in Southern California (e.g., Regional 9 Kelp Survey Consortium member agencies). The Interim Kelp Bed Canopy Reports will include brief summaries of data and images produced during one year of kelp aerial surveys (e.g., separate reports for calendar years 2025, 2027, and 2029) and shall be submitted every other year. The Biennial Kelp Bed Canopy Reports will provide a more thorough discussion, evaluation (e.g., detailed statistical analyses), and interpretation than the Interim Kelp Bed Canopy Reports; will cover two years of kelp aerial surveys (e.g., biennial reports for calendar years 2025-2026, 2027-2028, and 2029-2030), and shall be submitted the opposite years as the Interim Kelp Bed Canopy Reports. In addition to the kelp bed canopies, the images shall show onshore reference points, locations of all ocean outfalls and diffusers, artificial reefs, areas of known hard-bottom substrate (i.e., rocky reefs), and depth contours at intervals of 30-feet mean lower low water (MLLW). The report shall also be made available in a user-friendly format on a website that is readily available to the public.

The surveys shall be conducted on a "continuous improvement" basis, as needed improvements shall be made in monitoring, analysis, assessment, and/or documentation. For example, these could include:

- More sophisticated analysis of patterns, correlations, and cycles that may be related to the extent of kelp bed canopies; or
- Projects to improve understanding of influences on kelp beds or of how the extent of the canopies of various kelp beds has changed since the early 20th century.

5.2 Southern California Bight Monitoring Program Participation Requirements

The Discharger shall, as directed by the San Diego Water Board and USEPA, participate in the Southern California Bight Regional Monitoring Program coordinated by the Southern California Coastal Water Research Project (SCCWRP), or any other coordinator named by the San Diego Water Board and USEPA, pursuant to Water Code section 13383, and 40 CFR section 122.48. The intent of the Southern California Bight Regional Monitoring Program is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the Southern California Bight.

During these coordinated sampling efforts, a portion of the Discharger's receiving water sampling and analytical effort, as defined in section 4 of this MRP, may be reallocated to provide a regional assessment of the impact of the discharge of wastewater to the Southern California Bight. In that event, the San Diego Water Board and USEPA shall notify the Discharger in writing that a portion of the requirements to perform the receiving water sampling and analytical effort defined in section 4 of this MRP is suspended for the duration of the reallocation. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources. The level of resources in terms of sampling and analytical effort redirected from the receiving water monitoring program required under section 4 of this MRP shall approximately equal the level of resources provided to implement the regional monitoring and assessment program, unless the San Diego Water Board, USEPA, and the Discharger agree otherwise. The specific scope and duration of the receiving water monitoring program reallocation and redirection shall be determined in writing by the San Diego Water Board and USEPA, in consultation with the Discharger. When feasible, the Discharger shall reference the results and conclusions of the Southern California Bight Regional Monitoring Program to provide comparison and perspective on the results of the receiving water monitoring conducted by the Discharger. This analysis and comparison shall be reported in the receiving water monitoring reports described in section 4.6 of this MRP.

6 Special Studies Requirements

~~6.1 Climate Change Action Plan~~

~~The Discharger shall review and update its Climate Change Action Plan (CCAP) as needed or as requested by the San Diego Water Board. The CCAP shall include the following information:~~

- ~~The magnitude and timing of projected regional climate change impacts and mitigation measures on the Facilities and their ability to meet permit requirements. Impacts to be analyzed include, but are not limited to, the following:~~
- ~~Increasing magnitude and frequency of large storms and subsequent flooding, erosion, and inflow and infiltration;~~
- ~~Longer periods and intensity of drought;~~
- ~~Higher sea levels, higher tides, and bigger storm surges;~~
- ~~Increasing freshwater and ocean temperatures;~~
- ~~Rising air temperatures;~~
- ~~Changing ocean chemistry (pH, dissolved oxygen, and sensitivity to nutrient inputs); and~~
- ~~Changing influent volumes and chemical concentrations.~~

- ~~Impacts on process design parameters due to higher biochemical oxygen demand, ammonia (as N), and TSS influent concentrations;~~
- ~~Impacts on the Discharger's sewage collection system, wastewater treatment operations, and effluent quality;~~
- ~~Any potential adjustments to the NPDES permit conditions and to the Discharger's pollution control program;~~
- ~~Schedules and plans to address vulnerabilities identified in the CCAP and to update the CCAP as more information on climate change and its effects becomes more available. Any impacts or risks projected to jeopardize permit compliance must be addressed by a plan that includes scheduled risk assessments and mitigation measures as needed to maintain compliance;~~
- ~~The financing needed to pay for planned actions; and~~
- ~~Any other factors as appropriate.~~

6.~~2~~1 Euphotic Zone Study

6.~~2~~1.1 Euphotic Zone Study Phase Two Work Plan Implementation

The Discharger shall implement the Discharger's Euphotic Zone Study Phase Two Work Plan[7] and as directed in writing by the San Diego Water Board Executive Officer and USEPA Water Division Director. The Discharger shall notify the San Diego Water Board and USEPA of the intent to initiate the proposed actions included in the Discharger's work plan and comply with any conditions set by the San Diego Water

[7] The Discharger's Euphotic Zone Study Phase Two Work Plan was submitted as required by Order No. R9-2022-0078, *ADDENDUM NO. 1 TO ORDER NO. R9-2017-0007, NPDES NO. CA0107409*, was adopted by the San Diego Water Board and USEPA on August 10 and 23, 2022, respectively, and added section VI.B, *Phytoplankton Stimulation Study*, to Order No. R9-2017-0007, Attachment E, MRP.

Board Executive Officer and USEPA Water Division Director.

6.~~2~~1.2 Euphotic Zone Study Phase Two Status Reports

The Discharger shall submit annual status reports on phase two of the euphotic zone study no later than March 1 of each year to the San Diego Water Board and USEPA. The annual status reports shall include the following:

- A description of the monitoring activities conducted during the year;
- A summary of the monitoring data collected during the year; and
- A discussion of the depth of the euphotic zone and whether the PLOO wastewater plume was within the euphotic zone.

6.~~2~~1.3 Phytoplankton Stimulation Study Final Report

The Discharger shall submit a final report that evaluates the results of the influent and effluent nutrient monitoring conducted in compliance with sections 3.1 and 3.2 of this MRP and the euphotic zone study implemented in compliance with section 6.2 of this MRP. The Discharger shall evaluate the results to make conclusions as to whether the discharge of nutrients may stimulate phytoplankton productivity, including harmful algal blooms. The final report shall be submitted in accordance with the implementation schedule in the Discharger's Euphotic Zone Study Phase Two Work Plan[5]. The report shall include, at minimum, the following:

6.~~2~~1.3.1 A description of climatic and receiving water characteristics at the time of sampling that may affect the depth of the euphotic zone (e.g., weather observations, water discoloration, wind speed and direction, swell or wave action, time of sampling, tide height, etc.);

6.~~2~~1.3.2 A description of sampling stations;

6.~~2~~1.3.3 A description of the sample collection and preservation procedures used in the survey;

6.~~2~~1.3.4 A description of the specific methods used for laboratory analyses;

6.~~2~~1.3.5 An in-depth discussion, evaluation (e.g., detailed statistical analyses), interpretation and tabulation of the data including interpretations and conclusions as to the loading of nutrients from the Facility to the receiving water, the depth of the euphotic zone, whether the PLOO wastewater plume was within the euphotic zone, and whether the nutrients discharged through the PLOO may stimulate phytoplankton production and, if so, to what extent; and

6.~~2~~1.3.6 An in-depth discussion addressing each of the questions proposed in the Euphotic Zone Phase Two Work Plan and each section of the Phytoplankton Production Study.

6.~~3~~2 Plume Tracking Reporting

The Discharger shall include the PLOO real-time mooring system and associated pilot studies (e.g., autonomous underwater vehicle/ROTV surveys) in the Biennial Receiving

Water Monitoring Reports described in section 4.6 of this MRP. These reports shall include in-depth discussion, evaluation, interpretation, and tabulation of the real-time mooring and other project data. Report interpretations and conclusions shall include the state of the receiving waters into which the PLOO discharges and the estimated location of the PLOO plume throughout the reporting period.

6.~~4~~3 Coastal Remote Sensing Study

The Coastal Remote Sensing Study utilizes various aerial and satellite sensors in the visible, near-infrared, and thermal infrared to detect patterns in natural oceanographic variables, point and non-point source terrestrial runoff, and anthropogenic sources, such as the PLOO. Remote sensing image data and subsequent advanced analyses are utilized to spatially and temporally enhance regular field sampling surveys conducted by the Discharger, and to help interpret the results from those surveys. The Discharger shall continue to participate in the Coastal Remote Sensing Study. Results of the Coastal Remote Sensing Study shall be included in the Biennial Receiving Water Monitoring Reports described in section 4.6 of this MRP.

6.~~5~~4 Kelp Forest Monitoring

The Discharger shall continue to support important research conducted by the Scripps Institution of Oceanography to assess the health of San Diego's kelp forests and to monitor the effects of wastewater discharge on the local coastal ecosystem relative to other factors.

7 Other Monitoring Requirements

7.1 Discharge Monitoring Report-Quality Assurance (DMR-QA)

The Dischargers shall ensure that the results of the DMR-QA Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Resources Control Board (State Water Board) at the following address:

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

7.2 **Outfall and Diffuser Inspection.** Discharge Point No. 001 shall be inspected externally a minimum of once a year. Inspections shall include general observations and photographic/video graphic records of the outfall pipes and adjacent ballast material. The inspections may be conducted by remotely operated vehicle, diver, or manned submarine. A summary report of the inspection findings shall be provided annually on July 1. This written report will provide a description of the observed condition of the outfall structures from shallow water to their respective termini. Photographic/video graphic records shall be retained by the Discharger and submitted to the San Diego Water Board and USEPA upon request.

8 Reporting Requirements

8.1 General Monitoring and Reporting Requirements

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

8.1.2 The Discharger shall report all instances of noncompliance not reported under sections 5.5, 5.7, and 5.8 of the Standard Provisions (Attachment D) at the time monitoring reports are submitted.

8.2 Self-Monitoring Reports (SMRs)

8.2.1 The Discharger shall electronically submit SMRs using the State Water Board's CIWQS program website (https://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 or unplanned service interruption for electronic submittal. SMRs must be signed and certified as required by section 5 of the Standards Provisions (Attachment D). The Discharger shall maintain sufficient staffing and resources to ensure it submits SMRs that are complete and timely. This includes provision for training and supervision of individuals on how to prepare and submit SMRs.

8.2.2 The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections 3 and 4. The Discharger shall submit 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 Discharger monitors 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.

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

Table E-12. ~~Parameter List for Fish Tissue Monitoring Requirements~~ Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	First day of second calendar month following month of sampling.
1/Day	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following month of sampling.

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
1/Week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling.
1/Month[1,2]	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling.
1/Quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
2/Year	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	September 1 March 1
Interim Receiving Water Monitoring Report (executive summary)[3]	--January 1 following (or on) Order and Permit effective date	--One calendar year (January 1 through December 31)	July 1 of the year following the even years (e.g., separate interim reports for calendar years 2024 (due 7/1/2025), 2026 (due 7/1/2027), and 2028 (due 7/1/2029))
Biennial Receiving Water Monitoring and Assessment Report (full assessment)[4]	--January 1 following (or on) Order and Permit effective date	--Two calendar years (January 1 of the year through December 31 of the following year)	July 1 of the year following the odd years (e.g., separate biennial reports for calendar years 2022-2023 (due 7/1/2024), 2024-2025 (due 7/1/2026), and 2026-2027 (due 7/1/2028))
Oral/Written Biennial State of the Ocean Report[5]	--January 1 following (or on) Order and Permit effective date	--Two calendar years (January 1 of the year through December 31 of the following year)	By December 31 of the year following the odd years (e.g., separate biennial reports for calendar years 2022-2023 (due 12/31/2024), 2024-2025 (due 12/31/2026), and 2026-2027 (due 12/31/2028))

Notes for Table E-12

1. Include the monthly spill report as required by sections 6.3.2.2.4. of this Order~~/~~ and Permit.
2. Include monitoring results for offshore stations (section 4.2 of this MRP) in the monthly SMRs~~;~~.
3. As specified in sections 4.6.1 and 4.6.2 of this MRP.
4. As specified in sections 4.6.1, 4.6.3, 6.3 (Plume Tracking Reporting), and 6.4 (Coastal Remote Sensing Study) of

this MRP.

5. As specified in section 4.6.4 of this MRP.

8.2.4 **Reporting Protocols.** The Discharger 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 described above in section 8.2.4.

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

8.2.4.1 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).

8.2.4.2 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 (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

8.2.4.4 The Discharger is 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 is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

8.2.5 **Compliance Determination.** Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined above, section 7 of this Order~~/~~ and Permit, and in Attachment A of this Order~~/~~ and Permit. For purposes of reporting and administrative enforcement by the San Diego Water Board, USEPA, and State Water Board, the Discharger 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.

8.2.6 **Multiple Sample Data.** 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 Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

8.2.6.1 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.

8.2.6.2 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.

8.2.7 The Discharger shall submit SMRs in accordance with the following requirements:

8.2.7.1 The Discharger 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 Discharger is 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 Discharger shall electronically submit the data in a tabular format as an attachment.

8.2.7.2 The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements and/or exceedance of performance goals; 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.

8.2.7.3 The Discharger shall add all violations, including violations of ~~receiving water~~ other limitations, to CIWQS under the “Violations” tab.

8.3 Discharge Monitoring Reports (DMRs)

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

8.4 Other Reports

The following reports are required under Special Provisions (sections 4.1 and 6.3 of this Order), sections 1, 3, 4, 5, 6, and 7 of this MRP, and the California Code of Regulations (CCR). The reports shall be submitted to the San Diego Water Board using the State Water Board’s CIWQS program website, unless otherwise noted, and to USEPA by email R9NPDES@epa.gov. The reports must be signed and certified as required by section 5 of the Standards Provisions (Attachment D). The CIWQS website will provide additional information for SMR submittal in the event of a planned or unplanned service interruption for electronic submittal.

Table E-13. Other Reports

Report	Location of requirement	Due Date
Report of Waste Discharge (ROWD) (for reissuance)	Page 2 of ~~the~~ this Order and Permit	No later than 180 days before the ~~Order~~ expiration date of this Order and Permit
Performance Goal Exceedance Investigation Work Plan	Section 4.~~1.~~2	Within 30 days of the Discharger becoming aware of ~~after~~ the third successive exceedance of a performance goal
Performance Goal Exceedance Report	Section 4.~~1.~~2	As specified in the Performance Goal Exceedance Investigation Work Plan
Benchmark Exceedance Investigation Work Plan	Section 4.~~1.~~3	Within 30 days of the Discharger becoming aware of ~~after~~ the third successive exceedance of a benchmark
Benchmark Exceedance Report	Section 4.~~1.~~3	As specified in the Benchmark Exceedance Investigation Work Plan
~~Receiving Water~~ Special Assessment of Violation ~~Assessment~~ and Noncompliance	Section 6.3.2.3	Within 90 days of receipt of the San Diego Water Board's and/or USEPA's notification to perform a ~~Receiving Water~~ Special Assessment of Violation ~~Assessment~~ and Noncompliance.
Updated Dilution Analysis	Section 6.3.2.4	No later than 4 years after the effective date of this Order~~/~~ and Permit
Point Loma Ocean Outfall Capacity Report	Section 6.3.5.1	No later than 180 days prior to ~~this Order's~~ the expiration date of this Order and Permit
Treatment Plant Capacity Report	Section 6.3.5.2	Four years prior to reaching plant design capacity
Annual Local Limits Analysis	Section 6.3.5.3.2.2	Annually no later than July 1
Annual Pretreatment Report	Section 6.3.5.3.5	Annually no later than March 1
Annual Biosolids Report	Section 6.3.5.4.8	Annually no later than February 19
Asset Management Plan	Section 6.3.5.7	Within ~~180 days~~ two years of the effective date of this Order and Permit
Semiannual Progress Report	Section 6.3.6.2	January 1 through June 30 (due January 14) July 1 through December 31 (due July 14)
Flow Measurement	Section 1.2 of this MRP	Annually no later than July 1
Annual QA Report	Section 1.6 of this MRP	Annually no later than April 1
~~DMR-QA Study~~	~~Section 1.7 of this MRP~~	~~Annually no later than December 31~~[1]
Annual Additional Influent and Effluent Monitoring	Sections 3.1.2 and 3.2.2 of this MRP	Annually no later than June 30
Initial Investigation TRE Work Plan	Section 3.3.~~7~~6 of this MRP	Within 90 days of the effective date of this Order and Permit

Report	Location of requirement	Due Date
California Environmental Data Exchange Network Data Submittal Certification	Section 4.5 of this MRP	Annually no later than March 1
Interim Kelp Bed Canopy Report	Section 5.1 of this MRP	~~Annually no later than October 1~~ October 1 of the year following the even years (e.g., separate interim reports for calendar years 2024 (due 10/1/2025), 2026 (due 10/1/2027), and 2028 (due 10/1/2029))
Biennial Kelp Bed Canopy Reports	Section 5.1 of this MRP	October 1 of the year following the odd years (e.g., separate biennial reports for calendar years 2022-2023 (due 10/1/2024), 2024-2025 (due 10/1/2026), and 2026-2027 (due 10/1/2028))
Euphotic Zone Study Phase Two Work Plan Implementation Notification	Section 6.~~2~~1.1 of this MRP	In accordance with the Discharger's Euphotic Zone Study Phase Two Work Plan
Euphotic Zone Study Phase Two Status Report	Section 6.~~2~~1.2 of this MRP	Annually no later than March 1, in accordance with the Discharger's Euphotic Zone Study Phase Two Work Plan
Phytoplankton Stimulation Study Final Report	Section 6.~~2~~1.3 of this MRP	December 1, 2027, in ~~In~~ accordance with the Discharger's Euphotic Zone Study Phase Two Work Plan
Discharge Monitoring Report-Quality Assurance Study or Water Pollution Performance Evaluation Study	Section 7.1 of this MRP	Annually no later than December 31[1]
Outfall and Diffuser Inspection	Section 7.~~1~~2 of this MRP	Annually no later than July 1

Notes for Table E-13

1. See section ~~1.~~7.1. of this MRP for instructions on how to submit the study.

ATTACHMENT F – FACT SHEET

CONTENTS

(Revisions for CONTENTS are not shown in red-underline and red-strikeout.)

TABLES

(Revisions for TABLES are not shown in red-underline and red-strikeout.)

Parameter

ATTACHMENT F – FACT SHEET

As described in section 2.2 of this Order~~/~~ and Permit, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) and United States Environmental Protection Agency, Region 9 (USEPA) incorporates this Fact Sheet as findings of the San Diego Water Board and USEPA supporting the issuance of this Order~~/~~ and Permit. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order~~/~~ and Permit.

This Order~~/~~ and Permit ~~has~~ have been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in the State of California (State). Only those sections or subsections of this Order~~/~~ and Permit that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order~~/~~ and Permit not specifically identified as "not applicable" are fully applicable to this Discharger.

1 Permit Information

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

Type of Information	Facility/Discharger Information
WDID	9 000000275
Discharge	City of San Diego
Name of Discharge Structure	Point Loma Ocean Outfall (PLOO)
Name of Facility	E.W. Blom Point Loma Wastewater Treatment Plant
Facility Address	1902 Gatchell Road, San Diego, CA 92106, San Diego County
Facility Contact, Title and Phone	Juan Guerreiro, Director (858) 292-6436, jguerreiro@sandiego.gov
Authorized Person to Sign and Submit Reports	Peter S. Vroom, Deputy Director (619) 758-2301, pvroom@sandiego.gov
Mailing Address	9192 Topaz Way, Mail Station 901, San Diego, CA 92123
Billing Address	Same as mailing address
Type of Facility	Publicly-owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Yes
Recycling Requirements	Producer and Distributor (regulated under separate waste discharge requirements (WDRs))
Facility Permitted Flow	240 million gallons per day (MGD)
Facility Design Flow	240 MGD
Watershed	Pacific Ocean

Type of Information	Facility/Discharger Information
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean waters

1.1 The City of San Diego (Discharger) is the owner and operator of the E.W. Blom Point Loma Wastewater Treatment Plant (Facility), the Metro Biosolids Center (MBC), the Point Loma Ocean Outfall (PLOO), Discharger's sewage collection system, and other associated infrastructure (collectively referred to as Facilities).

For the purposes of this Order~~/~~ and Permit, 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 Discharger herein.

1.2 The Facility discharges wastewater to the Pacific Ocean, a water of the U.S. The Facilities and associated discharges to the Pacific Ocean were previously regulated by Order No. R9-2017-0007, as amended by Order No. R9-2022-0078, and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0107409 (Previous Order~~/~~ and Permit). The Previous Order~~/~~ and Permit ~~was~~ were adopted on April 12, 2017, by the San Diego Water Board and the 301(h)-modified permit (NPDES Permit No. CA0107409) was adopted on August 4, 2017, by USEPA. Order No. R9-2022-0078 (Addendum No. 1 to Order No. R9-2017-0007) was adopted by the San Diego Water Board on August 10, 2022, and adopted by the USEPA on August 23, 2022. The Previous Order~~/~~ and Permit became effective on October 1, 2017, and expired on September 30, 2022. In accordance with title 40 of the Code of Federal Regulations (40 CFR) section 122.6 and title 23, division 3, chapter 9, article 3, section 2235.4 of the California Code of Regulations (CCR), the terms of Order No. R9-2017-0007, as amended by Order No. R9-2022-0078 were administratively extended and continued in effect after the ~~Order/Permit~~ expiration date until the adoption of this Order~~/~~ and Permit. Attachment B provides a map of the area around the Facilities. Attachment C provides a flow schematic of the Facilities.

1.3 The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for renewal for its waste discharge requirements (WDRs) and 301(h)-modified NPDES permit on March 24, 2022. The Discharger provided supplemental information on March 24, 2023. The 2022 301(h) application is based on an improved discharge, as defined at 40 CFR section 125.58(i). The application was deemed complete on October 31, 2022.

1.4 Regulations at 40 CFR section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, this Order~~/~~ and Permit ~~limits~~ limit the duration of the discharge authorization. However, pursuant to CCR title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

2 Facility Description

2.1 Facility Wastewater and Biosolids Treatment and Controls

The Facility, located at 1902 Gatchell Road, San Diego, California, is the terminal treatment facility in the San Diego Metropolitan Sewerage System (Metro System). In addition to receiving raw wastewater (domestic sewage and industrial discharges) from both the northern and southern portions of the Metro System service area, the Facility may also receive multiple return streams, including North City Water Reclamation Plant (NCWRP) Filter Backwash, NCWRP Plant Drain, NCWRP Secondary and Un-disinfected Filtered Effluent Bypass (via the North Metro Interceptor), NCWRP Final Effluent (during times when NCWRP recycled water production exceeds demands), NCWRP Combined Waste, Out of Specification Final Effluent from North City Pure Water Facility (NCPWF), and MBC Centrate. The Facility also receives waste solids from the South Bay Water Reclamation Plant (SBWRP) and flow and pollutants from low-flow urban runoff diversion systems and "first flush" industrial ~~storm water~~ stormwater diversion systems.

The Facility provides 240 MGD of chemically-enhanced primary treatment capacity. The treatment train consists of five influent screens, chemical injection (ferric chloride occurs in the Parshall flumes, and anionic polymer is added in the individual flumes to the sedimentation tanks), six aerated grit chambers, 12 primary sedimentation basins, partial disinfection using sodium hypochlorite injection, and final screening. Increased TSS removal is largely attributed to the Discharger's implementation of an integrated system-wide chemical addition approach. The Discharger has proceeded with phased implementation of a proprietary technology called Peroxide Regenerated Iron Sulfide Control. The Discharger may pursue other similar methodologies to provide equivalent control of sulfides in the future. On-site solids treatment at the Facility consists of anaerobic sludge digestion. Dewatered solids are beneficially used as an alternate daily cover at a landfill or as a soil amendment. Digested sludge is transported via pipeline to MBC for dewatering and disposal. Screenings, grit, and scum are trucked to a landfill for disposal.

Chlorinated advanced primary-treated wastewater is discharged through the PLOO to the Pacific Ocean, approximately 4.5 miles offshore. Although this is beyond the limit of the ocean waters of the State, potential plume migration within the ocean waters of the State warrants joint regulation of the effluent. USEPA has primary regulatory responsibility for the discharge. However, in 1984, a Memorandum of Understanding was signed between USEPA and the State of California to jointly administer discharges that are granted modifications from secondary treatment standards. Under California's Porter-Cologne Water Quality Control Act, the San Diego Water Board issues WDRs which serve as an NPDES permit.

2.2 Description of San Diego Metropolitan Sewerage System (Metro System)

As stated above, the Facility serves as the terminal treatment facility of the Metro System. The Metro System collects and treats wastewater from the City of San Diego and 12 participating agencies (listed in Table F-2 below) within a 450-square mile

service area throughout San Diego County. Approximately 70 percent of the total Metro System flows are from the City of San Diego. The remaining flows feed into the Metro System from the 12 participating agencies.

Table F-2. Sewage Collection Systems that Feed into the Metro System

Municipalities	Water/Wastewater Districts	Sanitation/Maintenance Districts
City of Chula Vista City of Coronado City of Del Mar City of El Cajon City of Imperial Beach City of La Mesa City of National City City of Poway	Otay Water District Padre Dam Municipal Water District	Lemon Grove Sanitation District San Diego County (Includes the East Otay Mesa, Lakeside, Alpine, Spring Valley, and Wintergardens Service Areas)

The Metro System includes the Facilities [Facility, MBC, PLOO, Discharger's sewage collection system, and other associated infrastructure (e.g., sludge pipelines)], wastewater treatment and water recycling plants, and ocean outfalls.

Map 1 in Attachment B of this Order~~/~~ and Permit provides the boundaries of participating agencies and Metro System. Flow schematics 2 and 3 in Attachment C of this Order~~/~~ and Permit provide schematics of the Metro System. The Metro System includes:

2.2.1 Metropolitan Biosolids Center (MBC)
MBC is located on Marine Corps Air Station Miramar. MBC provides dewatering of sludge from the Facility and thickening, anaerobic digestion, and dewatering of sludge from the NCWRP. Dewatered solids are beneficially used as an alternate daily cover at a landfill or as a soil amendment.

2.2.2 Point Loma Ocean Outfall (PLOO) - See section 2.3 in this Fact Sheet below.

2.2.3 Sanitary Sewer System
The Discharger owns and operates the Metro System collection, treatment, and effluent disposal facilities, including the sewer interceptors and pump stations. The sanitary sewer systems that discharge to the Metro System are owned and operated by the respective participating agencies.

2.2.3.1 Pump Station 1
Pump Station No. 1 conveys wastewater from the southern portion of the Metro System through the South Metro Interceptor to Pump Station No. 2. Pump Station No. 1 has a pumping capacity of approximately 150 MGD and receives ferrous chloride, sodium hydroxide, and sodium hypochlorite for odor and sulfide control. Additionally, Pump Station No. 1 provides initial screening via two traveling screens to remove solids.

2.2.3.2 Pump Station 2

Pump Station No.2 receives wastewater from the north, south, and central regions of the Metro System service area and conveys all influent to the Facility. Pump Station No. 2 also provides initial screening and chemical addition (hydrogen peroxide, sodium hydroxide, and sodium hypochlorite for odor and sulfide control and to assist in coagulation/sedimentation at the Facility). Pump Station No. 2 has a pumping capacity of approximately 432 MGD. Pump Station No. 2 discharges wastewater to the east portal of the Point Loma Tunnel through two 87-inch diameter force mains, respectively 2.9 and 2.7 miles long. One force main follows a land route while the second force main is routed underneath San Diego Bay. The Point Loma Tunnel conveys wastewater to the Facility under the Point Loma peninsula.

2.2.4 North City Water Reclamation Plant (NCWRP)

The NCWRP has a design capacity of 30 MGD and is an advanced wastewater treatment facility capable of producing tertiary-treated recycled water that complies with the requirements of title 22, division 4, chapter 3 of the CCRs (Title 22 Regulations). Discharges of tertiary-treated recycled water from the NCWRP are regulated under separate WDRs[8]. Excess recycled water, secondary-treated effluent, and plant waste streams from NCWRP are returned to the sewer for transport to the Facility for additional treatment. Waste solids removed during treatment at NCWRP are directed to the Metropolitan Biosolids Center for treatment and use or disposal.

2.2.5 North City Pure Water Facility (NCPWF)

NCPWF is under construction for Pure Water Phase 1 and is expected to be in operation by the end of calendar year 2027. Discharges of advanced treated recycled water from the NCWRP and NCPWF will be regulated under separate WDRs[9].

2.2.6 South Bay Water Reclamation Plant (SBWRP)

The SBWRP has a tertiary design capacity of 15 MGD and a hydraulic capacity of 18 MGD. SBWRP is an advanced wastewater treatment facility producing recycled water that complies with Title 22 Regulations for customers within the South Bay region. Excess recycled water and secondary-treated effluent is directed to the South Bay Ocean Outfall. Waste solids are directed to the Facility through the South Metro Interceptor and Pump Stations Nos. 1 and 2, for treatment and removal. Discharges from the SBWRP are regulated under separate WDRs.[10]

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[8] Order No. R9-2015-0091, *Master Recycling Permit for the City of San Diego North City Water Reclamation Plant, San Diego County*, adopted by the San Diego Water Board on December 16, 2015.
[9] Order No. R9-2020-0001 As Amended By Order No. R9-2020-0183 NPDES No. CA0109398 *Waste Discharge Requirements For The City Of San Diego North City Water Reclamation Plant And Pure Water Facility, Indirect Potable Reuse Reservoir Water Augmentation Discharge To Miramar Reservoir San Diego County*, adopted and amended by the San Diego Water Board on May 13 and August 12, 2020, respectively.
[10] Order No. R9-2021-0011, NPDES No. CA0109045, *Waste Discharge Requirements for the City of San Diego South Bay Water Reclamation Plant Discharge to the Pacific Ocean through the South Bay Ocean Outfall* was adopted by the San Diego Water Board on May 12, 2021.

2.2.7 South Bay Ocean Outfall (SBOO)

The SBOO is jointly owned by the United States Section of the International Boundary and Water Commission (USIBWC) and the Discharger. The outfall discharges secondary- and tertiary-treated wastewater from the SBWRP and secondary-treated wastewater from the USIBWC South Bay International Wastewater Treatment Plant. The outfall has an average daily flow capacity of 174 MGD and a peak flow of 333 MGD. The SBOO discharges wastewater approximately 3.5 miles off the coast of the International Border at a depth of approximately 95 feet. Discharges from the SBOO are regulated under separate WDRs.[7,11]

2.2.8 Emergency Connection

In November 1965, the governments of the United States and Mexico agreed to construct, operate, and maintain an emergency connection from the sewage system of the City of Tijuana, Baja California to the Metro System, as an additional measure of safety to protect United States lands and waters from an upset or shutdown in the sewage system of the City of Tijuana (IBWC Minute No. 222 between the United States and Mexican sections of the International Boundary and Water Commission[12]). During the period when it was operational, up to 13 MGD of sewage could be transferred from the sewage system of the City of Tijuana to the Metro System through the Emergency Connection with treatment and disposal at the Discharger's Facility and discharge through the PLOO. The Emergency Connection was used daily throughout the 1980s and early 1990s and intermittently while the SBOO was still under construction. The Emergency Connection was last used on October 15, 2000; construction of the SBOO eliminated the need for continued use of the Emergency Connection. According to the Discharger, this emergency connection still exists but is not currently used. If the Discharger is requested to accept wastewater originating in Tijuana, Mexico, treated or untreated during the term of this Order~~/~~ and Permit, such acceptance would be contingent upon an agreement acceptable to the San Diego Water Board, USEPA, and the Discharger. The total suspended solids (TSS) contribution from that flow would not be counted toward the Discharger's mass emission limit(s).

2.3 Discharge Points and Receiving Waters

The PLOO has an average dry weather design flow of 240 MGD and a peak wet

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Order No. R9-2021-0015, *Master Recycling Permit for City of San Diego, South Bay Water Reclamation Plant, San Diego County* was adopted by the San Diego Water Board on June 9, 2021.

[11] Order No. R9-2021-0001, As Amended by Order No. R9-2023-0009, NPDES No. CA0108928, *Waste Discharge Requirements for the United States Section of the International Boundary and Water Commission South Bay International Wastewater Treatment Plant Discharge to the Pacific Ocean through the South Bay Ocean Outfall* was adopted by the San Diego Water Board on May 12, 2021, and amended on March 8, 2023.

[12] Minute No. 222 - *Emergency Connection of the Sewage System of the City of Tijuana, Baja California to the Metropolitan Sewage System of the City Of San Diego, California*, approved by United States on December 20, 1965, approved by Mexico on December 7, 1967, available at http://www.ibwc.gov/Files/Minutes/Min222.pdf (as of August 22, 2016).

weather flow of 432 MGD. The PLOO discharges wastewater from the Facility approximately 4.5 miles off the coast of Point Loma (32° 39' 55" North; 117° 19' 25" West) at a discharge depth of approximately 310 feet at mean lower low water. The PLOO is 23,472 feet long and includes a wye (Y-shaped) diffuser with two 2,496-foot-long diffuser legs. The diffuser has 416 discharge ports (208 on each leg). The Previous Order~~/~~ and Permit carried over an initial dilution value for the PLOO of 204 parts seawater per part wastewater (204:1) for the Facility. This initial dilution value was established based on the results of a modified version of the Roberts, Snyder, Baumgartner ocean outfall dilution model (RSB Model), submitted with the Discharger's 1995 ROWD and the Discharger's 1995, 2001, 2007, 2015, and 2022 301(h) applications to USEPA. This initial dilution value was predicated based on the 301(h)-variance-based effluent flow of 205 MGD from the Facility. For the 2022 ROWD, the Facility end-of-permit term (calendar year 2029) projected average annual flow is 129 MGD. This flow is an estimate based on conservative planning projections and may overstate what will actually be observed. Because the Facility end-of-permit projected flow of 129 MGD is less than the 301(h)-variance-based flow of 205 MGD evaluated by USEPA in the 1995, 2001, 2007, and 2015 applications, the San Diego Water Board and USEPA believe that the 301(h)-variance-based flow of 205 MGD continues to be a reasonable estimate for evaluating initial dilutions in the 2022 application. Thus, this Order~~/~~ and Permit ~~carries over~~ retains the initial dilution value of 204:1~~, as discussed in Attachment H~~. This 301(h)-variance-based flow of 205 MGD and minimum initial dilution value of 204:1 is used by the San Diego Water Board and USEPA to establish water quality-based effluent limitations (WQBELs) and performance goals and calculate mass-based effluent limitations for this Order~~/~~ and Permit, as discussed in sections 4.2 and 4.3 of this Fact Sheet.

