CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

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TENTATIVE 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

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

Discharger	City of San Diego
Name of Facility	South Bay Water Reclamation Plant
Facility Address	2411 Dairy Mart Road San Diego, CA 92154 San Diego County

Table 1. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Secondary-treated wastewater	32º 32’ 16” N	117º 11’ 00” W	Pacific Ocean

This Order was adopted on: **May 12, 2021**
This Order shall become effective on: **July 1, 2021**
This Order shall expire on: **June 30, 2026**

The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than 180 days prior to the Order expiration date. The United States Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) have classified this discharge as follows: **Major**.

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.

TENTATIVE
David W. Gibson, Executive Officer

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1. **Facility Information**

Information describing the South Bay Water Reclamation Plant and the South Bay Ocean Outfall (SBOO), is summarized in Table 1 and in sections 1 and 2 of the Fact Sheet (Attachment F). Section 1 of the Fact Sheet also includes information regarding the City of San Diego's (Discharger's) permit application.

2. **Findings**

The San Diego Water Board finds:

2.1. **Legal Authorities.** This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (Water Code) (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). This Order shall 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.

2.2. **Background and Rationale for Requirements.** The San Diego Water Board developed the requirements in this Order 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, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E, and G are also incorporated into this Order.

2.3. **Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections 4.2, 4.3, 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.

2.4. **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 unless such delegation is unlawful under Water Code section 13223 or this Order explicitly states otherwise.

2.5. **Notification of Interested Parties.** The San Diego Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. The San Diego Water Board has also provided an opportunity for the Discharger and interested agencies and persons to submit oral comments and recommendations at a public hearing. Details of the notification are provided in the Fact Sheet (Attachment F).

2.6. **Consideration of Public Comment.** The San Diego Water Board, in a public

meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (Attachment F).

THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order No. R9-2013-0006, as amended by Order Nos. R9-2014-0071 and R9-2017-0023 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 CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. The Discharger is hereby authorized to discharge subject to WDRs in this Order at the discharge location described in Table 1 to the Pacific Ocean off the coast of San Diego County. This action in no way prevents the San Diego Water Board from taking enforcement action for past violations of the Previous Order, Order No. R9-2013-0006, as amended.

3. Discharge Prohibitions

3.1. The discharge of waste from the Facility not treated by a secondary treatment process and not in compliance with the effluent limitations specified in section 4.1 of this Order, or to a location other than Discharge Point No. 001, unless specifically regulated by this Order 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, California Ocean Plan* (Ocean Plan), incorporated into this Order as if fully set forth herein and summarized in Attachment G, as a condition of this Order.

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 as if fully set forth herein and summarized in Attachment G, as a condition of this Order.

4. Effluent Limitations and Discharge Specifications

4.1. Effluent Limitations and Performance Goals – Discharge Point No. 001

4.1.1. Effluent Limitations – Discharge Point No. 001

4.1.1.1. The Discharger shall maintain compliance with the following effluent limitations for the Facility, with compliance measured at Monitoring Location E-001, as described in the Monitoring and Reporting Program (MRP, Attachment E).

Table 2. Effluent Limitations at Monitoring Location E-001[1]

Parameter	Units	Six-Month Median[2]	Average Monthly[2]	Average Weekly[2]	Maximum Daily[2]	Instantaneous Minimum	Instantaneous Maximum[2]
Flow	million gallons per day (MGD)	--	15.0	--	--	--	--

Parameter	Units	Six-Month Median[2]	Average Monthly[2]	Average Weekly[2]	Maximum Daily[2]	Instantaneous Minimum	Instantaneous Maximum[2]
Biochemical Oxygen Demand 5-day @ 20°C (BOD_5)	milligram per liter (mg/L)	--	30	45	--	--	--
BOD_5	pounds per day (lbs/day)	--	3,753	5,630	--	--	--
BOD_5	% Removal	--	≥85	--	--	--	--
Total Suspended Solids (TSS)	mg/L	--	30	45	--	--	--
TSS	lbs/day	--	3,753	5,630	--	--	--
TSS	% Removal	--	≥85	--	--	--	--
pH	standard units	--	--	--	--	6.0	9.0
Oil and Grease	mg/L	--	25	40	--	--	75
Oil and Grease	lbs/day	--	3,128	5,004	--	--	9,383
Settleable Solids	milliliter per liter (ml/L)	--	1.0	1.5	--	--	3.0
Turbidity	nephelometric turbidity unit (NTU)	--	75	100	--	--	225
Total Residual Chlorine	microgram per liter (µg/L)	190	--	--	760	--	5,700
Total Residual Chlorine	lbs/day	24	--	--	95	--	713
Endosulfan	µg/L	0.86	--	--	1.72	--	2.58
Endosulfan	lbs/day	0.108	--	--	0.215	--	0.322
~~Chronic Toxicity[3,4]~~	~~"Pass/Fail"~~	~~--~~	~~--~~	~~--~~	~~"Pass"~~	~~--~~	~~--~~

Notes for Table 2

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The mass emission rate (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 permitted flow for the Facility (15.0 MGD) and C is the concentration (mg/L).
3. ~~As specified in section 7.15 of this Order and section 3.3 of the MRP (Attachment E).~~

   ~~The chronic toxicity effluent limitation is protective of both the numeric acute and chronic toxicity 2019 Ocean Plan water quality objectives. The 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 *USEPA Regions 8, 9, and 10, Toxicity Training Tool* (January 2010).~~

4.1.2. Performance Goals

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. Performance goal parameters shall be monitored at Monitoring Location E-001, as described in the MRP (Attachment E). The San Diego Water Board will use the results for informational purposes only, not compliance determinations. The performance goals in Table 3 are not water quality-based effluent limitations (WQBELs) and are not enforceable, as such.

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

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Arsenic, Total Recoverable	µg/L	4.81E+02	--	2.78E+03	7.36E+03
Arsenic, Total Recoverable	lbs/day	6.02E+01	--	3.48E+02	9.21E+02
Cadmium, Total Recoverable	µg/L	9.56E+01	--	3.82E+02	9.56E+02
Cadmium, Total Recoverable	lbs/day	1.20E+01	--	4.78E+01	1.20E+02
Chromium (VI), Total Recoverable[4]	µg/L	1.91E+02	--	7.65E+02	1.91E+03
Chromium (VI), Total Recoverable[4]	lbs/day	2.39E+01	--	9.57E+01	2.39E+02
Copper, Total Recoverable	µg/L	9.76E+01	--	9.58E+02	2.68E+03

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Copper, Total Recoverable	lbs/day	1.22E+01	--	1.20E+02	3.35E+02
Lead, Total Recoverable	µg/L	1.91E+02	--	7.65E+02	1.91E+03
Lead, Total Recoverable	lbs/day	2.39E+01	--	9.57E+01	2.39E+02
Mercury, Total Recoverable	µg/L	3.78E+00	--	1.52E+01	3.82E+01
Mercury, Total Recoverable	lbs/day	4.73E-01	--	1.90E+00	4.78E+00
Nickel, Total Recoverable	µg/L	4.78E+02	--	1.91E+03	4.78E+03
Nickel, Total Recoverable	lbs/day	5.98E+01	--	2.39E+02	5.98E+02
Selenium, Total Recoverable	µg/L	1.43E+03	--	5.74E+03	1.43E+04
Selenium, Total Recoverable	lbs/day	1.79E+02	--	7.18E+02	1.79E+03
Silver, Total Recoverable	µg/L	5.18E+01	--	2.53E+02	6.54E+02
Silver, Total Recoverable	lbs/day	6.48E+00	--	3.17E+01	8.18E+01
Zinc, Total Recoverable	µg/L	1.16E+03	--	6.89E+03	1.84E+04
Zinc, Total Recoverable	lbs/day	1.45E+02	--	8.62E+02	2.30E+03
Cyanide, Total Recoverable	µg/L	9.56E+01	--	3.82E+02	9.56E+02
Cyanide, Total Recoverable	lbs/day	1.20E+01	--	4.78E+01	1.20E+02
Ammonia (expressed as nitrogen)	mg/L	5.74E+01	--	2.29E+02	5.74E+02
Ammonia (expressed as nitrogen)	lbs/day	7.18E+03	--	2.86E+04	7.18E+04
Phenolic Compounds (non-chlorinated)[1]	µg/L	2.87E+03	--	1.15E+04	2.78E+04
Phenolic Compounds (non-chlorinated)[1]	lbs/day	3.59E+02	--	1.44E+03	3.59E+03
Chlorinated Phenolics[1]	µg/L	9.56E+01	--	3.82E+02	9.56E+02
Chlorinated Phenolics[1]	lbs/day	1.20E+02	--	4.78E+01	1.20E+02
Endrin	µg/L	1.91E-01	--	3.82E-01	5.74E-01
Endrin	lbs/day	2.39E-02	--	4.78E-02	7.18E-02
HCH (BHC)[1]	µg/L	3.82E-01	--	7.65E-01	1.15E+00
HCH (BHC)[1]	lbs/day	4.78E-02	--	9.57E-02	1.44E-01
Radioactivity (alpha and beta particles)	Picocuries per Liter (pCi/L)	See note 5	--	--	--
Acrolein	µg/L	--	2.10E+04	--	--
Acrolein	lbs/day	--	2.63E+03	--	--
Antimony	µg/L	--	1.10E+05	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Antimony	lbs/day	--	1.38E+04	--	--
Bis(2-chloroethoxy) Methane	µg/L	--	4.20E+02	--	--
Bis(2-chloroethoxy) Methane	lbs/day	--	5.25E+01	--	--
Bis(2-chloroisopropyl) Ether	µg/L	--	1.10E+05	--	--
Bis(2-chloroisopropyl) Ether	lbs/day	--	1.38E+04	--	--
Chlorobenzene	µg/L	--	5.40E+04	--	--
Chlorobenzene	lbs/day	--	6.76E+03	--	--
Chromium (III), Total Recoverable[4]	µg/L	--	1.80E+07	--	--
Chromium (III), Total Recoverable[4]	lbs/day	--	2.25E+06	--	--
Di-n-butyl Phthalate	µg/L	--	3.30E+05	--	--
Di-n-butyl Phthalate	lbs/day	--	4.13E+04	--	--
Dichlorobenzenes	µg/L	--	4.90E+05	--	--
Dichlorobenzenes	lbs/day	--	6.13E+04	--	--
Diethyl Phthalate	µg/L	--	3.20E+06	--	--
Diethyl Phthalate	lbs/day	--	4.00E+05	--	--
Dimethyl Phthalate	µg/L	--	7.80E+07	--	--
Dimethyl Phthalate	lbs/day	--	9.76E+06	--	--
4,6-dinitro-2-methylphenol	µg/L	--	2.10E+04	--	--
4,6-dinitro-2-methylphenol	lbs/day	--	2.63E+03	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
2,4-dinitrophenol	µg/L	--	3.80E+02	--	--
2,4-dinitrophenol	lbs/day	--	4.75E+01	--	--
Ethylbenzene	µg/L	--	3.90E+05	--	--
Ethylbenzene	lbs/day	--	4.88E+04	--	--
Fluoranthene	µg/L	--	1.40E+03	--	--
Fluoranthene	lbs/day	--	1.75E+02	--	--
Hexachlorocyclopentadiene	µg/L	--	5.50E+03	--	--
Hexachlorocyclopentadiene	lbs/day	--	6.88E+02	--	--
Nitrobenzene	µg/L	--	4.70E+02	--	--
Nitrobenzene	lbs/day	--	5.88E+01	--	--
Thallium, Total Recoverable	µg/L	--	1.90E+02	--	--
Thallium, Total Recoverable	lbs/day	--	2.38E+01	--	--
Toluene	µg/L	--	8.10E+06	--	--
Toluene	lbs/day	--	1.01E+06	--	--
Tributyltin	µg/L	--	1.30E-01	--	--
Tributyltin	lbs/day	--	1.63E-02	--	--
1,1,1-trichloroethane	µg/L	--	5.20E+07	--	--
1,1,1-trichloroethane	lbs/day	--	6.51E+06	--	--
Acrylonitrile	µg/L	--	9.60E+00	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Acrylonitrile	lbs/day	--	1.20E+00	--	--
Aldrin	µg/L	--	2.10E-03	--	--
Aldrin	lbs/day	--	2.63E-04	--	--
Benzene	µg/L	--	5.60E+02	--	--
Benzene	lbs/day	--	7.01E+01	--	--
Benzidine	µg/L	--	6.60E-03	--	--
Benzidine	lbs/day	--	8.26E-04	--	--
Beryllium	µg/L	--	3.20E+00	--	--
Beryllium	lbs/day	--	4.00E-01	--	--
Bis(2-chloroethyl) Ether	µg/L	--	4.30E+00	--	--
Bis(2-chloroethyl) Ether	lbs/day	--	5.38E-01	--	--
Bis(2-ethlyhexyl) Phthalate	µg/L	--	3.30E+02	--	--
Bis(2-ethlyhexyl) Phthalate	lbs/day	--	4.13E+01	--	--
Carbon Tetrachloride	µg/L	--	8.60E+01	--	--
Carbon Tetrachloride	lbs/day	--	1.08E+01	--	--
Chlordane	µg/L	--	2.20E-03	--	--
Chlordane	lbs/day	--	2.75E-04	--	--
Chlorodibromomethane (Dibromochloromethane)	µg/L	--	8.20E+02	--	--
Chlorodibromomethane (Dibromochloromethane)	lbs/day	--	1.03E+02	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Chloroform	µg/L	--	1.20E+04	--	--
Chloroform	lbs/day	--	1.50E+03	--	--
Dichlorodiphenyltrichloroethane (DDT)	µg/L	--	1.60E-02	--	--
Dichlorodiphenyltrichloroethane (DDT)	lbs/day	--	2.00E-03	--	--
1,4-dichlorobenzene	µg/L	--	1.70E+03	--	--
1,4-dichlorobenzene	lbs/day	--	2.13E+02	--	--
3,3'-dichlorobenzidine	µg/L	--	7.70E-01	--	--
3,3'-dichlorobenzidine	lbs/day	--	9.63E-02	--	--
1,2-dichloroethane	µg/L	--	2.70E+03	--	--
1,2-dichloroethane	lbs/day	--	3.38E+02	--	--
1,1-dichloroethylene	µg/L	--	8.60E+01	--	--
1,1-dichloroethylene	lbs/day	--	1.08E+01	--	--
Dichlorobromomethane	µg/L	--	5.90E+02	--	--
Dichlorobromomethane	lbs/day	--	7.38E+01	--	--
Dichloromethane (Methylene Chloride)	µg/L	--	5.90E+02	--	--
Dichloromethane (Methylene Chloride)	lbs/day	--	5.38E+03	--	--
1,3-dichloropropene (1,3-Dichloropropylenes)	µg/L	--	8.50E+02	--	--
1,3-dichloropropene (1,3-Dichloropropylenes)	lbs/day	--	1.06E+02	--	--
Dieldrin	µg/L	--	3.80E-03	--	--
Dieldrin	lbs/day	--	4.75E-04	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
2,4-dinitrotoluene	µg/L	--	2.50E+02	--	--
2,4-dinitrotoluene	lbs/day	--	3.13E+01	--	--
1,2-diphenylhydrazine	µg/L	--	1.50E+01	--	--
1,2-diphenylhydrazine	lbs/day	--	1.88E+00	--	--
Halomethanes	µg/L	--	1.20E+04	--	--
Halomethanes	lbs/day	--	1.50E+03	--	--
Heptachlor	µg/L	--	4.80E-03	--	--
Heptachlor	lbs/day	--	6.00E-04	--	--
Heptachlor Epoxide	µg/L	--	1.90E-03	--	--
Heptachlor Epoxide	lbs/day	--	2.38E-04	--	--
Hexachlorobenzene	µg/L	--	2.00E-02	--	--
Hexachlorobenzene	lbs/day	--	2.50E-03	--	--
Hexachlorobutadiene	µg/L	--	1.30E+03	--	--
Hexachlorobutadiene	lbs/day	--	1.63E+02	--	--
Hexachloroethane	µg/L	--	2.40E+02	--	--
Hexachloroethane	lbs/day	--	3.00E+01	--	--
Isophorone	µg/L	--	7.00E+04	--	--
Isophorone	lbs/day	--	8.76E+03	--	--
N-nitrosodimethylamine	µg/L	--	7.00E+02	--	--
N-nitrosodimethylamine	lbs/day	--	8.76E+01	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
N-nitrosodi-N-propylamine	µg/L	--	3.60E+01	--	--
N-nitrosodi-N-propylamine	lbs/day	--	4.50E+00	--	--
Polynuclear Aromatic Hydrocarbons (PAHs)	µg/L	--	8.40E-01	--	--
Polynuclear Aromatic Hydrocarbons (PAHs)	lbs/day	--	1.05E-01	--	--
Polychlorinated Biphenyls (PCBs)	µg/L	--	1.80E-03	--	--
Polychlorinated Biphenyls (PCBs)	lbs/day	--	2.25E-04	--	--
TCDD Equivalents	µg/L	--	3.70E-07	--	--
TCDD Equivalents	lbs/day	--	4.63E-02	--	--
1,1,2,2-tetrachloroethane	µg/L	--	2.20E+02	--	--
1,1,2,2-tetrachloroethane	lbs/day	--	2.75E+01	--	--
Tetrachloroethylene (Tetrachloroethene)	µg/L	--	1.90E+02	--	--
Tetrachloroethylene (Tetrachloroethene)	lbs/day	--	2.38E+01	--	--
Toxaphene	µg/L	--	2.00E-02	--	--
Toxaphene	lbs/day	--	2.50E-03	--	--
Trichloroethylene (Trichloroethene)	µg/L	--	2.60E+03	--	--
Trichloroethylene (Trichloroethene)	lbs/day	--	3.25E+02	--	--
1,1,2-trichloroethane	µg/L	--	9.00E+02	--	--
1,1,2-trichloroethane	lbs/day	--	1.13E+02	--	--
2,4,6-trichlorophenol	µg/L	--	2.80E+01	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
2,4,6-trichlorophenol	lbs/day	--	3.50E+00	--	--
Vinyl Chloride	µg/L	--	3.40E+03	--	--
Vinyl Chloride	lbs/day	--	4.25E+02	--	--
Chronic Toxicity[6,7]	"Pass/Fail"	--	--	"Pass"	--

Notes for Table 3

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. 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 6.1 E-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.
3. The mass emission performance goals, in lbs/day, were calculated based on the following equation: Mass emission performance goal (lbs/day) = 8.34 x Q x C, where Q is the permitted flow for the Facility (15.0 MGD) and C is the concentration (mg/L).
4. Dischargers may, at their option, apply this performance goal as a total chromium performance goal.
5. 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.
6. As specified in section 7.15 of this Order and section 3.3 of the MRP (Attachment E).
7. This performance goal 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 *USEPA Regions 8, 9, and 10, Toxicity Training Tool* (January 2010).

4.1.3. Discharge Specifications

4.1.3.1. 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.

4.1.3.2. Waste discharged to the ocean must be essentially free of:

4.1.3.2.1. Material that is floatable or will become floatable upon discharge;

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

4.1.3.2.3. Substances which will accumulate to toxic levels in marine waters, sediments, or biota;

4.1.3.2.4. Substances that significantly decrease the natural light to benthic communities and other marine life; and

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

4.1.3.3. Waste effluents shall be discharged in a manner which provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.

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

4.1.3.4.1. 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;

4.1.3.4.2. 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

4.1.3.4.3. Maximum protection is provided to the marine environment.

4.1.3.5. 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.

4.2. Land Discharge Specifications – Not Applicable

4.3. Recycling Specifications – Not Applicable

5. Receiving Water Limitations

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. 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**

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

5.1.1.1.1.2. A single sample maximum not to exceed 400 CFU per 100 mL.

5.1.1.1.2. **Enterococci**

5.1.1.1.2.1. A six-week rolling geometric mean not to exceed 30 CFU per 100 mL, calculated weekly.

5.1.1.1.2.2. A statistical threshold value 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 shall not exceed 70 CFU per 100 ~~ml~~ mL throughout the water column, and not more than 10 percent of the samples shall exceed 230 CFU per 100 ~~ml~~ mL.

5.1.2. **Physical Characteristics**

5.1.2.1. Floating particulates and grease and oils shall not be visible.

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

5.1.2.3. Natural light shall not be significantly reduced at any point outside the initial dilution zone as a result of the discharge of waste.

5.1.2.4. 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.

5.1.2.5. Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.

5.1.3. **Chemical Characteristics**

5.1.3.1. 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.

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

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

5.1.3.4. 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.

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

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

5.1.3.7. 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.

5.1.4. **Biological Characteristics**

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

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

5.1.4.3. 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.

5.1.5. **Radioactivity**

Discharge of radioactive waste shall not degrade marine life.

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.

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, the more stringent provision shall apply.

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

6.1.2.2. The expiration date of this Order is contained on page 1 of this Order. After the expiration date, the terms and conditions of this Order are automatically continued pending issuance of a new permit, provided that all requirements of USEPA's NPDES regulations at title 40 of the Code of Federal Regulations (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 at a prominent location either on hard copy or electronic format. The Order shall be available to site personnel, San Diego Water Board, State Water Resources Control Board (State Water Board), and USEPA or their authorized representative at all times. Electronic copies accessible from a computer located at the Facility shall be considered onsite.

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.

6.2.2. Notifications required to be provided under this Order shall be made to the San Diego Water Board by:

Email – SanDiego@waterboards.ca.gov;
Telephone – (619) 516-1990; or
Facsimile – (619) 516-1994

6.3. Special Provisions

6.3.1. Reopener Provisions

6.3.1.1. This Order 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, Table 3, of this Order or as otherwise described in Table 3 of the Ocean Plan. (40 CFR section 122.44(d)(1))

6.3.1.2. This Order 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. 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 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. (Water Code section 13381(a));

6.3.1.3.2. Obtaining this Order 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 does not stay any condition of this Order. Notification by the Discharger of planned operational or facility changes, or anticipated noncompliance with this Order does not stay any condition of this Order. (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 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, the San Diego Water Board may institute proceedings under these regulations to modify or revoke and reissue this Order to conform to the toxic effluent standard or prohibition. (40 CFR section 122.44(b)(1))

6.3.1.6. This Order 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 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 may be reopened upon submission by the Discharger of adequate information, as determined by the San Diego Water Board, 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 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

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, may be re-evaluated and modified during this Order term, or this Order 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. For purposes of this section of the Order, a spill is a discharge that occurs at or downstream of the Facility in violation of Discharge Prohibition 3.1 of this Order. A spill may include a discharge of treated or untreated wastewater, or material other than treated or untreated wastewater that causes, may cause, or is caused by significant operational failure, and/or endangers or may endanger human health or the environment. The term “spill” as used in this section of the Order does not include sanitary sewer overflows from the sewage collection system that are reportable under separate WDRs. (See section 6.3.5.5 of this Order for more information.)

6.3.2.1.2. The Discharger shall maintain a Spill Prevention Plan (SPP) and a Spill Response Plan (SRP) for the Facility 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 Facility. The SPP/SRP and any amendments thereto shall be subject to the approval of the San Diego Water Board and shall be modified as directed by the San Diego Water Board. The Discharger shall submit the SPP/SRP and any amendments thereto to the San Diego Water Board upon request of the San Diego Water Board. The Discharger shall ensure that the up-to-date SPP/SRP is readily available to the Facility personnel at all times and that the sewerage system personnel are familiar with it.

6.3.2.2. **Spill Reporting Requirements**

The Discharger shall report spills, as defined in section 6.3.2.1.1 above, 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 by email at SanDiego@waterboards.ca.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) 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, as well as any additional pertinent information, to the San Diego Water Board 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 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 wastewater treatment facility, the Discharger is not required to notify the San Diego Water Board within 24 hours, or provide a 5-day written report.

6.3.2.2.3. For spills of material other than treated or untreated wastewater that cause, may cause, or are caused by significant operational failure, and/or endangers or may endanger human health or the environment, the Discharger shall:

6.3.2.2.3.1. Notify the San Diego Water Board by email at SanDiego@waterboards.ca.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) 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, as well as any additional pertinent information, to the San Diego Water Board 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 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 self-monitoring report (SMR) for the month in which the spill occurred. If no spills occurred during the calendar month, the Discharger shall report no spills occurred in the monthly SMR for that calendar month.

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

6.3.3. **Best Management Practices and Pollution Prevention**

6.3.3.1. **Pollutant Minimization Program (PMP).** The goal of the PMP is 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 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.

6.3.3.1.1. Reporting protocols in the MRP (Attachment E of this Order) 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 of this Order). These reporting protocols and definitions are used in determining the need to conduct a PMP, as follows:

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

i. The calculated effluent limitation is less than the reported Minimum Level (ML);
ii. The concentration of the pollutant is reported as DNQ; and
iii. 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 Method Detection Limit (MDL);

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.

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

6.3.3.1.3.1. 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;

6.3.3.1.3.2. Quarterly monitoring for the reportable pollutant(s) in the influent to the wastewater treatment system;

6.3.3.1.3.3. 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;

6.3.3.1.3.4. Implementation of appropriate cost-effective control measures for the reportable pollutant(s), consistent with the control strategy; and

6.3.3.1.3.5. An annual status report that shall be sent to the San Diego Water Board including:

i. All PMP monitoring results for the previous year;
ii. A list of potential sources of the reportable pollutant(s);
iii. A summary of all actions undertaken pursuant to the control strategy; and
iv. A description of actions to be taken in the following year.

6.3.4. Construction, Operation and Maintenance Specifications

6.3.4.1. 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.

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,

6.3.4.1.2.2. The San Diego Water Board has 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 or its designated representatives (new or expanded treatment facilities only), and

6.3.4.1.2.4. The San Diego Water Board has 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~~ Facility shall be protected against 100-year frequency Tijuana River flows as defined by the San Diego County Flood Control District.

6.3.4.3. The ~~Facilities~~ Facility shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year, 24-hour storm event as defined by the NOAA Atlas 14 Point Precipitation Frequency Estimates available at: https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=pa

6.3.4.4. The Facilities shall be protected against regional impacts of changing climate conditions (e.g., rising sea levels, flooding, higher storm surges, 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 Climate Change Action Plan which is required to be submitted within three years of the effective date of this Order pursuant to section 6.1 of the MRP (Attachment E).

6.3.4.5. The Discharger shall provide and maintain in good working order a sufficient alternate power source(s) to assure that, in the event of the loss, reduction, or failure of electrical power, the Facility is in compliance with the terms and conditions of this Order. 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, and recycling 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, 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. South Bay Ocean Outfall Capacity Report

No later than 180 days prior to this Order's expiration date, the Discharger shall submit a written report to the San Diego Water Board regarding capacity of the South Bay Ocean Outfall (SBOO) that includes the following items:

6.3.5.1.1. The Discharger's most current report on the SBOO capacity conducted within one year of the expiration date of this Order;

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

6.3.5.1.3. The Discharger's intended schedule for studies, design, and other steps needed to provide additional capacity for the SBOO 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 SBOO; and

6.3.5.1.5. A statement signed by a California Licensed Engineer certifying that the capacity of the SBOO is at least 40 MGD (or the total permitted discharge from the Facility and South Bay International Wastewater Treatment Plant (SBIWTP), whichever is higher).

6.3.5.1.6. The report must be signed and agreed upon by each of the parties discharging through the SBOO.

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 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 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 finds that adequate steps are not being taken to address capacity concerns, the San Diego Water Board 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, 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 USEPA and/or the San Diego Water Board, as provided in the 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, maintaining 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 includes 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.[1] The second level of enforcement is a 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 (https://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 cases, the Discharger shall issue a Compliance Findings of Violation and Order which is the first level 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.

[1] 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

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. The Discharger shall enforce the requirements promulgated pursuant to sections 307(b), 307(c), 307(d), and 402(b) of the 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), and to the San Diego Water Board via the CIWQS program website (https://www.waterboards.ca.gov/water_issues/programs/ciwqs/); 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, 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 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 the section 5.3.5.3 of this Order. 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 Facility, which the Discharger knows, or suspects 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:

i. Name of SIU and category, if subject to categorical standards;
ii. Type of wastewater treatment or control processes in place;
iii. Number of samples taken by SIU during the year;
iv. Number of samples and inspections by Discharger during the year;
v. For an SIU subject to discharge requirements for total toxic organics, whether all required certifications were provided;
vi. A list of pretreatment standards (categorical or local) violated during the year, or any other violations;
vii. Industries in significant non-compliance (SNC) as defined at 40 CFR section 403.12(f)(2)(vii), at any time during the year;
viii. 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
ix. 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; and

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

6.3.5.3.5.11. 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 diversion systems that are routed to the sanitary sewer collection system.

6.3.5.3.6. The Discharger shall provide a written technical evaluation of the need to revise local limits under 40 CFR section 403.5(c)(1) following permit reissuance (40 CFR section 122.44(j)(2)(ii)). The local limits technical evaluation is due to the San Diego Water Board within 180 days of the effective date of this Order.

6.3.5.3.7. The Discharger shall continue with its implementation of a Non-Industrial Source Control Program, consisting of a public education program designed to minimize the entrance of non-industrial toxic pollutants and pesticides into the sanitary sewer system. The program shall be reviewed periodically and addressed in the annual pretreatment report required under section ~~5.3.5.2.4~~ 6.3.5.3.5.

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 Facility are used or disposed of in accordance with these rules, whether the Discharger uses or disposes 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, 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 at the Facility 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 and/or at the biosolids treatment units to ensure that all pieces of metal, plastic, glass, and other inert objects are removed.

6.3.5.4.2. **Inspection and Entry**

The USEPA, the San Diego Water Board, the 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 transfers 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 transfers biosolids for further treatment, storage, use, or disposal, under the conditions of this Order 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**

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, 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% 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% dry weight" basis.

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. 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~~ 4°C; Salmonella spp. bacteria-24 hours when cooled to ~~four~~ 4 °C; enteric viruses-two weeks when frozen; and helminth ova-one month when cooled to 4 °C.

6.3.5.4.4.3. 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.

6.3.5.4.7.1. Notification of Noncompliance

The Discharger shall notify the 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, State Water Board, and 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 the 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 Facility (other than composted biosolids) at a new or previously unreported site, the Discharger shall notify the 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. It 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, State Water Board, and San Diego Water Board, and 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 the 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. It 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/), to the USEPA Biosolids Coordinator (CDX NeT electronic reporting system), and, if applicable, to 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. Results must be reported on a 100% 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 to the CDX NeT electronic reporting system, unless the Discharger requires its biosolids management contractors to report this information directly to the USEPA Biosolids Coordinator:

i. 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).

ii. 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
U.S. Environmental Protection Agency
EPA's CDX NeT electronic reporting system

If applicable,
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's member agencies are subject to the requirements of, and must comply with State Water Board Order No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems* (Statewide General SSO Order), including monitoring and reporting requirements as amended by State Water Board Order No. WQ 2013-0058-EXEC and any subsequent amendment/reissuance order. The Discharger's member agencies are 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 No. 2006-0003-DWQ or Order No. R9-2007-0005, the Discharger's member agencies' collection system is part of the treatment system that is subject to this Order. As such, pursuant to federal regulations, the Discharger's member agencies must report any noncompliance (40 CFR sections 122.44(1)(6) and (7)), properly operate and maintain its collection system [40 CFR section 122.41(e)], and

mitigate or prevent any discharge from the collection system in violation of this Order [40 CFR section 122.41(d)].

6.3.5.6. **Resource Recovery from Anaerobically Digestible Material**

If the Discharger or its member agencies plans to receive hauled-in anaerobically digestible material for injection into an anaerobic digester, the Discharger shall notify the San Diego Water Board 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 within 180 days of the effective date of this Order an Asset Management Plan (AMP) to ensure proper operation and maintenance of the Facilities. The Discharger may rely on existing documents to develop the AMP. The AMP shall include the following elements: ~~an asset management program to cover the treatment plant and collection system. The Discharger shall:~~

~~6.3.5.7.1. Procure, populate, and utilize asset management and/or work order management software within two years of permit issuance. The software shall:~~

~~6.3.5.7.1.1. Inventory all critical assets valued over $5,000 into a single database. 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 (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.~~

~~6.3.5.7.1.2. Automate work order production and tracking.~~

~~6.3.5.7.1.3. Prioritize system maintenance and rehabilitation projects.~~

~~6.3.5.7.2. Create and submit to San Diego Water Board an Asset Management Plan (AMP) within three years of the issuance of this Order. To avoid any duplication of effort, the Discharger may reference relevant sections of asset management plans required under other waste discharge requirements for the Facility as appropriate in providing a full and complete response to this requirement. The AMP shall be updated and re-evaluated every five years. The components of the AMP shall include:~~

6.3.5.7.~~2~~.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~~.2. Maintenance Plan

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

6.3.5.7.~~2~~.3. System Map

A ~~sewer collection system 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 Facility shall incorporate assets from the asset management inventory. The map shall be color-coded to identify maintenance and rehabilitation priorities.

6.3.5.7.~~2~~.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.~~2~~.5. System Projections

The AMP shall evaluate growth projections of population and service area and potential vulnerabilities resulting from climate change over the next 30 years. ~~To avoid any duplication of effort, the Discharger may reference specific sections of the Climate Change Action Plan described in Attachment E, section 6.1 of this Order as appropriate in providing a full and complete response to this requirement.~~

6.3.5.7.6. Asset Management Software

The AMP shall incorporate software 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 (GPS coordinate or equivalent identifier)
- Current performance/condition
- Purchase and installation date
- Purchase price
- Replacement cost
- Quantitative consequence of failure
- Quantitative likelihood of failure

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

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. The Discharger shall timely provide each updated or revised AMP to the San Diego Water Board.

6.3.6. **Other Special Provisions – Not Applicable**

6.3.7. **Compliance Schedules – Not Applicable**

7. Compliance Determination

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

7.1. 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 the 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.

7.2. 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.

7.3. 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.

7.4. 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).

7.5. 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).

7.6. 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.

7.7. 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.”

7.8. Percent Removal

Compliance with percent removal requirements for average monthly percent removal of BOD_5 and TSS shall be determined for the 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 locations specified in the MRP (Attachment E) within a calendar month.

The percent removal for each day shall be calculated according to the following equation:

Daily discharge percent removal = the influent concentration minus the effluent concentration, divided by the influent concentration, multiplied by 100.

7.9. 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.

7.10. 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.

7.11. 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.

7.12. **Mass Emission Rate (MER)**

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

MER (lbs/day) = 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.

7.13. **Bacterial Standards and Analysis**

7.13.1. 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 (CFU/100 mL) found on each day of sampling.

7.13.2. The statistical threshold value (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.

7.13.3. 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 approved by 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, and any other method approved by the San Diego Water Board.

7.14. **Single Operational Upset (SOU)**

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

7.14.1. 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.

7.14.2. A 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 Attachment D.

7.14.3. 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 Dischargers 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).

7.14.4. 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 Dischargers to assert the SOU limitation of liability, and the manner of counting violations shall be in accordance with Water Code section 13385(f)(2).

7.15. **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 null hypothesis (Ho) for the TST statistical approach is:

Mean discharge "in-stream" waste concentration (IWC) response $\leqslant 0.75 \times$ Mean control response.

A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". This is a t-test (formally Student's t-test), a statistical analysis comparing two sets of replicate observations—in the case of WET test, only two test concentrations (i.e., a control and 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 ~~MDEL~~ maximum daily performance goal 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".

The ~~MDEL~~ maximum daily performance goal for chronic toxicity is set at the IWC for the discharge (1.06% effluent[2]) and expressed in units of the TST statistical approach ("Pass" or "Fail"). All monitoring for the ~~MDEL~~ maximum daily performance goal for chronic toxicity shall be reported using the IWC effluent concentration and negative control, expressed in units of the TST. The TST hypothesis (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

[2] IWC = 1/minimum initial dilution factor (Dm) = 1/94.6 = 0.0106 = 1.06%

Board's review of reported toxicity test results will include review of concentration-response patterns as appropriate (see section 4.3.5 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 (40 CFR section 122.41(h)). The San Diego Water Board will make a determination as to whether a toxicity test result is compliant, and may consult with the Discharger, USEPA, the State Water Board's Quality Assurance (QA) 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
AMEL	Average Monthly Effluent Limitation
AMP	Asset Management Plan
AQUA	Aquaculture
ASBS	Areas of Special Biological Significance
AUV	Autonomous Underwater Vehicle
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)
BPJ	Best Professional Judgement
BRI	Benthic Response Index
°C	Degrees Celsius
$CBOD_5$	Carbonaceous Biochemical Oxygen Demand (5-Day @ 20°C)
CCAP	Climate Change Action Plan
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
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
DDT*	Dichlorodiphenyltrichloroethane
Discharger	City of San Diego
D_m	Minimum Initial Dilution Factor
DMR	Discharge Monitoring Report
DNQ*	Detected, But Not Quantified
EC_{25}	Effects Concentration at 25 Percent
ELAP	Environmental Laboratory Accreditation Program
eSMR	Electronic Self-Monitoring Reports
°F	Degrees Fahrenheit
Facility	South Bay Water Reclamation Plant
Facilities*	South Bay Water Reclamation Plant, South Bay Ocean Outfall; and Associated Treatment, Storage, and Conveyance Structures

Abbreviation	Definition
FCD	Flood Control District
GPS	Global Positioning System
HCH*	Hexachlorocyclohexane
H_o	Hypothesis
HSA	Hydrologic Subarea
HU	Hydrologic Unit
IND	Industrial Service Supply
IU	Industrial User
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
MDEL*	Maximum Daily Effluent Limitation
MDL*	Method Detection Limit
MEC	Maximum Effluent Concentration
MER	Mass Emission Rate
MF	Microfiltration
mg/kg	Milligram per Kilogram
mg/L	Milligram per Liter
MGD	Million Gallons per Day
MIGR	Migration of Aquatic Organisms
ML	Minimum Level
ml	Milliliter
ml/L	Milliliter per Liter
MRP	Monitoring and Reporting Program
NAV	Navigation
ND	Not Detected
ng/kg	Nanogram per Kilogram
NOAA’s	National Oceanic and Atmospheric Administration’s
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
PBDEs/BDEs	Polybrominated Diphenyl Ethers
PCBs*	Polychlorinated Biphenyls
pCi/L	Picocuries per Liter
PMP*	Pollutant Minimization Program
PMSD	Percent Minimum Significant Difference
PLWTP	E.W Blom Point Loma Wastewater Treatment Plant

Abbreviation	Definition
POTWs	Publicly-Owned Treatment Works
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
ROTV	Remotely Operated Towed Vehicle
ROWD	Report of Waste Discharge
RPA	Reasonable Potential Analysis
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SBIWTP	South Bay International Wastewater Treatment Plant
SBOO	South Bay Ocean Outfall
SBWRP	South Bay Water Reclamation Plant
SCCWRP	Southern California Coastal Water Research Project
SHELL	Shellfish Harvesting
SIC	Standard Industrial Classification
SIUs	Significant Industrial Users
SMR	Self-Monitoring Report
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 No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*
STV	Statistical Threshold Value
TAC	Test Acceptability Criteria
TBELs	Technology-Based Effluent Limitations
TCDD*	Tetrachlorodibenzodioxin

Abbreviation	Definition
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
TUa	Toxic Units Acute
TUc	Toxic Units Chronic
µg	Microgram
µg/kg	Microgram per Kilogram
µg/L	Microgram per Liter
UM3	USEPA Modeling Application Visual Plumes
µmhos/cm	Micromhos per Centimeter
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
U.S.	United States
USIBWC	United States Section of the International Boundary and Water Commission
Water Code	California Water Code
WDRs	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WILD	Wildlife Habitat
WQBELs	Water Quality-Based Effluent Limitations
ZID	Zone of Initial Dilution

Part 2. – Definitions

30-day average

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

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 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 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 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 well being 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 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.

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 is demonstrated by conducting chronic toxicity tests for the effluent as described in section 7.15 of this Order and section 3.3 of the MRP (Attachment E), and in accordance with the Test of Significant Toxicity statistical approach.

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.

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.

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.

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.

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

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 channelled 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 Monitoring Reports (DMRs)

The DMRs means the U.S. Environmental Protection Agency (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.

Facility

The South Bay Water Reclamation Plant.

Facilities

Collectively refers to the South Bay Water Reclamation Plant, South Bay Ocean Outfall; and any associated structure or system used in the storage, treatment, and recycling of wastewater at the South Bay Water Reclamation Plant, or any structure or system used in conveyance of wastewater to or from the South Bay Water Reclamation Plant.

Halomethanes

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

HCH

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% 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 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.

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 by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the San Diego Water Board.

Not Detected (ND)

Those sample results less than the laboratory's MDL.

Ocean Waters

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

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 average values of the raw wastewater influent pollutant concentrations to the facility and the average values of the effluent pollutant concentrations for a given time period.

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.

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)

PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of Ocean Plan Table 3 pollutants through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitations. 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 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 to fulfill the PMP requirements.

Publicly Owned Treatment Works (POTW)

POTW means a treatment works as defined by section 212 of the Clean Water Act (CWA), which is owned by a State or municipality (as defined by section 502(4) of the 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 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 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 correspond to approved analytical methods for reporting a sample result that are selected by the San Diego Water Board either from Appendix II of the Ocean Plan in accordance with 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.

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

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

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.

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, as shown in the table below.

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 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.

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 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 – Maps

Figure B-1. Map Showing City of San Diego Facilities and Service Area

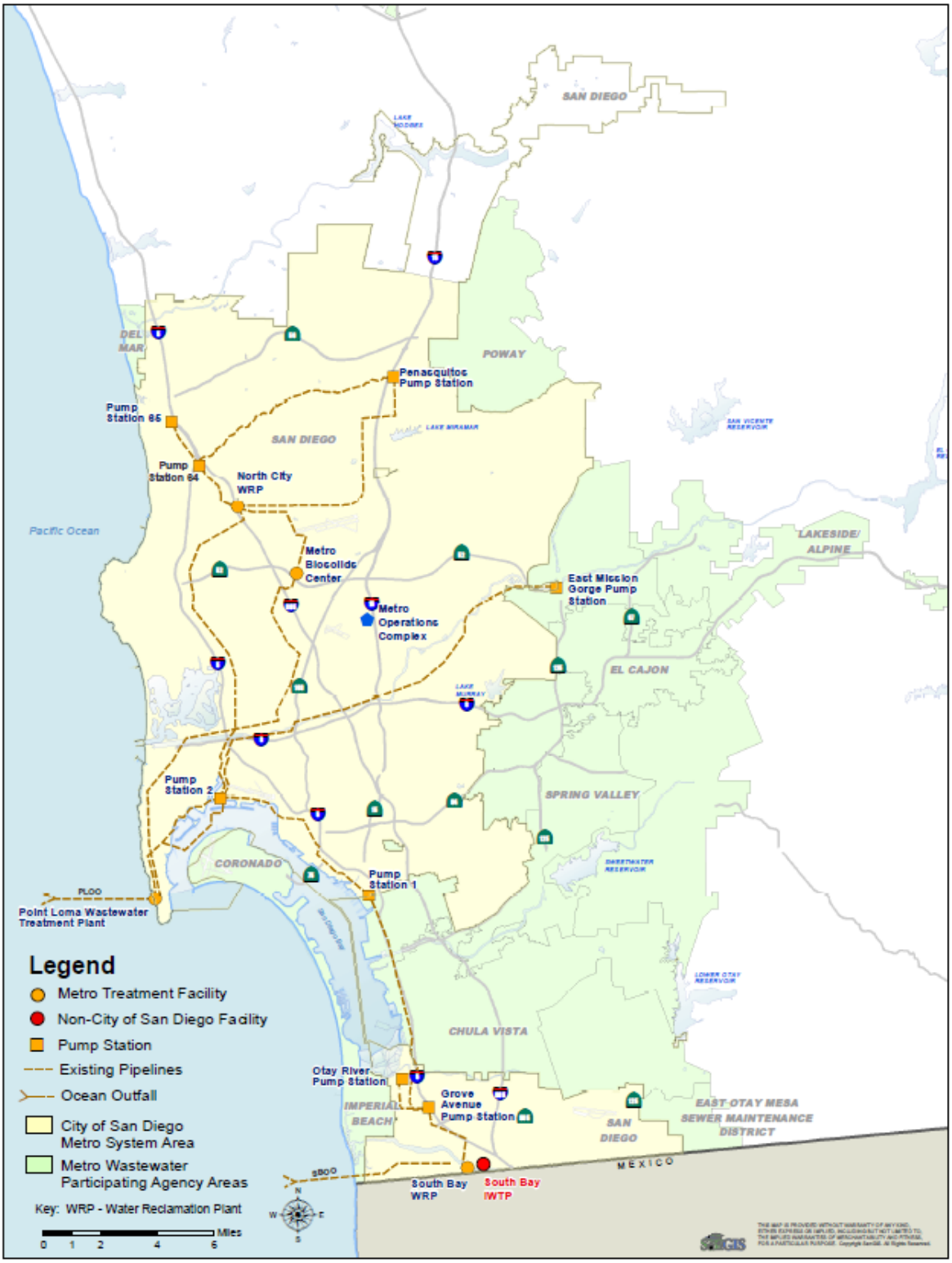


Figure B-2. Map Showing Location of South Bay Water Reclamation Plant and South Bay Ocean Outfall

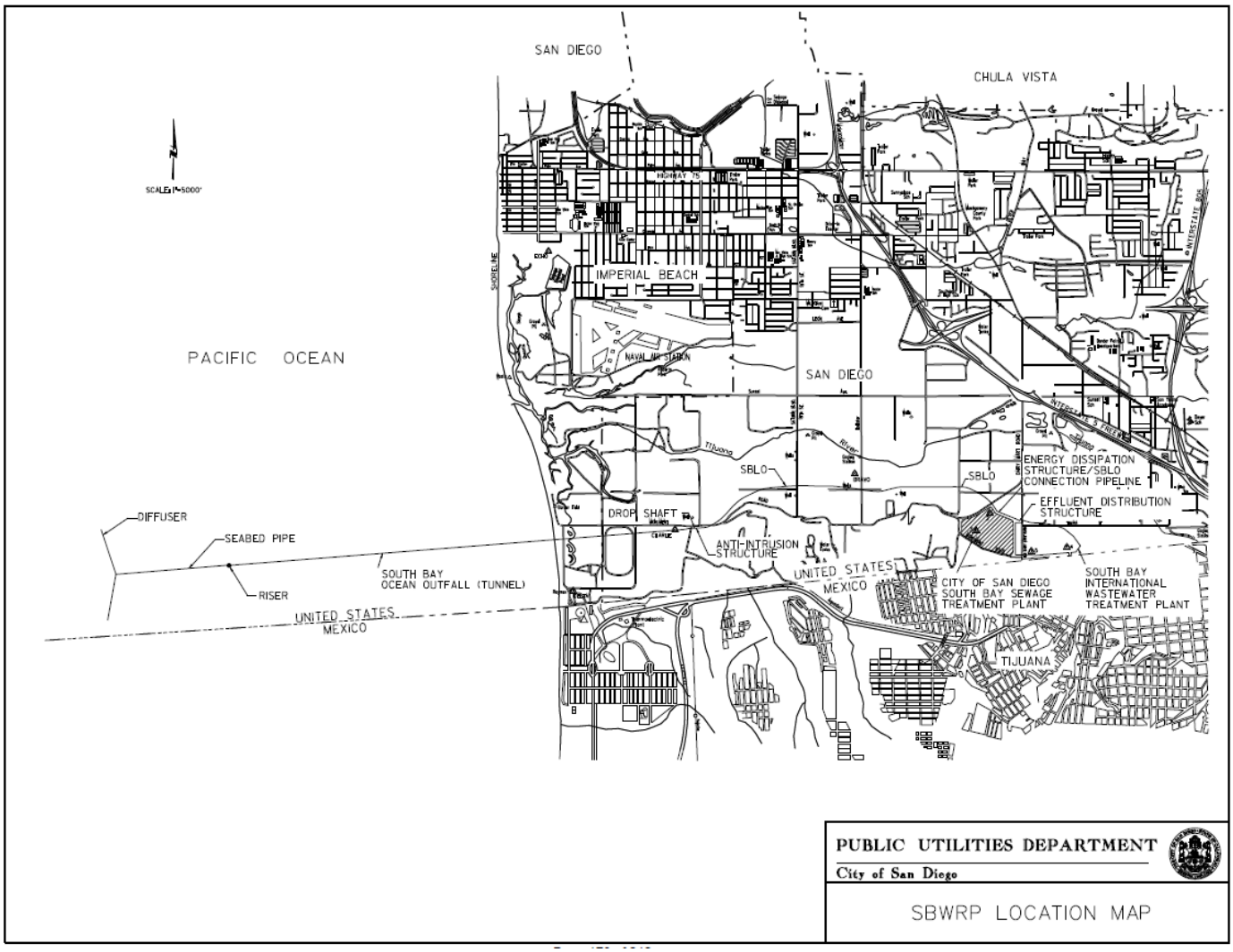
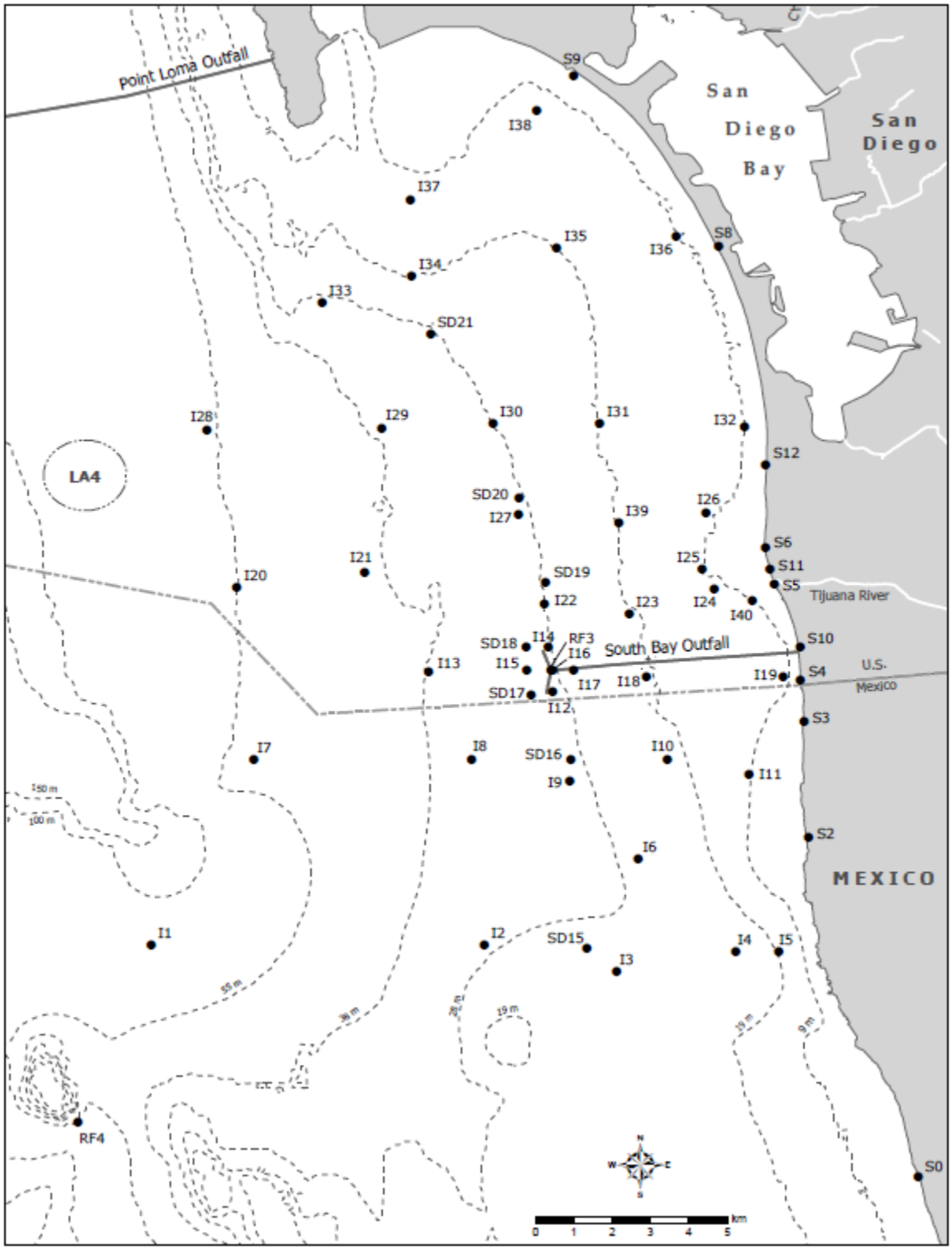
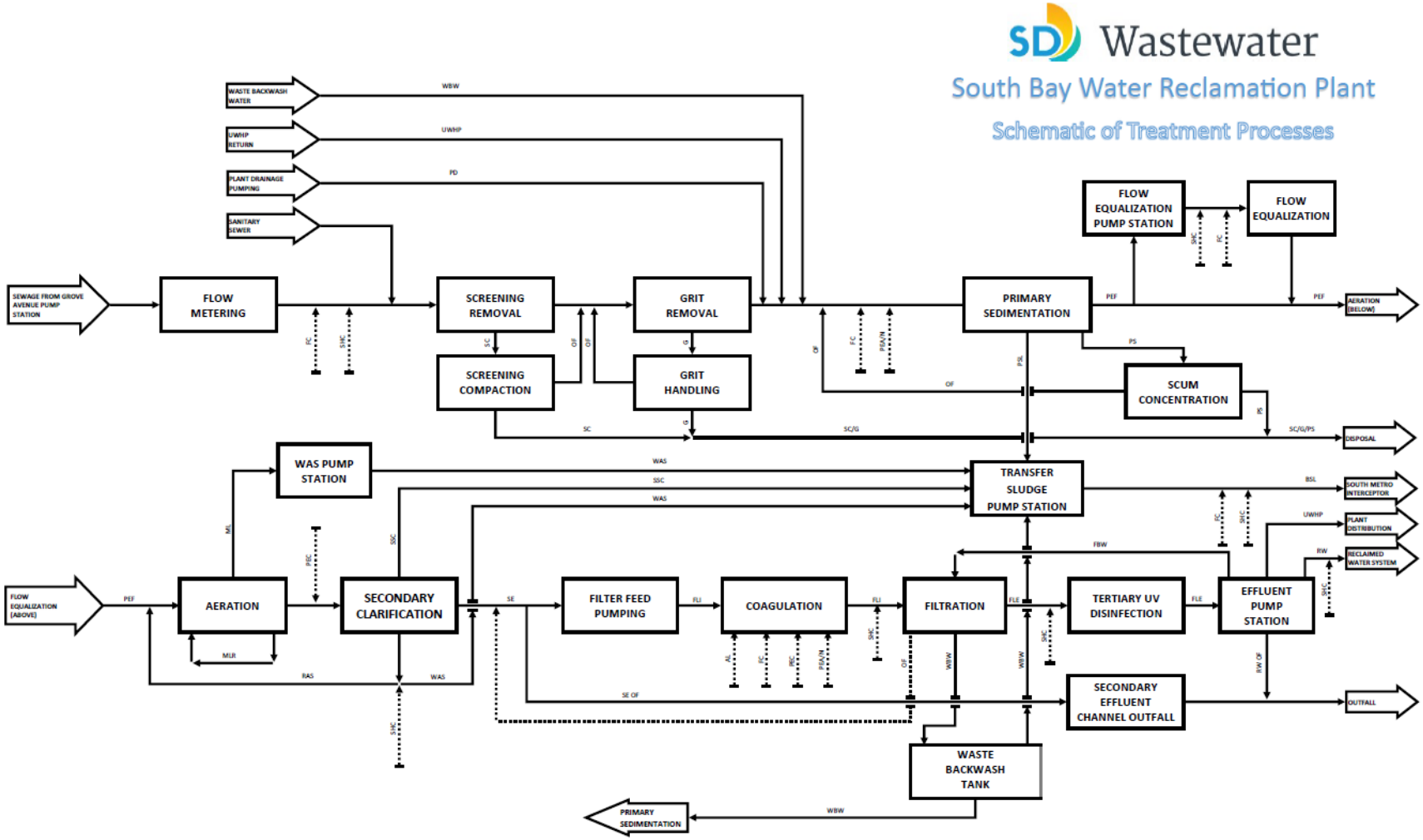


Figure B-3. Ocean Outfall Monitoring Locations



Attachment C –Flow Schematic



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. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (Water Code) and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 CFR section122.41(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 CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR section122.41(a)(1).)

1.2. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 CFR section122.41(c).)

1.3. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR section122.41(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. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR section122.41(e).)

1.5. Property Rights

1.5.1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR section122.41(g).)

1.5.2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR section122.5(c).)

1.6. **Inspection and Entry**

The Discharger shall allow the San Diego Water 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 section122.41(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 (33 U.S.C. section 1318(a)(4)(b)(i); 40 CFR section122.41(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 (33 U.S.C. section 1318(a)(4)(b)(ii); 40 CFR section122.41(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 (33 U.S.C. section 1318(a)(4)(b)(ii); 40 CFR section122.41(i)(3); Water Code, sections 13267, 13383); and

1.6.4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. section 1318(a)(4)(b); 40 CFR section122.41(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 section122.41(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 section122.41(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 section122.41(m)(2).)

1.7.3. Prohibition of bypass. Bypass is prohibited, and the San Diego Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR section122.41(m)(4)(i)):

1.7.3.1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR section122.41(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 section122.41(m)(4)(i)(B)); and

1.7.3.3. The Discharger submitted notice to the San Diego Water Board as required under Standard Provisions – Permit Compliance 1.7.5 below. (40 CFR section122.41(m)(4)(i)(C).)