2.4 Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in the Previous Order~~/~~ and Permit, for discharges from the Facility and representative monitoring data obtained at Monitoring Locations EFF-001 (Discharge Point No. 001) from October 2017 to December 2023 are as follows:

Table F-3. Historical Effluent Limitations and Monitoring Data at Monitoring Location EFF-001 for Conventional Pollutants[1,2]

Parameter	Units	Average Annual Effluent Limitation	Average Monthly Effluent Limitation	Average Weekly Effluent Limitation	Instantaneous Maximum Effluent Limitation	Highest Average Annual Discharge	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Instantaneous Maximum
Flow	MGD	--	240	--	--	--	192	--	--
Total Suspended Solids (TSS)	mg/L	--	60[1]	--	--	--	128[2]	--	--

Parameter	Units	Average Annual Effluent Limitation	Average Monthly Effluent Limitation	Average Weekly Effluent Limitation	Instantaneous Maximum Effluent Limitation	Highest Average Annual Discharge	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Instantaneous Maximum
Total Suspended Solids (TSS)	Facility percent removal (%)	--	≥75[1]	--	--	--	62[2]	--	--
Total Suspended Solids (TSS)	System-wide percent removal (%)	--	≥80[3]	--	--	--	62.7[2]	--	--
Total Suspended Solids (TSS)	metric ton per year (mt/yr)	12,000[4] 11,999[5]	--	--	--	[6]	--	--	--
Biochemical Oxygen Demand 5-day @ 20 degrees Celsius (°C) ($CBOD_5$)	System-wide percent removal (%)	≥58[3]	--	--	--	56.5[2]	--	--	--
Oil and Grease	mg/L	--	25	40	75	--	30[2]	36.8	85.5[2]
Oil and Grease	pounds per day (lbs/day)[7]	--	42,743	68,388	128,228	--	34,961	43,466	103,538[2]
Settleable Solids	ml/L	--	1.0	1.5	3.0	--	0.9[2]	1.8[2]	7[2]
Turbidity	NTU	--	75	100	225	--	90.4[2]	108[2]	190
pH	standard units	--	--	--	6.0 – 9.0[8]	--	--	--	6.73-7.48[8]

Notes for Table F-3

1 The Dischargers shall, as an average monthly, remove 75 percent of suspended solids from the influent stream before discharging wastewaters to the ocean, except that the effluent limitation to be met shall not be lower than 60 mg/l. This effluent limitation was derived from the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan), Table 4.

2 See section 2.5, Compliance Summary, for more information on exceedances.

3 The system-wide percent removal was derived from CWA sections 301(h) and (j)(5). Percent removal shall be calculated on a system-wide basis, as provided in section 7.9 of this Order~~/~~ and Permit. Section 7.9 of this Order~~/~~ and Permit is carried over from Orders Nos. R9-2002-0025, R9-2009-0001, and R9-2017-0007.

4 To be achieved on the effective date of this Order~~/~~ and Permit through the end of the fourth year of this Order~~/~~ and Permit. Mass emission limits for TSS apply only to discharges from publicly-owned treatment works (POTWs) owned and operated by the Discharger and the Discharger's wastewater generated in the Metro System service area, excluding TSS contributions from Metro System flows treated in the City of Escondido and SBWRP flows

discharged to the SBOO. If the Discharger is requested to accept wastewater originating in Tijuana, Mexico, treated or untreated, such acceptance would be contingent upon an agreement acceptable to the San Diego Water Board, USEPA, and Discharger. The TSS contribution from that flow would not be counted toward Discharger's mass emission limit(s).

5 To be achieved by the beginning of the fifth year of this Order~~/~~ and Permit. Mass emission limits for TSS apply only to discharges from POTWs owned and operated by the Discharger and the Discharger's wastewater generated in the Metro System service area, excluding TSS contributions from Metro System flows treated in the City of Escondido and SBWRP flows discharged to the SBOO. If the Discharger is requested to accept wastewater originating in Tijuana, Mexico, treated or untreated, such acceptance would be contingent upon an agreement acceptable to the San Diego Water Board, USEPA, and Discharger. The TSS contribution from that flow would not be counted toward Discharger's mass emission limit(s).

6 Calculated results for TSS annual mass emission were not included in California Integrated Water Quality System (CIWQS) data summary.

7 The mass emission rate (MER) limitation, in lbs/day, was calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the 301(h)-variance-based flow of 205 MGD and C is the concentration (in mg/L). The 301(h)-variance-based flow rate of 205 MGD was taken from the 1995 301(h) application and carried over from Orders Nos. 95-106, R9-2002-0025, R9-2009-0001, and R9-2017-0007.

8 Minimum and maximum value.

Table F-4. Historical Effluent Limitations and Monitoring Data at Monitoring Location EFF-001 Based On Water Quality Objectives[1]

Parameter	Units	Six-month Median	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	Instantaneous Maximum Effluent Limitation	Highest Six-month Median Discharge	Highest Average Monthly Discharge	Highest Maximum Daily Discharge	Highest Instantaneous Maximum
Total Chlorine Residual	microgram per liter (µg/L)	4.1E+02	--	1.6E+03	1.2E+04	0	--	4.0E+02	8.4E+03
Total Chlorine Residual	lbs/day	7.0E+02	--	2.7E+03	2.1E+04	0	--	2.4E+03	1.4E+04
Chronic Toxicity Test[2,3]	"Pass" / "Fail"	--	--	"Pass"	--	--	--	"Pass"	--
Aldrin	µg/L	--	4.5E-03	--	--	--	No detected	--	--
Aldrin	lbs/day	--	7.7E-03	--	--	--	No detected	--	--

Notes for Table F-4

1. Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates the position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation a value of 6.1E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^{2} or 610, and 6.1E+00 represents 6.1×10^{0} or 6.1.
2. MER effluent limitations are based on the permitted flow rate for (205 MGD).

3. The Chronic Toxicity final effluent limitation is protective of both the numeric acute and chronic toxicity Ocean Plan water quality objectives. The final effluent limitation will be implemented using Short-term Methods for *Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995) (https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NERL&dirEntryId=46584), current USEPA guidance in the *National Pollutant Discharge Elimination System Test of Significant Toxicity implementation Document* (EPA 833-R-10-003, June 2010) (https://www3.epa.gov/npdes/pubs/wet_final_tst_implementation2010.pdf) and *EPA Regions 8, 9, and 10, Toxicity Training Tool* (January 2010) (https://www.epa.gov/sites/default/files/documents/ToxTrainingTool10Jan2010.pdf).

2.5 Compliance Summary

As of ~~December 4, 2023 September 11, 2025~~ January 8, 2026, the Discharger has reported the following alleged violations of the Previous Order~~/~~ and Permit:

2.5.1 Order No. R9-2017-0007, section IV.A.1, table 5 states that the BOD average annual system-wide percent removal shall not be less than 58 percent. On December 31, 2022, the Discharger reported a BOD average annual system-wide percent removal of 56.5 percent, less than the required minimum limitation.

2.5.2 Order No. R9-2017-0007, section IV.A.1, table 5 states that the TSS average monthly system-wide percent removal shall not be less than 80 percent. On March 31, April 30, May 31, and June 30, 2022, and on March 31, 2023, the Discharger reported TSS average monthly system-wide percent removals of 75.5, 62.7, 66.8, 79.1, and 79.8 percent, respectively, less than the required minimum limitation.

2.5.3 Order No. R9-2017-0007, section IV.A.1, table 5 states that the TSS average monthly concentration shall not exceed 60 mg/L. On March 31, April 30, May 31, and June 30, 2022, the Discharger reported TSS average monthly concentrations of 83.7, 128.0, 118.0, and 79.8 mg/L, respectively, greater than the limitation.

2.5.4 Order No. R9-2017-0007, section IV.A.1, table 5 states that the TSS average monthly facility percent removal shall not be less than 75 percent. On April 30 and May 31, 2022, the Discharger reported TSS average monthly facility percent removals of 62 percent and 66.2 percent, respectively, less than the required minimum limitation.

2.5.5 Order No. R9-2017-0007, section IV.A.1, table 5 states that the settleable solids instantaneous maximum limitation is 3.0 ml/L. On November 28, 2017; March 12 and 23, 2019; September 12, 2019; August 12 and 30, 2021; December 14, 2021; May 4, 2022; ~~and~~ December 21, 2022; ~~and~~ August 22, 2023; ~~and~~ December 29, 2023; March 15, 2024; ~~and~~ January 17, 2025; August 26, 2025; and September 3 and 9, 2025, the Discharger reported settleable solids instantaneous maximums of 3.15; 3.15; 3.15; 4.0; 6.5; 4.0; 3.5; 7.0; 5.0; ~~3.2, and 4.2; 4.0; and 8, 4; 3.5; and 6~~3.2; 4.25; 4; 8; 4; 3.5; and 6 ml/L, respectively, greater than the limitation.

2.5.6 Order No. R9-2017-0007, section IV.A.1, table 5 states that the settleable solids average weekly limitation is 1.5 ml/L. On May 7, 2022, the Discharger reported a settleable solids average weekly of 1.8 ml/L, greater than the limitation.

2.5.7 Order No. R9-2017-0007, section IV.A.1, table 5 states that the turbidity average

monthly limitation is 75 NTU. On April 30, May 31, and June 30, 2022, the Discharger reported turbidity average monthly values of 83.4, 90.4, and 82.1 NTU, respectively, greater than the limitation.

2.5.8 Order No. R9-2017-0007, section IV.A.1, table 5 states that the turbidity average weekly limitation is 100 NTU. On April 30 and May 7, 2022, the Discharger reported turbidity average weekly values of 108 and 107 NTU, respectively, greater than the limitation.

2.5.9 Order No. R9-2017-0007, section IV.A.1, table 5 states that the oil and grease instantaneous maximum limitations are 75 mg/L. On May 4, 2022, the Discharger reported oil and grease value of 85.5 mg/L, greater than the limitations.

2.5.10 Order No. R9-2017-0007, section IV.A.1, table 5 states that the oil and grease average monthly limitation is 25 mg/L. On April 30 and May 31, 2022, the Discharger reported oil and grease average monthly values of 28.5 and 30 mg/L, respectively, greater than the limitation.

2.5.11 Order No. R9-2017-0007, Attachment E, Monitoring and Reporting Program, (MRP) contains the minimum monitoring requirements. The Discharger reported ~~22~~ ~~45~~ 65 deficient monitoring and reporting violations due to changes in monitoring requirements in the permit (2022 permit addendum adding monitoring requirements), missing values for calculated results, laboratory staff who lacked experience or made errors, monitoring results not available at the time the SMR was due, samples not analyzed, and Discharger's staff not appropriately collecting samples from shoreline monitoring stations and/or falsifying metadata.

2.5.12 Order No. R9-2017-0007, section VI.C.6.c requires the Discharger to prepare and submit Semiannual Progress Reports (Pure Water) on January 14 and July 14 each year. The Discharger submitted the Semiannual Progress Reports (Pure Water) for July-December 2017 and January-June 2018 on February 22, 2018, and July 18, 2018, respectively.

2.5.13 Order No. R9-2017-0007, section VI.C.4.a requires the Discharger to maintain in good working order a sufficient alternative power source. On January 28 and April 26, 2021, a power outage at the Facility resulted in the discharge of approximately 45 and 107.5 million gallons of partially treated wastewater, respectively, through the PLOO to the Pacific Ocean. While the Discharger has a standby emergency generator, the emergency generator was not functioning at the time of the power outage or was insufficient to power all treatment processes.

2.6 Planned Changes

2.6.1 Pure Water San Diego. The Previous Order~~/~~ and Permit included the Discharger's commitment to implementing a comprehensive water reuse program called "Pure Water San Diego" (also referred to as Pure Water Program). Pure Water San Diego is a long-term program that will provide a safe, reliable, and cost-effective potable water supply for San Diego through the application of advanced treatment technology to purify recycled water. As such the Pure Water San Diego Program is a joint water and wastewater facilities plan with the goal of producing water

suitable for potable reuse, while significantly reducing and improving the discharge to the ocean from the Facility. As part of this plan, wastewater normally directed to the Facility will be diverted to upstream treatment facilities where purified water will be produced. Pure Water San Diego is being implemented in two phases: Phase 1, the North City Pure Water Project and Phase 2, the Central Area Project.

Phase 1 advanced treatment facilities, the NCPWF, will be co-located with the North City Water Reclamation Plant (NCWRP). Construction of Phase 1 facilities, including pipelines, pump stations, and treatment processes, has begun. Purified water will eventually be delivered to Miramar Reservoir, as regulated under a separate NPDES Permit.[13] Full operation of Phase 1 is expected to begin by December 31, 2027. Once operational, Phase 1 will remove 52 MGD of wastewater that would otherwise have been directed to the Facility and produce 30 MGD of purified water suitable for potable reuse, as well as 12 MGD of recycled water for irrigation and other uses.

Phase 2 (Central Area Project) is in the planning stages. The planning stages of the Central Area Project include siting of the facilities, selecting the discharge location, determining regulatory requirements, and constructing and operating a demonstration facility. The Central Area Project is being designed to produce up to 53 MGD of purified water, for a cumulative total of 83 MGD by December 31, 2035, and may take ~~taking~~ into account production of water suitable for potable reuse occurring at all treatment processes for wastewater upstream from and at the Facility.

Tasks for Pure Water San Diego Phase 1 and Phase 2, which were provided in the Discharger's ROWD, have been included in section 6.3.6 of this Order~~/~~ and Permit.

2.6.2 Brine Discharges from SBWRP. In 2014, the Discharger added two Electrodialysis reversal (EDR) units at the SBWRP to reduce total dissolved solids (TDS), chloride, and sodium levels in the recycled water. Due to reliability and maintenance issues with the EDR units and in anticipation of increased recycled water demand, the Discharger has elected to install an microfiltration/reverse osmosis (MF/RO) system, as it is a more effective and reliable treatment method.

Currently, the EDR waste stream or EDR reject water is combined with waste solids and returned to the sewage collection system that is routed to the Facility for treatment and subsequent discharge through the Point Loma Ocean Outfall.

The project at SBWRP is being designed so that the future MF/RO waste stream or RO concentrate generated at SBWRP will no longer be pumped with waste

[13] Order No. R9-2020-0001 as amended by Order No. R9-2020-0183 NPDES No. CA0109398, *Waste Discharge Requirements for the City of San Diego North City Water Reclamation Plant and Pure Water Facility, Indirect Potable Reuse Reservoir Water Augmentation Discharge to Miramar Reservoir San Diego County* was adopted by the San Diego Water Board on May 13, 2020, and amended on August 12, 2020.

solids to the Facility for treatment in the manner described above. The Discharger's intent is to discharge the MF/RO concentrate through the South Bay Ocean Outfall under a separate WDRs (Order No. R9-2021-0011). This approach will result in a change to the characteristics of the wastewater sent from SBWRP to the Facility for treatment and discharge.

The project is currently anticipated to be completed in mid-2026 and may be extended based on unforeseen circumstances, such as delays with permitting and construction.

2.6.3 The Discharger is planning to divert ~~storm water~~ stormwater flows from the Facility premises back to the Facility headworks. Two of the storm drains that will divert stormwater flows to the Facility will be downstream of the Facility's flowmeter and the influent monitoring station (INF-001). According to the Discharger, the stormwater flows are only expected to make up about 0.65% of the Facility's total influent flow in a heavy storm. Due to the location of the storm drains/outfalls, the Discharger stated that installing a flow meter is challenging. The description of Monitoring Location INF-001 has been modified to account for the planned ~~storm water~~ stormwater diversion.

3 Applicable Plans, Policies, and Regulations

The requirements contained in this Order~~/~~ and Permit are based on the requirements and authorities described in this section.

3.1 Legal Authorities

This Order~~/~~ and Permit ~~serves~~serve as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (Water Code) (commencing with section 13260). This Order~~/~~ and Permit ~~is~~ are 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), which ~~serves~~ serve as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 1 subject to the WDRs in this Order~~/~~ and Permit. ~~Therefore, the~~ The State Order and Federal Permit are ~~consolidated into a single permit~~ separate permits that have been processed and issued pursuant to the consolidation of permit processing provisions of 40 CFR section 124.4(c)(2).

3.2 California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of chapter 3 of CEQA, (commencing with section 21100) of division 13 of the Public Resources Code.

3.3 State and Federal Laws, Regulations, Policies, and Plans

3.3.1 **Water Quality Control Plan.** The San Diego Water Board adopted a *Water Quality Control Plan for the San Diego Basin* (Basin Plan) on September 8, 1994, that designates beneficial uses, establishes water quality objectives, and contains

implementation programs and policies to achieve those objectives for the Pacific Ocean and other receiving waters addressed through the plan. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and approved by the State Water Resource Control Board (State Water Board). Beneficial uses applicable to the Pacific Ocean specified in the Basin Plan are summarized in Table F-5:

Table F-5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Pacific Ocean	• Industrial service supply (IND); • Navigation (NAV); • Water contact recreation (REC-1); • Non-contact recreation (REC-2); • Commercial and sport fishing (COMM); • Preservation of biological habitats of special significance (BIOL); • Wildlife habitat (WILD); • Rare, threatened, or endangered species (RARE); • Marine habitat (MAR); • Aquaculture (AQUA); • Migration of aquatic organisms (MIGR); • Spawning, reproduction, and/or early development (SPWN); and • Shellfish harvesting (SHELL).

In order to protect the beneficial uses, the Basin Plan establishes water quality objectives and a program of implementation. Requirements of this Order~~/~~ and Permit implement the Basin Plan.

3.3.2 **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (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, the USEPA approved the amendments on March 22, 2019, and it became effective on March 22, 2019. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized in Table F-6:

Table F-6. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001	Pacific Ocean	• IND; • REC-1; • REC-2, including aesthetic enjoyment; • NAV; • COMM; • Mariculture; • Preservation and enhancement of designated Areas of Special Biological Significance (ASBS); • Rare and endangered species; • MAR; • Fish migration; • Fish spawning; and • SHELL.

In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order~~/~~ and Permit implement the Ocean Plan.

3.3.3 **Antidegradation Policy.** Federal regulation 40 CFR section 131.12 requires that the State water quality standards include an antidegradation policy consistent with the federal 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 based on specific findings. The San Diego Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution 68-16.

3.3.4 **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the federal CWA and federal regulations at 40 CFR section 122.44(l) restrict backsliding in NPDES permits. These 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.

3.3.5 **Section 403(c) of the Clean Water Act (CWA).** Discharges to marine waters are subject to Section 403 of the CWA, which sets forth criteria to prevent unreasonable degradation of the marine environment and authorized imposition of any additional effluent limits necessary to protect the marine environment. Pursuant to 40 CFR section 125.122, unreasonable degradation of the marine

environment is evaluated based on ten factors or based on the application of a state's water quality standards. Specifically, 40 CFR section 125.122(b) states that discharges in compliance with State water quality standards "shall be presumed not to cause unreasonable degradation of the marine environment, for any specific pollutants or conditions specified in the variance or the standard." USEPA and the San Diego Water Board are applying the Basin Plan and the Ocean Plan as specified in sections 3.3.1 and 3.3.2 of this Fact Sheet, except for evaluating chronic toxicity for Discharge Point 001 using the test of significant toxicity (TST) statistical approach. USEPA has reviewed the previous studies to examine the comparison of toxicity test results using the TST and No-Observed-Effect-Concentration (NOEC) statistical approaches and has determined that use of the TST statistical approach is consistent with the Ocean Plan and CWA ~~part~~ section 403(c) in that it provides protection of the designated beneficial uses of ocean waters. TST statistical approach is also used in other NPDES permits for large publicly owned treatment works, including Orange County Sanitation District and City of Los Angeles. Given the available dilution (i.e. 204:1), the receiving water monitoring requirements, the Discharger's analysis of the ocean discharge criteria as part of its application, and USEPA's additional 403(c) analysis, USEPA makes a determination that the discharges authorized in this permit will not cause unreasonable degradation of the marine environment.

3.3.6 **Endangered Species Act Requirements.** This Order~~/~~ and Permit ~~does~~ do 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, sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). USEPA determined that the discharge would have no effect on listed bird species; may affect but is not likely to adversely affect listed fish species, black abalone, sea star, and whale species (right, sei, and sperm whale); and is likely to adversely affect white abalone, seal, sea turtles, and whale specie (blue, fin, gray, and humpback whales). These effect determinations are explained in the biological evaluation. USEPA is consulting with the United States Fish and Wildlife Service and the National Marine Fisheries Service (NMFS). This Order~~/~~ and Permit ~~requires~~ require compliance with effluent limitations~~, receiving water limits,~~ and other limitations and requirements to protect the beneficial uses of waters of the State, including protecting rare and endangered species. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

3.3.7 **Sewage Sludge and Biosolids.** On February 19, 1993, USEPA issued a final rule for the use and disposal of sewage sludge (40 CFR part 503). This regulation requires that producers of sewage sludge meet certain handling, disposal, and monitoring requirements. The USEPA, not the San Diego Water Board, will oversee compliance with 40 CFR part 503.

3.3.8 **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised State and tribal water quality standards become effective

for CWA purposes (40 CFR section 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

3.3.9 **California Thermal Plan.** The 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* (hereinafter Thermal Plan) on January 7, 1971, and amended this plan on September 18, 1975. This plan contains temperature objectives for coastal and inland surface waters. Requirements of this Order~~/~~ and Permit implement the Thermal Plan.

3.3.10 **Water Quality Certification Requirements** (CWA section 401; 40 CFR sections 124.53 and 124.54).

For States, Territories, or Tribes with USEPA approved water quality standards, USEPA requests certification from the affected State, Territory, or Tribe that the permit will meet all applicable water quality standards. Certification under section 401 of the CWA shall be in writing and shall include the conditions necessary to assure compliance with referenced applicable provisions of sections 208(e), 301, 302, 303, 306, and 307 of the CWA and appropriate requirements of State, Territory, or Tribal law. USEPA cannot issue the Permit ~~permit~~ until the certifying State, Territory, or Tribe has granted certification under 40 CFR section 124.53 or waived its right to certify. ~~If the State, Territory, or Tribe does not respond within 60 days of the requested deadline, it will be deemed to have waived certification.~~

Based on conversations between USEPA and the San Diego Water Board on September 10, 2025, the San Diego Water Board ~~has~~ agreed to waive the requirement for a pre-filing meeting request (see 40 CFR section 121.4). On September 11, 2025, USEPA requested a CWA section 401 water quality certification of the NPDES permit (401 Water Quality Certification). In their letter, USEPA proposed a 60-day timeframe for the reasonable period of time to act on the 401 Water Quality Certification, but in the event that the USEPA and San Diego Water Board did not agree on a reasonable period of time then the reasonable period of time shall be 6 months. The San Diego Water Board did not agree to the 60-day timeframe. Thus, the reasonable period of time to act on the 401 Water Quality Certification request was 6 months. The San Diego Water Board acted on this request on February 11, 2026, by adopting this Order, in lieu of issuing a separate, stand-alone 401 Water Quality Certification. This Order and Permit are consolidated State and federal NPDES permits developed by both the San Diego Water Board and USEPA. The San Diego Water Board's participation in the development of this Order and Permit ensures that the federal permit includes the conditions necessary for the authorized discharge to comply with applicable provisions of the CWA and State water quality requirements, including water quality standards, and serves as its CWA section 401 Water Quality

Certification of the federal permit issued by USEPA. ~~On September 11, 2025, USEPA requested CWA section 401 certification from the San Diego Water Board in accordance with 40 CFR section 121.5. September 12, 2025, the San Diego Water Board provided USEPA the water quality certification. See Attachment G of this Order and Permit.~~

3.4 Impaired Water Bodies on the CWA section 303(d) List

In ~~April 2018~~ May 2022, USEPA-approved the list of impaired water bodies, prepared by the State Water Board pursuant to federal CWA section 303(d), which are not expected to meet applicable water quality standards after implementation of technology-based effluent limitations (TBELs) for point sources. The 303(d) list for water in the Pacific Ocean in the vicinity of the PLOO include:

- Pacific Ocean Shoreline, Point Loma HA, at Bermuda Ave for ~~total coliform~~ indicator bacteria;
- Pacific Ocean Shoreline, Point Loma HA, at Sunset Cliffs and Froude Street for trash;
- Pacific Ocean Shoreline, Mission San Diego HSA, at Ocean Beach pier at Narrangaset for trash;
- Pacific Ocean Shoreline, Mission San Diego HSA, at Newport Ave for indicator bacteria; and
- Pacific Ocean Shoreline, Scripps HA, at Pacific Beach Point, Pacific Beach for ~~enterococci, fecal coliform, and total coliform~~ pathogens.

Several total maximum daily loads (TMDLs) for bacteria indicators have been adopted and approved within San Diego Region; however, there is no TMDL wasteload allocation applicable to the PLOO discharge. ~~Nonetheless, this Order/Permit implements receiving water quality objectives for bacterial indicators.~~

3.5 Other Plans, Polices and Regulations

3.5.1 Clean Water Act Section **301(h) ~~Waiver~~ Variance and Primary Treatment Requirements (CWA section 301(h); 40 CFR section 124.54).** The Discharger has applied for renewal of their CWA section 301(h)-modified NPDES permit for the Facility. The Discharger requested a renewal of their variance (informally called a "waiver" or "modification") under CWA section 301(h) and the Ocean Pollution Reduction Act of 1994, from federal secondary treatment standards contained in CWA section 301(b)(1)(B). The Discharger has proposed alternative effluent limitations for TSS and BOD_5, described below. The 2022 CWA section 301(h) application is based on an improved discharge, as defined at 40 CFR section 125.58(i). The Discharger has proposed to continue effluent disinfection (chlorination) to achieve applicable water quality standards for bacteria in State-regulated Ocean waters. The administrative processing for a CWA section 301(h) variance by USEPA generally consists of the following actions:

- Filing of a timely application by the discharger;
- Initial screening of the application by the State and USEPA;

- USEPA preparation of a Tentative Decision Document (TDD) which involves comparison of the application with criteria set forth in applicable statutes and regulations;
- Announcement of the tentative decision for the CWA section 301(h) variance by the USEPA Regional Administrator;
- Public notice of a draft CWA section 301(h)-modified permit incorporating the USEPA Regional Administrator's tentative decision and the TDD;
- Public hearings to address public interest;
- State concurrence in the granting of a consolidated CWA section 301(h) variance through State and USEPA joint issuance of section ~~a~~ 301(h)-modified NPDES ~~permit~~ permits, or denial by the State and/or the USEPA Regional Administrator; and
- Processing of appeals in accordance with 40 CFR part 124.

The Discharger has proposed the following alternative effluent limitations for TSS and BOD_5 based on CWA sections 301(h) and 301(j)(5). The Discharger's percent removal limitations for TSS and BOD_5 are computed on a "system-wide" basis, whereby the Discharger receives credit for removal achieved as part of water reclamation operations in the Metro System service area which ultimately connect to the Facility and discharge through the PLOO.

Table F-7. Summary of TBELs Based on CWA sections 301(h) and (j)(5)[1]
Proposed TSS MER rates (mt/yr)

Parameter	Units	Average Annual Effluent Limitations	Average Monthly Effluent Limitations
TSS	system-wide percent removal (%)	--	≥80[2]
TSS	mt/yr	11,999[3]	--
TSS	mt/yr	11,998[4]	--
BOD_5	system-wide percent removal (%)	≥58[2]	--

Notes for Table F-7

1. Based on average monthly performance data (1990 through 1994) for the Facility provided by the Discharger for the 1995 301(h) application.
2. The average monthly system-wide percent removal was derived from CWA sections 301(h) and (j)(5). Percent removal shall be calculated on a system-wide basis, as provided in section 7.9 of this Order~~/~~ and Permit. Section 7.9 of this Order~~/~~ and Permit is carried over from Orders Nos. R9-2002-0025, R9-2009-0001, and R9-2017-0007.
3. To be achieved on the effective date of this Order~~/~~ and Permit through the end of the fourth year of this Order~~/~~ and Permit. Mass emission limits for TSS apply only to discharges from POTWs owned and operated by the Discharger and the Discharger's wastewater generated in the Metro System service area, excluding TSS contributions from Metro System flows treated in the City of Escondido and SBWRP flows discharged to the SBOO. If the Discharger is requested to accept

wastewater originating in Tijuana, Mexico, treated or untreated, such acceptance would be contingent upon an agreement acceptable to the San Diego Water Board, USEPA, and Discharger. The TSS contribution from that flow would not be counted toward Discharger's mass emission limit(s).

4. To be achieved by the beginning of the fifth year of this Order~~/~~ and Permit. Mass emission limits for TSS apply only to discharges from POTWs owned and operated by the Discharger and the Discharger's wastewater generated in the Metro System service area, excluding TSS contributions from Metro System flows treated in the City of Escondido and SBWRP flows discharged to the SBOO. If the Discharger is requested to accept wastewater originating in Tijuana, Mexico, treated or untreated, such acceptance would be contingent upon an agreement acceptable to the San Diego Water Board, USEPA, and Discharger. The TSS contribution from that flow would not be counted toward Discharger's mass emission limit(s).

A POTW applying for a CWA section 301(h) variance must demonstrate satisfactorily to USEPA that the modified discharge will meet the following CWA section 301(h) requirements:

- The modified discharge will comply with all applicable water quality standards and the State has determined that the modified discharge will comply with State law;
- The modified discharge, alone or in combination with other sources, will not interfere with the attainment or maintenance of water quality that assures the protection of public water supplies; assures the protection and propagation of a balanced indigenous population of fish, shellfish, and wildlife; and allows for recreational activities;
- A monitoring program has been established by the applicant to monitor the impact of the modified discharge, including biological, water quality, and effluent monitoring;
- The modified discharge will not result in additional requirements on other point and nonpoint sources of pollutants and the State has determined that the modified discharge will not result in any such additional requirements;
- An applicant serving a population of 50,000 or more that receives toxic pollutants from industrial sources must demonstrate they have complied with urban area pretreatment requirements at the time the permit is approved;
- An applicant must make a demonstration that pretreatment requirements for industrial sources introducing wastes into the treatment works will be enforced;
- An applicant must demonstrate that a schedule of activities has been established to minimize the introduction of toxic substances from non-industrial sources onto the treatment works, including the development and implementation of programs for public education and non-industrial source control;
- An applicant must demonstrate that the modified discharge will not result in new or substantially increased discharges of the waived pollutants above the

discharge specified in the CWA section 301(h)-modified permit. Projections of effluent volumes and MERs for pollutants to which the modification applies must be provided in 5-year increments for the design life of the facility; and

- The modified discharge must receive at least primary or equivalent treatment and must meet CWA section 304(a)(1) criteria, in accordance with 40 CFR section 125.62(a). Variances are prohibited for discharges into waters that contain significant amounts of previously discharged effluent from the treatment works, or into saline estuarine waters that do not support a balanced indigenous population, do not allow recreation, or which violate water quality standards or criteria beyond the zone of initial dilution (ZID).

Under 40 CFR section 125.59(b), no CWA section 301(h)-modified permit may be issued for:

- Discharges that do not comply with 40 CFR parts 122 and 125, subpart G;
- Discharges of sewage sludge;
- Discharges that would not be in compliance with applicable provisions of State, local, or other federal laws and Executive Orders; or
- Discharges that enter the New York Bight Apex.

In addition, the Discharger must meet the following requirements under the Ocean Pollution Reduction Act of 1994, CWA section 301(j)(5):

- 80 percent removal of TSS based on a system-wide monthly average;
- 58 percent removal of BOD_5 based on a system-wide average annual;
- 45 MGD of water reclamation capacity by the year 2010; and
- Reduction of TSS discharged into the ocean during the period of the Order~~/~~ and Permit modification.

During the term of the 1995 permit, the Discharger implemented a reclamation program with a system capacity of 45 MGD of reclaimed water, thereby meeting the requirement for reclaimed water capacity of 45 MGD in CWA section 301(j)(5). On an average annual basis, currently a little over 12 MGD of reclaimed water is delivered to reuse sites from NCWRP and SBWRP. On a system-wide basis, the Discharger will be able to remove not less than 80 percent of TSS (on a monthly average) and not less than 58 percent of BOD_5 (on an average annual) in the discharge to which the 2022 CWA section 301(h) application applies.

USEPA has drafted a CWA section 301(h) TDD evaluating the Discharger's proposed improved discharge and effluent limitations for TSS and BOD_5, the projected average annual end-of-permit effluent flow rate, and 2009 through 2023 effluent concentrations for TSS and BOD_5, as provided in the updated 2022 301(h) application. The 2024 TDD concludes that the Discharger's 301(h) application satisfies CWA sections 301(h) and 301(j)(5). Based on this information, it is the USEPA Regional Administrator's tentative decision to grant

the Discharger's variance request for TSS and BOD_5, in accordance with the terms, conditions, and limitations of the TDD. In accordance with this decision and the 1984 301(h) Memorandum of Understanding between the State of California and USEPA, the San Diego Water Board and USEPA have jointly proposed issuance of ~~a~~ consolidated 301(h)-modified ~~permit~~ permits incorporating both federal NPDES requirements and State WDRs. The San Diego Water Board's adoption of this Order and Permit serves as its certification and concurrence with the Discharger's CWA section 301(h) variance. This Order and Permit are consolidated State and federal NPDES permits developed by both the San Diego Water Board and USEPA. The San Diego Water Board's participation in the development of this Order and Permit ensures that the federal permit includes the conditions necessary for the authorized modified discharge to comply with applicable provisions of state law, including water quality standards applicable to the pollutants for which the CWA section 301(h) variance is requested.

The final permit ~~will be~~ is issued without prejudice to the rights of any party to address the legal issue of the applicability of CWA section 1311 (j)(5) to the Discharger's future NPDES permits.

~~The Discharger's Order/~~ and ~~Permit renewal of the variance from federal secondary treatment standards, pursuant to CWA sections 301(h) and (j)(5), is contingent upon:~~

- ~~Determination by the California Coastal Commission that the proposed discharge is consistent with the Coastal Zone Management Act of 1972, as amended (16 U.S.C. section 1451 et seq.);~~
- ~~Determination by the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service that the proposed discharge is consistent with the federal Endangered Species Act of 1973, as amended (16 U.S.C. section 1531, et seq.);~~
- ~~Determination by the NOAA National Marine Fisheries Service that the proposed discharge is consistent with the Magnuson-Stevens Fishery Conservation and Management Act, as amended (16 U.S.C. section 1801, et seq.);~~
- ~~Determination by the San Diego Water Board that the discharge will not result in additional treatment pollution control, or other requirement, on any other point or nonpoint sources (40 CFR section 125.64);~~
- ~~The San Diego Water Board's certification concurrence that the discharge will comply with water quality standards for the pollutants which the 301(h) variance is requested (40 CFR section 125.61) (i.e., TSS and BOD_5). The joint issuance of a consolidated NPDES permit permits which incorporates incorporate both the 301(h) variance and State WDRs will serve as the State's concurrence; and~~
- ~~The USEPA Regional Administrator's final decision regarding the Discharger's CWA section 301(h) variance request.~~

3.5.2 ~~**Storm Water**~~ **Stormwater.** Pursuant to Order No 2014-0057-DWQ, amended by Order 2015-0122-DWQ and Order 2018-0028-DWQ, NPDES Permit No. CAS000001, *General Permit* for ~~storm water~~ stormwater *Discharges Associated with Industrial Activities* (~~Storm Water~~ Stormwater Order), sewerage treatment plants are classified (per Occupational Safety and Health Administration) as Standard Industrial Classification (SIC) code 4952 or "Sewerage Systems." SIC code 4952 falls within the Regulated SIC Code for enrollment under the ~~Storm Water~~ Stormwater Order. The eligibility for enrollment under the ~~Storm Water~~ Stormwater Order is not based on treatment design flow or capacity of the sewerage treatment plants. It is based on the regulated industrial activity. The Facility's SIC code is 4952 and is enrolled under the ~~Storm Water~~ Stormwater Order. The list of SIC codes can be found at https://www.waterboards.ca.gov/water_issues/programs/stormwater/sicnum.shtml .

3.5.3 **Pretreatment.** Discharges of pollutants that may interfere with operations of a POTW are regulated by USEPA's pretreatment regulations at 40 CFR part 403. These regulations require dischargers to develop and implement pretreatment programs that impose limitations on industrial users of the POTWs.