1.7.4. The San Diego Water Board may approve an anticipated bypass, after considering its adverse effects, if the San Diego Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance 1.7.3 above. (40 CFR section122.41(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. As of December 2023, a notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR section122.41(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 5.5 below (24-hour notice). The notice shall be sent to the San Diego Water Board. As of December 2023, a notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR section122.41(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 section122.41(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 section122.41(n)(2).)

1.8.2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR section122.41(n)(3)):

1.8.2.1. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR section122.41(n)(3)(i));

1.8.2.2. The permitted facility was, at the time, being properly operated (40 CFR section122.41(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 section122.41(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 section122.41(n)(3)(iv).)

1.8.3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR section122.41(n)(4).)

2. Standard Provisions – Permit Action

2.1. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR section122.41(f).)

2.2. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 CFR section122.41(b).)

2.3. Transfers

This Order is not transferable to any person except after notice to the San Diego Water Board. The San Diego Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR 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 section122.41(j)(1).)

3.2. Monitoring must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR part 136 for the

analysis of pollutants or pollutant parameters or as required under 40 CFR chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

3.2.1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

3.2.2. The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter 1, subchapter N for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR part 136 or otherwise required under 40 CFR chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 CFR 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 records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the San Diego Water Board Executive Officer at any time. (40 CFR section122.41(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 section122.41(j)(3)(i));

4.2.2. The individual(s) who performed the sampling or measurements (40 CFR section122.41(j)(3)(ii));

4.2.3. The date(s) analyses were performed (40 CFR section122.41(j)(3)(iii));

4.2.4. The individual(s) who performed the analyses (40 CFR section122.41(j)(3)(iv));

4.2.5. The analytical techniques or methods used (40 CFR section122.41(j)(3)(v)); and

4.2.6. The results of such analyses. (40 CFR section122.41(j)(3)(vi).)

4.3. Claims of confidentiality for the following information will be denied (40 CFR section122.7(b)):

4.3.1. The name and address of any permit applicant or Discharger (40 CFR section122.7(b)(1)); and

4.3.2. Permit applications and attachments, permits and effluent data. (40 CFR section122.7(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 or to determine compliance with this Order. 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. (40 CFR section122.41(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/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting 5.2.2, 5.2.3, 5.2.4, 5.2.5, and 5.2.6 below. (40 CFR section122.41(k).)

5.2.2. 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 section122.22(a)(3).).

5.2.3. All reports required by this Order 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:

5.2.3.1. The authorization is made in writing by a person described in Standard Provisions – Reporting 5.2.2 above (40 CFR section122.22(b)(1));

5.2.3.2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR section122.22(b)(2)); and

5.2.3.3. The written authorization is submitted to the San Diego Water Board and State Water Board. (40 CFR section122.22(b)(3).)

5.2.4. If an authorization under Standard Provisions – Reporting 5.2.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting 5.2.3 above must be submitted to the San Diego Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR section122.22(c).)

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

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 CFR section122.22(d).)

5.2.6. Any person providing the electronic signature for documents described in Standard Provisions – 5.2.1, 5.2.2, or 5.2.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting 5.2, and shall ensure that all relevant requirements of 40 CFR part 3 (Cross-Media Electronic Reporting) and 40 CFR part 127 (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. (40 CFR section122.41(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 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 section122.41(l)(4)(i).)

5.3.3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR part 136, or another method required for an industry-specific waste stream under 40 CFR chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the San Diego Water Board or State Water Board. (40 CFR section122.41(l)(4)(ii).)

5.3.4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR section122.41(l)(4)(iii).)

5.4. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 CFR section122.41(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 2023, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the San Diego Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10. The reports shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. The San Diego Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR section122.41(l)(6)(i).)

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

5.5.2.1. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR section122.41(l)(6)(ii)(A).)

5.5.2.2. Any upset that exceeds any effluent limitation in this Order. (40 CFR section122.41(l)(6)(ii)(B).)

5.5.3. The San Diego Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR section122.41(l)(6)(ii)(B).)

5.6. Planned Changes

The Discharger shall give notice to the San Diego Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR section122.41(l)(1)):

5.6.1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 CFR section122.41(l)(1)(i)); or

5.6.2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR section122.41(l)(1)(ii).)

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 subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels 7.1.1). (40 CFR section122.41(l)(1)(ii).)

5.7. Anticipated Noncompliance

The Discharger shall give advance notice to the San Diego Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 CFR section122.41(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 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 section122.41(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 section122.41(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 section122.41(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 of the following (40 CFR section122.42(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 CWA if it were directly discharging those pollutants (40 CFR section122.42(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. (40 CFR section122.42(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 section122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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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 (City or Discharger) to conduct routine or episodic self-monitoring of the discharges regulated under this Order at specified effluent and receiving water monitoring locations. The MRP requires the Discharger to report the results to the San Diego Water Board with information necessary to evaluate discharge characteristics and compliance status.

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

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 considered four basic types of information for each question:

(1) Management Information Need – Why does the San Diego Water Board need to know the answer?

(2) Monitoring Criteria – What monitoring will be conducted for deriving an answer to the question?

(3) Expected Product – How should the answer be expressed and reported?

(4) 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: Core monitoring, regional monitoring, special studies.

(1) 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 at the headworks, at the outfall prior to commingling with other discharges, and in the immediate vicinity of the discharge by examining local scale spatial effects.

(2) 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 the MRP does not specifically address regional monitoring, the San Diego Water Board may allow relief from aspects of core monitoring components in order to encourage participation pursuant to section 5 of this MRP.

(3) 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 locations 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 locations shall not be changed without notification to and the approval of the San Diego Water Board.

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.

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

1.4. Data produced and reports submitted pursuant to this Order 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 or equivalent analytical test methods validated for intended use and approved by the Executive Officer. The laboratory must include quality assurance/quality control (QA/QC) data in ~~all data~~ their reports ~~required by this Order and submit electronic data as required by the San Diego Water Board~~. The Discharger shall include in the self-monitoring reports (SMRs) the QA/QC data for analyses that do not meet

QA/QC requirements. All other QA/QC data shall be available upon request. 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 Provisions (Attachment D) section 4.

1.6. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. 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 should have a success rate equal or greater than 80 percent.

1.7. When requested by USEPA or the San Diego Water Board, the Discharger shall participate in the NPDES Discharge Monitoring Report QA (DMR-QA) performance study. If the DMR-QA is not requested, the Discharger shall submit the most recent Water Pollution Performance Evaluation Study. The Discharger shall ensure that the results of the DMR-QA Study or the most recent Water Pollution Performance Evaluation Study are submitted annually by December 31 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

1.8. 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) and 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 restated in this MRP, unless otherwise noted.

1.9. The Discharger shall ensure that analytical procedures used to evaluate compliance with effluent limitations or performance goals established in this Order use minimum levels (MLs) no greater than the applicable effluent limitations or performance goals and are consistent with the ~~requirements of 40 CFR part 136 and/or~~ MLs specified in Appendix II of the Ocean Plan, or otherwise approved by USEPA and authorized by the San Diego Water Board. 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 40 CFR part 136 and/or the Ocean Plan.~~ Discharger shall select the lowest ML value and its associated analytical method, which may be above the effluent limitation or performance goal. If the Ocean Plan does not include an ML for a parameter, the Discharger shall ensure the method detection limit (MDL) is consistent with the MDL provided in the method approved under 40 CFR part 136.

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. The north latitude and west longitude information in Table E-1 are approximate for administrative purposes.

Table E-1. Monitoring Station Locations[1]

Discharge Point Name	Monitoring Location Name	Type of Monitoring Location	Monitoring Location Description[2]
--	INF-001	Influent	At a location where all influent flows to South Bay Water Reclamation Plant (Facility) are accounted for in monitoring events; upstream of any in-plant return flows; and where representative samples of influent can be collected.
001	E-001	Effluent	Downstream of any in-plant return flows at the Facility where representative samples of effluent treated solely at the Facility can be collected, prior to commingling with other discharges contributing to the South Bay Ocean Outfall (SBOO).
--	S-0[3]	Shoreline Station	Latitude: 32° 25.148'N; Longitude: 117°05.837'W Mexico (Southernmost location)
--	S-2[3]	Shoreline Station	Latitude: 32° 29.922'N; Longitude: 117°07.380'W Mexico (Beach south of El Vigia Restaurant)
--	S-3[3]	Shoreline Station	Latitude: 32° 31.542'N; Longitude: 117°07.440'W Mexico (Beach at end of existing road of Playas de Tijuana)
--	S-4	Shoreline Station	Latitude: 32°32.183'N; Longitude: 117°07.4605'W United States (Beach just north of the border fence)
--	S-5	Shoreline Station	Latitude: 32°33.1489'N; Longitude: 117°07.6539'W United States (Beach north of mouth of the Tijuana River)
--	S-6	Shoreline Station	Latitude: 32° 33.978'N; Longitude: 117°07.980'W United States (Beach at end of Seacoast Drive)
--	S-8	Shoreline Station	Latitude: 32°38.208'N; Longitude: 117°08.640'W United States (Silver Strand State Beach, Area 4 West of Coronado Cays)
--	S-9	Shoreline Station	Latitude: 32°40.620'N; Longitude: 117°10.680'W United States (Beach at end of Avenida Del Sol seaward of Hotel Del Coronado)

Discharge Point Name	Monitoring Location Name	Type of Monitoring Location	Monitoring Location Description[21]
--	S-10	Shoreline Station	Latitude: 32°32.598'N; Longitude: 117°07.500'W United States (Beach at the terminus of Monument Road)
--	S-11	Shoreline Station	Latitude: 32°33.678'N; Longitude: 117°07.920'W United States (Beach approximately ¾ miles north of the mouth of the Tijuana River)
--	S-12	Shoreline Station	Latitude: 32°35.142'N; Longitude: 117°07.980'W United States (Beach at the end of Carnation Street)
--	I-1	Offshore Station	Latitude: 32°28.400'N; Longitude: 117°16.620'W; Depth: 198 ft (60 m)
--	I-2	Offshore Station	Latitude: 32°28.400'N; Longitude: 117°11.940'W; Depth: 106 ft (32 m)
--	I-3[43]	Offshore Station	Latitude: 32°28.020'N; Longitude: 117°10.080'W; Depth: 89 ft (27 m)
--	I-4	Offshore Station	Latitude: 32°28.300'N; Longitude: 117°08.400'W; Depth: 59 ft (18 m)
--	I-5[54]	Offshore Station	Latitude: 32°28.300'N; Longitude: 117°07.800'W; Depth: 46 ft (14 m)
--	I-6	Offshore Station	Latitude: 32°29.610'N; Longitude: 117°09.780'W; Depth: 86 ft (26 m)
--	I-7[65]	Offshore Station	Latitude: 32°31.000'N; Longitude: 117°15.180'W; Depth: 172 ft (52 m)
--	I-8[76]	Offshore Station	Latitude: 32°31.000'N; Longitude: 117°12.120'W; Depth: 118 ft (36 m)
--	I-9[43]	Offshore Station	Latitude: 32°30.700'N; Longitude: 117°10.740'W; Depth: 96 ft (29 m)
--	I-10[87]	Offshore Station	Latitude: 32°31.000'N; Longitude: 117°09.360'W; Depth: 63 ft (19 m)
--	I-11[54]	Offshore Station	Latitude: 32°30.800'N; Longitude: 117°08.220'W; Depth: 43 ft (13 m)
--	I-12[43]	Offshore Station	Latitude: 32°31.970'N; Longitude: 117°10.980'W; Depth: 92 ft (28 m)
--	I-13[76]	Offshore Station	Latitude: 32°32.250'N; Longitude: 117°12.720'W; Depth: 125 ft (38 m)
--	I-14[43]	Offshore Station	Latitude: 32°32.580'N; Longitude: 117°11.040'W; Depth: 92 ft (28 m)
--	I-15	Offshore Station	Latitude: 32°32.270'N; Longitude: 117°11.340'W; Depth: 102 ft (31 m)

Discharge Point Name	Monitoring Location Name	Type of Monitoring Location	Monitoring Location Description[21]
--	I-16[43]	Offshore Station	Latitude: 32°32.270'N; Longitude: 117°10.980'W; Depth: 92 ft (28 m)
--	I-17	Offshore Station	Latitude: 32°32.270'N; Longitude: 117°10.680'W; Depth: 83 ft (25 m)
--	I-18[87]	Offshore Station	Latitude: 32°32.170'N; Longitude: 117°09.660'W; Depth: 63 ft (19 m)
--	I-20[98]	Offshore Station	Latitude: 32°33.420'N; Longitude: 117°15.420'W; Depth: 182 ft (55 m)
--	I-21[76]	Offshore Station	Latitude: 32°33.640'N; Longitude: 117°13.620'W; Depth: 135 ft (41 m)
--	I-22[43]	Offshore Station	Latitude: 32°33.200'N; Longitude: 117°11.100'W; Depth: 92 ft (28 m)
--	I-23[87]	Offshore Station	Latitude: 32°33.050'N; Longitude: 117°09.900'W; Depth: 69 ft (21 m)
--	I-27	Offshore Station	Latitude: 32°34.450'N; Longitude: 117°11.460'W; Depth: 92 ft (28 m)
--	I-28	Offshore Station	Latitude: 32°35.630'N; Longitude: 117°15.840'W; Depth: 182 ft (55 m)
--	I-29	Offshore Station	Latitude: 32°35.670'N; Longitude: 117°13.380'W; Depth: 125 ft (38 m)
--	I-30[43]	Offshore Station	Latitude: 32°35.720'N; Longitude: 117°11.820'W; Depth: 92 ft (28 m)
--	I-31	Offshore Station	Latitude: 32°35.730'N; Longitude: 117°10.320'W; Depth: 63 ft (19 m)
--	I-33[43]	Offshore Station	Latitude: 32°37.430'N; Longitude: 117°14.220'W; Depth: 99 ft (30 m)
--	I-34	Offshore Station	Latitude: 32°37.800'N; Longitude: 117°12.960'W; Depth: 63 ft (19 m)
--	I-35	Offshore Station	Latitude: 32°38.200'N; Longitude: 117°10.920'W; Depth: 63 ft (19 m)
--	I-36[54]	Offshore Station	Latitude: 32°38.350'N; Longitude: 117°09.240'W; Depth: 36 ft (11 m)
--	I-37[54]	Offshore Station	Latitude: 32°38.880'N; Longitude: 117°12.980'W; Depth: 40 ft (12 m)
--	I-38[54]	Offshore Station	Latitude: 32°40.130'N; Longitude: 117°11.200'W; Depth: 36 ft (11 m)
--	I-19[54]	Kelp/ Nearshore Station	Latitude: 32°32.180'N; Longitude: 117°07.740'W; Depth: 33 ft (10 m)

Discharge Point Name	Monitoring Location Name	Type of Monitoring Location	Monitoring Location Description[21]
--	I-24[54]	Kelp/ Nearshore Station	Latitude: 32°33.400'N; Longitude: 117°08.700'W; Depth: 36 ft (11 m)
--	I-25[109]	Kelp/ Nearshore Station	Latitude: 32°33.670'N; Longitude: 117°08.880'W; Depth: 30 ft (9 m)
--	I-26[109]	Kelp/ Nearshore Station	Latitude: 32°34.470'N; Longitude: 117°08.820'W; Depth: 30 ft (9 m)
--	I-32[109]	Kelp/ Nearshore Station	Latitude: 32°35.680'N; Longitude: 117°08.280'W; Depth: 33 ft (10 m)
--	I-39[87]	Kelp/ Nearshore Station	Latitude: 32°34.340'N; Longitude: 117°10.050'W; Depth: 59 ft (18 m)
--	I-40[109]	Kelp/ Nearshore Station	Latitude: 32°33.230'N; Longitude: 117°08.170'W; Depth: 33 ft (10 m)
--	SD-15	Trawl Station	Latitude: 32°28.350'N; Longitude: 117°10.500'W; Depth: 89 ft (27 m)
--	SD-16	Trawl Station	Latitude: 32°31.000'N; Longitude: 117°10.720'W; Depth: 89 ft (27 m)
--	SD-17	Trawl Station	Latitude: 32°~~32~~31.~~200'N~~918'N; Longitude: 117°11.~~430'W~~280'W; Depth: 99 ft (30 m)
--	SD-18	Trawl Station	Latitude: 32°32.580'N; Longitude: 117°11.350'W; Depth: 99 ft (30 m)
--	SD-19	Trawl Station	Latitude: 32°33.500'N; Longitude: 117°11.080'W; Depth: 92 ft (28 m)
--	SD-20	Trawl Station	Latitude: 32°34.680'N; Longitude: 117°11.450'W; Depth: 96 ft (29 m)
--	SD-21	Trawl Station	Latitude: 32°36.990'N; Longitude: 117°12.690'W; Depth: 96 ft (29 m)
--	RF-3	Rig Fishing Station	Latitude: 32°32.270'N; Longitude: 117°11.000'W; Depth: 89 ft (27 m)
--	RF-4	Rig Fishing Station	Latitude: 32°25.910'N; Longitude: 117°17.655'W; Depth: 89 ft (27 m)

Notes for Table E-1:

1. Monitoring at locations in Mexico is dependent on the approval of the Mexico government. Monitoring at these locations is not required if the Mexico

government does not grant permission to enter and sample Mexico waters. In the event that the Mexico government does not grant permission to conduct the monitoring, the Discharger shall notify the San Diego Water Board in writing. Monitoring at locations in Mexico is needed to ensure representative sampling of the discharge's impact on water quality and beneficial uses.

2. The north latitude and west longitude information are approximate for administrative purposes.
3. Samples at shoreline stations S-0, S-2, and S-3 in Mexico are collected by either Comision Internacional de Limites y Aguas (CILA) or Comsion Estatal de Servicios Publicos de Tijuana (CESPT) and provided to the Discharger for sample analysis in the United States. Monitoring at these locations is recommended and requested to ensure representative sampling of the discharge's impact on water quality and beneficial uses. Failure to monitor at these locations is not a violation of the Order.
4. Discrete depths for total and fecal coliform, and enterococci (collectively, fecal indicator bacteria) samples include: 2m, 18m, and 27m.
5. Discrete depths for fecal indicator bacteria samples include: 2m, 6m, and 11m.
6. Discrete depths for fecal indicator bacteria samples include: 2m, 18m, and 52m.
7. Discrete depths for fecal indicator bacteria samples include: 2m, 18m, and 37m.
8. Discrete depths for fecal indicator bacteria samples include: 2m, 12m, and 18m.
9. Discrete depths for fecal indicator bacteria samples include: 2m, 18m, and 55m.
10. Discrete depths for fecal indicator bacteria samples include: 2m, 6m, and 9m.

3. Core Monitoring Requirements

3.1. Influent Monitoring Requirements

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

Influent monitoring of a wastewater stream prior to entering the treatment plant is necessary to address the following question:

(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 °C) (BOD_5) and total suspended solids (TSS) percent removal limitations?

3.1.1. The Discharger shall monitor the influent at monitoring location INF-001 as follows:

Table E-2. Influent Monitoring at Monitoring Location INF-001[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	Million gallons per day (MGD)	Recorder/ Totalizer	Continuous	--
5-day biochemical oxygen demand @ 20°C (BOD_5)	Milligram per liter (mg/L)	24-hr Composite	1/Week	[2]
Total Suspended Solids (TSS)	mg/L	24-hr Composite	1/Week	[2]
Arsenic, Total Recoverable	Microgram per liter (µg/L)	24-hr Composite	1/Month	[2]
Cadmium, Total Recoverable	µg/L	24-hr Composite	1/Month	[2]
Copper, Total Recoverable	µg/L	24-hr Composite	1/Month	[2]
Chromium (VI), Total Recoverable[3]	µg/L	24-hr Composite	1/Month	[2]
Cyanide, Total Recoverable[4]	µg/L	24-hr Composite	1/Month	[2,4]
Lead, Total Recoverable	µg/L	24-hr Composite	1/Month	[2]
Mercury, Total Recoverable	µg/L	24-hr Composite	1/Month	[2]
Nickel, Total Recoverable	µg/L	24-hr Composite	1/Month	[2]
Silver, Total Recoverable	µg/L	24-hr Composite	1/Month	[2]
Zinc, Total Recoverable	µg/L	24-hr Composite	1/Month	[2]

Notes for Table E-2

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. As required under 40 CFR part 136.
3. The Discharger may, at their option, monitor for total recoverable chromium in lieu of total recoverable chromium (VI).
4. If a Discharger can demonstrate to the satisfaction of the San Diego Water Board (subject to approval of an ATP by USEPA) that an analytical method is available

to reliably distinguish between strongly and weakly complexed cyanide, cyanide 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 shall be comparable to that achieved by the approved method in 40 CFR part 136, as revised May 14, 1999.

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.

Effluent monitoring is necessary to address the following questions:

(1) Does the effluent comply with permit effluent limitations, performance goals, and other requirements of this Order, thereby ensuring that water quality standards are achieved in the receiving water?

(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?

(5) What are the concentrations of nutrients in the discharge that may contribute to algal blooms and ocean acidification in the receiving water?

3.2.1. The Discharger shall monitor the effluent at monitoring location E-001 as follows:

Table E-3. Effluent Monitoring at Monitoring Location E-001[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Recorder/ Totalizer	Continuous[2]	--
BOD_5	mg/L	24-hr Composite	1/Day[3,4,5]	6
TSS	mg/L	24-hr Composite	1/Day[3,4,5]	6
pH	Standard units	Grab	1/Day[5]	6
Oil and Grease	mg/L	Grab	1/Week[4]	6
Settleable Solids	Milliliter per liter (ml/L)	Grab	1/Week	6
Turbidity	Nephelometric turbidity unit (NTU)	24-hr Composite	1/Week	6

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	1/Week	6
Temperature	°C	Grab	1/Week	6
Fecal Coliform	Colony Forming Units (CFU)/ 100 mL	Grab	7	6
Enterococci	CFU/ 100 mL	Grab	7	6
Ammonia (expressed as nitrogen)	mg/L	24-hr Composite or Grab	1/Month[4,8]	6
Ammonium[9]	mg/L	Grab	1/Month[4,10]	6
Nitrogen, Total[11]	mg/L	Grab	1/Month[4,10]	6
Nitrogen, Total Organic[12]	mg/L	Grab	1/Month[4,10]	6
Nitrate	mg/L	Grab	1/Month[4,10]	6
Nitrite	mg/L	Grab	1/Month[4,10]	6
Phosphorus, Total (as P)	mg/L	Grab	1/Month[4,10]	6
Phosphate	mg/L	Grab	1/Month[4,10]	6
Carbon, Total Organic	mg/L	Grab	1/Month[4,10]	6
Carbon, Dissolved Inorganic[13]	mg/L	Grab	1/Month[4,10]	6
Iron, Total	mg/L	Grab	1/Month[4,10]	6
Iron, Dissolved	mg/L	Grab	~~1/Month[4,]~~ 1/ Permit Term[4,14]	6
Alkalinity	mg/L $CaCO_3$	Grab	1/Month[4,10]	6
Salinity[15~~4~~]	Parts per thousand (PPT)	Grab	1/Month[4,10]	6
Arsenic, Total Recoverable	µg/L	24-hr Composite	1/Month[4,8]	6
Cadmium, Total Recoverable	µg/L	24-hr Composite	1/Month[4,8]	6
Chromium (VI), Total Recoverable[16~~5~~]	µg/L	24-hr Composite	1/Month[4,8]	6
Copper, Total Recoverable	µg/L	24-hr Composite	1/Month[4,8]	6
Lead, Total Recoverable	µg/L	24-hr Composite	1/Month[4,8]	6
Mercury, Total Recoverable	µg/L	24-hr Composite	1/Month[4,8]	6

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Nickel, Total Recoverable	µg/L	24-hr Composite	1/Month[4,8]	6
Selenium, Total Recoverable	µg/L	24-hr Composite	1/Month[4,8]	6
Silver, Total Recoverable	µg/L	24-hr Composite	1/Month[4,8]	6
Zinc, Total Recoverable	µg/L	24-hr Composite	1/Month[4,8]	6
Cyanide, Total	µg/L	24-hr Composite	1/Month[4,8]	6,17~~6~~
Total Residual Chlorine	µg/L	Grab	1/Month[4,8,18 ~~7~~]	6
Chronic Toxicity	"Pass"/ "Fail" (Test of Significant Toxicity)[19~~8~~]	24-hr Composite	1/Quarter	20~~19~~
Phenolic Compounds (nonchlorinated)[1]	µg/L	24-hr Composite	1/Month[4,8]	6
Phenolic Compounds (chlorinated)[1]	µg/L	24-hr Composite	1/Month[4,8]	6
Endosulfan[1]	µg/L	24-hr Composite	1/Month[4,8]	6
Endrin	µg/L	24-hr Composite	1/Month[4,8]	6
HCH[1]	µg/L	24-hr Composite	1/Month[4,8]	6
Radioactivity	Picocuries per liter (pCi/L)	24-hr Composite	1/Month[4,8]	6
Acrolein	µg/L	Grab	1/Quarter[4,8]	6
Antimony, Total Recoverable	µg/L	24-hr Composite	1/Quarter[4,8]	6
Bis (2-chloroethoxy) Methane	µg/L	24-hr Composite	1/Quarter[4,8]	6
Bis (2-chloroisopropyl) Ether	µg/L	24-hr Composite	1/Quarter[4,8]	6
Chlorobenzene	µg/L	Grab	1/Quarter[4,8]	6
Chromium (III), Total Recoverable[15]	µg/L	24-hr Composite	1/Quarter[4,8]	6
Di-n-butyl Phthalate	µg/L	24-hr Composite	1/Quarter[4,8]	6
Dichlorobenzenes[1]	µg/L	Grab	1/Quarter[4,8]	6

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Diethyl Phthalate	µg/L	24-hr Composite	1/Quarter[4,8]	6
Dimethyl Phthalate	µg/L	24-hr Composite	1/Quarter[4,8]	6
4,6-dinitro-2-methylphenol	µg/L	24-hr Composite	1/Quarter[4,8]	6
2,4-dinitrophenol	µg/L	24-hr Composite	1/Quarter[4,8]	6
Ethylbenzene	µg/L	Grab	1/Quarter[4,8]	6
Fluoranthene	µg/L	24-hr Composite	1/Quarter[4,8]	6
Hexachlorocyclopentadiene	µg/L	24-hr Composite	1/Quarter[4,8]	6
Nitrobenzene	µg/L	24-hr Composite	1/Quarter[4,8]	6
Thallium, Total Recoverable	µg/L	24-hr Composite	1/Quarter[4,8]	6
Toluene	µg/L	Grab	1/Quarter[4,8]	6
Tributyltin	µg/L	24-hr Composite	1/Quarter[4,8]	6
1,1,1-trichloroethane	µg/L	Grab	1/Quarter[4,8]	6
Acrylonitrile	µg/L	Grab	1/Quarter[4,8]	6
Aldrin	µg/L	24-hr Composite	1/Quarter[4,8]	6
Benzene	µg/L	Grab	1/Quarter[4,8]	6
Benzidine	µg/L	24-hr Composite	1/Quarter[4,8]	6
Beryllium, Total Recoverable	µg/L	24-hr Composite	1/Quarter[4,8]	6
Bis (2-chloroethyl) Ether	µg/L	24-hr Composite	1/Quarter[4,8]	6
Bis (2-ethlyhexyl) Phthalate	µg/L	24-hr Composite	1/Quarter[4,8]	6
Carbon Tetrachloride	µg/L	Grab	1/Quarter[4,8]	6
Chlordane[1]	µg/L	24-hr Composite	1/Quarter[4,8]	6
Chlorodibromomethane	µg/L	Grab	1/Quarter[4,8]	6
Chloroform	µg/L	Grab	1/Quarter[4,8]	6
Dichlorodiphenyltrichloroethane (DDT)[1]	µg/L	24-hr Composite	1/Quarter[4,8]	6
1,4-dichlorobenzene	µg/L	Grab	1/Quarter[4,8]	6

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
3,3'-dichlorobenzidine	µg/L	24-hr Composite	1/Quarter[4,8]	6
1,2-dichloroethane	µg/L	Grab	1/Quarter[4,8]	6
1,1-dichloroethylene	µg/L	Grab	1/Quarter[4,8]	6
Dichlorobromomethane	µg/L	Grab	1/Quarter[4,8]	6
Dichloromethane	µg/L	Grab	1/Quarter[4,8]	6
1,3-dichloropropene	µg/L	Grab	1/Quarter[4,8]	6
Dieldrin	µg/L	24-hr Composite	1/Quarter[4,8]	6
2,4-dinitrotoluene	µg/L	24-hr Composite	1/Quarter[4,8]	6
1,2-diphenylhydrazine	µg/L	24-hr Composite	1/Quarter[4,8]	6
Halomethanes[1]	µg/L	Grab	1/Quarter[4,8]	6
Heptachlor	µg/L	24-hr Composite	1/Quarter[4,8]	6
Heptachlor Epoxide	µg/L	24-hr Composite	1/Quarter[4,8]	6
Hexachlorobenzene	µg/L	24-hr Composite	1/Quarter[4,8]	6
Hexachlorobutadiene	µg/L	24-hr Composite	1/Quarter[4,8]	6
Hexachloroethane	µg/L	24-hr Composite	1/Quarter[4,8]	6
Isophorone	µg/L	24-hr Composite	1/Quarter[4,8]	6
N-nitrosodimethylamine	µg/L	24-hr Composite	1/Quarter[4,8]	6
N-nitrosodi-N-propylamine	µg/L	24-hr Composite	1/Quarter[4,8]	6
N-nitrosodiphenylamine	µg/L	24-hr Composite	1/Quarter[4,8]	6
Polynuclear Aromatic Hydrocarbons (PAHs)[1]	µg/L	24-hr Composite	1/Quarter[4,8]	6
Polychlorinated Biphenyls (PCBs)[1]	µg/L	24-hr Composite	1/Quarter[4,8]	6
TCDD equivalents[1]	µg/L	24-hr Composite	1/Quarter[4,8]	6
1,1,2,2-tetrachloroethane	µg/L	Grab	1/Quarter[4,8]	6
Tetrachloroethylene	µg/L	Grab	1/Quarter[4,8]	6

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Toxaphene	µg/L	24-hr Composite	1/Quarter[4,8]	6
Trichloroethylene	µg/L	Grab	1/Quarter[4,8]	6
1,1,2-trichloroethane	µg/L	Grab	1/Quarter[4,8]	6
2,4,6-trichlorophenol	µg/L	24-hr Composite	1/Quarter[4,8]	6
Vinyl Chloride	µg/L	Grab	1/Quarter[4,8]	6

Notes for Table E-3

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Report the total daily effluent flow and the monthly average flow.
3. The Discharger shall calculate the monthly average percent removal for BOD_5 and TSS in accordance with section 7.8 of this Order.
4. The Discharger shall calculate and report the mass emission rate (MER) of the constituent for each sample taken. The MER shall be calculated in accordance with section 7.12 of this Order.
5. The minimum sampling frequency shall be five days per week and shall increase to seven days per week for at least one week during July or August of each year.
6. ~~As required under~~ Analytical test methods shall be consistent with the requirements of 40 CFR part 136. The analytical test methods for compliance determinations shall use MLs specified in Appendix II of the Ocean Plan. The Discharger shall select the MLs that are below the effluent limitation or performance goal. If no ML value is below the effluent limitation or performance goal, the Discharger shall select the lowest ML value and its associated analytical method, which may be above the effluent limitation or performance goal. If the Ocean Plan does not include an ML for a parameter, the Discharger shall ensure the MDL is consistent with the MDL provided in the method approved under 40 CFR part 136.
7. Monitoring is only required if the overall compliance rate with the receiving water limitations for bacterial characteristics at section 5.1.1 of the Order is below 90% within a rolling one-year period or a single monitoring location exceeds the bacteria receiving water limitations more than 50% of the time within a rolling one-year period for offshore monitoring locations and a rolling quarterly period for ~~at the offshore and~~ kelp/nearshore monitoring locations, and the source of the exceedances is unknown. If required, the Discharger shall monitor the effluent the same day as the parameter is monitored in the receiving water.

8. The minimum frequency of monitoring for this parameter is automatically increased to twice the minimum frequency specified, if any analysis for this constituent yields a result higher than the applicable effluent limitation or performance goal specified in this Order. The increased minimum frequency of monitoring shall remain in effect until the results of a minimum of four consecutive analyses for this constituent are below all applicable effluent limitations or performance goals specified in this Order.
9. Ammonium may be determined by conversion from ammonia-nitrogen.
10. The minimum sampling frequency shall be once per month for a period of one year. After one year, minimum sampling frequency may be reduced to once per quarter.
11. Total nitrogen is the sum of total organic nitrogen, ammonia nitrogen, nitrate nitrogen, and nitrite nitrogen.
12. Total organic nitrogen can be derived by subtracting ammonia nitrogen from total kjeldahl nitrogen.
13. Dissolved inorganic carbon may be estimated using results of pH and alkalinity.
14. Dissolved iron shall be collected once during the permit term concurrently with a sample for collected for total iron to determine the proportion of dissolved iron in total iron.
15. Salinity may be calculated using conductivity and temperature or an alternative method proposed by the Discharger and in concurrence with the San Diego Water Board.
16. The Discharger may, at their option, monitor for total recoverable chromium in lieu of total recoverable chromium (III) or total recoverable chromium (VI).
17. If a Discharger can demonstrate to the satisfaction of the San Diego Water Board (subject to approval of an ATP by USEPA) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, cyanide 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 revised May 14, 1999.
18. Monitoring of total chlorine residual is only required on days when the Facility or any of its treatment units that are subject to this Order use chlorine for disinfection. If only one sample is collected for total chlorine residual analysis on a particular day, that sample must be collected at the time when the concentration of total chlorine residual in the discharge would be expected to be greatest. The times of chlorine discharges on the days that samples are collected, and the time at which samples are collected, shall be reported.

19. ~~For compliance determination~~, ~~c~~Chronic toxicity results shall be reported as "Pass" or "Fail". ~~For monitoring purpose only, chronic toxicity results shall also include.~~ "Percent Effect" shall also be reported as part of chronic toxicity results.

20. As specified in section 7.15 of this Order and section 3.3 of this MRP (Attachment E).

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 uses to control the discharge of toxic pollutants. WET tests evaluate the aggregate toxic effects of all chemicals in the effluent including additive, synergistic, or antagonistic toxicity effects; the toxicity effects of unmeasured chemicals in the effluent; and 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 1.06 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. Chronic Marine Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity greater than one parts per thousand (ppt), the Discharger shall conduct the following chronic toxicity tests on effluent samples, at the Discharge IWC (~~0.1~~1.06 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 is received.

3.3.3.1. 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.

3.3.3.2. 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).

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

3.3.4. Species Sensitivity Screening

Species sensitivity screening shall be conducted during this Order'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 is considered the most sensitive species for that suite. If only one species fails, then that species is considered the most sensitive species for that suite. Likewise, if two or more species result in "Fail", then the species that exhibits the highest "Percent Effect" at the discharge IWC 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)~~ performance goal.

3.3.5. 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.

3.3.5.1. 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 null hypothesis (Ho) for the TST statistical approach is: mean discharge IWC response $\leqslant$ (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 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.

3.3.5.2. 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.

3.3.5.3. Dilution water and control water, including brine controls, shall be 1-mi~~f~~crometer-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. ~~Monthly~~ R~~r~~eference toxicant testing ~~is sufficient if~~ 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). All reference toxicant test results should be reviewed and reported using the effects concentration at 25 percent (EC25).

3.3.5.5. 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. Preparation of an Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan

The Discharger shall prepare and submit a copy of the Discharger's Initial Investigation TRE Work Plan to the San Diego Water Board for approval within 90 days of the effective date of this Order. If the San Diego Water Board does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use USEPA manual EPA/833B-99/002 (municipal), or most current version, as guidance. The TRE Work Plan shall describe the steps that the Discharger intends to follow if toxicity is detected, 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;
- 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 Facility; 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).

3.3.7. Accelerated Monitoring Schedule for Maximum Daily Single Result: "Fail"

The maximum daily single result of a "Fail" shall be used to determine if accelerated testing needs to be conducted.

Once the Discharger becomes aware that the maximum daily single result is "Fail", the Discharger shall notify the San Diego Water Board 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 is 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", the

Discharger shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results in "Fail", the Discharger shall immediately implement the TRE Process conditions set forth below. During accelerated monitoring schedules, TST results ("Pass" or "Fail") for chronic toxicity tests shall be used to determine effluent compliance for the chronic toxicity ~~MDEL~~ maximum daily performance goal.

3.3.8. TRE Process

During the TRE Process, minimum effluent monitoring shall resume and TST results ("Pass" or "Fail") for chronic toxicity tests shall be used to determine effluent compliance for the chronic toxicity ~~MDEL~~ maximum daily performance goal.

3.3.8.1. 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 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:

- 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.

3.3.8.2. 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.

3.3.8.3. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water 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.

3.3.8.4. 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 is begun.

3.3.8.5. The San Diego Water Board recognizes 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, the TRE may be ended at any stage if routine monitoring finds there is no longer toxicity.

3.3.8.6. The San Diego Water Board may consider the results of any TRE/TIE studies in an enforcement action.

3.3.9. 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[3], and shall include the following:

3.3.9.1. The valid toxicity test results for the 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-9.

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

3.3.9.3. 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.

3.3.9.4. TRE/TIE results. The San Diego Water Board 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

[3] 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

the final TRE/TIE report~~. The final TRE/TIE Report.~~ At a minimum, the final TRE/TIE Report shall 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 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.

3.3.9.5. Statistical program (e.g., TST calculator, CETIS, etc.) output results, including graphical plots, for each toxicity test.

3.3.9.6. 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.

3.3.9.7. Any additional QA/QC documentation or any additional chronic toxicity-related information, upon written request from the San Diego Water Board.

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 South Bay Ocean Outfall (SBOO) 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 SBOO 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. The monitoring program may be modified by the San Diego Water Board 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 for approval.

The receiving water and sediment monitoring program for the SBOO may be conducted either individually or jointly with other dischargers to the SBOO.

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. Monitoring at locations in Mexico is dependent on the approval of the Mexico government. Monitoring is not required if the Mexico government does not grant permission to enter and sample Mexico waters. In the event that the Mexico government does not grant permission to conduct the monitoring, the Discharger shall notify the San Diego Water Board in writing. The purpose of the receiving water monitoring in Mexico is to ensure representative sampling of the discharge's impact on water quality and beneficial uses.

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). If an alternate navigation system is proposed, its accuracy should be compared to that of microwave and satellite-based systems, and any compromises in accuracy shall be justified.

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 footnote no. 2 to Table E-4 and footnote no. 3 to Table E-5 below shall still be recorded and reported in the monthly SMR to the San Diego Water Board 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 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. See Attachment B for a map of the shoreline monitoring locations.

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?

4.1.1. ~~All s~~Shoreline monitoring locations in the U.S. listed in Table E-1 (i.e., monitoring locations ~~S-0, S-2~~ S-4 through S-6, and S-8 through S-12) shall be monitored ~~as follows:~~ in accordance with Table E-4 below. The San Diego Water Board recommends and requests the Discharger apply these same requirements to shoreline monitoring locations in Mexico (i.e., monitoring locations S-0, S-2, and S-3).

Table E-4. Shoreline Water Quality Monitoring Requirements[1]

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

Notes for Table E-4

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Visual observations of the surface water conditions at the designated receiving water monitoring locations 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, and odor shall be recorded. These observations shall be taken whenever a sample is collected.
3. Sampling shall be spaced equally throughout the month to the extent possible.
4. The Discharger shall ensure five fecal coliform samples are collected within a rolling 30-day period.

4.2. **Offshore and Kelp/Nearshore Water Quality Monitoring Requirements**

Offshore monitoring extends from south of the international border to Point Loma. See Attachment B for a map of the offshore and kelp/nearshore monitoring Locations.

Offshore 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 standard units from that which occurs naturally outside the ZID?

(5) What is the potential error associated with the pH samples collected by the conductivity-temperature-depth (CTD) profiler?

(6) Is the aragonite saturation state at a level which is harmful to aquatic life?

(7) Do nutrients cause objectionable aquatic growth or degrade indigenous biota?

(8) Is fecal indicator bacteria present outside the zone of initial dilution? If so, is the bacteria human source?

(9) Is the wastewater plume encroaching upon receiving water areas used for swimming, surfing, diving, and shellfish harvesting?

(10) What is the fate of the discharge plume?

4.2.1. Offshore and kelp/nearshore monitoring locations listed in Table E-1 (i.e., monitoring locations I-1 through I-40) shall be monitored as follows, unless noted otherwise:

Table E-5. Offshore and Kelp/Nearshore Water Quality Monitoring Requirements[1]

Parameter	Units	Sample Type	Offshore Sampling Frequency[2]	Kelp/Nearshore Sampling Frequency[2]
Visual Observations	--	Visual	[3]	[3]
Temperature and Depth	°C, meters	Profile[4]	1/Quarter	1/Week
Salinity[5]	Parts per thousand (ppt)	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
Chlorophyll a	µg/L	Profile[4]	1/Quarter	1/Week
pH	Units	Profile[4]	1/Quarter	1/Week
Spectrophotometric pH[6]	Units	Grab	1/Quarter	Not Applicable
Alkalinity, Total[6]	mg/L $CaCO_3$	Grab	1/Quarter	Not Applicable
Ammonia (as N)[7]	mg/L	Grab or Profile[8]	1/Quarter	1/Quarter

Parameter	Units	Sample Type	Offshore Sampling Frequency[2]	Kelp/Nearshore Sampling Frequency[2]
Nitrogen, Total[7]	mg/L	Grab or Profile[8]	1/Quarter	1/Quarter
~~Phosphorus, Total (as P)[7]~~	~~mg/L~~	~~Grab or Profile[8]~~	~~1/Quarter~~	~~1/Quarter~~
Total Coliform[9]	CFU/100 mL	Grab	1/Quarter	1/Week
Fecal Coliform[9]	CFU/100 mL	Grab	1/Quarter	1/Week[10]
Enterococci[9]	CFU/100 mL	Grab	1/Quarter	1/Week
Human Marker HF183[11]	Number of copies (molecules)/100 mL	Grab	12	12

Notes for Table E-5

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Quarterly receiving water monitoring results shall be submitted within the monthly SMR for the month in which the monitoring was conducted.
3. Visual observations of the surface water conditions at the designated receiving water monitoring locations shall be conducted in such a manner as to enable the observer to describe and report the presence, if any, of floatables of sewage origin. Observations of wind (direction and speed), weather (cloudy, sunny, or rainy), direction of current, tidal conditions (high or low), water color, oil and grease, turbidity, and odor shall be recorded. These observations shall be taken whenever a sample is collected.
4. Temperature, depth, dissolved oxygen, light transmittance, pH, salinity, and chlorophyll a profile data shall be measured throughout the entire water column using a CTD profiler during the quarterly and weekly sampling events at all 40 offshore and kelp/nearshore monitoring locations (i.e., monitoring locations I-1 to I-40). 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. Salinity may be calculated using conductivity and temperature or an alternative method proposed by the Discharger and in concurrence with the San Diego Water Board.
6. Monitoring shall be conducted as described in 4.2.3.
7. Monitoring is not required while implementing Plume Tracking Program described in section 6.2 of this MRP.
8. Samples shall be collected at the surface, near the thermocline, and bottom or by continuous profile.

9. Total and fecal coliforms, and enterococcus shall be monitored at monitoring locations I-3, I-5, I-7 to I-14, I-16, I-18 to I-26, I-30, I-32, I-33, and I-36 to I-40 at the discrete depths specified for bacteria monitoring in Table E-1 of this MRP.
10. The Discharger shall ensure five fecal coliform samples are collected within a rolling 30-day period.
11. Human Marker HF183 monitoring is required only if the overall compliance rate with the receiving water limitations for bacterial characteristics at section 5.1.1 of this Order is below 90% within a rolling one-year period or a single monitoring location exceeds the bacteria receiving water limitations more than 50% of the time within a rolling one-year period for offshore monitoring locations and a rolling quarterly period for ~~at the offshore and~~ kelp/nearshore monitoring locations, and the source of the receiving water limitation exceedances is unknown.
12. If required, the monitoring frequency and locations the Discharger shall collect samples for HF183 concurrently with samples collected for fecal coliform at the offshore and/or kelp/nearshore monitoring locations 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 include, but is not limited to, I-3, I-5, I-7 to I-14, I-16, I-18 to I-26, I-30, I-32, I-33, and I-36 to I-40 at the discrete depths specified for bacteria monitoring in Table E-1 of this MRP. Samples shall be analyzed in accordance with section 4.2.2 of this MRP.

4.2.2. Human Marker HF183 Monitoring Requirements.

The Human Marker HF183 (HF183) monitoring requirements specified below is required if the overall compliance rate with the receiving water limitations for bacterial characteristics at section 5.1.1 of this Order is below 90% within a rolling one-year period or a single monitoring location exceeds the bacteria receiving water limitations more than 50% of the time within a rolling one-year period for offshore monitoring locations and within a rolling quarterly period for ~~at the offshore and~~ kelp/nearshore monitoring locations ~~designated at I-3, I-5, I-7 to I-14, I-16, I-18 to I-26, I-30, I-32, I-33, and I-36 to I-40~~, 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 Tijuana River, the discharge through the SBOO, or some other known source), the Discharger shall 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. 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.

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/or kelp/nearshore monitoring locations 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 I-3, I-5, I-7 to I-14, I-16, I-18 to I-26, I-30, I-32, I-33, and I-36 to I-40 at the discrete depths specified for bacteria monitoring listed in Table E-1 of this MRP. Samples shall be collected in accordance with USEPA 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. 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 (see section 5.1.1.1.1.2 of this Order), 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 USEPA 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. If the Discharger proposes to use the ddPCR method, the Discharger shall submit a QA/QC procedure for acceptance by the San Diego Water Board. The Discharger shall follow all QA/QC procedures outlined in the method or as approved by the San Diego Water Board. 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 California Integrated Water Quality System (CIWQS) as an attachment. Using the results of the HF183 analysis, the Discharger shall report whether the exceedances of receiving water limitations for fecal indicator bacteria are due to human sources or some other source.

4.2.3. Total Alkalinity and Spectrophotometric pH Monitoring Requirements.

Results for pH measured by spectrophotometric analysis shall be used to calibrate the pH results measured by the CTD profiler. Samples for pH and total alkalinity shall be used to calculate aragonite saturation state.

4.2.3.1. 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). The Discharger shall collect grab samples for spectrophotometric pH and alkalinity at the surface, thermocline, and bottom at offshore monitoring location I-1, and at surface and bottom at offshore monitoring locations I-21 and I-28. The Discharger shall collect a duplicate sample at the bottom at offshore monitoring location I-1 during each sampling event. For stations I-1, I-21, and I-28, 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% 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. 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~~$_2$ 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 CTD and 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.

4.3. **Benthic Monitoring Requirements**

Seafloor sediments integrate constituents that are discharged to the ocean. Most particles that come from the SBOO 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 are 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 SBOO 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 Monitoring Locations and Frequency.

The sediment monitoring program is designed to assess spatial and temporal trends at the offshore monitoring locations and to assess benthic habitat condition in terms of physical and chemical composition (e.g., grain-size distribution, sediment chemistry). Sediment samples for assessment of sediment chemistry shall be collected twice per year during the winter (e.g., January) and summer (e.g., July) at 27 of the offshore monitoring locations listed in Table E-1, including 12 primary monitoring locations located along the outfall discharge depth contour (i.e., monitoring locations I-2, I-3, I-6, I-9, I-12, I-14, I-15, I-16, I-22, I-27, I-30, I-33) and 15 secondary monitoring

locations located at other depths (i.e., monitoring locations I-1, I-4, I-7, I-8, I-10, I-13, I-18, I-20, I-21, I-23, I-28, I-29, I-31, I-34, I-35). At the discretion of the San Diego Water Board, the requirement for sampling the secondary monitoring locations may be relaxed to allow Discharger participation in Southern California Bight Regional Monitoring efforts, or to reallocate resources to accommodate approved Strategic Process Studies.

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-6.

4.3.1.3. Sediment Chemistry Test Methods.

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 (NOAA'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.

4.3.1.4. Sediment Chemistry Parameters.

Sediment monitoring for physical and chemical properties shall be conducted at the 27 offshore monitoring locations listed in section 4.3.1.1 of this MRP and in Table E-1 (i.e., monitoring locations I-1 through I-4, I-6 though I-10, I-12 though I-16, I-18, I-20 through I-23, I-27 through I-31, and I-33 through I-35) for the parameters identified in Table E-6.

Table E-6. List of Parameters to Characterize Sediment Contamination Exposure and Effect[1]

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
Aluminum	Milligram/kilogram (mg/kg)	Grab	2/Year
Antimony	mg/kg	Grab	2/Year
Arsenic	mg/kg	Grab	2/Year
Barium	mg/kg	Grab	2/Year

Parameter	Units	Type of Sample	Minimum Frequency
Beryllium	mg/kg	Grab	2/Year
Cadmium	mg/kg	Grab	2/Year
Chromium	mg/kg	Grab	2/Year
Copper	mg/kg	Grab	2/Year
Iron	mg/kg	Grab	2/Year
Lead	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
Zinc	mg/kg	Grab	2/Year
BDE-17[2]	Nanogram/kilogram (ng/kg)	Grab	2/Year
BDE-28[2]	ng/kg	Grab	2/Year
BDE-47[2]	ng/kg	Grab	2/Year
BDE-49[2]	ng/kg	Grab	2/Year
BDE-66[2]	ng/kg	Grab	2/Year
BDE-85[2]	ng/kg	Grab	2/Year
BDE-99[2]	ng/kg	Grab	2/Year
BDE-100[2]	ng/kg	Grab	2/Year
BDE-138[2]	ng/kg	Grab	2/Year
BDE-153[2]	ng/kg	Grab	2/Year
BDE-154[2]	ng/kg	Grab	2/Year
BDE-183[2]	ng/kg	Grab	2/Year
BDE-190[2]	ng/kg	Grab	2/Year
PCB-8	ng/kg	Grab	2/Year
PCB-18	ng/kg	Grab	2/Year
PCB-28	ng/kg	Grab	2/Year
PCB-37	ng/kg	Grab	2/Year
PCB-44	ng/kg	Grab	2/Year
PCB-49	ng/kg	Grab	2/Year
PCB-52	ng/kg	Grab	2/Year
PCB-66	ng/kg	Grab	2/Year
PCB-70	ng/kg	Grab	2/Year
PCB-74	ng/kg	Grab	2/Year
PCB-77	ng/kg	Grab	2/Year
PCB-81	ng/kg	Grab	2/Year
PCB-87	ng/kg	Grab	2/Year
PCB-99	ng/kg	Grab	2/Year
PCB-101	ng/kg	Grab	2/Year
PCB-105	ng/kg	Grab	2/Year
PCB-110	ng/kg	Grab	2/Year

Parameter	Units	Type of Sample	Minimum Frequency
PCB-114	ng/kg	Grab	2/Year
PCB-118	ng/kg	Grab	2/Year
PCB-119	ng/kg	Grab	2/Year
PCB-123	ng/kg	Grab	2/Year
PCB-126	ng/kg	Grab	2/Year
PCB-128	ng/kg	Grab	2/Year
PCB-138	ng/kg	Grab	2/Year
PCB-149	ng/kg	Grab	2/Year
PCB-151	ng/kg	Grab	2/Year
PCB 153	ng/kg	Grab	2/Year
PCB 156	ng/kg	Grab	2/Year
PCB 157	ng/kg	Grab	2/Year
PCB 158	ng/kg	Grab	2/Year
PCB 167	ng/kg	Grab	2/Year
PCB 168	ng/kg	Grab	2/Year
PCB 169	ng/kg	Grab	2/Year
PCB 170	ng/kg	Grab	2/Year
PCB 177	ng/kg	Grab	2/Year
PCB 180	ng/kg	Grab	2/Year
PCB 183	ng/kg	Grab	2/Year
PCB 187	ng/kg	Grab	2/Year
PCB 189	ng/kg	Grab	2/Year
PCB 194	ng/kg	Grab	2/Year
PCB 195	ng/kg	Grab	2/Year
PCB 201	ng/kg	Grab	2/Year
PCB 206	ng/kg	Grab	2/Year
4,4'-DDT	ng/kg	Grab	2/Year
2,4'-DDT	ng/kg	Grab	2/Year
4,4'-DDD	ng/kg	Grab	2/Year
2,4'-DDD	ng/kg	Grab	2/Year
4,4'-DDE	ng/kg	Grab	2/Year
4,4'-DDMU	ng/kg	Grab	2/Year
alpha-Chlordane	ng/kg	Grab	2/Year
gamma-Chlordane	ng/kg	Grab	2/Year
cis-nonachlor	ng/kg	Grab	2/Year
trans-nonachlor	ng/kg	Grab	2/Year
oxychlordane	ng/kg	Grab	2/Year
1,6,7-Trimethylnaphthalene	Microgram/ kilogram (µg/kg)	Grab	2/Year
1-Methylnapthalene	µg/kg	Grab	2/Year
2,6-Dimethylnaphthalene	µg/kg	Grab	2/Year
2-Methylnapthalene	µg/kg	Grab	2/Year

Parameter	Units	Type of Sample	Minimum Frequency
Acenaphthene	µg/kg	Grab	2/Year
Acenaphthylene	µg/kg	Grab	2/Year
Anthracene	µg/kg	Grab	2/Year
Benz[a]anthracene	µg/kg	Grab	2/Year
Benzo[a]pyrene	µg/kg	Grab	2/Year
Benzo[b]fluoranthene	µg/kg	Grab	2/Year
Benzo[e]pyrene	µg/kg	Grab	2/Year
Benzo[g,h,i]perylene	µg/kg	Grab	2/Year
Benzo[k]fluoranthene	µg/kg	Grab	2/Year
Biphenyl	µg/kg	Grab	2/Year
Chrysene	µg/kg	Grab	2/Year
Dibenz[a,h]anthracene	µg/kg	Grab	2/Year
Fluoranthene	µg/kg	Grab	2/Year
Fluorene	µg/kg	Grab	2/Year
Indeno[1,2,3-c,d]pyrene	µg/kg	Grab	2/Year
Naphthalene	µg/kg	Grab	2/Year
Perylene	µg/kg	Grab	2/Year
Phenanthrene	µg/kg	Grab	2/Year
Pyrene	µg/kg	Grab	2/Year

Note for Table E-6

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Monitoring for polybrominated diphenyl ethers (PBDEs or BDEs) may be delayed until January 2022 to allow the Discharger's laboratory sufficient time to validate the analytical method.

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 recommendations contained in *Sediment Toxicity Pilot Study for the San Diego Ocean Outfall Monitoring Regions, 2016 – 2018, Final Project Report* submitted by the Discharger on June 14, 2019 (Sediment Toxicity Report) in accordance with the schedule contained in the Sediment Toxicity Report unless otherwise directed in writing by the San Diego Water Board. The Discharger shall comply with any conditions set by the San Diego Water Board. Results to the sediment toxicity monitoring shall be reported in the Interim and Biennial Receiving Water Monitoring Reports in section 4.6.1 of this MRP.

4.3.3. Benthic Community Condition

4.3.3.1. Benthic Community Monitoring Locations and Frequency.

Sediment samples for assessment of benthic community structure shall be collected semiannually during winter (e.g., January) and summer (e.g., July) at 27 of the offshore monitoring locations listed in Table E-1, including 12 primary monitoring locations located along the outfall discharge depth contour (i.e., monitoring locations I-2, I-3, I-6, I-9, I-12, I-14, I-15, I-16, I-22, I-27, I-30, I-33) and 15 secondary monitoring locations located at other depths (i.e., monitoring locations I-1, I-4, I-7, I-8, I-10, I-13, I-18, I-20, I-21, I-23, I-28, I-29, I-31, I-34, I-35). One sample per monitoring location 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 operations manual developed by SCCWRP for the Southern California Bight Regional Monitoring Program (current field operations manual is available at: https://ftp.sccwrp.org/pub/download/BIGHT18/Bight18SedQualityFieldManual.pdf). 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. Benthic organisms shall be counted and identified to as low a taxon as possible.

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 monitoring location, 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).

4.3.4. Benthic Random Sampling.

This MRP, the MRP for the South Bay International Wastewater Treatment Plant (SBIWTP), and the MRP for the E.W. Blom Point Loma Wastewater Treatment Plant (PLWTP) discharge through the Point Loma Ocean Outfall, require the United States 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 section 4.3.1 of this MRP for sediment assessment for physical and chemical properties and in section 4.3.3 of this MRP for benthic community condition monitoring. These stations shall be reselected each year by USEPA or their designee to meet the requirements for this MRP, the MRP for the PLWTP, and the MRP for the SBIWTP using the USEPA probability-based Environmental Monitoring and Assessment Program (EMAP) design. The area of coverage shall extend from the mouth of the San Dieguito River south to the United States/Mexico border.

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 Program at the discretion of the San Diego Water Board as specified in section 5.2 of this MRP.

4.4. Fish and Macroinvertebrates 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 invertebrates 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.

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 Locations.

Fish and invertebrate 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 (see section 4.4.2 of this MRP). Single community trawls for fish and invertebrates shall be conducted semiannually in the winter (e.g., January) and summer (e.g., July) at seven trawl monitoring locations designated SD-15 through SD-21 at the locations specified in Table E-1. These monitoring locations represent two areas near Discharge Point No. 001 (i.e., monitoring locations SD-17 and SD-18), ~~two~~ three areas up coast of Discharge Point No. 001 (i.e., monitoring locations SD-19, SD-20, and SD-21), and two areas down coast of Discharge Point No. 001 (i.e., monitoring locations SD-15 and SD-16).