3.5.4 **Sewage Collection System.** Publicly-owned sewage collection systems are subject to coverage under State Water Board Order No. 2022-0103-DWQ, *Statewide Waste Discharge Requirements, General Order for Sanitary Sewer Systems* (Statewide General SSO Order), and any subsequent Order. The Discharger owns and operates a publicly-owned sewage collection system and must retain coverage under Order No. 2022-0103-DWQ and any subsequent Order.

In addition, the provisions of this Order~~/~~ and Permit prohibit discharges from any point other than the authorized discharge point. Therefore, any discharges from the sewage collection system are prohibited. Moreover, the sewage collection system is part of the POTW and, therefore, must comply with the provisions of this Order~~/~~ and Permit requiring reports of any noncompliance (40 CFR sections 122.44(1)(6) and (7)), proper operation and maintenance (40 CFR section 122.41(e)), and duty to mitigate sewage spills (40 CFR section 122.41(d)).

4 Rationale for Effluent Limitations and Discharge Specifications

The federal CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the 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 limitations 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.

Where applicable technology-based limitations and standards and WQBELs both result in effluent limitations, the more protective numeric limitation shall be applied.

4.1 Discharge Prohibitions

This Order~~/~~ and Permit ~~retains~~ retain the discharge prohibitions from the Previous Order~~/~~ and Permit, as described below. Discharges from the Facilities to surface waters in violation of prohibitions contained in this Order~~/~~ and Permit are violations of the federal CWA and therefore ~~are~~ may be subject to third party lawsuits. Discharges from the Facilities to land in violation of prohibitions contained in this Order~~/~~ and Permit are violations of the Water Code and are not subject to third party lawsuits under the federal CWA because the Water Code does not contain provisions allowing third party lawsuits for such violations.

4.1.1 Discharge Prohibition 3.1 has been carried over from the Previous Order~~/~~ and Permit~~.~~ (Order No. R9-2017-0007, section III.A). Discharge Prohibition 3.1 ~~clearly defines what types of~~ clarifies that any discharges other than those to Discharge Point No. 001 are ~~prohibited~~ unauthorized, unless explicitly regulated by this Order and Permit or separate WDRs. 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. Discharges not described in the ROWD, and subsequently in this Order~~/~~ and Permit, are prohibited.

4.1.2 ~~Discharge Prohibitions 3.2 and 3.3 have been carried over from the Previous Order/Permit. Prohibitions 3.2 and 3.3 include discharge prohibitions of the Ocean Plan and the Basin Plan.~~
Discharge Prohibition 3.2 is based on the Basin Plan, Chapter 4, *Implementation, Waste Discharge Prohibitions*, section (9), which has been carried over from the Previous Order and Permit (Order No. R9- 2017-0007, Attachment G, section B.9). Discharge Prohibition 3.2 clearly defines what types of discharges are prohibited. This prohibition is also 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. Discharges not described in the ROWD, and subsequently in this Order and Permit, are prohibited.

4.1.3 Discharge Prohibition 3.3 is based on the Ocean Plan, *Discharge Prohibitions*, *By-Passing*, section III.I.4.a., which has been carried over from the Previous Order and Permit (Order No. R9-2017-0007, Attachment G, section A.4). Discharge Prohibition 3.3 prohibits the bypassing of untreated wastes containing concentrations of pollutants in excess of the effluent limitations or performance goals in this Order and Permit.

4.1.~~3~~4 Discharge Prohibition 3.4 is based on the Ocean Plan, *General Provisions*, *General Requirements For Management Of Waste Discharge To The Ocean*, section III.A.2.c., which has been carried over from the Previous Order and Permit (Order No. R9-2017-0007, section IV.B.2). Discharge Prohibition 3.4 has been added to ensure that the assumption used to derive the dilution credits established through this Order~~/~~ and Permit remains substantially the same so that

the effluent limitations are protective of water quality. This Order~~/~~ and Permit considered a dilution credit of 204 based on the results of a modified version of the RSB model, submitted with the Discharger's 1995 ROWD and the Discharger's 1995, 2001, 2007, 2015, and 2022 301(h) applications to USEPA to conduct the reasonable potential analysis described in section 4.3.3 of this Fact Sheet. Moreover, the instream waste concentration (IWC) for the chronic toxicity effluent limitation is based on this dilution credit.

4.1.5 Discharge Prohibition 3.5 is based on the following sections of the Ocean Plan: *Water Quality Objectives*, *Physical Characteristics*, sections II.C.1 and 5; *General Provisions*, *General Requirements For Management Of Waste Discharge To The Ocean*, section III.A.2.b.(1); and *Discharge Prohibitions*, *Trash*, section III.I.6. Discharge Prohibition 3.5 has been carried over from the Previous Order and Permit (Order No. R9-2017-0007, sections IV.B.1.a. and V.A.3.a.). Discharge Prohibition 3.5 has been added to ensure that the discharge of trash or floatable materials is prohibited.

4.1.6 Discharge Prohibition 3.6 is based on the following sections of the Ocean Plan: *Water Quality Objective, Radioactivity*, section II.F.1 and *Discharge Prohibitions*, *Hazardous Substances*, section III.I.1.a.; and Basin Plan, Chapter 4, *Waste Discharge Prohibitions*, section (12). Discharge Prohibition 3.6 prohibits the discharge of radiological, chemical, or biological warfare agent or high-level radioactive waste to surface waters.

4.1.7 Discharge Prohibition 3.7 is based on the Ocean Plan, *Discharge Prohibitions*, *Sludge*, section III.I.3.a. Discharge Prohibition 3.7 has been carried over from the Previous Order and Permit (Order No. R9-2017-0007, Attachment G, section A.3). Discharge Prohibition 3.7 prohibits the discharge of sludge to surface waters.

4.2 Technology-Based Effluent Limitations

4.2.1 Scope and Authority

Section 301(b) of the federal 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.

Regulations promulgated in 40 CFR section 125.3(a)(1) require TBELs for municipal dischargers to be placed in NPDES permits.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements attainable through the application of secondary treatment [defined in 40 CFR section 304(d)(1)].

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_5, TSS, and pH.

The Ocean Plan is applicable, in its entirety, to point source discharges to the Pacific Ocean. Therefore, the discharge of wastewater to the Pacific Ocean at Discharge Point No. 001 is subject to the Ocean Plan. The Ocean Plan establishes water quality objectives, general requirements for management of waste discharged to the ocean, effluent quality requirements for waste discharges, discharge prohibitions, and general provisions. Further, Table 4 of the Ocean Plan establishes TBELs for POTWs and industrial discharges for which Effluent Limitation Guidelines have not been established pursuant to CWA sections 301, 302, or 306.

In compliance with 40 CFR sections 122.45(f)(1) and 423.15, mass-based limitations have also been established in this Order~~/~~ and Permit for conventional, nonconventional, and toxic pollutants, with some exceptions. Section 122.45(f)(2) of 40 CFR allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order~~/~~ and Permit ~~includes~~ include effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass-based limitations provided in 40 CFR section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH, turbidity, and settleable solids.

The CWA requires that TBELs be established based on several levels of controls:

- 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.
- 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.
- Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including 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.
- 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.

4.2.2 Applicable Technology-Based Effluent Limitations

4.2.2.1 Federal Regulations

The Discharger has requested a renewal of its variance under CWA section 301(h), 33 U.S.C. section 1311(h), and the Ocean Pollution Reduction Act of 1994, 33 U.S.C. section 1311(j)(5), from the federal secondary treatment standards contained in CWA section 301(b)(1)(B), U.S.C. section 1311(b)(1)(B), for the pollutants TSS and BOD_5. A modification for pH was not requested. The effluent limitations for TSS and BOD_5, based on CWA sections 301(h) and (j)(5), are previously described in this Fact Sheet, section 3.5.1. The TBEL for pH, required by 40 CFR part 133, continues to apply to the discharge which must be maintained within the limits of 6.0 to 9.0 pH units, at all times.

The Facility generally met the removal requirements for BOD_5 and TSS established in the Previous Order~~/~~ and Permit (see section 2.4 of this Fact Sheet for more information on exceedances). Based on CWA sections 301(h) and (j)(5), the percent removal requirements of BOD_5 and TSS remain appropriate and are carried over from the Previous Order~~/~~ and Permit. TSS and BOD_5 removal are computed on a "system-wide" basis to avoid double-counting of return solids and centrate streams.

The mass emission limitations for TSS in this Order~~/~~ and Permit are based on the effluent limitations requested by the Discharger in the 2022 301(h) application which were evaluated by USEPA in the 2024 TDD. The Discharger requested TSS mass emission limitations of 11,999 mt/yr for years 1 through 4 of this Order~~/~~ and Permit (2024-2028), and 11,998 mt/yr for year 5 of this Order~~/~~ and Permit (2029). Upon enactment of the Ocean Pollution Reduction Act II (OPRA II), the Discharger proposes to reduce mass emissions to 11,500 mt/yr commencing on December 31, 2025, and to 9,942 mt/yr commencing on December 31, 2027. A reduction down to 9,942 mt/yr is equivalent to levels that would have occurred if the 240-MGD Facility were to achieve TSS concentration standards of 30 mg/L, which is consistent with secondary treatment regulations specified in 40 CFR part 133. The compliance determination language for average annual effluent limitation has been updated from the ~~previous~~ Previous Order~~/~~ and Permit to clarify that the limitation applies to the calendar year. The TBELs based on federal regulations are summarized in Table F-8 below.

Table F-8. Summary of TBELs Based on Secondary Treatment Standards

Parameter	Unit	Average Annual	Average Monthly[1]	Instantaneous Minimum	Instantaneous Maximum[1]
TSS	System-wide percent removal (%)	--	≥80[1]	--	--

Parameter	Unit	Average Annual	Average Monthly[1]	Instantaneous Minimum	Instantaneous Maximum[1]
TSS	metric ton per year (mt/yr)	11,999[2]	--	--	--
TSS	mt/yr	11,998[3]	--	--	--
BOD_5	System-wide percent removal (%)	≥58[1]	--	--	--
pH	standard units	--	--	6.0	9.0

Notes for Table F-8:

1. The average monthly system-wide percent removal was derived from CWA sections 301(h) and (j)(5). Percent removal shall be calculated on a system-wide basis, as provided in section 7.9 of this Order~~/~~ and Permit. Section 7.9 of this Order~~/~~ and Permit is carried over from Orders Nos. R9-2002-0025, R9-2009-0001, and R9-2017-0007.
2. To be achieved on the effective date of this Order~~/~~ and Permit through the end of the fourth year of this Order~~/~~ and Permit. Mass emission limits for TSS apply only to discharges from POTWs owned and operated by the Discharger and the Discharger's wastewater generated in the Metro System service area, excluding TSS contributions from Metro System flows treated in the City of Escondido and SBWRP flows discharged to the SBOO. If the Discharger is requested to accept wastewater originating in Tijuana, Mexico, treated or untreated, such acceptance would be contingent upon an agreement acceptable to the San Diego Water Board, USEPA, and Discharger. The TSS contribution from that flow would not be counted toward Discharger's mass emission limit(s).
3. To be achieved by the beginning of the fifth year of this Order~~/~~ and Permit. Mass emission limits for TSS apply only to discharges from POTWs owned and operated by the Discharger and the Discharger's wastewater generated in the Metro System service area, excluding TSS contributions from Metro System flows treated in the City of Escondido and SBWRP flows discharged to the SBOO. If the Discharger is requested to accept wastewater originating in Tijuana, Mexico, treated or untreated, such acceptance would be contingent upon an agreement acceptable to the San Diego Water Board, USEPA, and Discharger. The TSS contribution from that flow would not be counted toward Discharger's mass emission limit(s).

4.2.2.2 Ocean Plan

This Order~~/~~ and Permit ~~carries~~ carry over numeric effluent limitations based on Table 4 of the Ocean Plan from the Previous Order~~/~~ and Permit for the Facility at Monitoring Locations EFF-001.

Table 4 of the Ocean Plan requires dischargers to achieve a percent removal of 75 percent for TSS 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. This requirement is not computed on a system-wide basis and applies directly to the Facility influent and effluent waste streams.

The previous orders have contained mass-based effluent limitations for oil and grease calculated using the 301(h)-variance-based annual flow rate of 205

MGD, taken from the 1995 301(h) application. The Discharger has maintained compliance with effluent limitations for mass emissions calculated using 205 MGD. USEPA has not evaluated the impact of the PLOO discharge and compliance with CWA section 301(h) decision criteria at an oil and grease MER associated with a PLOO discharge of 240 MGD. Based on the 2022 301(h) application, mass-based effluent limitations continue to be based on the 301(h)-variance-based flow rate of 205 MGD, as they were in the 1995, 2003, 2009, and 2017 permits (see section 2.3 of this Fact Sheet for more information).

The TBELs from the Ocean Plan are summarized in Table F-9:

Table F-9. Summary of TBELs on Table 4 of the Ocean Plan

Parameter	Unit	Average Monthly Effluent Limitation	Average Weekly Effluent Limitation	Instantaneous Maximum Effluent Limitation	Instantaneous Maximum Effluent Limitation
Oil and Grease	mg/L	25	40	--	75
TSS	mg/L	60[1]	--	--	--
TSS	Percent Removal (%)	[1]	--	--	--
Settleable Solids	ml/L	1.0	1.5	--	3.0
Turbidity	NTU	75	100	--	225
pH	standard units	--	--	6.0	9.0

Note for Table F-9

1. Table 4 of the Ocean Plan requires that the Discharger shall, as a monthly average, remove 75 percent 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.

4.2.2.3 **Effluent Flow.** This Order~~/~~ and Permit ~~carries~~ carry over the effluent flow limitations from the Previous Order~~/~~ and Permit.

4.3 Water Quality-Based Effluent Limitations (WQBELs)

4.3.1 Scope and Authority

Federal 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 the federal 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 is intended to protect the designated uses of the receiving water as specified in the Basin Plan and Ocean Plan and achieve applicable water quality objectives and criteria that are contained in other State plans and policies, or any applicable water quality criteria contained in the Ocean Plan.

4.3.2 Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan and Ocean Plan designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives for all waters.

4.3.2.1 **Basin Plan.** The beneficial uses specified in the Basin Plan applicable to the Pacific Ocean are summarized in section 3.3.1 of this Fact Sheet.

The Basin Plan water quality objective for dissolved oxygen applicable to ocean waters is stated as follows: "The dissolved oxygen concentration in ocean waters shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials."

The Basin Plan states, "The pH value shall not be changed at any time more than 0.2 pH units from that which occurs naturally."

4.3.2.2 **Ocean Plan.** The beneficial uses specified in the Ocean Plan for the Pacific Ocean are summarized in section 3.3.2 of this Fact Sheet. The Ocean Plan also includes water quality objectives for the ocean receiving water for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity.

Table 3 of the Ocean Plan includes the following water quality objectives for toxic pollutants and whole effluent toxicity (WET):

- Six-month median, daily maximum, and instantaneous maximum objectives for 19 chemicals and chemical characteristics, including total chlorine residual, for the protection of marine aquatic life.
- 30-day average objectives for 20 non-carcinogenic chemicals for the protection of human health. These have been applied as average monthly effluent limitations (AMELs).
- 30-day average objectives for 42 carcinogenic chemicals for the protection of human health. These have been applied as AMELs.
- Daily maximum objectives for acute and chronic toxicity.

4.3.3 Determining the Need for WQBELs

The San Diego Water Board evaluated the need for discharge prohibitions, effluent limitations, or both for non-conventional and toxic pollutant parameters, based on both numeric and narrative water quality objectives in ~~Table 3~~Chapter II of the Ocean Plan.

4.3.3.1 Reasonable Potential Analysis for Numeric Water Quality Objectives

The evaluation was performed in accordance with 40 CFR section 122.44(d) and guidance for statistically determining the "reasonable potential" for a discharged pollutant to exceed ~~an~~a numeric water quality objective in Table 3 of the Ocean Plan, as outlined in the revised *Technical Support Document for Water Quality-based Toxics Control* (TSD; EPA/505/2-90-001, 1991) and the Ocean Plan Reasonable Potential Analysis (RPA) Amendment that was adopted by the State Water Board on April 21, 2005. The statistical approach combines knowledge of effluent variability (as estimated by a coefficient of variation) with the uncertainty due to a limited amount of effluent data to estimate a maximum effluent value at a high level of confidence. This estimated maximum effluent value is based on a lognormal distribution of daily effluent values. Projected receiving water values (based on the estimated maximum effluent value or the reported maximum effluent value and minimum probable initial dilution) can then be compared to the appropriate objective to determine potential for an exceedance of that objective and the need for an effluent limitation. According to the Ocean Plan amendment, the RPA can yield three endpoints: 1) Endpoint 1, an effluent limitation is required and monitoring is required; 2) Endpoint 2, an effluent limitation is not required and the San Diego Water Board may require monitoring; and 3) Endpoint 3, the RPA is inconclusive, monitoring is required, and an existing effluent limitation may be retained or a permit reopener clause may be included to allow inclusion of an effluent limitation if future monitoring warrants the inclusion. Endpoint 3 is typically the result when there are fewer than 16 data points and all are censored data (i.e., below quantitation or method detection levels (MDLs) for an analytical procedure).

The implementation provisions for Table 3 of the Ocean Plan specify that the minimum probable initial dilution is the lowest average initial dilution within any single month of the year. Dilution estimates are to be based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents, of sufficient strength to influence the initial dilution process, flow across the discharge structure. Before establishing a dilution credit for a discharge, it must first be determined if, and how much, receiving water is available to dilute the discharge.

Conventional pollutants were not considered as part of the RPA. TBELs for these pollutants are included in this Order~~/~~ and Permit as described in section 4.2 of this Fact Sheet.

Using the RPcalc 2.0 software tool developed by the State Water Board for conducting RPAs, the San Diego Water Board and USEPA have conducted the RPA for the parameters listed in Table 3 of the Ocean Plan. For parameters that do not display a reasonable potential to cause or contribute to an exceedance of a water quality objective (referred to as "reasonable potential"), this Order~~/~~ and Permit ~~includes~~ include desirable maximum effluent concentrations (MECs) which were derived using effluent limitation determination procedures described below and are referred to in this Order~~/~~ and Permit as "performance goals." ~~A narrative receiving water limitation statement to comply with all Ocean Plan objectives requirements is provided for those parameters not displaying reasonable potential.~~ The Discharger is required to monitor for these parameters pursuant to the Monitoring and Reporting Program (MRP, Attachment E) in order to gather data for use in RPA for future permit reissuances.

Effluent data provided in the Discharger's monitoring reports for the Facility from October 2017 to August 2023 were used in the RPA.

During the development of Order No. R9-2009-0001, initial dilution was assessed using USEPA modeling application Visual Plumes (UM3) and the minimum initial dilution was calculated to be 227:1. Effluent and outfall characteristics have not changed sufficiently to warrant the need for another dilution analysis and the dilution is not anticipated to have changed. The calculated value from the 2009 UM3 analysis is higher than the previous initial dilution (204:1) based on the results of a modified version of the RSB model, submitted with the Discharger's 1995 ROWD and the Discharger's 1995, 2001, 2007, 2015, and 2022 301(h) applications to USEPA. The Discharger has recommended retaining the previous initial dilution value as more appropriate and representative of PLOO minimum initial dilution. Thus, the initial dilution value of 204:1 has been carried over from the Previous Order~~/~~ and Permit to this Order~~/~~ and Permit. A detailed description of the 2009 UM3 analysis is provided in the Previous Order~~/~~ and Permit, Attachment H.

Effluent data provided in the Discharger's monitoring reports for the Facility from October 2017 to August 2023, were used in the RPA (the most recent years). A minimum probable initial dilution of 204:1 was considered in this evaluation.

A summary of the RPA results is provided in Table F-10:

Table F-10. RPA Results Summary

Parameter	Units	N[1]	MEC[2,3]	Most Stringent Criteria	Background	RPA Endpoint[4]
Arsenic	µg/L	291	2.1	8[5]	3	2
Cadmium	µg/L	291	5.1	1[5]	0	2
Chromium (VI)	µg/L	291	7.3	2[5]	0	2
Copper	µg/L	291	97	3[5]	2	2
Lead	µg/L	291	8.6	2[5]	0	2

Parameter	Units	N[1]	MEC[2,3]	Most Stringent Criteria	Background	RPA Endpoint[4]
Mercury	µg/L	291	0.059	0.04[5]	0.0005	2
Nickel	µg/L	291	11	5[5]	0	2
Selenium	µg/L	291	3.2	15[5]	0	2
Silver	µg/L	291	0.55	0.7[5]	0.16	2
Zinc	µg/L	291	157	20[5]	8	2
Cyanide	µg/L	295	3	1[5]	0	2
Total Chlorine Residual	µg/L	8,636	8,400	2[5]	0	1
Ammonia	µg/L	291	48,100	600[5]	0	2
Acute Toxicity[7]	Tua	--	--	0.3	0	--
Chronic Toxicity[8,9]	"Pass"/ "Fail"	159	"Pass"	--	--	1 (based on best professional judgement)
Phenolic Compounds	µg/L	291	131	30[5]	0	2
Chlorinated Phenolics	µg/L	291	<0.14	1[5]	0	2
Endosulfan	µg/L	291	<6.9E-04	0.009[5]	0	2
Endrin	µg/L	291	<0.00078	0.002[5]	0	2
HCH	µg/L	291	0.103	0.004[5]	0	2
Radioactivity	picocuries per liter (pCi/L)	67	42	[10]	0	3
Acrolein	µg/L	67	<0.75	220[11]	0	2
Antimony	µg/L	287	2.5	1,200[11]	0	2
Bis(2-chloroethoxyl) methane	µg/L	86	<0.089	4.4[11]	0	2
Bis(2-chloroisopropyl) ether	µg/L	86	<0.096	1,200[11]	0	2
Chlorobenzene	µg/L	67	<0.21	570[11]	0	2
Chromium (III)	µg/L	67	2.7	190,000[11]	0	2
Di-n-butyl phthalate	µg/L	86	1.1	3,500[11]	0	2
Dichlorobenzenes	µg/L	76	<0.29	5,100[11]	0	2
Diethyl phthalate	µg/L	86	47	33,000[11]	0	2
Dimethyl phthalate	µg/L	86	0.51	820,000[11]	0	2
4,6-Dinitro-2-methylphenol	µg/L	291	<0.14	220[11]	0	2
2,4-Dinitrophenol	µg/L	291	<0.42	4[11]	0	2
Ethylbenzene	µg/L	67	<0.24	4,100[11]	0	2
Fluoranthene	µg/L	86	<0.058	15[11]	0	2
Hexachlorocyclopentadiene	µg/L	85	<0.10	58[11]	0	2
Nitrobenzene	µg/L	86	<0.13	4.9[11]	0	2

Parameter	Units	N[1]	MEC[2,3]	Most Stringent Criteria	Background	RPA Endpoint[4]
Thallium	µg/L	287	<0.027	2[11]	0	2
Toluene	µg/L	67	11	85,000[11]	0	2
Tributyltin	µg/L	67	<0.0011	0.0014[11]	0	2
1,1,1-Trichloroethane	µg/L	67	<0.32	540,000[11]	0	2
Acrylonitrile	µg/L	67	<0.48	0.1[11]	0	2
Aldrin	µg/L	309	<0.000714	0.000022[11]	0	2
Benzene	µg/L	67	<0.17	5.9[11]	0	2
Benzidine	µg/L	86	<1.4	0.000069[11]	0	3
Beryllium	µg/L	287	<0.12	0.033[11]	0	2
Bis(2-chloroethyl) ether	µg/L	86	<0.051	0.045[11]	0	2
Bis(2-ethylhexyl) phthalate	µg/L	86	16	3.5[11]	0	2
Carbon tetrachloride	µg/L	67	<0.033	0.9[11]	0	2
Chlordane	µg/L	291	<0.00094	0.000023[11]	0	2
Chlorodibromomethane	µg/L	67	<0.34	8.6[11]	0	2
Chloroform	µg/L	67	15	130[11]	0	2
DDT	µg/L	291	<0.00063	0.00017[11]	0	2
1,4-Dichlorobenzene	µg/L	76	<0.29	18[11]	0	2
3,3-Dichlorobenzidine	µg/L	86	<1.5	0.0081[11]	0	3
1,2-Dichloroethane	µg/L	67	<0.24	28[11]	0	2
1,1-Dichloroethylene	µg/L	67	<0.25	0.9[11]	0	2
Dichlorobromomethane	µg/L	67	<0.0014	6.2[11]	0	2
Dichloromethane (Methylene Chloride)	µg/L	64	5.7	450[11]	0	2
1,3-Dichloropropene (1,3-Dichloropropylenes)	µg/L	67	<0.20	8.9[11]	0	2
Dieldrin	µg/L	291	<0.00067	0.00004[11]	0	2
2,4-Dinitrotoluene	µg/L	86	<0.083	2.6[11]	0	2
1,2-Diphenylhydrazine	µg/L	86	<0.20	0.16[11]	0	2
Halomethanes	µg/L	67	5.4	130[11]	0	2
Heptachlor	µg/L	291	<0.00084	0.00005[11]	0	2
Heptachlor Epoxide	µg/L	291	<0.00074	0.00002[11]	0	2
Hexachlorobenzene	µg/L	86	<0.082	0.00021[11]	0	3
Hexachlorobutadiene	µg/L	86	<0.88	14[11]	0	2
Hexachloroethane	µg/L	86	<0.089	2.5[11]	0	2
Isophorone	µg/L	86	<0.092	730[11]	0	2
N-nitrosodimethylamine	µg/L	86	<0.18	7.3[11]	0	2
N-nitrosodi-N-propylamine	µg/L	86	<0.00050	0.38[11]	0	2
N-nitrosodiphenylamine	µg/L	86	<0.081	2.5[11]	0	2
PAHs	µg/L	86	<0.092	0.0088[11]	0	2
PCBs	µg/L	313	<1.2[12]	0.000019[11]	0	3

Parameter	Units	N[1]	MEC[2,3]	Most Stringent Criteria	Background	RPA Endpoint[4]
TCDD equivalents	µg/L	61	4.9E-08	3.9E-09[11]	0	2
1,1,2,2-Tetrachoroethane	µg/L	67	<0.0016	2.3[11]	0	2
Tetrachloroethylene (Tetrachloroethene)	µg/L	67	<0.21	2[11]	0	2
Toxaphene	µg/L	291	<0.11	0.00021[11]	0	3
Trichloroethylene (Trichloroethene)	µg/L	67	<0.33	27[11]	0	2
1,1,2-Trichloroethane	µg/L	67	<0.25	9.4[11]	0	2
2,4,6-Trichlorophenol	µg/L	291	<0.11	0.29[11]	0	2
Vinyl Chloride	µg/L	67	<0.24	36[11]	0	2

Notes for Table F-10

1. Number of data points available for the RPA.
2. If there is a detected value, the highest reported value is summarized in the table. If there are no detected values, the lowest MDL is summarized in the table.
3. Note that the reported MEC does not account for dilution. The RPA does account for dilution; therefore, it is possible for a parameter with an MEC in exceedance of the most stringent criteria not to present a reasonable potential (i.e., Endpoint 2).
4. End Point 1 – Reasonable potential determined, limit required, monitoring required.

   End Point 2 – Discharge determined not to have reasonable potential; monitoring may be established.

   End Point 3 – RPA was inconclusive, carry over previous limitations if applicable, and establish monitoring.
5. Based on the six-Month Median in Table 3 of the Ocean Plan.
6. Background concentrations contained in Table 5 of the Ocean Plan.
7. Order No. R9-2017-0007 did not require monitoring of acute toxicity monitoring.
8. Based on the Daily Maximum in Table 3 of the Ocean Plan.
9. Includes results for Giant Kelp (germination and growth), Red Abalone (exclusive and inclusive), and Topsmelt (survival and growth).
10. Not to exceed limits specified in title 17, division 1, chapter 5, subchapter 4, group 3, article 3, section 30253 of the CCR. Levels of radioactivity that exceed the applicable criteria are not expected in the discharge.
11. Based on the 30-Day Average in Table 3 of the Ocean Plan.
12 In an email dated October 30, 2023, the Discharger stated, “The value of 8.1 µg/L was inadvertently reported as a sample, but this was actually a sample spike for laboratory quality control. The analyst did not pick the correct test type in the Laboratory Information Management System (LIMS) identifying it as a spike and so it was reported as a sample result.” Thus, the value of 8.1 µg/L was not used for the RPA for PCBs.

Endpoint 1

Reasonable potential to cause or contribute to an exceedance of water quality objectives contained within the Ocean Plan (i.e., Endpoint 1) was determined for total chlorine residual and effluent limitations (based on the initial dilution of 204:1, as discussed above) have been retained from the Previous Order~~/~~ and Permit.

The MRP (Attachment E) is designed to obtain additional information for these constituents to determine if reasonable potential exists for these constituents in future permit renewals and/or updates.

Reasonable potential has been concluded for chronic toxicity based on best professional judgement given the possibility of synergistic effects (step 13 of the Ocean Plan, Appendix VI). Because discharges into POTWs are ever changing, the effluent from POTWs is inconsistent and may have a mixture of known and unknown pollutants that could have synergistic or additive toxic effects on receiving waters. The mixture of known and unknown pollutants may come from industrial, commercial, and/or residential sources in the Discharger's service areas. The pollutants could include constituents of emerging concern (CECs) used in households such as pharmaceuticals and personal care products (PPCPs), pesticides, and per- and polyfluoroalkyl substances (PFAS). Even though the toxicity monitoring data for the past several years did not exceed the chronic toxicity effluent limitation in the Previous Order~~/~~ and Permit, increased and/or unknown pollutants could be introduced into the Discharger's POTWs from industrial, commercial, and/or residential sources in the future that have synergistic or additive toxic effects. Additionally, if a toxic effect is discovered in the receiving water, the results of the WET testing may be useful for identifying the source of the toxicity.

Endpoint 2

Consistent with 40 CFR section 122.44(l)(2)(i)(B), effluent limitations from the ~~previous~~ Previous Order~~/~~ and Permit, Order No. R9 2017-0007, were not retained for constituents that were not deemed to have reasonable potential to cause an exceedance of a water quality objective. Instead, performance goals have been assigned for these constituents. Except as discussed above for chronic toxicity, parameters for which Endpoint 2 was concluded are determined not to have reasonable potential, thus this Order~~/~~ and Permit ~~does~~ do not establish effluent limitations for these parameters. Reasonable potential to cause or contribute to an exceedance of water quality objectives contained within the Ocean Plan (i.e., Endpoint 2) was not determined for Aldrin; thus, effluent limitations from Order No. R9 2017-0007 have been replaced by performance goals in this Order~~/~~ and Permit.

Endpoint 3

For parameters for which Endpoint 3 was concluded, reasonable potential was inconclusive. For parameters for which Endpoint 3 was concluded and previous effluent limitations had not been established in the Previous Order~~/~~ and Permit, performance goals have been retained. For parameters for which Endpoint 3 was concluded and previous effluent limitations had been established in the Previous Order~~/~~ and Permit, effluent limitations have been retained.

4.3.3.2 Narrative Water Quality Objectives

The Ocean Plan Chapter II includes narrative water quality objectives for all ocean waters to ensure the reasonable protection of beneficial uses and the prevention of nuisance. 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 narrative objectives within a standard. Consistent with the Ocean Plan, section II.A.3 ~~and Appendix VI~~, the San Diego Water Board and USEPA evaluated reasonable potential for narrative water quality objectives for pollutant levels expected from samples collected at stations representative of the area within the waste field where initial dilution is completed. The subsections below provide a broad overview of the analysis and Attachment G provides a more detailed analysis.

4.3.3.2.1 Bacteria Characteristics

Based on the bacteria water quality objectives (WQOs) in the Ocean Plan, section II.B and the REC-1 beneficial use defined in the Basin Plan, within 3 nautical miles of the shoreline (i.e., State-regulated Ocean waters), the discharge must achieve the Ocean Plan bacteriological standards for water contact recreation throughout the water column, excluding the zone of initial dilution (ZID) for the ocean outfall. For the bacterial RPA, the San Diego Water Board and USEPA evaluated the enterococcus monitoring data since enterococcus is the most sensitive bacteria indicator of the three species (i.e., enterococcus, fecal coliforms, and total coliforms). To support this evaluation of enterococcus data only, ~~we~~ the San Diego Water Board and USEPA observed that some enterococcus exceedances occurred when other coliform results did not exceed criteria and enterococcus exceedances co-occurred with fecal or total coliform exceedances. The San Diego Water Board and USEPA evaluated enterococcus monitoring data from January 2015 through December ~~2021~~2024 for shoreline, kelp bed, and offshore stations (~~total~~ 52 stations total) shown in Map 3 in Attachment B of this Order and Permit. ~~Both statistical threshold value and 6-week geometric mean enterococcus objectives at shoreline stations exhibit low exceedance rates (1.5 percent and 2 percent, respectively). These exceedances seem to be attributed to sources other than the ocean outfall plume because modeling and monitoring results indicate that the outfall plume remains submerged in the offshore zone and enterococcus objectives at kelp bed stations exhibit much lower exceedance rates at all depths (less than 1 percent) even though kelp bed stations are closer to the outfall than shoreline stations. Enterococcus results at offshore stations show exceedances mostly confined to stations beyond State waters, especially within the ZID. Thus, available monitoring data indicate that the Point Loma Ocean Outfall discharge is not causing or contributing to exceedances of the Ocean Plan bacteria objectives throughout the water column within State waters.~~

The conformance rates at shoreline stations for both statistical threshold value (STV, not to be exceeded more than 10 percent of the time in a month) and 6-week geometric mean enterococcus objectives were 98.5% and 98%, respectively. The conformance rate at the kelp bed stations were higher at all depth for enterococcus (i.e., 99.8% conformance rate) even though the kelp bed stations are located from 1,000 ft to 1.2 miles and closer to the discharge

point (see Map 3) and thus, potentially more affected by the Point Loma Ocean Outfall discharge plume than the shoreline stations. In addition, modeling and monitoring results indicate that the outfall plume remains submerged, most heavily trapped 40 to 60 meters below the surface, and predominant currents at this depth are typically upcoast-downcoast (northwestward-southeastward) in the offshore zone. These results indicate that the exceedances at the shoreline stations were likely due to sources other than the discharge plume (e.g., urban runoff).

Offshore stations within State-regulated waters were in full conformance with enterococcus WQOs at the surface and down to 60 meters below the surface, which is the portion of the water column that is within reach of recreational divers. Note that recreation self-contained underwater breathing apparatus (SCUBA) diving is generally limited to 40 meters below the surface. Higher enterococcus concentrations were rare and were limited to depths of 60 meters (197 feet) or more. These instances of higher enterococcus concentrations are likely related to discharge plume incursion. During 2015-2024, at the offshore stations within the State-regulated Ocean waters enterococcus concentrations exceeded the Ocean Plan STV value in approximately 2% of the samples, and all of these occurrences were at depths 60 meter or more. Thus, available monitoring data indicate that the Point Loma Ocean Outfall discharge is not significantly causing or contributing to exceedances of the Ocean Plan bacteria objectives throughout the water column within State-regulated Ocean waters.