4.4.1.2. Fish and Invertebrate Trawl Method.

Trawls shall be conducted using a Marinovich 7.62-meter (25-foot) 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 monitoring locations.

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 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*) 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 shall be identified by 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 Liver Tissue Chemical Analysis.

Chemical analyses of fish tissues shall be performed annually (e.g., October) on target species collected at or near the trawl monitoring locations. The seven trawl monitoring locations are classified into five zones for the purpose of collecting sufficient numbers of fish for tissue analyses. Trawl Zone 5 represents the nearfield zone, defined as the area within a 1-km radius of monitoring locations SD-17 and/or SD-18; Trawl Zone 6 represents the north farfield zone, defined as the area within a 1-km radius of monitoring locations SD-19 and/or SD-20; Trawl Zone 7 represents the far-north farfield zone, defined as the area within a 1-km radius of monitoring location SD-21; Trawl Zone 8 represents the south farfield zone, defined as the area within a 1-km radius of monitoring location SD-16; Trawl Zone 9 represents the far-south farfield zone, defined as the area within a 1-km radius of monitoring location SD-15. There are no depth requirements for these five zones with regards to the collection of fishes for tissue analysis.

Liver tissues shall be analyzed from fishes collected in each of the above five 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 4.4.2.2 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 the Table E-7 below.

4.4.1.5. Fish Targeted for Chemical 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 target 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.

Fish muscle tissues shall be analyzed annually (e.g., October) from fishes collected in each of the two rig fishing zones described below in order to monitor the uptake of pollutants in selected species.

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 monitoring locations RF-3 and RF-4 listed in Table E-1. Rig Fishing Zone 3 is the nearfield area centered within a 1-km radius of monitoring location RF-3; Rig Fishing Zone 4 represents the southern farfield area centered within 1-km radius of monitoring location RF-4. There are no depth requirements for these two rig fishing zones with regards to the collection of fishes for tissue analysis. 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 Targeted Species.

The species of fish targeted for muscle tissue analysis from the rig fishing monitoring locations 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.

4.4.2.4. 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-7.

Table E-7. List of Parameters to Characterize Fish Tissue[1]

Parameter	Units	Type of Sample	Minimum Frequency
Total Lipids	Percent	Composite	1/Year
Aluminum	mg/kg	Composite	1/Year
Antimony	mg/kg	Composite	1/Year
Arsenic	mg/kg	Composite	1/Year
Barium	mg/kg	Composite	1/Year
Beryllium	mg/kg	Composite	1/Year
Cadmium	mg/kg	Composite	1/Year
Chromium	mg/kg	Composite	1/Year
Copper	mg/kg	Composite	1/Year
Iron	mg/kg	Composite	1/Year
Lead	mg/kg	Composite	1/Year
~~Manganese~~	~~mg/kg~~	~~Composite~~	~~1/Year~~
Mercury	mg/kg	Composite	1/Year

Parameter	Units	Type of Sample	Minimum Frequency
Nickel	mg/kg	Composite	1/Year
Selenium	mg/kg	Composite	1/Year
Silver	mg/kg	Composite	1/Year
~~Tin~~	~~mg/kg~~	~~Composite~~	~~1/Year~~
Zinc	mg/kg	Composite	1/Year
BDE-17[2]	ng/kg	Composite	1/Year
BDE-28[2]	ng/kg	Composite	1/Year
BDE-47[2]	ng/kg	Composite	1/Year
BDE-49[2]	ng/kg	Composite	1/Year
BDE-66[2]	ng/kg	Composite	1/Year
BDE-85[2]	ng/kg	Composite	1/Year
BDE-99[2]	ng/kg	Composite	1/Year
BDE-100[2]	ng/kg	Composite	1/Year
BDE-138[2]	ng/kg	Composite	1/Year
BDE-153[2]	ng/kg	Composite	1/Year
BDE-154[2]	ng/kg	Composite	1/Year
BDE-183[2]	ng/kg	Composite	1/Year
BDE-190[2]	ng/kg	Composite	1/Year
PCB-8	ng/kg	Composite	1/Year
PCB-18	ng/kg	Composite	1/Year
PCB-28	ng/kg	Composite	1/Year
PCB-37	ng/kg	Composite	1/Year
PCB-44	ng/kg	Composite	1/Year
PCB-49	ng/kg	Composite	1/Year
PCB-52	ng/kg	Composite	1/Year
PCB-66	ng/kg	Composite	1/Year
PCB-70	ng/kg	Composite	1/Year
PCB-74	ng/kg	Composite	1/Year
PCB-77	ng/kg	Composite	1/Year
PCB-81	ng/kg	Composite	1/Year
PCB-87	ng/kg	Composite	1/Year
PCB-99	ng/kg	Composite	1/Year
PCB-101	ng/kg	Composite	1/Year
PCB-105	ng/kg	Composite	1/Year
PCB-110	ng/kg	Composite	1/Year
PCB-114	ng/kg	Composite	1/Year
PCB-118	ng/kg	Composite	1/Year
PCB-119	ng/kg	Composite	1/Year
PCB-123	ng/kg	Composite	1/Year
PCB-126	ng/kg	Composite	1/Year
PCB-128	ng/kg	Composite	1/Year
PCB-138	ng/kg	Composite	1/Year

Parameter	Units	Type of Sample	Minimum Frequency
PCB-149	ng/kg	Composite	1/Year
PCB-151	ng/kg	Composite	1/Year
PCB 153	ng/kg	Composite	1/Year
PCB 156	ng/kg	Composite	1/Year
PCB 157	ng/kg	Composite	1/Year
PCB 158	ng/kg	Composite	1/Year
PCB 167	ng/kg	Composite	1/Year
PCB 168	ng/kg	Composite	1/Year
PCB 169	ng/kg	Composite	1/Year
PCB 170	ng/kg	Composite	1/Year
PCB 177	ng/kg	Composite	1/Year
PCB 180	ng/kg	Composite	1/Year
PCB 183	ng/kg	Composite	1/Year
PCB 187	ng/kg	Composite	1/Year
PCB 189	ng/kg	Composite	1/Year
PCB 194	ng/kg	Composite	1/Year
PCB 195	ng/kg	Composite	1/Year
PCB 201	ng/kg	Composite	1/Year
PCB 206	ng/kg	Composite	1/Year
~~PCBs~~	~~ng/kg~~	~~Composite~~	~~1/Year~~
2,4'-DDD	ng/kg	Composite	1/Year
4,4'-DDD	ng/kg	Composite	1/Year
2,4-DDE	ng/kg	Composite	1/Year
4,4'-DDE	ng/kg	Composite	1/Year
2,4'-DDT	ng/kg	Composite	1/Year
4,4'-DDT	ng/kg	Composite	1/Year
4,4'-DDMU	ng/kg	Composite	1/Year
~~Aldrin~~	~~ng/kg~~	~~Composite~~	~~1/Year~~
a~~A~~lpha-Chlordane	ng/kg	Composite	1/Year
gamma-Chlordane	ng/kg	Composite	1/Year
cis-Nonachlor	ng/kg	Composite	1/Year
~~Dieldrin~~	~~ng/kg~~	~~Composite~~	~~1/Year~~
~~Endosulfan~~	~~ng/kg~~	~~Composite~~	~~1/Year~~
~~Endrin~~	~~ng/kg~~	~~Composite~~	~~1/Year~~
~~Gamma-BHC~~	~~ng/kg~~	~~Composite~~	~~1/Year~~
~~Heptachlor~~	~~ng/kg~~	~~Composite~~	~~1/Year~~
~~Heptachlor Epoxide~~	~~ng/kg~~	~~Composite~~	~~1/Year~~
~~Hexachlorobenzene~~	~~ng/kg~~	~~Composite~~	~~1/Year~~
~~Mirex~~	~~ng/kg~~	~~Composite~~	~~1/Year~~
~~t~~T~~t~~rans-Nonachlor	ng/kg	Composite	1/Year
Oxychlordane	ng/kg	Composite	1/Year

Parameter	Units	Type of Sample	Minimum Frequency
1,6,7-Trimethylnaphthalene	ng/kg	Composite	1/Year
1-Methylnapthalene	µg/kg	Composite	1/Year
2,6-Dimethylnaphthalene	ng/kg	Composite	1/Year
2-Methylnapthalene	ng/kg	Composite	1/Year
Acenaphthene	µg/kg	Composite	1/Year
Acenaphthylene	µg/kg	Composite	1/Year
Anthracene	µg/kg	Composite	1/Year
~~Benzo(a)anthracene~~ Benz[a]anthracene	µg/kg	Composite	1/Year
~~Benzo(o)fluoranthene~~	~~µg/kg~~	~~Composite~~	~~1/Year~~
Benzo[b]fluoranthene	µg/kg	Composite	1/Year
Benzo[k]fluoranthene	µg/kg	Composite	1/Year
Benzo[g,h,i]pyrelene	µg/kg	Composite	1/Year
Benzo[a]pyrene	µg/kg	Composite	1/Year
Benzo[e]pyrene	µg/kg	Composite	1/Year
Biphenyl	µg/kg	Composite	1/Year
Chrysene	µg/kg	Composite	1/Year
~~Dibenzo(ah)anthracene~~ Dibenz[a,h]anthracene	µg/kg	Composite	1/Year
Fluoranthene	µg/kg	Composite	1/Year
Fluorene	µg/kg	Composite	1/Year
~~Ideno(123cd)pyrene~~ Indeno[1,2,3-c,d]pyrene	µg/kg	Composite	1/Year
Naphthalene	µg/kg	Composite	1/Year
~~1-Methylnaphthalene~~	~~µg/kg~~	~~Composite~~	~~1/Year~~
~~2-Methylnaphthalene~~	~~µg/kg~~	~~Composite~~	~~1/Year~~
~~2,6-Dimethylnaphthalene~~	~~µg/kg~~	~~Composite~~	~~1/Year~~
~~2,3,5-Trimethylnaphthale~~	~~µg/kg~~	~~Composite~~	~~1/Year~~
Naphthalene	µg/kg	Composite	1/Year
Perylene	µg/kg	Composite	1/Year
Phenanthrene	µg/kg	Composite	1/Year
~~1-Methylphenanthene~~	~~µg/kg~~	~~Composite~~	~~1/Year~~
Pyrene	µg/kg	Composite	1/Year

Note for Table E-7

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Monitoring for polybrominated diphenyl ethers (PBDEs or BDEs) may be delayed until January 2022 to allow the Discharger's laboratory sufficient time to validate the analytical method.

4.5. **California Environmental Data Exchange Network (CEDEN)**

In addition to submitting SMRs, the Discharger shall also ensure that all the receiving water monitoring results are submitted to CEDEN no later than 120 days after ~~analyses have been completed~~ reports are received. If the receiving water monitoring is conducted jointly with other dischargers to the SBOO, the Discharger shall coordinate the submittal of the receiving water monitoring results with other agencies discharging through the SBOO to ensure data is not duplicated in CEDEN. A statement certifying that all monitoring results have been timely uploaded into CEDEN shall be submitted annually by March 1 of each year. Only monitoring results from the following requirements shall be reported in CEDEN:

- Shoreline, kelp/nearshore, and offshore water quality (section 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 (section 4.4.1 of this MRP); and
- Rig fishing (section 4.4.2 of this MRP)

4.6. **Receiving Water Status and Trends**

4.6.1. Receiving Water Monitoring Report

4.6.1.1. The Discharger shall submit Interim and Biennial Receiving Water Monitoring Reports to the San Diego Water Board. The Interim Receiving Water Monitoring Reports will cover only one year of receiving water monitoring (e.g., separate reports for calendar years 2022, 2024, and 2026), will only cover even numbered years, 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 2020-2021, 2022-2023, and 2024-2025), and shall be submitted the opposite years as the Interim Receiving Water Monitoring Reports. These reports are described below under sections 4.6.1.2 and 4.6.1.3 and cover the following monitoring requirements:

- Shoreline, kelp/nearshore, and offshore water quality, if available (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, if applicable (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 6.2 of this MRP; only required in the Biennial Report); and
- Coastal remote sensing, when reports are available (section 6.3 of this MRP; only required in the Biennial Report).

4.6.1.2. The Discharger shall submit Interim Receiving Water Monitoring Reports (Interim Reports, executive summary) as specified in Table E-9, section 7.4 of this MRP. The Interim Reports will cover the first "even" year in each biennial reporting cycle as described below in section 4.6.1.3 (e.g., separate reports for calendar years 2022, 2024, and 2026). The Interim Reports may be submitted as an integrated report covering both the receiving water monitoring required in this MRP, the MRP for the Point Loma Ocean Outfall, and the MRP for the SBIWTP (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.

4.6.1.3. The Discharger shall submit Biennial Receiving Water Monitoring and Assessment Reports (Biennial Reports, full assessment) as specified in Table E-9, section 7.4 of this MRP. These Biennial Reports will each cover a full two-year monitoring cycle beginning with even-numbered years (e.g., Biennial Reports for calendar years 2020-2021, 2022-2023, and 2024-2025). The Biennial Reports may be submitted as an integrated report covering both the receiving water monitoring required in this MRP, the MRP for the PLWTP, and the MRP for the SBIWTP (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 monitoring locations, including, if such information is available, differences unique to each monitoring location (e.g., 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;
- 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 in this Order have been attained at each monitoring location; and
- An in-depth discussion addressing the questions proposed in each section of the Receiving Water Monitoring Requirements of this MRP.

4.6.2. State of the Ocean Report.

During the same year that the Biennial Reports are submitted, the Discharger shall present an oral report to the San Diego Water Board summarizing the conclusions of the Biennial Report over the two-year monitoring period. If an oral report cannot be scheduled for a San Diego Water Board meeting, the San Diego Water Board may approve submission of a written State of the Ocean Report. The State of the Ocean Report shall include, at minimum, the following elements:

- Description of the monitoring effort completed;
- The status and trends of receiving water 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, 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. These programs shall be developed and implemented so as to answer the following questions:

(1) What are the status and trends of conditions in ocean waters in the San Diego Region with regard to beneficial uses? For example:

- Are fish and shellfish safe to eat?
- Is water quality safe for swimming?
- 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 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.

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 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 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, the Discharger shall submit to the San Diego Water Board a report which summarizes the data, analyses, assessment, and images produced by the surveys. The report is a joint collaboration among multiple ocean dischargers in the Southern California (e.g., Regional 9 Kelp Survey Consortium member agencies). 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 is 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 sections 13267 and 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 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 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, 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 4.6.1 of this MRP.

6. Special Studies Requirements

6.1. Climate Change Action Plan (CCAP)

The Discharger shall prepare and submit a CCAP within three years of the effective date of this Order. The Discharger may make use of existing climate-change-related plans to comply with this requirement. Changing climate conditions may fundamentally alter the way devices and systems used in the storage, treatment, collection, and conveyance of wastewater are designed and operated. Climate change research indicates the overarching driver of change is increased atmospheric carbon dioxide (CO_2) from human activity. The increased CO_2 emissions trigger changes to climatic patterns, which increase sea level and the intensity of coastal storm surges (Δ Sea Level), lead to more erratic local weather patterns and increased flooding (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 CCAP shall identify the magnitude and timing of projected regional impacts on the Facilities (including sewers, pipes and other conveyances), and operations ability to meet the requirements of this Order due to climate change if current trends continue. The CCAP shall also identify steps being taken or planned to address greenhouse gas emissions attributable to wastewater treatment plants, solids handling, and effluent discharge processes.

The CCAP shall also identify steps being taken or planned to address flooding and sea level rise risks; volatile rain period impacts (both dry and wet weather); challenges in accommodating high and low wastewater flows; impacts on process

design parameters due to higher biochemical oxygen demand, ammonia (as N), and TSS influent concentrations; impacts on wastewater treatment operations and quality; the potential need to adjust NPDES permit conditions and the Discharger's pollution control program; the financing needed to pay for planned actions; schedules to update the CCAP as more information on climate change and its effect become more available; and any other factors as appropriate. 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.

6.2. Plume Tracking Monitoring Program

Plume tracking is an ongoing program designed to assess dispersion and fate of the wastewater plume discharged from the SBOO. The Discharger shall continue to implement *the Plume Tracking Monitoring Plan for the Point Loma and South Bay Ocean Outfall Regions*, *San Diego* submitted by the Discharger on March 28, 2018. The Discharger shall submit annual progress reports on March 1 of each year that summarize any highlights or significant project findings from the past calendar year, and provide updates on the status of new work plans that have been developed or are under development. Based on the results of the plume tracking study, the Discharger shall periodically review receiving water monitoring locations to ensure the locations are properly located to evaluate the impact of the discharge. Plume tracking results and interpretations shall be included in the Biennial Receiving Water Monitoring Reports described in section 4.6.1 of this MRP.

6.3. 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 SBOO. 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 in coordination with the USIBWC until the scheduled study end date of June 30, 2023. After completion of the study, by ~~December 1, 2023~~October 31, 2022, the Discharger shall submit to the San Diego Water Board recommendations for whether the study should be extended. Results of the Coastal Remote Sensing Study shall be included in the Biennial Receiving Water Monitoring Reports described in section 4.6.1 of this MRP.

7. Reporting Requirements

7.1. General Monitoring and Reporting Requirements

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

7.1.2. 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.

7.2. **Self-Monitoring Reports (SMRs)**

7.2.1. The Discharger shall electronically submit SMRs using the State Water Board's CIWQS program website at 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.

7.2.2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections 3 through 6. 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.

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

Table E-8. 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.
Daily	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.
Weekly	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.

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Monthly	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.
Quarterly[1,2]	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
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	Not Applicable
Annually	January 1 following (or on) the permit effective date.	January 1 through December 31	Not Applicable ~~March 1~~

Note for Table E-8

1. Include monitoring results for offshore monitoring locations (section 4.2 of this MRP) in the monthly SMRs.
2. If sample results for parameters or toxicity tests required to be conducted once per quarter (1/quarter) are not provided in the quarterly SMR for the monitoring period in which the sample was collected, the Discharger shall identify the SMR(s) which contains the sample results.

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

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

7.2.4.1. 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).

7.2.4.2. 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.

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

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

7.2.5. Compliance Determination. Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined above and in Attachment A of this Order. For purposes of reporting and administrative enforcement by the San Diego Water Board 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.

7.2.6. 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:

7.2.6.1. 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.

7.2.6.2. 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.

7.2.7. The Discharger shall submit SMRs in accordance with the following requirements:

7.2.7.1. 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.

7.2.7.2. 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; 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.

7.2.7.3. The Discharger shall add all violations, including violations of receiving water limitations, to CIWQS under the "Violations" tab.

7.3. Discharge Monitoring Reports (DMRs)

The DMRs are USEPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic SMRs (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 at:

http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring.

7.4. Other Reports

The following reports are required under Special Provisions (sections 6.1 and 6.3 of this Order), sections 1, 3, 4, 5, and 6 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. 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-9. Other Reports

Report	Location of requirement	Due Date
ROWD (for reissuance)	Page 2 (signature page)	No later than 180 days before the Order expiration date[1]
Treatment Plant Capacity Report	Section 6.3.5.1	Four years prior to reaching plant design capacity[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 6.3.5.7.2	May 12, 2024
DMR-QA Study	Section 1.7 of this MRP	Annually no later than December 31[2]
Initial Investigation TRE Work Plan	Section 3.3.6 of this MRP	Within 90 days of the effective date of this Order
CEDEN Certification Statement	Section 4.5 of this MRP	Annually no later than March 1

Report	Location of requirement	Due Date
Interim Receiving Water Monitoring Report (executive summary)	Sections 4.6.1.1 and 4.6.1.2 of this MRP	July 1 of the year following the even years (e.g., separate reports for calendar years 2022 (due 7/1/2023), 2024 (due 7/1/2025), and 2026 (due 7/1/2027)
Biennial Receiving Water Monitoring and Assessment Report (full assessment)	Sections 4.6.1.1 and 4.6.1.3 of this MRP	July 1 of the year following the odd years (e.g., biennial reports for calendar years 2020-2021 (due 7/1/2022), 2022-2023 (due 7/1/2024), and 2024-2025 (due 7/1/2026))
Oral/Written Biennial State of the Ocean Report	Section 4.6.2 of this MRP	By December 31 of the year following the odd years (e.g., biennial reports for calendar years 2020-2021 (due 12/2022), 2022-2023 (due 12/2024), and 2024-2025 (due 12/2026))
Kelp Bed Canopy Report	Section 5.1 of this MRP	Annually no later than October 1
CCAP	Section 6.1 of this MRP	No later than three years of the effective date of this Order
Plume Tracking Progress Report	Section 6.2 of this MRP	Annually no later than March 1
Coastal Remote Sensing Study Recommendations Report	Section 6.3 of this MRP	No later than ~~December 1, 2023~~ October 31, 2022

Notes for Table E-9

1. Submit in person or by mail to the San Diego Water Board office (2375 Northside Drive. Suite 100, San Diego, CA 92108) or by email at SanDiego@waterboards.ca.gov.
2. See section 1.7 of this MRP for instructions on how to submit the study.

Attachment F – Fact Sheet

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Attachment F – Fact Sheet

As described in section 2.2 of this Order, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) incorporates this Fact Sheet as findings of the San Diego Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in the State of California (State). Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order 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 000000900
Discharger	City of San Diego
Name of Discharge Structure	South Bay Outfall (SBOO)
Name and Address of Facility	South Bay Water Reclamation Plant 2411 Dairy Mart Road San Diego, CA 92154 San Diego County
Facility Contact, Title and Phone	Shauna Lorance, Director of Public Utilities, (619)-533-7555
Authorized Person to Sign and Submit Reports	Same as Facility Contact
Mailing Address	9192 Topaz Way, San Diego, CA 92123
Billing Address	Same as mailing address
Type of Facility	Publicly-owned treatment works (POTWs, SIC No. 4952)
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	15.0 million gallons per day (MGD)
Facility Design Flow	18 MGD
Dilution Factor (D_m)	94.6

Watershed	Pacific Ocean
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean waters

1.1. The City of San Diego (Discharger) is the owner and operator of the South Bay Water Reclamation Plant (Facility or SBWRP) and the South Bay Ocean Outfall (SBOO); the San Ysidro sanitary sewer collection system; and a portion of the Imperial Beach sanitary sewer collection system. The term "Facilities" is used in this Order to collectively refer to the SBWRP, SBOO; and any associated structure or system used in the storage, treatment, and recycling of wastewater at the SBWRP, or any structure used in conveyance of wastewater to or from the SBWRP. Together, these facilities comprise the municipal publicly-owned treatment works (POTW).

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and State of California (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 United States. The Discharger was previously regulated by Order No. R9-2013-0006, as amended by Order Nos. R9-2014-0071 and R9-2017-0023, and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0109045 adopted on February 13, 2013 and expired on April 3, 2018. Attachment B provides a map of the area around the Facility. Attachment C provides flow schematics of the Facility.

1.3. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for reissuance of its WDRs and NPDES permit on October 2, 2017. The application was deemed complete on October 26, 2017. A site visit was conducted on October 16, 2020, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

1.4. Regulations at title 40 of the Code of Federal Regulations (40 CFR) section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. However, pursuant to California Code of Regulations (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. Description of Wastewater and Biosolids Treatment and Controls

The Discharger owns and operates the Facility, which is located at 2411 Dairy Mart Road, San Diego, adjacent to the United States and Mexico Border. The Discharger provides municipal wastewater treatment services to a population of approximately 125,000.

The Facility treats wastewater collected from the southern portion of the City of San Diego, including San Ysidro, Otay Mesa, and the Tijuana River Valley (all of

which flow through the Grove Avenue Pump Station (GAPS)). The Facility also receives raw wastewater from a portion of the Imperial Beach sewage collection system (through the Otay River Pump Station), the City of Chula Vista, and unincorporated portions of South County and East County. Wastewater from the GAPS and the Otay River Pump Station is primarily domestic sewage from residential and commercial activities.

Wastewater treatment unit operations and processes at the Facility consist of influent screening using mechanical bar screens, aerated grit chambers, primary sedimentation tanks, 1.5 million gallons of primary flow equalization basins with air-activated sludge process and an anoxic selector zone, secondary clarifiers, mono-media (anthracite) filters, and ultraviolet disinfection.

The Facility produces tertiary-treated ~~reclaimed~~ recycled water depending on anticipated recycled water demands. The recycled water is transferred through a ~~reclaimed~~ recycled water distribution system to qualified ~~reclaimed~~ recycled water customers under separate WDRs, Order No. 2000-203. During times with no recycled water demand, up to 15 MGD of secondary effluent is discharged to the Pacific Ocean through the South Bay Ocean Outfall (SBOO). During times with high recycled water demand, the entire effluent flow may be directed to tertiary treatment and reuse. At times when recycled water demand is low, excess tertiary-treated recycled water that has been treated via ultraviolet disinfection may also be discharged.

Solids removed through the screening and grit removal processes are hauled offsite and disposed of in a landfill. Waste solids removed through the sedimentation/clarification process are returned to the sewer system for transport to the City of San Diego Point Loma Wastewater Treatment Plant, where they are again removed and directed to anaerobic digesters at the Point Loma Wastewater Treatment Plant for stabilization. After digestion, the solids are dewatered and thickened for reuse as a soil amendment or for disposal.

The secondary treatment design capacity of the Facility is 18.0 MGD as a 30-day average daily flow. The current maximum permitted flow is 15.0 MGD. From May 2013 to May 2019, the average influent flow to the Facility was 7.36 MGD and the average effluent flow from the Facility to the SBOO was 3.25 MGD.

The City of San Diego maintains a United States Environmental Protection Agency (USEPA) approved pretreatment program for the Facility administered by the Industrial Wastewater Control Program of the Public Utilities Department. The Discharger receives wastewater from six non-categorical Significant Industrial Users (SIUs) and five Categorical Industrial Users (CIUs).

2.2. Discharge Points and Receiving Waters

The Discharger and the United States Section of the International Boundary and Water Commission (USIBWC) jointly own and operate the SBOO. The effluent from the Facility is combined with the effluent from the South Bay International Wastewater Treatment Plant (SBIWTP), which is owned and operated by USIBWC, within the SBOO prior to discharge to the Pacific Ocean.

The SBOO was constructed with a total average design capacity of 174 MGD and a peak hydraulic capacity of 233 MGD. The Facility is permitted to discharge up to 15 MGD to the SBOO, and the SBIWTP is permitted to discharge up to 25 MGD of secondary treated wastewater to the SBOO.

The outfall extends westward approximately 23,600 feet from the mouth of the Tijuana River to a depth of 93 feet. The outfall terminates in a wye diffuser with two 1,980-foot diffusers. Each diffuser leg contains 82 diffuser riser assemblies, and one at the wye structure for a total of 165 diffuser riser assemblies. To achieve proper effluent velocity and dilution levels, 18 diffuser risers (72 open ports) are in use on the South leg. The North leg of the diffuser is closed with no open ports. The terminus of the diffuser is located at Latitude 32° 32' 15" North, Longitude 117° 00' 00" West.

During the development of a previous Order, Order No. R9-2006-0067, the San Diego Water Board, with assistance from the State Water Resources Control Board (State Water Board), determined the minimum initial dilution factor to be 94.6 for the discharge of up to 40 MGD of effluent through the SBOO using the USEPA-approved computer modeling package Visual Plumes with the UM3 model. Computer modeling was performed based on characteristics of the SBOO, the effluent, and the receiving water, subject to the input limitations of Visual Plumes. Monthly profiles for the receiving water were developed using receiving water data provided by the Discharger for the time period between June 2002 and April 2005. Initial dilution factors were determined for each monthly profile; the most conservative minimum initial dilution factor was determined using the May profile. Section 4.3.3 of this Fact Sheet includes additional discussion of initial dilution. Additional details of the initial dilution computer modeling performed is provided in Attachment H of Order No. R9-2006-0067 and in the San Diego Water Board records, which are available upon request.

2.3. Summary of Existing Requirements and Self-Monitoring Report Data

Effluent limitations contained in the previous Order, Order No. R9-2013-0006, for discharges from the Facility and representative monitoring data obtained at Monitoring Location E-001 (Discharge Point No. 001) were as follows:

Table F-2. Historical Effluent Limitations and Monitoring Data at Monitoring Location E-001[1]

Parameter	Units	Average Monthly Effluent Limitation	Average Weekly Effluent Limitation	Instantaneous Maximum Effluent Limitation	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Instantaneous Maximum
Flow	MGD	15.0	---	---	6.16	---	---
Biochemical Oxygen Demand 5-day @ 20 degrees Celsius (°C) ($CBOD_5$)	mg/L	30	45	--	23	35	---
BOD_5	lbs/day[2]	3,753	5,630	--	870	1,634	---
BOD_5	% Removal	85[3]	--	--	92[3]	---	---
Total Suspended Solids (TSS)	mg/L	30	45	---	11.4	21.7	---
TSS	lbs/day[2]	3,753	5,630	--	472	3,337	---
TSS	% Removal	85[3]	--	--	95[3]	--	---
Oil and Grease	mg/L	25	40	75	7.4	13.6	30.6
Oil and Grease	lbs/day[2]	3,128	5,004	9,383	643	1,029	1,541
Settleable Solids	ml/L	1.0	1.5	3.0	1.5	2.9	8.75
Turbidity	NTU	75	100	225	5.89	12	45.2
pH	standard units	---	---	6.0 – 9.0[4]	--	--	6.96 – 7.93[4]

Notes for Table F-2:

1. Monitoring data from May 2013 to November 2020.
2. Mass emission rate (MER) effluent limitations are based on the permitted flow rate for the Facility (15.0 MGD).
3. Lowest average monthly percent removal.
4. Minimum and maximum value.

Table F-3. Historic Effluent Limitations and Monitoring Data at E-001 (Protection of Aquatic Life)[1,2]

Parameter	Units	Six-Month Median Effluent Limitation	Maximum Daily Effluent Limitation	Instantaneous Maximum Effluent Limitation	Highest Six-Month Median Discharge	Highest Daily Maximum Discharge	Highest Instantaneous Maximum Discharge
Total Residual Chlorine	µg/L	1.90E+02	7.60E+02	5.70E+03	5.0E+01	1.68E+03	1.68E+03
Total Residual Chlorine	lbs/day[3]	2.40E+00	9.60E+01	7.18E+02	1.7E+00	2.29E+01	1.31E+02

Notes for Table F-3:

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Monitoring data from May 2013 to November 2020
3. MER effluent limitations are based on the permitted flow rate for the Facility (15.0 MGD).

2.4. Compliance Summary

As of November 2020, the Discharger has reported the following violations of Order No. R9-2013-0006:

2.4.1. The effluent pH was not reported on July 6, 13, 20, 27, 2014; and on August 3,10, 17, 24, and 31, 2014. The MRP requires that the effluent pH be reported daily in monthly monitoring reports submitted by the Discharger.

2.4.2 The maximum daily effluent concentration for total residual chlorine was 1,680 µg/L on September 26, 2015, exceeding the maximum daily effluent limitation (MDEL) of 760 µg/L.

2.4.3. The January through March 2016 quarterly monitoring report did not include any monitoring results for total recoverable chromium (III) at Monitoring Location E-001.

2.4.4. Samples for DDT, endosulfan, and HCH collected in October 2017 failed to meet laboratory QC requirements.

2.4.5. The effluent settleable solids concentration was 8.8 ml/L on September 5, 2018, exceeding the instantaneous effluent limitation of 3.0 ml/L.

2.4.6. The weekly average settleable solids concentration was 2.9 ml/L for September 2-8, 2018, exceeding the weekly average effluent limitation for settleable solids established of 1.5 ml/L.

2.4.7. The average monthly settleable solids concentration was 1.5 ml/L for September 2018, exceeding the average monthly effluent limitation for settleable solids of 1.0 ml/L.

2.4.8. The monitoring results for radioactivity due with the September 2018 monthly monitoring report were submitted late.

2.5. Planned Changes

The Discharger does not anticipate any changes to the Facilities during the term of this Order.

3. Applicable Plans, Policies, and Regulations

The requirements contained in this Order are based on the requirements and authorities described in this section.

3.1. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (Water Code) (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall 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.

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 Board. Beneficial uses applicable to the Pacific Ocean specified in the Basin Plan are summarized in Table F-4:

Table F-4. 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 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-12:

Table F-5. 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;

Discharge Point	Receiving Water	Beneficial Uses
		• 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 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 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. Anti-backsliding regulations found at 40 CFR 122.44(l) prohibit reissuing or modifying an NPDES permit to include effluent limitations less stringent than in the previous permit. Effluent limitations may be relaxed where one of the exceptions described in 40 CFR 122.44(l) are met including exceptions involving technical mistakes or mistaken interpretations of law.

3.3.5. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limitations, receiving water limits, and other 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.

3.3.6. **Sewage Sludge and Biosolids.** This Order does not authorize any act that results in violation of requirements administered by USEPA to implement 40 CFR part 503, *Standards for the Use or Disposal of Sewage Sludge*. These standards regulate the final use or disposal of sewage sludge that is generated during the treatment of domestic sewage in a municipal wastewater treatment facility. The Discharger is responsible for meeting all applicable requirements of 40 CFR part 503 that are under USEPA's enforcement authority.

3.4. **Impaired Water Bodies on the CWA section 303(d) List**

In August 2018, USEPA-approved the list of impaired water bodies, prepared by the State Water Board pursuant to 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 waters in the Pacific Ocean in the vicinity of the SBOO include:

- Pacific Ocean Shoreline, Otay Valley HA, at Carnation Ave and Camp Surf Jetty for indicator bacteria;
- Pacific Ocean Shoreline, Imperial Beach Pier for indicator bacteria (total coliform for SHELL), PCBs, and trash;
- Pacific Ocean Shoreline, Tijuana HU, at end of Seacoast Drive for indicator bacteria (enterococcus for REC-1 and total coliform for SHELL beneficial use);
- Pacific Ocean Shoreline, Tijuana HU, at 3/4 mile North of Tijuana River for indicator bacteria (enterococcus for REC-1 and total coliform for SHELL beneficial use);
- Pacific Ocean Shoreline, Tijuana HU, at Cortez Avenue for indicator bacteria (total coliform for SHELL beneficial use);
- Pacific Ocean Shoreline, Tijuana HU, at Tijuana River mouth for indicator bacteria (enterococcus, fecal coliform, and total coliform);
- Pacific Ocean Shoreline, Tijuana HU, at Monument Road for indicator bacteria (enterococcus, fecal coliform, and total coliform for REC-1 and total coliform for SHELL beneficial use); and
- Pacific Ocean Shoreline, Tijuana HU, at the US Border for indicator bacteria (total coliform for SHELL beneficial use).

Currently, there are no effective total maximum daily loads (TMDLs) to address the specific impairments listed above. The San Diego Water Board is addressing the water quality impairments and will develop appropriate regulatory actions for each impairing pollutant in each listed waterbody. These actions may include the adoption of a TMDL.

3.5. **Other Plans, Policies and Regulations**

3.5.1. **Secondary Treatment Regulations.** Part 133 of 40 CFR establishes the minimum levels of effluent quality to be achieved by secondary treatment. These limitations, established by the USEPA, are incorporated into this Order, except where more stringent limitations are required by other applicable plans, policies, or regulations.

3.5.2. **Storm Water.** Pursuant to Order No 2014-0057-DWQ, NPDES Permit No. CAS000001, *General Permit for Storm Water Discharges Associated with Industrial Activities* (Storm Water 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 (https://www.waterboards.ca.gov/water_issues/programs/stormwater/sicnum.shtml) falls within the Regulated SIC Code for enrollment under the Storm Water Order. The eligibility for enrollment under the Order is not based on treatment design flow or capacity of the sewerage treatment plants. It is the industrial activity that is regulated. The Facility has the same SIC code (4952) and is enrolled under the Storm Water 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.

4. Rationale for Effluent Limitations and Discharge Specifications

The 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.

4.1. Discharge Prohibitions

This Order retains the discharge prohibitions from the previous Order, Order No. R9-2013-0006, as described below. Discharges from the Facility to surface waters in violation of prohibitions contained in this Order are violations of the CWA and therefore are subject to third party lawsuits. Discharges from the Facility to land in violation of prohibitions contained in this Order are violations of the Water Code and are not subject to third party lawsuits under the CWA because the Water Code does not contain provisions allowing third party lawsuits.

4.1.1. Order No. R9-2013-0006 contained Discharge Prohibition III.A, which prohibited discharges to a location other than Discharge Point No. 001, unless specifically regulated by Order No. R9-2013-0006 or separate WDRs. This prohibition has been retained in this Order as Discharge Prohibition 3.1. Discharge Prohibition 3.1 also prohibits discharges not in compliance with the effluent limitations specified in section 4.1.1 of this Order.

4.1.2. Order No. R9-2013-0006 contained Discharge Prohibitions III.B and III.C, which required compliance with the discharge prohibitions of the Ocean Plan and

Basin Plan, respectively. These prohibitions have been retained in this Order as Discharge Prohibitions 3.2 and 3.3.

4.2. Technology-Based Effluent Limitations (TBELs)

4.2.1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge from the Facility authorized by this Order must meet minimum federal technology-based requirements based on secondary treatment standards at 40 CFR part 133. Discharges must also meet TBELs based on Ocean Plan Table 4.

Regulations promulgated in 40 CFR section 125.3(a)(1) require TBELs for municipal dischargers to be placed in NPDES permits based on secondary treatment standards or equivalent to secondary treatment standards.

The CWA established the minimum performance requirements for POTWs [defined in section 304(d)(1)]. Section 301(b)(1)(B) of that CWA requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment as defined by the USEPA Administrator.

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in 40 CFR part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of biochemical oxygen demand (BOD), total suspended solids (TSS), and pH.

In compliance with 40 CFR sections 122.45(f)(1) and 423.15, mass-based limitations have also been established in this Order 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 includes 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 and temperature.

Mass-based effluent limitations were calculated using the following equation:
lbs/day = flow (MGD) x pollutant concentration (mg/L) x 8.34

4.2.2. Applicable Technology-Based Effluent Limitations (TBELs)

4.2.2.1. Federal Regulations. This Order establishes average weekly and average monthly effluent limitations for BOD_5 and TSS, and an average monthly percent removal of at least 85 percent for BOD_5 and TSS based on secondary treatment standards for POTWs established in 40 CFR part 133.

The secondary treatment regulations in 40 CFR part 133 also require that pH be maintained between 6.0 and 9.0 standard units.

Section 122.45(d) of 40 CFR require that all permit limitations be expressed, unless impracticable, as average monthly effluent limitations (AMELs) and average weekly effluent limitations (AWELs) for POTWs. TBELs based on secondary treatment standards for BOD_5, TSS, and pH are summarized in Table F-13 below, applying AMELs in lieu of 30-day average and AWELs in lieu of 7-day average.

Table F-6. Summary of TBELs Based on Secondary Treatment Standards

Parameter	Unit	Average Monthly Effluent Limitation	Average Weekly Effluent Limitation	Instantaneous Minimum Effluent Limitation	Instantaneous Maximum Effluent Limitation
BOD_5	mg/L	30	45	--	--
BOD_5	% Removal	≥85	--	--	--
TSS	mg/L	30	45	--	--
TSS	% Removal	≥85	--	--	--
pH	standard units	--	--	6.0	9.0

4.2.2.2. Ocean Plan. The Ocean Plan is applicable, in its entirety, to point source discharges to the 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 (ELGs) have not been established. Consistent with the previous Order, Order No. R9-2013-0006, numeric effluent limitations based on Table 4 of the Ocean Plan are being established in this Order for the Facility at Monitoring Location E-001.

Because secondary treatment standards contain effluent limitations for TSS that are more stringent than Table 4 of the Ocean Plan, the more stringent effluent limitations for TSS have been applied to discharges from the Facility.

Effluent limitations based on Table 4 of the Ocean Plan for oil and grease, settleable solids, turbidity, and pH have been retained from the Previous Order, Order No. R9-2013-0006. The TBELs from the Ocean Plan are summarized in Table F-7:

Table F-7. Summary of TBELs Based on Table 4 of the Ocean Plan

Parameter	Unit	Average Monthly Effluent Limitation	Average Weekly Effluent Limitation	Instantaneous Maximum Effluent Limitation
Oil and Grease	mg/L	25	40	75
TSS	mg/L	60[2]	--	--
TSS	% Removal	See note 1	--	--
Settleable Solids	ml/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	standard units	--	--	Within the limits of 6.0 to 9.0 at all times

Note for Table F-7

1. Table 4 of the Ocean Plan specifies 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. Secondary treatment standards are more stringent than this limitation and have been applied in this Order.

4.2.2.3. Effluent Flow. The average monthly effluent limitation for flow of 15.0 MGD has been retained from Order No. R9-2013-0006. The San Diego Water Board established an effluent limitation for flow based on the design flow capacity of the SBWRP as reported in the ROWD. The effluent flow limitation is a component of this Order to ensure proper operation and maintenance of treatment processes and systems.[1] Proper operation includes ensuring wastewater effluent flows stay within the design capacity of the process treatment units.[2] Operating beyond the design capacity may result in insufficient treatment and discharges that threaten beneficial uses. Furthermore, federal regulations require that NPDES permit effluent limitations, standards, or prohibitions for POTWs be calculated based on design flow.[3] In compliance with applicable regulations, the mass-based effluent limitations in this Order are calculated based on design flow of the SBWRP. The limitation on flow is not functionally different than a prohibition on flows in excess of the design criteria.

[1] Section 6.3.5.2 of this Order also requires the Discharger to submit a treatment plant capacity report to the San Diego Water Board showing how flow volumes will be prevented from exceeding existing capacity or how capacity will be increased four years prior to reaching POTW design capacity.
[2] See 40 CFR section122.41 (e).

[3] 40 CFR section122.45 (b)(1).

4.3. Water Quality-Based Effluent Limitations (WQBELs)

4.3.1. Scope and Authority

CWA section 301(b) and 40 CFR section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 CFR requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed State criterion or policy interpreting the State's narrative criterion, supplemented with other relevant information, as provided in 40 CFR section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary 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 21 chemicals and chemical characteristics, including total chlorine residual and chronic toxicity, 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 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 effluent limitations for non-conventional and toxic pollutant parameters, based on water quality objectives in Table 3 of the Ocean Plan. 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 objective, 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 probably 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 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.

In 2006, the San Diego Water Board, with assistance from the State Water Board, had determined the minimum initial dilution factor (D_m) for the SBOO to be 94.6, equating to a dilution ratio of 94.6 parts seawater to 1-part wastewater (94.6:1). This determination was based on a total flow rate of 15.0 MGD from the Facility. In the ROWD, the Discharger did not note any significant changes that would alter the previously determined dilution characteristics. Therefore, the previous dilution ratio of 94.6:1 has been retained in this Order and applied to WQBELs established herein.

Conventional pollutants were not considered as part of the RPA. TBELs for these pollutants are included in this Order 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 has conducted the RPA for the constituents listed in Table F-8 below. For constituents that do not display reasonable potential, this Order includes desirable maximum effluent concentrations (MECs) which were derived using effluent limitation determination procedures described below and are referred to in this Order as "performance goals." A narrative limit 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 constituents as stated in the Monitoring and Reporting Program (MRP, Attachment E) of this Order in order to gather data for use in RPAs for future permit reissuances.

Effluent data provided in the Discharger's monitoring reports for the Facility from May 2013 through November 2020 were used in the RPA. A dilution ratio of 94.6:1 was considered in this evaluation.

A summary of the RPA results is provided in Table F-8:

Table F-8. RPA Results Summary

Parameter	Units	N[2]	MEC[3,4]	Most Stringent Criteria	Background	RPA Endpoint[5]
Arsenic, Total Recoverable	µg/L	95	2.03	8[6]	3[7]	2
Cadmium, Total Recoverable	µg/L	84	1.33	1[6]	0	2
Chromium (VI), Total Recoverable	µg/L	95	8	2[6]	0	2
Copper, Total Recoverable	µg/L	95	29.5	3[6]	2[7]	2
Lead, Total Recoverable	µg/L	95	3	2[6]	0	2
Mercury, Total Recoverable	µg/L	92	0.01	0.04[6]	0.0005[7]	2
Nickel, Total Recoverable	µg/L	95	14.2	5[6]	0	2
Selenium, Total Recoverable	µg/L	94	1.78	15[6]	0	2
Silver, Total Recoverable	µg/L	95	1.57	0.7[6]	0.16[7]	2
Zinc, Total Recoverable	µg/L	95	145	20[6]	8[7]	2

Parameter	Units	N[2]	MEC[3,4]	Most Stringent Criteria	Background	RPA Endpoint[5]
Cyanide, Total	µg/L	94	3	1[6]	0	2
Total Residual Chlorine	µg/L	2,357	5000	2[6]	0	1
Ammonia (expressed as nitrogen)	µg/L	95	20,200	600[6]	0	2
Acute Toxicity	TUa	--	--	0.3[8]	0	--
Chronic Toxicity	TUc	97	95.2	1[8]	0	2 ~~See Note 11~~
Phenolic Compounds[1]	µg/L	95	<2.04	30[6]	0	2
Chlorinated Phenolics[1]	µg/L	95	<0.14	1[6]	0	2
Endosulfan[1]	µg/L	33	34.4	0.009[6]	0	1
Endrin	µg/L	93	<0.00078	0.002[6]	0	2
HCH[1]	µg/L	93	<0.0002	0.004[6]	0	2
Radioactivity	pCi/L	--	--	[9]	0	--
Acrolein	µg/L	31	<0.75	220[10]	0	2
Antimony	µg/L	95	4.4	1,200[10]	0	2
Bis(2-chloroethoxyl) Methane	µg/L	33	<0.092	4.4[10]	0	2
Bis(2-chloroisopropyl) Ether	µg/L	65	<0.097	1,200[10]	0	2
Chlorobenzene	µg/L	31	<0.21	570[10]	0	2
Chromium (III), Total Recoverable	µg/L	18	10	190,000[10]	0	2
Di-n-butyl Phthalate	µg/L	33	<0.4	3,500[10]	0	2
Dichlorobenzenes[1]	µg/L	30	<0.33	5,100[10]	0	2
Diethyl Phthalate	µg/L	35	25.7	33,000[10]	0	2
Dimethyl Phthalate	µg/L	33	<0.12	820,000[10]	0	2
4,6-dinitro-2-methylphenol	µg/L	94	<1.46	220[10]	0	2
2,4-dinitrophenol	µg/L	94	<0.44	4.0[10]	0	2
Ethylbenzene	µg/L	30	<0.24	4,100[10]	0	2
Fluoranthene	µg/L	33	<0.18	15[10]	0	2
Hexachlorocyclopentadiene	µg/L	33	<0.103	58[10]	0	2
Nitrobenzene	µg/L	33	<0.14	4.9[10]	0	2
Thallium, Total Recoverable	µg/L	95	3.81	2[10]	0	2
Toluene	µg/L	31	0.42	85,000[10]	0	2
Tributyltin	µg/L	32	<0.0044	0.0014[10]	0	3
1,1,1-trichloroethane	µg/L	31	<0.34	540,000[10]	0	2
Acrylonitrile	µg/L	31	<0.48	0.10[10]	0	2

Parameter	Units	N[2]	MEC[3,4]	Most Stringent Criteria	Background	RPA Endpoint[5]
Aldrin	µg/L	93	<0.00072	0.000022[10]	0	2
Benzene	µg/L	31	<0.35	5.9[10]	0	2
Benzidine	µg/L	26	<1.49	0.000069[10]	0	3
Beryllium	µg/L	95	0.18	0.033[10]	0	2
Bis(2-chloroethyl) Ether	µg/L	33	<0.0512	0.045[10]	0	2
Bis(2-ethylhexyl) Phthalate	µg/L	33	15.8	3.5[10]	0	2
Carbon Tetrachloride	µg/L	31	<0.33	0.90[10]	0	2
Chlordane[1]	µg/L	32	<0.001	0.000023[10]	0	3
Chlorodibromomethane	µg/L	231	18.2	8.6[10]	0	2
Chloroform	µg/L	31	20.3	130[10]	0	2
DDT[1]	µg/L	30	<0.00153	0.00017[10]	0	2
1,4-dichlorobenzene	µg/L	32	<0.29	18[10]	0	2
3,3-dichlorobenzidine	µg/L	32	<1.49	0.0081[10]	0	3
1,2-dichloroethane	µg/L	31	<0.32	28[10]	0	2
1,1-dichloroethylene	µg/L	31	<0.37	0.9[10]	0	2
Dichlorobromomethane	µg/L	31	24.7	6.2[10]	0	2
Dichloromethane	µg/L	55	2.21	450[10]	0	2
1,3-dichloropropene	µg/L	30	<0.32	8.9[10]	0	2
Dieldrin	µg/L	93	<0.00067	0.00004[10]	0	2
2,4-dinitrotoluene	µg/L	33	<0.0839	2.6[10]	0	2
1,2-diphenylhydrazine	µg/L	33	<0.33	0.16[10]	0	2
Halomethanes[1]	µg/L	30	<0.36	130[10]	0	2
Heptachlor	µg/L	93	<0.0006	0.00005[10]	0	2
Heptachlor Epoxide	µg/L	95	<0.000745	0.00002[10]	0	3
Hexachlorobenzene	µg/L	33	<0.133	0.00021[10]	0	3
Hexachlorobutadiene	µg/L	33	<0.106	14[10]	0	2
Hexachloroethane	µg/L	33	<0.0899	2.5[10]	0	2
Isophorone	µg/L	32	<0.0926	730[10]	0	2
N-nitrosodimethylamine	µg/L	33	<0.245	7.3[10]	0	2
N-nitrosodi-N-propylamine	µg/L	33	<0.1	0.38[10]	0	2
N-nitrosodiphenylamine	µg/L	33	<0.0818	2.5[10]	0	2
PAHs[1]	µg/L	30	<0.145	0.0088[10]	0	3
PCBs[1]	µg/L	31	<0.018	0.000019[10]	0	3
TCDD equivalents[1]	µg/L	30	<0.007	0.0000000039[10]	0	3
1,1,2,2-tetrachoroethane	µg/L	31	<0.33	2.3[10]	0	2
Tetrachloroethylene	µg/L	31	<0.27	2.0[10]	0	2
Toxaphene	µg/L	93	<012	0.00021[10]	0	3
Trichloroethylene	µg/L	31	<0.34	27[10]	0	2

Parameter	Units	N[2]	MEC[3,4]	Most Stringent Criteria	Background	RPA Endpoint[5]
1,1,2-trichloroethane	µg/L	31	<0.25	9.4[10]	0	2
2,4,6-trichlorophenol	µg/L	94	0.116	0.29[10]	0	2
Vinyl Chloride	µg/L	31	<0.24	36[10]	0	2

Notes for Table F-8

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Number of data points available for the RPA.
3. The highest value was reported as the MEC if the parameter was detected. If the parameter was not detected, the lowest MDL was reported as the MEC.
4. 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 RP (i.e. Endpoint 2).
5. End Point 1 – Reasonable Potential (RP) determined, limit required, monitoring required.
   End Point 2 – Discharger determined not to have RP, monitoring may be established.
   End Point 3 – RPA was inconclusive, carry over previous limitations if applicable, and establish monitoring.
6. Based on the 6-Month Median in the Table 3 of the Ocean Plan.
7. Background concentrations contained in Table 5 of the Ocean Plan.
8. Based on the Daily Maximum in Table 3 of the Ocean Plan.
9. 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.
10. Based on 30-Day Average in Table 1 of the Ocean Plan.
11. ~~See discussion on chronic toxicity below.~~

The three different endpoints for parameters assessed in the RPA are discussed below:

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 endosulfan. Effluent limitations for total residual chlorine were retained from the previous Order, Order No. R9-2013-0006, and effluent limitations for endosulfan were established in this Order. The effluent

limitations for total residual chlorine and endosulfan are based on the initial dilution of 94.6:1 as discussed below.

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.

Endpoint 2

Consistent with 40 CFR section 122.44(I)(2)(i)(B), effluent limitations from the previous Order, Order No. R9 2013-0006, were not retained for constituents that were not deemed to have reasonable potential to cause an exceedance of a WQO. Instead, performance goals have been assigned for these constituents. Except as discussed below, parameters for which Endpoint 2 was concluded are determined not to have reasonable potential, thus this Order does not establish effluent limitations for these parameters.

Endpoint 3

For parameters for which Endpoint 3 was concluded, reasonable potential was inconclusive. Performance goals have been retained for parameters for which Endpoint 3 was concluded and for which effluent limitations were not established in Order No. R9-2013-0006.

Bacterial Indicators

This Order 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 SBOO, located 23,600 feet offshore at a depth of 93 feet.
- The initial dilution is 94.6.
- The San Diego Water Board is not aware of any shellfish harvesting within the zone of initial dilution (ZID) of the SBOO.
- There are no kelp beds within the ZID of the SBOO.

~~Chronic Toxicity~~

~~Although the RPA does not demonstrate that chronic toxicity in the effluent has reasonable potential to cause an exceedance of water quality objectives, this Order adds chronic toxicity effluent limitations based on best professional judgement (BPJ, Step 13 of the Ocean Plan RPA). Step 13 authorizes an RPA based on BPJ upon a review of all available information to determine if a water-quality based effluent limitation is required to protect beneficial uses.~~

~~Treated effluent from the Facility regulated under this Order comingles with the SBIWTP discharge, separately regulated under Order No. R9-2021-0001 before discharge to the ocean through the SBOO. The SBIWTP treats sewage originating in Tijuana, Mexico. Tijuana is a major urban area with over 2,500 industrial plants; including manufacturing, chemical substances and petroleum, minerals, paper and printing, wood and wood products, textiles, clothing and leather, and food and beverage products. While Tijuana has a source control~~

~~program administered by the Government of Mexico, the adequate implementation of the program cannot be relied on and sewage from the Tijuana region can still be toxic even after secondary treatment. The City of San Diego's Environmental Impact Report, conducted to determine environmental impacts of the SBOO, indicated that "the potential impact of the expected elevated toxics/heavy metal content of the treated Mexican effluent is considered potentially significant and not mitigated at this time. Total reliance on future source control in Mexico to pretreat wastewater prior to conveyance to the SBIWTP is not sufficiently guaranteed to occur such that the impact can be considered mitigated." It is possible that the SBIWTP would discharge effluent that does not meet Ocean Plan water quality standards if Tijuana's source control measures are not properly implemented. Order No. R9-2021-0001, for the SBIWTP, includes an effluent limitation for chronic toxicity.~~

~~Further, discharges into POTWs are everchanging and unknown and/or new pollutants could be introduced into the Discharger's POTWs from nonresidential and/or residential sources at any time, resulting in synergistic and/or additive toxic effects in the receiving water. If a toxic effect is discovered in the receiving water, the results of the WET may be useful for identifying the source of the toxicity. As a result, this Order includes an effluent limit for chronic toxicity which requires routine monitoring to ensure that effluent from the Facility is not causing synergistic and/or additive toxic effects.~~

~~Several sensitive species are also known to exist in or traverse the vicinity of the SBOO. Threatened and/or endangered species with habitats in the vicinity of the SBOO include: olive ridley sea turtle (*Lepidochelys olivacea*), green turtle (Chelonia mydas), and the leatherback sea turtle (Dermochelys coriacea). (See 50 CFR section 224.10(c).) Marine fish species surrounding the SBOO also include, speckled sanddab (*Citharichthys stigmaeus*), California lizardfish (Synodus lucioceps), hornyhead turbot (Pleuronichthys verticalis), and California halibut (Paralichthys californicus). (*Final Supplemental Environmental Impact Statement, Clean Water Act Compliance at the South Bay International Wastewater Treatment Plant* (2005), p. 3-29.) An effluent limitation for chronic toxicity is necessary to protect these sensitive species, the benthic communities upon which they may feed, and other designated beneficial uses from synergistic and/or additive toxic effects the Facility's effluent and comingled discharges from the SBOO.~~

~~Thus, in the San Diego Water Board's best professional judgment, an effluent limitation for chronic toxicity is necessary based on the Facility, Facility operations, and potential toxic impact of the discharge. This Order establishes a chronic toxicity effluent limitation for the Facility discharge in order to further ensure that the combined discharge of effluent from the Facility and the SBIWTP through the SBOO does not cause or contribute to exceedances of effluent limits for chronic toxicity, thereby ensuring that water quality standards are achieved in the receiving water and designated beneficial uses are protected.~~

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:

$C_e = C_o + D_m (C_o – C_s)$ where,
C_e = the effluent limitation (µg/L)
C_o = the water quality objective to be met at the completion of initial dilution (µg/L)
C_s = background seawater concentration
D_m = minimum probable initial dilution expressed as parts seawater per part wastewater

4.3.4.2. As discussed in section 4.3.3 above, the initial dilution of 94.6:1 was retained from the previous Order, Order No. R9-2013-0006.

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 "C_s"). In accordance with Table 3 implementing procedures, C_s equals zero for all pollutants not established in Table 5. The background concentrations provided in Table 5 of the Ocean Plan are summarized in Table F-9:

Table F-9. 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-10. 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, $C_e = C_o + D_m (C_o – C_s)$, effluent limitations/performance goals are calculated as follows.

Total Chlorine Residual:
$C_e = 2 + 94.6 (2 – 0) = 191.2$ (6-Month Median)
$C_e = 8 + 94.6 (8 – 0) = 764.8$ (Daily Maximum)
$C_e = 60 + 94.6 (60 – 0) = 5{,}736$ (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.