In federal waters located offshore beyond 3 nautical miles, USEPA has developed 304(a)(1) ambient water quality criteria for bacteria which are recommended to protect people from gastrointestinal illness for primary contact recreation, or similar full body contact activities, in recreational waters (*Recreational Water Quality Criteria*, EPA 820-F-12-058, 2012), but USEPA has not directly promulgated water quality standards for marine recreational activities in federal waters. For federal waters, the water use is defined by the CWA section 101(a)(2) interim goal to provide water quality for recreation in and on the water, wherever attainable. USEPA describes the “primary contact recreation” use as protective when the potential for ingestion of, or immersion in, water is likely. Activities usually include swimming, bathing, water-skiing, tubing, skin-diving, surfing, water play by children, and other activities likely to result in immersion (*Water Quality Standards Handbook*, EPA-823-B-94-005a, 1994). USEPA has reviewed the actual uses of federal waters surrounding the Point Loma Ocean Outfall to determine where such activities occur. Concurrent with ocean monitoring activities in federal waters, the Discharger completes visual observations on recreational use and available records during the past two decades show no federally-defined primary contact recreational activities occurring in the deep offshore federal waters beyond 3 nautical miles including the vicinity of the Point Loma Ocean Outfall discharge. It is reported that virtually all swimming, surfing, diving, paddling, fishing from

paddle craft, board sailing, water skiing, SCUBA diving, and personal watercraft operation is confined to waters less than 2 nm (3.7 km) from shore. Based on this information, the San Diego Water Board and USEPA have determined that federal waters beyond the zone of initial dilution are not currently designated for primary contact recreation and therefore, the recommended 304(a)(1) water quality criteria for bacteria are not applicable.

The San Diego Water Board and USEPA concluded the discharge will allow for the attainment and maintenance of water quality which allows for recreational activities beyond the zone of initial dilution. The conformance with bacteria WQOs is achieved through (1) effective dilution and dispersion of the ocean outfall discharge and (2) effluent disinfection at the plant to reduce effluent concentrations of bacteria meeting the REC-1 WQOs. This Order and Permit continue to require the Discharger to monitor all three bacteria indicators (i.e., enterococcus, fecal coliforms, and total coliforms) in the effluent and the receiving water. The San Diego Water Board and USEPA conduct routine reviews of the monitoring reports to assess ~~compliance~~ conformance with the bacteria water quality objectives and determine potential need to re-open this Order and Permit. In addition, this Order and Permit ~~continues~~ continue to require the Discharger to observe, record and report any primary contact recreational activities observed in federal waters.

4.3.3.2.2 Physical Characteristics

The Ocean Plan, section II.C includes the following water quality objectives for the physical characteristics.

1. Floating particulates and grease and oil shall not be visible.
2. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.
3. Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.
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.
5. Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.

The San Diego Water Board and USEPA evaluated reasonable potential for the above physical water quality characteristics using the effluent and receiving water monitoring data. Based on the visual observations of the surface water conditions ~~at the designated receiving water stations,~~ including floatables of sewage origin, water color, oil and grease, turbidity, trash, and odor and the ocean monitoring data for light transmittance, chlorophyll a, and colored dissolved organic matter (CDOM)~~,~~ at the desinated receiving water stations, the discharge is not causing or contributing to exceedances of ~~the narrative~~ the Ocean Plan narrative WQOs for physical characteristics ~~for~~ (e.g., floating particulates, grease and oil, discoloration, reduced natural light, or

trash). This Order and Permit also require the technology-based effluent limitations for total suspended solids, oil and grease, settleable solids, and turbidity to further prevent an exceedance of these parameters to be above these narrative WQOs.

To access the impact of the solids deposition (i.e., physical characteristics number 4 within this subsection), the solids deposition and accumulation of organic matter in sediments were predicted using the 1994 ATSD sediment deposition model. The model results in the steady-state organic accumulation rate ranging from 5 to 10 grams per meter squared and indicates no or minimal effect on benthic communities. ~~In addition, the technology-based effluent limitations in this Order and Permit for total suspended solids, oil and grease, settleable solids, and turbidity are sufficient to prevent an exceedance of these parameters to be above these narrative water quality objectives.~~ Therefore, there is no reasonable potential for the discharge to cause or contribute to the degradation of benthic communities. ~~exceed the Ocean Plan water quality objectives for physical characteristics.~~

4.3.3.2.3 Chemical Characteristics

The Ocean Plan, Section II.D includes the following water quality objectives for the chemical characteristics. The evaluation was performed to determine whether a discharge causes, has the reasonable potential to cause, or contributes to an excursion above these narrative water quality objectives after initial mixing.

1. The dissolved oxygen (DO) concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.

   Based on the model prediction and receiving water monitoring results for DO detected at the farfield ocean monitoring stations, the discharge does not result in more than a 10 percent reduction from natural background levels. See detail modeling results in the 301(h) waiver Final Decision Document, section B.2. The technology-based effluent limitations in this Order and Permit for BOD are also sufficient to minimize the chance that the wastewater discharge will cause more than 10 percent reduction in DO from that which occurs naturally outside the ZID. Therefore, there is no reasonable potential for the discharge to cause or contribute to significantly decrease DO in the receiving water.

2. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

   The receiving water monitoring data for pH indicated that the ~~The~~ technology-based effluent limitations in this Order and Permit for pH are sufficient to prevent an excursion above this water quality objective.

3. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.

   Given the presence of oxygen in the plume waters, sulfides will be converted to other compounds and therefore sulfides will not be significantly increased above that present under natural conditions. Based on the sediment monitoring data for acid volatile sulfides, ~~Additionally, this Order and Permit contain technology-based effluent limitations for BOD that provide for protective DO levels near the discharge point; therefore,~~ there is no reasonable potential for the discharge to contain sulfide concentrations above the background levels of the receiving water and sediments.

4. The concentration of substances set forth in chapter II, Table 3, in marine sediments shall not be increased to levels which would degrade indigenous biota; and
   The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.

   The sediment monitoring results for the substances (ten metals, total DDTs, total PCBs, and total PAHs) set forth in chapter II, Table 3 of the Ocean Plan indicated that the chemical characteristics in sediments beyond the zone of initial dilution are not changed by the modified discharge such that toxic substances in Table 3 of the Ocean Plan are increased to levels which would degrade indigenous biota. Concentrations of total organic carbon, total volatile solids, total nitrogen, BOD, and sulfides are measured as indicators of organic enrichment in benthic sediments. The San Diego Water Board and USEPA evaluated these monitoring results for biological indicators and conclude that significant effects on the benthic macrofauna community are not occurring in areas beyond the zone of initial dilution. The San Diego Water Board and USEPA also evaluated monitoring results of the benthic communities in the sediment around the PLOO. Analyses of macrofaunal data demonstrate that wastewater discharged through the PLOO has not negatively impacted benthic communities in the coastal waters off San Diego. Values for most community parameters are similar at stations located both nearfield and farfield from the discharge areas. Changes in populations of pollution-sensitive and pollution-tolerant species, or other indicators of benthic condition, provide little or no evidence of habitat degradation in either outfall region. For example, the brittle star *Amphiodia urtica* is a well-known dominant species of the mid-shelf in fine sediment habitats in the Southern California Bight, which is known to be sensitive to environmental changes near wastewater outfalls (Swartz et al. 1986). However, abundances of *A. urtica* off the PLOO remained within the range of natural variation in SCB populations (Gillett et al. 2017). Furthermore, the performance goals ~~and mass emission benchmarks~~ in this Order and Permit prevent an exceedance above the Ocean Plan water quality objectives for priority pollutants in the receiving water. Therefore,

there is no reasonable potential for the discharge to cause or contribute to significantly degrade marine sediment quality and negatively impact the benthic community.

6. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota. **~~Bacterial Indicators~~**

~~This Order/Permit does not include effluent limitations for bacterial indicators for the following reasons:~~

- ~~The discharge point (Discharge Point No. 001) is located at the terminus of the PLOO, 4.5 miles offshore at a depth of 310 feet.~~
- ~~The minimum probable dilution factor is 204:1.~~
- ~~The San Diego Water Board is not aware of any shellfish harvesting within the zone of initial dilution of the PLOO.~~
- ~~The offshore receiving water monitoring results for total coliform between October 2017 and August 2023 consistently complied with the Ocean Plan single sample maximum.~~
- ~~About 99 percent of the offshore receiving water monitoring results for fecal coliform between October 2017 and August 2023 complied with the Ocean Plan single sample maximum.~~
- ~~At least 92 percent of the offshore receiving water monitoring results for enterococci between October 2017 and August 2023 complied with the Ocean Plan single sample maximum.~~
- ~~The Discharger disinfects the chemically enhanced primary-treated wastewater prior to discharge.~~

The RP analysis is determined from chlorophyll a, ammonia, and/or nutrient data collected in the effluent and at stations representative of the area at the ZID or beyond. The long-term average for chlorophyll a measured at the near-ZID boundary station is similar to long-term averages measured at nearfield and farfield stations. In addition, the Discharger is required to conduct a euphotic zone study and a phytoplankton stimulation study to determine the depth of the euphotic zone in the receiving water and evaluate whether nutrients from the discharge plume reach the euphotic zone and thereby potentially stimulate phytoplankton productivity, including harmful algal blooms. Based on the 2023 euphotic zone study and the nutrient monitoring data, it is concluded that nutrient materials in the PLOO discharge will not result in a significant change in the productivity or standing stock of phytoplankton, will not cause natural light to be significantly reduced beyond the initial dilution zone, and will not cause objectionable aquatic growths or degrade indigenous biota.

7. Numeric Water Quality Objectives: Table 3 water quality objectives apply to all discharges within the jurisdiction of this Plan. Unless otherwise specified, all metal concentrations are expressed as total recoverable concentrations.

Table F-10 shows the results of the reasonable potential analysis for all the Table 3 pollutants. Due to finding reasonable potential for total residual chlorine and chronic toxicity, this Order and Permit establish effluent limitations for these parameters. The constituents that do not have reasonable potential to cause or contribute to an exceedance of water quality objectives have been assigned performance goals ~~and/or the mass emission benchmarks~~. Since the exceedances of the performance goals or mass emission benchmarks will trigger an investigation into the cause of the exceedance, these additional requirements are sufficient to prevent an excursion above the numeric water quality objective in Table 3 of the Ocean Plan during the permit term.

Based on the RP evaluations above, the San Diego Water Board and USEPA concluded that the discharge will allow for the attainment or maintenance of the Ocean Plan water quality objectives for chemical characteristics.

4.3.3.2.4 Biological characteristics

The Ocean Plan, section II.E. includes the following water quality objectives for the biological characteristics. The evaluation was performed to determine reasonable potential for these biological water quality objectives using monitoring data collected at fish and invertebrates monitoring stations.

1. Marine communities, including vertebrate, invertebrate, algae, and plant species, shall not be degraded.
2. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.
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.

As discussed above, the receiving water monitoring results indicate the marine communities have not been affected by the PLOO discharge, remaining consistent through the years and results are comparable to those at the background monitoring stations. Demersal fishes and megabenthic invertebrate populations monitored in 2022 and 2023 do not show evidence of negative impacts associated with proximity to wastewater discharge from the PLOO. Community parameters are similar at stations located both near and far from the outfall discharge sites in both regions. Major community metrics, such as species richness, abundance, and diversity were generally within historical ranges reported for the San Diego region (City of San Diego 1995, 1998, 2000, 2022) and were representative of those characteristics of similar habitats throughout the Southern California Bight (e.g., Allen et al. 1998, 2002, 2007, 2011, Walther et al. 2017).

Therefore, the San Diego Water Board and USEPA concluded that there is no reasonable potential for the discharge to cause or contribute to exceed the Ocean Plan water quality objectives for biological characteristics. Furthermore,

this Order and Permit contain effluent limitations for chronic toxicity which are an extra measure to prevent an excursion above these narrative water quality objectives.

4.3.3.2.5 Radioactivity

The Ocean Plan, section II.F requires that discharge of radioactive waste shall not degrade marine life.

Based on the RP evaluation for radioactivity using the effluent monitoring data, reasonable potential was inconclusive (see Table F-10). Therefore, this Order and Permit continue to require performance goals and monthly monitoring requirements for radioactivity to ensure levels of radioactivity in the discharge do not exceed the applicable criteria. Furthermore, as described in Discharge Prohibition 3.6, this Order and Permit prohibit discharges of radiological warfare agent or radioactive waste to the ocean without further treatment, which would be sufficient to prevent an excursion above the applicable radioactivity criteria in the receiving water.

4.3.4 WQBEL Calculations

4.3.4.1 From the Table 3 water quality objectives of the Ocean Plan, effluent limitations and performance goals are calculated according to the following equation for all pollutants, except for acute toxicity (if applicable) and radioactivity:

Ce = Co + Dm (Co – Cs) where,
Ce = the effluent limitation (µg/L)
Co = the water quality objective to be met at the completion of initial dilution (µg/L)
Cs = background seawater concentration
Dm = minimum probable initial dilution expressed as parts seawater per part wastewater

4.3.4.2 This Order~~/~~ and Permit ~~carries~~ carry over the Dm of 204 from the Previous Order~~/~~ and Permit.

4.3.4.3 Table 5 of the Ocean Plan establishes background concentrations for some pollutants to be used when determining reasonable potential (represented as “Cs”). In accordance with Table 3 implementing procedures of the Ocean Plan, Cs equals zero for all pollutants not established in Table 5 of the Ocean Plan. The background concentrations provided in Table 5 of the Ocean Plan are summarized in Table F-11 below:

Table F-11. Pollutants Having Background Concentrations

Pollutant	Background Seawater Concentration
Arsenic, Total Recoverable	3 µg/L
Copper, Total Recoverable	2 µg/L
Mercury, Total Recoverable	0.0005 µg/L
Silver, Total Recoverable	0.16 µg/L
Zinc, Total Recoverable	8 µg/L

4.3.4.4 As an example, effluent limitations for total chlorine residual were determined as follows.

Water quality objectives from the Ocean Plan for total chlorine residual are:

Table F-12. Example Parameter Water Quality Objectives

Parameter	Units	Six-Month Median	Daily Maximum	Instantaneous Maximum
Total Chlorine Residual	µg/L	2	8	60

Using the equation, Ce = Co + Dm (Co – Cs), effluent limitations/performance goals are calculated as follows.

Total Chlorine Residual:
Ce = 2 + 204 (2 – 0) = 410 (six-Month Median)
Ce = 8 + 204 (8 – 0) = 1,600 (Daily Maximum)
Ce = 60 + 204 (60 – 0) = 12,000 (Instantaneous Maximum)

Based on the implementing procedures described above, effluent limitations and performance goals have been calculated for all parameters in Table 3 of the Ocean Plan and incorporated into this Order~~/~~ and Permit.

4.3.4.5 Section 122.45(f)(1) of the 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. However, 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. This Order~~/~~ and Permit ~~includes~~ include effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g., California Toxics Rule criteria and maximum contaminant levels) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

Mass-based effluent limitations were calculated using the following equation: lbs/day = permitted flow (MGD) x pollutant concentration (mg/L) x 8.34

4.3.4.6 Based on the results of the RPA, a summary of the WQBELs established in this Order~~/~~ and Permit ~~are~~ is provided in the table below.

Table F-13. Summary of WQBELs at Monitoring Location EFF-001

Parameter	Unit	Six-Month Median[1]	Average Monthly[1]	Maximum Daily[1]	Instantaneous Maximum[1]
Total Chlorine Residual	µg/L	4.1E+02	--	1.6E+03	1.2E+04
Total Chlorine Residual	lbs/day[2]	7.0E+02	--	2.7E+03	2.1E+04

Parameter	Unit	Six-Month Median[1]	Average Monthly[1]	Maximum Daily[1]	Instantaneous Maximum[1]
Chronic Toxicity[3,4]	"Pass" / "Fail" ~~Toxic Units Chronic (TUc)~~	--	--	"Pass"~~205~~	--

Notes for Table F-13

1. The scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation, a value of 6.1E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^{2} or 610, and 6.1E+00 represents 6.1×10^{0} or 6.1.
2. The MER limitation, in lbs/day, was calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the permitted flow for the PLOO (205 MGD) and C is the concentration (mg/L).
3. As specified in section 7.16 of this Order~~/~~ and Permit and section 3.3 of the MRP (Attachment E).
4. A WQBEL is established based on best professional judgement. See section 4.3.3 of this Fact Sheet for more information.

4.3.5 Performance Goals

Constituents that do not have reasonable potential to cause or contribute to an exceedance of water quality objectives have been assigned performance goals. Pursuant to Water Code section 13383, this Order~~/~~ and Permit ~~includes~~ include monitoring and reporting requirements related to performance goals. Performance goals serve to maintain existing treatment levels and effluent quality and supports State and federal antidegradation policies. Additionally, performance goals provide all interested parties with information regarding the expected level of pollutants in the discharge that should not be exceeded in order to maintain the water quality objectives established in the Ocean Plan and the overall pollutant control performance of the Facility. Performance goals are not limitations or standards for the regulation of the discharge. Effluent concentrations above the performance goals will not be considered as violations of this Order~~/~~ and Permit but serve as indicators that the effluent may be causing or contributing to an exceedance of water quality objectives. However, any two consecutive exceedances of the performance goals will trigger an investigation into the cause of the exceedance. If the exceedance persists in three successive monitoring events, the Discharger is required to submit a Performance Goal Exceedance Investigation Work Plan to the San Diego Water Board and USEPA within 30 days of the Discharger becoming aware of the third successive exceedance. The Performance Goal Exceedance Investigation Work Plan is required to outline the investigative steps being taken, whether outside technical expertise is being retained to assist in the investigation, and the proposed schedule for completing a Performance Goal Exceedance Report. The Performance Goal Exceedance Report is required to include a

description of the nature of the exceedance(s), the results of the investigation including the cause of the exceedance(s), the corrective actions taken, any proposed corrective measures, and a schedule for implementation, if necessary. Repeated exceedances of performance goals may prompt the San Diego Water Board and USEPA to reopen and amend this Order~~/~~ and Permit to replace performance goals for constituents of concern with effluent limitations, or the San Diego Water Board and USEPA may coordinate such actions with the next permit reissuance. The Discharger is in violation of this Order~~/~~ and Permit if it does not comply with the performance goal investigation and reporting requirements, when required by the terms of this Order~~/~~ and Permit. The performance goals are provided in Table 3, section 4.~~1.~~2 of this Order~~/~~ and Permit.

4.3.6 Whole Effluent Toxicity (WET)

4.3.6.1 The WET testing protects receiving waters from the aggregate toxic effect of a mixture of pollutants in the effluent. Because of the nature of discharges into the POTW sewershed, it is possible that toxic constituents could be present in the Facility effluent or could have synergistic or additive effects.

4.3.6.2 In the Previous Order~~/~~ and Permit, the chronic toxicity is expressed as "Pass" or "Fail" for each maximum daily individual result. The Previous Order~~/~~ and Permit also required the Discharger to report the "Percent Effect" as part of the chronic toxicity result. From October 2017 to August 2023, the Discharger was in compliance with the effluent limitation for chronic toxicity with all the reported results as "Pass" in its self-monitoring reports.

However, as stated in section 4.3.3 of this Fact Sheet, the ~~this Order and Permit contain an~~ effluent limitation for chronic toxicity is being carried over from the Previous Order~~/~~ and Permit to this Order based on best professional judgement (Step 13 of the Ocean Plan Appendix VI). This Order~~/~~ and Permit also ~~retains~~ retain the monthly monitoring requirement for chronic toxicity to determine compliance with the effluent limitation.

4.3.6.3 ~~This Order/Permit also carries~~ This Order and Permit also carry ~~establish an effluent limitation for chronic toxicity based on the chronic toxicity water quality objective in the 2019 Ocean Plan. The effluent limitation shall be implemented using *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). Chronic toxicity shall be expressed as toxic units chronic (TUc), where:~~

~~TUc = 100 / NOEC~~

~~NOEC is the No Observed Effect Concentration (also referred to as the No Observed Effect Level or NOEL) and is expressed as the maximum percent of effluent that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test.~~

~~4.3.6.3 For informational reporting purposes only, this Order and Permit also carry~~ over the ~~Test of Significant Toxicity (~~TST~~)~~ statistical approach at the discharge "in-

stream" waste concentration (IWC) from the Previous Order~~/~~ and Permit, with ~~a~~ compliance determination of ~~results reported as~~ "Pass" or "Fail," as described in section 7.16 of this Order~~/~~ and Permit and section 3.3 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 ≤ 0.75 × mean control response." A test that rejects this null hypothesis shall be reported as "Pass" (in compliance). A test that does not reject this null hypothesis shall be reported as "Fail" (not in compliance). The Discharger shall also continue reporting the "Percent Effect" as part of chronic toxicity result. Percent Effect" (or Effect, in percent) = [(Control mean response – IWC mean response) ÷ Control mean response)] ×100.

The Ocean Plan's approach to chronic toxicity WQBELs is based on a "toxic unit" derived from one multi-concentration toxicity test and relies on the No Observed Effect Limit. Section III.F of the 2019 Ocean Plan provides for more stringent requirements if necessary to protect the designated beneficial uses of ocean waters.

~~The information submitted using the TST approach results will not be used to determine regulatory compliance or to determine reasonable potential of the exceedance of water quality objectives for toxicity.~~ The decision to include the TST statistical approach for this Order/Permit ~~informational reporting purposes only~~ is based on the following information:

4.3.6.3.1 USEPA requires the TST statistical approach for analyzing chronic toxicity in USEPA-issued NPDES permits. This Order~~/~~ and Permit serve as ~~is a joint~~ consolidated State and federal NPDES permits adopted by the San Diego Water Board and issued by USEPA.

4.3.6.3.2 By email dated December 23, 2025, the City requested TST as the sole methodology for determining compliance with the chronic toxicity effluent limitation. 4.3.6.3.1 Evaluating chronic toxicity using the TST statistical approach more precisely identifies toxicity in the effluent ~~to protect the designated beneficial uses of ocean waters from potential toxic effects from the discharge~~.

4.3.6.3.~~2~~3 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) used in this NPDES permit.~~)~~. This document states, "Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program." The TST approach is "another statistical option to analyze valid WET test data for NPDES WET reasonable potential and permit compliance determinations. … The TST approach does not result in changes to EPA's WET test methods promulgated at Title 40 of the Code of Federal Regulations Part 136." "The TST approach can be applied

to acute (survival) and chronic (sublethal) endpoints and is appropriate to use for both freshwater and marine EPA WET test methods."

4.3.6.3.4 Using ~~Reporting~~ the TST in this Order/Permit ~~results~~, in conjunction with ~~the NOEC results and~~ 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. The TST statistical approach will improve consistency in assessing effluent toxicity and the impact of discharge. Diamond et al. (2013) examined the side-by-side comparison of ~~No-Observed-Effect-Concentration (~~NOEC~~)~~ and TST results using California chronic toxicity test data (including data from POTWs) for *Haliotis rufescens* used in the red abalone larval development WET method and *Mytilus* species used in the pacific oyster, *Crassostrea gigas* and mussel, *Mytilus* spp. shell development test method 1005.0 (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; and California State Water Resources Control Board. 2011. *Whole Effluent Toxicity Test Drive Analysis of the Test of Significant Toxicity (TST)*. Sacramento, CA, USA). See Table 1 (method types 1 through 5) on page 1103. This comparison shows that while the TST and NOEC statistical approaches perform similarly most of the time, the TST performs better in identifying toxic and nontoxic samples, a desirable characteristic for chronic toxicity testing conducted under this Order~~/~~ and Permit. This examination also signals that the test methods' false positive rate (β no higher than 0.05 at a mean effect of 10 percent) and false negative rate (α no higher than 0.05 (0.25 for topsmelt) at a mean effect of 25 percent) are indeed low.

4.3.6.3.5 Fox et al. 2019[14] found that the TST approach incentivizes laboratories to produce more precise data and increase statistical power. When within-test variability is low and the percent effect is low, the NOEC approach is more likely to declare a sample toxic than the TST approach. When within-test variability is high and the percent effect is high, the NOEC approach is less likely to declare a sample toxic than the TST approach.

4.3.6.3.6 Using the TST approach, ~~provide~~ the San Diego Water Board will have ~~with~~ more confidence when making reasonable potential determinations as to whether the discharge is toxic or non-toxic. The use ~~reported results~~ of the TST approach will also allow for better data comparability to the Discharger's previous toxicity results reported under the previous Order and Permit. Additionally, the results will allow for data comparability with the toxicity results

[14] Fox J, Denton D, Diamond J, Stuber R. 2019. *Comparison of False-Positive Rates of 2 Hypothesis-Test Approaches in Relation to Laboratory Toxicity Test Performance. Environmental Toxicology and Chemistry*. 38(3): 511–523.

for South Bay Water Reclamation Plant,[15] as well as other coastal regions, that also implement the TST approach for analyzing chronic toxicity data from ocean outfall discharges, including the City of Los Angeles and Orange County Sanitation District.

4.3.6.3.7 The USEPA's WET testing program and acute and chronic WET methods rely on the measurement result for a specific test endpoint, not upon achievement of specified concentration-response patterns to determine toxicity. USEPA's WET methods do not require achievement of specified effluent or ambient concentration-response patterns prior to determining that toxicity is present.[16]

Nevertheless, USEPA's acute and chronic WET methods require that effluent and ambient concentration-response patterns generated for multi-concentration acute and chronic toxicity tests be reviewed, as a component of test review following statistical analysis, to ensure that the calculated measurement result for the toxicity test is interpreted appropriately (EPA-821-R-02-012, section 12.2.6.2; EPA-821-R-02-013, section 10.2.6.2).

4.3.6.3.8 Pollutants, such as TCDD and DDT, have method detection limits that are greater than their effluent limitations. Thus, pollutants in excess of the effluent limitation may be discharged without detection, attach to suspended solids, be released into the Pacific Ocean, and harm designated beneficial uses. The effluent could also include harmful levels of PPCPs, pesticides, and PFAS that don't have effluent limitations or performance goals that could cause toxic conditions in the receiving water. ~~Using~~ Reporting ~~the more precise TST statistical approach may identify more exceedances~~ instances of toxicity ~~due to the inclusion of the false negative error rate.~~

4.3.6.3.94 The TST approach provides a precise statistical approach that ~~WET testing~~ is necessary to protect the Southern California Bight, Point Loma Kelp Beds, and Cabrillo State Marine Reserve. The San Diego Water Board performed an analysis of the beneficial uses in the area to determine that ~~WET testing~~ the TST approach is necessary to protect those beneficial uses. The beneficial uses of the Southern California Bight, Point Loma Kelp Beds, and Cabrillo State Marine Reserve include those listed under section I of the Water Quality Control Plan Ocean Waters of California (Ocean Plan) and in Table 2-3 of the San Diego Water Board's Basin Plan (Basin Plan), which include ~~Include~~ but are not limited to industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated ASBS; rare

[15] Order No. R9-2021-0011, NPDES No. CA0109045, *Waste Discharge Requirements for the City of San Diego South Bay Water Reclamation Plant Discharge to the Pacific Ocean through the South Bay Ocean Outfall* was adopted by the San Diego Water Board on May 12, 2021, and includes the TST statistical approach for the chronic toxicity effluent limitation.
[16] See, Supplementary Information in support of the Final Rule establishing WET test methods at 67 Fed. Reg. 69952, 69963, Nov. 19, 2002.

and endangered species; marine habitat; fish migration; fish spawning and shellfish harvesting.

4.3.6.3.94.1 The PLOO discharges into the Southern California Bight, which comprises 400 miles of recessed coastline from Santa Barbara County to Ensenada, Mexico. In the Southern California Bight, warm subtropical water flows north, close to the shore, while colder subarctic water flows south, offshore. This unique ocean circulation pattern creates a biological transition zone that supports approximately 500 marine fish species and more than 5,000 invertebrate species.

4.3.6.3.94.2 The PLOO discharges near the Point Loma kelp beds. The Point Loma kelp bed extends along the length of the Point Loma peninsula and is the largest in San Diego Region.[17] "Kelp forests, such as the [Point Loma kelp beds], are particularly appreciated for their high productivity and diversity. These thriving communities harbor an amazing variety of organisms because of the high productivity of these algae (kelps), the number of microhabitats (specialized living spaces characterized by their physical or biological structure) they provide, and the frequent disturbances that prevent domination by only a few species. Holdfasts, the convoluted structures that anchor kelps to the bottom, shelter more than 150 species of invertebrates seeking hiding places, food and living space. Other organisms live on the blades (analogous to leaves) and stipes (analogous to stems) of the kelp in different depths of the water column; some are associated with the surface canopy. Other animals shelter and hunt near the kelp. The net result is that more than 800 species have been identified in and around kelp forest communities of southern California."[18] "In addition to their ecological significance, kelp forests are also valued for other reasons. For instance, they support economically important commercial and recreational fisheries, as well as non-consumptive diving, snorkeling, and wildlife viewing."[19] The kelp beds also support abalone, "an economically important commercial fishery throughout California until the 1980's. Their primary food in southern California is giant kelp. … Historically, seven species of abalone have been common off San Diego. Two species, *Haliotis cracherodii* and *H. sorenseni*, are now on the federal endangered species list."[20]

4.3.6.3.94.3 California has designated the ocean waters surrounding the end of the Point Loma peninsula as one of the marine protected areas (MPAs), Cabrillo State Marine Reserve. This reserve contains numerous marine plants and animals

[17] Status of the Kelp Beds in 2016: Ventura, Los Angeles, Orange, and San Diego Counties, Prepared for the Central Region Kelp Survey Consortium and Region Nine Kelp Survey Consortium MBC Applied Environmental Sciences
[18] Kelp Forest - Cabrillo National Monument (U.S. National Park Service) (nps.gov)
[19] Kelp Forests - Channel Islands National Park (U.S. National Park Service) (nps.gov)
[20] City of San Diego Ocean Monitoring Program, *Environmental Monitoring and Technical Services Division, Biennial Receiving Waters Monitoring and Assessment Report for the Point Loma and South Bay Ocan Outfalls, 2020-2021*.

including lacy red and slimy green algae, sluggish sea hares, leggy octopi, darting fish, hermit crabs, and kelp forest. The reserve provides views of the Pacific Gray Wale annual migration from Alaska to Baja California, Mexico.[21]

4.3.6.~~4~~5 For acute toxicity, Order No. R9-2009-0001 established performance goals and semiannual monitoring. Subsequently, the Previous Order~~/~~ and Permit removed performance goals and monitoring requirements. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a short or a longer exposure period of time and may measure mortality, reproduction, and growth. A chemical at a low concentration could have chronic effects but no acute effects until the chemical was at a higher concentration. Thus, chronic toxicity is a more stringent requirement than acute toxicity. To ensure the aggregated impacts of pollutants present within the Discharger's effluent does not result in the presence of toxicity within the receiving water, this Order~~/~~ and Permit ~~continues~~ continue to leave out performance goals and monitoring requirements for acute toxicity and retains effluent limitations for chronic toxicity. Removal of the numeric acute toxicity performance goals did not constitute backsliding because chronic toxicity is a more stringent requirement than acute toxicity. Effluent limitations for chronic toxicity are necessary, feasible, and appropriate because effluent data exhibited reasonable potential to cause or contribute to an exceedance of the toxicity water quality objectives.

4.3.6.~~5~~6 In January 2010, USEPA published a guidance document entitled; *EPA Regions 8, 9 and 10 Toxicity Training Tool*, which among other things discusses permit limitation expression for chronic toxicity. The document acknowledges that NPDES regulations at 40 CFR section 122.45(d) require that all permit limits be expressed, unless impracticable, as an average weekly effluent limitation (AWEL) and AMEL for POTWs. Following section 5.2.3 of the Technical Support Document (TSD), the use of an AWEL and AMEL is not appropriate for WET. In lieu of an AWEL and AMEL for POTWs, USEPA recommends establishing a maximum daily effluent limitation (MDEL) for toxic pollutants and pollutants in water quality permitting, including WET. This is appropriate for two reasons. The basis for the average weekly and average monthly requirement for POTWs derives from secondary treatment regulations and is not related to the requirement to assure achievement of water quality standard. Moreover, an average weekly and average monthly requirement comprising up to seven and thirty-one daily samples, respectively, could average out daily peak toxic concentrations for WET and therefore, the discharge's potential for causing acute and chronic effects would be missed. It is impracticable to use an AWEL and AMEL, because short-term spikes of toxicity levels that would be permissible under the 7-day and 31-day average scheme, respectively, would not be adequately protective of all beneficial uses. The MDEL is the highest allowable value for the discharge measured during a calendar day or 24-hour

[21] Cabrillo State Marine Reserve (SMR)

period representing a calendar day. This approach is comparable to that of the Ocean Plan, which calls for a daily maximum chronic toxicity limit.

4.3.6.~~6~~7 USEPA designed its 2000 guidance as a standardized step-by step review process that investigates the causes for ten commonly observed concentration-response patterns and provides for the proper interpretation of the test endpoints derived from these patterns for NOECs, LC 50, and EC25, thereby reducing the number of misclassified test results. The guidance provides one of three determinations based on the review steps: that calculated effect concentrations are reliable and should be reported, that calculated effect concentrations are anomalous and should be explained, or that the test was inconclusive and should be repeated with a newly collected sample. The standardized review of the effluent and receiving water concentration-response patterns provided by USEPA's 2000 guidance decreased discrepancies in data interpretation for NOEC, LC 50, and EC25 test results, thereby lowering the chance that a truly nontoxic sample would be misclassified and reported as toxic.

Appropriate interpretation of the measurement result from USEPA's TST statistical approach ("Pass"/"Fail") for effluent and receiving water samples is, by design, independent from the concentration-response patterns of the toxicity tests for those samples. Therefore, when using ~~reporting the results of~~ the TST ~~statistical approach in addition to the NOEC~~ statistical approach, application of USEPA's 2000 guidance on effluent and receiving waters concentration-response patterns will not improve the appropriate interpretation of TST results as long as all Test Acceptability Criteria and other test review procedures, including those related to quality assurance for effluent and receiving water toxicity tests, reference toxicity tests, and control performance (mean, standard deviation, and coefficient of variation), described by the WET test methods manual and TST guidance, are followed. The 2000 guidance may be used to identify reliable, anomalous, or inconclusive concentration-response patterns and associated statistical results to the extent that the guidance recommends review of test procedures and laboratory performance already recommended in the WET test methods manual. The guidance does not apply to single-concentration (IWC) and control statistical t-tests and does not apply to the statistical assumptions on which the TST is based. The San Diego Water Board and USEPA will not consider a concentration-response pattern as sufficient basis to determine that a TST t-test result for a toxicity test is anything other than valid, absent other evidence. In a toxicity laboratory, unexpected concentration-response patterns should not occur with any regular frequency and consistent reports of anomalous or inconclusive concentration-response patterns or test results that are not valid will require an investigation of laboratory practices.

4.3.6.~~7~~8 Any Data Quality Objectives or Standard Operating Procedure used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent or receiving water toxicity test measurement results from

the ~~NOEC or~~ TST statistical approach which include a consideration of concentration-response patterns and/or Percent Minimum Significant Differences (PMSDs) must be submitted for review by the San Diego Water Board and USEPA, in consultation with the State Water Board's Quality Assurance Officer and Environmental Laboratory Accreditation Program (ELAP) (40 CFR section 122.44(h)). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the PMSD criteria only apply to compliance for NOEC and the sublethal endpoints of the NOEC, and therefore are not used to interpret TST results.

4.3.6.~~8~~9 This Order~~/~~ and Permit ~~contains~~ contain a reopener to require the San Diego Water Board and USEPA to modify this Order~~/~~ and Permit, if necessary, to make it consistent with any new policy, law, or regulation.