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 includes 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 and BPJ, a summary of the WQBELs established in this Order are provided in the Table F-11. 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. 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 Facility (15.0 MGD) and C is the concentration (mg/L).

Table F-11. Summary of WQBELs at Monitoring Location E-001

Parameter	Unit	Six-Month Median[1]	Maximum Daily[1]	Instantaneous Maximum[1]
~~Chronic Toxicity[2,3]~~	~~"Pass"/" Fail"~~	~~--~~	~~"Pass"~~	~~--~~
Total Residual Chlorine	µg/L	190	760	5,700
Total Residual Chlorine	lbs/day	24	95	713
Endosulfan	µg/L	0.86	--	1.72
Endosulfan	lbs/day	0.108	--	0.215

Notes for Table F-11

1. The mass emission rate (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 permitted flow for the Facility (15.0 MGD) and C is the concentration (mg/L).

~~2. As specified in section 7.12 of this Order and section 3.3 of the MRP (Attachment E).~~

~~3. A numeric WQBEL has been established for chronic toxicity based on best professional judgement (BPJ, Step 13 of the Ocean Plan RPA). The chronic toxicity performance goal is protective of both the numeric acute and chronic toxicity 2019 Ocean Plan water quality objectives. The chronic toxicity 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 USEPA Regions 8, 9, and 10, Toxicity Training Tool (January 2010).~~

4.3.4.7. A summary of the performance goals is provided in Table F-12.

Table F-12. Summary of Performance Goals at Monitoring Location E-001[1]

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Arsenic, Total Recoverable	µg/L	4.81E+02	--	2.78E+03	7.36E+03
Arsenic, Total Recoverable	lbs/day	6.02E+01	--	3.48E+02	9.21E+02
Cadmium, Total Recoverable	µg/L	9.56E+01	--	3.82E+02	9.56E+02
Cadmium, Total Recoverable	lbs/day	1.20E+01	--	4.78E+01	1.20E+02
Chromium (VI), Total Recoverable[4]	µg/L	1.91E+02	--	7.65E+02	1.91E+03
Chromium (VI), Total Recoverable[4]	lbs/day	2.39E+01	--	9.57E+01	2.39E+02
Copper, Total Recoverable	µg/L	9.76E+01	--	9.58E+02	2.68E+03
Copper, Total Recoverable	lbs/day	1.22E+01	--	1.20E+02	3.35E+02
Lead, Total Recoverable	µg/L	1.91E+02	--	7.65E+02	1.91E+03
Lead, Total Recoverable	lbs/day	2.39E+01	--	9.57E+01	2.39E+02
Mercury, Total Recoverable	µg/L	3.78E+00	--	1.52E+01	3.82E+01
Mercury, Total Recoverable	lbs/day	4.73E-01	--	1.90E+00	4.78E+00
Nickel, Total Recoverable	µg/L	4.78E+02	--	1.91E+03	4.78E+03
Nickel, Total Recoverable	lbs/day	5.98E+01	--	2.39E+02	5.98E+02
Selenium, Total Recoverable	µg/L	1.43E+03	--	5.74E+03	1.43E+04
Selenium, Total Recoverable	lbs/day	1.79E+02	--	7.18E+02	1.79E+03

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Silver, Total Recoverable	µg/L	5.18E+01	--	2.53E+02	6.54E+02
Silver, Total Recoverable	lbs/day	6.48E+00	--	3.17E+01	8.18E+01
Zinc, Total Recoverable	µg/L	1.16E+03	--	6.89E+03	1.84E+04
Zinc, Total Recoverable	lbs/day	1.45E+02	--	8.62E+02	2.30E+03
Cyanide, Total Recoverable	µg/L	9.56E+01	--	3.82E+02	9.56E+02
Cyanide, Total Recoverable	lbs/day	1.20E+01	--	4.78E+01	1.20E+02
Ammonia (expressed as nitrogen)	mg/L	5.74E+01	--	2.29E+02	5.74E+02
Ammonia (expressed as nitrogen)	lbs/day	7.18E+03	--	2.86E+04	7.18E+04
Phenolic Compounds (non-chlorinated)[1]	µg/L	5.74E+04	--	2.29E+05	5.74E+05
Phenolic Compounds (non-chlorinated)[1]	lbs/day	7.18E+03	--	2.86E+04	7.18E+04
Chlorinated Phenolics[1]	µg/L	2.87E+03	--	1.15E+04	2.87E+04
Chlorinated Phenolics[1]	lbs/day	3.59E+02	--	1.44E+03	3.59E+03
Endrin	µg/L	9.56E+01	--	3.82E+02	9.56E+02
Endrin	lbs/day	1.20E+01	--	4.78E+01	1.20E+02
HCH (BHC)[1]	µg/L	1.91E-01	--	3.82E-01	5.74E-01
HCH (BHC)[1]	lbs/day	2.39E-02	--	4.78E-02	7.18E-02
Radioactivity (alpha and beta particles)	Picocuries per Liter (pCi/L)	See note 5	--	--	--
Acrolein	µg/L	--	2.10E+04	--	--
Acrolein	lbs/day	--	2.63E+03	--	--
Antimony	µg/L	--	1.10E+05	--	--
Antimony	lbs/day	--	1.38E+04	--	--
Bis(2-chloroethoxy) Methane	µg/L	--	4.20E+02	--	--
Bis(2-chloroethoxy) Methane	lbs/day	--	5.25E+01	--	--
Bis(2-chloroisopropyl) Ether	µg/L	--	1.10E+05	--	--
Bis(2-chloroisopropyl) Ether	lbs/day	--	1.38E+04	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Chlorobenzene	µg/L	--	5.40E+04	--	--
Chlorobenzene	lbs/day	--	6.76E+03	--	--
Chromium (III), Total Recoverable[4]	µg/L	--	1.80E+07	--	--
Chromium (III), Total Recoverable[4]	lbs/day	--	2.25E+06	--	--
Di-n-butyl Phthalate	µg/L	--	3.30E+05	--	--
Di-n-butyl Phthalate	lbs/day	--	4.13E+04	--	--
Dichlorobenzenes	µg/L	--	4.90E+05	--	--
Dichlorobenzenes	lbs/day	--	6.13E+04	--	--
Diethyl Phthalate	µg/L	--	3.20E+06	--	--
Diethyl Phthalate	lbs/day	--	4.00E+05	--	--
Dimethyl Phthalate	µg/L	--	7.80E+07	--	--
Dimethyl Phthalate	lbs/day	--	9.76E+06	--	--
4,6-dinitro-2-methylphenol	µg/L	--	2.10E+04	--	--
4,6-dinitro-2-methylphenol	lbs/day	--	2.63E+03	--	--
2,4-dinitrophenol	µg/L	--	3.80E+02	--	--
2,4-dinitrophenol	lbs/day	--	4.75E+01	--	--
Ethylbenzene	µg/L	--	3.90E+05	--	--
Ethylbenzene	lbs/day	--	4.88E+04	--	--
Fluoranthene	µg/L	--	1.40E+03	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Fluoranthene	lbs/day	--	1.75E+02	--	--
Hexachlorocyclopentadiene	µg/L	--	5.50E+03	--	--
Hexachlorocyclopentadiene	lbs/day	--	6.88E+02	--	--
Nitrobenzene	µg/L	--	4.70E+02	--	--
Nitrobenzene	lbs/day	--	5.88E+01	--	--
Thallium, Total Recoverable	µg/L	--	1.90E+02	--	--
Thallium, Total Recoverable	lbs/day	--	2.38E+01	--	--
Toluene	µg/L	--	8.10E+06	--	--
Toluene	lbs/day	--	1.01E+06	--	--
Tributyltin	µg/L	--	1.30E-01	--	--
Tributyltin	lbs/day	--	1.63E-02	--	--
1,1,1-trichloroethane	µg/L	--	5.20E+07	--	--
1,1,1-trichloroethane	lbs/day	--	6.51E+06	--	--
Acrylonitrile	µg/L	--	9.60E+00	--	--
Acrylonitrile	lbs/day	--	1.20E+00	--	--
Aldrin	µg/L	--	2.10E-03	--	--
Aldrin	lbs/day	--	2.63E-04	--	--
Benzene	µg/L	--	5.60E+02	--	--
Benzene	lbs/day	--	7.01E+01	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Benzidine	µg/L	--	6.60E-03	--	--
Benzidine	lbs/day	--	8.26E-04	--	--
Beryllium	µg/L	--	3.20E+00	--	--
Beryllium	lbs/day	--	4.00E-01	--	--
Bis(2-chloroethyl) Ether	µg/L	--	4.30E+00	--	--
Bis(2-chloroethyl) Ether	lbs/day	--	5.38E-01	--	--
Bis(2-ethlyhexyl) Phthalate	µg/L	--	3.30E+02	--	--
Bis(2-ethlyhexyl) Phthalate	lbs/day	--	4.13E+01	--	--
Carbon Tetrachloride	µg/L	--	8.60E+01	--	--
Carbon Tetrachloride	lbs/day	--	1.08E+01	--	--
Chlordane	µg/L	--	2.20E-03	--	--
Chlordane	lbs/day	--	2.75E-04	--	--
Chlorodibromomethane (Dibromochloromethane)	µg/L	--	8.20E+02	--	--
Chlorodibromomethane (Dibromochloromethane)	lbs/day	--	1.03E+02	--	--
Chloroform	µg/L	--	1.20E+04	--	--
Chloroform	lbs/day	--	1.50E+03	--	--
Dichlorodiphenyltrichloroethane (DDT)	µg/L	--	1.60E-02	--	--
Dichlorodiphenyltrichloroethane (DDT)	lbs/day	--	2.00E-03	--	--
1,4-dichlorobenzene	µg/L	--	1.70E+03	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
1,4-dichlorobenzene	lbs/day	--	2.13E+02	--	--
3,3'-dichlorobenzidine	µg/L	--	7.70E-01	--	--
3,3'-dichlorobenzidine	lbs/day	--	9.63E-02	--	--
1,2-dichloroethane	µg/L	--	2.70E+03	--	--
1,2-dichloroethane	lbs/day	--	3.38E+02	--	--
1,1-dichloroethylene	µg/L	--	8.60E+01	--	--
1,1-dichloroethylene	lbs/day	--	1.08E+01	--	--
Dichlorobromomethane	µg/L	--	5.90E+02	--	--
Dichlorobromomethane	lbs/day	--	7.38E+01	--	--
Dichloromethane (Methylene Chloride)	µg/L	--	5.90E+02	--	--
Dichloromethane (Methylene Chloride)	lbs/day	--	5.38E+03	--	--
1,3-dichloropropene (1,3-Dichloropropylenes)	µg/L	--	8.50E+02	--	--
1,3-dichloropropene (1,3-Dichloropropylenes)	lbs/day	--	1.06E+02	--	--
Dieldrin	µg/L	--	3.80E-03	--	--
Dieldrin	lbs/day	--	4.75E-04	--	--
2,4-dinitrotoluene	µg/L	--	2.50E+02	--	--
2,4-dinitrotoluene	lbs/day	--	3.13E+01	--	--
1,2-diphenylhydrazine	µg/L	--	1.50E+01	--	--
1,2-diphenylhydrazine	lbs/day	--	1.88E+00	--	--
Halomethanes	µg/L	--	1.20E+04	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Halomethanes	lbs/day	--	1.50E+03	--	--
Heptachlor	µg/L	--	4.80E-03	--	--
Heptachlor	lbs/day	--	6.00E-04	--	--
Heptachlor Epoxide	µg/L	--	1.90E-03	--	--
Heptachlor Epoxide	lbs/day	--	2.38E-04	--	--
Hexachlorobenzene	µg/L	--	2.00E-02	--	--
Hexachlorobenzene	lbs/day	--	2.50E-03	--	--
Hexachlorobutadiene	µg/L	--	1.30E+03	--	--
Hexachlorobutadiene	lbs/day	--	1.63E+02	--	--
Hexachloroethane	µg/L	--	2.40E+02	--	--
Hexachloroethane	lbs/day	--	3.00E+01	--	--
Isophorone	µg/L	--	7.00E+04	--	--
Isophorone	lbs/day	--	8.76E+03	--	--
N-nitrosodimethylamine	µg/L	--	7.00E+02	--	--
N-nitrosodimethylamine	lbs/day	--	8.76E+01	--	--
N-nitrosodi-N-propylamine	µg/L	--	3.60E+01	--	--
N-nitrosodi-N-propylamine	lbs/day	--	4.50E+00	--	--
Polynuclear Aromatic Hydrocarbons (PAHs)	µg/L	--	8.40E-01	--	--
Polynuclear Aromatic Hydrocarbons (PAHs)	lbs/day	--	1.05E-01	--	--
Polychlorinated Biphenyls (PCBs)	µg/L	--	1.80E-03	--	--
Polychlorinated Biphenyls (PCBs)	lbs/day	--	2.25E-04	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
TCDD Equivalents	µg/L	--	3.70E-07	--	--
TCDD Equivalents	lbs/day	--	4.63E-02	--	--
1,1,2,2-tetrachloroethane	µg/L	--	2.20E+02	--	--
1,1,2,2-tetrachloroethane	lbs/day	--	2.75E+01	--	--
Tetrachloroethylene (Tetrachloroethene)	µg/L	--	1.90E+02	--	--
Tetrachloroethylene (Tetrachloroethene)	lbs/day	--	2.38E+01	--	--
Toxaphene	µg/L	--	2.00E-02	--	--
Toxaphene	lbs/day	--	2.50E-03	--	--
Trichloroethylene (Trichloroethene)	µg/L	--	2.60E+03	--	--
Trichloroethylene (Trichloroethene)	lbs/day	--	3.25E+02	--	--
1,1,2-trichloroethane	µg/L	--	9.00E+02	--	--
1,1,2-trichloroethane	lbs/day	--	1.13E+02	--	--
2,4,6-trichlorophenol	µg/L	--	2.80E+01	--	--
2,4,6-trichlorophenol	lbs/day	--	3.50E+00	--	--
Vinyl Chloride	µg/L	--	3.40E+03	--	--
Vinyl Chloride	lbs/day	--	4.25E+02	--	--
Arsenic, Total Recoverable	µg/L	4.81E+02	--	2.78E+03	7.36E+03
Arsenic, Total Recoverable	lbs/day	6.02E+04	--	3.48E+05	9.21E+05
Cadmium, Total Recoverable	µg/L	9.56E+01	--	3.82E+02	9.56E+02
Cadmium, Total Recoverable	lbs/day	1.20E+04	--	4.78E+04	1.20E+05
Chromium (VI), Total Recoverable[4]	µg/L	1.91E+02	--	7.65E+02	1.91E+03

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Chromium (VI), Total Recoverable[4]	lbs/day	2.39E+04	--	9.57E+04	2.39E+05
Copper, Total Recoverable	µg/L	9.76E+01	--	9.58E+02	2.68E+03
Copper, Total Recoverable	lbs/day	1.22E+04	--	1.20E+05	3.35E+05
Lead, Total Recoverable	µg/L	1.91E+02	--	7.65E+02	1.91E+03
Lead, Total Recoverable	lbs/day	2.39E+04	--	9.57E+04	2.39E+05
Mercury, Total Recoverable	µg/L	3.78E+00	--	1.52E+01	3.82E+01
Mercury, Total Recoverable	lbs/day	4.73E+02	--	1.90E+03	4.78E+03
Nickel, Total Recoverable	µg/L	4.78E+02	--	1.91E+03	4.78E+03
Nickel, Total Recoverable	lbs/day	5.98E+04	--	2.39E+05	5.98E+05
Selenium, Total Recoverable	µg/L	1.43E+03	--	5.74E+03	1.43E+04
Selenium, Total Recoverable	lbs/day	1.79E+05	--	7.18E+05	1.79E+06
Silver, Total Recoverable	µg/L	5.18E+01	--	2.53E+02	6.54E+02
Silver, Total Recoverable	lbs/day	6.48E+03	--	3.17E+04	8.18E+04
Zinc, Total Recoverable	µg/L	1.16E+03	--	6.89E+03	1.84E+04
Zinc, Total Recoverable	lbs/day	1.45E+05	--	8.62E+05	2.30E+06
Cyanide, Total Recoverable	µg/L	9.56E+01	--	3.82E+02	9.56E+02
Cyanide, Total Recoverable	lbs/day	1.20E+04	--	4.78E+04	1.20E+05
Ammonia (expressed as nitrogen)	µg/L	5.74E+04	--	2.29E+05	5.74E+05
Ammonia (expressed as nitrogen)	lbs/day	7.18E+06	--	2.86E+07	7.18E+07
Phenolic Compounds (non-chlorinated)[1]	µg/L	2.87E+03	--	1.15E+04	2.78E+04
Phenolic Compounds (non-chlorinated)[1]	lbs/day	3.59E+02	--	1.44E+03	3.59E+03
Chlorinated Phenolics[1]	µg/L	9.56E+01	--	3.82E+02	9.56E+02
Chlorinated Phenolics[1]	lbs/day	1.20E+01	--	4.78E+01	1.20E+02
Endrin	µg/L	1.91E-01	--	3.82E-01	5.74E-01
Endrin	lbs/day	2.39E-02	--	4.78E-02	7.18E-02
HCH (BHC)[1]	µg/L	3.82E-01	--	7.65E-01	1.15E+00
HCH (BHC)[1]	lbs/day	4.78E-02	--	9.57E-02	1.44E-01
Radioactivity (alpha and beta particles)	Picocuries per Liter (pCi/L)	See note 5	--	--	--
Acrolein	µg/L	--	2.10E+04	--	--
Acrolein	lbs/day	--	2.63E+06	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Antimony	µg/L	--	1.10E+05	--	--
Antimony	lbs/day	--	1.38E+07	--	--
Bis(2-chloroethoxy) Methane	µg/L	--	4.20E+02	--	--
Bis(2-chloroethoxy) Methane	lbs/day	--	5.25E+04	--	--
Bis(2-chloroisopropyl) Ether	µg/L	--	1.10E+05	--	--
Bis(2-chloroisopropyl) Ether	lbs/day	--	1.38E+07	--	--
Chlorobenzene	µg/L	--	5.40E+04	--	--
Chlorobenzene	lbs/day	--	6.76E+06	--	--
Chromium (III), Total Recoverable[4]	µg/L	--	1.80E+07	--	--
Chromium (III), Total Recoverable[4]	lbs/day	--	2.25E+09	--	--
Di-n-butyl Phthalate	µg/L	--	3.30E+05	--	--
Di-n-butyl Phthalate	lbs/day	--	4.13E+07	--	--
Dichlorobenzenes	µg/L	--	4.90E+05	--	--
Dichlorobenzenes	lbs/day	--	6.13E+07	--	--
Diethyl Phthalate	µg/L	--	3.30E+05	--	--
Diethyl Phthalate	lbs/day	--	4.13E+07	--	--
Dimethyl Phthalate	µg/L	--	7.80E+07	--	--
Dimethyl Phthalate	lbs/day	--	9.76E+09	--	--
4,6-dinitro-2-methylphenol	µg/L	--	2.10E+04	--	--
4,6-dinitro-2-methylphenol	µg/L	--	2.10E+04	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
4,6-dinitro-2-methylphenol	lbs/day	--	2.63E+06	--	--
2,4-dinitrophenol	µg/L	--	3.80E+02	--	--
2,4-dinitrophenol	lbs/day	--	4.75E+04	--	--
Ethylbenzene	µg/L	--	3.90E+05	--	--
Ethylbenzene	lbs/day	--	4.88E+07	--	--
Fluoranthene	µg/L	--	1.40E+03	--	--
Fluoranthene	lbs/day	--	1.75E+05	--	--
Hexachlorocyclopentadiene	µg/L	--	5.50E+03	--	--
Hexachlorocyclopentadiene	lbs/day	--	6.88E+05	--	--
Nitrobenzene	µg/L	--	4.70E+02	--	--
Nitrobenzene	lbs/day	--	5.88E+04	--	--
Thallium, Total Recoverable	µg/L	--	1.90E+02	--	--
Thallium, Total Recoverable	lbs/day	--	2.38E+04	--	--
Toluene	µg/L	--	8.10E+06	--	--
Toluene	lbs/day	--	1.01E+09	--	--
Tributyltin	µg/L	--	1.30E-01	--	--
Tributyltin	lbs/day	--	1.63E+01	--	--
1,1,1-trichloroethane	µg/L	--	5.20E+07	--	--
1,1,1-trichloroethane	lbs/day	--	6.51E+09	--	--
Acrylonitrile	µg/L	--	9.60E+00	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Acrylonitrile	lbs/day	--	1.20E+03	--	--
Aldrin	µg/L	--	2.10E-03	--	--
Aldrin	lbs/day	--	2.63E-01	--	--
Benzene	µg/L	--	5.60E+02	--	--
Benzene	lbs/day	--	7.01E+04	--	--
Benzidine	µg/L	--	6.60E-03	--	--
Benzidine	lbs/day	--	8.26E-01	--	--
Beryllium	µg/L	--	3.20E+00	--	--
Beryllium	lbs/day	--	4.00E+02	--	--
Bis(2-chloroethyl) Ether	µg/L	--	4.30E+00	--	--
Bis(2-chloroethyl) Ether	lbs/day	--	5.38E+02	--	--
Bis(2-ethlyhexyl) Phthalate	µg/L	--	3.30E+02	--	--
Bis(2-ethlyhexyl) Phthalate	lbs/day	--	4.13E+04	--	--
Carbon Tetrachloride	µg/L	--	8.60E+01	--	--
Carbon Tetrachloride	lbs/day	--	1.08E+04	--	--
Chlordane	µg/L	--	2.20E-03	--	--
Chlordane	lbs/day	--	2.75E-01	--	--
Chlorodibromomethane (Dibromochloromethane)	µg/L	--	8.20E+02	--	--
Chlorodibromomethane (Dibromochloromethane)	lbs/day	--	1.03E+05	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
Chloroform	µg/L	--	1.20E+04	--	--
Chloroform	lbs/day	--	1.50E+06	--	--
Dichlorodiphenyltrichloroethane (DDT)	µg/L	--	1.60E-02	--	--
Dichlorodiphenyltrichloroethane (DDT)	lbs/day	--	2.00E+00	--	--
1,4-dichlorobenzene	µg/L	--	1.70E+03	--	--
1,4-dichlorobenzene	lbs/day	--	2.13E+05	--	--
3,3'-dichlorobenzidine	µg/L	--	7.70E-01	--	--
3,3'-dichlorobenzidine	lbs/day	--	9.63E+01	--	--
1,2-dichloroethane	µg/L	--	2.70E+03	--	--
1,2-dichloroethane	lbs/day	--	3.38E+05	--	--
1,1-dichloroethylene	µg/L	--	8.60E+01	--	--
1,1-dichloroethylene	lbs/day	--	1.08E+04	--	--
Dichlorobromomethane	µg/L	--	5.90E+02	--	--
Dichlorobromomethane	lbs/day	--	7.38E+04	--	--
Dichloromethane (Methylene Chloride)	µg/L	--	5.90E+02	--	--
Dichloromethane (Methylene Chloride)	lbs/day	--	5.38E+06	--	--
1,3-dichloropropene (1,3-Dichloropropylenes)	µg/L	--	8.50E+02	--	--
1,3-dichloropropene (1,3-Dichloropropylenes)	lbs/day	--	1.06E+05	--	--
Dieldrin	µg/L	--	3.80E-03	--	--
Dieldrin	lbs/day	--	4.75E-01	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
2,4-dinitrotoluene	µg/L	--	2.50E+02	--	--
2,4-dinitrotoluene	lbs/day	--	3.13E+04	--	--
1,2-diphenylhydrazine	µg/L	--	1.50E+01	--	--
1,2-diphenylhydrazine	lbs/day	--	1.88E+03	--	--
Halomethanes	µg/L	--	1.20E+04	--	--
Halomethanes	lbs/day	--	1.50E+06	--	--
Heptachlor	µg/L	--	4.80E-03	--	--
Heptachlor	lbs/day	--	6.00E-01	--	--
Heptachlor Epoxide	µg/L	--	1.90E-03	--	--
Heptachlor Epoxide	lbs/day	--	2.38E-01	--	--
Hexachlorobenzene	µg/L	--	2.00E-02	--	--
Hexachlorobenzene	lbs/day	--	2.50E+00	--	--
Hexachlorobutadiene	µg/L	--	1.30E+03	--	--
Hexachlorobutadiene	lbs/day	--	1.63E+05	--	--
Hexachloroethane	µg/L	--	2.40E+02	--	--
Hexachloroethane	lbs/day	--	3.00E+04	--	--
Isophorone	µg/L	--	7.00E+04	--	--
Isophorone	lbs/day	--	8.76E+06	--	--
N-nitrosodimethylamine	µg/L	--	7.00E+02	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
N-nitrosodimethylamine	lbs/day	--	8.76E+04	--	--
N-nitrosodi-N-propylamine	µg/L	--	3.60E+01	--	--
N-nitrosodi-N-propylamine	lbs/day	--	4.50E+03	--	--
Polynuclear Aromatic Hydrocarbons (PAHs)	µg/L	--	8.40E-01	--	--
Polynuclear Aromatic Hydrocarbons (PAHs)	lbs/day	--	1.05E+02	--	--
Polychlorinated Biphenyls (PCBs)	µg/L	--	1.80E-03	--	--
Polychlorinated Biphenyls (PCBs)	lbs/day	--	2.25E-01	--	--
TCDD Equivalents	µg/L	--	3.70E-07	--	--
TCDD Equivalents	lbs/day	--	4.63E-05	--	--
1,1,2,2-tetrachloroethane	µg/L	--	2.20E+02	--	--
1,1,2,2-tetrachloroethane	lbs/day	--	2.75E+04	--	--
Tetrachloroethylene (Tetrachloroethene)	µg/L	--	1.90E+02	--	--
Tetrachloroethylene (Tetrachloroethene)	lbs/day	--	2.38E+04	--	--
Toxaphene	µg/L	--	2.00E-02	--	--
Toxaphene	lbs/day	--	2.50E+00	--	--
Trichloroethylene (Trichloroethene)	µg/L	--	2.60E+03	--	--
Trichloroethylene (Trichloroethene)	lbs/day	--	3.25E+05	--	--
1,1,2-trichloroethane	µg/L	--	9.00E+02	--	--
1,1,2-trichloroethane	lbs/day	--	1.13E+05	--	--
2,4,6-trichlorophenol	µg/L	--	2.80E+01	--	--

Parameter	Units	Six-Month Median[2,3]	Average Monthly[2,3]	Maximum Daily[2,3]	Instantaneous Maximum[2,3]
2,4,6-trichlorophenol	lbs/day	--	3.50E+03	--	--
Vinyl Chloride	µg/L	--	3.40E+03	--	--
Vinyl Chloride	lbs/day	--	4.25E+05	--	--
~~Chronic Toxicity[6,7]~~	~~"Pass/Fail"~~	~~--~~	~~--~~	~~"Pass"~~	~~--~~

Notes for Table F-~~11~~12

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The MER performance goals, in lbs/day, were calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the permitted flow for the Facility (15.0 MGD) and C is the concentration (mg/L).
3. 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 6.1 E-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.
4. Dischargers may, at their option, apply this performance goal as a total chromium performance goal.
5. Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, section 30253 of the California Code of Regulations. Reference to section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.
6. As specified in section 7.15 of this Order and section 3.3 of the MRP (Attachment E).
7. This performance goal 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 *USEPA Regions 8, 9, and 10, Toxicity Training Tool* (January 2010).

4.3.5. **Whole Effluent Toxicity (WET)**

4.3.5.1. 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 effluent from the Facility or could have synergistic or additive effects.

4.3.5.2. For this Order, chronic toxicity in the discharge is evaluated using USEPA's 2010 Test of Significant Toxicity (TST) hypothesis testing approach at the discharge "in-stream" waste concentration (IWC), as described in section 7.15 of this Order 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". A test that does not reject this null hypothesis shall be reported as "Fail". The chronic toxicity ~~effluent limitation~~ performance goal is expressed as "Pass" for each maximum daily individual result. The Discharger shall also report the "Percent Effect" as part of chronic toxicity result.

For chronic toxicity, the previous Order, Order No. R9-2013-0006, contained a performance goal of 96 TUc and quarterly monitoring. During the term of Order No. R9-2013-0006, the maximum reported effluent chronic toxicity value 95.2 TUc (reported in July 2015). Using the RPA procedures from the Ocean Plan, the effluent does not have reasonable potential to cause an exceedance of the narrative water quality objective for chronic toxicity (i.e., Endpoint 1). This Order~~, however does not~~ establishes a chronic toxicity performance goal evaluated using the TST statistical approach with a maximum daily value ~~as~~ of "Pass," instead of a numerical chronic toxicity performance goal .~~However, as stated in section 4.3.3 of this Fact Sheet, this Order adds an effluent limitation for chronic toxicity based on BPJ (Step 13 of the RPA procedures from the Ocean Plan).~~

4.3.5.3. This Order contains a reopener to require the San Diego Water Board to modify the effluent limitations for toxicity, if necessary, to make it consistent with any new policy, law, or regulation. The previous Order, Order No. R9-2013-0006, did not establish performance goals for acute toxicity like the previous Order, and discontinued monitoring for acute toxicity. 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 period 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. As a result, effluent limitations or performance goals for acute toxicity have not been included in this Order.