4.4 Final Effluent Limitation Considerations

4.4.1 Satisfaction of Anti-Backsliding Requirements

NPDES permits must conform with Anti-backsliding requirements discussed in section 3.3.4 of this Fact Sheet. These Anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the ~~previous~~ Previous Order~~/~~ and Permit, with some exceptions where limitations may be relaxed. This Order~~/~~ and Permit ~~complies~~ comply with all applicable federal and State Anti-backsliding regulations.

The effluent limitations in this Order~~/~~ and Permit are at least as stringent as the effluent limitations in the Previous Order~~/~~ and Permit, with the exception of effluent limitations for Aldrin. The effluent limitations for this parameter are less stringent than those in the Previous Order~~/~~ and Permit. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

CWA section 402(o)(1) and 303(d)(4). CWA section 402(o)(1) prohibits the establishment of less stringent WQBEL's "except in compliance with section 303(d)(4)." CWA section 303(d)(4) has two parts: paragraph (A) which applies to nonattainment waters and paragraph (B) which applies to attainment waters. For waters where standards are not attained, CWA section 304(d)(4)(A) specifies that any effluent limitation based on a TMDL or other WLA may be revised only if the cumulative effect of all such revised effluent limitations based on such TMDL's or WLA's will assure the attainment of such water quality standards. For attainment waters, CWA section 303(d)(4)(B) specifies that a limitation based on a water quality standard may be relaxed where the action is consistent with the antidegradation policy.

The receiving water in the vicinity of the PLOO is considered an attainment water for Aldrin because the receiving water is not listed as impaired on the 303(d) list for

this parameter.[22] As discussed in section 4.4.2, below, removal of the effluent limitations for Aldrin ~~comply~~ complies with federal and state antidegradation requirements. Thus, the removal of these effluent limitations from the Previous Order~~/~~ and Permit meets the exception in CWA section 303(d)(4)(B).

As described further in section 4.4.2 of this Fact Sheet, updated information that was not available at the time the Previous Order~~/~~ and Permit ~~was~~ were issued indicates that Aldrin does not exhibit reasonable potential to cause or contribute to an exceedance of applicable water quality objectives in the receiving water. The updated information that supports the removal of effluent limitations for Aldrin includes the following: Effluent monitoring data collected between October 2017 and August 2023 indicates that Aldrin in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the Ocean Plan objective for Aldrin. In 2020 and 2021, Aldrin was not detected in any PLOO sediment samples or liver samples from fishes collected from the PLOO region.

~~This Order and Permit contain new chronic toxicity effluent limitations based on the Ocean Plan and consistent with the California State Court Decision, *Camarillo Sanitary District v. State Water Resources Control Board (2025) 113 Cal.App.5th 407*. The new effluent limitations are expressed using a different testing methodology than the previous effluent limitations and are not clearly less stringent under CWA section 402(o). Even if the new limitations could be construed as being less stringent, CWA section 401(o)(1) allows for WQBELs to be revised consistent with the requirements of CWA section 303(d)(4). CWA section 303(d)(4)(B) applies to this discharge because the Pacific Ocean is not impaired for toxicity, making it an attainment water. Under CWA section 303(d)(4)(B), a limitation based on a water quality standard or any other permitting standard may be relaxed where the action is consistent with antidegradation policy. As explained in Fact Sheet section 4.4.2, there will be no degradation to water quality and the change in limits will not result in a violation of water quality standards.~~

4.4.2 Satisfaction of Antidegradation Policies

The WDRs for the Discharger must conform with antidegradation requirements discussed in section 3.3.3 of this Fact Sheet. The antidegradation policies require that beneficial uses and the water quality necessary to maintain those beneficial uses in the receiving waters of the discharge shall be maintained and protected, and, if existing water quality is better than the quality required to maintain beneficial uses, the existing water quality shall be maintained and protected unless allowing a lowering of water quality is necessary to accommodate important economic and social development or consistent with maximum benefit to the people of California. When a significant lowering of water quality is allowed by the San Diego Water Board, an antidegradation analysis is required in accordance with the State Water

[22] "The exceptions in Clean Water Act section 303(d)(4) address both waters in attainment with water quality standards and those not in attainment, i.e., waters on the section 303(d) impaired waters list." State Water Board Order WQ 2008-0006, Berry Petroleum Company, Poso Creek/McVan Facility.

Board's Administrative Procedures Update (July 2, 1990), Antidegradation Policy Implementation for NPDES Permitting.

This Order~~/~~ and Permit ~~complies~~ comply with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution No. ~~68-16~~68-16. As explained below, this Order and Permit do not authorize lowering water quality as compared to the level of discharge authorized in the previous Order and Permit, which is the baseline by which to measure whether degradation will occur. This Order and Permit also do not allow for an increased flow or a reduced level of treatment relative to the previous Order and Permit.

~~This Order and Permit impose a new aquatic toxicity limitation and requirements. The previous Order and Permit required analyzing whole effluent toxicity (WET) tests using the hypothesis testing method of the Test of Significant Toxicity (TST) and imposed chronic toxicity limits of "Pass/Fail" at IWC. This Order and Permit instead require the statistical endpoints of the NOEC and IC_{25} and appropriate dilution consisting of a control and a minimum five effluent concentrations for measuring WET and establish a new chronic toxicity limitation (i.e., Toxic Unit of 1) based on the water quality objectives for chronic toxicity in the Ocean Plan. In addition, this Order and Permit continue to require chronic toxicity monitoring using the TST approach and TRE triggers on chronic toxicity to ensure that a comparable level of treatment will be maintained. Therefore, the San Diego Water Board and the USEPA determine that water quality will not be degraded by the changes in the chronic toxicity requirements.~~

This Order removes effluent limitations for Aldrin based on updated information, as described in sections 4.3.3 and 4.4.1 of this Fact Sheet. The removal of WQBELs for Aldrin will not result in a decrease in the level of treatment or control, or a reduction in water quality. Therefore, the San Diego Water Board finds that the removal of the effluent limitations for Aldrin does not result in an allowed increase in pollutants or any additional degradation of the receiving water. Thus, the removal of effluent limitations is consistent with the antidegradation provisions of 40 CFR section 131.12 and the State Antidegradation Policy.

4.4.3 Stringency of Requirements for Individual Pollutants

This Order~~/~~ and Permit ~~contains~~ contain both TBELs and WQBELs for individual pollutants. The TBELs consist of restrictions on BOD_5, TSS, oil and grease, settleable solids, turbidity, 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. These limitations are not more stringent than required by the federal CWA.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives 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

Ocean Plan, which was approved by USEPA on February 14, 2006, and has since been further amended. All beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives 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 federal CWA" pursuant to 40 CFR section 131.21(c)(1). Collectively, this Order~~/~~ and Permit's restrictions on individual pollutants are no more stringent than required to implement the requirements of the federal CWA.

4.4.4 Twelve-month Toxics Mass Emission Benchmarks

Order Nos. 95-106, R9-2002-0025, R9-2009-0001, and the Previous Order~~/~~ and Permit contained toxics 12-month mass emission benchmarks for effluent discharged through the PLOO. These benchmarks were established to address the uncertainty due to projected increases in toxic pollutant loadings from the Facility to the marine environment during the 5-year 301(h) variance, and to establish a framework for evaluating the need for an antidegradation analysis to determine compliance with water quality standards at the time of permit reissuance. These benchmarks contained in the Previous Order~~/~~ and Permit have been carried over to this Order~~/~~ and Permit, except for the mass emission benchmark for non-chlorinated phenolics, which was recalculated based on new information. After reviewing the data, the Discharger found that the reported non-chlorinated phenolics effluent data from January 1990 to April 1994 was not representative of non-chlorinated phenolics because the reported results only included phenol, only one of the parameters in the definition for non-chlorinated phenolics. Beginning in May 1994, the PLOO effluent was also monitored for 3-methylphenol (4-methylphenol unresolved) and 4-methylphenol (3-methylphenol unresolved), which was added to phenol to yield the reported value for non-chlorinated phenols. The recalculated mass emission benchmark for non-chlorinated phenolics was based the effluent data from May 1994 through November 1995, rather than January 1990 to April 1994.

The 12-month mass emission benchmarks for the 1995 permit were determined using 1990 through April 1995 n-day average monthly performance (95th percentile) of the Facility and the 301(h)-variance-based effluent flow of 205 MGD for the 1995 301(h) application and the following equations:

MER (lbs/day) = Permitted Flow (MGD) x Pollutant Concentration (mg/L) x 8.34.

For the 2002 permit, the 12-month mass emission benchmarks for copper and selenium were recalculated using the 1994 n-day average monthly performance (95th percentile) and 205 MGD and the mass emission benchmark for cyanide was corrected. Average monthly performance was calculated as outlined in Appendix E of *Technical Support Document for Water Quality-based Toxics Control* (EPA/5005/2-90-001, 1991; TSD).

These mass emission benchmarks are not WQBELs and are not enforceable, as such. The mass emission benchmarks may be re-evaluated and modified during this Order~~/~~ and Permit term, or this Order~~/~~ and Permit may be modified to incorporate WQBELs, in accordance with the requirements set forth at 40 CFR sections 122.62 and 124.5. However, any two consecutive exceedances of the benchmarks will trigger an investigation into the cause of the exceedance. If the exceedance persists in three successive monitoring events, the Discharger is required to submit a Benchmark Exceedance Investigation Work Plan to the San Diego Water Board and USEPA within 30 days of the Discharger becoming aware of the third successive exceedance. The Benchmark Exceedance Investigation Work Plan is required to outline the investigative steps being taken, whether outside technical expertise is being retained to assist in the investigation, and the proposed schedule for completing a Benchmark Exceedance Report. The Benchmark Exceedance Report is required to include a description of the nature of the exceedance(s), the results of the investigation including the cause of the exceedance(s), the corrective actions taken, any proposed corrective measures, and a schedule for implementation, if necessary. Repeated exceedances of benchmarks may prompt the San Diego Water Board and USEPA to reopen and amend this Order~~/~~ and Permit to replace benchmarks for constituents of concern with effluent limitations, or the San Diego Water Board and USEPA may coordinate such actions with the next permit reissuance. The Discharger is in violation of this Order~~/~~ and Permit if it does not comply with the benchmark investigation and reporting requirements, when required by the terms of this Order~~/~~ and Permit. The benchmarks are provided in Table 3, section 4.~~1.~~3 of this Order~~/~~ and Permit.

Section 4.~~1.~~3, Table 4 of this Order~~/~~ and Permit ~~contain~~ contains the 12-month effluent mass emission benchmarks for toxic and carcinogenic materials that apply to the undiluted effluent from the Facility discharged to the PLOO at Monitoring Location EFF-001 as described in the MRP (Attachment E).

4.5 Discharge Specifications

~~This Order and Permit remove the discharge specifications contained in the previous Order and Permit (Order No. R9-2017-0007, section IV.B).~~ The Ocean Plan includes ~~discharge specifications incorporated~~ section III.A.2 ~~of the Ocean Plan~~, General Requirements for Management of Waste Discharge to the Ocean. ~~This~~ The Previous Order~~/~~ and Permit ~~incorporates~~ incorporated these requirements ~~to this Order/Permit~~ for the discharge of waste to the ocean through the PLOO to be consistent with the Ocean Plan. Attachment G provides a detailed analysis of how this Order and Permit will conform with the Ocean Plan, section III.A.2. ~~However, these requirements are either redundant with other provisions (e.g., sections III.A.2.c of the Ocean Plan is redundant of discharge prohibition section 3.4 of this Order and Permit) or not consistent with the 2025 U.S. Supreme Court's ruling in City and County of San Francisco, California v. Environmental Protection Agency (No. 23-753), which held that the Clean Water Act does not authorize end-result requirements in NPDES permits. Therefore, this Order and Permit remove inconsistent provisions that are unnecessary or, where appropriate, include more stringent requirements (e.g.,~~

~~discharge prohibitions) that the Discharger must meet to achieve water quality goals. Described below are some specific examples that were considered when removing the discharge specification from this Order and Permit.~~

~~4.6 Land Discharge Specifications – Not Applicable~~

~~4.7 Recycling Specifications – Not Applicable~~

~~Ocean Plan section III.A.2.b. requires waste discharged to the ocean to be essentially free of material that is floatable or will become floatable upon discharge; settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life; substances which will accumulate to toxic levels in marine water, sediments, or biota; substances that significantly decrease the natural light to benthic communities and other marine life; and material that result in aesthetically undesirable discoloration of the ocean surface. The Facility discharges advanced primary-treated wastewater, which has been in compliance with effluent limitations for total suspended solids (TSS), oil and grease, settleable solids, turbidity, and chronic toxicity. The receiving water monitoring results also indicate that the waste discharge from the Facility is meeting the requirements of Ocean Plan section III.A.2.b (e.g., no observed floatable material, no reduction in light transmittance, or undesirable discoloration near the outfall). Furthermore, the technology-based effluent limitations in this Order and Permit, including those for TSS, settleable solids, oil and grease, and turbidity would be sufficient to prohibit these materials in the discharge that may negatively impact beneficial uses. Therefore, these discharge specifications were removed from this Order and Permit.~~

~~Ocean Plan section III.A.2.d. requires that the location of waste discharges be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that: (1) pathogenic organisms and viruses are not present in areas where shellfish are harvested for human consumption or in areas used for swimming or other body-contact sports; (2) natural water quality conditions are not altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater; and (3) maximum protection is provided to the marine environment. The federal waters near the discharge point are not areas which shellfish are harvested for human consumption or areas used for swimming or other body-contact sports. Thus, subsections (1) and (2) of this requirement do not apply to this Order and Permit. Additionally, the effluent limitations and performance goals that were derived from water quality objectives for the protection of marine aquatic life were designed to provide the maximum protection to the marine environment, satisfying the requirement of subsection (3) of Ocean Plan section III.A.2.d.. Therefore, these discharge specifications were removed from this Order and Permit.~~

~~Ocean Plan section III.A.2.e. requires waste that contains pathogenic organisms or viruses be discharged a sufficient distance from shellfishing and water-contact sports areas to maintain applicable bacterial standards without disinfection. As stated above, the federal waters near the discharge point are not areas in which shellfish are harvested for human consumption or areas used for swimming or other body-~~

~~contact sports. Therefore, this discharge specification was removed from this Order and Permit.~~

5 Rationale for Receiving Water Limitations

~~Receiving water limitations of this Order/Permit are derived from the water quality objectives for ocean waters established by the Basin Plan and the Ocean Plan.~~

~~Prior to 2009, the San Diego Water Board interpreted the Bacterial Characteristics Water-contact Standards of the Ocean Plan to apply only in the zone bounded by the shoreline and a distance 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and within kelp beds. The Ocean Plan provides that these Bacteriological Standards also apply in designated areas outside this zone used for water contact sports, as determined by the Regional Water Boards (i.e., all waters designated with the contact water recreation (REC-1) beneficial use). These designated areas must be specifically defined in the Basin Plan. Because the San Diego Water Board has designated the ocean waters with the REC-1 beneficial use in the Basin Plan, the Ocean Plan Bacterial Standards apply throughout State territorial marine waters in the San Diego Region, which extend from surface to bottom, out to three nautical miles from the shoreline. This interpretation has been confirmed by USEPA.~~

~~The Ocean Plan Bacteria Standards were amended in February 2019 and include new standards for fecal coliform and enterococci. As a result, this Order/Permit includes receiving water limitations for fecal coliform and enterococci based on the 2019 Ocean Plan Bacteria Standards.~~

~~The bacteria characteristics for waters beyond State of California territorial marine waters are derived from the *2012 USEPA Recreational Water Quality Criteria* (RWQC), Table 1 (https://www.epa.gov/sites/default/files/2015-10/documents/rwqc2012.pdf).~~

~~The Previous Order and Permit included the receiving water limitations as backstops for unanticipated circumstances or any potential changes to effluent quality that could affect receiving water quality. This Order and Permit remove these receiving water limitations to be consistent with the 2025 U.S. Supreme Court ruling in City and County of San Francisco, California v. Environmental Protection Agency (No. 23-753), which held that the Clean Water Act does not authorize end-result requirements in NPDES permits. End-result requirements make the Discharger responsible for the quality of the receiving water into which it discharges pollutants, without specifying specific requirements (e.g., effluent limitations) or actions the Discharger must take that apply at or before the discharge point.~~

~~The receiving water limitations were derived from the narrative water quality objectives for ocean waters established by the Basin Plan and the Ocean Plan. The San Diego Water Board and USEPA have evaluated whether there is reasonable potential for the discharge to cause or contribute to an exceedance of any narrative water quality objective in accordance with 40 CFR section 122.44(d). Where reasonable potential is determined, this Order and Permit require more stringent limitations or discharge prohibitions to ensure that the discharge satisfies Clean Water Act section 301(b)(1)(C)~~

~~(33 U.S.C. section 1311(b)(1)(C)). See section 4.3.3.2 of this Fact Sheet. If unanticipated circumstances or changes to effluent quality occur during the permit term, the San Diego Water Board and USEPA may reopen this Order and Permit to include any limitations necessary to protect water quality.~~

The Previous Order and Permit included generalized receiving water limitations as backstops for unanticipated circumstances or any potential changes to effluent quality that could affect receiving water quality. This Order and Permit remove the generalized receiving water limitations contained in the Discharger's prior permit that made the Discharger responsible for the quality of the receiving water into which the permittee discharges pollutants, without specifying specific requirements (e.g., effluent limitations) or other actions the discharger must take that apply at or before the discharge point. This action was taken 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, which held that NPDES permits issued by USEPA may not include end-result requirements under Clean Water Act section 301(b)(1)(C). End-result requirements are 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 receiving water into which it discharges pollutants.

The generalized receiving water limitations were derived from the narrative water quality objectives for ocean waters established by the Basin Plan and the Ocean Plan. The San Diego Water Board and USEPA reviewed the remaining permit requirements and have evaluated whether there is reasonable potential for the discharge to cause or contribute to an exceedance of any narrative or numeric water quality objective in accordance with 40 CFR section 122.44(d). Where reasonable potential is determined, this Order and Permit require more stringent limitations or discharge prohibitions to ensure that the discharge satisfies the requirements of Clean Water Act section 301(b)(1)(C) (33 U.S.C. section 1311(b)(1)(C)). See section 4.3.3.2 of this Fact Sheet. As a result, the discharge does not authorize violations of water quality standards, and the removal of the generalized receiving water limitation does not authorize the additional discharge of pollutants or authorize the violation of water quality standards. This Order and Permit do~~es~~ not, therefore, authorize either backsliding or further degradation of water quality.

If unanticipated circumstances or changes to effluent quality occur during the permit term, the San Diego Water Board and USEPA may reopen this Order and Permit to include any limitations necessary to protect water quality.[23]

[23] In addition, while the San Diego 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.

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 the Standard Provisions (Attachment D).

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 the State to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR section 123.25, this Order~~/~~ and Permit ~~omits~~ omit 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~~/~~ and Permit ~~incorporates~~ incorporate by reference Water Code section 13387(e).

6.2 Special Provisions

6.2.1 Reopener Provisions

This Order~~/~~ and Permit may be re-opened and modified, revoked and reissued, or terminated for cause in accordance with the provisions of 40 CFR parts 122, 123, 124, and 125. The San Diego Water Board may reopen the permit to modify permit conditions and requirements. Causes for modification include, but are not limited to, revisions to effluent limitations, receiving water requirements, monitoring and reporting requirements; participation in the Southern California Coastal Water Research Project (SCCWRP) monitoring program or other regional or water body monitoring coalition as determined by the San Diego Water Board; revisions to sludge use or disposal practices; or adoption of new or revised regulations, water quality control plans, or policies by the State Water Board, San Diego Water Board, or USEPA including revisions to the Basin Plan or Ocean Plan.

6.2.2 Special Studies and Additional Monitoring Requirements

6.2.2.1 Spill Prevention and Response Plans

The federal CWA largely prohibits any discharge of pollutants from point sources to waters of the United States except as authorized under an NPDES permit. In general, any point source discharge of sewage effluent to waters of the United States must comply with technology-based, secondary treatment standards, at a minimum, and any more stringent requirements necessary to meet applicable water quality standards and other requirements. The unpermitted discharge of wastewater to waters of the United States is illegal under the federal CWA. Further, the Basin Plan prohibits discharges of waste to land, except as authorized by WDRs or the terms described in Water Code section 13264. The Basin Plan also prohibits the unauthorized discharge of

treated or untreated sewage to waters of the State or to a ~~storm water~~ stormwater conveyance system. Further, Discharge Prohibition 3.1 of this Order~~/~~ and Permit ~~prohibits~~ prohibit the discharge of waste from the Facilities to a location other than Discharge Point No. 001.

Sanitary collection and treatment systems experience periodic failures resulting in discharges that may affect waters of the United States and/or State. There are many factors which may affect the likelihood of a spill. To ensure appropriate funding, management, and planning to reduce the likelihood of a spill, and to increase the level of response if a spill does occur, this Order~~/~~ and Permit ~~requires~~ require the Discharger to maintain and implement Spill Prevention and Response Plans.

6.2.2.2 **Spill Reporting Requirements**

To determine compliance with Discharge Prohibition 3.1 and provide appropriate notification to the general public for the protection of public health, spill reporting requirements have been established in sections 6.3.2.2 and 6.3.5.5 of this Order~~/~~ and Permit.

6.2.2.3 ~~**Receiving Water Violation**~~ **Special Assessment of Violation and Noncompliance**

In the event of either a violation of any ~~receiving water limitation established within~~ limitations or noncompliance with any permit conditions (e.g., discharge prohibitions) of this Order~~/~~ and Permit, the San Diego Water Board and~~/or~~ USEPA may require the Discharger to perform a special assessment. The purpose of ~~the~~ this special assessment shall be to investigate the nature and cause of the ~~receiving water~~ violation or noncompliance and identify measures needed to ensure future compliance with ~~receiving water~~ the limitations, requirements, or conditions of this Order and Permit. The Discharger shall submit the required assessment report to the San Diego Water Board and USEPA within 90 days of receipt of the San Diego Water ~~Board~~ Board's and/or ~~USEPA~~USEPA's notification ~~of the need~~ to perform a ~~Receiving Water~~ Violation/Noncompliance Assessment. The results of the assessment will assist the Discharger~~;~~, the San Diego Water Board~~;~~, and USEPA in determining permit compliance and appropriate corrective actions for the protection of water quality and designated beneficial uses.

6.2.2.4 **Dilution Analysis**

This Permit/Order requires the Discharger to complete an updated dilution analysis for the PLOO or a report demonstrating that the discharge volume changes and/or other impacts from the Pure Water San Diego project will not decrease the initial dilution below 204:1 no later than 4 years after the effective date of this Order~~/~~ and Permit. The planned changes detailed in section 2.6 of this Fact Sheet and any other relevant projects in the Metro System (e.g., indirect potable reuse projects, brine discharges, lower discharge flow rate)

could greatly change the initial dilution of the PLOO. Information from the updated dilution analysis may be used for future permit reissuances.

6.2.3 Best Management Practices and Pollution Prevention

The Pollutant Minimization Program (PMP) is based on the requirements of section III.C.9 of the Ocean Plan. The goal of the program is to reduce potential sources of pollutants by using source control measures if the specified circumstances occur.

6.2.4 Construction, Operation, and Maintenance Specifications

6.2.4.1 **Publicly-Owned Treatment Works (POTWs)** - This Order~~/~~ and Permit ~~carries~~ carry over provisions from the Previous Order~~/~~ and Permit to ensure that new treatment facilities and expansions of existing treatment facilities are completely constructed and operable prior to initiation of the discharge from the new or expanded facilities.

6.2.4.2 This Order~~/~~ and Permit ~~carries~~ carry over a provision from the Previous Order~~/~~ and Permit, to ensure the Facilities are protected against the impact of storm events.

6.2.4.3 This Order~~/~~ and Permit ~~carries~~ carry over the provision from the Previous Order~~/~~ and Permit, to ensure the Facilities are protected against regional impacts due to ~~climate change~~ extreme weather (e.g., sea level rise and floods).

6.2.4.4 This Order~~/~~ and Permit ~~carries~~ carry over the provision from the Previous Order~~/~~ and Permit, to ensure the Facilities have adequate power. This provision is based on the requirements of 40 CFR section 122.41(e).

6.2.5 Special Provisions for POTWs

6.2.5.1 **Point Loma Ocean Outfall (PLOO) Capacity Report**

To ensure that sufficient capacity is available to accommodate potential growth in the future, this Order~~/~~ and Permit ~~requires~~ require the Discharger to evaluate the capacity of the PLOO during the term of the permit and submit their findings to the San Diego Water Board.

6.2.5.2 **Ensuring Adequate Treatment Plant Capacity**

Title 23, division 3, chapter 9, article 9, section 2232 of the CCR requires POTWs ensure adequate treatment plant capacity. This Order~~/~~ and Permit ~~retains~~ retain the requirement for a treatment plant capacity study which serves as an indicator to the San Diego Water Board and USEPA of the Facility's hydraulic capacity and potential growth in the service area.

6.2.5.3 **Pretreatment Program**

The federal CWA section 307(b), and federal regulations, 40 CFR part 403, establish pretreatment requirements for POTWs which receive pollutants from non-domestic users. This Order~~/~~ and Permit ~~contains~~ contain pretreatment program requirements pursuant to 40 CFR part 403 that are applicable to the

Discharger. A pretreatment program is required to prevent the introduction of pollutants, which will interfere with treatment plant operations or sludge disposal and prevent pass through of pollutants that exceed water quality objectives, standards, or permit limitations. Also, this Order~~/~~ and Permit ~~incorporates~~ incorporate conditions for implementing urban area pretreatment program requirements under CWA section 301(h) and 40 CFR part 125. Also, this Order~~/~~ and Permit ~~retains~~ retain the requirement to conduct an annual analysis of the local limits as required under 40 CFR section 125.65(c)(1)(iii).

The Discharger's implementation and enforcement of its approved pretreatment program is an enforceable condition of this Order~~/~~ and Permit. If the Discharger fails to perform the pretreatment functions, the San Diego Water Board, the State Water Board, or USEPA may take enforcement actions against the Discharger as authorized by the federal CWA and Water Code.

6.2.5.4 Sludge (Biosolids) Requirements

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. The Discharger 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 CCR establishes approved methods for the disposal of collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes. Requirements to ensure the Discharger disposes of solids in compliance with State and federal regulations have been included in this Order~~/~~ and Permit.

6.2.5.5 Sewage Collection System

The State Water Board issued Order No. WQ 2022-0103-DWQ, *Statewide Waste Discharge General Order for Sanitary Sewer Systems* (Statewide General SSO Order) on December 6, 2022. The Statewide General SSO Order requires state agency, municipality, special district, or other public entity that owns and/or operates one or more sanitary sewer systems greater than one mile in length (each individual sanitary sewer system to enroll for coverage and comply with the Statewide General SSO Order. The Statewide General SSO Order requires agencies to develop Sewer System Management Plans (SSMPs) and report all sanitary sewer overflows, among other requirements and prohibitions.

The Statewide General SSO Order contains requirements for operation and maintenance of sewage 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. The Discharger is enrolled in the Statewide General SSO Order.

The San Diego Water Board issued Order No. R9-2007-0005, *Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region*

(Regional General SSO Order). The Regional General SSO Order is more stringent and prescriptive than the Statewide General SSO Order. The Discharger is also enrolled in the Regional General SSO Order.

Regardless of the coverage obtained under the Statewide General SSO Order or Regional General SSO Order, the Discharger's sewage collection system is part of the treatment system that is subject to this Order~~/~~ and Permit. As such, pursuant to federal regulations, the Discharger must report any noncompliance (40 CFR sections 122.44(l)(6) and (7)), properly operate and maintain its sewage collection system [40 CFR section 122.41(e)], and mitigate or prevent any discharge from the sewage collection system in violation of this Order~~/~~ and Permit [40 CFR section 122.41(d)].

This Order and Permit add requirements for the Discharger to ensure that USEPA receives notifications and certified reports that are required under the Statewide General SSO Order for spills that:

- reach a surface water, including a surface water body that contains no flow or volume of water, or a drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly, and/or
- are greater than 1000 gallons.

Sanitary sewer overflows that are reported under the Statewide General SSO Order and Regional General SSO Order are available to the public at the Sanitary Sewer Overflows (SSO) Data Visualization Tool - San Diego Region and State Water Board Public SSO Report Database.[24]

6.2.5.6 **Requirements for Receipt of 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 sewage 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 WDRs 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.

[24] https://cawaterboards.sharepoint.com/RB9/SitePages/DIViTs.aspx and https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportSSOServlet?reportAction=criteria&reportId=sso_main

The SOPs are required for POTWs that 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.

6.2.5.7 **Asset Management Plan**

This Order~~/~~ and Permit ~~requires~~ require the Discharger 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 rehabilitation and replacement plan, maintenance plan, system map, funding, ~~system projections, and~~ asset management software~~.~~, and asset resiliency. Standard Provision 1.4 in Attachment D of this Order~~/~~ and Permit is based on the requirements of 40 CFR section 122.41(e) and requires the Discharger to properly operate and maintain all facilities and systems of treatment and control which are installed or used by the Discharger to achieve compliance with the conditions of this Order~~/~~ and Permit. Asset management planning provides a framework for setting and operating quality assurance procedures and ensuring the Discharger has sufficient financial and technical resources to continually maintain a targeted level of service and the operational integrity of the POTWs. Extreme weather conditions may fundamentally alter the way wastewater facilities are designed, operated, and maintained. The Asset Management Plan requirement has been updated to include asset resiliency to ensure the Facilities and operations are protected against regional impacts of these extreme weather conditions. Asset management requirements have been established in this Order~~/~~ and Permit to ensure compliance with Standard Provision 1.4 in Attachment D of this Order~~/~~ and Permit and the requirements of 40 CFR section 122.41(e).

6.2.6. Other Special Provisions

Pure Water San Diego Potable Reuse Tasks and Goals. The Previous Order~~/~~ and Permit included the schedule of tasks for Pure Water San Diego for the Discharger to demonstrate its commitment to move forward with implementation of the water reuse program. To demonstrate the Discharger's continued commitment to Pure Water San Diego, the Discharger's application proposed to incorporate the schedule of tasks for implementing Pure Water San Diego in this Order~~/~~ and Permit. Along with the schedule, this Order~~/~~ and Permit ~~merges~~ merge the requirements for task reports and semiannual progress reports from the Previous Order~~/~~ and Permit to only include semiannual progress reports.

On February 6, 2025, the California Coastal Commission conditionally concurred with the Consistency Certification CC-0002-24 for the Facility and PLOO

submitted by the Discharge for the NPDES permit reissuance. Consistency Certification CC-0002-24 includes the following adopted condition:

> Interim Report to the Commission. Between February and December of 2027, the Discharger shall provide to the California Coastal Commission, at one of its monthly public meetings, an oral interim status report on the construction and implementation progress of Phase 1 of its Pure Water San Diego program and on progress in planning and funding Phase 2 of its Pure Water San Diego program.

In accordance with the Consistency Certification CC-0002-24, this Order and Permit include the California Coastal Commission's condition within Table 5, *Pure Water San Diego Potable Reuse Tasks, 2022-2028*.

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 section 13383 also authorize the San Diego Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP (Attachment E) establishes monitoring, reporting, and recordkeeping requirements that implement federal and State requirements. The reports required by the MRP (Attachment E) are needed to ensure compliance with the Order, protect beneficial uses, and obtain other benefits as described in this Fact Sheet and the MRP (Attachment E). Thus, the burdens, including costs, of the MRP (Attachment E) required by this Order~~/~~ and Permit bear a reasonable relationship to the need for and benefits to be obtained from the MRP (Attachment E). The following provides the rationale for the monitoring and reporting requirements contained in the MRP (Attachment E) for the Facility.

7.1 Core Monitoring Requirements

7.1.1 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. Influent monitoring frequencies and sample types have been retained from the Previous Order~~/~~ and Permit, except for the following:

- This Order~~/~~ and Permit ~~requires~~ require influent monitoring to account for all influent wastestream flows with the exception of the ~~storm water~~ stormwater flows that are diverted from Facility premises to the Facility headworks, downstream of the INF-001.
- This Order~~/~~ and Permit ~~reduces~~ reduce the minimum monitoring frequency for Aldrin from weekly to monthly. As detailed in section 4.3.3 of this Fact Sheet, reasonable potential to cause or contribute to an exceedance of water quality objectives was not determined for Aldrin; thus, this Order~~/~~ and Permit ~~replaces~~ replace effluent limitations with performance goals for Aldrin.

- The sample type for remaining priority pollutants has been updated from 24-hour composite to grab for pollutants that are classified volatile organic compounds.

This Order~~/~~ and Permit ~~carries~~ carry over influent monitoring for nutrients from Order No. R9-2022-0078, *Addendum No. 1 to Order No. R9-2017-0007 NPDES No. CA0107409*. As stated in the addendum, the NOAA NMFS issued a final biological opinion dated March 4, 2022, which provides results of its review of potential effects of the PLOO discharge on federally listed threatened and endangered species, and essential fish habitat. The NMFS biological opinion concluded that certain federally listed threatened and endangered species could be at risk of exposure to phytoplankton blooms, including harmful algal blooms, in the event nutrient loads from the discharge contribute to the formation of such blooms in the receiving water. The Terms and Conditions in the NMFS biological opinion include monitoring to determine the nutrient loading from the discharge. Monitoring for nutrients in the influent is necessary to evaluate the Facility's treatment of nutrients. The requirements for influent monitoring for nutrients implement a portion of the Terms and Conditions of the NMFS biological opinion.

Refer to section 3.1 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.1.2 Effluent Monitoring

Effluent monitoring is required to determine compliance with the conditions of this Order~~/~~ and Permit, to identify operational problems, to improve plant performance, and to conduct reasonable potential analyses for subsequent orders. Effluent monitoring also provides information on wastewater characteristics for use in interpreting water quality and biological data. Effluent monitoring requirements have been carried over from the Previous Order~~/~~ and Permit with the following exceptions:

7.1.2.1 For this Order~~/~~ and Permit, the Discharger may apply the performance goal for both chromium (VI) and chromium (III) as a total chromium performance goal. The Ocean Plan allows dischargers to meet the objective for chromium (VI) as a total chromium objective (footnote a, of Table 3 of the Ocean Plan). Total chromium includes both chromium (VI) and chromium (III) and applicable federal regulations in 40 CFR part 136 under the CWA do not specify an analytical method for chromium (III)[25] Thus, this Order~~/~~ and Permit ~~allows~~ allow the Discharger to also meet the objective for chromium (III) as a total chromium objective. If the Discharger only monitors for total chromium to meet the requirements for both chromium (VI) and chromium (III), the total chromium data will be used to determine if reasonable potential exists for both chromium (VI) and chromium (III) in future permit reissuances and/or updates.

[25] In order to obtain a value for chromium (III), two separate methods must be used: one for total chromium determination and one for chromium (VI) determination. The value for chromium (III) is obtained by subtracting the chromium (VI) value from the total chromium value.

7.1.2.2 This Order~~/~~ and Permit ~~reduces~~ reduce the minimum monitoring frequency for Aldrin from weekly to monthly. As detailed in section 4.3.3 of this Fact Sheet, reasonable potential to cause or contribute to an exceedance of water quality objectives was not determined for Aldrin; thus, this Order~~/~~ and Permit ~~replaces~~ replace effluent limitations with performance goals for Aldrin.