Removal of numeric acute toxicity performance goals does not constitute backsliding because chronic toxicity is a more stringent requirement than acute toxicity.

~~4.3.5.4.~~ Under the Ocean Plan, chronic toxicity is measured by Toxic Units Chronic (TUc) and relies on the No Observed Effect Limit. ~~Chapter III, section F.1, of the Ocean Plan authorizes the San Diego Water Board to establish more restrictive effluent limitations as necessary to protect designated beneficial uses of ocean waters. The San Diego Water Board has conducted a site-specific analysis and finds that a more restrictive effluent limitation for chronic toxicity based on the TST statistical approach is necessary to protect designated beneficial uses of ocean waters.~~

~~4.3.5.5. Several sensitive species are known to exist in or traverse the vicinity of the SBOO. Threatened and/or endangered species with habitats in the vicinity of the SBOO include: olive ridley sea turtle (*Lepidochelys olivacea*), green turtle (*Chelonia mydas*), and the leatherback sea turtle (Dermochelys coriacea). (See 50 CFR section 224.10(c).) Marine fish species surrounding the SBOO also include, speckled sanddab (Citharichthys stigmaeus), California lizardfish (Synodus lucioceps), hornyhead turbot (Pleuronichthys verticalis), and California halibut (Paralichthys californicus). (*Final Supplemental Environmental Impact Statement, Clean Water Act Compliance at the South Bay International Wastewater Treatment Plant* (2005), p. 3-29.) The TST approach provides a precise statistical approach that is necessary to protect these sensitive species, the benthic communities upon which they may feed, and other designated beneficial uses.~~

~~4.3.5.6. The Discharger expressed that the TST approach is its preferred method for analyzing chronic toxicity. The Facility also discharges to the SBOO, which is jointly owned and operated by USIBWC. To ensure consistency and provide comparable data, all discharges to the same outfall should evaluate chronic toxicity using the same statistical approach. USIBWC is required, under separate Order No. R9-2021-0001, to evaluate chronic toxicity using the TST statistical approach. Thus, this Order also requires the Discharger to evaluate chronic toxicity using the TST statistical approach to ensure consistency and comparable data.~~

4.3.5.4. The Discharger expressed that the TST statistical approach is its preferred method for analyzing chronic toxicity. ~~Further, e~~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. Thus, this Order requires the discharger to evaluate the chronic toxicity performance goal using the TST statistical approach.

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 the West Coast marine methods and test species required under this Order. See Table 1 (method types 1

through 5) on page 1103 in Diamond J., Denton D., Roberts J., Zheng L. 2013. *Evaluation of the Test of Significant Toxicity for Determining the Toxicity of Effluents and Ambient Water Samples*. Environ Toxicol Chem 32:1101-1108. This comparison shows that while the TST and 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. This examination also signals that the test methods' false positive rate (β no higher than 0.05 at a mean effect of 10%) and false negative rate (α no higher than 0.05 (0.25 for topsmelt) at a mean effect of 25%) are indeed low. This highlights that using the TST in this Order in conjunction with other Ocean Plan requirements (West Coast WET method/test species for monitoring and limiting chronic toxicity, the IWC representing the critical condition for water quality protection, the initial dilution procedure, and a single test for compliance)—provides increased assurance that statistical error rates are more directly addressed and accounted for in decisions regarding chronic toxicity in the discharge.

Additionally, Fox et al. 2019[4] 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.

Using the TST approach, the San Diego Water Board will have more confidence when making reasonable potential ~~and permit compliance~~ determinations as to whether the discharge is toxic or non-toxic. The use of the TST approach will also allow for better data comparability to other facilities in the San Diego Region, as well as other coastal regions, that also implement the TST approach for analyzing chronic toxicity data from ocean outfall discharges. ~~As a result, and in accordance with Chapter III, section F.1, of the Ocean Plan, the San Diego Water Board is exercising its discretion to use the TST statistical approach for this discharge as necessary for the protection of beneficial uses of ocean waters.~~

In January 2010, USEPA published a guidance document titled, *USEPA 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 AWEL and AMEL for POTWs. Following section 5.2.3 of the Technical Support Document (TSD), the use of an AWEL and AMEL are not appropriate for WET. In lieu of an AWEL and AMEL for POTWs, USEPA recommends establishing a MDEL for toxic pollutants and pollutants in water quality

[4] 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.

permitting, including WET. This is appropriate for two reasons. The basis for the average weekly and average monthly requirements for POTWs derives from secondary treatment regulations and is not related to the requirement to ensure achievement of water quality standard. Moreover, an AWEL and AMEL requirement comprising up to seven and 31 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 period representing a calendar day.

Later in June 2010, USEPA published another guidance document titled, *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010), in which they recommend the following: "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 for analyzing valid WET test data. Use of the TST approach does not result in any changes to USEPA's WET test methods. Section 9.4.1.2 of USEPA's *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), recognizes that, the statistical methods in this manual are not the only possible methods of statistical analysis. The TST approach can be applied to acute (survival) and chronic (sublethal) endpoints and is appropriate to use for both freshwater and marine USEPA WET test methods.

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.[5]

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). In 2000, USEPA provided guidance for such reviews to ensure that test

[5] See, Supplementary Information in support of the Final Rule establishing WET test methods at 67 Fed. Reg. 69952, 69963, Nov. 19, 2002.

endpoints for determining toxicity based on the statistical approaches utilized at the time the guidance was written (NOEC), percent waste giving 50 percent survival of test organisms (lethal concentration 50, LC_{50}), effects concentration at 25 percent (EC25) were calculated appropriately (EPA 821-B-00-004).

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 EC_{25}, thereby reducing the number of misclassified test results. The guidance provides one of three determinations based on the review steps: 1) that calculated effect concentrations are reliable and should be reported, 2) that calculated effect concentrations are anomalous and should be explained, or 3) 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 the TST 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 (TAC) 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 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.

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 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, in consultation with USEPA, and 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.

4.4. Final Effluent Limitations

4.4.1. Satisfaction of Anti-Backsliding Requirements

NPDES permits must conform with Anti-backsliding requirements discussed in section 3.3.5 of this Fact Sheet. These Anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. This permit complies with all applicable federal and State Anti-backsliding regulations.

4.4.2. Satisfaction of Antidegradation Policies

The WDRs for the Discharger must conform with antidegradation requirements discussed in section 3.3.4 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 Board's Administrative Procedures Update (July 2, 1990), *Antidegradation Policy Implementation for NPDES Permitting*.

This Order complies with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution No. 68-16, and no degradation of the receiving water is expected.

4.4.3. Stringency of Requirements for Individual Pollutants

This Order contains 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 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 CWA" pursuant to 40 CFR section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

4.5. Interim Effluent Limitations – Not Applicable

4.6. Land Discharge Specifications – Not Applicable

4.7. Recycling Specifications – Not Applicable

5. Rationale for Receiving Water Limitations

Receiving water limitations of this Order 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 includes receiving water limitations for fecal coliform and enterococci based on the 2019 Ocean Plan Bacteria Standards.

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 omits federal conditions that address enforcement authority specified in 40 CFR sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

6.2. Special Provisions

6.2.1. Reopener Provisions

This Order may be 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 or the San Diego Water Board, 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 CWA 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, 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 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 conveyance system. Further, Discharge Prohibitions 3.1 and 3.2 of this Order prohibits the discharge of waste from the Facilities to a location other than Discharge Point No. 001.

Sanitary collection and treatment systems experience periodic failures which may result in discharges that may affect waters of the Unites 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 requires the Discharger to maintain and implement Spill Prevention and Response Plans.

6.2.2.2. Spill Reporting Requirements

To determine compliance with Discharge Prohibitions 3.1 and 3.2 and provide appropriate notification to the general public for the protection of public health, spill reporting requirements have been established in section 6.3.2.2 of this Order.

6.2.3. **Best Management Practices and Pollution Prevention**

The Pollutant Minimization Program is based on the requirements of the section III.C.9 of the Ocean Plan.

6.2.4. **Construction, Operation, and Maintenance Specifications**

6.2.4.1. This Order carried over provisions from the previous Order, Order No. R9-2013-0006, 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 requires the Facility to be protected against impacts of flooding from 100 year frequency Tijuana River flows which is similar to ~~carried over~~ a provision from the previous Order, Order No. R9-2013-0006, ~~to ensure~~ requiring that the ~~Facilities~~ Facility ~~are~~ be protected against the impacts of flooding from peak stream flows.

6.2.4.3. This Order carried over a provision from the previous Order, Order No. R9-2013-0006, to ensure the ~~Facilities are~~ Facility is protected against the impact of storm events.

6.2.4.4. This Order adds a provision to ensure the Facilities are protected against regional impacts due to climate change (e.g., sea level rise and floods). Compliance with this provision is implemented through development and implementation of applicable measures identified in the Climate Change Action Plan which is required to be submitted within three years of the effective date of this Order pursuant to section 6.1 of the MRP (Attachment E).

6.2.4.5. This Order adds a provision based on the requirements of 40 CFR section 122.41(e) to ensure the Facilities have adequate power.

6.2.5. **Special Provisions for Publicly-Owned Treatment Works (POTWs)**

6.2.5.1. South Bay Ocean Outfall (SBOO) Capacity Report

To ensure that sufficient capacity is available to accommodate potential growth in the future, this Order requires the Discharger to evaluate the capacity of the SBOO 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

The previous Order, Order No. R9-2013-0006, required the Discharger to submit a report four years prior to the time wastewater flows are projected to reach plant capacity, as stated in title 23, division 3, chapter 9, article 2, sections 2232 and 2235.3 of the CCR. The requirement states:

"Four years prior to reaching POTW design capacity, the Discharger shall submit a Treatment Plant Capacity Report to the San Diego Water Board showing how flow volumes will be prevented from exceeding existing capacity or how capacity will be increased. A notification and copy of the report shall be sent to appropriate local elected officials, local permitting agencies, and the press. The required technical report shall be reviewed, approved, and jointly submitted to the San Diego Water Board 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 finds that the technical report indicates adequate steps are not being taken to address the capacity problem, the San Diego Water Board may adopt a time schedule order or other enforcement order. Such action will be preceded by notice and a hearing.

6.2.5.3. Pretreatment Program

The federal CWA section 307(b), and federal regulations, 40 CFR part 403, require POTWs to develop an acceptable industrial pretreatment program. A pretreatment program is required to prevent the introduction of pollutants, 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. Pretreatment requirements are imposed pursuant to 40 CFR part 403.

The Discharger's implementation and enforcement of its approved pretreatment program is an enforceable condition of this Order. 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 CWA and Water Code.

This Order incorporates conditions for implementing urban area pretreatment program requirements under CWA section 301 (h) and 40 CFR part 125. Although the Facility is not regulated under a waiver pursuant to CWA section 301 (h), those pretreatment requirements are included because the City implements a single pretreatment program for all its POTWs.

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.

6.2.5.5. Collection System

The State Water Board issued Order No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer System* (Statewide General SSO Order) on May 2, 2006. The State Water Board amended the MRP for the Statewide General SSO Order through Order WQ 2013-0058-EXEC on August 6, 2013. The Statewide General SSO Order requires public agencies that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a POTW to enroll for coverage and comply with the Statewide General SSO Order. The Statewide General SSO Order requires agencies to develop Sanitary Sewer 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 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). Order No. R9-2007-0005 is more stringent and prescriptive than the Statewide General SSO Order. Agencies such as the Discharger that are enrolled under the Statewide General SSO Order are also required to also comply with the Regional General SSO Order.

Regardless of the coverage obtained under Order No. 2006-0003-DWQ or Order No. R9-2007-0005, the Discharger's member agencies' collection system is part of the treatment system that is subject to this Order. As such, pursuant to federal regulations, the Discharger's member agencies must report any noncompliance (40 CFR sections 122.44(1)(6) and (7)), properly operate and maintain its collection system [40 CFR section 122.41(e)], and mitigate or prevent any discharge from the collection system in violation of this Order [40 CFR section 122.41(d)].

6.2.5.5. 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 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.

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.

6.2.5.6. Asset Management Plan

Section 6.3.5.7 of this Order requires 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 detailed asset inventories, operation and maintenance tasks, and long-range financial planning. Standard Provision 1.4 in Attachment D of this Order is based on the requirements of 40 CFR section 122.41(e) and requires the 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. 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 Facility. Asset management requirements have been established in this Order to ensure compliance with Standard Provision 1.4 in Attachment D of this Order and the requirements of 40 CFR section 122.41(e).

6.2.6. **Other Special Provisions – Not Applicable**

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 authorizes 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 cost of compliance with the MRP (Attachment E) to the Discharger may be reduced if costs are shared with USIBWC, which jointly owns and operates the SBOO. 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 bear a reasonable relationship to the need for and benefits to be obtained from the MRP (Attachment E).

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 for flow, BOD_5, metals, and TSS have been retained from Order No. R9-2013-0006.

Refer to section 3.1 of the MRP (Attachment E).

7.1.2. Effluent Monitoring

Effluent monitoring is required to determine compliance with the conditions of this Order, 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 Order No. R9-2013-0006, with the following exceptions.

7.1.2.1. This Order requires monitoring the effluent for fecal coliform and enterococci if the overall compliance rate with the receiving water limitations for bacterial characteristics at section 5.1.1 of this Order is below 90% within a rolling one-year period or a single monitoring location exceeds the bacteria receiving water limitations more than 50% of the time within a rolling one-year period for offshore monitoring locations and a rolling quarterly period for ~~at the offshore and/or~~ kelp/nearshore monitoring locations and the source of the receiving water exceedances is unknown. If required, the Discharger is required to monitor the effluent the same day as the parameter is monitored in the receiving water. This monitoring is needed to document the effluent's relationship with the receiving water monitoring data.

7.1.2.2. Wastewater discharges of organic carbon and nutrients to ocean waters can contribute to ocean acidification. Upon discharge to ocean waters, organic carbon is broken down by bacteria, which consume dissolved oxygen during the decomposition process, triggering hypoxic conditions, increasing carbon dioxide (CO_2) levels and lowering pH. When nutrients such as nitrogen and phosphorus are introduced to ocean waters, they can trigger algae blooms

which create more dissolved CO_2 when the algae dies. Following death of the algae, the algae decomposed by bacteria further decreases dissolved oxygen levels and increases acidity.

This Order adds monthly monitoring requirements for ammonium, total nitrogen, nitrate, nitrite, total organic nitrogen, total phosphorus, phosphate, total organic carbon, dissolved inorganic carbon, ~~dissolved~~ total iron, alkalinity, and salinity to gather data on the contribution of the discharge to ocean acidification, hypoxia, and harmful algal blooms. After one year of monitoring, the monitoring frequency for these parameters may be reduced from monthly to quarterly. This Order also requires monitoring for dissolved iron once per permit term concurrently with a sample for total iron to determine the proportion of dissolved iron in total iron.

Refer to section 3.2 of the MRP (Attachment E).

7.1.3. Whole Effluent Toxicity Testing Requirements

This Order contains chronic toxicity effluent limitations as described in section 4.3.5 of this Fact Sheet.

Consistent with the requirements of the Ocean Plan, section 3.3.6 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. 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 requires the Discharger to notify the San Diego Water Board 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[6] 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 Evaluation

[6] 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).

(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.

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 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).

7.2. Receiving Water Monitoring Requirements

The receiving water and sediment monitoring requirements in section 4 of the MRP are designed to measure the effects of the SBOO 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. Monitoring at locations in Mexico is dependent on the approval of the Mexico government. Monitoring is not required if the Mexico government does not grant permission to enter and sample Mexico waters. In the event that the Mexico government does not grant permission to conduct the monitoring, the Discharger is required to provide written notice to the San Diego Water Board. The purpose of the receiving water monitoring in Mexico is to ensure representative sampling of the discharge's impact on water quality and beneficial uses. Sampling in the waters of Mexico provides regional context and essential information regarding the potential impact of the SBOO discharge south of the outfall and, thus, south of the border. To truly assess the potential impacts of the SBOO discharge on the marine environment, it is necessary to sample throughout the water column in all directions around the outfall, whether that be in State or international waters.

Refer to section 4 of the MRP (Attachment E).

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. This Order requires a minimum of five samples for fecal coliform within a rolling 30-day period. This change reflects the new bacterial provisions contained in the 2019 amendment to the Ocean Plan, which requires the 30-day geometric

mean for fecal coliform be calculated using the five most recent samples. 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. R9-2013-0006. This Order also modifies the GPS coordinates for monitoring location S4 and S5 due to access issues Shoreline monitoring locations S-0, S-2, and S-3 are located in Mexico and samples at the locations are currently collected by agencies in Mexico and provided to the Discharger for analyses in the U.S. Monitoring location S-2 and S-3 have been incorporated into the monitoring and reporting program for the SBWRP since the adoption of Order No. 2000-0129 by the San Diego Water Board on September 13, 2000. Monitoring location S-0 replaced monitoring location S-1 following adoption of Order No. R9-2006-0067 by the San Diego Water Board on November 8, 2006. Sampling at monitoring locations S-0, S-2, and S-3 is recommended and requested but not required as the stations are located in Mexico and sample collection is subject to the permission of the Mexico government. The San Diego Water Board recommends monitoring at these locations to ensure representative sampling of the effluent's impact on water quality and beneficial uses. The data collected at these monitoring locations are also useful for differentiating the effects of shoreline sewage discharges in Mexico from the effects of discharge through the SBOO. During certain oceanographic conditions, sewage discharges in Mexico can be transported north causing exceedances of receiving water limitations for fecal indicator bacteria at shoreline monitoring locations in the U.S.

Refer to section 4.1 of the MRP (Attachment E).

7.2.2. **Offshore and Kelp/Nearshore Water Quality Monitoring Requirements**

Offshore and kelp/nearshore water quality 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, to evaluate the contribution of the discharge to ocean acidification, and to gather data for future permit reissuances. Offshore and kelp/nearshore monitoring requirements have been carried over from Order No. R9-2013-0006 with the following exceptions:

7.2.2.1. This Order requires a minimum of five fecal coliform samples within a rolling 30-day period to evaluate the compliance with the 30-day geometric mean receiving water limitation for fecal coliform, which is based on the five most recent samples.

7.2.2.2. This Order requires the Discharger to monitor for the Human Marker HF183 if the overall compliance rate with the receiving water limitations for bacterial characteristics at section 5.1.1 of this Order is below 90% within a rolling one-year period or a single monitoring location exceeds the bacteria receiving water limitations more than 50% of the time within a rolling one-year period for offshore monitoring locations and a rolling quarterly period for ~~at the offshore and~~ kelp/nearshore 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 Tijuana River, the discharge through the SBOO, 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 the Human Marker HF183 concurrently with samples collected for fecal coliform at the offshore and/or kelp/nearshore monitoring locations experiencing the exceedances. The Human Marker HF183, derived from the 16S rRNA gene of Bacteroides, has been widely used to identify sewage pollution in coastal waters. Monitoring for the Human Marker HF183 will be used to confirm the presence of human fecal material when the single sample maximum receiving water limitation for fecal coliform is exceeded. After the San Diego Water Board implements the requirement to collect samples for the Human Marker HF183, analysis of the Human Marker HF183 is only required if the concurrently collected sample for fecal coliform exceeds the single sample maximum receiving water limitation. Results for the Human Marker HF183 is used for informational purposes only, there is no receiving water limitation for the Human Marker HF183.

7.2.2.3. This Order requires monitoring for ammonia (as N)~~,~~ and total nitrogen~~, and total phosphorus (as P)~~ at the offshore and kelp/nearshore monitoring locations to evaluate compliance with receiving water limitations and to assist with identification of the wastewater plume discharged from the SBOO. Nutrient monitoring can also be used evaluate the contribution of nutrients to the receiving water, which has implications for ocean acidification, hypoxia, and harmful algal blooms. This monitoring is not required if implementing the plume tracking program.

7.2.2.4. This Order requires monitoring for pH by spectrophotometric technique and total alkalinity in the laboratory at a subset of offshore monitoring locations. Measurements of pH by spectrophotometric technique and total alkalinity is used provide a more accurate 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 5.1.3.2 of this Order requires that pH shall not be changed at any time more than 0.2 units from that which occurs naturally. The imprecision of pH measurement

technology (e.g., glass electrodes) has been well documented in the scientific literature. The margin of error associated with using dated technology to measure pH can be greater than 0.2 pH units, which makes it impossible to achieve the precision required to measure compliance with the pH receiving water limitation. 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.

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) may be needed to assess ocean acidification effects (see *The West Coast Ocean Acidification and Hypoxia Science Panel, Major Findings, Recommendations, and Actions*, Appendix G at 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[7] suggests that nutrients from wastewater effluent can 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 requires the Discharger to calculate aragonite saturation to evaluate the potential effects of the discharge on ocean acidification.

Refer to section 4.2 of the MRP (Attachment E).

7.2.3. **Benthic Monitoring Requirements**

Sediments integrate constituents that are discharged to the ocean. Most particles that come from the SBOO 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.

Section 4.3 of the MRP (Attachment E) requires periodic assessment of sediment quality to evaluate potential effects of the SBOO discharge and compliance with narrative water quality standards specified in the Ocean Plan. The required

[7] Howard, M.D.A., M. Sutula, D.A. Caron, Y. Chao, J.D. Farrara, H. Frenzel, B. Jones, G. Robertson, K. McLaughlin, A. Sengupta. 2014. *Anthropogenic Nutrient Sources Rival Natural Sources on Small Scales in the Coastal Waters of the Southern California Bight*. Limnology and Oceanography 59:285-297.

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.

This Order carries over the sediment chemistry and infauna monitoring requirements from Order No. R9-2013-0006, including continuing to implement the sediment toxicity recommendations in the Sediment Toxicity Pilot Study and the requirement to conduct sediment chemistry and infauna monitoring at 40 randomly selected monitoring locations in collaboration with the USIBWC. However, this Order makes the sediment chemistry parameters consistent with the parameters monitored for the Southern California Bight Regional Monitoring Program coordinated by SCCWRP with the exception of fipronils pesticides to save on monitoring costs. The analysis of polybrominated diphenyl ethers (PBDEs) may be delayed until 2022 to allow the Discharger's laboratory sufficient time to certify and validate the analytical method.

Refer to section 4.3 of the MRP (Attachment E).

7.2.4. Fish and Macroinvertebrate 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 Order, Order No. R9-2013-0006, except this Order makes the parameters monitored in fish tissue consistent with the parameters monitored in sediment.

Refer to section 4.4 of the MRP (Attachment E).

7.2.5. Receiving Water Monitoring Program Reporting Requirements

This Order carries over the requirement to submit Interim and Biennial Receiving Water Monitoring Reports. These reports may be submitted as an integrated

report covering the receiving water monitoring conducted under this MRP, the MRP for the SBWITP, and the MRP for the Point Loma Wastewater Treatment Plant discharge through the Point Loma Ocean Outfall. The Interim Reports provide a summary of receiving water monitoring data for the first even year in each biennial reporting cycle. The Biennial Reports provide a full assessment and detailed evaluation of the receiving water monitoring data collected over the two-year monitoring cycle.

The main objectives of the Biennial Report analysis is to 1) evaluate compliance with the receiving water limitations of this Order including California 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 that the receiving water monitoring program was designed to answer. The assessment and evaluation of the receiving water monitoring data in the Biennial Reports documents any effects of wastewater discharge, other anthropogenic influences (e.g., storm water discharge, urban runoff), or natural factors (e.g., climate changes) on coastal water quality, seafloor sediment conditions, and local marine organisms.

During the same year Biennial Reports are submitted, the Discharger is required to present to the San Diego Water Board at a regularly scheduled public meeting, a State of the Ocean oral report that summarizes the findings in the Biennial Report. The Receiving Water Monitoring Reports and State of the Ocean oral report help to educate the San Diego Water Board and the public about potential water quality impacts resulting from the discharge in a concise and approachable manner.

Refer to section 4.6 of the MRP (Attachment E).

7.3. Groundwater – Not Applicable

7.4. 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, 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).

7.4.1. 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).

7.4.2. 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 is 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.

The Discharger is 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 sections 13267 and 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 shall 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 shall 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).

7.5. Special Studies Requirements

7.5.1. Climate Change Action Plan (CCAP)

This Order requires the Discharger to prepare and submit a CCAP within three years of the effective date of this Order.

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 carbon dioxide (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, and heat waves). The changes to the water temperature and pH may affect how the receiving waters reacts to the discharges.

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.

Refer to section 6.1 of the MRP (Attachment E)

7.5.2. Plume Tracking Study

Plume tracking is an ongoing program designed to assess the dispersion and fate of the wastewater plume discharged from the SBOO. 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 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.

Refer to section 6.2 of the MRP (Attachment E)

7.5.3. **Remote Sensing**

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 SBOO. 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 in coordination with the USIBWC until the study end date of June 30, 2023. After the study end date, the Discharger is required to submit a recommendations report describing whether the study should continue.

Refer to section 6.3 of the MRP (Attachment E)

7.6. **Other Monitoring Requirements**

7.6.1. **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 ensure 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)

8. Public Participation

The San Diego Water Board considered the issuance of WDRs that serve as an NPDES permit for the Facilities. As a step in the WDR adoption process, the San Diego Water Board staff developed tentative WDRs and encouraged public participation in the WDR adoption process by providing a period of a minimum of 30 days for public review and comment on the Tentative Order.

8.1. Notification of Interested Parties

The San Diego Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided by posting a Notice of Public Hearing and Comment and the tentative WDRs on the San Diego Water Board's website for the duration of the public comment period. The Tentative Order was posted on the San Diego Water Board website and emailed to the Discharger and all known interested parties on February 23, 2021

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 WDRs as provided through the notification process. Comments were due either in person or by mail to San Diego Water Board office at 2375 Northside Drive, Suite 100, San Diego, CA 92108.

To be fully responded to by staff and considered by the San Diego Water Board, the written comments were due at the San Diego Water Board office by 5:00 p.m. on **March 25, 2021**.

8.3. Public Hearing

The San Diego Water Board held a public hearing via video/teleconference on the tentative WDRs during its regular Board meeting on the following date and time:

Date:	May 12, 2021
Time:	9:00 AM
Location:	No Physical Meeting Location (Webcast Only)

Interested persons were invited to attend. At the public hearing, the San Diego Water Board heard testimony, pertinent to the discharge, WDRs, 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, sections 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 at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or State holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. 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

By fax:
(916) 341-5199

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. Information and Copying

The ROWD, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the San Diego Water Board by calling (619) 516-1990.

8.6. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the San Diego Water Board, reference these Facilities, and provide a name, address, and phone number.

8.7. **Additional Information**

Requests for additional information or questions regarding this Order should be directed to Fisayo Osibodu by email at Olufisayo.osibodu@waterboards.ca.gov or by phone at (619) 521-8036.

Attachment G – Ocean Plan and Basin Plan Discharge Prohibitions

1. Ocean Plan Discharge Prohibitions

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

1.2. Waste shall not be discharged to designated Areas of Special Biological Significance except as provided in chapter III.E. of the Ocean Plan.

1.3. 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 that discharges to the ocean without further treatment, is prohibited.

1.4. The by-passing of untreated wastes containing concentrations of pollutants in excess of those of Table 3 or Table 4 [of the Ocean Plan] to the ocean is prohibited, except as allowed by Federal Standard Provisions I.7 and I.8 (Attachment D).

1.5. The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited.

2. Basin Plan Discharge Prohibitions

2.1. The discharge of waste to waters of the State in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in Water Code section 13050, is prohibited.

2.2. The discharge of waste to land, except as authorized by WDRs of the terms described in Water Code section 13264 is prohibited.

2.3. The discharge of pollutants or dredged or fill 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.

2.4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless the San Diego Water Board issues an NPDES permit authorizing such a 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.

2.5. 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 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.

2.6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the San Diego Water Board.

2.7. The dumping, deposition, or discharge of waste directly into waters of the State, or adjacent to such waters in any manner which may permit it's being transported into the waters, is prohibited unless authorized by the San Diego Water Board.

2.8. Any discharge to a storm water conveyance system that is not composed entirely of storm water is prohibited unless authorized by the San Diego Water Board. [The federal regulations, 40 CFR section 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR section 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to an NPDES permit and discharges resulting from firefighting activities.] [section 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

2.9. The unauthorized discharge of treated or untreated sewage to waters of the State or to a storm water conveyance system is prohibited.

2.10. 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.

2.11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the State is prohibited.

2.12. The discharge of any radiological, chemical, or biological warfare agent into waters of the State is prohibited.

2.13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the San Diego Water Board.

2.14. 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 affect, beneficial uses of such waters is prohibited.