7.1.2.3 This Order~~/~~ and Permit ~~carries~~ carry over flame-retardant monitoring from Order No. R9-2022-0078, Addendum No. 1 to Order No. R9-2017-0007 NPDES No. CA0107409. The NMFS biological opinion dated March 4, 2022, identifies individual species that could potentially uptake or accumulate contaminants such as organophosphate flame retardants and other persistent organic pollutants that may be present in treated wastewater discharged to the receiving water. This uptake and/or accumulation could increase their body burden of these contaminants and the risk of incurring adverse effects on their growth, reproduction, and overall health and survival over a shorter period of time than would otherwise occur absent the discharge. NMFS' analysis focused on the apparently increasing threat associated with accumulation of organophosphate flame retardants, given the recent literature describing the potential harm organophosphate flame retardants can have on numerous federally listed threatened and endangered species, and their known association with wastewater discharge in general. The Terms and Conditions in the NMFS biological opinion include effluent monitoring for organophosphate flame retardants. This Order~~/~~ and Permit ~~includes~~ include effluent monitoring requirements for flame-retardant to implement the Terms and Conditions of the NMFS biological opinion.

7.1.2.4 This Order~~/~~ and Permit ~~carries~~ carry over effluent monitoring for nutrients from Order No. R9-2022-0078, Addendum No. 1 to Order No. R9-2017-0007 NPDES No. CA0107409. As stated in section 7.1.1 of this Fact Sheet, the NMFS biological opinion concluded that certain federally listed threatened and endangered species could be at risk of exposure to phytoplankton blooms. Monitoring for nutrients in the effluent is necessary to quantify the nutrient loading to the receiving water from the Facility's discharge, evaluate the Facility's treatment of nutrients, and evaluate potential contribution of the discharge to formation of algal blooms in the receiving ocean waters. The requirements for effluent monitoring for nutrients implement a portion of the Terms and Conditions of the NMFS biological opinion.

The nutrient and water chemistry monitoring will also be used to inform the coupled biogeochemical-physical model in development by the SCCWRP to evaluate impacts of local pollution on ocean acidification within the Southern California Bight.

7.1.2.5 This Order~~/~~ and Permit also ~~adds~~ add effluent monitoring for PFAS compounds. POTWs are potentially significant receivers of PFAS from various sources, including disposal of landfill leachate and firefighting foam, which results in PFAS in the influent to POTWs. Typical POTW treatment systems are not

designed to remove PFAS, and therefore, the discharge from POTWs, especially those with industrial inputs, are possible contributors of PFAS to the surface waters. Effluent monitoring for PFAS compounds is included in this Order~~/~~ and Permit to identify and understand PFAS in wastewater. The proposed monitoring requirements for PFAS compounds are also consistent with EPA's PFAS Action Plan (dated June 15, 2022) and PFAS Strategic Roadmap (October 2021) that describe the EPA's goals of reducing PFAS discharges to waterways. This includes proposing monitoring requirements in federally issued NPDES permits, such as ~~this joint~~ these consolidated NPDES ~~permit~~ permits.

7.1.2.6 The sample type for remaining priority pollutants has been updated from 24-hour composite to grab for pollutants that are classified volatile organic compounds.

Refer to section 3.2 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.1.3 WET Testing Requirements

This Order~~/~~ and Permit ~~contains~~ contain chronic toxicity effluent limitations as described in section 4.3.6 of this Fact Sheet.

Consistent with the requirements of the Ocean Plan, section 3.3.7 of the MRP (Attachment E) requires the Discharger to develop an Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan and submit the Initial Investigation TRE Work Plan within 90 days of the effective date of this Order~~/~~ and Permit. The Initial Investigation TRE Work Plan must describe steps the Discharger intends to follow if the effluent limitation for chronic toxicity is exceeded.

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. To determine if the discharge consistently exceeds the toxicity effluent limitation, this Order~~/~~ and Permit ~~requires~~ require the Discharger to notify the San Diego Water Board and USEPA and to accelerate toxicity testing if the effluent limitation for chronic toxicity is exceeded in any one test. If any of the additional tests demonstrate toxicity, in accordance with section III.C.10 of the Ocean Plan, the Discharger is required to submit a Detailed TRE Work Plan in accordance with its submitted Initial Investigation TRE Work Plan and USEPA guidance[26] which shall include further steps taken by the Discharger to investigate, identify, and correct the causes of toxicity; actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for these actions. The Discharger may also implement a Toxicity Identification

[26] See (a) *TRE Guidance for Municipal Wastewater Treatment Plants* (EPA 833-B-99-002, 1999); (b) *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070); *Toxicity Identification Evaluation, Phase I* (EPA/600/6-91/005F); (c) *Methods for Aquatic Toxicity Identification Evaluations, Phase II* (EPA/600/R-92/080); (d) *Methods for Aquatic Toxicity Identification Evaluations, Phase III* (EPA/600/R-92/081); and (e) *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054,1996).

Evaluation (TIE), as necessary, based upon the magnitude and persistence of toxicity effluent limitation exceedances. Once the source of toxicity is identified, the Discharger must take all reasonable steps to reduce the toxicity to meet the chronic toxicity effluent limitation identified in section 4.1 of this Order~~/~~ and Permit.

The above accelerated monitoring (a minimum of six 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.

Within 30 days of completion of the TRE, the Discharger 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 the toxicity effluent limitation of this Order~~/~~ and Permit and prevent recurrence of exceedances of the effluent limitation, and a time schedule for implementation of any planned corrective actions. The Discharger 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 San Diego Water Board. The corrective actions and time schedule must be modified at the direction of the San Diego Water Board.

Refer to section 3.3 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.2 Receiving Water Monitoring Requirements

The receiving water and sediment monitoring requirements set forth below are designed to measure the effects of the PLOO discharge on the receiving water. These monitoring requirements will remain in effect on an interim basis, pending development of a new and updated monitoring and assessment program.

Refer to section 4 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.2.1 Shoreline Water Quality Monitoring Requirements

Shoreline water quality monitoring is required to determine if the effluent is causing or contributing to exceedances of the water quality standards in the shoreline, the area where the ocean surface waves come closer to shore and break. Monitoring requirements for fecal coliform bacteria has been changed from once per week to a minimum of five samples to be collected within a rolling 30-day period. These changes reflect the new bacterial provisions contained in the Ocean Plan. The 2019 amendment to the Ocean Plan also removes the requirement to conduct repeat sampling if a single sample exceeds any of the bacterial single sample maximum standards. Thus, this repeat sampling requirement has not been carried over from Order No. R9-2017-0007.

Refer to section 4.1 of the MRP (Attachment E).

7.2.2 Offshore Water Quality and Kelp Monitoring Requirements

Offshore water quality and kelp monitoring 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, evaluate the contribution of

the discharge to ocean acidification, and to gather data for future permit reissuances. Offshore water quality and kelp monitoring requirements have been carried over from the ~~previous~~ Previous Order~~/~~ and Permit, Order No. R9-2017-0007, with the following exceptions:

7.2.2.1 This Order~~/~~ and Permit ~~adds~~ add monitoring requirements for colored dissolved organic matter (CDOM) to be consistent with Appendix III section 10.1 of the Ocean Plan.

7.2.2.2 Monitoring requirements for total coliform has been removed. These changes reflect the new bacterial provisions contained in the 2018 amendment to the Ocean Plan.

~~7.2.2.3 In the event of recurring exceedances of bacterial standards in the receiving water, this Order/Permit requires the Discharger to monitor for the human associated HF183 genetic marker (HF183) to confirm if fecal contamination associated with the bacterial exceedances is from a human source. The need for this monitoring will be triggered if the overall compliance rate with the receiving water limitations for bacterial characteristics at sections 5.1.1 and 5.1.2 of this Order/Permit falls below 90 percent within a rolling one-year period or a single monitoring location exceeds the bacteria receiving water limitations more than 50 percent of the time within a rolling one-year period at the offshore stations located near the PLOO, excluding offshore station F-030, and the source of the exceedances is unknown. If the source of where the fecal contamination causing the bacteria receiving water limitation exceedances originated is known (e.g., storm events, the discharge through the PLOO, or some other known source), the Discharger is required to submit a written report to the San Diego Water Board describing the specific cause and source of the exceedances and if human fecal waste is the cause, a strategy for prioritizing the bacterial receiving water sites for remediation. If the San Diego Water Board concurs with the conclusions of the report, HF183 monitoring is not required. If HF183 monitoring is required, the San Diego Water Board will direct the Discharger in writing to implement the HF183 monitoring and development of a strategy for remediating the bacterial receiving water sites based on measured human fecal waste levels. The San Diego Water Board will provide the Discharger with a written explanation regarding the need for the information and the evidence that supports requiring the Discharger to provide the information. If directed to implement HF183 monitoring, the Discharger is required to collect samples for HF183 concurrently with samples collected for fecal coliform at the offshore stations experiencing the exceedances. The human associated HF183 genetic marker, derived from the 16S rRNA gene of Bacteroides, is increasingly being used to identify human sources of sewage pollution in coastal waters. Monitoring for the HF183 genetic marker under this Order/Permit will be used to confirm the presence of human fecal material when the single sample maximum receiving water limitation for fecal coliform is exceeded in the receiving ocean waters. After the San Diego Water Board implements the requirement to collect samples for the HF183 genetic marker, analysis of HF183 is only required if the~~

~~concurrently collected sample for fecal coliform exceeds the single sample maximum receiving water limitation. Results for the HF183 monitoring will be used for investigative purposes, there is no receiving water limitation expressed in terms of the HF183 genetic marker.~~

~~7.2.2.4 This Order/Permit requires~~7.2.2.3 This Order and Permit require the Discharger monitor for pH by spectrophotometric technique and total alkalinity quarterly at the depths of any deployed pH and/or oxygen sensors on the Real-Time Oceanographic Mooring ~~at a subset of offshore stations, as recommended by SCCWRP~~ to provide more precise measure of pH in the receiving water. Increased precision of pH measurements will allow for better evaluation of changes in pH due to ocean acidification. ~~Compliance with the pH receiving water limitation in section 5.1.4.2 of this Order/Permit will be based on the pH measurements calibrated according to USEPA approved 40 CFR part 136 methods. Measurements of pH by spectrophotometric technique and total alkalinity is used provide a more precise measure of pH in the receiving water and to calibrate the pH measurements collected by potentiometric sensors (i.e., glass electrodes) attached to conductivity-temperature-depth (CTD) profile samplers utilized during routine receiving water monitoring. Section 5.1.4.2 of this Order/Permit requires that pH shall not be changed at any time more than 0.2 standard units from that which occurs naturally.~~ The temporal imprecision of pH measurement technology (e.g., glass electrodes) has been well documented in scientific literature. The margin of error associated with using ~~dated~~ this technology to measure pH can be greater than 0.2 pH units particularly when deployed for extended periods~~, which makes it impossible to achieve the precision required to measure compliance with the pH receiving water limitation in section 5.1.4.2 of this Order/Permit.~~ However, calibrating glass electrodes with measurements of pH by spectrophotometric technique and total alkalinity in the laboratory can increase the precision of the glass electrodes measurements collected in the field. This is particularly useful for sensors that are deployed on unmanned moorings for extended periods lasting days to months. A 2017 study suggests that pH measurements with this calibration method can be used to differentiate trends or spatial difference greater than 0.2 pH units, while the uncalibrated potentiometric glass electrodes can be used to differentiate trends or spatial difference greater than 0.5 pH units.[27]

In addition to imprecision of glass electrodes, emerging evidence suggests that monitoring parameters other than pH, especially aragonite saturation state (relevant to shell-building in calcifying organisms) and partial pressure of carbon dioxide (relevant to fish behavior and navigation) is needed to assess ocean acidification effects (see *The West Coast Ocean Acidification and Hypoxia Science Panel, Major Findings, Recommendations, and Actions*, Appendix G at

[27] McLaughlin, K., Nezlin, N.P., Weisberg, S.B., Dickson, A.G., Booth, J.A., Cash, C.L., Feit, A., Gully, J.R., Johnson, S., Latker, A., Mengel, M.J., Robertson, G.L., Steele, A., & Terriquez, L. (2017b). An evaluation of potentiometric pH sensors in coastal monitoring applications. Limnology and Oceanography: Methods, 15, 679-689. doi: 10.1002/lom3.10191

Pgs. 26-27 available at: https://ftp.sccwrp.org/pub/download/DOCUMENTS/TechnicalReports/926_WestCoastOAHSciencePanel.pdf). While the main driver of ocean acidification is due to atmospheric carbon dioxide, the discharge of anthropogenic nutrients from wastewater treatment plants may exacerbate ocean acidification, especially on smaller spatial scales. A recent study[28] suggests that nutrients from wastewater effluent may provide a significant source of nitrogen for nearshore productivity in Southern California waters, and may be equivalent to upwelling on smaller spatial scales that are more relevant to algal blooms. Anthropogenic nutrients from wastewater effluent may increase algal blooms. As these algal blooms die off, the decay promotes bacterial respiration resulting in increased carbon dioxide, lower pH, and decreases in oxygen (e.g., hypoxia). This Order~~/~~ and Permit also ~~requires~~ require the Discharger calculate aragonite saturation state to evaluate the potential effects of the discharge on ocean acidification.

Refer to sections 4.2 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.2.3 Benthic Monitoring Requirements

Sediments integrate constituents that are discharged to the ocean. Most particles that come from the PLOO 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 Appendix III, section 6 of the Ocean Plan, this Order~~/~~ and Permit ~~requires~~ require periodic assessment of sediment quality to evaluate potential effects of the PLOO discharge and compliance with narrative water quality standards specified in the Ocean Plan. The required assessment consists of the measurement and integration of three lines of evidence: 1) physical and chemical properties of seafloor sediments, 2) seafloor sediment toxicity to assess bioavailability and toxicity of sediment contaminants, and 3) ecological status of the biological communities (benthos) that live in or on the seafloor sediments.

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.

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.

[28] Howard, M. D. A., M. Sutula, D. A. Caron, Y. Chao, J. D. Farrara, H. Frenzel, B. Jones, G. Robertson, K. McLaughlin, and A. Sengupta. 2014. Anthropogenic nutrient sources rival natural sources on small scales in the coastal waters of the Southern California Bight. Limnology and Oceanography 59(1):285–297.

Benthic monitoring requirements have been carried over from the ~~previous~~ Previous Order~~/~~ and Permit with the following exceptions:

- Sediment samples for physical and chemical properties, toxicity, and benthic community condition shall be taken concurrently and adjacent to each other as much as possible.
- For the benthic community analysis, the multivariate pattern analyses (e.g., ordination and classification analyses) shall be included.
- This Order~~/~~ and Permit ~~adds~~ add monitoring requirements for dissolved sulfide to help determine if concentrations of pollutants in marine sediments are at levels that would degrade the benthic community.

Refer to section 4.3 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.2.4 Fish and Invertebrate Monitoring Requirements

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.

Fish and invertebrate monitoring requirements have been carried over from the ~~previous~~ Previous Order~~/~~ and Permit, Order No. R9-2017-0007.

Refer to section 4.4 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.2.5 Receiving Water Monitoring Reporting Requirements

7.2.5.1 California Environmental Data Exchange Network (CEDEN)

The California Environmental Data Exchange Network (CEDEN) is a central database to find and share information about the State's water bodies, including streams, lakes, rivers, and the coastal ocean. Many groups in the State monitor water quality, aquatic habitat, and wildlife health to ensure good stewardship of our ecological resources. CEDEN aggregates this data and makes it accessible to environmental managers and the public. CEDEN requires a minimum level of quality assurance and quality control measures to ensure the data reported is of sufficient quality. When developing integrated reports for listing impaired water bodies pursuant to CWA section 303(d), Regional Water Quality Control Boards must rely on data submitted to CEDEN to make determinations of water quality. Data not included in CEDEN is generally not permissible to be included in the integrated reports.

This Order~~/~~ and Permit ~~requires~~ require the Discharger submit applicable receiving water monitoring data to CEDEN or an equivalent database that is linked to CEDEN to ensure the monitoring data is available to the San Diego Water Board for integrated reports and is easily accessible to the public and other environmental managers. Additionally, the requirement to submit receiving water monitoring data to CEDEN is consistent with the San Diego Water Board's A Framework for Monitoring and Assessment in the San Diego Region, endorsed by the San Diego Water Board in December 2012 through Resolution No. R9-2012-0069. CEDEN currently does not accept all receiving water monitoring data collected pursuant to this Order~~/~~ and Permit; however, CEDEN is periodically updated to accept additional data. The Discharger is only required to submit data that is accepted by CEDEN until such time CEDEN is updated to accept the data. The Discharger is required to submit an annual certification that all applicable receiving water monitoring data has been timely uploaded to CEDEN.

7.2.5.2 **Receiving Water Monitoring Report**

This Order~~/~~ and Permit ~~requires~~ require the Discharger to submit a Receiving Water Monitoring Report once per permit term. The main objectives of the Receiving Water Monitoring Report is to 1) determine if the effluent is causing or contributing to exceedances of the water quality standards outside of the ZID ~~evaluate compliance with the receiving water limitations of this Order/Permit including Ocean Plan water quality objectives and water-contact bacteriological standards~~; 2) identify any biological or chemical changes in the receiving water that may be associated with the wastewater discharge and 3) answer the key regulatory questions posed in the MRP (Attachment E) that the receiving water monitoring program was designed to answer. The assessment and evaluation of the receiving water monitoring data in the Receiving Water Monitoring Report documents any effects of wastewater discharge, other anthropogenic influences (e.g., ~~storm water~~ stormwater discharge, urban runoff), or natural factors (e.g., ~~climate changes~~ extreme weather) on coastal water quality, seafloor sediment conditions, and local marine organisms. The Receiving Water Monitoring Report helps educate the public about potential water quality impacts resulting from the discharge.

7.2.5.3 **State of the Ocean**

This Order~~/~~ and Permit ~~requires~~ require the Discharger present a State of the Ocean oral report to the San Diego Water Board at a public Board meeting. The State of the Ocean oral report summarizes the conclusions of the Receiving Water Monitoring Report, including a description of the monitoring efforts completed, the status and trends of receiving water quality conditions, and plans for future monitoring efforts. Similar to the Receiving Water Monitoring Report, the State of the Ocean oral report helps educate the public about potential water quality impacts resulting from the discharge in a more concise and approachable manner. In addition to educating the public, the State of the Ocean oral report also allows for public participation by providing a forum for the public to comment on

the findings presented by the Discharger. If an oral report cannot be scheduled for a San Diego Water Board meeting, this Order~~/~~ and Permit ~~provides~~ provide the option for the San Diego Water Board Executive Officer and USEPA Water Division Director to approve the submission of a written Biennial State of the Ocean Report in lieu of an oral report.

7.2.6 Groundwater – Not Applicable

7.3 Regional Monitoring Requirements

Regional ocean water monitoring provides information about the sources, fates, and effects of anthropogenic contaminants in the coastal marine environment necessary to make assessments over large areas. The large-scale assessments provided by regional monitoring describe and evaluate cumulative effects of all anthropogenic inputs and enable better decision-making regarding protection of beneficial uses of ocean waters. Regional monitoring data assists in the interpretation of core monitoring studies by providing a more accurate and complete characterization of reference conditions and natural variability. Regional monitoring also leads to methods standardization and improved quality control through inter-calibration exercise. The coalitions implementing regional monitoring enable sharing of technical resources, trained personnel, and associated costs. Focusing these resources on regional issues and developing a broader understanding of pollutants effects in ocean waters enables the development of more rapid and effective response strategies. Based on all these considerations the San Diego Water Board supports regional approaches to monitoring ocean waters.

Consistent with Appendix III section 1 of the Ocean Plan, the Discharger may be required by the San Diego Water Board, to participate with other regulated entities, other interested parties, and the San Diego Water Board in development and implementation of new and improved monitoring and assessment programs for ocean waters in the San Diego Region and discharges to those waters.

Refer to section 5 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.3.1 Kelp Bed Canopy Monitoring Requirements

Kelp consists of a number of species of brown algae. Along the central and southern California coast, giant kelp (*Macrocystis pyrifera*) is the largest species colonizing rocky, and in some cases sandy, subtidal habitats. Giant kelp is an important component of coastal and island communities in southern California, providing food and habitat for numerous animals.

Refer to section 5.1 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.3.2 Southern California Bight Regional Monitoring Program Participation Requirements

The Southern California Bight (Bight), defined as the concave bend of the shoreline extending from Point Conception to Punta Colonet in Mexico, is host to unique, biologically diverse marine ecosystems that have long been vulnerable to the impacts of human activity. The coastal zone of the Bight hosts nearly 22 million

United States residents that engage in a wide variety of industrial, military, and recreational activities. Approximately 5,600 miles of watersheds, half of which are highly developed, drain into the Bight. The Southern California Bight Regional Monitoring Program brings together researchers and water-quality managers to pool their resources and work together to investigate the condition of marine ecosystems both spatially and temporally, and extend greater protections to the Bight's diverse habitats and natural resources.

Consistent with Appendix III section 1 of the Ocean Plan, the Discharger may be required to participate in the Southern California Bight Regional Monitoring Program coordinated by SCCWRP, or any other coordinator named by the San Diego Water Board, pursuant to Water Code section 13383, and 40 CFR section 122.48. The intent of the Southern California Bight Regional Monitoring Program is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the Bight.

During these coordinated sampling efforts, the Discharger's receiving water sampling and analytical effort, as defined in section 4 of the MRP (Attachment E), may be reallocated to provide a regional assessment of the impact of the discharge of wastewater to the Bight. In that event, the San Diego Water Board will notify the Discharger in writing that a portion of the requirement to perform the receiving water sampling and analytical effort defined in section 4 of the MRP (Attachment E) is suspended for the duration of the reallocation. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources. The level of resources in terms of sampling and analytical effort redirected from the receiving water monitoring program required under section 4 of the MRP (Attachment E) shall equal the level of resources provided to implement the regional monitoring and assessment program, unless the San Diego Water Board and the Discharger agree otherwise. The specific scope and duration of the receiving water monitoring program reallocation and redirection will be determined and set by the San Diego Water Board, in consultation with the Discharger.

Refer to section 5.2 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.4 Special Studies Requirements

7.4.1 ~~Climate Change Action Plan~~

~~Changing climate conditions may fundamentally alter the way wastewater facilities are designed and operated. Climate change research indicates the overarching driver of change is increased atmospheric CO_2 from human activity. The increased CO_2 emissions trigger changes to climatic patterns, which increase the intensity of sea level rise and coastal storm surges (Δ Sea Level), lead to more erratic rainfall and local weather patterns (Δ Weather Patterns), trigger a gradual warming of freshwater and ocean temperatures (Δ Water Temperature), and trigger changes to ocean water chemistry (Δ Water pH).~~

~~The changes to the sea level and weather patterns may affect the Facilities (e.g., flooding, increased influent flows during wet weather, wildfires, and heat waves). The San Diego Region Report of California's Fourth Climate Change Assessment states that " … wastewater infrastructure is vulnerable to future climate extremes…." Climate extremes of longer dry periods followed by larger and more intense storm events will challenge existing flood control capabilities, increase infiltration and inflow, and jeopardize wastewater collection and treatment facility integrity through flooding and erosion. Rising ocean temperatures thermally expand ocean levels and threaten coastal infrastructure. This threat is further exacerbated when higher sea levels are combined with larger storm surges and episodic events such as El Nino.~~

~~The changes to the water temperature and pH may affect how the receiving waters react to the discharges. The physical state of the eastern Pacific Ocean is also changing. Higher ocean temperatures increase the frequency of harmful algal blooms (HABs), decrease the ability of ocean waters to hold oxygen, and increase the likelihood of eutrophication that can further increase hypoxia and ocean acidification. Ocean warming caused by global climate change is expected to lead to lower dissolved oxygen in the ocean with negative implications for ocean productivity and marine habitat.[29] Climate change combined with rising nutrient loads, both of which are the result of human activities, are changing ocean biogeochemistry and increasing oxygen consumption. In the long term, this could lead to ecosystem collapses.[30] Declining oxygen is one of the most drastic changes in the ocean and this trend is expected to worsen under future climate change scenarios.[31] Ocean acidification is also a problem that is expected to grow in intensity, according to The West Coast Ocean Acidification and Hypoxia Science Panel.[32] Their findings indicate that much of the ocean acidification along the west coast of the United States is due to climate change and that human inputs are making the problem worse. The Southern California Coastal Waters Research Project finds that HABs have been a persistent and escalating issue in California's coastal waterbodies and summarizes that the most significant drivers to increasing HAB occurrence and severity are anthropogenic nutrient inputs and warmer waters due to climate change.[33] Future climate change is expected to~~

~~[29] Keeling, R.F., Kortzinger, A., and Gruber, N. Ocean Deoxygenation in a Warming World. Annual Review of Marine Science, Vol. 2:199-299, January 2010.~~
~~[30] Breitburg, D. *et al.* Declining oxygen in the global ocean and coastal waters. *Science (80-)* 359, eaam7240 (2018).~~
~~[31] Low, N.H.N., Micheli, F., Aguilar, J.D. *et al.* Variable coastal hypoxia exposure and drivers across the southern California Current. *Sci Rep* 11, 10929 (2021). https://doi.org/10.1038/s41598-021-89928-4~~
~~[32] OAH-Panel-Key-Findings-Recommendations-and-Actions-4.4.16-FINAL.pdf (westcoastoah.org)~~
~~[33] Smith, J., D. Shultz, M.D.A. Howard, G. Robertson, V. Phonsiri, V. Renick, D.A. Caron, R. Kudela, K. McLaughlin. 2021. Southern California Bight 2018 Regional Monitoring Program: Volume VIII. Harmful Algal Blooms. Technical Report 1170. Southern California Coastal Water Research Project. Costa Mesa, CA.~~

~~enhance the magnitude and frequency of harmful algal blooms caused by cyanobacteria.~~[34]

~~A summary perspective is found in California's Fourth Climate Change Assessment, which predicts increasing temperatures, higher sea levels, heavier precipitation events, more drought, more area burned by wildfire, and air temperatures to rise between 2.5 to 2.7 ˚F. This will increase human mortality, cause damage to coastal properties, and increase droughts and floods which may cost California an estimated tens of billions of dollars by mid-century. Ocean acidification, with implications for fishery ecosystems, is already impacting shell-building species along the California coast.~~[35]

~~The California Public Resources Code (Public Resources Code) recognizes that anthropogenic greenhouse gas emissions responsible for climate change are also driving major shifts in the chemical properties of the world's oceans (Public Resources Code section 35630(c)). Furthermore, Governor Newsom's Executive Order N-10-1920 directs State agencies to prepare a water resiliency portfolio that meets the needs of California's communities, economy, and environment. The State Water Board's Resolution No. 2017-0012, Comprehensive Response to Climate Change, and the San Diego Water Board's Resolution No. R9-2018-0051, *Addressing Threats to Beneficial Uses from Climate Change*, also require a proactive approach to climate change in all State and regional actions.~~

~~Based on these considerations, this Order/Permit requires the Discharger to prepare and submit an updated Climate Change Action Plan (CCAP) within three years of the effective date of this Order/Permit and to ensure Facilities and operations are protected against regional impact of changing climate conditions.~~

~~Refer to section 6.1 of the MRP (Attachment E) of this Order/Permit.~~

~~7.4.2~~ Euphotic Zone Study

This Order~~/~~ and Permit ~~retains~~ retain the euphotic zone study from the Previous Order~~/~~ and Permit, which was added as a part of Order No. R9-2022-0078, Addendum No. 1 to order No. R9-2017-0007, NPDES No. CA0107409. The NMFS biological opinion dated March 4, 2022, concluded that certain federally listed threatened and endangered species could be at risk of exposure to phytoplankton blooms, including harmful algal blooms, in the event nutrient loads from the discharge contribute to the formation of such blooms in the receiving water. The Terms and Conditions in the NMFS biological opinion include a requirement to conduct a multi-year study to measure and determine the seasonal depth of the euphotic zone in the area of the discharge from the PLOO to assess the potential for the discharge to contribute to the formation, frequency, and extent of phytoplankton blooms in the receiving water. The euphotic zone study

~~[34] O'Neil, J.M., Davis, T.W., Burford, M.A., and Gobler, C.J. The rise of harmful cyanobacteria blooms: The potential roles of eutrophication and climate change. Harmful Algae, Volume 14, February 2012, pages 313-334.~~
~~[35] https://climateassessment.ca.gov~~

requirements implement a portion of the Terms and Conditions of the NMFS biological opinion.

Refer to section 6.~~2~~1 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.4.~~3~~2 Plume Tracking Reporting

Plume tracking is an ongoing program designed to assess the dispersion and fate of the wastewater plume discharged from the PLOO. Plume tracking can provide useful information for developing and revising future monitoring locations~~,~~ ~~evaluating compliance with receiving water limitations,~~ and helping to ensure public safety for beaches and water contact recreation in the Pacific Ocean. Determining the conditions under which the plume travels toward the shore allows for more effective action to protect public health associated with beach use. Plume tracking can be used to determine if the plume is moving towards the shore or surface where it may encroach upon water recreation ~~areas~~ area and impact beneficial uses. 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. This Order requires the Discharger to continue to implement the Plume Tracking Monitoring Plan for the Point Loma and South Bay Ocean Outfall Regions, San Diego, California submitted by the Discharger on March 28, 2018, and updated in consultation with the San Diego Water Board and USEPA, Region IX.

Refer to section 6.~~3~~2 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.4.~~4~~3 Coastal Remote Sensing Study

The Coastal Remote Sensing Study utilizes various aerial and satellite sensors in the visible, near-infrared, and thermal infrared to detect patterns in natural oceanographic variables, point and non-point source terrestrial runoff, and anthropogenic sources, such as the PLOO. Remote sensing image data and subsequent advanced analyses are utilized to spatially and temporally enhance regular field sampling surveys conducted by the Discharger, and to help interpret the results from those surveys. The Discharger shall continue to participate in the Coastal Remote Sensing Study.

Refer to section 6.~~4~~3 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.4.~~5~~4 Kelp Forest Monitoring

The Discharger shall continue to support important research conducted by the Scripps Institution of Oceanography to assess the health of San Diego's kelp forests and to monitor the effects of wastewater discharge on the local coastal ecosystem relative to other factors.

7.5 Other Monitoring Requirements

7.5.1 Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program. Under the authority of section 308 of the CWA (33 U.S.C. section 1318), USEPA requires major and selected minor permittees under the NPDES Program to

participate in the annual 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 Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or 2) per the waiver issued by USEPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensures the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study 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 Study to USEPA's DMR-QA Coordinator and Quality Assurance Manager.

Refer to section 1.7 of the MRP (Attachment E) of this Order~~/~~ and Permit.

7.5.2 Diffuser and effluent characteristics are necessary to determine the momentum of the effluent as it enters the receiving water, and the density of the effluent (which will affect ~~it's~~ its buoyancy in the receiving water).

8 Public Participation

The San Diego Water Board and USEPA jointly considered the issuance of ~~WDRs in~~ this Order~~/~~ and Permit that ~~serves~~ serve as ~~a~~ consolidated NPDES ~~permit~~ permits for the Discharger. As a step in the adoption process of this Order~~/~~ and Permit for the Facilities, the San Diego Water Board and USEPA developed a Tentative Order~~/~~ and a draft Permit and encouraged public participation in the joint proceedings to consider adoption of the Tentative Order~~/~~ and Permit in accordance with the requirements of 40 CFR section 124.10 and Water Code section 13167.5.

8.1 Notification of Joint Public Comment Period

By electronic mail dated March 1, 2024, the San Diego Water Board and USEPA notified the Discharger and interested agencies and persons of its intent to jointly consider adoption of the tentative Order~~/~~ and Permit. The San Diego Water Board and USEPA also provided notice that this tentative Order~~/~~ and Permit ~~was~~ were posted on both the San Diego Water Board and USEPA websites and provided a period of at least 30 days for public review and comment. The San Diego Water Board did not act on the NPDES permit at the March 13, 2024, board meeting. The San Diego Water Board acted on the tentative Order~~/~~ and Permit at a subsequent Board meeting.

USEPA also participated at the March 13, 2024, meeting to provide information on the Tentative Decision for a waiver of secondary treatment requirements pursuant to

Clean Water Act 301(h). USEPA did not act on the 301(h) waiver at the March 13, 2024, meeting.

Due to significant changes in the tentative Order and Permit, by electronic mail dated September 12, 2025, the San Diego Water Board and USEPA notified the Discharger and interested agencies and persons of the revised tentative Order and Permit and provided a period of at least 30 days for public review and comment. The San Diego Water Board's and USEPA's websites contained the Public Notice and revised tentative Order and Permit.

~~By electronic mail dated September 12, 2025, the San Diego Water Board provided public notice for the 401 Certification document. The San Diego Water Board also provided notice that this revised tentative Order and Permit were posted on both the San Diego Water Board website and provided a period of at least 30 days for public review and comment.~~

The public also had access to the meeting agenda including all supporting documents and any changes in meeting dates and locations through the San Diego Water Board's website at: https://www.waterboards.ca.gov/sandiego/.

8.2 Written Comments

Interested persons were invited to submit written comments concerning tentative Order~~/~~ and Permit and revised tentative Order and Permit as provided through the notification process. Written comments or e-mailed comments were required to be received at the following addresses:

Executive Officer, San Diego Water Board
2375 Northside Drive, Suite 100, San Diego, CA 92108,
or SanDiego@waterboards.ca.gov

Julie Song, USEPA, Region 9
NPDES Permits Office
song.julie@epa.gov and R9NPDES@epa.gov

Written comments on the tentative Order and Permit had to be received by the San Diego Water Board and USEPA by 5:00 p.m. on April 1, 2024, to be considered timely and considered by staff, the San Diego Water Board, and USEPA. Written comments on the revised tentative Order and Permit had to be received by the San Diego Water Board and USEPA by 5:00 p.m. on October 13, 2025, to be considered timely and considered by staff, the San Diego Water Board, and USEPA. The San Diego Water Board and USEPA provided written responses to all timely received ~~public~~ comments ~~on this tentative Order/Permit~~ during both public comment periods and posted the response to comments document on the Board's website in advance of the public meeting date.

8.3 Public Meeting

The San Diego Water Board held a public meeting on the tentative Order~~/~~ and Permit during its regular Board meeting on the date, time, and location show immediately

below. ~~EPA~~USEPA also participated at this same public meeting and provided information about the City's request for Clean Water Act Section 301(h) waiver.

Date: March 13, 2024
Time: 9:00 AM
Location: San Diego Water Board Meeting Room,
2375 Northside Drive, San Diego CA

Interested persons were invited to attend. At the public meeting, the San Diego Water Board considered oral comments and testimony pertinent to the discharge and tentative Order~~/~~ and Permit. For accuracy of the record, important testimony was requested in writing.

The San Diego Water Board did not act on the tentative Order~~/~~ and Permit at the March 13, 2024, meeting, but formally acted on the tentative Order~~/~~ and Permit at a subsequent Board meeting. Upon issuance of the final Order~~/~~ and Permit and 301(h)-modified NPDES permit decision and response to comments, the San Diego Water Board and USEPA notified the Discharger and persons who submitted written comments or requested notice of the final decision.

A public hearing may be requested by any interested party. The request must be in writing and state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if it is determined that there is a significant amount of interest expressed.

The San Diego Water Board held a second public meeting on the revised tentative Order and Permit during its regular Board meeting on the date, time, and location show immediately below. USEPA also participated at this same public meeting.

Date: December 10, 2025
Time: 9:00 AM
Location: San Diego Water Board Meeting Room,
2375 Northside Drive, San Diego CA

Interested persons were invited to attend. At the public meeting, the San Diego Water Board considered oral comments and testimony pertinent to the discharge and tentative Order and Permit. For accuracy of the record, important testimony was requested in writing.

8.4 Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and CCR, title 23, section 2050. 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~~/Permit~~ at the following address, except that if the thirtieth day following the date of this Order~~/Permit~~ 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. Petitions may be sent in as follows:

By mail:
State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

In Person:
State Water Resources Control Board
Office of Chief Counsel
1001 I Street
Sacramento, California 95814

By email:
waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a petition for review, see:
https://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

8.5 Appeal of Federal NPDES Permit

Petitions to the USEPA Environmental Appeals Board (EAB) to review the final NPDES permit are governed by the regulations at 40 CFR section 124.19 and must be filed within 30 days of when notice of final permit issuance is served. Those persons filing a petition for review must have filed comments on this draft NPDES permit or participated in a public hearing on this matter as provided in 40 CFR section 124.19. Otherwise, any such petition for review may be filed only to the extent of changes from the draft permit to the final permit. If a petition for review is filed, only those permit conditions that are uncontested will go into effect pending disposition of the petition for review.

Petitions to the EAB for review of the NPDES permit may be filed electronically in accordance with the procedures available on the EAB's website at www.epa.gov/eab.

Petitions for review may also be submitted in writing and sent to the EAB through the U.S. Postal Service (except by Express Mail), addressed to the EAB's mailing address, which is:

Clerk of the Board
United States Environmental Protection Agency
Environmental Appeals Board (MC 1103M)
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460-0001

All filings delivered by hand or courier, including Federal Express, UPS, and U.S. Postal Service Express Mail, should be directed to the following address:

Clerk of the Board
US Environmental Protection Agency
Environmental Appeals Board
1201 Constitution Avenue, NW

WJC East Building, Room 3332
Washington, DC 20004

Petitioners may also contact the Clerk of the Board by email (Clerk_EAB@epa.gov) or by phone at (202) 233-0122.

8.6 Public Access to Records and Copying

Records pertinent to the San Diego Water Board's and USEPA's proceedings to adopt this Order~~/~~ and Permit including but not limited to the ROWD, public notices, public comments received, San Diego Water Board's and USEPA's responses to comments received, and other supporting documents are maintained by the San Diego Water Board and USEPA. These records are available for public access between 8:30 a.m. and 4:45 p.m., Monday through Friday at the San Diego Water Board office (San Diego Water Board, 2375 Northside Drive, San Diego CA, (619) 516-1990).

The San Diego Water Board website contains information and instructions on how to request access and obtain copies of these records at: http://www.waterboards.ca.gov/sandiego/about_us/contact_us/records.shtml. Copies of these records may also be arranged by contacting the USEPA office ~~(~~at song.julie@epa.gov, (415) 972-3035.

8.7 Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding this Order~~/~~ and Permit should contact the San Diego Water Board and USEPA at the address below; reference this Facility or Order; and provide a name, address, email address (if available), and phone number.

San Diego Regional Water Quality Control Board
2375 Northside Drive, Suite 100
San Diego, CA 92108-2700
Phone (619) 516-1990
Email SanDiego@waterboards.ca.gov

Julie Song
USEPA, Region 9
NPDES Permits Office (WTR 2-3)
75 Hawthorne Street
San Francisco, CA 94105
Phone (415) 972-3035
Email song.julie@epa.gov

8.8 Additional Information

Requests for additional information or questions regarding this Order~~/~~ and Permit should be directed to Joann Lim of the San Diego Water Board by email at Joann.Lim@waterboards.ca.gov or by phone at (619) 521-3362; and/or Julie Song of USEPA by email at Song.Julie@epa.gov or by phone at (415) 972-3035.

~~ATTACHMENT G – Clean Water Act Section 401 Water Quality Certification~~
~~DISCHARGE PROHIBITIONS CONTAINED IN THE OCEAN PLAN AND BASIN PLAN~~

ATTACHMENT G – ANALYSIS OF OCEAN PLAN AND BASIN PLAN REQUIREMENTS

In this attachment, the San Diego Regional Water Quality Control Board (San Diego Water Board) and United States Environmental Protection Agency, Region 9 (USEPA) evaluate the discharge specifications, receiving water limitations, and discharge prohibitions of the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) and *Water Quality Control Plan for the San Diego Basin* (Basin Plan) that were contained in the previous order, Order No. R9-2017-0007.

- Section IV.B of Order No. R9-2017-0007: The discharge specifications are directly from the Ocean Plan, chapter III, *Program of Implementation*, section A.2, *General Requirements For Management Of Waste Discharge To The Ocean*. (Ocean Plan general requirements)
- Section V of Order No. R9-2017-0007: The receiving water limitations are derived from the Ocean Plan, chapter II, *Water Quality Objectives*, sections A through F and the Basin Plan, Chapter 3, *Water Quality Objectives*. (Ocean Plan and Basin Plan water quality objectives [WQOs])
- Attachment G of Order No. R9-2017-0007: Ocean Plan and Basin Plan prohibitions are directly from the Ocean Plan, chapter III, *Program of Implementation*, section I and Basin Plan, chapter 4, *Implementation*. (Ocean Plan and Basin Plan prohibitions)

This is the first Order and Permit for the E.W. Blom Point Loma Wastewater Treatment Plant (Point Loma WWTP) and Point Loma Ocean Outfall (PLOO) that evaluates the provisions, receiving water limitations, and Ocean Plan and Basin Plan prohibitions. The evaluation includes:

(1) identifying each of the provisions (Ocean Plan general requirements), water quality limitations (Ocean Plan and Basin Plan WQOs), and Ocean Plan and Basin Plan prohibitions that were contained in the previous order, Order No. R9-2017-0007;

(2) determining if the PLOO discharge is causing or contributing to violations of the Ocean Plan general requirements, Ocean Plan and Basin Plan WQOs, or Ocean Plan and Basin Plan prohibitions;

(3) identifying or adding requirements (e.g., prohibition, effluent limitation) to prevent the PLOO discharge from causing or contributing to violations of the Ocean Plan general requirements, Ocean Plan and Basin Plan WQOs, and Ocean Plan and Basin Plan prohibitions;

(4) identifying or adding requirements (e.g., effluent and receiving water monitoring) that will indicate if there is nonconformance with Ocean Plan general requirements, Ocean Plan or Basin Plan WQOs, or Ocean Plan and Basin Plan prohibitions; and

(5) concluding if the San Diego Water Board and USEPA can remove the discharge specifications, receiving water limitations, and Ocean Plan and Basin Plan prohibitions identified in (1) based on the information from (2) through (4) and still expect that the discharge will conform with the Ocean Plan general requirements, Ocean Plan and Basin Plan WQOs, and Ocean Plan and Basin Plan prohibitions.

The U.S. Supreme Court's decision in *City and County of San Francisco, California v. Environmental Protection Agency* (2025) held that NPDES permits issued by USEPA may not include end-results requirements under Celan Water Act section 301(b)(1)(C). Some of the discharge specifications (Ocean Plan general requirements), receiving water limitations (Ocean Plan and Basin Plan WQOs), and Ocean Plan and Basin Plan prohibitions are considered end-result requirements under the U.S. Supreme Court's decision and have thus been removed. Some requirements were removed because the requirement is covered under existing effluent limitations, existing or new discharge prohibitions, or both. Some requirements were removed because they are not applicable to this Order and Permit.

The table below details the evaluation of the discharge specifications and prohibitions (Ocean Plan general requirements and Ocean Plan and Basin Plan discharge prohibitions) and receiving water limitations (Ocean Plan and Basin Plan WQOs) as described above in steps (1) through (5), Although this Order and Permit remove the end-result requirements, the San Diego Water Board and USEPA will review the monitoring results to identify any water quality concerns and respond accordingly (e.g., issue an investigative order to determine if and how much the discharge is causing or contributing to water quality concerns, reopen this Order and Permit to develop additional effluent limitations or to add operational requirements if needed to remedy the issue, or take an enforcement action).

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
1	Not contained in Order No. R9-2017-0007	Ocean Plan, section III.A.2.a: Waste management systems that discharge to the ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.	Biannually, the City of San Diego (City) is required to conduct the following monitoring: 1) Benthic monitoring at 12 primary core stations located along the outfall discharge depth contour and 10 secondary core stations located at other depths; 2) Fish and invertebrate monitoring at two trawl stations near the discharge point, two trawl stations up coast of the discharge point, and two trawl stations down coast of the discharge point; and 3) Fish monitoring at one nearfield rig fishing zone and one farfield fishing zone. The City's 2022-2023 Biennial Receiving Water Monitoring and Assessment Report (Biennial Report)[36] compares the two years of data to the historical data since 1994 and to other areas within the Southern California Bight (SCB) with similar benthic habitats. The Biennial Report states that the major community metrics, such as species richness, abundance, diversity, evenness, and dominance were within historical ranges reported for the San Diego region and were representative of those characteristics of similar SCB benthic habitats. The Biennial Report also states that the macrofaunal communities in the San Diego region appeared healthy in summer 2022–2023, with assemblages consistent with those observed during previous regional surveys conducted from 1994 to 2021. Benthic response index (BRI)[37] results for 99% of the PLOO monitoring stations were considered characteristic of undisturbed habitats, while the remaining stations had values suggesting only a possible minor deviation from reference conditions. These BRI results indicate that the communities around the PLOO are not degraded. The San Diego Water Board and USEPA have not identified any operational or maintenance issues that has led to a violation of Order No. R9-2017-0007. The daily, weekly, and monthly effluent monitoring indicate that the E.W. Blom Point Loma Wastewater Treatment Plant (Facility) is well operated. See Attachment F, section 2.5, Compliance Summary.	To ensure the integrity of the waste management system (e.g., Point Loma WWTP and PLOO), this Order and Permit carry over requirements to: 1) Properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order and Permit (Attachment D, section 1.4); 2) Effluent	The analysis detailed in step (2) indicates that the discharge is in conformance with this Ocean Plan general provision. The requirements listed in steps (3) and (4) describe how this Order and Permit are adequately protective of the Ocean Plan general requirement.

[36] The reports submitted by the City, including the Biennial Report, are available at the following website: https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportEsmrAtGlanceServlet?inCommand=reset .
The City's 2022-2023 Biennial Receiving Water Monitoring and Assessment Report was required by Order No. R9-2017-0007. To search for this report, the user must enter the order number (R9-2017-0007) and select the reporting year 2023. The report name is *Annual SMR (MONNPDES) (Receiving Water Monitoring) report for 2023*.

[37] Southern California Coastal Water Research Project (SCCWRP) developed the Benthic Response Index (BRI) for the southern California continental shelf. The BRI is the abundance weighted average pollution tolerance of species occurring in a sample. It sets thresholds that can be used to assess whether samples meet reference condition criteria and whether they are impaired in terms of biodiversity, community function, or defaunation.

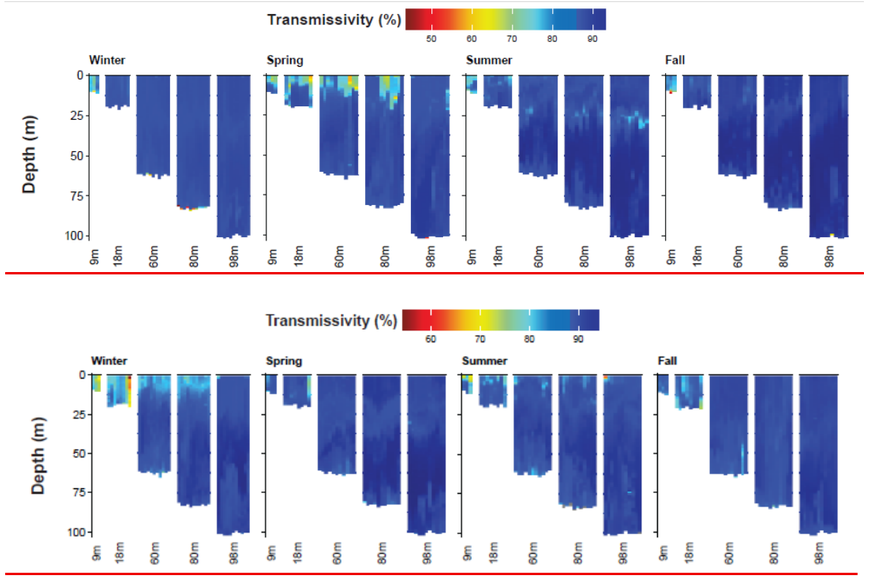
Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
				limitations (section 4.1) and influent and effluent monitoring (Attachment E, sections 3.1 and 3.2) to assess the performance of treatment facilities (i.e. waste management systems), to identify operational problems, and to improve plant performance; and 3) Inspect the PLOO (i.e., waste management system) at least once per year to ensure it is in good working order, and all ports are operational (Attachment E, section 7.2). To continue to evaluate the health and diversity of the indigenous marine life and	

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
				community, this Order and Permit carry over requirements to conduct benthic, fish, and invertebrate monitoring (Attachment E, sections 4.3 and 4.4).	
2	Section IV.B.1.a. Section V.A.3.a	Ocean Plan, section 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. Ocean Plan, section II.C.1: Floating particulates and grease and oil shall not be visible. Ocean Plan, Section II.C.5: Trash shall not be present in ocean waters, along	The quarterly monitoring requirements at the 36 offshore monitoring stations for visual observations (e.g., describe and report the presence, if any, of floatables of sewage origin, oil and grease) do not indicate floatable materials in the receiving water surrounding the PLOO. Daily effluent monitoring of oil and grease and total suspended solids indicate that the discharge is essentially free of material that is floatable or will become floatable upon discharge. See Attachment F, section 2.5, compliance summary. The Biennial Report does include findings of trash at the shoreline monitoring locations. However, other monitoring (e.g., no trash at the offshore monitoring location) and plume tracking data indicate that the PLOO discharge plume does not reach the shoreline, and the trash is likely from non-point sources from the land.	To ensure the PLOO discharge does not contribute material that is floatable or will become floatable upon discharge, grease and oil, or trash to the receiving water, this Order and Permit: 1) Add a discharge prohibition for trash or material that is floatable or will become floatable upon discharge (section 3.5): 2) Carry over effluent limitations	The analysis detailed in step (2) indicates that the discharge is in conformance with this Ocean Plan general provision and these physical WQOs. The requirements listed in steps (3) and (4) describe how this Order and Permit are protective of the Ocean Plan general provision and WQOs.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.		(section 4.1) and monitoring requirements (Attachment E, section 3.2) for oil and grease and total suspended solids (material that is floatable or could become floatable); and 3) Carry over requirements to record visual observations at each receiving water monitoring location, including observations of any floatables of sewage origin, oil and grease, and trash (Attachment E, section 4.2, Table E-9, table note 2).	
3	Section IV.B.1.b. Section V.A.3.d	Ocean Plan, section III.A.2.b.(2): Waste discharged to the ocean must be essentially free of settleable	Chapters 5 and 6 of the Biennial Report state that: 1) The City did not identify any spatial patterns in sediments in 2022 and 2023 sediment composition results between near-zone of initial dilution (ZID) and farfield stations. Figure 5.3 in the Biennial Report includes a history of sediment composition values from 1991 to 2021, showing no clear patterns indicating degradation from proximity to the PLOO; 2) Community metrics related to richness, abundance, and diversity are within historical ranges, which indicates no changes to the ocean sediments leading to benthic degradation; and 3) BRI results indicate that the communities around the PLOO are not degraded.	To ensure that the discharge is essentially free of settleable material or substances that may form sediments which will degrade	The analysis detailed in step (2) indicates that the discharge is in conformance with this Ocean Plan

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		material or substances that may form sediments which will degrade benthic communities or other aquatic life. 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.	Since the effective date of the previous Order and Permit, October 1, 2017, daily effluent monitoring for settleable solids included 22 days of noncompliance, approximately 0.75% of the days of the permit term. See Attachment F, section 2.5, Compliance Summary.	benthic communities or other aquatic life, this Order and Permit carry over effluent limitations (section 4.1) and monitoring requirements (Attachment E, section 3.2) for settleable solids. To monitor the sediment characteristics around the PLOO for any changes that may degrade benthic communities, this Order and Permit carry over benthic monitoring requirements (Attachment E, section 4.3).	general provision and physical WQO. The requirements listed in steps (3) and (4) describe how this Order and Permit are protective of the Ocean Plan general provision and WQO.
4	Section IV.B.1.c. Section V.A.4.d Section V.A.4.g	Ocean Plan, section III.A.2.b.(3): Waste discharged to the ocean must be essentially free of substances	Chapters 5, 7, and 9 of the Biennial Report include the biannual results for the benthic, fish, and invertebrate monitoring and state that: 1) Seafloor sediment monitoring for physical and chemical properties does not show any clear patterns whether pollutant levels were related to proximity to the outfall (see chapter 5 of the Biennial Report, graphs depicting values from as early as 1991) ; 2) BRI results indicate that the communities around the PLOO are not degraded; 3) The mean results for sediment toxicity testing ranged from 95% to 99% survival and indicated nontoxic sediment conditions; and	To ensure that the discharge is essentially free of substances which will accumulate to toxic levels in marine waters, sediments or	The analysis detailed in step (2) indicates that the discharge is in conformance with this Ocean Plan

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		which will accumulate to toxic levels in marine waters, sediments or biota. Ocean Plan, section II.D.4: The concentration of substances set forth in chapter II, Table 3, in marine sediments shall not be increased to levels which would degrade indigenous biota. Ocean Plan, section II.D.7.a: Table 3 WQOs apply to all discharges within the jurisdiction of this Plan.	4) Historical fish tissue monitoring does not show evidence of accumulation and is consistent with other studies of the region. Weekly and monthly effluent monitoring for Ocean Plan Table 3 parameters indicates that the discharge is essentially free of substances which will accumulate to toxic levels in marine waters, sediments or biota. See Attachment F, section 2.5, Compliance Summary. Section 4.3.3.1 in Attachment F of this Order and Permit includes the reasonable potential analysis for numeric WQOs based on chapter II, Table 3 of the Ocean Plan. Based on the analysis, this Order and Permit added an effluent limitation or performance goal for each parameter in chapter II, Table 3 of the Ocean Plan.	biota, this Order and Permit carry over effluent limitations (section 4.1), performance goals (section 4.2), and effluent monitoring requirements (Attachment E, section 3.2) for toxicity and Ocean Plan Table 3 parameters. To ensure that the sediment characteristics around the PLOO are not changed such that benthic communities are degraded, this Order and Permit carry over benthic, fish, and invertebrate monitoring requirements (Attachment E, sections 4.3 and 4.4).	general provision and chemical WQO. The requirements listed in steps (3) and (4) describe how this Order and Permit are protective of the Ocean Plan general provision and WQOs.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
5	Section IV.B.1.d. SectionV.A.3.c	Ocean Plan, section 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. 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.	Appendix C.14 of the Biennial Report indicates high percentage transmissivity (e.g., clarity) throughout the water column. Values of transmissivity are recorded in the PLOO region during 2022 (first image below) and 2023 (second image below). Data are 1-meter binned values per depth for each station and were collected over 4–5 days during each quarterly survey. Stations are depicted from north to south along each depth contour which is depicted on the x axis.  State-regulated Ocean waters end approximately at the 80-meter depth of the PLOO. The discharge point of the PLOO is approximately at the 100-meter (310-feet) depth. Since the effective date of the current Order and Permit, October 1, 2017, daily effluent monitoring for turbidity included 91 days of noncompliance from April to June 2022, approximately 3% of the days. The exceedances were caused by significant buildup of vivianite found in the lines during a valve replacement on the sludge pumping lines. The vivianite buildup was restricting the plant's ability to pump sludge from the sedimentation basins to the digesters. To overcome this, operations staff feed two digesters at a time to increase pumping capacity. Staff also removed some buildup manually. Also, the Facility also received extra solids from the Discharger's other facilities (North City Water Reclamation Plant and Metro Biosolids Center). The solids are in blended sludge form, or solids that have already been processed, and therefore don't settle out as effectively once these solids arrive at the Facility. The staff increased the chemical dose at the Facility during these times of increased solids to improve solids settling. See Attachment F, section 2.5, Compliance Summary.	To ensure the discharge is essentially free of substances that significantly decrease the natural light to benthic communities and other marine life, this Order and Permit carry over effluent limitations (section 4.1) and monitoring requirements (Attachment E, section 3.2) for turbidity. To ensure natural light is not significantly reduced at any point outside the initial dilution zone, this Order and Permit carry over quarterly requirements to measure the light transmittance at the offshore stations (Attachment E, section 4.2).	The analysis detailed in step (2) indicates that the discharge is in conformance with this Ocean Plan general provision and WQO. The requirements listed in steps (3) and (4) describe how this Order and Permit are adequately protective of the benthic communities and marine life.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
6	Section IV.B.1.e. Section V.A.3.b	Ocean Plan, section 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. Ocean Plan, section II.C.2: The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.	Based on the visual observations in the City's receiving water reports, the ocean surface color is blueish-green along the 100-m contour depth (by the discharge point, approximately 4.5 nautical miles from shore), green along the 80-m contour depth (along the boundary of the federal and State-regulated Ocean waters, approximately 3 nautical miles from shore), greenish-blue along the 60-m contour depth, and green along the 20-m contour depth (kelp beds approximately 1 nautical mile from shore). The observations of ocean surface color at the outfall, north of the outfall, and south of the outfall along the contour lines indicate no notable change in color in relation to the discharge. Daily effluent monitoring of total suspended solids, biochemical oxygen demand, oil and grease, and turbidity do not indicate that the discharge is causing or contributing to undesirable discoloration. See Attachment F, section 2.5, Compliance Summary.	To ensure the PLOO discharge does not cause or contribute to undesirable discoloration in the receiving water, this Order and Permit carry over: Effluent limitations (section 4.1) and monitoring requirements (Attachment E. section 3.2) for total suspended solids, biochemical oxygen demand, oil and grease, and turbidity, and Quarterly monitoring requirements for visual observations of color (Attachment E. section 4.2). Ocean discoloration is typically caused by algal blooms. To ensure the PLOO discharge does not cause	The analysis detailed in step (2) indicates that the discharge is in conformance with this Ocean Plan general provision and WQO. The requirements listed in steps (3) and (4) describe how this Order and Permit prevent and monitor for discoloration.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
				or contribute to undesirable discoloration in the receiving water, this Order and Permit also carry over effluent monitoring for nutrients to quantify the nutrient loading to the receiving waters from the Facility's discharge, evaluate the Facility's treatment of nutrients, and evaluate potential contribution of the discharge to formation of algal blooms that cause undesirable discoloration in the receiving ocean waters (Attachment E. section 3.2).	
7	Section IV.B.2.	Ocean Plan, section III.A.2.c. Waste effluents shall be	The initial dilution of 204 parts seawater to 1 part wastewater (204:1) is based on the results of a modified version of the Roberts, Snyder, and Baumgartner (RSB) model, submitted by the City in its 1995 Report of Waste Discharge (e.g., application). During the development of Order No. R9-2009-0001, initial dilution was assessed using USEPA modeling application Visual Plumes (UM3) and the minimum initial dilution was calculated to be 227:1, higher than the current initial dilution. Effluent and outfall characteristics have not changed sufficiently to warrant the need for another dilution analysis	To ensure sufficient initial dilution, this Order and Permit add the	The analysis detailed in step (2) indicates that the discharge

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		discharged in a manner which provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.	and the dilution is not anticipated to have changed. This Order and Permit maintain the conservative initial dilution of 204:1 instead of relaxing it to a higher value. See the City's application for the most recent initial dilution analysis.	following discharge prohibition that addresses this requirement: Discharge at Discharge Point No. 001 is prohibited when the discharge does not receive a minimum initial dilution of at least 204:1, with the exception of radioactivity[38]. Compliance shall be achieved by proper operation and maintenance of the discharge outfall to ensure that it (or its replacement, in whole or part) is in good working order and is consistent with, or can achieve better mixing than, 204:1. The Discharger shall notify the San Diego Water Board and	is in conformance with this Ocean Plan general provision. The requirements listed in steps (3) and (4) describe how this Order and Permit are adequately protective of the Ocean Plan general requirement.

[38] The Ocean Plan states that the objective for radioactivity shall apply directly to the undiluted waste effluent.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
				USEPA if outfall ports will be retrofitted, as the 204:1 dilution assumes all outfall ports are operational. (section 3.4) To ensure the outfall structure is in good working order and thus help ensure the minimum initial dilution is at least 204:1, this Order and Permit carry over requirements to inspect the PLOO at least once per year, and all ports are operational. (Attachment E. section 7.2)	
8	Section IV.B.3. Section IV.B.4.	Ocean Plan, section III.A.2.d. Location of waste	The San Diego Water Board designates all State-regulated Ocean waters with the beneficial use of shellfish harvesting[39] and contact water recreation (e.g., REC-1)[40]. The State-regulated Ocean waters end three nautical miles (approximately 3.45 miles) from the shore, while the discharge point is approximately 3.9 nautical miles (4.5 miles) from the shore. This provides a reasonable separation of the discharge point from the shellfishing and water contact sports beneficial uses.	To ensure that the effluent is only discharged to the location determined in	The analysis detailed in step (2) indicates that the discharge

[39] The definition for shellfish harvesting in Chapter 2 of the San Diego Basin Plan "Includes uses of water that support habitats suitable for the collection of filter-feeding shellfish (e.g., clams, oysters and mussels) for human consumption, commercial, or sport purposes.
[40] The definition for contact water recreation (REC-1) in Chapter 2 of the San Diego Basin Plan "Includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and SCUBA diving, surfing, white water activities, fishing, or use of natural hot springs.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
	Section V.A.1 Section V.A.2	discharges must be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that: 1) Pathogenic organisms and viruses are not present in areas where shellfish are harvested for human consumption or in areas used for swimming or other body-contact sports. 2) Natural water quality conditions are not altered in areas designated as being of special biological significance or areas that	In addition to the reasonable separation, the City currently disinfects the advanced primary-treated wastewater prior to discharge through the PLOO. For the bacterial reasonable potential analysis in State-regulated Ocean waters, the San Diego Water Board and USEPA evaluated the enterococcus monitoring data since enterococcus is the most sensitive bacteria indicator of the three species (i.e., enterococcus, fecal coliforms, and total coliforms). To support this evaluation of enterococcus data only, the San Diego Water Board and USEPA observed that some enterococcus exceedances occurred when other coliform results did not exceed criteria and enterococcus exceedances co-occurred with all fecal and total coliform exceedances. The San Diego Water Board and USEPA evaluated enterococcus monitoring data from January 2015 through December 2024 for shoreline, kelp bed, and offshore stations (52 stations total) shown in Map 3 in Attachment B of this Order and Permit. The conformance rate for both statistical threshold value (STV, not to be exceeded more than 10 percent of the time in a month) and 6-week geometric mean enterococcus objectives at shoreline stations were high (98.5 and 98% conformance, respectively). The conformance rate at the kelp bed stations, which are closer to the discharge point than the shoreline stations are to the discharge point, were even higher at all depths for enterococcus (99.8% conformance rate), fecal coliform (99.9% conformance rate), and for total coliform (96.4% conformance rate). In addition, modeling and monitoring results indicate that the outfall plume remains submerged in the offshore zone. These results indicate that the exceedances at the shoreline stations were likely due to sources other than the ocean outfall plume (e.g., urban runoff). Offshore stations within State-regulated Ocean waters were in full conformance with enterococcus WQOs at the surface and down to 60 meters below the surface, which is the portion of the water column that is within reach of recreational divers. Note that recreation self-contained underwater breathing apparatus (SCUBA) diving is generally limited to 40 meters below the surface. Higher enterococcus concentrations were rare and were limited to depths of 60 meters (197 feet) or more. These instances of higher enterococcus concentrations are likely related to discharge plume incursion. During 2015-2024, at the offshore stations within the State-regulated Ocean waters enterococcus concentrations exceeded the Ocean Plan STV value in approximately 2% of the samples, and all these occurrences were at depths 60 meters or more. Thus, available monitoring data indicates that the Point Loma Ocean Outfall discharge is not significantly causing or contributing to exceedances of the Ocean Plan bacteria objectives throughout the water column within State-regulated Ocean waters. Previous Order and Permit No. R9-2017-0007 establishes enterococcus receiving water limits in federal waters (e.g., waters beyond the three-nautical mile limit of State regulation) where "primary contact recreation"[41] occurs based on CWA section 304(a)(1) criteria. USEPA has not determined that any primary contact recreation occurs in the federal waters at or near the PLOO discharge. The City's ocean monitoring also shows that no such primary contact recreation has been observed or reported beyond the three-nautical-mile limit of State regulation. Therefore, the USEPA Recreational Water Quality Criteria (RWQC) for enterococci do not apply to this Order and Permit, which have never been applied to the previous orders (e.g.,	1993 and included in Table 1 of this Order and Permit[42], this Order and Permit carry over the following discharge prohibitions: 1) The discharge of waste from the Facilities to a location other than Discharge Point No. 001, unless specifically regulated by this Order and Permit or separate WDRs, is prohibited. (section 3.1) 2) The unauthorized discharge of treated or untreated sewage to waters of the U.S., waters of	is in conformance with these Ocean Plan general provisions and WQOs. The requirements listed in steps (3) and (4) describe how this Order and Permit are adequately protective of the Ocean Plan general requirements and WQOs.

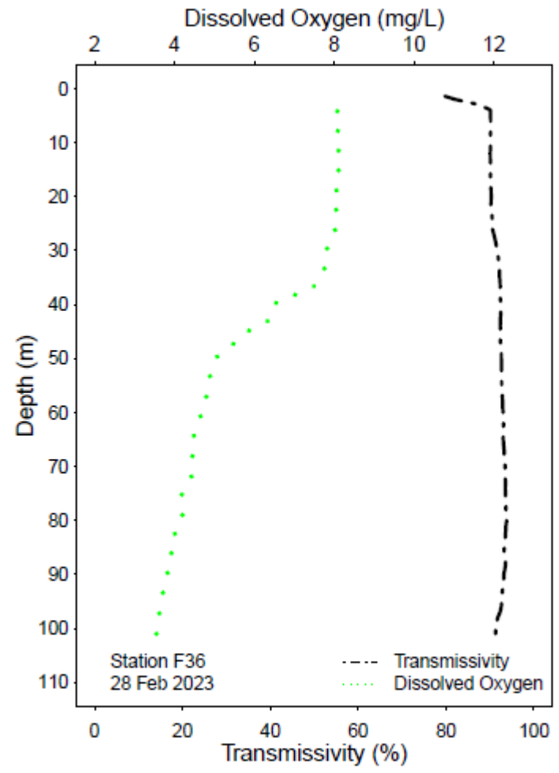
[41] The 2012 RWQC describes the criteria designed to protect "primary contact recreation", including swimming, bathing, surfing, water skiing, tubing, water play by children, and similar water contact activities where a high degree of bodily contact with the water, immersion and ingestion are likely. Enterococcus limit applied to federal waters where "primary contact recreation" occur include a 30-day geometric mean of 35 CFU per 100 milliliters (ml) and a STV (not to be exceeded more than 10 percent of the time) of 130 CFU per 100 ml.

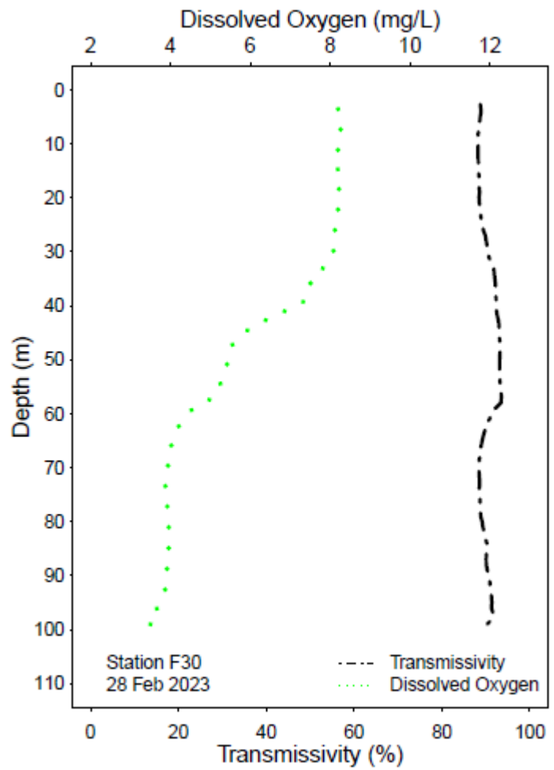
[42] The location of the waste discharge (Discharge Point No. 001, approximately 4.5 miles off the coast of Point Loma at a discharge depth of approximately 310 feet) has remained the same since November 1993 and is not expected to change during this Order and Permit term. Thus, determining the location of waste discharge is not applicable to this Order and Permit.

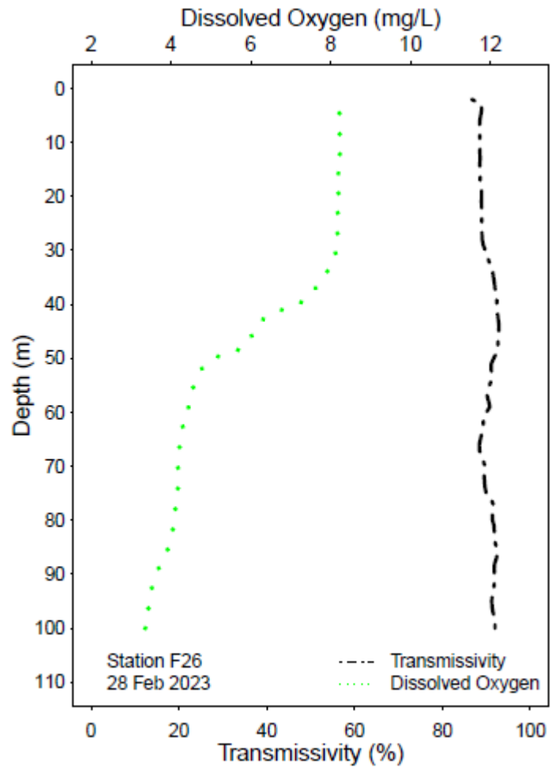
Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		existing marine laboratories use as a source of seawater. 3) Maximum protection is provided to the marine environment. Ocean Plan, section III.A.2.e. Waste that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing 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	Order No. R9-2017-0007) as well. Moreover, the bacterial WQOs from the Ocean Plan and Basin Plan have never been applied to federal waters in the previous orders because this is not State-regulated waters.	the State, or to a stormwater conveyance system is prohibited. (section 3.2) To ensure the outfall structure is in good working order, all ports are operational, and thus all waste is only discharged to the predetermined location, this Order and Permit carry over requirements to inspect the PLOO at least once per year (Attachment E. section 7.2). To ensure the beneficial use for water contact recreation is protected, this Order and Permit carry over receiving water monitoring requirements for fecal coliform and	

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used. Fecal coliform A 30-day geometric mean (GM) of fecal coliform density not to exceed 200 per 100 milliliters (mL), calculated based on the five most recent samples from each site, and a single sample maximum (SSM) not to exceed 400 per 100 mL.		enterococcus. (Attachment E, sections 4.1 and 4.2)	

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		Enterococci A six-week rolling GM of enterococci not to exceed 30 colony forming units (CFU) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 110 CFU/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.			
9	Section V.A.4.a.	Ocean Plan Section II.D.1 Basin Plan, Chapter 3 The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which	The Biennial Report indicates that the dissolved oxygen in the vicinity of the discharge is the same as the monitoring stations furthest north of the discharge. This indicates that the existing effluent limitations for biochemical oxygen demand (5-day @ 20 degrees Celsius (°C)) (BOD5) are adequate to ensure this water quality objective is met. Monitoring Location F36 referenced in the figure below from the 2022-2023 Biennial Report is the location furthest north of the discharge (about 12.5 miles north of the discharge point).	To ensure the PLOO discharge does not contribute significant oxygen demanding pollutants to the receiving water, this Order and Permit carry over effluent limitations	The analysis detailed in step (2) indicates that the discharge is in conformance with this Ocean Plan WQO. The requirements listed in steps (3) and (4)

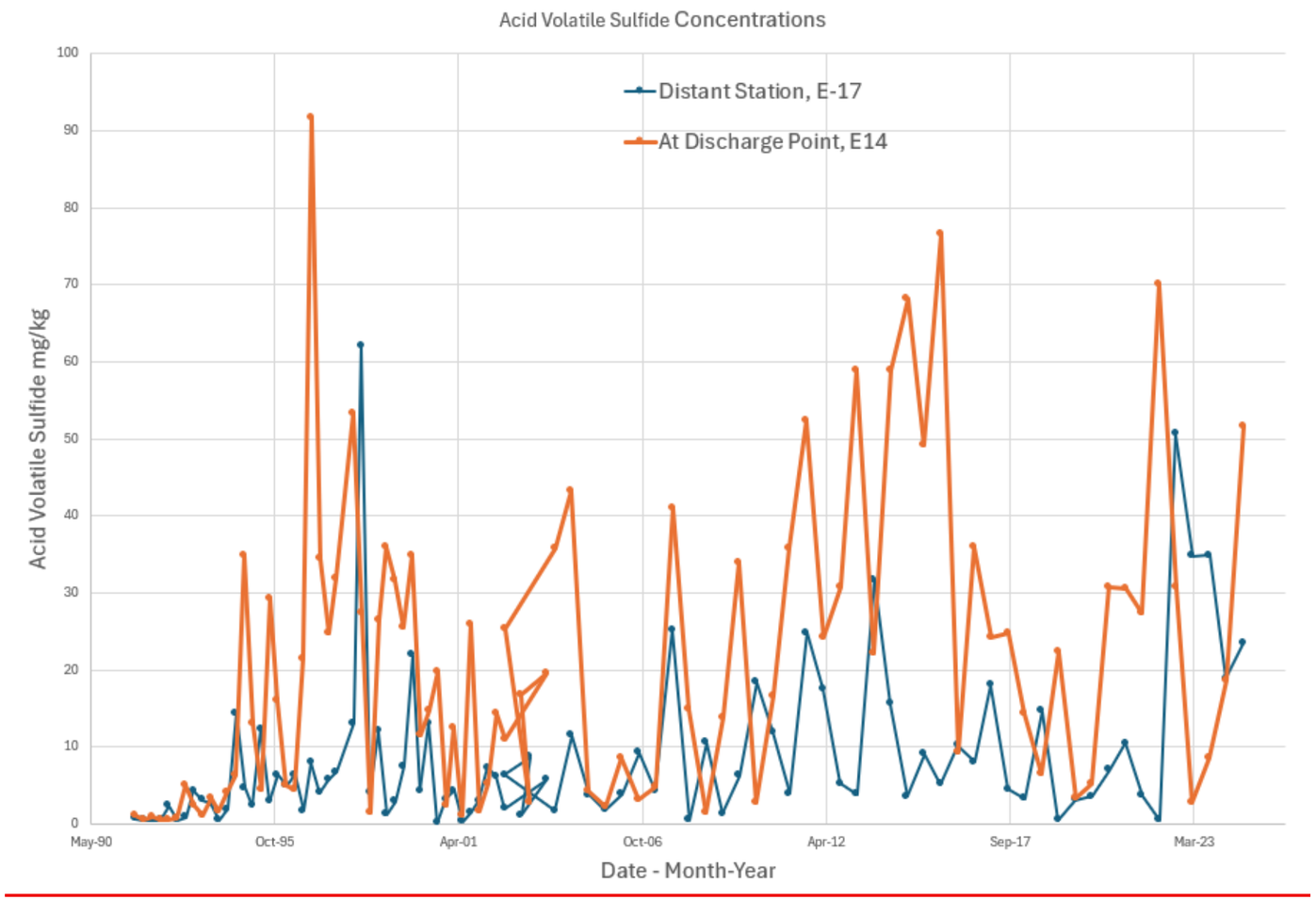
Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		occurs naturally, as the result of the discharge of oxygen demanding waste materials.	 Monitoring Location F30 referenced in the figure below from the 2022-2023 Biennial Report is directly over the discharge point.	(section 4.1) and monitoring requirements (Attachment E, sections 3.1 and 3.2) for BOD_5. To determine if the waters meet this water quality objective, this Order and Permit carry over requirements to monitor for dissolved oxygen at the offshore stations. (Attachment E, section 4.2)	describe how this Order and Permit are adequately protective of the Ocean Plan WQO.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
			 Monitoring Location F26 referenced in the figure below from the 2022-2023 Biennial Report is the location furthest south of the discharge point (about 7.5 miles south of the discharge point).		

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
					
10	Section V.A.4.b	Ocean Plan Section II.D.2 Basin Plan, Chapter 3 The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.	The Biennial Report indicates that the pH in the vicinity of the discharge is the same as the monitoring stations furthest north of the discharge. This indicates that the existing effluent limitations for pH are adequate to ensure this water quality objective is met. At Monitoring Location 36 (the location furthest north of the discharge, about 12.5 miles north of the discharge point), the pH ranges from 7.7 (101 meters deep) to 8.1 (1 meter deep). At Monitoring Location 30 (the location directly over the discharge point), the pH ranges from 7.7 (99 meters deep) to 8.1 (1 meter deep). At Monitoring Location 26 (the location furthest south of the discharge point, about 7.5 miles south of the discharge point), the pH ranges from 7.7 (101 meters deep) to 8.1 (1 meter deep).	To ensure the PLOO discharge does not significantly change pH of the receiving waters, this Order and Permit carry over effluent limitations	The analysis detailed in step (2) indicates that the discharge is in conformance with this Ocean Plan WQO. The requirements

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
				(section 4.1) and monitoring requirements (Attachment E, section 3.2) for pH. To determine if the waters continue meeting this water quality objective, this Order and Permit carry over requirements to monitor for pH at the offshore stations. (Attachment E. section 4.2)	listed in steps (3) and (4) describe how this Order and Permit prevent and monitor for changes in pH from that which occurs naturally.
11	Section V.A.4.c	Ocean Plan Section II.D.3 The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.	The previous orders and permits (Order Nos. R9-2002-0025, R9-2009-0001, and R9-2017-0007) didn't include a requirement to monitor the dissolved sulfide concentration in and near the sediment (aqueous/dissolved phase in pore water). Instead, the previous orders and permits included a requirement to monitor for acid volatile sulfide in the sediment (solid phase, metal sulfides), which is more stable and simpler to measure than dissolved sulfide. Dissolved sulfide is unstable, highly reactive, and prone to oxidation. There is a significant, but not strong, correlation between acid volatile sulfide and dissolved sulfide concentrations. Acid volatile sulfide is mostly composed of relatively stable bonded sulfide, while dissolved sulfide is unstable and reflects fluctuations in temperature and organic load.[43] From 1991 (time period prior to the current discharge point) to 2024 (the most recently reported data), the reported acid volatile sulfide at the discharge point varies over time from concentrations matching the distant station to concentrations higher than the distant station, as shown in the chart below. This data shows that the sulfide might be higher at the discharge point; however, since the data is not comparable to the WQO, more information is needed (see next column).	High sulfide concentrations are one of the indicators of organic loading (i.e., BOD_5). To ensure the PLOO discharge does not contribute sulfide to the receiving waters, this Order and	The analysis detailed in step (2) indicates that the discharge is in conformance with this Ocean Plan WQO. The requirements listed in steps (3) and (4) describe how

[43] https://www.npo-jews.org/pdf/r003.pdf, Pore Water Sampling Method for sulfide Measuring in Sediment, Chihiro Yamamoto, Kazuki Koshio, Hiroshi Noguchi, and Koreyoshi Yamasaki., Journal of Journal of Japanese Society of Civil Engineers. Ser. B1, Vol. 78, No. 1, p. 106, 2022.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
				Permit carry over effluent limitations (section 4.1) and monitoring requirements (Attachment E, sections 3.1 and 3.2) for BOD_5. To determine if the waters meet this water quality objective, this Order and Permit add requirements to monitor the sediment for dissolved sulfides in the offshore benthic stations. (Attachment E. section 4.3)	this Order and Permit prevent and monitor for changes in dissolved sulfide concentration from that which occurs naturally.
12	Section V.A.4.e	Ocean Plan Section II.D.5 The concentration	Organic carbon, nitrogen, and sulfides are some of the various indicators of organic loading.	To ensure the PLOO discharge does not contribute to	The analysis detailed in step (2) indicates that

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		of organic materials in marine sediments shall not be increased to levels that would degrade marine life.	From 1991 to 2021 (1,062 sediment samples analyzed), the maximum and mean BOD concentrations were 980 parts per million (ppm) and 303 ppm, respectively. From 2022 to 2023 (36 sediment samples analyzed), the maximum and mean BOD concentrations were 660 ppm and 319 ppm, respectively. From 1991 to 2021 (1,260 sediment samples analyzed), the maximum and mean sulfide concentrations were 108 and 5.1 (ppm, respectively. From 2022 to 2023 (79 sediment samples analyzed), the maximum and mean sulfide concentrations were 70.1 ppm and 13.2 ppm, respectively. From 1991 to 2021 (1,195 sediment samples analyzed), the maximum and mean percent total nitrogen values were 0.192% and 0.0052%, respectively. From 2022 to 2023 (79 sediment samples analyzed), the maximum and mean total nitrogen values were 0.086% and 0.048%, respectively. From 1991 to 2021 (1,196 sediment samples analyzed), the maximum and mean percent total organic carbon values were 4.85% and 0.69%, respectively. From 2022 to 2023 (79 sediment samples analyzed), the maximum and mean total organic carbon values were 3.12% and 0.72%, respectively. The Biennial Report states that macrofaunal communities in the San Diego region also appeared healthy in summer 2022–2023, with assemblages consistent with those observed during previous regional surveys conducted from 1994 to 2021. BRI results indicate that the communities around the PLOO are not degraded.	increases in the concentration of organic material in marine sediments, this Order and Permit carry over: effluent limitations (section 4.1) and monitoring requirements (Attachment E, sections 3.1 and 3.2) for BOD_5, and effluent monitoring for nutrients to quantify the nutrient loading to the receiving water and sediment from the Facility's discharge and evaluate the Facility's treatment of nutrients. (Attachment E. section 3.2) To determine if the water meets this water quality objective, this Order and Permit carry	the discharge is in conformance with this Ocean Plan WQO. The requirements listed in steps (3) and (4) describe how this Order and Permit prevent and monitor for concentrations of organic materials in marine sediments that would degrade marine life.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
				over requirements for benthic, fish, and invertebrate monitoring to determine the health of marine life. (Attachment E. sections 4.3 and 4.4)	
13	Section V.A.4.f	Ocean Plan Section II.D.6 Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.	The Biennial Report states that the BRI is an important tool for evaluating anthropogenic impacts on coastal seafloor habitats off southern California: BRI values less than 25 are considered indicative of reference conditions (i.e., not impacted by natural and/or anthropogenic disturbance), values between 25 and 34 represent possible minor deviation from reference conditions, and values greater than 34 represent increasing levels of degradation. Overall, 95% of the 163 individual benthic samples collected in the PLOO region during 2022 and 2023 were characteristic of reference conditions. No stations had BRI values indicative of degradation (i.e., all stations had a BRI ≤ 34). The Biennial Report states that macrofaunal communities in the San Diego region also appeared healthy in summer 2022–2023, with assemblages consistent with those observed during previous regional surveys conducted from 1994 to 2021. BRI results indicate that the communities around the PLOO are not degraded.	To ensure the PLOO discharge does not contribute to increases in nutrient materials that cause objectionable aquatic growths or degrade indigenous biota, this Order and Permit carry over effluent monitoring for nutrients to quantify the nutrient loading to the receiving water and sediment from the Facility's discharge and evaluate the Facility's treatment of nutrients.	The analysis detailed in step (2) indicates that the discharge is in conformance with this Ocean Plan WQO. The requirements listed in steps (3) and (4) describe how this Order and Permit prevent and monitor for nutrients that would degrade indigenous biota.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
				(Attachment E. section 3.2) To determine if the waters meet this water quality objective, this Order and Permit carry over requirements for benthic, fish, and invertebrate monitoring to determine the health of the indigenous biota. (Attachment E. sections 4.3 and 4.4)	
14	Section V.A.5.a	Ocean Plan Section II.E.1 Marine communities, including vertebrate, invertebrate, algae, and plant species, shall not be degraded.	The Biennial Report states that macrofaunal communities in the San Diego region also appeared healthy in summer 2022–2023, with assemblages consistent with those observed during previous regional surveys conducted from 1994 to 2021. BRI results indicate that the communities around the PLOO are not degraded.	To ensure the PLOO discharge does not contribute to the degradation of marine communities, this Order and Permit carry over effluent limitations and performance goals (sections 4.1 and 4.2) and monitoring requirements (Attachment E, section 3.2) for	The analysis detailed in step (2) indicates that the discharge is in conformance with this Ocean Plan WQO. The requirements listed in steps (3) and (4) describe how this Order and Permit will monitor the effluent for

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
				parameters with WQOs for the protection of marine aquatic life. To determine if the water meets this water quality objective, this Order and Permit carry over requirements for benthic, fish, and invertebrate monitoring to determine the health of vertebrate, invertebrate, algae, and plant species. (Attachment E. sections 4.3 and 4.4)	pollutants that may degrade marine communities and will monitor the health of the marine communities.
15	Section V.A.5.b	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.	External examination of fish collected indicated that fish populations remained healthy off San Diego, with fewer than 0.4% of all fish having external parasites or showing any evidence of disease or other abnormalities. As abnormalities or parasites were present across the region, there does not appear to be a relationship between these anomalies and proximity to the outfall.	To determine if the water meets this water quality objective, this Order and Permit carry over requirements for benthic, fish, and invertebrate monitoring to determine the health of fish,	The analysis detailed in step (2) indicates that the discharge is in conformance with this Ocean Plan WQO. The requirements listed in steps (3) and (4)

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
				shellfish, or other marine resources used for human consumption. (Attachment E. sections 4.3 and 4.4)	describe how this Order and Permit will monitor the health of the marine resources.
16	Section V.A.5.c	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.	Organic carbon, nitrogen, and sulfides are some of the various indicators of organic loading. From 1991 to 2021 (1,062 sediment samples analyzed), the maximum and mean BOD concentrations were 980 ppm and 303 ppm, respectively. From 2022 to 2023 (36 sediment samples analyzed), the maximum and mean BOD concentrations were 660 ppm and 319 ppm, respectively. From 1991 to 2021 (1,260 sediment samples analyzed), the maximum and mean sulfide concentrations were 108 and 5.1 (ppm, respectively. From 2022 to 2023 (79 sediment samples analyzed), the maximum and mean sulfide concentrations were 70.1 ppm and 13.2 ppm, respectively. From 1991 to 2021 (1,195 sediment samples analyzed), the maximum and mean percent total nitrogen values were 0.192% and 0.0052%, respectively. From 2022 to 2023 (79 sediment samples analyzed), the maximum and mean total nitrogen values were 0.086% and 0.048%, respectively. From 1991 to 2021 (1,196 sediment samples analyzed), the maximum and mean percent total organic carbon values were 4.85% and 0.69%, respectively. From 2022 to 2023 (79 sediment samples analyzed), the maximum and mean total organic carbon values were 3.12% and 0.72%, respectively. The Biennial Report states that macrofaunal communities in the San Diego region also appeared healthy in summer 2022–2023, with assemblages consistent with those observed during previous regional surveys conducted from 1994 to 2021. BRI results indicate that the communities around the PLOO are not degraded.	To ensure the PLOO discharge does not contribute to the concentration of organic materials in marine resources, this Order and Permit carry over effluent limitations and performance goals (sections 4.1 and 4.2) and monitoring requirements (Attachment E, section 3.2) for organic pollutants listed in Table 3 of the Ocean Plan. To determine if the water meets this water quality objective, this Order and Permit carry	The analysis detailed in step (2) indicates that the discharge is in conformance with this Ocean Plan WQO. The requirements listed in steps (3) and (4) describe how this Order and Permit will monitor the health of the marine communities.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
				over requirements for benthic, fish, and invertebrate monitoring to determine the health of fish, shellfish, or other marine resources used for human consumption. (Attachment E. sections 4.3 and 4.4)	
17	Section V.A.6	Ocean Plan Section II.F.1 Discharge of radioactive waste shall not degrade marine life.	As stated above, the Biennial Report states that the major community metrics, such as species richness, abundance, diversity, evenness, and dominance were within historical ranges reported for the San Diego region and were representative of those characteristics of similar SCB benthic habitats. The Biennial Report also states that the macrofaunal communities in the San Diego region appeared healthy in summer 2022–2023, with assemblages consistent with those observed during previous regional surveys conducted from 1994 to 2021. BRI results indicate that the communities around the PLOO are not degraded.	To ensure the PLOO discharge does not contribute to radioactive waste that degrade marine life, this Order and Permit carry over performance goal (section 4.1) and monitoring (Attachment E. section 3.2) for radioactivity. To continue to evaluate the health and diversity of the indigenous marine life, this	Prohibition 3.6 of this Order and Permit address this WQO.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
				Order and Permit carry over requirements for benthic, fish, and invertebrate monitoring to determine the health of marine life. (Attachment E. sections 4.3 and 4.4)	
18	Attachment G, section A.1	Ocean Plan Section III.I.1.a. The Discharge of any radiological chemical, or biological warfare agent or high-level radioactive waste into the ocean is prohibited.	This Order and Permit include this prohibition as Discharge Prohibition 3.6.Thus, evaluation is not required for this prohibition.	This Order and Permit include this prohibition as Discharge Prohibition 3.6. This Order and Permit carry over effluent limitation and performance goal (sections 4.1 and 4.2) and monitoring (Attachment E, section 3.2) for toxicity and radioactivity that may indicate radiological chemical, or biological warfare agent or high-level radioactive waste.	This Order and Permit include this prohibition as Discharge Prohibition 3.6.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
19	Attachment G, section A.2	Ocean Plan Section III.I.2.a. Waste shall not be discharged to designated Areas of Special Biological Significance (ASBS) except as provided in chapter III.E of the Ocean Plan.	Not Applicable. The closest ASBS is approximately 13 miles north of the PLOO discharge point and monitoring results indicate that the PLOO discharge plume does not reach the closest ASBS.	Not Applicable.	Not Applicable.
20	Attachment G, section A.3	Ocean Plan Section III.I.3.a. 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. The discharge of sludge digester supernatant directly to the ocean, or to a waste stream	During the permit term for Order No. R9-2017-0007, the City did not report any discharges of sludge.	This Order and Permit carry over Discharge Prohibition 3.1, which includes a board prohibition on discharges (including sludge) not regulated by this Order and Permit or separate waste discharge requirements. This Order and Permit also add Discharge Prohibition 3.7. This Order and Permit carry over notifications and	This Order and Permit broadly include this prohibition as Discharge Prohibitions 3.1 and 3.7.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		that discharges to the ocean without further treatment, is prohibited.		reporting requirements for any discharges of waste to a location other than Discharge Point No. 001 (section 6.3.2.2).	
21	Attachment G, section A.4	Ocean Plan Section III.I.3.b. The by-passing of untreated wastes containing concentrations of pollutants in excess of those of Table 2 or Table 1 of the Ocean Plan is prohibited.	During the permit term for Order No. R9-2017-0007, the City did not report any bypasses that violated Standard Provisions 1.7 of Attachment D of Order No. R9-2017-0007.	This Order and Permit include this prohibition as Discharge Prohibition 3.3, with the exceptions allowed in Standard Provisions 1.7 of Attachment D. This Order and Permit carry over notification requirements for an unanticipated or anticipated bypass (Attachment D, section 1.7).	This Order and Permit include this prohibition as Discharge Prohibition 3.3, with the exceptions allowed in Standard Provisions 1.7 of Attachment D.
22	Attachment G, section B.1	Basin Plan, Chapter 4 The discharge of waste to waters of the State in a manner causing, or threatening to	Please see evaluations for items 1 through 17 above.	The cumulative requirements in this Order and Permit, including prohibitions (section 3), minimum initial dilution (section 3.4), and	The cumulative requirements in this Order and Permit are more prescriptive and provide equal water

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		cause a condition of pollution, contamination or nuisance as defined in Water Code section 13050, is prohibited.		effluent limitations and performance goals (sections 4.1 and 4.2), prevent the condition of pollution, contamination or nuisance. Monitoring requirements in this Order and Permit include visual observations; chemical analysis; benthic, fish and invertebrate monitoring (Attachment E, section 4) to determine if the receiving water has a condition of pollution, contamination or nuisance as defined in Water Code section 13050.	quality protection and treatment control to control the discharge from causing or threatening to cause a condition of pollution, contamination or nuisance. Therefore, removing this prohibition has already been addressed in this Order and Permit.
23	Attachment G, section B.2	Basin Plan, Chapter 4 The discharge of waste to land, except as authorized by	During the permit term for Order No. R9-2017-0007, the City did not report any discharges from the Point Loma Wastewater Treatment Plant to land.	This Order and Permit carry over discharge prohibition 3.1, prohibiting the discharge of	This Order and Permit include discharge prohibition 3.1 which is

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		WDRs or the terms described in Water Code section 13264 is prohibited.		waste from the Facilities to a location other than Discharge Point No. 001, unless specifically regulated by this Order and Permit or separate WDRs. Unlike the Basin Plan prohibition, discharge prohibition 3.1 applies to both unauthorized discharges to land and water and is thus broader. This Order and Permit carry over notifications and reporting requirements for any discharges of waste to a location other than Discharge Point No. 001 (section 6.3.2.2).	broader and inclusive of this Basin Plan prohibition; therefore, the intent of the Basin Plan prohibition is already addressed.
24	Attachment G, section B.3	Basin Plan, Chapter 4 The discharge of pollutants or dredged or fill	Order No. R9-2017-0007 controlled the discharge of pollutants with effluent limitations and the effluent monitoring indicates a good compliance with the effluent limitations (see compliance summary in Attachment F, section 2.5). For the conventional pollutants (biochemical oxygen demand, total suspended solids, settleable solids, turbidity, and oil and grease), from October 2017 to October 2025, the percentage of days of non-compliance with the effluent limitations was	This Order and Permit carry over effluent limitations and performance	The cumulative requirements in this Order and Permit

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		material to waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the exemption described in Water Code section 13376) is prohibited.	14%, of which ● 12% occurred in 2022 and ● 8% were due to one violation of the biochemical oxygen demand (5-day @ 20 degrees Celsius (°C)) (BOD_5) system-wide percent removal average annual effluent limitation in 2022. However, from October 2023 to October 2025, the discharge has been in full compliance with the BOD_5 system-wide percent removal average annual effluent limitation. For toxic pollutants (e.g., chlorine, chronic toxicity, and aldrin), from October 2017 to October 2025, the discharge has been in 100% compliance. The activities at the Facilities described in this Order and Permit do not include dredged or fill material. Thus, a portion of this Basin Plan prohibition does not apply to this Order and Permit.	goals (sections 4.1 and 4.2) and monitoring requirements (Attachment E, sections 3.1 and 3.2) for conventional and toxic pollutants to control and monitor the discharge of pollutants.	provide water quality protection to control the discharge of pollutants; therefore, the applicable intent of this Basin Plan prohibition is already addressed. The dredged or fill material does not apply to this Order and Permit.
25	Attachment G, section B.4	Basin Plan, Chapter 4 Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this San Diego Water Board issues an NPDES permit authorizing such a	Not Applicable. This Order and Permit do not cover recycled water. The City has other waste discharge requirements that cover the discharge of recycled water to lakes or reservoirs.	Not Applicable.	Not Applicable.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		discharge; the proposed discharge has been approved by the State of California Department of Public Health and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.			
26	Attachment G, section B.5	Basin Plan, Chapter 4 The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be	During the permit term for Order No. R9-2017-0007, the City did not report any discharges from the Point Loma Wastewater Treatment Plant, Metro Biosolids Center (MBC), or the PLOO. Discharges from the City's sewage collection system are reported to the online California Integrated Water Quality System (CIWQS) Sanitary Sewer System Database as required under separate Waste Discharge Requirements[44].	This Order and Permit carry over discharge prohibition 3.1, prohibiting the discharge of waste from the Facilities to a location other than Discharge Point No. 001, unless specifically regulated by this Order and Permit or separate WDRs.	This Order and Permit include discharge prohibition 3.1 which is broader and inclusive of this Basin Plan prohibition; therefore, the intent of the Basin Plan prohibition is

[44] The Discharger is subject to the requirements of and must comply with State Water Board Order No. WQ 2022-0103-DWQ, *Statewide Waste Discharge General Order for Sanitary Sewer Systems*, and any subsequent amendment/reissuance order.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		made at the discretion of the San Diego Water Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.		Unlike the Basin Plan prohibition, discharge prohibition 3.1 applies to both unauthorized discharges to inland and ocean waters and is thus broader. This Order and Permit carry over notifications and reporting requirements for any discharges of waste to a location other than Discharge Point No. 001 (section 6.3.2.2).	already addressed.
27	Attachment G, section B.6	Basin Plan, Chapter 4 The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of	During the permit term for Order No. R9-2017-0007, the City did not report any discharges from the Point Loma Wastewater Treatment Plant.	This Order and Permit carry over discharge prohibition 3.1, prohibiting the discharge of waste from the Facilities to a location other than Discharge Point No. 001,	This Order and Permit include discharge prohibition 3.1 which is broader and inclusive of this Basin Plan prohibition;

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		the discharger is prohibited, unless the discharge is authorized by the San Diego Water Board.		unless specifically regulated by this Order and Permit or separate WDRs. Unlike the Basin Plan prohibition, discharge prohibition 3.1 applies to both unauthorized discharges to land and water and is thus broader. This Order and Permit carry over notifications and reporting requirements for any discharges of waste to a location other than Discharge Point No. 001 (section 6.3.2.2).	therefore, the intent of the Basin Plan prohibition is already addressed.
28	Attachment G, section B.7	Basin Plan, Chapter 4 The dumping, deposition, or discharge of waste directly into waters of the State, or adjacent to such waters in	During the permit term for Order No. R9-2017-0007, the City did not report any discharges from the Point Loma Wastewater Treatment Plant.	This Order and Permit carry over discharge prohibition 3.1, prohibiting the discharge of waste from the Facilities to a location other than Discharge	This Order and Permit include discharge prohibition 3.1 which is broader and inclusive of this Basin Plan

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		any manner which may permit its being transported into the waters, is prohibited unless authorized by the San Diego Water Board.		Point No. 001, unless specifically regulated by this Order and Permit or separate WDRs. The discharge prohibition 3.1 applies to discharges to all unauthorized locations, including waters of the State, or adjacent to such waters and is thus broader. This Order and Permit carry over notifications and reporting requirements for any discharges of waste to a location other than Discharge Point No. 001 (section 6.3.2.2).	prohibition; therefore, the intent of the Basin Plan prohibition is already addressed.
29	Attachment G, section B.8	Basin Plan, Chapter 4 Any discharge to a stormwater conveyance system that is not composed entirely of	During the permit term for Order No. R9-2017-0007, the City did not report any discharges from the Point Loma Wastewater Treatment Plant.	This Order and Permit carry over discharge prohibition 3.1, prohibiting the discharge of waste from the Facilities to a	This Order and Permit include discharge prohibition 3.1 which is broader and inclusive of

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		stormwater is prohibited unless authorized by the San Diego Water Board. [The federal regulations, title 40 of the Code of Federal Regulations (40 CFR) section 122.26(b)(13), define stormwater as stormwater runoff, snow melt runoff, and surface runoff and drainage. Section 122.26(b)(2) of 40 CFR defines an illicit discharge as any discharge to a stormwater conveyance system that is not composed entirely of stormwater except discharges pursuant to an NPDES permit and discharges resulting from firefighting		location other than Discharge Point No. 001, unless specifically regulated by this Order and Permit or separate WDRs. The discharge prohibition 3.1 applies to discharges to all unauthorized locations, including stormwater conveyance system and is thus broader. This Order and Permit carry over notifications and reporting requirements for any discharges of waste to a location other than Discharge Point No. 001 (section 6.3.2.2). This Order and Permit carry over the requirement for the City to enroll the Facility in	this Basin Plan prohibition; therefore, the intent of the Basin Plan prohibition is already addressed.

Item No.	(1) Sections of Previous Order and Permit (Order No. R9-2017-0007)	(1) Ocean Plan and Basin Plan Requirements	(2) Evaluation of Current Compliance with Order No. R9-2017-0007 and Conformance with Ocean Plan and Basin Plan Requirements	(3) and (4) Sections in Order No. R9-2026-0002	(5) Conclusion
		activities.] [section 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].		the State's Industrial General Permit Order 2104-0057-DWQ as amended in 2015 and 2018 (section 3.5.2).	
30	Attachment G, section B.9	Basin Plan, Chapter 4 The unauthorized discharge of treated or untreated sewage to waters of the State or to a stormwater conveyance system is prohibited.	During the permit term for Order No. R9-2017-0007, the City did not report any discharges from the Point Loma Wastewater Treatment Plant.	This Order and Permit include this prohibition as Discharge Prohibition 3.2. Monitoring requirements in this Order and Permit include visual observations; chemical analysis; benthic, fish and invertebrate monitoring (Attachment E, section 4) to determine if the receiving water has a condition of pollution, contamination or nuisance as defined in Water Code section 13050, is prohibited.	This Order and Permit include this prohibition as Discharge Prohibition 3.2.

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31	Attachment G, section B.10	Basin Plan, Chapter 4 The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in Water Code section 13264, is prohibited.	During the permit term for Order No. R9-2017-0007, the City did not report any discharges from the Point Loma Wastewater Treatment Plant to septic tank/subsurface disposal systems. This Order and Permit does not include septic tank/subsurface disposal systems.	This Order and Permit prohibit the discharge of waste to a location other than Discharge Point No. 001, which is not a septic tank/subsurface disposal system.	This Order and Permit include discharge prohibition 3.1 which is broader and inclusive of this Basin Plan prohibition; therefore, the intent of the Basin Plan prohibition is already addressed.
32	Attachment G, section B.11	Basin Plan, Chapter 4 The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the State is prohibited.	Maximum Contaminant Levels (MCL) have been established by the California State Water Board for uranium, strontium, radium, gross alpha, gross beta particle activity and tritium. The MCL for gross alpha is 15 Picocuries per Liter (pCi/L). The trigger MCL for gross beta is 50 pCi/L.[40] During the permit term for Order No. R9-2017-0007, the City reported 94 monitoring results for gross alpha radiation from October 2017 to October 2025. The results ranged from not detected" (ND, less than 0.623 picocuries per liter, pCi/L) to 19.8 pCi/L, with an average value of 7.6 pCi/L. About 97% were less than 15 pCi/L, the MCL. During the permit term for Order No. R9-2017-0007, the City reported 94 monitoring results for gross beta radiation from October 2017 to October 2025. The results ranged from 3.9 pCi/L to 150 pCi/L, with an average value of 26.5 pCi/L. About 86% were less than 50 pCi/L, the trigger MCL. 194 concentration results in its self-monitoring reports for gross alpha and beta radiation. These results ranged from "not detected" (ND, less than 0.623 picocuries per liter, pCi/L) to 150 pCi/L, with an average value of 17 pCi/L. About 99% of the effluent concentrations for gross alpha/beta were below 100 pCi/L and 93% were below 50 pCi/L. Note: The Pacific Ocean is not designated for use as domestic or municipal supply.	This Order and Permit include this prohibition as Discharge Prohibition 3.6. This Order and Permit carry over effluent limitations and performance goals (sections 4.1 and 4.2) and monitoring (Attachment E, section 3.2) for toxicity and radioactivity that may indicate radiological chemical, or	The San Diego Water Board and USEPA can remove this Basin Plan prohibition because Discharge Prohibition 3.6 also prohibits the discharge of radioactive waste (i.e., radiological chemical, or biological warfare agent or high-level

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				biological warfare agent or high-level radioactive waste.	radioactive waste).
33	Attachment G, section B.12	Basin Plan, Chapter 4 The discharge of any radiological, chemical, or biological warfare agent into waters of the State is prohibited.	Maximum Contaminant Levels (MCL) have been established by the California State Water Board for uranium, strontium, radium, gross alpha, gross beta particle activity and tritium. The MCL for gross alpha is 15 pCI/L. The trigger MCL for gross beta is 50 pCi/L.[40] During the permit term for Order No. R9-2017-0007, the City reported 94 monitoring results for gross alpha radiation from October 2017 to October 2025. The results ranged from not detected" (ND, less than 0.623 picocuries per liter, pCi/L) to 19.8 pCi/L, with an average value of 7.6 pCi/L. About 97% were less than 15 pCi/L, the MCL. During the permit term for Order No. R9-2017-0007, the City reported 94 monitoring results for gross beta radiation from October 2017 to October 2025. The results ranged from 3.9 pCi/L to 150 pCi/L, with an average value of 26.5 pCi/L. About 86% were less than 50 pCi/L, the trigger MCL. 194 concentration results in its self-monitoring reports for gross alpha and beta radiation. These results ranged from "not detected" (ND, less than 0.623 picocuries per liter, pCi/L) to 150 pCi/L, with an average value of 17 pCi/L. About 99% of the effluent concentrations for gross alpha/beta were below 100 pCi/L and 93% were below 50 pCi/L. Note: The Pacific Ocean is not designated for use as domestic or municipal supply.	This Order and Permit include this prohibition as Discharge Prohibition 3.6. This Order and Permit carry over effluent limitations and performance goals (sections 4.1 and 4.2) and monitoring (Attachment E, section 3.2) for toxicity and radioactivity that may indicate radiological chemical, or biological warfare agent or high-level radioactive waste.	The San Diego Water Board and USEPA can remove this Basin Plan prohibition because Discharge Prohibition 3.6 also prohibits the discharge of radiological, chemical, or biological warfare agent.
34	Attachment G, section B.13	Basin Plan, Chapter 4 The discharge of waste into a natural or excavated site below historic	During the permit term for Order No. R9-2017-0007, the City did not report any discharges from the Point Loma Wastewater Treatment Plant to natural or excavated sites. This Order and Permit does not include natural or excavated sites below historic water levels.	This Order and Permit prohibit the discharge of waste to a location other than Discharge Point No. 001,	The San Diego Water Board and USEPA can remove this Basin Plan prohibition

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		water levels is prohibited unless the discharge is authorized by the San Diego Water Board.		which is not a natural or excavated site. This Order and Permit carry over notifications and reporting requirements for any discharges of waste to a location other than Discharge Point No. 001 (section 6.3.2.2).	because discharge prohibition 3.1 is broader.
35	Attachment G, section B.14	Basin Plan, Chapter 4 The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the State or which unreasonably affect, or threaten to	Please see items 4, 5, and 6 above.	This Order and Permit carry over effluent limitations (section 4.1) and monitoring requirements (Attachment E, sections 3.1 and 3.2) for TSS, BOD, settleable solids, and turbidity and receiving water monitoring (e.g., benthic, sediment, fish, and invertebrate monitoring in Attachment E, sections 4.3 and 4.4).	The analysis detailed in step (2) from items 4, 5, and 6 indicates that the discharge is in conformance with this Ocean Plan general provision and chemical WQO. The requirements listed in steps (3) and (4) describe how this Order and Permit are protective of the Ocean

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		affect, beneficial uses of such waters is prohibited.			Plan general provision and WQOs.